AECOM Environment

Submitted to:
Keystone Pipeline Project

Submitted by:
AECOM
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Inventory of Trees and Shrubs Along the Keystone Pipeline Mainline Right-of-Way and Ancillary Facilities in North Dakota



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Executive Summary

In compliance with a certificate condition issued by the North Dakota Public Service Commission, in the Findings of Fact, Conclusions of Law and Order, February 21, 2008 (Order), trees and shrubs expected to be cleared along the Keystone Mainline Pipeline Project (Project) right-of-way (ROW) and ancillary facilities (i.e., pipeyards and railsidings) in North Dakota were inventoried for replacement. The species and numbers of trees and shrubs within 51 native growth areas (i.e. woodlots) and 106 windbreak/shelterbelt areas identified within the construction ROW were documented by field crews between April 24 and June 10, 2008. Results of the inventory determined that the Project would remove a total of 33,946 trees and shrubs within the approved construction ROW, temporary extra workspace, pipeyards and railsidings. Following stipulations in the Order and supplemental orders, a total of 69,152 trees and shrubs are required to be planted as compensation for those cleared by the Project.

1.0 Introduction

TransCanada Keystone Pipeline, LP (Keystone) is constructing and will operate an interstate crude oil transmission system from an oil supply hub near Hardisty, Alberta, (Canada) to destinations in the United States (U.S.) (**Figure 1**). The U.S. portion of the Keystone mainline will consist of approximately 1,082 miles of new pipeline constructed from the U.S./Canadian border in Cavalier County, North Dakota, to existing terminals and refineries in Wood River (Madison County) and Patoka (Marion County), Illinois. The Cushing Extension will consist of approximately 296 miles of additional pipeline commencing in Jefferson County, Nebraska, near the Nebraska-Kansas border, and terminating at existing crude oil terminals in Cushing (Payne County), Oklahoma. Keystone plans to construct the Project over three years. The construction of two mainline sections in North Dakota and South Dakota began in 2008. The remaining portion of the mainline will be constructed in 2009 and the Cushing Extension will be constructed in 2010.

The Keystone Mainline Pipeline Project (Project) will cross approximately 214 miles of North Dakota in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent counties (Figure 2). In a decision documented in the Findings of Fact, Conclusions of Law and Order (Order), dated February 21, 2008 (Appendix A), the State of North Dakota Public Service Commission (Commission) directed Keystone to inventory trees and shrubs anticipated to be cleared during Project construction in North Dakota. Replacement ratios for trees and shrubs removed by the Project were established in the Order and three supplemental orders, dated May 30, 2008, July 2, 2008, and August 27, 2008 (Appendix A).

The purpose of this inventory was to determine the number and species of trees and shrubs that would be removed in North Dakota, as well as calculate the number of trees and shrubs, by species, to be planted as compensation for those removed. Keystone recorded the numbers and species of trees and shrubs in windbreaks, shelterbelts and all other wooded areas affected by the Project right-of-way (ROW), temporary extra workspace (EWS), pipeyards and railsidings.

2.0 Methods

The Order pertains to (a) windbreaks and shelterbelts and (b) "lengths of wooded areas in excess of 50 feet of route length", also called "native growth areas". (These terms are defined in the Tree and Shrub Sampling Plan included in the Second Supplemental Order Appendix A). For the purposes of this inventory, features were classified as either (a) "windbreaks" (forested areas with less than 50 feet crossed by the Project route) or (b) "woodlots" (forested areas with greater than 50 feet crossed by Project route). Due to the timing associated with Commission approval of the Keystone Sampling Plan, Keystone conducted a full inventory of trees and shrubs prior to clearing activates.

The Order requires the Project to inventory woody plants within windbreaks and replace all trees and shrubs anticipated to be cleared within the permanent (50-foot-wide) ROW, including those that are considered invasive species or noxious weeds. The Fourth Supplemental Order (Appendix A) requires inventory of all trees in temporary EWS up to 15 feet beyond the Order's approved 50-foot wide permanent ROW through windbreaks. The Tree and Shrub Mitigation Specifications (TSMS) in the Order stipulate that within windbreaks, trees or shrubs anticipated to be cleared, regardless of size, shall be inventoried for replacement. The TSMS also require the Project to inventory woody plants anticipated to be cleared within woodlots as follows: all trees of one-inch diameter at breast height (dbh) and greater; shrubs anticipated to be cleared within the permanent ROW; and shrubs anticipated to be cleared in areas where topsoil would not be preserved and replaced.

Windbreaks and woodlots along the Project route requiring inventory were identified by review of aerial photographs. Each windbreak and woodlot was assigned a unique feature identification code. All trees and shrubs were inventoried at locations to be cleared for pipeyards and railsidings. Along the Project route, a constant 110-foot corridor was staked through identified woodlots and windbreaks. Within each feature, one or

more line transects were established to inventory all trees and shrubs within the survey corridor. The approximate location and number of line transects established were sketched on field datasheets. Trees and shrubs were identified to genus and species where possible and tallied. Trees and shrubs with multiple stems were counted based on connection to the common rootstock and not as individual stems. In areas of dense foliage, the numbers of trees and shrubs occurring in the area were estimated. No shrubs were inventoried in the EWS because native topsoil from all disturbed areas was preserved and replaced after construction.

If field personnel were unable to identify a tree or shrub in the field, plant material samples were collected, close-up photographs of the stem and buds or other unique features were taken, and a detailed description of the plant was recorded. The sample was later identified when possible and otherwise recorded as "unidentified".

Field teams recorded the following information for each feature on a datasheet (Appendix C): GPS coordinates for (1) the Project route alignment within each feature (windbreaks) or (2) the enter and exit of the Project route alignment within each feature (woodlots); enter and exit mileposts; location; date surveyed; a sketch of the survey area; a sketch of the approximate location and number of line transects; and a count of the trees and shrubs by species. Each feature was documented with at least two photographs taken from alternate angles (Appendix D).

After the inventory was completed, the numbers of trees and shrubs anticipated to be removed within the actual ROW and EWS footprint were estimated by extrapolating values based on the actual ROW/EWS footprint acreage and composition and densities of species observed within the 110-foot-wide survey corridor. The appropriate mitigation ratio (see Discussion) was applied to the extrapolated values to determine the number of individuals of each species the Project will plant to compensate for those removed.

3.0 Results

A total of 106 windbreaks and 51 woodlots were inventoried by four field crews between April 24 and June 10, 2008. Twelve woodlots and one windbreak identified by review of aerial photographs were eliminated from further consideration due to subsequent decisions to reroute the pipeline around or horizontal directional drill (HDD) under the features, resulting in no removal of trees or shrubs in these areas. Two woodlots and two windbreaks identified by review of aerial photographs were not surveyed due to access issues, post-inventory pipeline reroutes affecting new features, or other reasons. The composition and numbers of trees and shrubs cleared by the Project in these unsurveyed features were included, based on extrapolation from inventoried values for nearby features (**Appendix A** and **Appendix B,** Table B-1).

A total of 44,122 trees and shrubs were inventoried within the 110-foot survey corridor and pipeyard and railsiding sites (**Appendix B**). Within the areas inventoried, 16 shrub and 26 tree species were identified and a total of 33,946 trees and shrubs were estimated to be removed during construction of the Project in North Dakota (**Table 1**).

Table 1 Tree and Shrub Species Identified for Replacement Along the Mainline and Within Pipeyards and Railsidings in North Dakota

Common Name	Scientific Name	Estimated Number Removed	Number to be Planted
Shrubs			
American cranberrybush	*Viburnum trilobum*	807	1,614
American hazelnut	*Corylus americana*	51	102
American plum	*Prunus americana*	58	116

Table 1 Tree and Shrub Species Identified for Replacement Along the Mainline and Within Pipeyards and Railsidings in North Dakota

Common Name	Scientific Name	Estimated Number Removed	Number to be Planted
Beaked hazelnut	*Corylus cornuta*	518	1,036
Common lilac	*Syringa vulgaris*	73	146
Gooseberry	*Ribes* spp.	3	6
Hedge cotoneaster	*Cotoneaster lucidus*	36	72
Juneberry	*Amelanchier alnifolia*	800	1,600
Redosier dogwood	*Cornus stolonifera*	386	772
Round-leaved hawthorn	*Crateagus rotundifolia*	1,058	2,116
Shrubby cinquefoil	*Potentilla fruticosa*	5	10
Siberian peashrub	*Caragana arborescens*	581	1,162
Silver buffaloberry	*Shepherdia argentea*	382	764
Silverberry	*Elaeagnus commutata*	23	46
Snowberry	*Symphoricarpos* spp.	4,987	9,974
Tatarian honeysuckle	*Lonicera tatarica*	625	1,250
	Total Shrubs	**10,452**	**20,904**
Trees			
American elm	*Ulmus americana*	193	392
American linden	*Tilia americana*	839	1,687
Balsam poplar	*Populus balsamifera*	7	17
Black Hills white spruce	*Picea glauca* var. *densata*	20	52
Boxelder maple	*Acer negundo*	594	1,278
Bur oak	*Quercus macrocarpa*	3,004	6,050
Chokecherry	*Prunus virginiana*	10,755	21,738
Colorado spruce	*Picea pungens*	113	250
Common buckthorn	*Rhamnus cathartica*	23	46
Common hackberry	*Celtis occidentalis*	17	43
Cottonwood	*Populus deltoides*	368	883
Eastern hophornbeam	*Ostrya virginiana*	729	1,509
Eastern red-cedar	*Juniperus virginiana*	2	4
European mountain ash	*Sorbus aucuparia*	17	46
Fireberry hawthorn	*Crataegus chrysocarpa*	5	10
Green ash	*Fraxinus pennsylvanica*	3,097	6,395

Table 1 Tree and Shrub Species Identified for Replacement Along the Mainline and Within Pipeyards and Railsidings in North Dakota

Common Name	Scientific Name	Estimated Number Removed	Number to be Planted
Paper birch	*Betula papyrifera*	2	4
Ponderosa pine	*Pinus ponderosa*	365	736
Quaking aspen	*Populus tremuloides*	510	1,020
Rocky Mountain juniper	*Juniperus scopulorum*	70	185
Russian olive	*Elaeagnus angustifolia*	16	35
Scots pine	*Pinus sylvestris*	6	12
Siberian elm	*Ulmus pumila*	1,625	3,550
Unknown tree (multiple spp.)	N/A	952	1,904
White oak	*Quercus alba*	10	20
White willow	*Salix alba*	45	111
Willow	*Salix* spp.	110	271
	Total Trees	**23,494**	**48,248**
	Grand Total	**33,946**	**69,152**

4.0 Discussion

The Order and three supplemental orders (**Appendix A**) issued by the North Dakota Public Service Commission set the following limits to the width of clearcutting of woody species through windbreaks and woodlots within the construction ROW.

1. Through windbreaks, a 50-foot-wide ROW plus additional 15-foot-wide EWS (for a total of 65 feet) (Order, Fourth Supplemental Order);
2. Through woodlots, a 50-foot-wide ROW plus additional 35-foot-wide EWS (for a total of 85 feet) (Order);
3. In 22 approved forested water body crossings and road boring locations, a 50-foot-wide ROW plus up to an additional 85-foot-wide EWS (for a total of up to 135 feet) (Second Supplemental Order); and
4. In seven of the 22 approved forested water body crossings and road boring locations, a 50-foot-wide ROW plus EWS beyond 85 feet (for a total of over 135 feet) (Fifth Supplemental Order).

Replacement ratios for trees and shrubs removed by the Project in North Dakota are set forth in the Order and supplemental orders (Appendix A) as follows:

1. In windbreaks, all trees and shrubs removed within the 50-foot-wide permanent ROW, shall be replaced at a 2:1 ratio (Order); and trees removed within 50-foot to 65-foot-wide temporary EWS (a total of 0 to 15 feet beyond the 50-foot-wide ROW) shall be replaced at a 5:1 ratio (Fourth Supplemental Order). (The Second Supplemental Order exempts one windbreak at a bored road crossing from these terms; see point 2, below.),

2. In woodlots (and the approved windbreak at the bored road crossing) all trees and shrubs removed within the 50-foot-wide permanent ROW shall be replaced at a 2:1 ratio (Order); and all trees within 50- to 85-foot-wide temporary EWS (a total of 0 to 35 feet beyond the 50-foot-wide ROW) shall be replaced at a 2:1 ratio,
3. At the 22 forested water body crossing and road boring locations approved by the Second Supplemental Order, trees within 85-foot to 135-foot EWS (a total of 35 to 85 feet beyond the 50-foot-wide ROW) shall be replaced at a 2:1 ratio, and
4. At the seven approved forested water body crossings and road boring location, trees removed in areas beyond 135-foot EWS shall be replaced at a 5:1 ratio.

Table 2 summarizes the required mitigation ratios:

Table 2 Mitigation Ratios for Trees and Shrubs Removed within the Project ROW and EWS

	Permanent ROW (50')	**EWS (50' - 65')**	**EWS (65' - 85')**	**EWS (85'-135') (22 approved areas only)**	**EWS (>135') (7 approved areas only)**
Windbreaks	2:1 (trees and shrubs)	5:1 (trees only)	N/A	N/A	N/A
Woodlots and 1 Approved Windbreak	2:1 (trees and shrubs)	2:1 (trees only)	2:1 (trees only)	2:1 (trees only)	5:1 (trees only)

Tables B-1 through B-3 (**Appendix B**) present the numbers of trees and shrubs within each woodlot and windbreak that were calculated, according to the ordered ratios, to replace those estimated to be removed during Project construction. A total of 69,152 trees and shrubs are required to be planted by the Project in mitigation for those removed in the state of North Dakota (**Table 1**; Tables B-1 through B-3, **Appendix B**).

Figures


NORTH DAKOTA
MINNESOTA
MICHIGAN
SOUTH DAKOTA
WISCONSIN
IOWA
NEBRASKA
ILLINOIS
INDIANA
KANSAS
MISSOURI
KENTUCKY
OKLAHOMA
ARKANSAS
TENNESSEE
LOCATOR MAP
May 6, 2008 Alignment
Mainline
Cushing Extension
70 35 0 70
Scale In Miles
Figure 1
Keystone Pipeline Project Route
AECOM
July 2009


Bottineau
Rolette
Towner
Cavalier
Pembina
Pierce
Ramsey
Walsh
Benson
Nelson
Grand Forks
Sheridan
Wells
Eddy
Foster
Griggs
Steele
Traill
Burleigh
Kidder
Stutsman
Barnes
Cass
Logan
LaMoure
Emmons
Ransom
McIntosh
Dickey
Sargent
Richland
LOCATOR MAP
May 6, 2008 Alignment
Mainline
10 5 0 10 20
Scale in Miles
Figure 2
Keystone Pipeline Project Route,
North Dakota
AECOM
July 2009

Appendix A

North Dakota Public Service Commission Documents

State of North Dakota Public Service Commission Findings of Fact, Conclusions of Law and Order, February 21, 2008

State of North Dakota Public Service Commission Second Supplemental Order, May 30, 2008

State of North Dakota Public Service Commission Fourth Supplemental Order, July 2, 2008

State of North Dakota Public Service Commission Fifth Supplemental Order, August 27, 2008

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

February 21, 2008

Appearances

Commissioners Susan E. Wefald, Tony Clark, and Kevin Cramer.

Thomas D. Kelsch and Todd D. Kranda, Kelsch Kelsch Ruff & Kranda, 103 Collins Avenue, Mandan, ND 58554 on behalf of the Applicant TransCanada, Keystone Pipeline, LP.

Nicholas R. Delaney, Rinke Noonan US Bank Plaza, Suite 300, St. Cloud MN 56302 on behalf of Interveners Dakota Resource Council, Ramona Klein, Merle and Linette Kratochvill, Janie and John Capp, and Mark Novak.

Janie and John Capp, 12466 60th ST NE, Lankin, ND 58250, Intervenors.

Erik R. Johnson City Attorney Fargo, 505 Broadway St N Ste 206 Fargo, ND 58102 and John M. Dingess and Pat Madsen Duncan, Ostrander & Dingess PC 3600 S Yosemite St Ste 500 Denver CO 80237-1829, on behalf of the City of Fargo.

Matthew Shimanek, Hammarback, Dusek & Associates, PLC 712 DeMers Ave. East Grand Forks, MN 56721, and Jana M. Linderman (IA #AT00004750) Plains Justice 100 1st Street SW Cedar Rapids, Iowa 52404 on behalf of Interveners Dakota Resource Council, Ramona Klein, Merle and Linette Kratochvill, Janie and John Capp, and Mark Novak.

William W. Binek, Chief Counsel, Public Service Commission, 600 East Boulevard, Bismarck, North Dakota 58505, on behalf of the Public Service Commission.

Patrick Fahn, Utility Analyst, Public Service Commission, 600 East Boulevard, Bismarck, North Dakota 58505 on behalf of the Public Service Commission.

Al Wahl, Administrative Law Judge, Office of Administrative Hearings, 1707 North 9th Street, Bismarck, ND 58501-1882, as Procedural Hearing Officer.

Preliminary Statement

On April 11, 2007 TransCanada Keystone Pipeline, LP (Keystone) filed an application for a certificate of public convenience and necessity (PCN) under N.D.C.C. Chapter 49-03.1 to construct and operate the Keystone Pipeline in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent Counties of North Dakota. The crude oil pipeline route is specifically shown by route maps included in Keystone's application. Approximately 218 miles of the Keystone Pipeline is located in North Dakota, Case No. PU-07-152.

On April 11, 2007 Keystone filed an application for a waiver of procedures and time schedules, and consolidated applications for a certificate of corridor compatibility and a route permit authorizing construction of the Keystone Pipeline, Case No. PU-06-421.

Keystone requests the Commission waive the procedures set forth in N.D.C.C. §§ 49-22-08 and 49-22-08.1 to allow for a single consolidated application for Corridor Certificate and Route Permit.

On May 2, 2007 the Commission deemed the application of Keystone complete and issued a Notice of Filing and Notice of Hearing scheduling a public hearing for Monday, July 23, 2007 in Valley City and for Tuesday, July 24, 2007 in Park River, North Dakota.

The issues to be considered in this proceeding are:

1. Will the location, construction, and operation of the proposed pipeline produce minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota?

2. Is the proposed pipeline compatible with the environmental preservation and the efficient use of resources?

3. Will the proposed pipeline corridor and route minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that

energy needs are met and fulfilled in an orderly and timely fashion?

4. Is it appropriate for the Commission to waive the procedures as requested in the application including the request for a single consolidated application for Corridor Certificate and Route Permit?

On June 21, 2007 Gary R. Leistico and Nicholas R. Delaney, Attorneys at Law, on behalf of the Dakota Resource Council, filed a request to postpone the hearings until completion of the United States Department of State Environmental Impact Study (EIS) and the related comment period. As an alternative, the Dakota Resource Council requested that the Commission's approval of the application be postponed until after completion of the EIS and related comment period, after which the Dakota Resource Council would request an additional hearing to discuss environmental related concerns.

On June 27, 2007 the Commission denied Dakota Resource Council's request to postpone the hearings and to postpone approval of the application.

On July 11, 2007 Nicholas Delaney, Attorney at Law, filed a Petition to Intervene on behalf of The Dakota Resource Council, Ramona Klein, Merle and Linette Kratochvill, John and Janie Capp, and Mark Novak. The Dakota Resource Council is a non-profit membership based organization which seeks to, among other things, preserve the environmental integrity of North Dakota. A number of its members are landowners who will be affected by the proposed project. The Petitioners own property which will be affected by the proposed project.

On July 12, 2007 John and Janie Capp requested to intervene on their own behalf. John and Janie Capp own land that will be affected by the proposed project.

On July 13, 2007 the Commission granted the requests to intervene by The Dakota Resource Council, Ramona Klein, Merle and Linette Kratochvill, John and Janie Capp, and Mark Novak.

The hearing was continued to September 5, 2007 at the Commission Hearing Room in Bismarck.

On October 23, the City of Fargo filed a motion to intervene as a Party in the above action and to re-open the hearing.

On October 24, 2007 the Commission passed a motion to extend to December 12, 2007 the time for designation of a corridor and route.

On November 7, 2007 the Commission issued a Notice of Intent to Consider Information not Presented at a Hearing to incorporate items from the public input file for consideration in this proceeding.

On November 7, 2007 the Commission issued an order granting intervention to the City of Fargo and reopened the proceeding. The Commission limited the scope of the reopened proceeding, as authorized under Section 69-02-02-05 of the North Dakota Administrative Code, to the safety and public health issues relating to the water supply of the City of Fargo from Lake Ashtabula and the Sheyenne River.

The parties agreed to a hearing date and the Commission issued an Order on November 8, 2007 determining that an emergency exists under the circumstances of this proceeding and that hearing be scheduled on an expedited basis as authorized under N.D.C.C. § 49-22-13(4), and scheduling the hearing for November 27, 2007.

On November 27, 2007 the Commission passed a Motion to extend time to designate route and corridor to a date to be determined at a future time.

On December 20, 2007 Keystone and Fargo filed a Settlement Stipulation resolving Fargo's intervention in this proceeding. On December 26, 2007 Fargo filed a Motion to Withdraw as Party Intervenor.

On January 14, 2008 Administrative Law Judge Al Wahl issued an order granting leave to withdraw as intervenor to the City of Fargo effective December 20, 2007.

On January 17, 2008 Keystone filed a letter and drawing confirming that horizontal directional drilling (HDD) will be used for installation of the pipe at the Sheyenne River crossing.

On January 22, 2008 Keystone filed a letter stating it will install 0.72 pipe instead of 0.80 pipe in the area of the Fordville Aquifer from mile post 45.6 to mile post 47.9, and in the Lake Ashtabula area from mile post 126.7 to mile post 128.1.

On January 23, 2008 the Commission issued a notice of intent to consider, pursuant to N.D.C.C. § 28-32-25, the information filed by Keystone on January 17 and 22, 2008.

On January 29, 2008 Keystone filed a copy of a waiver of the 500 foot buffer zone avoidance area requirement for a residence signed by Albert and Gloria Wittenberg.

On January 30, 2008 the Commission issued a notice of intent to consider, pursuant to N.D.C.C. § 28-32-25, the information filed by Keystone on January 29, 2008.

On January 29, 2008 John Capp and Janie Capp filed e-mail comments in response to the January 23, 2008 notice of intent to consider information.

On February 6, 2008 Janie Capp filed e-mail comments in response to the January 23, 2008 notice of intent to consider information.

On February 6, 2008 intervenors Dakota Resource Council, Janie and John Capp, Ramona Klein, Linette and Merle Kratochvil and Mark Novak filed e-mail comments in response to the January 23, 2008 notice of intent to consider information.

Having allowed all interested persons an opportunity to be heard and having heard, reviewed and considered all testimony and evidence presented, the Commission makes the following:

Findings of Fact

1. As proposed, the Keystone Pipeline project in the State of North Dakota would constitute approximately 218 miles of 30-inch crude oil pipeline, five pumping stations, a total of 13 main line valves and four check valves. The pipeline is designed for a maximum allowable operating pressure of 1,440 pounds per square inch gauge.

2. There are approximately 2,124 miles of hazardous liquid pipelines in North Dakota. Approximately 1,024 miles of the total are crude oil pipelines.

3. The Keystone Pipeline's purpose is to transport Canadian crude oil from the Western Canadian Sedimentary Basin to markets in the United States. The project would commence at the crude oil supply hub near Hardisty, Alberta, Canada, and extend to Wood River and Patoka, Illinois. Initially, the pipeline will have a nominal capacity to transport 435,000 barrels of oil per day (bpd). Subsequently, the pipeline will be extended to a terminal at Cushing, Oklahoma and the nominal capacity will be expanded to 591,000 bpd. The length of the proposed facility in the United States is approximately 1,078 miles from the Canadian border to Patoka and an additional 294 miles for the Cushing Extension. The pipeline will enter North Dakota at the Canadian/North Dakota border in Cavalier County and will extend in a southerly

direction passing through eight counties, exiting the state at the South Dakota border in Sargent County.

4. Meera Kothari, a professional engineer responsible for pipeline design and pipeline integrity for the Keystone Pipeline project, stated that pipelines are the safest method of transporting crude oil and that transporting 435,000 bpd would require 7,000 trucks every day. The Commission agrees.

5. Keystone is required to obtain a Presidential Permit from the United States Department of State (DOS) to authorize the construction of pipeline facilities across the United States border pursuant to the authority delegated to DOS by the President of the United States under Executive Order No. 13337. DOS is responsible for preparing an Environmental Impact Statement (EIS) for the entire project as required by the National Environmental Policy Act (NEPA). To comply with NEPA, the principal objectives of the EIS are to identify and assess potential impacts on the environment that would result from the proposed project; describe and evaluate reasonable alternatives; identify the preferred alternative; identify and recommend specific mitigation measures; and facilitate public and agency involvement in identifying significant environmental impacts. The final draft EIS concluded that the proposed project, if designed, constructed, and operated in accordance with the project description and the mitigation measures proposed by Keystone, and additional permit conditions, would result in limited adverse environmental impacts.

6. The Keystone Pipeline utilizes a conversion of a natural gas line in Canada running from Alberta, Canada to a point north of eastern North Dakota. Keystone states that the use of this converted gas line has both economic and environmental benefits. Keystone states that the use of the existing natural gas line in Canada defined where the project enters North Dakota. Keystone states that the location of a suitable crossing of the Missouri River at Yankton, South Dakota defined where the project exits North Dakota at the South Dakota border.

7. Keystone considered locating the pipeline within the Interstate Highway 29 (I-29) right-of-way or adjacent to the I-29 right-of-way. According to the North Dakota Department of Transportation Policy Manual, location of the Keystone Pipeline within the I-29 right-of-way would not be permitted. Keystone contends that a pipeline route adjacent to the I-29 right-of-way would need to go around numerous overpasses, interchanges, and urban or developed areas further increasing the length and impact of the pipeline. Keystone states that a route along I-29 is not consistent with points Keystone has proposed for the United States/Canada border crossing location and the Missouri River crossing point.

8. Keystone considered a pipeline route adjacent to the existing Alliance Pipeline route. Keystone states such a route would be longer than the proposed route by over 100 miles.

9. We find that alternatives to the proposed route considered by Keystone would not minimize adverse effects and would likely increase the number of landowners affected and the environmental impact.

Pipeline Integrity

10. Kothari testified that she is responsible for ensuring the pipeline is designed, constructed, and operated in accordance with the Department of Transportation Pipeline and Hazardous Material Safety Administration (PHMSA) regulation at Title 49 Code of Federal Regulations Part 195 (49 CFR 195), and the American Society of Mechanical Engineer Standard B-31.4, Pipeline Transportation Systems of Liquid Hydrocarbons. She is also responsible for the development of a pipeline management plan.

11. 49 CFR 195 prescribes safety standards and reporting requirements for pipeline facilities used in the transportation of hazardous liquids or carbon dioxide. 49 CFR 195 prescribes design requirements for pipeline systems including the pipe, valves, fittings, and flanges; prescribes minimum requirements for constructing pipeline systems including field inspection of materials, pipeline location, pipe bending, welding, repair or removal of unacceptable welds, testing of welds, cover over the pipeline, ditch backfilling, valve installation and location, installation of pumping equipment; prescribes minimum requirements for pipeline pressure testing without leakage; prescribes minimum requirements for operator qualification of individuals performing pipeline facility tasks; and prescribes minimum requirements for protecting steel pipelines against corrosion including qualifications for supervisors, pipe coating, cathodic protection, monitoring of external corrosion control, mitigation of internal corrosion, protection against atmospheric corrosion, repair or replacement of corroded pipe, and corrosion control record keeping.

12. 49 CFR 195 prescribes minimum requirements for operating and maintaining pipeline systems after construction including the requirement for a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. The procedural manual must be prepared before initial operations of a pipeline system commence. Normal operations and maintenance activities include a determination of which pipeline facilities are located in areas that would require an immediate response by the operator to prevent hazards to the public if the facilities failed or malfunctioned and minimizing the potential for such

hazards. Normal operations and maintenance activities also include abandoning pipeline facilities by safe disconnection from the operating pipeline system, purging of combustibles, and sealing abandoned facilities left in place. 49 CFR 195 also requires a written integrity management program that addresses the risks on each segment of pipeline in a high consequence area.

13. Kothari testified that, to safeguard against manufacturing defects, Keystone qualifies all pipe mills and steel manufacturers using a formal qualification process consistent with the industry and international standards to which quality control is managed in the industry. The pipe is engineered with stringent chemical requirements. Each batch of pipe is mechanically tested to prove its strength, fracture control and fracture propagation property. Pipe in the mill is hydrostatically tested for seam defects. Pipe seams are inspected using ultrasonic instruments and visually inspected. Coating is applied in the mill and the coating plants have similar quality control procedures.

14. Kothari testified that, to safeguard against construction defects, Keystone follows industry guidelines for overland transportation and barging over water. The pipe is examined selectively once offloaded from railcars using ultrasonic techniques. Pipe welds performed at the construction site are non-destructively inspected. One hundred percent of the girth welds are inspected. An electronic device called a holiday detector or jeep will traverse along the pipe to check for any nick or damage to the coating and repair it before the pipe is put into the trenches. Any defects in the coating are repaired prior to lowering the pipe into the ditch. At completion of construction, the pipeline is filled with water and pressurized 125% of its maximum operating pressure to test pipeline integrity including leaks. Any pipe that fails under hydrostatic testing is removed and replaced and the pipeline is again tested. At completion of construction, Keystone utilizes an in-line inspection tool (caliper pig) to check for dents or ovalities. Defects are removed. Three years after the pipeline has been placed into operation, Keystone will conduct another in-line inspection to ensure the integrity of the pipeline, and will investigate any anomalies found by this inspection.

15. To safeguard against external corrosion, a fusion bond epoxy (FBE) coating is applied to the pipe. In addition, Keystone will install a cathodic protection system to prevent corrosion in the event any damaged pipe coating is not detected and repaired. Kothari also testified that in the 28 years that TransCanada has been using FBE coating, there have been no leaks on this type of pipeline using FBE coating coupled with cathodic protection. Keystone has stipulated with the City of Fargo to install additional cathodic protection test stations at the contributory pipeline segments associated with the seven intermittent stream crossings between milepost 104.9 and 128, specifically at or near mileposts 104.9, 111, 112.8, 113.2, 126.8, 127.5, and 128.

16. To safeguard against internal corrosion, Keystone's tariff will restrict the amount of solid and water that is acceptable in the crude oil transported. Keystone periodically uses cleaning tools to push out any water at low points.

17. To detect both internal and external corrosion, Keystone periodically uses in-line inspection tools outfitted with sensors that can detect metal loss on internal and external pipe walls. With respect to the contributory pipeline segments associated with the seven intermittent stream crossings between milepost 104.9 and 128 (specifically at or near mileposts 104.9, 111, 112.8, 113.2, 126.8, 127.5, and 128), Keystone has stipulated with the City of Fargo to perform a high resolution in-line inspection for internal and external corrosion within the first three years of operation and to re-inspect within 5 years of the initial inspection.

18. To safeguard against third-party damage to the pipeline system, Keystone will conduct air patrols per PHMSA pipeline safety regulations, which is 26 times a year, not to exceed three weeks apart. Keystone will also participate in the State One-Call program, install marker signs, and implement a public awareness program.

19. To safeguard against overpressure of the pipeline, the Keystone Pipeline will utilize a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system includes automatic operations to remotely prevent line overpressure and also allows a pipeline operator to remotely control pipeline valves. The SCADA system monitors and electronically reports flow, pressure, temperature, and other data to the control center located in Calgary, Alberta, Canada.

20. Brian J. Thomas, President of BRIWEST Energy Ltd. providing consulting services with respect pipeline construction and operation of the Keystone Pipeline project, testified that the SCADA system is comprised of three components: (i) equipment installed at the pump stations and valve sites; (ii) a communications link so the equipment can speak to the host system in the control center at Calgary; and (iii) the host system installed in the operations control center in Calgary that allows the operator to remotely control and operate the pipeline. The Calgary operations control center is manned every day of the year, 24 hours a day. The system includes a fully redundant "hot standby" system that can be utilized in the event of trouble with the primary system. In the event of a communications failure, equipment installed at the pump stations will take over.

21. The record indicates 5 pump stations located approximately 40 to 50 miles apart at mileposts 33.1, 76.2, 123.7, 170.9, and 217.7. Keystone proposes to have 13 mainline valves located approximately 15 to 20 miles apart. Some of the mainline valves are at the pump stations. Ten of the mainline valves are automated SCADA operated

valves, and are able to be closed from a remote location. SCADA operated valves close within three minutes of an emergency shutdown. Three mainline valves are manually operated. Automated valves are located upstream of the Pembina River, the Tongue River, the Sheyenne River, and the Lone Tree Lake. An automated valve is located near the Fordville Aquifer and near an aquifer in Sargent County. An automated valve is located between the second and third pump station to reduce the length of pipe section out of service for maintenance. Also, Keystone has stipulated with the City of Fargo to install a SCADA operated valve at milepost 131.

22. In addition to the mainline valves, Keystone proposes to install four check valves along the length of the pipeline in North Dakota. The check valves are installed downstream of river crossings in locations where the rivers are 100 feet wide at the high water mark and also in other areas that require additional protection. Check valves are located downstream of the Pembina River, the Tongue River, the Sheyenne River, and the Lone Tree Lake. Check valves operate instantaneously and without supervision in the event of a loss of pressure in the pipeline.

23. Thomas testified that Keystone uses a number of methods to detect a leak on the pipeline. The first system consists of the operators monitoring the system from the Calgary control center. They monitor the flow information coming back from the remote locations and typically are capable of detecting leaks of 25 to 30 percent of the pipeline flow rate. The second system is a software-based, volume-balance system that looks at the volume going into the system and out of the system and compares the two. The volume-balance system is capable of detecting leaks down to a limit of about five percent. The third system is a computational pipeline monitoring system that divides the pipeline into smaller segments bounded by flow measurement equipment. It measures volume into and out of a segment every few seconds and looks for discrepancies. Any discrepancies are added up quickly and an alarm will sound. Keystone estimates that leaks of 1.5 to 2 percent of pipeline flow would be detected by the computational monitoring system within 140 minutes. Leaks of just less than 1.5 percent of the pipeline flow would be discovered in less than 90 days.

24. In addition, leaks may be detected by direct observation during aerial and ground patrols. Through awareness programs, the public and landowners are encouraged to report leaks and other events that may suggest a threat to the integrity of the pipeline.

25. Thomas testified that Keystone will prepare and submit a complete Emergency Response Plan to the PHMSA. Keystone maintains a 24-hour response or contact phone number which is posted on all of the right-of-way signs, facility signs, published within all of Keystone's public awareness materials and provided annually to all property owners along the pipeline route.

Exclusion and Avoidance Areas

26. North Dakota Administrative Code Chapter 69-06-08, sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for a certificate of corridor compatibility and route permit. The criteria as set forth in North Dakota Administrative Code Section 69-06-08-02, are classified as Exclusion Areas, Avoidance Areas, Selection Criteria and Policy Criteria. A transmission facility route must not be sited within an Exclusion Area. A transmission facility route must not be sited within an Avoidance Area unless the applicant shows under the circumstances there are no reasonable alternatives. In determining whether an Avoidance Area shall be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative routes. In accordance with the Commission's Section Criteria, a transmission route shall be approved if it is demonstrated that no significant adverse impacts will result from the location, construction, and maintenance of the transmission facility. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits of the transmission facility.

27. Keystone evaluated a corridor width of one-mile for the exclusion, avoidance, selection and policy criteria of the Commission.

Exclusion Areas

28. The proposed route of the Keystone Pipeline crosses no exclusion areas as defined by the North Dakota Public Service Commission.

Avoidance Areas

29. The proposed route of the Keystone Pipeline will cross avoidance areas as defined by the Commission including 0.8 miles of the Tetrault Woods State Forest in Pembina County, 19 residences within five hundred feet, one parcel of irrigated land at milepost 204 to 204.5, and potential cultural resource sites.

Tetrault Woods State Forest

30. The proposed alignment of the Keystone Pipeline Project where it crosses the Pembina River near Walhalla is east of the area generally considered the Pembina Gorge. The proposed route will cross the Pembina River at the Tetrault Woods State Forest. The Tetrault Woods State Forest is a Commission designated avoidance area.

While not classified as a Wild, Scenic, or Recreational river and therefore not a Commission designated avoidance area, the Pembina River is listed on the National Rivers Inventory (NRI) maintained by the National Park Service. State and federal agencies must avoid or mitigate actions that would adversely affect designated NRI river segments. The Pembina River is identified as having Outstandingly Remarkable Values in the Scenery, Geology and Wildlife categories.

31. Keystone initially proposed an open cut crossing for the Pembina River. Keystone has testified that, in working with the North Dakota Forest Service, construction techniques and mitigation procedures were developed to avoid forested areas. Horizontal directional drilling (HDD) will be used to drill under the Pembina River and Tetrault Woods State Forest as indicated by Exhibit T28, a drawing of the HDD proposal. The drawing shows the start point and end point of the directional drill, the pipeline depth will be a minimum of 35 feet under the river and 40 feet under the trees in the adjacent area. The pipeline will not impact the forested areas of the Tetrault Woods State Forest or the Pembina River.

32. We agree with the use of HDD in the Pembina River crossing area as proposed by Keystone and the location as shown by Exhibit T28. The construction, operation and maintenance of the Keystone Pipeline must not impact the Pembina River or the forested areas of the Pembina River crossing or the Tetrault Woods State Forest.

500 Foot Buffer

33. Under N.D.C.C. § 49-22-05.1, areas within five hundred feet of an inhabited rural residence are designated avoidance areas. The five hundred foot avoidance area criteria for an inhabited rural residence may be waived by the owner of the inhabited rural residence in writing. Michael Koski, project director of the consulting team assigned to the Keystone project, testified that twenty-three residences are potentially located within the 500 foot avoidance area. Of these, 18 residence owners had signed written waivers of the 500 foot avoidance area. Koski stated that reroutes and route refinement of the project has resulted in the movement of the line to a point greater than 500 feet away from four of those residences. Exhibit T-14 consisted of copies of the "Waiver of 500 Foot Buffer Zone Avoidance Area Requirement" documents signed by the 18 residence owners. On January 29, 2008 Keystone filed a copy of a waiver of the 500 foot buffer zone avoidance area requirement for the 19th residence.

Irrigated Land

34. Regarding the parcel of irrigated land crossed by the proposed route of the Keystone Pipeline, Keystone indicates that North Dakota Administrative Code § 69-06-

08-102 (h) exempts underground transmission facilities such as the buried Keystone pipeline from analysis for impacts to irrigated land. However, Keystone will coordinate with landowners during construction to minimize irrigation and drainage systems disruptions and compensate for damages and resulting lost production. Keystone will repair, replace, or compensate landowners where irrigation or drainage systems are damaged by construction.

Cultural Resources

35. Keystone commissioned research and investigations and worked with federal and North Dakota governmental officials relating to the impact of the location, construction, and operation of the proposed pipeline on health and welfare, natural resources, and the environment. Keystone worked with federal, state and local agencies to avoid cultural resources, biological resources, wetlands, grasslands and other areas of interest to the agencies.

36. Keystone commissioned field surveys to determine the locations of prehistoric and historic cultural resources that could be affected by surface disturbance during pipeline construction. During 2006, Class I, Class II and Class III cultural resource investigations were completed. The Class I literature and files search was one mile wide centered on the proposed pipeline centerline. The Class II reconnaissance level vehicular survey covered 100% of the proposed pipeline route. The Class III cultural resource pedestrian inventory included a 31% sample of the proposed pipeline route, 300 feet wide centered on the proposed pipeline centerline. In addition to the pedestrian survey, 46 shovel test probes were excavated at locations with potential for buried cultural deposits.

37. As a result of the cultural resource evaluations, Keystone proposes to avoid 9 of the cultural sites by reroute of the pipeline. The Commission is uncertain whether the route proposed in the application includes the reroutes avoiding the 9 cultural sites. Also Keystone will bore underneath 10 historic period railroad segments that are potentially eligible for the National Register. 26 other cultural sites in the corridor will not be affected unless Keystone's pipeline route proposal changes. Four cultural sites remain unevaluated and the effect of the Keystone project has not been determined.

38. The record in this proceeding also indicates possible cultural resources located on properties of Francis Bures and Vaughn Zacharias. Keystone has provided amendments to its original proposed route as shown in Exhibit T16 at the Bures property and as shown in Exhibit T17 at the Zacharias property for the purpose of avoiding possible cultural resources. The reroutes will not impact any of the cultural sites identified by the Class I, II or III surveys.

39. The Commission finds the measures proposed by Keystone are adequate provided requirements of the State Historic Preservation Office (SHPO) are followed. However, any route changes necessitated by requirements of the SHPO must be filed with the Commission and approved prior to the start of construction.

40. The Commission has considered the proposed management of adverse impacts, the orderly siting of facilities, system reliability and integrity, the efficient use of resources, and alternative sites and finds Keystone's corridor and route proposal has adequately considered avoidance areas.

Aquifers

41. The proposed Keystone Pipeline route will pass through areas where shallow and surficial aquifers exist from mile post marker 6.7 to 7.3, mile post marker 8.0 to 11.8, mile post marker 12.5 to 16.0, and mile post marker 29.5 to 29.7 all in Pembina County; from mile post marker 119.2 to 121.3 and mile post marker 123.1 to 123.9 in Steele County; from mile post marker 123.9 to 124.3 and 124.3 to 125.1 in Barnes County; and from mile post marker 192.9 to 193.3, mile post marker 196.8 to 198.1, mile post marker 202.0 to 206.4, mile post marker 206.4 to 207.2, and mile post marker 207.2 to 208.3 all in Sargent County.

42. Heidi Tillquist, Environmental Toxicologist and Project Manager with ENSR providing consulting services for the Keystone Pipeline project, testified that approximately 80% of the aquifers along the proposed Keystone Pipeline route are overlain by low permeability soils and confining materials that would inhibit the infiltration of crude oil in the event of a pipeline leak. The majority of aquifers are more than 50 feet deep, so the majority of aquifers crossed by the pipeline have a low susceptibility to contamination.

43. Tillquist testified that studies show that if a spill reaches an aquifer, the extent of contamination is small in area. At a Bemidji, Minnesota spill where 10,000 barrels (42,000 gallons) were released, the plume of BTEX moved 170 yards from the crude oil source over a 20-year period. BTEX is a group of volatile organic compounds - benzene, toluene, ethylbenzene and xylene - found in petroleum hydrocarbons. Tillquist stated that the BTEX compounds are highly soluble in water and tend to be the most toxic.

44. Tillquist testified that in 500 sites with BTEX contamination, the Environmental Protection Agency found that BTEX moves slower than the groundwater because of natural attenuation, i.e. microbes eating the hydrocarbons. At these 500 sites, 75% of

BTEX plume moved less than 250 feet from the source of contamination and in 80% of the cases the plume was stable or decreasing in size.

45. Tillquist testified that the evaporation of lighter compounds in crude oil is quicker and more efficient than the dissolution of BTEX compounds into the water column regarding the consequence of a crude oil spill.

Fordville Aquifer Area

46. Terril Borgeson, 6307 Highway 32, Park River, North Dakota testified that the Walsh Water District, the City of Park River, the City of Minto, and numerous farms and ranches depend on the Fordville Aquifer as their main source of water. Borgeson testified that the North Dakota State Water Commission has an in-depth study of the Fordville Aquifer that had been done for the City of Park River when they bought the government wells and obtained a grant for a municipal water system out of the aquifer. The report is titled *Water Supply Investigation for the City of Park River, Fordville Aquifer, Walsh County, North Dakota, by Jon C. Patch, P.E., Hydrologist, 2002.* Intervenor witness Jim Horner, geologist with the North Dakota Department of Health, Division of Water Quality and Groundwater Protection, testified that the City of Cavalier draws all its water supply from groundwater wells located in the Fordville Aquifer.

47. Tillquist testified that a pipeline would have to leak thousands of barrels in order to get out of the pipeline trench and mobilize further. The dirt replaced in the pipeline trench over the top of the pipeline is not as compacted as the virgin ground on either side. Small leaks don't leave the right-of-way, but migrate to the surface following the path of least resistance of the less compacted soil. In addition to subsurface transport, a leak that is large enough to exit the trench can mobilize by overland transport or stream flow.

48. Tillquist testified that the margin of the Fordville Aquifer at its closest point is approximately three linear miles from the proposed Keystone Pipeline route. The groundwater wells in the Fordville Aquifer are 6.5 miles from the proposed Keystone Pipeline route. The soils in the area are permeable with infiltration rates of 0.4 to 12.6 feet per day. The depth of the groundwater in the Fordville Aquifer is 0 to 30 feet and averages 20 feet.

49. Concerning subsurface transport, Tillquist testified that the crude oil would not migrate, but BTEX contaminants in crude oil are soluble in water, like groundwater, and the water will mobilize the BTEX contaminants. BTEX contaminants can move hundreds of feet but not 3 miles. Subsurface transport is not a viable exposure route. In addition, emergency response teams would be responding to contain and mitigate the spill.

50. Concerning overland transport, Tillquist testified that most leaks would be contained within the pipeline trench or slightly adjacent to it, but with a very large leak following terrain downhill, the crude oil will spread laterally and pool in depressions. In the absence of steep terrain and channels, the movement of crude oil is limited to a few hundred feet to no more than a half mile. Crude oil adheres to soils and vegetation thus reducing the amount of oil that continues to move along. There is a 200 foot drop in elevation from the pipeline over the three miles to the outer edge or margin of the aquifer, calculated as a 1.3 percent slope and described by Tillquist as relatively flat. Tillquist testified that this slope would not significantly enhance overland transport and overland transport is not a viable exposure route. In addition, emergency response teams would be responding to contain and mitigate the spill.

51. In the Fordville aquifer area, there are 23 intermittent streams and two perennial streams. Intermittent streams do not flow all the time and movement of crude oil down dry channels is like overland transport, typically limited to no more than a half-mile in the event of a large spill. The shortest distance of travel in an intermittent channel from the pipeline route to the margin of the Fordville aquifer approximately 3.5 miles.

52. Crude oil is capable of moving further when facilitated by flowing water. The streams in the Fordville Aquifer area can be categorized into those that lose water to the Fordville Aquifer and those that gain water from the Fordville Aquifer. Regarding BTEX contaminants, Tillquist's testimony was that for streams that gain water from the Fordville Aquifer, oil and dissolved constituents have no chance of getting into the aquifer since all the water would be coming out of the aquifer and pushing into the streams. For streams that lose water to the Fordville Aquifer, oil and dissolved constituents would have a chance of getting into the aquifer. The losing streams include the North Branch of the Forest River, a perennial stream, and 8 intermittent streams between and including mile post markers 45.7 and 47.8.

53. As the crude oil is transported by water in a stream, the oil floats on top of the water surface and adheres to vegetation and soils at the margins of the stream. The shortest stream distance from the pipeline to the margin of the Fordville Aquifer is on an intermittent stream, and is approximately 4.1 miles. Based on terrain and stream velocity, it would take 2.0 hours plus or minus 30 minutes for the crude oil on this intermittent stream to reach the margin of the Fordville Aquifer. Continuing along this intermittent stream, the distance from the margin of the Fordville Aquifer to the surficial portion of the aquifer closest to the public wells is approximately 5 miles. The distance from this point on the stream to the public wells is approximately 1 mile. If oil from a leak large enough, thousands of barrels, was to get out of the trench and mobilized enough to get to a stream channel and then travel approximately 9.1 miles in the stream to point

closest to the public wells, the dissolved constituents (e.g. BTEX compounds) would then have to be transported subsurface in the aquifer approximately 1 mile through the aquifer to reach the well intakes. Tillquist testified that the BTEX compounds would likely move only hundreds of feet and the constituents of oil that do not dissolve and have a high affinity to soil would be confined by the aquifer soils and materials.

54. We find that neither the Fordville Aquifer nor the public wells in the Fordville Aquifer will likely be exposed to crude oil contamination or BTEX contamination by means of surface transport, stream transport, or subsurface transport or any combination of those transport mechanisms.

55. Keystone is proposing to locate a check valve near mile post marker 49, which is south of the losing stream area of the Fordville Aquifer. Check valves operate instantaneously and without supervision in the event of a loss of pressure in the pipeline. If a leak in the losing reach area is detected and the pipeline pumps are shutdown, the check valve will close and prevent a reverse flow of product.

56. Horner agreed with Tillquist the proposed pipeline route in the Fordville Aquifer area is safe, but that it would be safer for a pipeline route to the west. Drainage would be the same, but it is further away and gives a little more travel time.

57. At the direction of the Commission, Keystone engaged Richard Kuprewicz of Accufacts, Inc., an independent pipeline consulting firm providing pipeline design and operation analysis services, to provide a review of external leak detection systems and make a recommendation concerning pipeline leak detection. Accufacts reported that Keystone's current design approach using internal computer-based leak detection (computational pipeline monitoring - CPM) is better suited than external leak detection systems to identify high-rate pipeline releases.

58. In Accufacts' opinion, external leak detection systems such as fiber optic monitoring, hydrocarbon electric sensing cable, carbon vapor monitoring, and acoustic emission monitoring are intended to more quickly identify slow rate or seepage releases than conventional right-of-way inspections, patrols, or CPM. Such external leak detection systems should be considered as complementing CPM leak detection in those few ultra-sensitive areas where the environment can quickly spread low rate releases. The report states that external leak detection systems are not warranted on the Keystone Pipeline in North Dakota, even in the Fordville Aquifer area, because the pipeline is not located in an ultra-sensitive area. Less than 0.1% of the approximately 200,000 miles of liquid transmission pipeline in the United States currently incorporate real-time computer-based external leak detection systems.

59. The Accufacts report recommended that the CPM system should clearly incorporate separate alarming to rapidly identify high-rate releases, and include long term accumulated gain/loss balance computer trending alarms to help identify lower rate releases that can generate slowly expanding underground release plumes that might spread from the pipeline right-of-way with time. Keystone stated that it will implement systems to incorporate accumulated gain/loss trending as recommended by Accufacts. The Accufacts report also stated that a competent oil spill response plan should outline key contingency steps to protect/recover aquifers that may be impacted from a pipeline; and that Keystone's oil spill response plans are advised to recognize all aquifers that they might affect and clearly outline the critical steps that would be taken to limit spill impact as well as remediate the aquifer from a release.

60. The use of external vapor detectors is not a general practice that is used in the pipeline industry. Accufacts concluded that because of the various factors, (i.e. distance from Keystone Pipeline, low gradient of terrain between the pipeline and aquifer, soil conditions, as well as characteristics of the crude oil blends), a low rate leak or a seepage leak is not a legitimate threat to the Fordville Aquifer.

61. Under a Special Permit received from the PHMSA, Keystone was provided a waiver of the regulations of the Office of Pipeline Safety in 49 C.F.R. § 195.106. Under the waiver, Keystone is allowed to design, construct and operate the Keystone Pipeline in certain areas at hoop stresses up to 80 percent of the specified minimum yield strength of the pipe (0.80 pipe) rather than 72 percent of the of the specified minimum yield strength of the pipe (0.72 pipe). Keystone must use 0.72 pipe, which is thicker wall pipe, in locations including high population areas, highway crossings, railroad crossings, road crossings, within pump stations, at mainline valve assemblies, at pigging facilities and at measurement facilities.

62. By its January 22, 2008 letter, Keystone informed the Commission that it will install a continuous length of 0.72 pipe, instead of 0.80 pipe, in the losing steam reach area of the Fordville Aquifer from mile post 45.6 to mile post 47.9, which is approximately 2.3 miles. Mileposts locating streams in the Fordville Aquifer area are included in Exhibit T-22. The 0.72 pipe would cross 2 intermittent streams located north of the North Branch of the Forest River, would cross the North Branch of the Forest River, and cross 6 intermittent streams located south of the North Branch. The Commission finds this proposal is acceptable.

63. At the public hearings in Valley City and Park River, some members of the public suggested that the pipeline route should be moved either to the east of the Fordville Aquifer or further to the west.

64. Keystone considered route concepts to the east and west of the Fordville Aquifer.

65. The east route concept involved a route length of 160 miles, was 15 miles longer than the proposed Keystone Pipeline route, involved more road crossings, more stream crossings and approximately 2 more miles (29 more acres) of wetland crossings.

66. The west route concept involved a route 8 or 9 miles west of the current proposed Keystone location. The western route concept is three miles longer than the currently proposed Keystone Pipeline route and involves 2.7 more miles and (43 more acres) of wetland crossings.

67. Both the east and west route concepts in the Fordville area would affect a greater number of landowners.

68. The Commission finds the proposed Keystone Pipeline route in the Fordville area represents the minimal environmental impact and minimal impact to the landowners compared to either the east route or west route concepts.

Public Water Systems

69. Keystone's application indicates there are no reservoirs, no municipal water supplies, nor any water sources for organized rural water districts on the proposed Keystone Pipeline route or within the 1-mile wide corridor/study area of the proposed pipeline route.

70. Surface water and groundwater sources for public water systems fall under the North Dakota Source Water Protection Program. The Program delineates a wellhead protection area for ground water-dependent public water systems and delineates a source water protection area for surface water-dependent public water systems. The goal is to prevent contamination of public water supplies.

71. Horner testified that the Division of Water Quality and Groundwater Protection does not have a permit process for a project like the Keystone Pipeline but does monitor the project for groundwater issues. Horner stated that some of the wellhead protection areas that had been mapped by Keystone during its corridor assessment are not considered wellhead protection areas because the public water supply wells are no longer used. Horner identified the wells at the Pembina River aquifer, east of mileposts 6 and 7 on Map 1 of 10, that may still be in place but are no longer used by the City of Walhalla for public water.

72. Horner identified several wells east of milepost 30.7 on Map 2 of 10, approximately 2112 to 2957 feet east, in the Gardar aquifer, that may still be in place but are no longer used for public water. Horner indicated that the well near Sharon located east of milepost 100 on Map 5 of 10, is no longer a public water system.

73. Keystone's Exhibit T9, a map of the Fordville Aquifer area indicates a wellhead protection area near milepost 40 that is also classified as a high consequence area by the Office of Pipeline Safety of the Department of Transportation. Tillquist testified that this area is associated with surface water intakes for the City of Park River. Tillquist confirmed with the North Dakota Department of Health that the City of Park River no longer gets its water from this source and this source is therefore no longer a wellhead protection area.

74. The proposed Keystone Pipeline route is approximately 5227 feet from a public water supply well near mile post marker 20.24 in Pembina County.

75. Horner testified that he was satisfied and comfortable with the location of the Keystone Pipeline Project from a groundwater perspective.

76. The Commission finds that the evidence in the record shows the proposed Keystone Pipeline route will not impact public water systems.

Private Water Systems

77. Tillquist testified that Keystone did not assess whether private wells or localized groundwater will be impacted by a pipeline leak. Tillquist was not aware of any mandates or regulations that dictate the distance a pipeline needs to be from a private well.

78. A number of private landowners raised concern about contamination of groundwater and private wells. Landowners testified concerning the existence of shallow private water wells and such wells in the vicinity of the pipeline but no one indicated the existence of a well within 500 feet of the pipeline.

79. Horner testified to the existence of a database listing private water wells that is available at the North Dakota State Water Commission. Not all private water wells are listed in the database since, prior to 1972, there were no requirements for private water well registration with the Board of Water Well Commissioners. Horner recommended that the pipeline be located 500 feet from private water wells.

80. Thomas, represented that in the event a leak were to affect a private individual's well, Keystone would find an alternate source of water for that individual and also develop a mitigation plan to mitigate the well contamination while maintaining an alternate supply of water for the landowner.

Lake Ashtabula/Sheyenne River Area

81. Tillquist testified that, in the event of a large pipeline leak that would exit the pipeline trench, crude oil would not reach the Sheyenne River or Lake Ashtabula by overland transport, subsurface transport, or overland transport in a dry stream channel. Tillquist testified that the pipeline is over two and one-half linear miles away from the water bodies so sub-surface transport is not a viable route for crude oil to reach the Sheyenne River or Lake Ashtabula. The terrain in the Sheyenne River and Lake Ashtabula area is relatively flat, so overland transport is not a viable route for the crude oil. All of the intermittent streams, except for one stream that is right at the Sheyenne River, are at least 1.6 miles away from the river and, when dry, would not be a viable route for crude oil to reach the Sheyenne River.

82. Tillquist identified viable stream channels where, if a leak occurred, crude oil could potentially get into the stream channel and be transported by flowing water to Lake Ashtabula or the Sheyenne River. Tillquist identified a 1.4 mile pipeline segment where the pipeline crosses intermittent stream channels that could flow into Lake Ashtabula. The closest stream distance to Lake Ashtabula from the point the Keystone pipeline intersects a viable intermittent stream is 1.6 miles.

83. Tillquist testified about another 1.4 mile pipeline segment downstream of Lake Ashtabula where the pipeline crosses intermittent stream channels that could flow into the Sheyenne River. The closest stream distance to the Sheyenne River from the point the Keystone pipeline intersects a viable intermittent stream is 2.1 miles.

84. Horner testified that he was not concerned with the proximity of the proposed pipeline route to Lake Ashtabula and Sheyenne River.

85. Lake Ashtabula and the Sheyenne River are not defined as a high consequence area under the Code of Federal Regulations.

86. At the public hearing in Valley City a suggestion was made to move the pipeline to the east further away from the Sheyenne River and Lake Ashtabula.

87. Koski testified that shifting the pipeline one and one half to two miles to the east puts the pipeline in the drainage system of the Maple River which drains into the

Sheyenne. It would also move the Pipeline closer to other shallow aquifers and involves crossing one and a half more miles of wetlands.

88. The Commission finds the proposed Keystone Pipeline route in the Lake Ashtabula/Sheyenne River area represents minimal environmental impact and minimal impact to the landowners compared to the east route concept. The Commission finds that neither the Sheyenne River nor Lake Ashtabula will likely be exposed to crude oil contamination or BTEX contamination by means of surface transport, stream transport, or subsurface transport or any combination of those transport mechanisms.

89. By its January 22, 2008 letter, Keystone informed the Commission that it will install a continuous length of 0.72 pipe, instead of 0.80 pipe, where the pipeline crosses intermittent streams in the area of Lake Ashtabula from mile post 126.7 to mile post 128.1, which is approximately 1.4 miles. Mileposts locating streams in the area of Lake Ashtabula are specified in Exhibit T-24. The 0.72 pipe would cross 3 intermittent streams. The Commission finds this proposal is acceptable.

Stream and River Crossings

90. The proposed Keystone Pipeline route will cross several rivers and streams including the Pembina River, Tongue River, North Branch Park River, Middle Branch Park River, South Branch Park River, North Branch Forest River, Middle Branch Forest River, South Branch Forest River, North Branch Turtle River, Goose River, and the Sheyenne River.

91. Under Section 404 of the Clean Water Act, Keystone must obtain from the U.S. Army Corps of Engineers a Section 404 Permit if the construction or operation of the Keystone Pipeline may result in any discharge into waters of the United States including navigable waters, tributaries to navigable waters, and wetlands. In addition, under Section 401 of Clean Water Act, Keystone must provide the U.S. Army Corps of Engineers a water quality certification from the State in which the discharge originates or will originate. The state agency with jurisdiction over water quality matters is the North Dakota Department of Health.

92. Intervenor witness Michael Sauer, Senior Environmental Scientist, Division of Water Quality, North Dakota Department of Health, testified that a detailed Section 401 Water Quality Certification review is initiated after receiving a completed Section 404 application from the U.S. Army Corps of Engineers. The Section 404 Permit will contain any requirements established by Department of Health in the Section 401 certificate.

93. In its May 4, 2006 letter the North Dakota Game and Fish Department stated that the Pembina River; Tongue River; a tributary to the Tongue River running through section 18, Township 161 North, Range 56 West, Pembina County; North Branch Park River; Middle Branch Park River; South Branch Park River; North Branch Forest River; Middle Branch Forest River; Goose River; and Sheyenne River are classified as valuable fisheries. For the crossings of these valuable fisheries, the North Dakota Game and Fish Department requested directional drilling of the streams if possible. If this method is not feasible, then the North Dakota Game and Fish Department requests no construction activities within the waterway between April 15 and June 1 with appropriate controls to minimize erosion and sedimentation. With this caveat, the North Dakota Game and Fish Department believes the Keystone Pipeline Project will have no significant effects on wildlife or wildlife habitat, including rare or protected species provided best management practices are implemented.

94 The Commission finds that Keystone should notify the Commission whether it intends to HDD under these valuable fisheries. This notification should include maps similar to those filed concerning HDD at the Pembina River and Sheyenne River crossings. If Keystone does not intend to HDD under all of the valuable fisheries, Keystone should study the feasibility of HDD under these valuable fisheries. Stream crossing plans must be filed with the Commission and approved prior to the start of construction.

Sheyenne River Crossing

95. Keystone initially proposed an open cut of the crossing at the Sheyenne River.

96. Sauer indicated in a September 25, 2007 letter to the Commission that, after conducting a cursory field review, it would be extremely difficult if not impossible to restore the proposed Sheyenne crossing area if trenching methods were implemented. He also indicated that the riverine and riparian zone for 300 feet upstream and downstream look similar to the proposed crossing site and that the crossing method appears to be much more important than the selected site.

97. Keystone's January 17, 2008 filing indicates that HDD will be used to drill under the Sheyenne River as well as the trees and shrubs on either side of the Sheyenne River. The filing provides a drawing of the HDD proposal. The drawing shows the start point and end point of the directional drill. The drawing indicates the pipeline depth will be approximately 40 feet under the river and the trees and shrubs on the south embankment of the Sheyenne River valley. The drawing confirms the HDD proposal extends approximately 400 feet north of the Sheyenne River but does not extend under the trees and shrubs on the north embankment of the Sheyenne River valley.

98. The proposed Keystone Pipeline route is acceptable to the Commission only if the HDD goes under the Sheyenne River and the trees and shrubs on both the north and south embankments of the Sheyenne River valley, e.g. the valley view shed. We find an order concerning the proposed route must be conditioned upon a HDD proposal that goes under the Sheyenne River and the trees and shrubs on both the north and south embankments of the Sheyenne River valley and such proposal must be filed for Commission approval before the Route Permit between mileposts 168 and 170 is effective. The construction, operation and maintenance of the Keystone Pipeline must not impact the Sheyenne River or the forested area of the Sheyenne River or the Sheyenne River valley.

Tree and Shrub

99. Dean Cowling, project director for the Keystone Pipeline project, testified that it is possible to construct a 30-inch pipeline with only a 50 foot clear cut through a shelterbelt but to construct such a pipeline in other wooded areas would require a wider clear cut to construct the pipeline in a safe and practical manner. Keystone needs 25-35 feet to weld and place the pipe on skids and to have equipment to travel along and pick up the pipe and place it in the ditch. All the dirt that comes out of the trench needs to be placed in the easement area. Due to these construction and safety concerns, Keystone cannot safely limit the tree cuts to 50 feet width in wood lot areas.

100. Cowling testified that Keystone would, through lengths of wooded areas in excess of 50 feet, agree to keep clear cuts to 85 feet wide where practical. The Commission finds that, due to the size of pipe used for the Keystone Pipeline, the width of clear cuts through windbreaks and shelterbelts should be limited to 50 feet or less, and clear cuts through lengths of other wooded areas in excess of 50 feet shall be limited to 85 feet or less.

101. Keystone specified several areas where more than 110 feet of tree clearing might be needed for extra work space. The areas are the Tongue River crossing, North Branch Park River crossing, North Branch Forest River crossing, Middle Branch Forest River crossing, North Branch Turtle River crossing, and Sheyenne River crossing. Extra work space is required at these areas for deep ditch excavation for the stream crossing and stream bank grading. This tree clearing would be limited to 25 feet beyond the standard 110-foot construction right-of-way. After reviewing Keystone's proposal to HDD, the Commission finds Keystone's request for more than 110 feet of tree clearing at the Sheyenne River crossing is no longer necessary. As shown by the map of the HDD, no trees will be cleared in the Sheyenne River crossing area.

102. The Commission finds that pipeline construction at the other locations should avoid trees to the extent practicable. The Commission has already determined that clear cuts through lengths of wooded areas in excess of 50 feet of route length shall be limited to 85 feet or less. If Keystone needs additional construction work space at stream or river crossings and would like to clear more than an 85 feet width of trees, Keystone must submit a clearing plan to be approved by the Commission prior to start of construction. The plan must indicate the width of the cut (up to 135 feet) and the distance from the crossing (number of feet on each side of the crossing) that is needed.

103. L.A. Gray, Senior Vice President of Universal Ensco Inc., Engineering and Construction Manager for the United States portion of the Keystone Pipeline project, testified that Keystone has a permanent 50-foot easement along the pipeline and would allow all but 20 to 30 feet of the permanent easement to revegetate. The Commission agrees with this recommendation which improves on the previously approved specification that allowed a clearing of 50 feet over the pipeline.

104. Exhibit T5 is a Tree and Shrub Mitigation Specifications document approved by the Commission in previous siting cases. Keystone proposed an amended version of the Commission's specifications as Exhibit T4. Keystone proposes changes to the Commission approved Tree and Shrub Mitigation Specifications as follows:

- Keystone proposes to inventory trees in wind break and shelter belt areas that are 1-inch diameter at breast height and in non-wind break and non-shelter belt areas to inventory trees that have a 3-inch diameter at breast height.
- Keystone proposes to inventory trees and shrubs anticipated to be removed during construction in wood lots and riparian areas by using a sample method. Trees and shrubs in shelter belts and wind breaks would be actually counted.
- Keystone proposes to inventory for replacement in non-windbreak and non-shelterbelt areas only those shrubs in the maintained corridor portion of the permanent right-of–way where shrubs will not be allowed to regrow.
- Keystone proposes that all areas, rather than just non-windbreak and non-shelterbelt areas, outside of the maintained corridor portion of the permanent right-of-way shrubs shall be allowed to regenerate naturally, and in the event topsoil is disturbed and not preserved and replaced, shrubs in those areas shall be inventoried for replacement.
- Keystone proposes that the width of the construction right-of-way for clear cuts through woody areas be limited to 85 feet or less where practical.
- Keystone proposes that the number of trees or shrubs cleared from areas outside of the inventory areas be noted in the inventory rather than noting

differences in the number of trees or shrubs in general that are actually cleared versus the number of trees and shrubs inventoried.

- Keystone proposes that tree and shrub replacement shall not be conducted within 20 to 30 feet of the permanent maintained corridor rather than within 25 feet of the pipeline.
- Keystone proposes to advise each landowner in writing of their right to have replacement trees/shrubs planted on the landowner's property, and landowners will have 60 days to elect to exercise that right by advising Keystone in writing. Failure of the landowner to exercise that right within the 60 day time period would constitute a waiver of the right.
- Keystone proposes that only tree/shrub replacements planted by shall be inspected, and that the annual report shall document the condition of a replacement planting but not any woodlands work completed. Keystone further proposes that if the 3 year survival rate is less that 75%, the Commission may order a one-time additional planting.

105. The Commission finds merit in some of Keystone's proposals for tree and shrub mitigation. Therefore, the Commission amends its previously approved Exhibit T5 Tree and Shrub Mitigation Specifications. The amended Tree and Shrub Mitigation Specifications for the Keystone Pipeline project is attached to this order. Amendments are shown by underlines and strikethroughs. Also attached is a final version of the amended Specifications.

106. Keystone agrees to inventory for replacement all shrubs in areas where the topsoil is disturbed and not preserved.

Noxious Weeds

107. Roger Johnson, North Dakota Agriculture Commissioner, notified Keystone by June 11, 2007 letter that the primary jurisdiction regarding noxious weed law resides with the counties and the jurisdiction of each county weed board extends to all land within the county, but the jurisdiction does not include any land within the corporate limits of a city if that city has its own noxious weed control program. Johnson encouraged Keystone to contact each county weed control officer and schedule a time for inspection of the land impacted by pipeline construction. Cooperation with the county weed boards will ensure that the disturbed land does not create a future noxious weed control concern.

108. Keystone has prepared a Construction Mitigation and Reclamation Plan (CMR Plan) that is a compilation of procedures for environmental mitigation, restoration and post monitoring compliance when constructing a pipeline across agricultural land,

pastureland, cultivated lands wetlands, streams, water bodies, grasslands. It also covers noise and dust control during construction; management of weeds including noxious weeds; fire prevention and spill prevention and containment; topsoil removal, storage and replacement; erosion and sediment control; and reclamation.

109. Keystone's CMR Plan at subsections 2.13, 4.11.4 and 4.11.5.3 sets forth procedures for control of noxious weeds.

Noise

110. There will be five pump stations in North Dakota located approximately 40 to 50 miles apart in relatively rural locations. Keystone provided late filed Exhibit T-29 which included maps depicting pump station locations and showing that, based on estimated noise projections, no residences or businesses will experience a sound pressure level greater than 55 decibels audible (dBa). The residence closest to a pump station, that is pump station 19 at milepost 217.7 in Sargent County, is not occupied. A sound pressure level of 55 dBa is approximately equivalent to noise from a car that is approximately 100 yards away and traveling at about 40 miles per hour. Keystone will manage the sound levels of the five pump stations in North Dakota to 55 dBa at the nearest noise sensitive area.

111. We find there is no significant impact relative to noise levels at generated by the pumps at the proposed station locations.

3rd Party Inspector

112. Koski testified that he is responsible for the discussion of environmental training and environmental inspection and post-construction monitoring and maintenance programs committed to by Keystone. Keystone will implement a post-monitoring construction program, some of which is outlined in the CMR Plan, to ensure that reclamation obligations and specifications and landowner commitments are met following construction. Keystone will also implement a detailed environmental inspection program during construction, which will involve environmental inspectors dedicated to environmental inspection activities in each construction spread conducted by the project. Environmental inspection is conducted to ensure compliance with commitments, permit conditions, regulations and specifications. Keystone will conduct a post-construction monitoring program to ensure compliance with commitments made to landowners and in various permitting processes.

113. In response to cross-examination by Commissioner Cramer concerning third-party oversight on location during construction of the pipeline, Gray testified that there is

precedence of jurisdiction oversight of pipeline construction. The Commission finds that it is appropriate for jurisdiction oversight of the construction of Keystone Pipeline.

114. The Commission will procure a qualified inspector for oversight during construction. Oversight inspection shall be conducted for the purpose of monitoring the construction activities to help ensure compliance with the Commission's order. Oversight inspection shall be accomplished through frequent spot inspections of construction activities conducted throughout the state including reclamation of disturbed surface areas. The cost of the inspector will be paid from the siting process expense recovery fund that was established under N.D.C.C. § 49-22-22 (3).

Other Considerations

115. Gray testified that Keystone would commit to compensating the landowners for any damages caused by Keystone related to the mixing of topsoil.

116. Kothari testified that normal farming practices would not impact the pipeline and that the pipeline is designed inherently to manage any sort of stresses with equipment crossing over the pipeline. If oil were to leak from the pipeline because of farm equipment or other equipment contact with it, Keystone would be responsible for the damage.

117. The total proposed Keystone route alignment through the State of North Dakota crosses approximately 14.7 miles (197 acres) of wetlands. This amounts to approximately 6% of the total construction disturbance. Keystone's CMR Plan at section 6.0 sets forth procedures for crossing wetlands.

118. Keystone stated that, to the extent practical, all effects of pipeline construction will be mitigated. All lands disturbed will be returned to their current land uses. Keystone's CMR Plan at section 4.0 sets forth construction practices when crossing agricultural, forest, pasture, range and grass lands.

119. Construction of the Keystone Project will involve approximately 500 construction workers working on two spreads. One crew will start at the Canadian Border and work southerly approximately 130 miles and the second crew will start northeast of Valley City and work southerly to the South Dakota border.

120. The Keystone Project will require 20-30 acre pipe yards for the storing of pipe, to be located approximately every 30 miles along the pipeline. The Keystone Project will have two or three 20-acre contractor yards in North Dakota.

121. The construction right-of-way for the Keystone Pipeline will be 110 feet wide made up of a 50-foot permanent easement – 25 feet either side of center of the pipeline – and a 60-foot wide temporary work space. The Keystone Project will require additional work space in areas where there are large excavations, river and stream crossings, highways and railroads. At the Pembina River crossing, the HDD operation will require a construction right-of-way of 150 feet wide and 250 feet long at the south side entry point and 150 feet wide and 150 feet long at the north side exit point. The HDD entry and exit points at the Sheyenne River crossing will require a construction right-of-way of 150 feet wide and 250 feet long.

122. Keystone will use construction tools to relieve compaction along the right-of-way, to return the agricultural land to the same compaction as adjacent land, and to return agricultural fields to their previous productivity.

123. Surface water will be used short term for hydrostatic testing but no extended consumptive use of water resources. All areas of natural vegetation within the right-of-way will be reclaimed, and no agricultural lands will be taken permanently out of production except for land used to install above ground facilities, (i.e. pump stations and valves).

124. Keystone is using the State One Call System to locate existing utilities, waterlines and septic systems, fiber optic cables, sewer lines and other utilities. Keystone works with these utilities and will enter into agreements concerning inspection and methods of crossing these utilities.

125. Landowners expressed concerns regarding landowner liabilities once the pipeline is operating. Cowling testified that he believes liability protection is provided for landowners in the easement document. Cowling stated that under the easement document Keystone will pay commercially reasonable costs and indemnify and hold the landowner harmless for any loss, damages, claims or actions resulting from Keystone's use of the easement, except to the extent such loss, damage claims or actions result from negligence or willful misconduct of the landowner or its agents.

From the foregoing Findings of Fact, the Commission now makes its:

Conclusions of Law

1. The Commission has jurisdiction over the applicant TransCanada Keystone Pipeline, LP and over the subject matter of this application under North Dakota Century Code Chapter 49-22.

2. Keystone is a utility as defined in North Dakota Century Code Section 49-22-03(13).

3. The pipeline proposed by Keystone is a transmission facility as defined in North Dakota Century Code Section 49-22-03(12).

4. Keystone is required to obtain written waiver under North Dakota Century Code Section 49-22-05.1 to locate the pipeline within 500 feet of an inhabited rural residence.

5. The location, construction, and operation of the proposed pipeline, as conditioned in this Order, will produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.

6. The proposed pipeline corridor and route, as conditioned in this Order, are compatible with the environmental preservation and the efficient use of resources.

7. The proposed pipeline corridor and route, as conditioned in this Order, will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

8. The proposed project, as conditioned in this Order, is of such design and location that it will produce minimal adverse effects, as defined under North Dakota Century Code Section 49-22-07.2.

From the foregoing Findings of Fact and Conclusions of Law, the Commission now makes its:

Order

The Commission orders:

1. TransCanada Keystone Pipeline, LP's application for waiver of procedures and time schedules is granted.

2. Keystone is issued Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 to construct the 218 mile, 30-inch crude oil pipeline. The route that is approved for this purpose is the route identified in the Application, as supplemented by Exhibit Nos. T16 and T17 that were submitted at the hearing for the reroutes at the Bures and Zacharias properties. The Route Permit between mileposts 168 and 170 is conditioned upon Commission approval of an acceptable HDD proposal that goes under the

Sheyenne River and the trees and shrubs on both the north and south embankments of the Sheyenne River valley. There shall be no construction activity related to the pipeline between mileposts 168 and 170 until Keystone's HDD proposal has been approved by the Commission. Keystone shall file a HDD proposal by May 21, 2008.

3. Keystone shall obtain approval from the Commission prior to any changes or deviations to the pipeline route.

4. Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 are effective for the life of the pipeline, but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

5. Keystone shall comply with all the rules and regulations of all other agencies having jurisdiction over any phase of the proposed project, and shall obtain all other necessary licenses and permits, and shall provide copies to the Commission prior to any construction.

6. Keystone shall obtain written waivers from affected landowners for location of the pipeline within 500 feet of a residence, school, or place of business prior to any construction in those areas.

7. Keystone shall conduct a preconstruction conference to be held prior to the commencement of any construction. The conference must include a Keystone representative, Keystone's construction supervisor, and Commission staff, to ensure that Keystone fully understands the conditions set forth in this order.

8. Keystone shall inform the Commission of the date construction will start just prior to the commencement of construction; report to the Commission on the date construction is started; and, once construction has started, shall keep the Commission updated on construction activities on a weekly basis.

9. Keystone shall construct and operate the pipeline in the manner described in the application and at the hearing and in late filed exhibits and supplemental materials, and in accordance with all applicable safety requirements.

10. The pipeline must be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in rangeland, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.

11. All crossings of graded roads must be bored unless the responsible governing agency specifically permits Keystone to open cut the road.

12. Keystone shall study the feasibility of HDD at the crossings of the Tongue River; a tributary to the Tongue River running through section 18, Township 161 North, Range 56 West, Pembina County; the North Branch Park River; Middle Branch Park River; South Branch Park River; North Branch Forest River; Middle Branch Forest River; and Goose River, which are classified as valuable fisheries.

13. Pipeline construction at the Tongue River, North Branch Park River, North Branch Forest River, Middle Branch Forest River, and North Branch Turtle River crossings shall avoid trees to the extent practicable. If Keystone needs additional construction work space at stream or river crossings and would like to clear more than an 85 feet width of trees, Keystone shall submit a clearing plan with the Commission to be approved prior to start of construction. The plan shall indicate the width of the cut (up to 135 feet) and the distance from the crossing (number of feet on each side of the crossing) that is needed.

14. The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less.

15. Keystone shall promptly report to the Commission the presence in the permit area of any critical habitat of threatened or endangered species, or of bald or golden eagles that Keystone becomes aware of and that were not previously reported to the Commission.

16. Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage, unless adequate protection measures approved by the Commission are taken.

17. All cultural resource mitigation plans must be submitted to the State Historic Preservation Office (SHPO) and approved by the SHPO prior to the start of any fieldwork or construction activity. Any route changes necessitated by requirements of the SHPO must be filed with the Commission and approved prior to the start of construction.

18. If any cultural resource, paleontological resource, archeological resource, historical resource, or gravesite is discovered during construction of the facility, earth disturbing activities in the immediate vicinity of the discovery must be halted. The resource must be marked, preserved and protected from any further disturbance until a professional examination can be made in consultation with the SHPO. A report of such

examination must be filed with the SHPO and the Commission. Clearance to proceed must be given by the SHPO and the Commission.

19. During construction, at least 12 inches of topsoil, where available (or topsoil to the depth of cultivation, whichever is greater), over and along trench areas where cuts will be made, must be stripped and segregated from subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. After backfilling is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must then be replaced over areas from which it was stripped only after the subsoil is replaced.

20. Reclamation and clean-up along the right-of-way must be continuous and coordinated with ongoing construction.

21. All pre-existing roads and lanes used during construction must be restored to a condition that will accommodate their previous use, and areas used as temporary roads during construction must be restored to their original condition.

22. Keystone shall, prior to any construction, file with the Commission a list identifying private and new access roads that will be used or required during construction and file a description of methods used by Keystone to reclaim those access roads.

23. Reclamation, fertilization and reseeding must be done by Keystone according to the Natural Resource Conservation Service unless otherwise specified by the landowner and approved by the Commission.

24. Keystone shall comply with the Commission's Tree and Shrub Mitigation Specifications attached to this order.

25. Keystone shall repair or replace all property removed or damaged during all phases of construction and operation of the proposed transmission facility including all fences and gates removed or damaged.

26. Keystone shall repair, replace, or compensate landowners where irrigation or drainage systems are damaged by construction.

27. In the event that a person's well is contaminated as a result of the pipeline operation, Keystone shall pay all costs associated with finding and providing a permanent water supply that is at least of similar quality and quantity; and any other

related damages including but not limited to any consequences, medical or otherwise, related to water contamination.

28. Any damage that occurs as a result of soil disturbance on a persons' property shall be paid for by Keystone.

29. No person will be held responsible for a pipeline leak that occurs as a result of normal farming practices over the top of or near the pipeline.

30. Keystone shall pay commercially reasonable costs and indemnify and hold the landowner harmless for any loss, damages, claims or actions resulting from Keystone's use of the easement, except to the extent such loss, damage claims or actions result from negligence or willful misconduct of the landowner or its agents.

31. Keystone shall prepare and implement an Emergency Response Plan. Prior to putting the Keystone Pipeline into operation, the manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies required under 49 CFR 195.402 shall be filed with the Commission, reviewed and approved by the Commission, and shall be in place.

32. Keystone shall prepare and implement a written integrity management program. Prior to putting the Keystone Pipeline into operation, the written integrity management program required under 49 CFR 195.452 shall be filed with the Commission, reviewed and approved by the Commission, and shall be in place.

33. Keystone shall provide the Commission with a hard copy and electronic copy of the pipeline alignment drawings with alignment data showing the pipeline as built, and an electronic version of the as-built pipeline alignment that can be imported into ESRI GIS mapping software, and shall provide this information within 6 months of the completion of the construction.

34. Keystone's obligation for reclamation and maintenance of the right-of-way shall continue throughout the life of the pipeline.

PUBLIC SERVICE COMMISSION

Tony Clark	**Susan E. Wefald**	**Kevin Cramer**
Commissioner	**President**	**Commissioner**

~~Case No. PU-06-421~~

Tree and Shrub Mitigation Specifications

Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (*e.g., Caragana arborescens, Elaeagnus angustifolia, Rhamnus cathartica, Tamarix chinensis, T. parviflora, T. ramosissima, Ulmus pumila*), shall be inventoried before cutting. The inventory shall record the location, number, and species of trees and shrubs.

2. In windbreaks and shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, shall be inventoried for replacement.

3. In native growth ~~non-windbreak and non-shelterbelt~~ areas, trees anticipated to be cleared that are 1 inch diameter at breast height ("dbh") or greater shall be inventoried for replacement.

4. In native growth ~~non-windbreak and non-shelterbelt~~ areas, shrubs anticipated to be cleared in the permanent right-of-way shall be inventoried for replacement.

5. In native growth ~~non-windbreak and non-shelterbelt~~ areas outside the permanent right-of-way, shrubs shall be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil shall be preserved and replaced after construction. Shrubs shall be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared shall be inventoried for replacement.

~~5.~~6. In native growth areas, trees and shrubs may be inventoried by actual count or by sampling method that will properly represent the woody vegetation population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (NDPSC) and approved prior to the start of construction shall define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots shall be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

Clearing

~~6.~~7. Trees and shrubs shall be selectively cleared, leaving mature trees and shrubs intact where practical.

~~7.~~8. The width of clear cuts through windbreaks, shelterbelts and all other wooded ~~woody~~ areas shall be limited to 50 feet or less unless otherwise approved by the NDPSC.

~~8.~~9. If the ~~number~~ area of trees or shrubs actually cleared differs from the ~~number~~ area inventoried, the difference in number of trees and shrubs to be replaced shall be noted on the inventory.

Replacement

~~9.~~10. Prior to tree/shrub replacement, documentation identifying the number and variety of trees removed as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings shall be filed with the ~~North Dakota Public Service Commission~~ (~~NSPSC~~) for approval.

~~10.~~11. Tree replacement shall be on a 2 to 1 basis with 2-year-old saplings. Shrub replacement shall be on a 2 to 1 basis with stem cuttings.

~~11.~~12. Trees and shrubs shall be replaced by the same species or similar species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

~~12.~~13. Tree and shrub replacement shall not be conducted within a 20 to 30 foot wide path over the ~~25 feet of the~~ pipeline~~(s)~~ to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.

~~13.~~14. Landowners shall be given the option of having replacement trees/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing those replacement trees/shrubs to be planted at alternative locations.

~~14.~~15. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings shall be filed with the NDPSC.

~~15.~~16. Tree/shrub replacements shall be inspected once a year for three years, on about the anniversary of the plantings, and, on or shortly before October 1 of each year, a report shall be submitted to the NDPSC documenting the condition of replacement planting and any woodlands work completed. If after three years from the anniversary of the plantings the survival rate is less than 75%, the NDPSC may order additional planting(s).

Case No. PU-06-421

Tree and Shrub Mitigation Specifications

Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (*e.g., Caragana arborescens, Elaeagnus angustifolia, Rhamnus cathartica, Tamarix chinensis, T. parviflora, T. ramosissima, Ulmus pumila*), shall be inventoried before cutting. The inventory shall record the location, number, and species of trees and shrubs.

2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, shall be inventoried for replacement.

3. In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height ("dbh") or greater shall be inventoried for replacement.

4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way shall be inventoried for replacement.

5. In native growth areas outside the permanent right-of-way, shrubs shall be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil shall be preserved and replaced after construction. Shrubs shall be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared shall be inventoried for replacement.

6. In native growth areas, trees and shrubs may be inventoried by actual count or by sampling method that will properly represent the woody

vegetation population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (NDPSC) and approved prior to the start of construction shall define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots shall be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

Clearing for Construction

7. Trees and shrubs shall be selectively cleared, leaving mature trees and shrubs intact where practical.

8. The width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to 50 feet or less unless otherwise approved by the NDPSC.

9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced shall be noted on the inventory.

Replacement

10. Prior to tree/shrub replacement, documentation identifying the number and variety of trees removed as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings shall be filed with the NSPSC for approval.

11. Tree replacement shall be on a 2 to 1 basis with 2-year-old saplings. Shrub replacement shall be on a 2 to 1 basis with stem cuttings.

12. Trees and shrubs shall be replaced by the same species or similar species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

13. Tree and shrub replacement shall not be conducted within a 20 to 30 foot wide path over the pipeline to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.

14. Landowners shall be given the option of having replacement trees/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing those replacement trees/shrubs to be planted at alternative locations.

15. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings shall be filed with the NDPSC.

16. Tree/shrub replacements shall be inspected once a year for three years, on about the anniversary of the plantings, and, on or shortly before October 1 of each year, a report shall be submitted to the NDPSC documenting the condition of replacement planting and any woodlands work completed. If after three years from the anniversary of the plantings the survival rate is less than 75%, the NDPSC may order additional planting(s).

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Certificate of Corridor Compatibility

Number 101

This is to certify that the Commission has designated a transmission facility corridor for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility corridor is designated by the Commission's February 21, 2008 Order in Case No PU-06-421.

This certificate is subject to the conditions and limitations in that order.

Bismarck, North Dakota, February 21, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

STATE OF NORTH DAKOTA

Route Permit

Number 111

This is to certify that the Commission has designated a transmission facility route for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility route is designated by the Commission's February 21, 2008 Order in Case No PU-06-421.

This certificate is subject to the conditions and limitations in that order.

Bismarck, North Dakota, February 21, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

SECOND SUPPLEMENTAL ORDER

May 30, 2008

Preliminary Statement

On February 21, 2008 the Commission issued Findings of Fact, Conclusions of Law and Order (Order) granting to TransCanada Keystone Pipeline, LP (Keystone) Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 for a 218 mile, 30-inch crude oil pipeline (Keystone Pipeline) in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent Counties of North Dakota.

The Order required that:

1. Keystone file stream crossing plans with the Commission and approved prior to the start of construction for crossings of valuable fisheries that will not be horizontal directional drilled, and that

2. Keystone file a clearing plan with the Commission and approved prior to the start of construction should additional construction work space be needed at stream or river crossings and would like to clear more than an 85 foot width of trees

The Order also adopted tree and shrub mitigation specifications setting forth the procedures for the inventory, clearing, and replacement of trees and shrubs removed during construction of the Keystone Pipeline. The specifications provide that trees and shrubs may be inventoried by actual count or by sampling method. A sampling plan developed by the company must be filed with the Commission and approved prior to the start of construction.

On April 7, 2008 Keystone filed a motion requesting approval of stream crossing methods, approval of extra work space in forested areas, and approval of a Tree and Shrub Sampling Plan. Keystone also filed for clarification of inconsistency in the Order concerning tree clearing widths.

On May 13, 2008 the Commission held an Informal Hearing on these matters. The Informal Hearing was continued to May 21, 2008, and to May 27, 2008.

On May 27, 2008 TransCanada filed a motion requesting approval of two (2) route refinements to be contingent of Keystone obtaining voluntary acquisition of easements from affected landowners.

Clarification on Tree Clearing Widths

Paragraph 14 of the Commission's Order states:

> *"The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less."*

Item number 8 of the Tree and Shrub Mitigation Specifications states:

> *"The width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to 50 feet or less unless otherwise approved by the North Dakota Public Service Commission."*

The requirement as stated in paragraph 14 of the Commission's Order is the specific requirement of the Commission in the permit issued to Keystone, and is controlling over the more general statement contained in the Tree and Shrub Mitigation Plan. It was determined that there is no actual inconsistency and the application of these two provisions were fully discussed and explained.

Additional Work Space in Forested Areas

Keystone's April 7, 2008 filing included site specific drawings depicting additional temporary work space in forested areas at certain stream or road crossings shown below:

MP 13.12 Unnamed Creek
MP 16.13 Tributary to Tongue River
MP 17 Unnamed Creek
MP 21.44 Unnamed Creek
MP 22.7 Unnamed Creek
MP 23.7 Cart Creek
MP 24.7 Unnamed Creek
MP 29.4 North Branch Park River
MP 31.8 Unnamed Creek

MP 33.3 Unnamed Stream and Middle Branch Park River
MP 34.8 Unnamed Creek
MP 35.3 Unnamed Creek
MP 36.3 Unnamed Creek
MP 37.2 Unnamed Creek
MP 38.1 Unnamed Creek
MP 42.7 Unnamed Stream
MP 46.4 North Branch Forest River
MP 49.2 Unnamed Stream
MP 54.8 Middle Branch Forest River
MP 107.1 Bored Crossing of 5th Street NE
MP 123.6 Bored Crossing of 11th Street SE
MP 212.6 Bored Crossing of 97th Street

Lois A. Gray provided both written and verbal testimony in support of Keystone's request.

On May 20, 2008 Keystone filed revisions to the following April 7 site specific drawings:

MP 13.12 Unnamed Creek
MP 22.7 Unnamed Creek
MP 33.4 Unnamed Stream and Middle Branch Park River
MP 35.3 Unnamed Creek
MP 36.3 Unnamed Creek
MP 37.2 Unnamed Creek
MP 38.1 Unnamed Creek
MP 42.7 Unnamed Stream
MP 49.2 Unnamed Stream

At the May 27, 2008 Informal Hearing, Keystone agreed that, at all stream crossings, it would maintain a setback or buffer from the stream bank to temporary workspace spoil areas of at least 25 feet.

On May 28, 2008 Keystone filed revisions to the May 20 site specific drawings listed above.

The additional temporary work space at stream crossings depicted on the site specific drawings is necessary to install the pipeline safely and with the least environmental impact to the stream.

Tree and Shrub Sampling Plan

Keystone has developed the Tree and Shrub Sampling Plan for Native Growth Areas to describe the methods Keystone will implement to count and document the woody vegetation to be removed during pipeline construction by the Keystone Project through Native Growth Areas.

Keystone provided this sampling plan to the ND State Forester who concurred with the recommendations of the Plan. Also, a concurrence was obtained from the USDA Forest Service.

A slight modification of the sampling plan was made to address the concerns of the Commission for random and representative sampling. The Tree and Shrub Sampling Plan for Native Growth Areas will accurately represent the quantity of trees and shrubs that will be replaced at a ratio of 2 to 1 after construction of the Keystone Project.

Stream Crossing Methods

Keystone has studied the feasibility of horizontal directional drilling (HDD) of the Tongue River and the South Branch Park River and determined that HDD crossings are feasible based upon the additional costs required to install the pipeline for a depth and length under the river bed to prevent exposure due to potential stream scour and lateral migration design requirements.

Keystone has studied the feasibility of HDD of the tributary to the Tongue River running through section 18, Township 161 North, Range 56 West, Pembina County; the North Branch Park River; Middle Branch Park River; North Branch Forest River; Middle Branch Forest River; and Goose River and determined that HDD of these streams is not feasible. Keystone submitted site specific drawings and an evaluation of the crossing method proposed at each river and stream crossing. Keystone met with North Dakota Game & Fish on March 4, 2008 regarding the stream crossing methods. By its March 28, 2008 email, the North Dakota Game & Fish confirmed that the crossing methods presented by Keystone at the meeting are acceptable.

The stream crossing methods and mitigation methods proposed by Keystone will protect aquatic species of the stream.

Two Route Refinements in Walsh County

The first proposed route refinement is in Walsh County from pipeline milepost 48.3 to milepost 49.8 (the Novak-Sticha reroute). TransCanada provided a copy of a waiver executed by Michael Kratochvil for the pipeline to be within 500 feet of his residence. The second route refinement is in Walsh County near pipeline mileposts 50 to 52 (the Capp reroute).

The May 19, 2008 affidavit of Loys A Gray stated that the 2 route refinements prevent Keystone's need to utilize eminent domain proceedings to acquire easements from landowners.

On May 27, 2008 Keystone provided Notice to State Agencies and Officials as identified pursuant to North Dakota Administrative Code Section 69-06-01-05, Notice to County Auditors and County Commissions pursuant to North Dakota Administrative Code Section 69-06-01-02, and Notice to State Senators and Representatives pursuant to North Dakota Administrative Code § 69-06-01-02 that they had until 5:00 p.m. on Thursday May 29, 2008 to file written comments with the Commission concerning the two refinements.

Keystone requests that the 2 route refinements be approved by the Commission contingent upon the filing of voluntary easements from the affected landowners. If the voluntary easements cannot be obtained and filed for a route refinement, that route refinement will not take effect. Keystone also indicates the reroutes are contingent upon completing cultural resource surveys.

By email dated May 28, 2008, the State Historic Preservation Office (SHPO) indicated that a portion of the proposed Novak-Sticha reroute was very recently inventoried for cultural resources and a newly recorded site–a stone foundation remnant–MAC-WA-01 (32WA260) was recorded in it. The SHPO states that this site warrants a formal evaluation regarding its significance and eligibility for the National Register of Historic Places if it is to be impacted and not avoided. The SHPO noted no concerns with respect to the Capp reroute.

Job Service North Dakota's May 28, 2008 letter indicated no comment on the project and no permits are required from Job Service.

At the Commission's May 29, 2008 Informal Hearing, Keystone indicated that additional information would be filed concerning the Capp reroute and requested that the Commission postpone its decision on the Capp reroute.

The issues to be considered in this proceeding are:

1. Will the location, construction, and operation of the proposed pipeline produce minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota?

2. Is the proposed pipeline compatible with the environmental preservation and the efficient use of resources?

3. Will the proposed pipeline corridor and route minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

The proposed Novak-Sticha reroute is compatible with the environmental preservation and the efficient use of resources and will result in minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

Order

The Commission orders:

1. The width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less. The width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less. This provision is controlling in this Order over the general requirement contained in the Tree and Shrub Mitigation Plan.

2. TransCanada Keystone Pipeline, LP's clearing plans filed April 7, 2008 and as amended on May 28, 2008 for additional construction work space at 22 locations are approved.

3. TransCanada Keystone Pipeline, LP's Tree and Shrub Sampling Plan for Native Growth Areas is approved and is attached to this order.

4. TransCanada Keystone Pipeline, LP's stream crossing plans are approved.

5. TransCanada Keystone Pipeline, LP's May 27, 2008 request for the route refinement referred to as the Novak-Sticha reroute is granted conditional upon the landowners granting voluntary easements to Keystone and the filing of the easements with the Commission and contingent upon completing cultural resource surveys.

6. This Order is supplemental to the Commission's February 21, 2008 Findings of Fact, Conclusions of Law and Order and the Commission's May 23, 2008 First Amended Order.

7. TransCanada Keystone Pipeline, LP is issued First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111.

8. First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111 are effective for the life of the pipeline, but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

PUBLIC SERVICE COMMISSION

Tony Clark **Commissioner**	**Susan E. Wefald** **President**	**Kevin Cramer** **Commissioner**

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

First Amended
Certificate of Corridor Compatibility Number 101

This is to certify that the Commission has designated a transmission facility corridor for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility corridor is designated by the Commission's February 21, 2008 Order in Case No PU-06-421 and is amended by the Commission's May 30, 2008 Order.

This certificate is subject to the conditions and limitations in that order.

Bismarck, North Dakota, May 30, 2008.

ATTEST:

Executive Director

PUBLIC SERVICE COMMISSION

Commissioner

STATE OF NORTH DAKOTA

Second Amended
Route Permit Number 111

This is to certify that the Commission has designated a transmission facility route for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility route is designated by the Commission's February 21, 2008 Order in Case No PU-06-421; is amended by the Commission's May 23, 2008 Order in Case No. PU-06-421 for route refinements; and is amended by the Commission's May 30, 2008 Order for a conditional route refinement.

This permit is subject to the conditions and limitations in those orders.

Bismarck, North Dakota, May 30, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***



TransCanada

In business to deliver

KEYSTONE PIPELINE PROJECT

North Dakota

Tree and Shrub Sampling Methodology for Native Growth Areas

Revised May 2008

Tree/Shrub Inventory – Native Growth Areas

The Keystone Project will pass through approximately 214 miles of North Dakota. Evaluation of the route indicates that the project ROW will impact approximately 46 acres of trees (windbreak/shelterbelts, woodlots, riparian areas) spread out over about 180 different locations.

The North Dakota Public Service Commission's Order and Tree and Shrub Mitigation Specification directs the project to inventory all trees and shrubs located in windbreaks and shelterbelts. In compliance with this condition, Keystone will record the numbers and species of trees and shrubs in windbreaks and shelterbelts.

In addition, the Specification requires the project to either inventory native growth (forested) areas by direct count or to develop a sampling plan to determine the number of trees and shrubs that will be removed in native growth areas. The Project may elect to inventory the woodlots by direct counting. Alternatively, this Plan defines a sampling methodology to determine tree and shrub numbers in native growth areas. This Plan will be filed with the Commission and approved prior to the implementation of this sampling methodology.

Field Sampling Method

The inventory methodology will include a review of the aerial photographs along the project route to identify random plot sampling locations in native growth areas. Native growth (forested) areas occur in approximately 66 locations along the project route in North Dakota. In order to ensure that the sampling method properly represents the woody vegetation population, twenty of these locations (30 percent) will be selected for field sampling, based on the availability of landowner permission.

As part of this sampling methodology, the woodland sample sites will be stratified by county to ensure spatial variability is represented. In addition, Keystone will inspect each woodland site after the aerial photography review to classify the woodland communities by woodland type and by the dominance of vegetation in general height classifications (e.g., tall trees, tall shrubs, low shrubs, etc.). Following this classification, a stratified random sampling procedure will be used to ensure sample sites were proportional to the acreage of each woodland type.

For each field sampling location, Keystone civil survey teams will stake the edge of the project construction ROW. Biological survey teams will then establish two sample plots within the ROW limits (20 ft x 50 ft) and will clearly mark these plots with rope or flagging. The biological survey teams will record the approximate location of the sample plot, as well as the number and species of trees (>1" dbh), tall shrubs and short shrubs located within the plot boundaries. The tree and shrub count data from the sample plots will be provided to the project team to

determine the numbers of trees and shrubs the project will remove from all areas of the project.

Tree/Shrub Estimating Procedure

The project will determine the total area of anticipated construction clearing through forested areas by utilizing the project's high-resolution aerial photography overlain with the project workspace boundaries. The boundaries of the forested areas will be marked in the GIS system and a measurement of the area of disturbance through each native growth areas will be obtained. Data gathered on the ground from the tree/shrub plot samples will be extrapolated on an area-basis to establish the numbers of trees and shrubs cleared during construction of the project. For example, if 7 trees were counted in 1000 square foot sample area, the number of trees cleared on one acre of woodland would be projected to be 305 trees (43,560 square feet in an acre / 1000 square feet (sample area) = 43.56 x 7 (trees counted in 1000 sq ft sample area) = 304.92 estimated trees per acre).

Conducting transects or sample plots and extrapolating the data to determine vegetation estimates over much larger areas is a common estimating tool for forest inventory and vegetation analyses. The methodology described above is designed to provide an accurate determination of tree and shrub numbers in native growth areas that will be cleared by the Keystone Project in North Dakota. If the area of trees and shrubs actually cleared differs from the area originally calculated, an updated estimate of trees and shrubs will be determined at the end of the project. The numbers of trees and shrubs identified by this inventory method will be used to determine the species and quantity of trees and shrubs to be replaced.

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

FOURTH SUPPLEMENTAL ORDER

July 2, 2008

On February 21, 2008, the Commission issued Findings of Fact, Conclusions of Law and Order (Order) granting to TransCanada Keystone Pipeline, LP (Keystone) Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 for a 218 mile, 30-inch crude oil pipeline (Keystone Pipeline) in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent Counties of North Dakota.

The Commission's May 23, 2008 First Supplemental Order granted First Amended Route Permit Number 111 for a route between mileposts 168 and 170 also known as the Sheyenne River crossing area, for a number of route refinements, and for five conditional route refinements.

The Commission's May 30, 2008 Second Supplemental Order granted First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111 for tree clearing plans, additional construction work space plans, stream crossing plans, Keystone's Tree and Shrub Sampling Plan for Native Growth Areas, and a conditional route refinement known as the Novak-Sticha reroute.

The Commission's June 19, 2008 Third Supplemental Order granted Third Amended Route Permit 111 for a conditional route refinement known as the Capp reroute.

On June 26, 2008, Keystone filed a motion requesting approval of additional work space in certain shelter belts along the route beyond the 50 feet currently allowed by the Commission's February 21, 2008 Order. The June 24, 2008 affidavit of Loys A Gray III stated that additional right-of-way width is require at shelter belts to facilitate the use of mechanized welding. Keystone is requesting approval of up to 15 feet additional work space at all shelter belt crossings, an increase from 50 feet clearing up to 65 feet

clearing. Gray states that the additional temporary work space is necessary to install the pipeline safely and with the least environmental impact to the land. Gray states that Keystone will replace the trees removed from the additional temporary work space at a ratio of five trees replaced for each tree removed instead of the two trees replaced for each tree removed as required by the Tree and Shrub Mitigation Plan in this proceeding.

The issue to be considered is whether the granting of additional work space produce minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota?

Trees must be protected to the extent possible and Keystone Pipeline construction must, if practicable, avoid trees at all shelterbelt crossings.

The proposal for additional work space at shelterbelts is compatible with the environmental preservation and the efficient use of resources and will result in minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

Order

The Commission orders:

1. TransCanada Keystone Pipeline, LP's June 26, 2008 request for an increase from 50 feet clearing up to 65 feet clearing at all shelterbelt crossings is granted. Trees shall be protected to the extent possible and Keystone Pipeline construction shall, if practicable, avoid trees at shelterbelt crossings.

2. TransCanada Keystone Pipeline, LP shall replace the trees removed from the additional temporary work space at a ratio of five trees replaced for each tree removed.

3. This Order is supplemental to the Commission's February 21, 2008 Findings of Fact, Conclusions of Law and Order; the May 23, 2008 First Supplemental Order; the May 30, 2008 Second Supplemental Order; and the June 19, 2008 Third Supplemental Order.

4. TransCanada Keystone Pipeline, LP is issued Second Amended Certificate of Corridor Compatibility Number 101 and Fourth Amended Route Permit Number 111.

5. Second Amended Certificate of Corridor Compatibility Number 101 and Fourth Amended Route Permit Number 111 are effective for the life of the pipeline, but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

PUBLIC SERVICE COMMISSION

Tony Clark	**Susan E. Wefald**	**Kevin Cramer**
Commissioner	**President**	**Commissioner**

STATE OF NORTH DAKOTA

Fourth Amended
Route Permit Number 111

This is to certify that the Commission has designated a transmission facility route for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility route is designated by the Commission's February 21, 2008 Order; is amended by the Commission's May 23, 2008 Order for route refinements; is amended by the Commission's May 30, 2008 Order for a conditional route refinement; is amended by the Commission's June 19, 2008 Order for a conditional route refinement; and is amended by the Commission's July 2, 2008 Order for additional tree clearing; all in Case No PU-06-421.

This permit is subject to the conditions and limitations in those orders.

Bismarck, North Dakota, July 2, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

PUBLIC SERVICE COMMISSION

STATE OF NORTH DAKOTA

Second Amended
Certificate of Corridor Compatibility Number 101

This is to certify that the Commission has designated a transmission facility corridor for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility corridor is designated by the Commission's February 21, 2008 Order; is amended by the Commission's May 30, 2008 Order; and is amended by the Commission's July 2, 2008 Order for additional tree clearing; all in Case No PU-06-421.

This certificate is subject to the conditions and limitations in that order.

Bismarck, North Dakota, July 2, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

AFFIDAVIT OF SERVICE BY CERTIFIED MAIL

STATE OF NORTH DAKOTA
COUNTY OF BURLEIGH

Janet Marquart deposes and says that:

she is over the age of 18 years and not a party to this action and, on the **7th** day of **July, 2008,** she deposited in the United States Mail, at Bismarck, North Dakota, **one** envelope with certified postage, return receipt requested, fully prepaid, securely sealed, containing a photocopy of:

Fourth Supplemental Order

and an original of:

Fourth Amended Route Permit Number 111
Second Amended Certificate of Corridor Compatibility Number 101

Todd Kranda
Kelsch Kelsch Ruff & Kranda
PO Box 1266
Mandan, ND 58554-1266

Certified No. 7008 0150 0003 3556 3657

Janet Marquart further deposes and says that on the **7th day of July, 2008,** she deposited in the United States Mail, Bismarck, North Dakota, **three** envelopes by certified mail, with postage fully prepaid, securely sealed, each containing a photocopy of each of the same:

The envelopes were addressed as follows:

Jana Linderman
Plains Justice
100 First Street SW
Cedar Rapids, IA 52404

Certified No. 7008 0150 0003 3556 3664

Derrick Braaten
Sarah Vogel Law Firm PC
222 N. 4th Street
Bismarck, ND 58501-4004

Certified No. 7008 0150 0003 3556 3671

Thomas Kelsch
Kelsch Kelsch Ruff & Kranda
PO Box 1266
Mandan, ND 58554-1266
Certified No. 7008 0150 0003 3556 3688

Each address shown is the respective addressee's last reasonably ascertainable post office address.

Subscribed and sworn to before me
this 7th day of **July, 2008**

Janet Marquart

Shelly A Bauske
Notary Public

SEAL

SHELLY A BAUSKE
Notary Public
State of North Dakota
My Commission Expires July 22, 2010

APPROVED

DATE: 8-27-08

MOTION

August 27, 2008

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

I move the Commission adopt the Fifth Supplemental Order in TransCanada Keystone Pipeline, LP's application to construct and operate a 218-mile, 30-inch crude oil pipeline in Cavalier to Sargent Counties, North Dakota, granting TransCanada's request for additional temporary workspace at forested areas, Case No. PU-06-421.

PJF

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

TransCanada Keystone Pipeline, LP
30-Inch Crude Oil Pipeline/Cavalier to Sargent Counties
Siting Application

Case No. PU-06-421

FIFTH SUPPLEMENTAL ORDER

August 27, 2008

On February 21, 2008, the Commission issued Findings of Fact, Conclusions of Law and Order (Order) granting to TransCanada Keystone Pipeline, LP (Keystone) Certificate of Corridor Compatibility No. 101 and Route Permit No. 111 for a 218 mile, 30-inch crude oil pipeline (Keystone Pipeline) in Cavalier, Pembina, Walsh, Nelson, Steele, Barnes, Ransom, and Sargent Counties of North Dakota.

The Commission's May 23, 2008 First Supplemental Order granted First Amended Route Permit Number 111 for a route between mileposts 168 and 170 also known as the Sheyenne River crossing area, for a number of route refinements, and for five conditional route refinements.

The Commission's May 30, 2008 Second Supplemental Order granted First Amended Certificate of Corridor Compatibility Number 101 and Second Amended Route Permit Number 111 for tree clearing plans, additional construction work space plans, stream crossing plans, Keystone's Tree and Shrub Sampling Plan for Native Growth Areas, and a conditional route refinement known as the Novak-Sticha reroute.

The Commission's June 19, 2008 Third Supplemental Order granted Third Amended Route Permit 111 for a conditional route refinement known as the Capp reroute.

The Commission's July 2, 2008 Fourth Supplemental Order granted Second Amended Certificate of Corridor Compatibility Number 101 and Fourth Amended Route Permit 111 for an increase from 50 feet clearing up to 65 feet clearing at certain shelterbelt crossings along the route.

On July 30, 2008 Keystone filed a motion requesting approval of additional work space at six forested stream crossings and at one forested road crossing. The July 25, 2008 affidavit of Loys A Gray III stated that additional temporary work space is necessary to install the pipeline safely and with the least environmental impact to the

streams. Gray states that Keystone will replace the trees removed from the additional temporary work space at a ratio of five trees replaced for each tree removed instead of the two trees replaced for each tree removed as required by the Tree and Shrub Mitigation Plan in this proceeding.

The issue to be considered is whether the granting of additional work space will produce minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota?

Trees must be protected to the extent possible and Keystone Pipeline construction must, if practicable, avoid trees at all the forested crossings.

The proposal for additional work space at the six forested stream crossings and at one forested road crossing is compatible with the environmental preservation and the efficient use of resources and will result in minimal adverse effects on the environment, natural resources, and upon the welfare of the citizens of North Dakota while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

Order

The Commission orders:

1. TransCanada Keystone Pipeline, LP's July 30, 2008 request for additional work space at the six forested stream crossings and at one forested road crossing is granted. Trees shall be protected to the extent possible and Keystone Pipeline construction shall, if practicable, avoid trees at the forested crossings.

2. TransCanada Keystone Pipeline, LP shall replace the trees removed from the additional temporary work space at a ratio of five trees replaced for each tree removed.

3. This Order is supplemental to the Commission's February 21, 2008 Findings of Fact, Conclusions of Law and Order; the May 23, 2008 First Supplemental Order; the May 30, 2008 Second Supplemental Order; the June 19, 2008 Third Supplemental Order, and the July 2, 2008 Fourth Supplemental Order.

4. TransCanada Keystone Pipeline, LP is issued Third Amended Certificate of Corridor Compatibility Number 101 and Fifth Amended Route Permit Number 111.

5. Third Amended Certificate of Corridor Compatibility Number 101 and Fifth Amended Route Permit Number 111 are effective for the life of the pipeline, but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.

PUBLIC SERVICE COMMISSION

Tony Clark	**Susan E. Wefald**	**Kevin Cramer**
Commissioner	**President**	**Commissioner**

STATE OF NORTH DAKOTA

Third Amended
Certificate of Corridor Compatibility Number 101

This is to certify that the North Dakota Public Service Commission has designated a transmission facility corridor for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility corridor is designated by the Commission's February 21, 2008 Order; is amended by the Commission's May 30, 2008 Order; is amended by the Commission's July 2, 2008 Order for additional tree clearing; and is amended by the Commission's August 27, 2008 Order for additional work space at forested stream/road crossings; all in Case No PU-06-421.

This certificate is subject to the conditions and limitations in that order.

Bismarck, North Dakota, August 27, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

STATE OF NORTH DAKOTA

Fifth Amended
Route Permit Number 111

This is to certify that the North Dakota Public Service Commission has designated a transmission facility route for TransCanada Keystone Pipeline, LP to construct and operate a 218-mile, 30-inch crude oil pipeline with associated facilities and pipeline interconnections in Cavalier to Sargent Counties, North Dakota.

The transmission facility route is designated by the Commission's February 21, 2008 Order; is amended by the Commission's May 23, 2008 Order for route refinements; is amended by the Commission's May 30, 2008 Order for a conditional route refinement; is amended by the Commission's June 19, 2008 Order for a conditional route refinement; is amended by the Commission's July 2, 2008 Order for additional tree clearing; and is amended by the Commission's August 27, 2008 Order for additional work space at forested stream/road crossings; all in Case No PU-06-421.

This permit is subject to the conditions and limitations in those orders.

Bismarck, North Dakota, August 27, 2008.

ATTEST: ***PUBLIC SERVICE COMMISSION***

Executive Director ***Commissioner***

Appendix B

Inventory and Mitigation Tables

Table B-1. Trees and shrubs inventoried prior to clearing along the mainline in North Dakota and numbers of trees and shrubs calculated for replacement

Table B-2. Trees and shrubs inventoried prior to clearing along the mainline in North Dakota and numbers of trees and shrubs calculated for replacement: twenty-two locations where additional temporary extra workspace (EWS) was approved

Table B-3. Trees and shrubs inventoried prior to clearing in North Dakota pipeyards and railsidings and numbers of trees and shrubs calculated for replacement

Table B-1. Trees and shrubs inventoried prior to clearing along the mainline in North Dakota and numbers of trees and shrubs calculated for replacement. Width of clearing for the right-of-way (ROW) and temporary extra workspace (EWS) was approved up to 65' through windbreaks and up to 85' through woodlots.[1]

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
0.00	0.01	Windbreak	EN1-042408-WB001	American elm	17	16	10	N/A	26
				Green ash	19	18	15	N/A	33
				Siberian peashrub	19	18	N/A	N/A	18
0.11	0.13	Windbreak	EN1-042408-WB002	Cottonwood	7	6	5	N/A	11
0.79	0.79	Windbreak	EN1-042408-WB003	Cottonwood	19	18	15	N/A	33
				Siberian peashrub	39	36	N/A	N/A	36
0.90	0.90	Windbreak	EN1-042408-WB004	Common lilac	95	86	N/A	N/A	86
				Green ash	22	20	15	N/A	35
4.66	4.73	Woodlot	EN1-060808-WL002	Bur oak	193	176	52	88	316
				Chokecherry	88	80	24	40	144
				Hedge cotoneaster	1	0	N/A	N/A	0
				Quaking aspen	23	20	6	10	36
				Snowberry	372	338	N/A	N/A	338
4.81	4.89	Woodlot	EN1-060808-WL003	Bur oak	36	28	10	18	56
				Chokecherry	98	78	28	48	154
				Round-leaved hawthorn	24	20	N/A	N/A	20
				Snowberry	326	258	N/A	N/A	258
				Tatarian honeysuckle	6	4	N/A	N/A	4

[1] The North Dakota Public Service Commission Order of February 21, 2008, (Order) stipulated that the width of clearcuts shall not exceed 50' through windbreaks and 85' through woodlots and that the replacement ratio shall be 2:1. The Fourth Supplemental Order of July 2, 2008, increased the allowable clearcut width through windbreaks to 65' and sets the replacement ratio for trees removed within 50'-65' EWS at 5:1.

[2] The numbers and species of trees and shrubs in each category (50' ROW, 50'-65' EWS, 65-85' EWS) were extrapolated based on tree and shrub composition and density within the inventory area.

[3] Trees and shrubs were calculated for replacement within the 50'-wide ROW, in accordance with the Original Order of February 21, 2008.

[4] Trees, only, were calculated for replacement in all EWS, in accordance with the Fourth Supplemental Order, July 2, 2008

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
5.08	5.10	Woodlot	EN1-060808-WL004	Balsam poplar	2	2	0	2	4
				Boxelder maple	21	16	6	10	32
				Bur oak	17	12	6	8	26
				Chokecherry	9	6	2	4	12
				Round-leaved hawthorn	5	4	N/A	N/A	4
				Snowberry	1	0	N/A	N/A	0
				Willow	2	2	0	2	4
5.96	5.96	Windbreak	EN1-042408-WB005	Siberian elm	23	20	15	N/A	35
7.63	7.65	Windbreak	EN1-042408-WB006	Siberian elm	13	12	10	N/A	22
				Siberian peashrub	62	56	N/A	N/A	56
7.96	7.98	Windbreak	EN1-042408-WB007	Siberian elm	6	6	5	N/A	11
				Siberian peashrub	19	18	N/A	N/A	18
8.50	8.51	Windbreak	EN1-042508-WB008	Cottonwood	1	0	0	N/A	0
				Siberian elm	22	20	15	N/A	35
				Siberian peashrub	68	62	N/A	N/A	62
				White willow	14	12	10	N/A	22
9.00	9.00	Windbreak	EN1-042508-WB009	Cottonwood	9	8	10	N/A	18
9.18	9.18	Windbreak	EN1-042508-WB010	Cottonwood	17	16	10	N/A	26
9.33	9.33	Windbreak	EN1-042508-WB011	Cottonwood	10	10	5	N/A	15
9.49	9.50	Windbreak	EN1-042508-WB012	Shrubby cinquefoil	11	10	N/A	N/A	10
				White willow	17	16	10	N/A	26
10.00	10.01	Windbreak	EN1-042508-WB013	Chokecherry	3	4	0	N/A	4
				Green ash	17	22	10	N/A	32
10.24	10.25	Windbreak	EN1-042508-WB014	Boxelder maple	7	8	5	N/A	13
				Chokecherry	4	4	5	N/A	9
				Siberian peashrub	21	24	N/A	N/A	24
11.24	11.24	Windbreak	EN1-042508-WB015	Chokecherry	1	0	0	N/A	0
				Common lilac	24	0	N/A	N/A	0
				Green ash	2	0	0	N/A	0

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
11.75	11.76	Windbreak	EN1-042508-WB016	American plum	28	26	N/A	N/A	26
				Boxelder maple	1	0	0	N/A	0
				Chokecherry	40	36	25	N/A	61
				Cottonwood	15	14	10	N/A	24
				Green ash	17	16	10	N/A	26
				Siberian elm	28	26	20	N/A	46
13.36	13.37	Windbreak	EN1-042508-WB017	Siberian elm	5	6	5	N/A	11
13.48	13.49	Windbreak	EN1-042508-WB018	Siberian peashrub	15	16	N/A	N/A	16
				White willow	8	8	5	N/A	13
13.60	13.60	Windbreak	EN1-042508-WB019	Siberian elm	10	10	10	N/A	20
13.77	13.77	Windbreak	EN1-042508-WB020	Siberian elm	8	10	5	N/A	15
				Siberian peashrub	12	14	N/A	N/A	14
14.24	14.25	Windbreak	none	Boxelder maple	25	22	15	N/A	37
				European mountain ash	29	26	20	N/A	46
16.58	16.58	Woodlot	EN2-051408-WL011	Green ash	12	0	0	0	0
16.63	16.66	Woodlot	EN2-051408-WL012	American linden	2	2	0	0	2
				Chokecherry	3	4	0	2	6
				Green ash	17	20	2	6	28
				Siberian elm	6	8	2	2	12
				unknown shrub	150	178	N/A	N/A	178
				unknown shrub	50	60	N/A	N/A	60
				unknown shrub	100	118	N/A	N/A	118
				unknown tree	2	2	0	0	2
				unknown tree	2	2	0	0	2
17.74	17.77	Windbreak	EN1-042608-WB022	Boxelder maple	2	2	0	N/A	2
				Green ash	3	4	0	N/A	4
				Willow	6	8	0	N/A	8

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
18.00	18.12	Woodlot	EN2-051408-WL014	Bur oak	79	72	22	36	130
				Chokecherry	1,780	1,616	488	814	2,918
				Green ash	92	84	26	42	152
				Juneberry	8	8	N/A	N/A	8
				Quaking aspen	222	202	60	102	364
				Round-leaved hawthorn	15	14	N/A	N/A	14
				Siberian elm	14	12	4	6	22
				Snowberry	135	122	N/A	N/A	122
				unknown shrub	150	136	N/A	N/A	136
				unknown tree	990	900	270	452	1,622
19.61	19.63	Windbreak	N/A[5]	Boxelder maple	2	2	0	N/A	2
				Green ash	2	2	0	N/A	2
				Round-leaved hawthorn	0	0	N/A	N/A	0
				Siberian elm	1	0	0	N/A	0
20.22	20.25	Windbreak	EN1-042608-WB023	Boxelder maple	5	4	5	N/A	9
				Green ash	7	6	5	N/A	11
				Round-leaved hawthorn	1	0	N/A	N/A	0
				Siberian elm	2	2	0	N/A	2
20.91	20.92	Windbreak	EN1-042608-WB025	Green ash	9	10	5	N/A	15
				Siberian peashrub	8	10	N/A	N/A	10
21.02	21.03	Windbreak	EN1-042608-WB026	Green ash	14	12	10	N/A	22
				Siberian peashrub	12	10	N/A	N/A	10

[5] Feature was not inventoried; composition and numbers were extrapolated based on feature EN1-042608-WB023.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
25.08	25.14	Woodlot	EN1-042708-WL020 EN2-051508-WL020	Chokecherry	79	78	18	38	134
				Green ash	7	6	2	4	12
				Juneberry	4	4	N/A	N/A	4
				Quaking aspen	300	292	68	144	504
				Siberian elm	7	6	2	4	12
				unknown shrub	310	302	N/A	N/A	302
				unknown shrub	61	60	N/A	N/A	60
				unknown tree	3	2	0	2	4
				unknown tree	10	10	2	4	16
25.17	25.18	Windbreak	EN1-042708-WB027	American cranberrybush	25	24	N/A	N/A	24
				Cottonwood	1	0	0	N/A	0
				Redosier dogwood	16	16	N/A	N/A	16
				Willow	30	30	25	N/A	55
25.93	25.94	Windbreak	EN1-042708-WB028	American cranberrybush	10	10	N/A	N/A	10
				Chokecherry	65	62	40	N/A	102
				Green ash	20	20	15	N/A	35
				Willow	2	2	0	N/A	2
28.53	28.54	Windbreak	EN1-042708-WB029	Green ash	12	10	10	N/A	20
				Siberian peashrub	44	40	N/A	N/A	40
28.60	28.61	Windbreak	EN1-042708-WB030	Green ash	13	12	10	N/A	22
				Siberian peashrub	82	74	N/A	N/A	74
29.46	29.47	Windbreak	EN1-042708-WB031	Colorado spruce	20	18	15	N/A	33
				Common lilac	66	60	N/A	N/A	60
				Green ash	1	0	0	N/A	0

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
29.96	30.12	Woodlot	EN1-042708-WL022 EN2-051508-WL022	American linden	2	2	0	0	2
				Boxelder maple	28	24	6	12	42
				Bur oak	4	4	0	2	6
				Chokecherry	465	404	112	214	730
				Green ash	86	74	20	40	134
				Redosier dogwood	550	478	N/A	N/A	478
				Siberian elm	47	40	12	22	74
				Snowberry	385	334	N/A	N/A	334
				unknown shrub	150	130	N/A	N/A	130
				unknown shrub	119	104	N/A	N/A	104
31.02	31.03	Woodlot	EN4-052008-WL023	Boxelder maple	22	12	6	24	42
				Cottonwood	4	2	2	4	8
				Siberian elm	1	0	0	2	2
31.35	31.44	Woodlot	EN1-042808-WL024 EN4-052008-WL024	American elm	5	4	2	6	12
				Beaked hazelnut	113	96	N/A	N/A	96
				Bur oak	75	64	20	92	176
				Chokecherry	129	110	34	160	304
				Green ash	107	90	28	132	250
				Hedge cotoneaster	84	72	N/A	N/A	72
				Juneberry	14	12	N/A	N/A	12
				Quaking aspen	13	12	4	16	32
				Round-leaved hawthorn	3	2	N/A	N/A	2
				Siberian elm	3	2	0	4	6
32.03	32.03	Windbreak	EN1-042708-WB032	Beaked hazelnut	8	8	N/A	N/A	8
				Bur oak	6	6	5	N/A	11
				Chokecherry	35	32	25	N/A	57
				Green ash	3	2	0	N/A	2
				Juneberry	39	34	N/A	N/A	34
				Round-leaved hawthorn	2	2	N/A	N/A	2

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
32.31	32.38	Woodlot	EN4-052008-WL026	American elm	8	8	2	4	14
				American linden	1	0	0	0	0
				Beaked hazelnut	3	2	N/A	N/A	2
				Boxelder maple	27	26	8	12	46
				Bur oak	190	180	60	80	320
				Chokecherry	29	28	10	12	50
				Green ash	77	72	24	32	128
				Juneberry	40	38	N/A	N/A	38
				Round-leaved hawthorn	5	4	N/A	N/A	4
				Siberian elm	3	2	0	2	4
				Snowberry	107	102	N/A	N/A	102
34.51	34.52	Windbreak	EN1-042808-WB033	Siberian elm	4	4	5	N/A	9
34.91	34.92	Windbreak	EN1-042808-WB034	American cranberrybush	2	2	N/A	N/A	2
				Boxelder maple	1	0	0	N/A	0
				Bur oak	1	0	0	N/A	0
				Chokecherry	10	10	5	N/A	15
				Green ash	4	4	5	N/A	9
				Round-leaved hawthorn	11	10	N/A	N/A	10
37.72	37.74	Woodlot	N/A[6]	American cranberrybush	1	0	N/A	N/A	0
				Boxelder maple	1	0	0	0	0
				Bur oak	1	0	0	0	0
				Chokecherry	6	0	2	6	8
				Green ash	2	0	0	2	2
				Round-leaved hawthorn	7	0	N/A	N/A	0
40.14	40.14	Windbreak	EN1-042808-WB035	Green ash	14	12	10	N/A	22
				Siberian peashrub	12	10	N/A	N/A	10

[6] Feature was not inventoried; composition and numbers were extrapolated based on feature EN1-042808-WB034.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
41.40	41.58	Woodlot	EN1-042808-WL033 EN4-052108-WL033	American elm	3	2	0	2	4
				American hazelnut	111	102	N/A	N/A	102
				Boxelder maple	11	10	2	6	18
				Bur oak	114	106	30	52	188
				Chokecherry	137	126	36	62	224
				Green ash	39	36	10	18	64
				Juneberry	21	20	N/A	N/A	20
				Round-leaved hawthorn	60	56	N/A	N/A	56
				Siberian elm	20	18	6	10	34
				Snowberry	745	690	N/A	N/A	690
42.39	42.41	Woodlot	EN4-052108-WL038	Chokecherry	22	16	6	12	34
				Green ash	1	0	0	0	0
				Juneberry	52	36	N/A	N/A	36
				Round-leaved hawthorn	130	90	N/A	N/A	90
				Snowberry	535	370	N/A	N/A	370
42.46	42.52	Woodlot	EN4-052108-WL039	Chokecherry	116	114	22	62	198
				Green ash	1	0	0	0	0
				Juneberry	30	30	N/A	N/A	30
				Round-leaved hawthorn	1,078	1,050	N/A	N/A	1,050
				Snowberry	1,665	1,622	N/A	N/A	1,622
44.83	44.84	Woodlot	EN4-052108-WL041	none	0	0	0	0	0
51.35	51.44	Windbreak	N/A[7]	Cottonwood	28	22	15	N/A	37
				Willow	5	4	5	N/A	9
52.62	52.63	Windbreak	EN1-042908-WB037	Cottonwood	12	12	10	N/A	22
				Willow	2	2	0	N/A	2
52.75	52.76	Windbreak	EN1-042908-WB038	Colorado spruce	18	16	10	N/A	26

[7] Feature was not inventoried due to post-inventory reroute; composition and numbers were extrapolated based on feature EN1-042908-WB037.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
53.03	53.05	Woodlot	EN4-052208-WL044	Boxelder maple	4	4	2	2	8
				Chokecherry	100	102	38	34	174
				Juneberry	20	20	N/A	N/A	20
				Round-leaved hawthorn	80	82	N/A	N/A	82
				Siberian elm	2	2	0	0	2
53.23	53.23	Windbreak	EN1-042908-WB039	Black Hills white spruce	15	14	10	N/A	24
53.35	53.36	Windbreak	EN1-042908-WB040	Black Hills white spruce	8	8	5	N/A	13
54.11	54.18	Windbreak	EN1-042908-WB041	Cottonwood	1	0	0	N/A	0
				Green ash	44	38	30	N/A	68
				Siberian peashrub	63	54	N/A	N/A	54
56.51	56.54	Windbreak	EN1-042908-WB042	American cranberrybush	30	30	N/A	N/A	30
				Boxelder maple	11	10	5	N/A	15
				Chokecherry	42	40	25	N/A	65
				Cottonwood	1	0	0	N/A	0
				Green ash	16	16	10	N/A	26
57.22	57.26	Woodlot[8]	WB-043[9]	Boxelder maple	17	12	4	10	26
58.20	58.22	Windbreak	EN1-042908-WB044	Boxelder maple	29	28	20	N/A	48

[8] Feature was re-classified after inventories were complete. Re-classification was based on definitions set forth in the Original Order of February 21, 2008.
[9] Feature was not inventoried due to denied access; values were extrapolated based on feature EN1-042908-WB044.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
58.60	58.62	Woodlot	EN4-052208-WL046	Boxelder maple	2	2	0	0	2
				Bur oak	9	12	2	2	16
				Chokecherry	65	84	16	12	112
				Common hackberry	5	6	2	0	8
				Juneberry	1	2	N/A	N/A	2
				Redosier dogwood	2	2	N/A	N/A	2
				Round-leaved hawthorn	65	84	N/A	N/A	84
				Snowberry	280	362	N/A	N/A	362
				Tatarian honeysuckle	3	4	N/A	N/A	4
62.07	62.08	Windbreak	EN1-043008-WB045	American cranberrybush	11	10	N/A	N/A	10
				American plum	5	4	N/A	N/A	4
				Boxelder maple	22	20	15	N/A	35
				Cottonwood	5	4	5	N/A	9
				Green ash	14	12	10	N/A	22
				Redosier dogwood	1	0	N/A	N/A	0
				Siberian peashrub	25	24	N/A	N/A	24
63.95	63.97	Windbreak	EN1-043008-WB046	American cranberrybush	3	2	N/A	N/A	2
				American plum	6	6	N/A	N/A	6
				Cottonwood	13	12	10	N/A	22
				Green ash	16	14	10	N/A	24
				Siberian elm	33	30	25	N/A	55
				Siberian peashrub	1	0	N/A	N/A	0
65.06	65.07	Windbreak	EN1-043008-WB047	American cranberrybush	6	2	N/A	N/A	2
				American plum	6	2	N/A	N/A	2
				Chokecherry	5	2	5	N/A	7
				Redosier dogwood	6	2	N/A	N/A	2
				Round-leaved hawthorn	22	6	N/A	N/A	6
				Silverberry	171	46	N/A	N/A	46

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
65.67	65.68	Windbreak	EN1-043008-WB048	Siberian elm	11	10	5	N/A	15
65.84	65.86	Windbreak	EN1-043008-WB049	American cranberrybush	16	14	N/A	N/A	14
				Chokecherry	27	24	20	N/A	44
				Cottonwood	9	8	5	N/A	13
				Green ash	12	10	10	N/A	20
				Siberian elm	5	4	5	N/A	9
				Siberian peashrub	7	6	N/A	N/A	6
74.02	74.03	Windbreak	EN1-043008-WB050	Green ash	20	18	15	N/A	33
				Siberian elm	8	8	5	N/A	13
				Siberian peashrub	255	232	N/A	N/A	232
77.74	77.78	Windbreak	EN1-043008-WB051	Cottonwood	1	2	0	N/A	2
				Green ash	12	12	10	N/A	22
				White willow	11	12	10	N/A	22
84.22	84.22	Windbreak	EN1-043008-WB052	Cottonwood	2	0	0	N/A	0
84.47	84.47	Windbreak	EN1-043008-WB053	Cottonwood	4	4	5	N/A	9
93.03	93.04	Windbreak	EN1-043008-WB054	Siberian elm	5	4	5	N/A	9
93.14	93.15	Windbreak	EN1-043008-WB055	Siberian elm	4	4	5	N/A	9
94.78	94.78	Windbreak	EN1-050108-WB056	Green ash	3	0	0	N/A	0
96.35	96.37	Windbreak	EN1-050108-WB057	Green ash	15	14	10	N/A	24
				Siberian peashrub	34	30	N/A	N/A	30
96.82	96.89	Windbreak	EN1-050108-WB058	American cranberrybush	63	56	N/A	N/A	56
				Chokecherry	34	30	20	N/A	50
				Cottonwood	22	20	15	N/A	35
				Green ash	20	18	15	N/A	33
				Redosier dogwood	14	12	N/A	N/A	12
104.71	104.72	Windbreak	EN1-050108-WB059	Siberian elm	62	56	40	N/A	96
117.33	117.36	Windbreak	EN1-050108-WB061	Boxelder maple	26	24	20	N/A	44
				Chokecherry	62	58	40	N/A	98
				Siberian elm	6	6	5	N/A	11

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
118.32	118.34	Windbreak	EN1-050108-WB062	Chokecherry	4	4	5	N/A	9
				Cottonwood	7	6	5	N/A	11
				Siberian elm	2	2	0	N/A	2
121.57	121.58	Windbreak	EN1-050108-WB063	Green ash	3	2	0	N/A	2
				Siberian peashrub	14	12	N/A	N/A	12
121.72	121.74	Windbreak	EN1-050108-WB064	Green ash	26	24	20	N/A	44
				Siberian peashrub	23	20	N/A	N/A	20
124.67	124.73	Woodlot	EN4-052108-WL048	Chokecherry	235	214	64	106	384
				Cottonwood	35	32	10	16	58
				Green ash	158	144	44	72	260
				Snowberry	33	30	N/A	N/A	30
				Willow	3	2	0	2	4
130.89	130.91	Windbreak	EN3-042308-WB066	American plum	15	14	N/A	N/A	14
				Boxelder maple	76	70	55	N/A	125
				Chokecherry	30	28	20	N/A	48
				Russian olive	10	10	5	N/A	15
				Siberian elm	5	4	5	N/A	9
				Siberian peashrub	33	30	N/A	N/A	30
133.35	133.36	Windbreak	EN3-042308-WB067	Siberian elm	13	12	10	N/A	22
142.00	142.01	Windbreak	EN1-060908-WB068 EN1-042408-WB068	Chokecherry	2	2	0	N/A	2
				Green ash	9	8	5	N/A	13
				Siberian peashrub	15	14	N/A	N/A	14
148.00	148.02	Windbreak	EN3-042308-WB069	Chokecherry	125	114	85	N/A	199
				Cottonwood	55	50	40	N/A	90
				Ponderosa pine	1	0	0	N/A	0
				Rocky Mountain juniper	1	0	0	N/A	0
				Siberian peashrub	30	28	N/A	N/A	28
				Siberian peashrub	30	28	N/A	N/A	28
148.73	148.73	Windbreak	EN3-042308-WB070	Colorado spruce	9	8	5	N/A	13
149.00	149.01	Windbreak	EN3-042308-WB071	Siberian elm	53	48	35	N/A	83

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
149.68	149.69	Windbreak	EN3-042308-WB072	Siberian elm	14	12	10	N/A	22
				Siberian peashrub	14	12	N/A	N/A	12
149.88	149.88	Windbreak	EN3-042308-WB073	Colorado spruce	9	8	5	N/A	13
150.06	150.07	Windbreak	EN3-042308-WB074	Siberian elm	24	22	15	N/A	37
				Siberian peashrub	17	16	N/A	N/A	16
153.26	153.28	Windbreak	EN3-042408-WB075	Boxelder maple	2	2	0	N/A	2
				Ponderosa pine	12	10	10	N/A	20
				Rocky Mountain juniper	8	8	5	N/A	13
153.40	153.40	Windbreak	EN3-042408-WB076	Colorado spruce	10	10	5	N/A	15
				Cottonwood	1	0	0	N/A	0
153.63	153.65	Windbreak	EN3-042408-WB076B	Cottonwood	10	10	10	N/A	20
				Willow	4	4	5	N/A	9
157.56	157.59	Woodlot	EN2-051608-WL049	Chokecherry	10	8	2	6	16
				Green ash	2	2	0	2	4
				Paper birch	2	2	0	2	4
165.73	165.74	Windbreak	EN3-042408-WB077	Boxelder maple	1	2	0	N/A	2
				Chokecherry	27	28	10	N/A	38
				Round-leaved hawthorn	2	2	N/A	N/A	2
				Tatarian honeysuckle	2	2	N/A	N/A	2
168.31	168.49	Woodlot	EN3-042408-WL049a	Bur oak	3	2	0	2	4
				Fireberry hawthorn	8	2	2	6	10
				Green ash	22	8	6	14	28
				Snowberry	3,500	1,202	N/A	N/A	1,202
168.92	169.02	Woodlot	EN3-042508-WL050	Boxelder maple	1	0	0	0	0
				Bur oak	2	2	0	0	2
				Chokecherry	3	2	0	2	4
				Green ash	8	8	2	4	14

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
172.28	172.33	Woodlot	EN3-042508-WB078 EN2-051608-WL053	American plum	7	8	N/A	N/A	8
				Boxelder maple	17	18	4	6	28
				Chokecherry	140	150	34	56	240
				Juneberry	40	44	N/A	N/A	44
				Round-leaved hawthorn	43	46	N/A	N/A	46
				Siberian elm	1	2	0	0	2
				Snowberry	335	360	N/A	N/A	360
				unknown tree	71	76	16	28	120
				unknown tree	18	20	4	8	32
172.50	172.58	Windbreak	EN3-042508-WB079	Siberian elm	38	34	25	N/A	59
174.80	174.80	Windbreak	EN3-042708-WB080	Balsam poplar	9	8	5	N/A	13
175.63	175.69	Woodlot	EN3-042708-WL052 EN2-051608-WL054	Boxelder maple	47	42	14	20	76
				Chokecherry	11	10	4	4	18
				Gooseberry	6	6	N/A	N/A	6
				Green ash	83	76	24	36	136
				Snowberry	100	92	N/A	N/A	92
178.37	178.37	Windbreak	EN3-042508-WB081	Boxelder maple	4	4	5	N/A	9
				Chokecherry	16	18	10	N/A	28
				Siberian elm	14	16	10	N/A	26
178.46	178.47	Windbreak	EN3-042508-WB082	Siberian elm	9	10	5	N/A	15
178.57	178.57	Windbreak	EN3-042508-WB083	Siberian elm	2	0	0	N/A	0
178.82	178.82	Windbreak	EN3-042508-WB084	Siberian elm	10	10	5	N/A	15
180.92	180.94	Windbreak	EN3-042708-WB085	Siberian elm	31	28	20	N/A	48
				Siberian peashrub	15	14	N/A	N/A	14
181.09	181.10	Windbreak	EN3-042708-WB086	Siberian elm	20	18	15	N/A	33
182.92	182.94	Windbreak	EN1-060908-WB087 EN3-042708-WB087	Common hackberry	6	6	5	N/A	11
				Green ash	25	22	15	N/A	37
				Rocky Mountain juniper	26	24	20	N/A	44
				Siberian peashrub	36	32	N/A	N/A	32

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
183.34	183.35	Windbreak	EN3-042708-WB088	Green ash	1	0	0	N/A	0
				Siberian elm	7	6	5	N/A	11
				Siberian peashrub	3	2	N/A	N/A	2
183.94	183.95	Windbreak	EN3-042708-WB089	Green ash	3	2	0	N/A	2
				Siberian elm	3	2	0	N/A	2
				Siberian peashrub	24	22	N/A	N/A	22
184.19	184.20	Windbreak	EN3-042708-WB090	Green ash	2	2	0	N/A	2
				Siberian elm	10	10	5	N/A	15
				Siberian peashrub	12	10	N/A	N/A	10
185.10	185.13	Woodlot[10]	EN3-042708-WB091	Cottonwood	11	8	2	6	16
				Siberian elm	2	2	0	2	4
190.57	190.58	Windbreak	EN3-042508-WB092	American plum	6	6	N/A	N/A	6
				Chokecherry	1	2	0	N/A	2
				Green ash	4	4	0	N/A	4
				Russian olive	1	2	0	N/A	2
				Siberian elm	22	26	10	N/A	36
				Siberian peashrub	9	10	N/A	N/A	10
				Tatarian honeysuckle	26	30	N/A	N/A	30
				Willow	55	62	25	N/A	87
192.40	192.43	Windbreak	EN3-042508-WB093	none	0	0	0	N/A	0
192.46	192.47	Windbreak	EN3-042508-WB094	none	0	0	0	N/A	0
194.33	194.36	Windbreak	EN3-042608-WB095	Cottonwood	12	12	5	N/A	17
196.98	197.00	Windbreak	EN3-042508-WB096	Black Hills white spruce	10	10	5	N/A	15
				Cottonwood	1	0	0	N/A	0
				Green ash	27	24	20	N/A	44
				Siberian elm	12	10	10	N/A	20
				Siberian peashrub	15	14	N/A	N/A	14

[10] Feature was re-classified after inventories were complete. Re-classification was based on definitions set forth in the Original Order of February 21, 2008.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-65' EWS (5:1 in Windbreaks; 2:1 in Woodlots)[4]	65'-85' EWS (2:1; Woodlots only)	Total Number to be Planted
197.04	197.07	Windbreak	EN3-042508-WB097	Common hackberry	15	14	10	N/A	24
				Cottonwood	12	10	10	N/A	20
				Green ash	19	18	15	N/A	33
				Rocky Mountain juniper	70	64	50	N/A	114
				Siberian elm	5	4	5	N/A	9
				Siberian peashrub	20	18	N/A	N/A	18
207.26	207.27	Windbreak	EN3-042608-WB098	Boxelder maple	1	0	0	N/A	0
				Cottonwood	8	2	10	N/A	12
				Willow	1	0	0	N/A	0
209.35	209.41	Woodlot	EN3-042608-WB099	American plum	3	2	N/A	N/A	2
				Boxelder maple	10	10	2	4	16
				Chokecherry	30	28	8	14	50
211.92	211.92	Windbreak	EN3-042608-WB100	Siberian elm	10	10	5	N/A	15
212.04	212.05	Windbreak	EN3-042608-WB101	Siberian elm	18	16	10	N/A	26
212.17	212.17	Windbreak	EN3-042608-WB102	Siberian elm	24	22	15	N/A	37
213.86	213.90	Windbreak	EN3-042608-WB105	Boxelder maple	1	0	0	N/A	0
				Cottonwood	1	0	0	N/A	0
				Siberian elm	24	22	15	N/A	37
				Willow	6	6	5	N/A	11
214.42	214.43	Windbreak	EN3-042608-WB106	American plum	10	10	N/A	N/A	10
				Cottonwood	57	52	40	N/A	92
				Siberian elm	116	106	80	N/A	186
				Willow	30	28	20	N/A	48
215.47	215.55	Woodlot[11]	EN3-042608-WB107	Cottonwood	39	34	10	18	62
				Willow	10	8	2	4	14
216.67	216.69	Windbreak	EN3-042608-WB108	Cottonwood	7	0	5	N/A	5
				Siberian elm	1	0	0	N/A	0
				Total	**24,025**	**20,024**	**3,752**	**3,492**	**27,268**

[11] Feature was re-classified after inventories were complete. Re-classification was based on definitions set forth in the Original Order of February 21, 2008.

Table B-2. Trees and shrubs inventoried prior to clearing along the mainline in North Dakota and numbers of trees and shrubs calculated for replacement: twenty-two locations where additional temporary extra workspace (EWS) was approved.[1]

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
13.03	13.16	Woodlot	EN1-042608-WL009 EN2-051308-WL009	American cranberrybush	350	314	N/A	N/A	314
				Boxelder maple	6	6	16	N/A	22
				Bur oak	267	240	692	N/A	932
				Chokecherry	1,265	1,136	3,276	N/A	4,412
				Green ash	218	196	564	N/A	760
				Juneberry	720	646	N/A	N/A	646
				Round-leaved hawthorn	59	52	N/A	N/A	52
				Siberian elm	16	14	42	N/A	56
				unknown shrub	180	162	N/A	N/A	162
16.13	16.17	Woodlot	EN2-051408-WL010	American linden	17	20	42	N/A	62
				Chokecherry	135	152	340	N/A	492
				Green ash	8	8	20	N/A	28
				Siberian elm	11	12	26	N/A	38

[1] The Second Supplemental Order of May 30, 2008, approved additional temporary extra workspace at 22 forested water body crossings and road borings beyond the limits set forth in the Order. Fifteen of these areas were approved for clearing up to 135' in total width (50'-wide right-of-way [ROW] plus up to 85'-wide EWS) at a replacement ratio of 2:1. The remaining seven areas were approved for clearing beyond 135' in total width as documented in the Fifth Supplemental Order of August 27, 2008. In accordance with this supplemental order, trees removed within EWS beyond 135' wide were calculated be replaced at a 5:1 ratio.
[2] The numbers and species of trees and shrubs in each category (50' ROW, 50'-135' EWS, >135' EWS) were extrapolated based on tree and shrub composition and density within the 110'-wide survey area.
[3] Trees and shrubs were calculated for replacement within the 50'-wide ROW, in accordance with the Original Order of February 21, 2008.
[4] Trees, only, were calculated for replacement in all EWS, in accordance with the Original Order of February 21, 2008.

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
16.97	17.05	Woodlot	EN1-042608-WL013 EN2-051408-WL013	American cranberrybush	5	4	N/A	N/A	4
				American linden	98	80	266	N/A	346
				Bur oak	3	2	8	N/A	10
				Chokecherry	360	298	984	N/A	1,282
				Cottonwood	7	6	20	N/A	26
				Green ash	110	90	300	N/A	390
				Redosier dogwood	71	58	N/A	N/A	58
				Siberian elm	90	74	246	N/A	320
21.42	21.49	Woodlot	EN2-051408-WL016	American linden	94	86	236	N/A	322
				Chokecherry	720	654	1,806	N/A	2,460
				Green ash	61	56	154	N/A	210
				Siberian elm	72	66	180	N/A	246
				Snowberry	407	370	N/A	N/A	370
22.69	22.76	Woodlot	EN1-042708-WL017 EN2-051508-WL017	American elm	56	48	138	N/A	186
				American linden	89	76	220	N/A	296
				Boxelder maple	2	2	4	N/A	6
				Bur oak	1	0	2	N/A	2
				Chokecherry	64	56	158	N/A	214
				Green ash	125	108	308	N/A	416
				Quaking aspen	5	4	12	N/A	16
23.65	23.69	Woodlot	EN2-051508-WL018	American linden	76	70	192	N/A	262
				Boxelder maple	1	0	2	N/A	2
				Chokecherry	30	28	76	N/A	104
				Green ash	6	6	14	N/A	20
				Siberian elm	1	0	2	N/A	2
				Snowberry	53	50	N/A	N/A	50
				unknown tree	2	2	4	N/A	6
				Willow	1	0	2	N/A	2

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
24.66	24.69	Woodlot	EN2-051508-WL019	American linden	45	40	116	N/A	156
				Boxelder maple	24	22	62	N/A	84
				Bur oak	4	4	12	N/A	16
				Chokecherry	230	208	594	N/A	802
				Juneberry	5	4	N/A	N/A	4
				Round-leaved hawthorn	1	0	N/A	N/A	0
				Siberian elm	20	18	54	N/A	72
29.33	29.44	Woodlot	EN2-051508-WL021	American linden	35	32	104	10	146
31.76	31.97	Woodlot	EN1-042808-WL025 EN4-052008-WL025	American cranberrybush	442	398	N/A	N/A	398
				American elm	15	14	50	0	64
				Beaked hazelnut	1,003	902	N/A	N/A	902
				Boxelder maple	10	8	34	0	42
				Bur oak	230	206	780	5	991
				Chokecherry	352	316	1,196	5	1,517
				Cottonwood	2	2	8	0	10
				Green ash	110	98	374	0	472
				Juneberry	577	518	N/A	N/A	518
				Quaking aspen	1	0	4	0	4
				Round-leaved hawthorn	3	2	N/A	N/A	2
				Snowberry	300	270	N/A	N/A	270

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
33.25	33.50	Woodlot	EN1-061008-WL027	American elm	8	8	18	N/A	26
				American linden	1	0	2	N/A	2
				Beaked hazelnut	3	2	N/A	N/A	2
				Boxelder maple	27	24	62	N/A	86
				Bur oak	190	174	434	N/A	608
				Chokecherry	29	26	68	N/A	94
				Green ash	77	70	176	N/A	246
				Juneberry	40	36	N/A	N/A	36
				Round-leaved hawthorn	5	4	N/A	N/A	4
				Siberian elm	3	2	6	N/A	8
				Snowberry	107	98	N/A	N/A	98
34.81	34.86	Woodlot	EN4-052008-WL028	American cranberrybush	180	162	N/A	N/A	162
				Boxelder maple	10	8	26	N/A	34
				Bur oak	25	22	64	N/A	86
				Chokecherry	29	26	74	N/A	100
				Green ash	1	0	2	N/A	2
				Juneberry	3	2	N/A	N/A	2
				Quaking aspen	4	4	12	N/A	16
				Round-leaved hawthorn	4	4	N/A	N/A	4
				Snowberry	182	164	N/A	N/A	164
35.29	35.43	Woodlot	EN1-042808-WL029 EN4-052108-WL029	American elm	5	4	14	0	18
				Boxelder maple	17	16	46	0	62
				Bur oak	145	132	392	20	544
				Chokecherry	39	36	106	5	147
				Green ash	65	60	178	10	248
				Juneberry	62	56	N/A	N/A	56
				Round-leaved hawthorn	19	18	N/A	N/A	18
				Snowberry	19	18	N/A	N/A	18

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
36.32	36.43	Woodlot	EN4-052108-WL030	Chokecherry	25	22	86	N/A	108
				Quaking aspen	4	4	16	N/A	20
				Round-leaved hawthorn	2	2	N/A	N/A	2
				Snowberry	163	148	N/A	N/A	148
37.18	37.36	Woodlot	EN1-061008-WL031	American elm	11	10	28	N/A	38
				Beaked hazelnut	16	14	N/A	N/A	14
				Boxelder maple	15	14	36	N/A	50
				Bur oak	211	190	516	N/A	706
				Chokecherry	174	158	426	N/A	584
				Green ash	21	18	52	N/A	70
				Juneberry	2	2	N/A	N/A	2
				Quaking aspen	8	8	20	N/A	28
				Siberian elm	2	2	4	N/A	6
				Snowberry	2,222	2,008	N/A	N/A	2,008
38.17	38.25	Woodlot	EN4-052108-WL032	Bur oak	75	66	216	N/A	282
				Chokecherry	25	22	72	N/A	94
				Green ash	6	6	16	N/A	22
				Round-leaved hawthorn	4	4	N/A	N/A	4
				Snowberry	240	214	N/A	N/A	214
42.76	42.82	Woodlot	EN4-052108-WL040	American elm	1	0	2	0	2
				Beaked hazelnut	13	12	N/A	N/A	12
				Boxelder maple	2	2	4	0	6
				Chokecherry	295	288	728	5	1,021
				Juneberry	90	88	N/A	N/A	88
				Redosier dogwood	4	4	N/A	N/A	4
				Round-leaved hawthorn	265	258	N/A	N/A	258
				Snowberry	238	232	N/A	N/A	232
				Tatarian honeysuckle	52	50	N/A	N/A	50

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
46.45	46.58	Woodlot	EN1-061008-WL042 EN1-042808-WL042	American elm	1	0	2	0	2
				American linden	2	2	4	0	6
				Boxelder maple	1	0	2	0	2
				Bur oak	73	64	196	20	280
				Chokecherry	26	22	70	5	97
				Green ash	11	10	30	5	45
				Rocky Mountain juniper	1	0	2	0	2
				Round-leaved hawthorn	42	36	N/A	N/A	36
				Snowberry	3	2	N/A	N/A	2
49.24	49.26	Woodlot	EN1-042908-WL015	American cranberrybush	2	0	N/A	N/A	0
				Boxelder maple	6	0	10	N/A	10
				Chokecherry	11	0	18	N/A	18
				Common buckthorn	19	0	32	N/A	32
				Green ash	7	0	12	N/A	12
				Round-leaved hawthorn	1	0	N/A	N/A	0
				Tatarian honeysuckle	1	0	N/A	N/A	0
54.82	55.08	Woodlot	EN1-042908-WL045 EN4-052208-WL045	American linden	24	20	60	5	85
				Boxelder maple	18	16	44	5	65
				Bur oak	96	82	240	20	342
				Chokecherry	91	78	224	20	322
				Eastern hophornbeam	427	364	1,060	85	1,509
				Green ash	23	20	56	5	81
				Round-leaved hawthorn	309	264	N/A	N/A	264
				Snowberry	605	518	N/A	N/A	518

Mar 20, 2009 CL						Number of Trees and Shrubs Calculated to be Replaced at Ordered Ratios[2]			
Start MP	End MP	Site Type	Feature ID	Species Identified in Inventory Area	Number counted in 110'-Wide Inventory Area	50'-Wide ROW (2:1)[3]	50'-135' EWS (2:1)[4]	>135' EWS (5:1)	Total Number to be Planted
107.23	107.30	Windbreak	EN1-050108-WB060	American cranberrybush	1	0	N/A	N/A	0
				Chokecherry	65	58	108	N/A	166
				Cottonwood	26	22	42	N/A	64
				Eastern red-cedar	2	2	2	N/A	4
				Green ash	53	46	86	N/A	132
				Ponderosa pine	4	4	8	N/A	12
				Siberian elm	15	14	24	N/A	38
				Siberian peashrub	35	30	N/A	N/A	30
123.64	123.68	Woodlot[5]	EN1-050108-WB065	Boxelder maple	18	16	36	N/A	52
				Chokecherry	11	10	24	N/A	34
				Cottonwood	4	4	10	N/A	14
				Green ash	35	30	72	N/A	102
				Russian olive	2	2	2	N/A	4
				Siberian elm	29	24	60	N/A	84
				Siberian peashrub	119	100	N/A	N/A	100
212.73	212.77	Woodlot[5]	EN3-042608-WB103[6]	Boxelder maple	8	8	20	0	28
212.92	212.96	Woodlot[5]	EN3-042608-WB104[6]	Cottonwood	15	14	28	0	42
				Siberian elm	15	14	28	0	42
				Total	**17,013**	**15,232**	**20,254**	**230**	**35,716**

[5] Feature was re-classified after inventories were complete. Re-classification was based on definitions set forth in the Original Order of February 21, 2008.
[6] Features EN3-042608-WB103 and EN3-042608-WB104 are located at a road boring site and implied, collectively, as one of the 22 areas approved for additional clearing.

Table B-3. Trees and shrubs inventoried prior to clearing in North Dakota pipeyards and railsidings and numbers of trees and shrubs calculated for replacement.[1]

Site Name	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in Inventory Area	Total Number to be Planted (2:1)
Aneta 2 Pipeyard	Windbreak	EN1-043008-Aneta 2 Pipeyard	American cranberrybush	118	236
			Colorado spruce	75	150
			Green ash	368	736
			Ponderosa pine	352	704
			Redosier dogwood	94	188
			Rocky Mountain juniper	6	12
			Scots pine	6	12
			Siberian elm	458	916
			Silver buffaloberry	382	764
			White Willow	14	28
Fordville 2 Railsiding	Windbreak	EN1-042908-Fordville 2 Railsiding	Chokecherry	39	78
			Green ash	4	8
			Siberian elm	9	18
Grafton A & B Pipeyard	Windbreak	EN1-042908-Grafton A & B Pipeyard	American cranberrybush	175	350
			Cottonwood	4	8
			Green ash	110	220
			Redosier dogwood	6	12
			Siberian elm	95	190

[1] Trees and shrubs cleared within pipeyards and railsidings were calculated for replacement at a 2:1 ratio.

Site Name	Site Type	Feature ID	Species Identified in Inventory Area	Number Counted in Inventory Area	Total Number to be Planted (2:1)
Oakes Railsiding	Windbreak	EN3-042708-ORS	American plum	19	38
			Boxelder maple	24	48
			Chokecherry	420	840
			Common buckthorn	7	14
			Cottonwood	2	4
			Green ash	110	220
			Siberian elm	76	152
			Siberian peashrub	8	16
			Tatarian honeysuckle	14	28
			unknown tree	50	100
			White oak	10	20
			Willow	8	16
Valley City Pipeyard B	Woodlot	EN3-042808-VCPYB	none[2]	0	0
Valley City West A Pipeyard	Windbreak	EN3-042708-VCPYA&B	Cottonwood	14	28
			Russian olive	7	14
			Total	**3,084**	**6,168**

[2] Site was cleared prior to survey.

Appendix C

Field Datasheets

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT 4/24/08	
FEATURE ID: ENI042408-WB001	MP ENTER/EXIT: 0.00 0.01	SURVEY COORDINATES: N 5766767 576626 E5478030
TEAM NAME: ENI INVESTIGATORS: S. Long, C. Boden, Klopicka	LOGBOOK PAGE #(S): 182:4-5	PHOTO #(S): ENI-042408-WB001-1E " " " 1 -24

PLANT TAXA INVENTORY

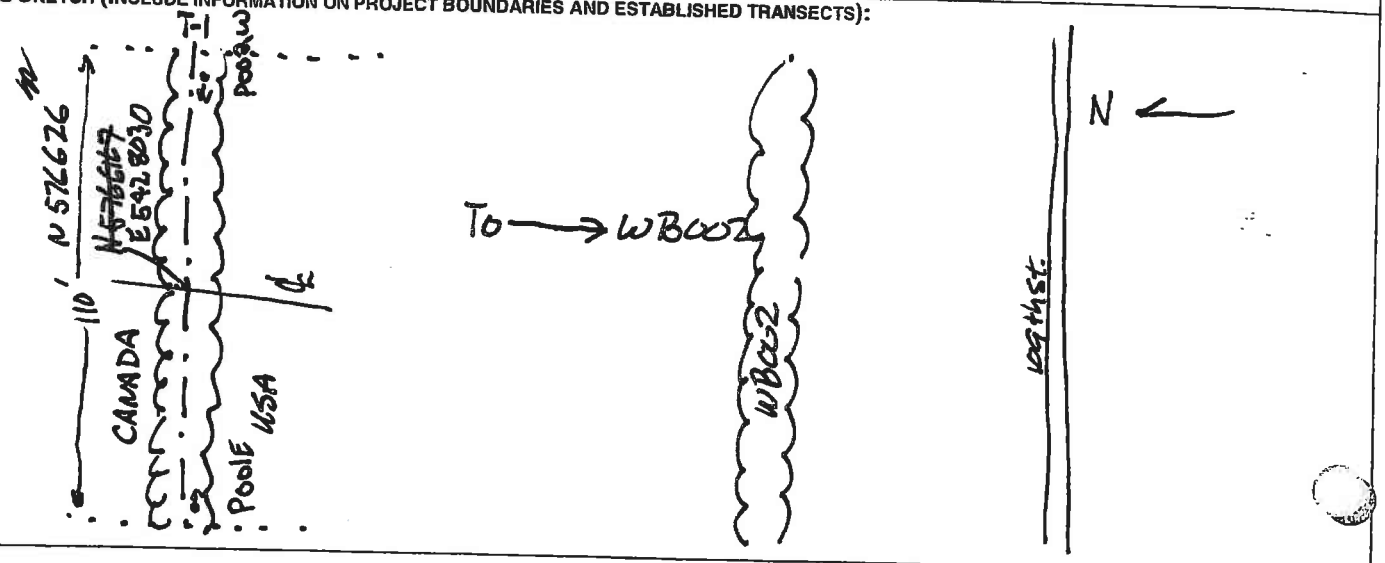
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
19 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	19 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
17 AMERICAN ELM (*ULMUS AMERICANA*)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 36
	TOTAL # OF DECIDUOUS SHRUBS: 19
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Sparrow species in windbreak

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI-042408-WB002	**MP ENTER/EXIT:** 0.11/0.13	**SURVEY COORDINATES:** N 576624 E 5427855
TEAM NAME: ENI **INVESTIGATORS:** S. Lowry, C Bitzer, K Rumpka	**LOGBOOK PAGE #(S):** 1642 647	**PHOTO #(S):** ENI-042408-WB002-001W " " " 002E

PLANT TAXA INVENTORY

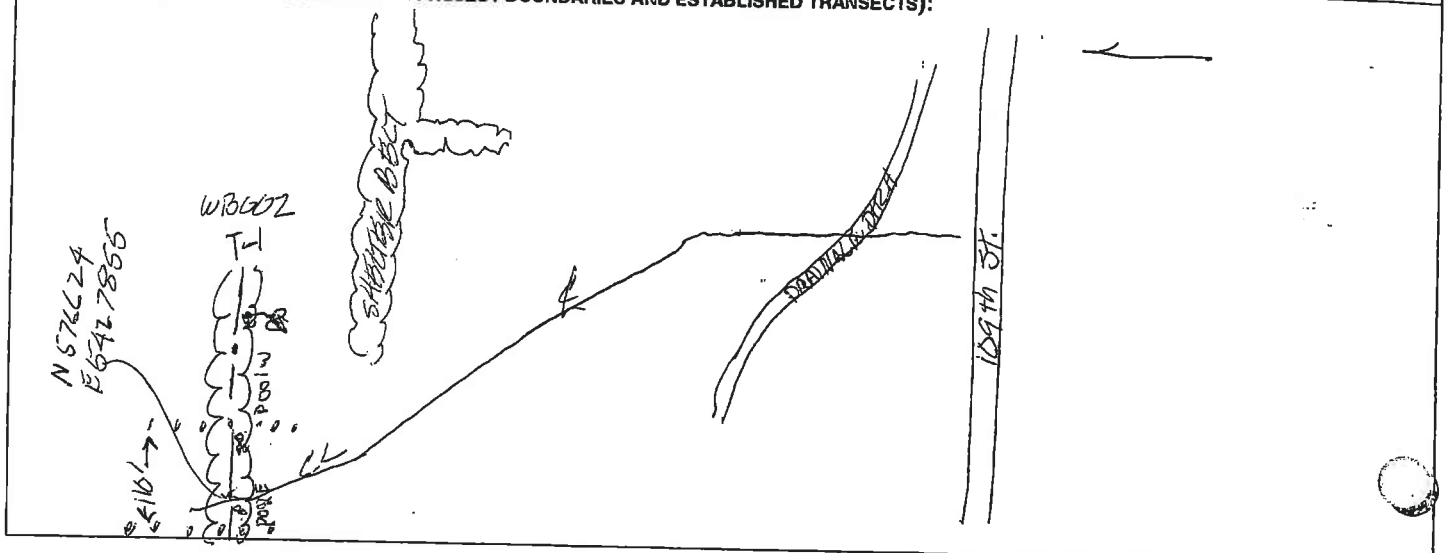
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
7 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 7
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 4/24/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: ENI-042408-WB003	MP ENTER/EXIT: 0.79/0.79	SURVEY COORDINATES: N 576470 E 5426830
TEAM NAME: ENI INVESTIGATORS: S. Lynch, C. Bakken, K. Rumpca	LOGBOOK PAGE #(S): 1 of 2 8 of 9	PHOTO #(S): ENI-042408-WB003-001W " " " -002E

PLANT TAXA INVENTORY

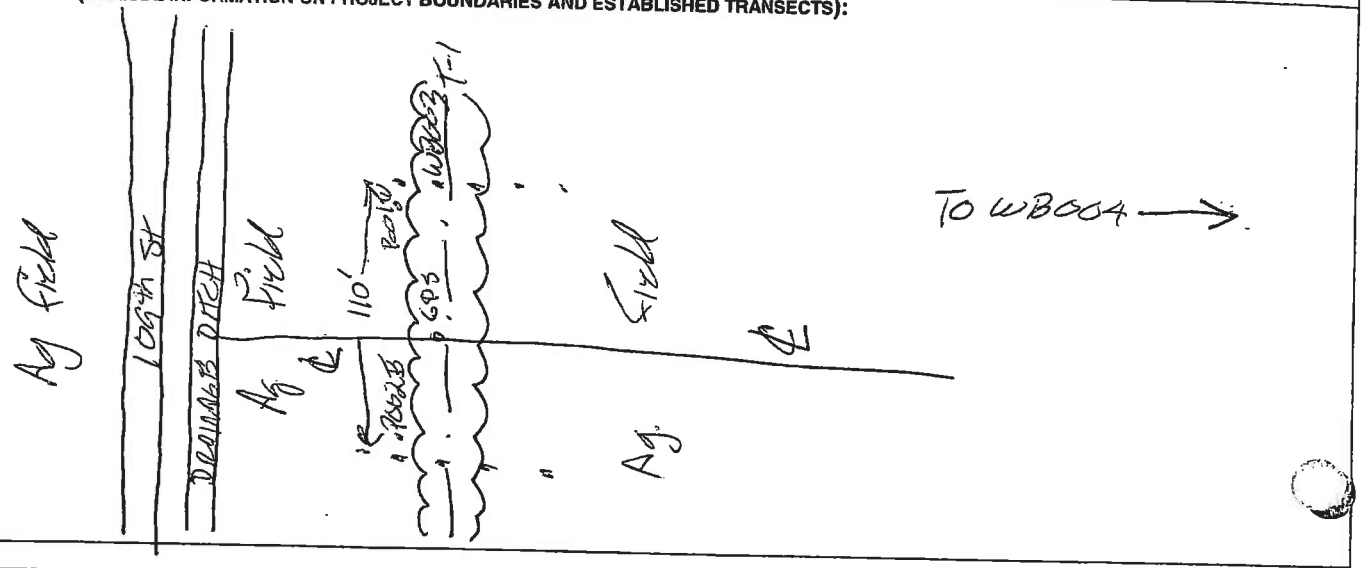
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
19 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	39 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 19
	TOTAL # OF DECIDUOUS SHRUBS: 39
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI-042408-WB004	**MP ENTER/EXIT:** 0.90/0.90	**SURVEY COORDINATES:** N 576478 E 642646
TEAM NAME: ENI **INVESTIGATORS:** S. Long, C. Bakens, K. Rung	**LOGBOOK PAGE #(S):** 1of2 10f11	**PHOTO #(S):** ENI-042408-WB004-001B 001W

PLANT TAXA INVENTORY

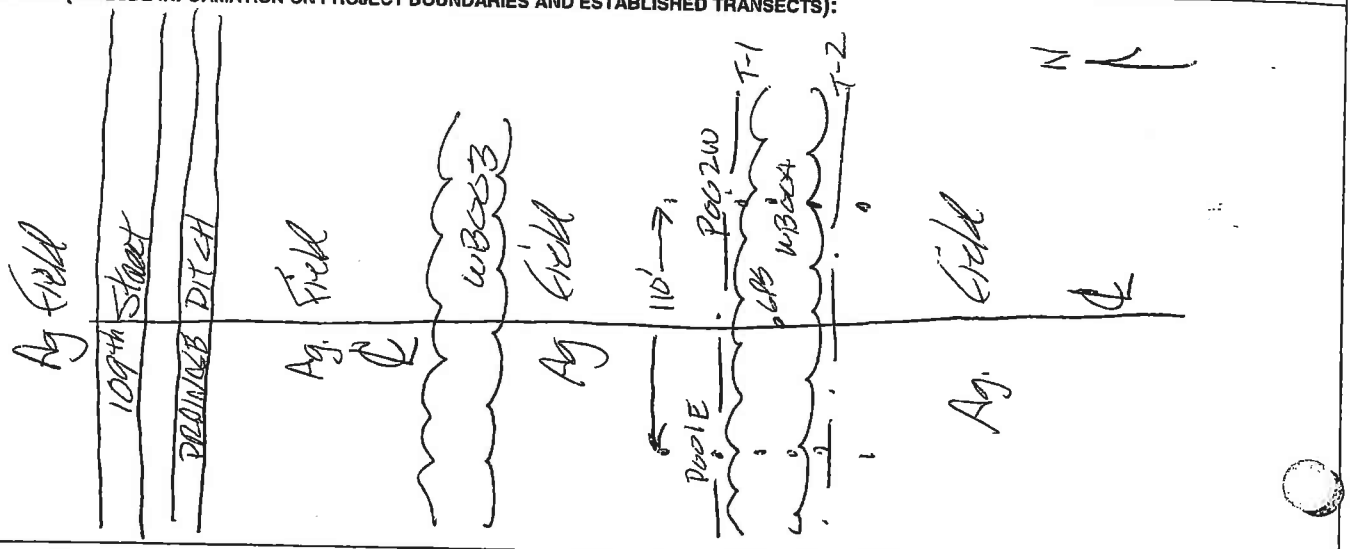
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
22 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	95 LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 22
	TOTAL # OF DECIDUOUS SHRUBS: 95
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 5

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-13-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051308WL0001	**MP ENTER/EXIT:** 4.32 / 4.50	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Stribley, Ridenour	**LOGBOOK PAGE #(S):** 2-4	**PHOTO #(S):**

PLANT TAXA INVENTORY

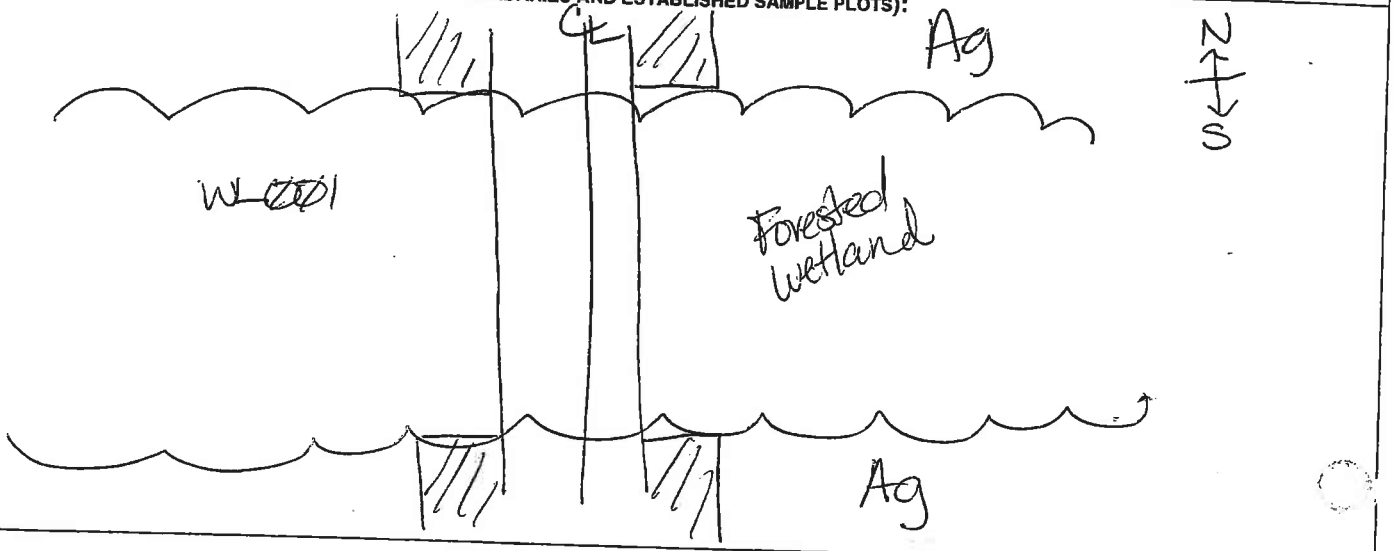
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
213 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
357 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
84 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	4 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
58 POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	142 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
14 WILLOW (*SALIX SPECIES*) +24 = 42	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
142 Unk Shrub (red stems) dogwood	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
34 unk tree (fuzzy flower) willow	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
38 ribes sp #1	TOTAL # OF EVERGREEN TREES: 0
7 ribes sp #2 (no spines)	TOTAL # OF DECIDUOUS TREES: 126
	TOTAL # OF DECIDUOUS SHRUBS: 4
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 176 (not including ribes sp.)

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL001	UNK Shrub (redstems)	dogwood	Cornus sericea	yes
WL001	green ash	green ash	Fraxinus pennsylvanica	no
WL001	balsam poplar	balsam poplar	Populus basimifera	no
WL001	aspen	quaking aspen	Populus temuloides	no
WL001	Ribes sp. #1 (throns0	Canadian gooseberry	Ribes oxyacanthoides	yes
WL001	Ribes sp. #2 (no thorns)	swamp current	Ribes triste	yes
WL001	raspberry	American red raspberry	Rubus idaeus	yes
WL001	Willow	peachleaf willow	Salix amygdaloides	no
WL001	Elm	Siberian elm	Ulmus pumila	no
WL001	UNK Tree #1 (fuzzy flowers)	willow	Salix spp.	yes

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: June 8, 2008

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: WL 002

MP ENTER/EXIT: 4.66 / 4.76

ENTER/EXIT COORDINATES: N 48.9339 W 097.95544 enter North
N 48.93252 W 097.95534 exit South

TEAM NAME: EN1

INVESTIGATORS: Steve Lang, Jim Duncan

LOGBOOK PAGE #(S): 2,3

PHOTO #(S): EN1060808WL002-00IN P-1 P-2 EN1060808WL002-00XS

PLANT TAXA INVENTORY

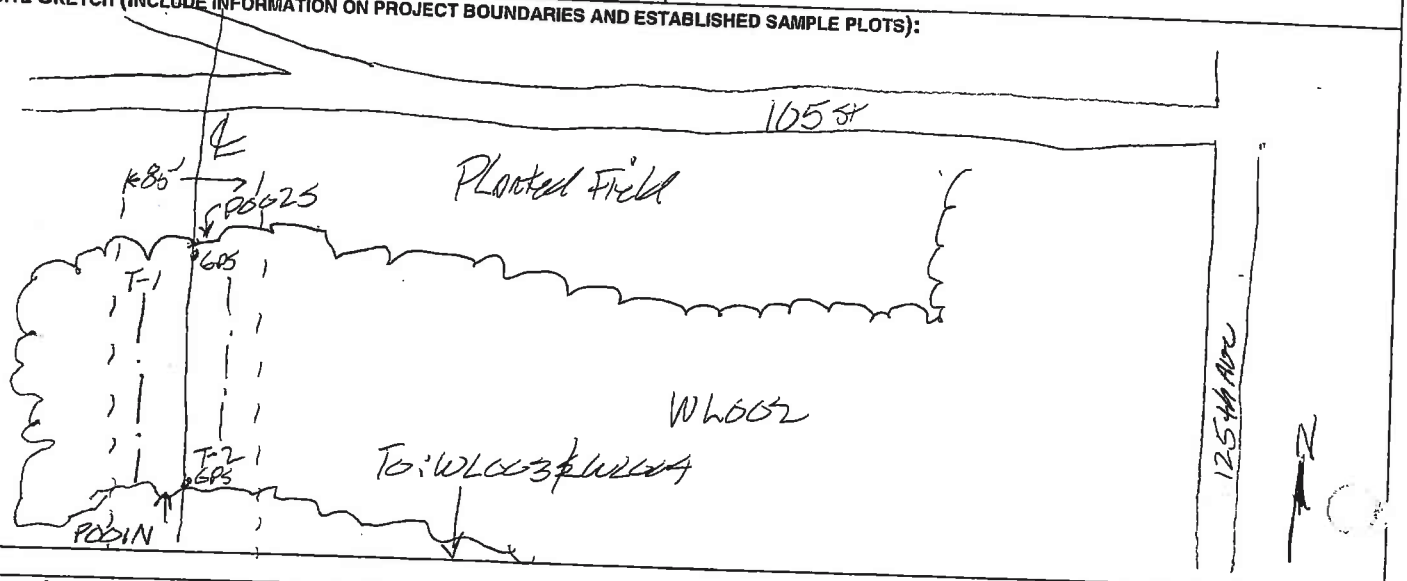
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
23 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	88 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
193 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	1 COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	372 Snowberry (*Symphoricarpos occidentalis*)
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 216
_____	TOTAL # OF DECIDUOUS SHRUBS: 466 461 90
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- Snowberry occurs in dense patches; most common in central part of woodlot
- Landowner apparently sprayed (herbicides) on trees and shrubs along northern woodlot border

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: June 8, 2008

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: WL003

MP ENTER/EXIT: 4.80 / 4.91

ENTER/EXIT COORDINATES: N 48.93097 W 097.95530 North enter
N 48.93044 W 097.95535 South exit

TEAM NAME: ENI

INVESTIGATORS: Steve Long, Jim Duncan

LOGBOOK PAGE #(S): 45

PHOTO #(S): ENI060808WL003-001N
P-3 P-4 P-5 ENI060808WL003-002S
ENI060808WL003003

PLANT TAXA INVENTORY

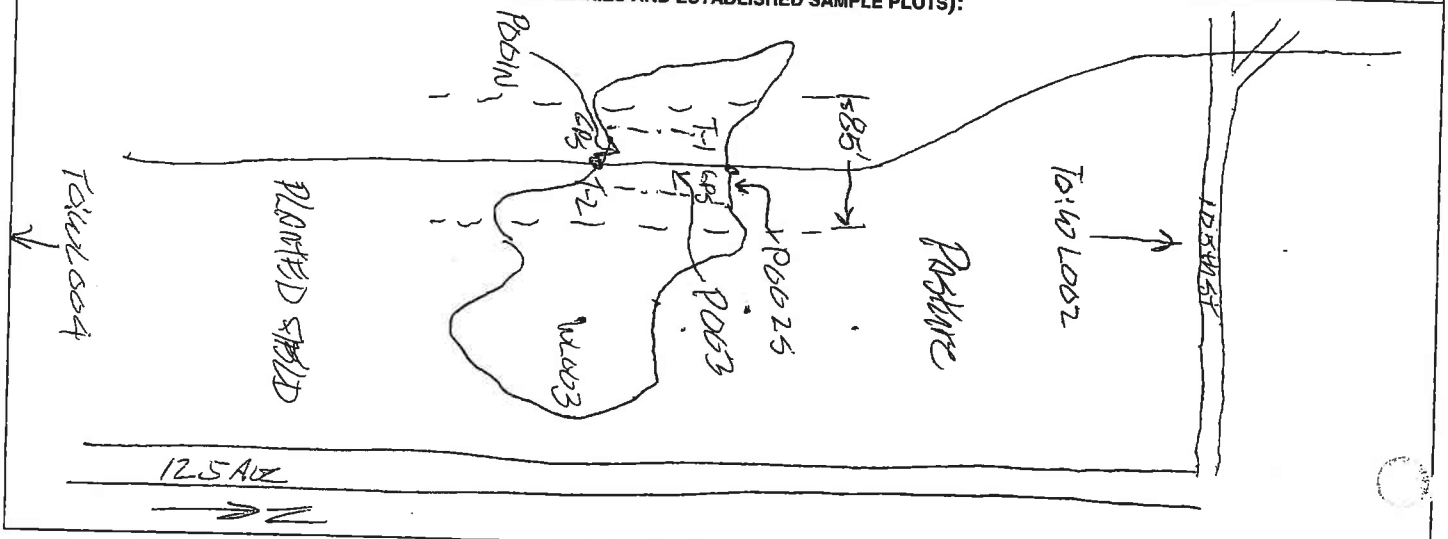
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	98 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
36 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	24 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	6 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	326 Snowberry (*Symphoricarpos occidentalis*)
_____	7 Rose (*ROSA ARKANSANA*)

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 36
	TOTAL # OF DECIDUOUS SHRUBS: 461
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS:

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Snowberry occurs in dense groups, mostly in Northern low areas

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: June 8, 2008	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: WL 004	**MP ENTER/EXIT:** 5.04 / 5.09	**ENTER/EXIT COORDINATES:** N48.92780 W097.95538 North Entry N 48.92722 W 097.95519 South exit
TEAM NAME: ENT **INVESTIGATORS:** Steve Long, Jim Duncan	**LOGBOOK PAGE #(S):** 6,7	**PHOTO #(S):** ENV060808WL004-008N P-6 P-7 ENV060808WL004-0025

PLANT TAXA INVENTORY

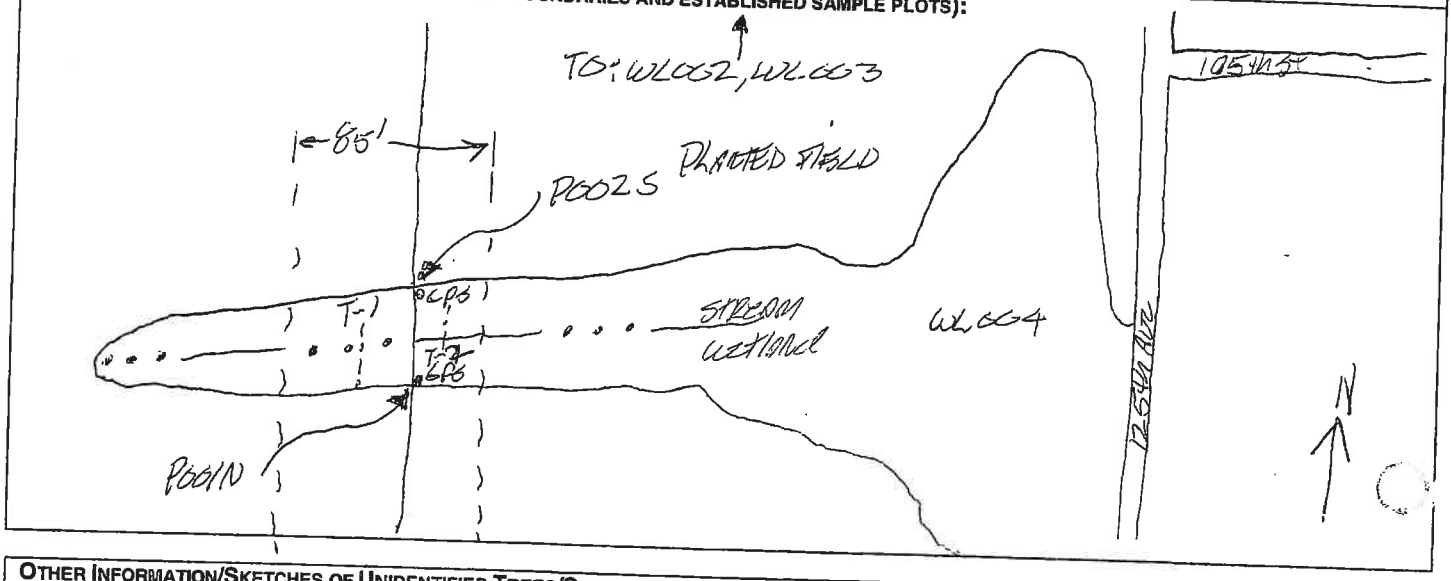
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
21 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	9 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
17 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
2 POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	5 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
2 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	1 Snowberry (*Symphoricarpos albus*)
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 52
_____	TOTAL # OF DECIDUOUS SHRUBS: 15
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 7/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042408WB005	**MP ENTER/EXIT:** 5.95/5.95	**SURVEY COORDINATES:** N 576673 E 5418523
TEAM NAME: ENI **INVESTIGATORS:** S. Long, C. Bolton, K. Rungka	**LOGBOOK PAGE #(S):** 1&2 12,13	**PHOTO #(S):** ENI042408WB005 002W " " 001E

PLANT TAXA INVENTORY

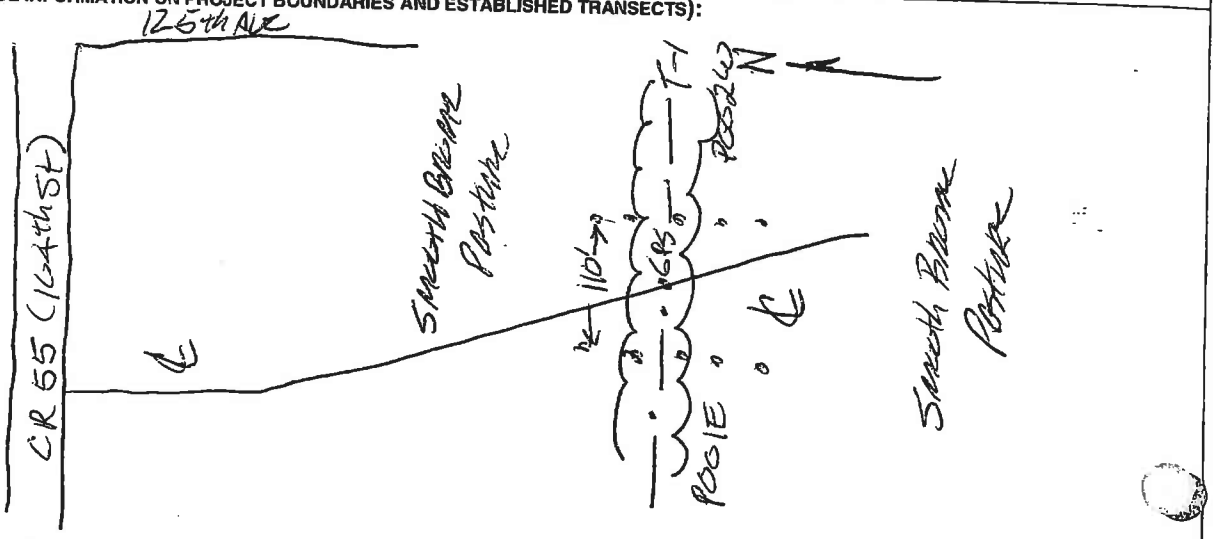
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
23 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 23
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042408-WBOO6	**MP ENTER/EXIT:** 7.62 / 7.63	**SURVEY COORDINATES:** N 577324 E 541593
TEAM NAME: ENI **INVESTIGATORS:** C. Bolton, K. Rumpka, S. Long	**LOGBOOK PAGE #(S):** 14f2 14f5	**PHOTO #(S):** ENI042408WB006001F ENI042408WB006002W

PLANT TAXA INVENTORY

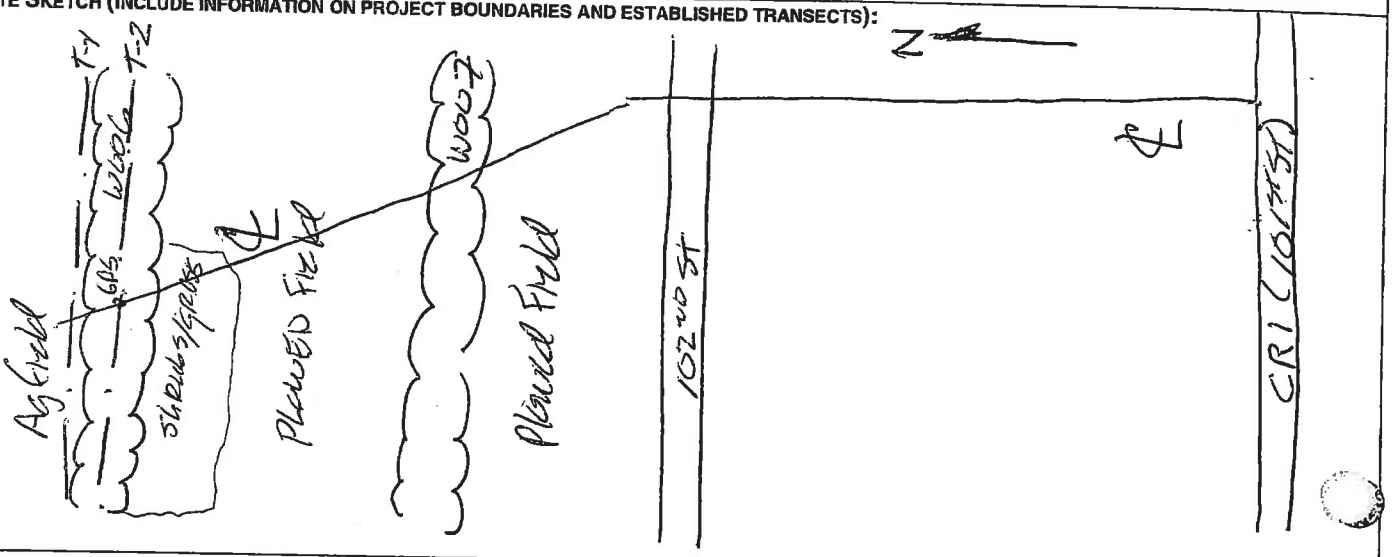
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
13 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	62 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 13
	TOTAL # OF DECIDUOUS SHRUBS: 62
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042408-WBG07	**MP ENTER/EXIT:** 7.95/7.97	**SURVEY COORDINATES:** N 577036 E 6541548
TEAM NAME: ENI **INVESTIGATORS:** S. Looby, K. Rupka, C. Boken	**LOGBOOK PAGE #(S):** 16 / 16 & 17	**PHOTO #(S):** ENI042408WBG07 001 W 002 E

PLANT TAXA INVENTORY

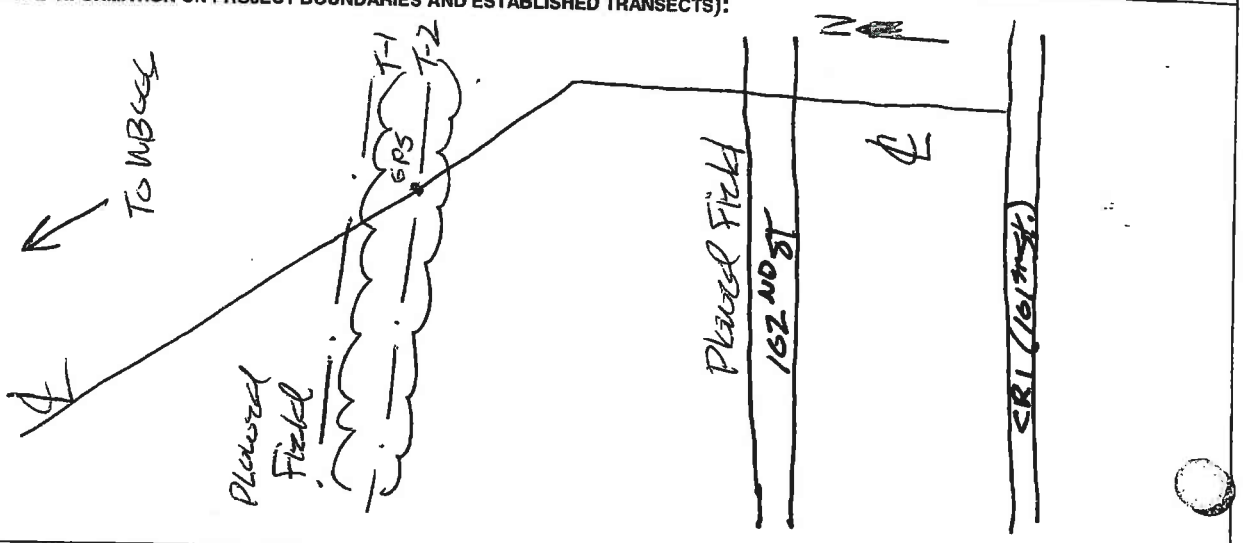
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
6 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE; SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	19 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~0~~
_____	TOTAL # OF DECIDUOUS TREES: 6
_____	TOTAL # OF DECIDUOUS SHRUBS: 19
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB008	**MP ENTER/EXIT:** 8.5/8.51	**SURVEY COORDINATES:** E N 577800 N E 5414679
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longi, Cory Bolen, Ken Rucicka	**LOGBOOK PAGE #(S):** 141 / 182-19	**PHOTO #(S):** 001-West 002-East

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
22 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
14 WILLOW (*SALIX SPECIES*) SALIX ALBA	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	68 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

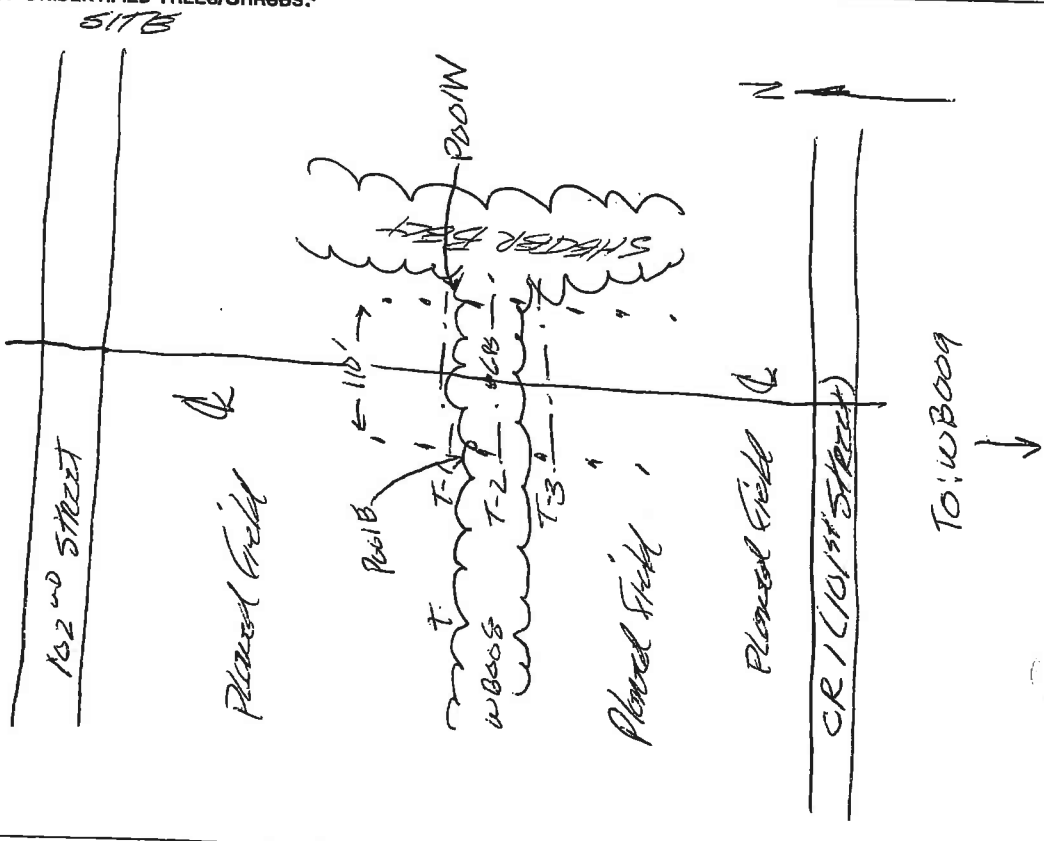
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 37
_____	TOTAL # OF DECIDUOUS SHRUBS: 68
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
_____	TOTAL # OF OTHER TREES/SHRUBS: 3
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):

OTHER INFORMATION/SKETCHES OF ~~UNIDENTIFIED TREES/SHRUBS~~:



WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB009	**MP ENTER/EXIT:** 8.98/8.99	**SURVEY COORDINATES:** N 577819 E E 5413872 N
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longi, Cory Boles, Ken Ruzicka	**LOGBOOK PAGE #(s):** 141 20&21	**PHOTO #(s):** EN1-042508-WB009-001W " - " - " -002E

PLANT TAXA INVENTORY

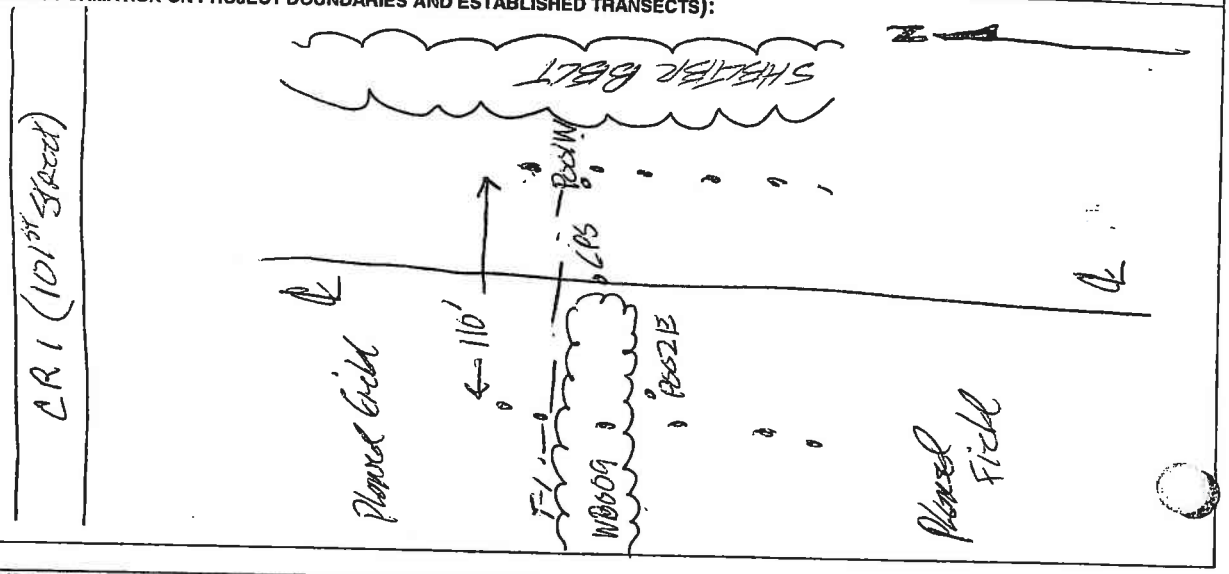
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
9 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 6
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB010	**MP ENTER/EXIT:** 9.17 / 9.17	**SURVEY COORDINATES:** N 577816 E / E 5413590 N
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Cory Bolen, Ken Ruzicka	**LOGBOOK PAGE #(S):** 16 of 1 22 & 23	**PHOTO #(S):** EN1-042508-WB011-001W - " - " -002E

PLANT TAXA INVENTORY

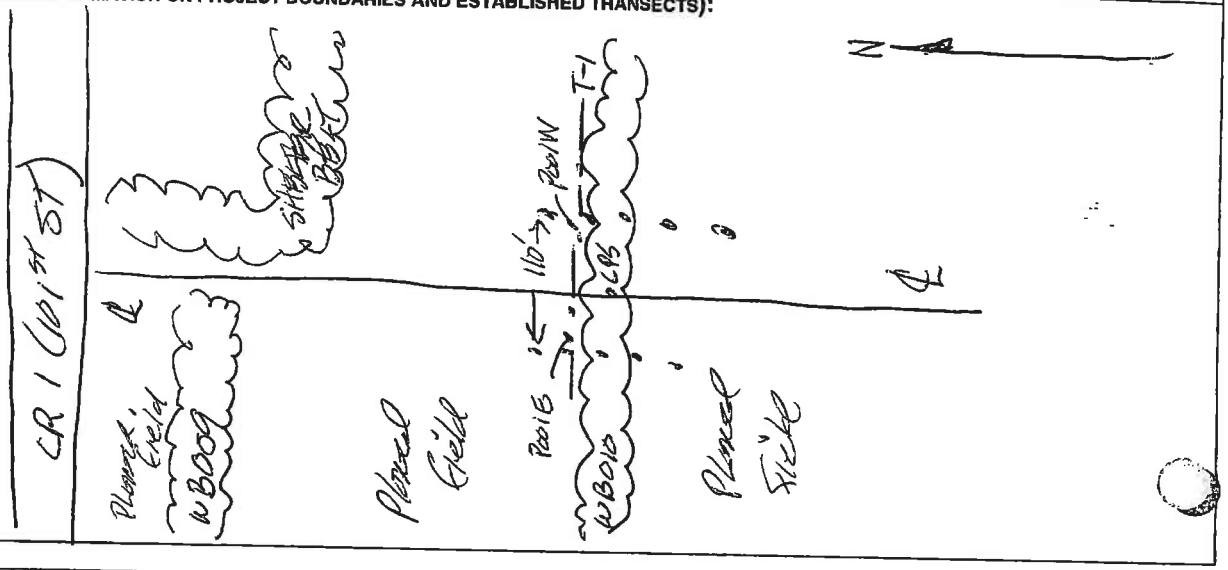
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
17 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 17
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 5
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB011	**MP ENTER/EXIT:** 9.32/9.32	**SURVEY COORDINATES:** N 577840 E E 5413340 N
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longi, Cory Bolen, Ken Ruricha	**LOGBOOK PAGE #(S):** 181 24&25	**PHOTO #(S):** EN1-042508-WB011-001 West, -002 East

PLANT TAXA INVENTORY

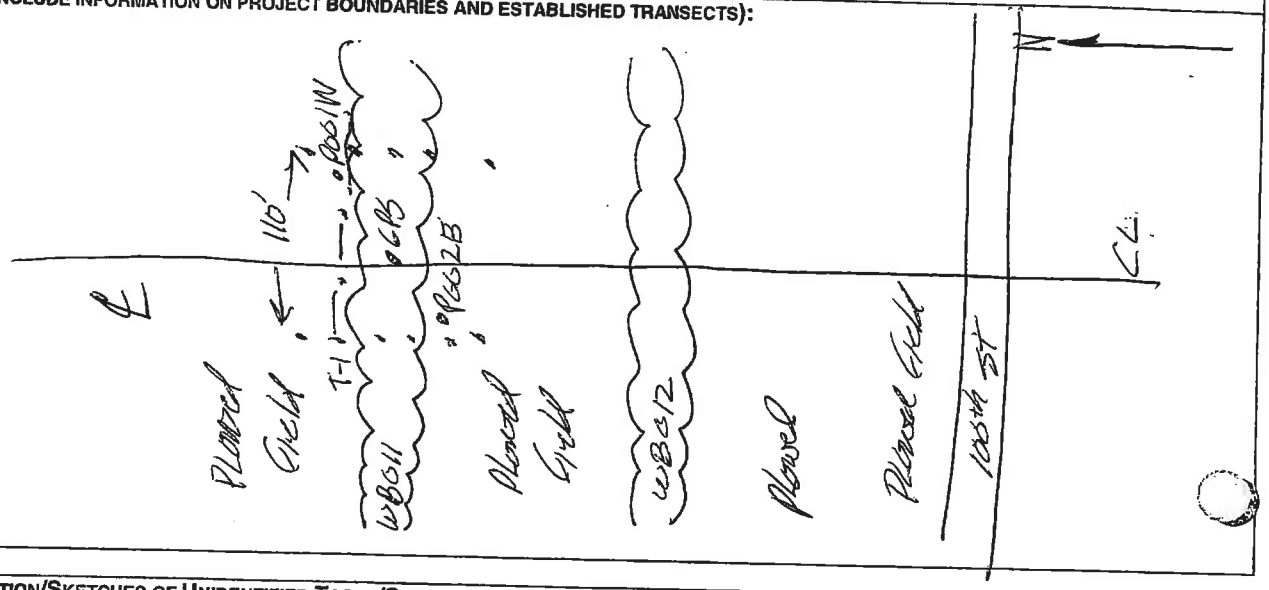
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
10 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 6
_____	TOTAL # OF DECIDUOUS TREES: 10
_____	TOTAL # OF DECIDUOUS SHRUBS: 6
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB012	**MP ENTER/EXIT:** 9.48/9.49	**SURVEY COORDINATES:** N 5413090 E 577834
TEAM NAME: EN1 **INVESTIGATORS:** Sten Lang, Cory Bolen, Ken Ruzicka	**LOGBOOK PAGE #(S):** 16/ 26&27	**PHOTO #(S):** EN1-042508-WB012-001W " - " - " - 002E

PLANT TAXA INVENTORY

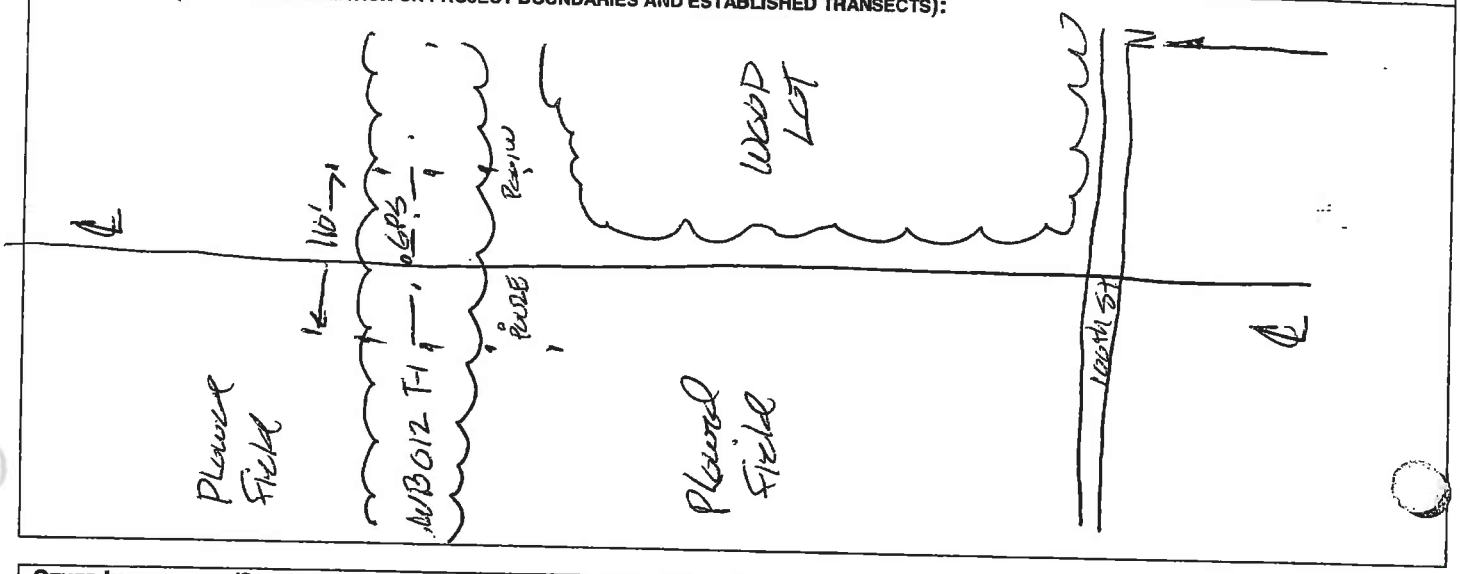
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINÉ, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	11 CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
17 WILLOW (*SALIX SPECIES*) SALIX ALBA	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 6
_____	TOTAL # OF DECIDUOUS TREES: 17
_____	TOTAL # OF DECIDUOUS SHRUBS: 11
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB013	**MP ENTER/EXIT:** 9.99/10.00	**SURVEY COORDINATES:** N 5412262 E 577837
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Cory Bolen Ken Ruzicka	**LOGBOOK PAGE #(S):** 14/ 28&29	**PHOTO #(S):** EN1-042508-WB013-001W " - " - " - 002E

PLANT TAXA INVENTORY

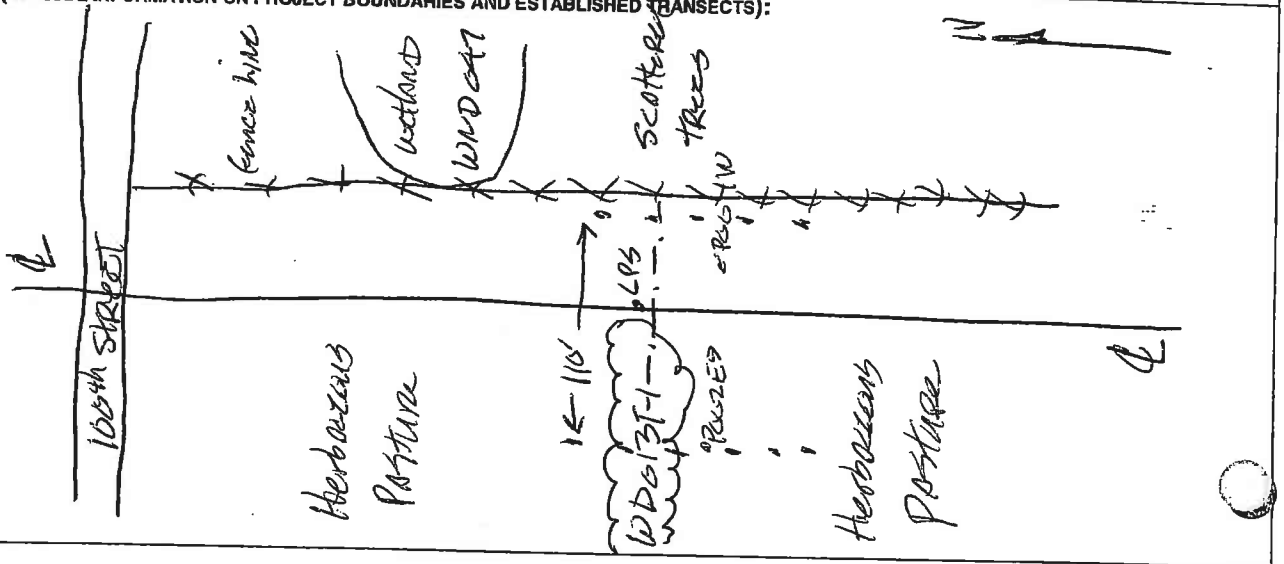
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
17 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	3 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 8
	TOTAL # OF DECIDUOUS TREES: 17
	TOTAL # OF DECIDUOUS SHRUBS: 3
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB014	**MP ENTER/EXIT:** 10.23/10.24	**SURVEY COORDINATES:** N 5411958 E 577863
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Cory Boles, Ken Rudicka	**LOGBOOK PAGE #(S):**	**PHOTO #(S):** EN1-042508-WB014-001W " - " - " 002E

PLANT TAXA INVENTORY

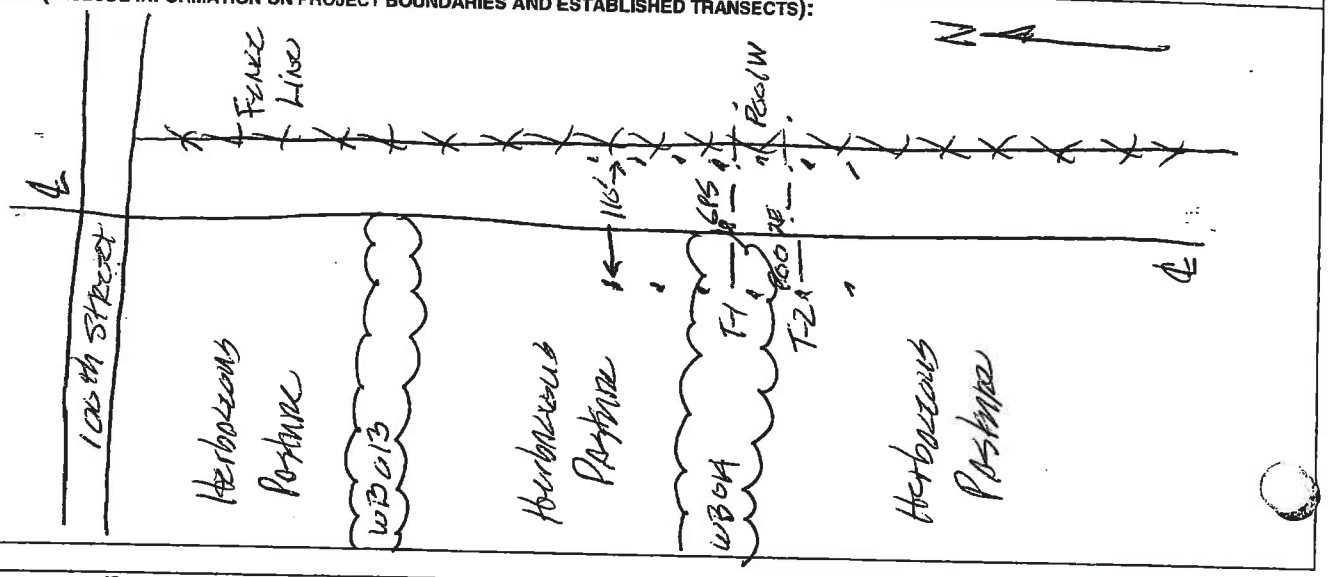
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
7 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	4 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	21 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 7
	TOTAL # OF DECIDUOUS SHRUBS: 25
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~8~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB015	**MP ENTER/EXIT:** 11.23/11.23	**SURVEY COORDINATES:** N 5410286 E 577908
TEAM NAME: ~~CB~~ EN1 **INVESTIGATORS:** Steve Longi, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** 1of1 32&33	**PHOTO #(S):** EN1-042508-WB015-001W " " " -002E

PLANT TAXA INVENTORY

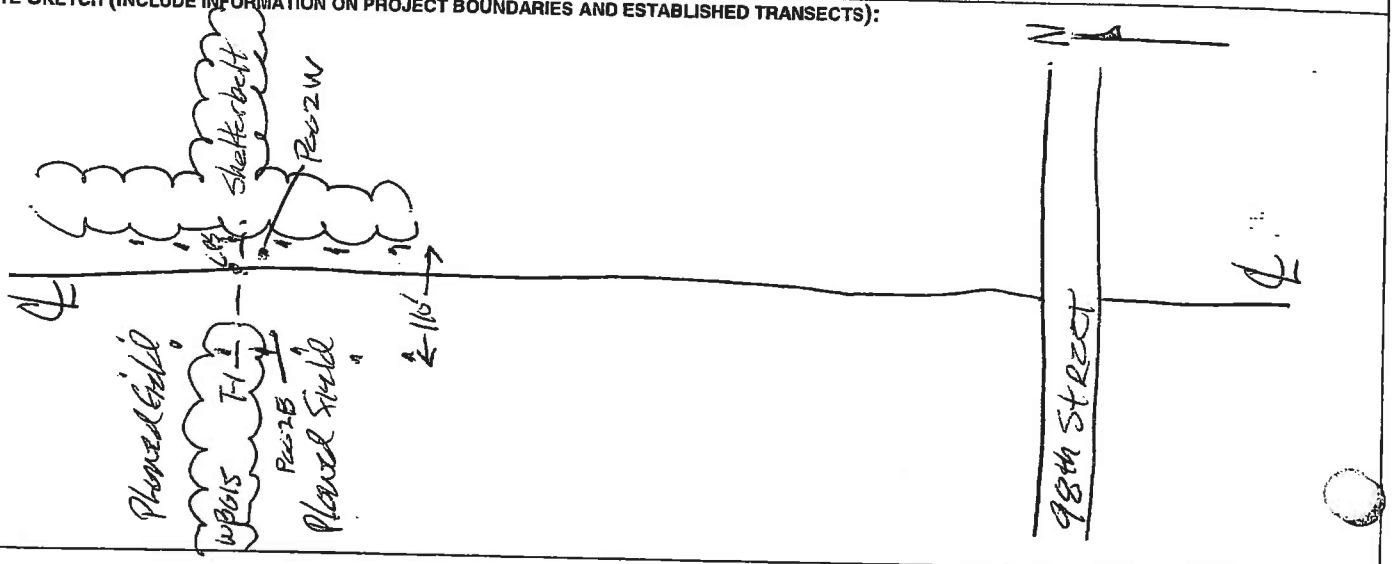
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
2 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	1 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	24 LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 2
	TOTAL # OF DECIDUOUS SHRUBS: 25
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB016	**MP ENTER/EXIT:** 11.74/11.75	**SURVEY COORDINATES:** N 5409440 E 577900
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** 141 34 & 35	**PHOTO #(S):** EN1-042508-WB016-001W ~ - ~ - ~ -002E

PLANT TAXA INVENTORY

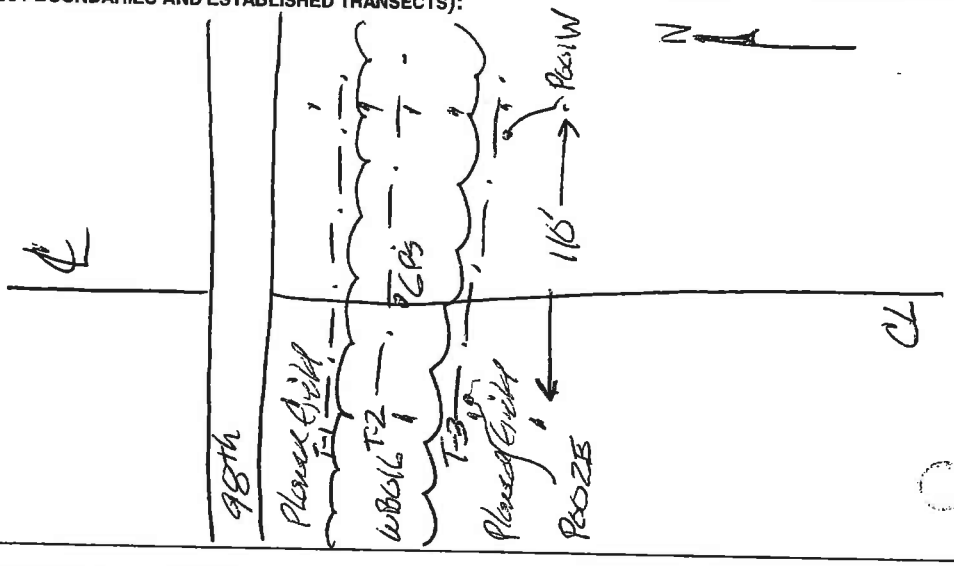
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
17 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
15 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
28 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	40 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	28 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~0~~
_____	TOTAL # OF DECIDUOUS TREES: 61
_____	TOTAL # OF DECIDUOUS SHRUBS: 69
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-13-08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN20513O8WL009

MP ENTER/EXIT: 13.02 / 13.15

ENTER/EXIT COORDINATES:

TEAM NAME: EN2

INVESTIGATORS: Stribley, Ridenour

LOGBOOK PAGE #(S): 5-7

PHOTO #(S):

PLANT TAXA INVENTORY

 # INVENTORIED, DECIDUOUS TREES:

- 218 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)
- _____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)
- _____ BIRCH, PAPER (*BETULA PAPYRIFERA*)
- _____ COTTONWOOD (*POPULUS DELTOIDES*)
- _____ CRABAPPLE (*MALUS SPECIES*)
- 14 ELM, SIBERIAN (*ULMUS PUMILA*)
- _____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)
- _____ LARCH, SIBERIAN (*LARIX SIBIRICA*)
- _____ LINDEN, AMERICAN (*TILIA AMERICANA*)
- 12 MAPLE, BOXELDER (*ACER NEGUNDO*)
- _____ MAPLE, SILVER (*ACER SACCHARINUM*)
- _____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)
- 267 OAK, BUR (*QUERCUS MACROCARPA*)
- _____ OHIO BUCKEYE (*AESCULUS GLABRA*)
- _____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)
- _____ POPLAR, WHITE (*POPULUS ALBA*)
- _____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)
- _____ WALNUT, BLACK (*JUGLANS NIGRA*)
- 180 WILLOW (*SALIX SPECIES*)

 # INVENTORIED, INVASIVE/EXOTIC SPECIES:

- _____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)
- _____ ELM, SIBERIAN (ULMUS PUMILA)
- _____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)
- _____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)
- _____ SALTCEDAR (TAMARIX RAMOSISSIMA)
- _____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)
- _____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)

 # INVENTORIED, OTHER:

- 1265 Unk Shrub #1 chokecherry
- 350 unk shrub #2 Cranberry
- 720 unk shrub # 3 (Juneberry?)
- 180 Unk Shrub #4 (w/ catkins?) willow
- _____

 # INVENTORIED, EVERGREEN TREES:

- _____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
- _____ SPRUCE, COLORADO (*PICEA PUNGENS*)
- _____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
- _____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
- _____ PINE, PONDEROSA (*PINUS PONDEROSA*)
- _____ PINE, LIMBER (*PINUS FLEXILIS*)
- _____ PINE, SCOTCH (*PINUS SYLVESTRIS*)

 # INVENTORIED, DECIDUOUS SHRUBS:

- _____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
- _____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
- _____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
- 1265 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
- _____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
- _____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
- 350 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
- _____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
- 59 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
- _____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
- _____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
- _____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
- 720 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
- _____ LILAC, COMMON (*SYRINGA VULGARIS*)
- _____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
- _____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
- _____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
- _____ POISON IVY (*RHUS RADICANS*)
- _____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
- _____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
- _____ SUMAC, SMOOTH (*RHUS GLABRA*)
- _____ SUMAC, STAGHORN (*RHUS TYPHINA*)

 # INVENTORIED, OTHER:

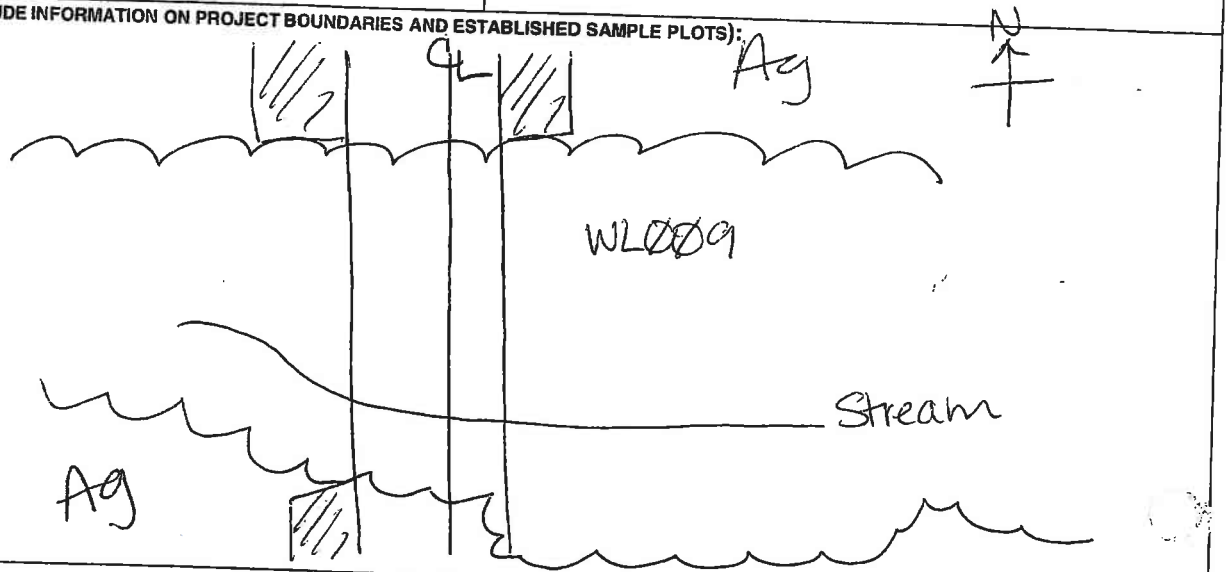
- 36 raspberry
- 11 ribes #2

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 501
_____	TOTAL # OF DECIDUOUS SHRUBS: 59
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 2515 (not including nbes)
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL009	UNK Shrub #1 (redleaves)	chokecherry	Prunus virginiana	yes
WL009	hawthorn			yes
WL009	juneberry			yes
WL009	UNK Shrub #4			yes

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB017	**MP ENTER/EXIT:** 13.35 / 13.36	**SURVEY COORDINATES:** N 5406858 E 577946
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longi, Ken Ruzicka, Cory Boten	**LOGBOOK PAGE #(S):** 1 of 1 38 & 39	**PHOTO #(S):** EN1-042508-WB017-001W " - " - " - 002E

PLANT TAXA INVENTORY

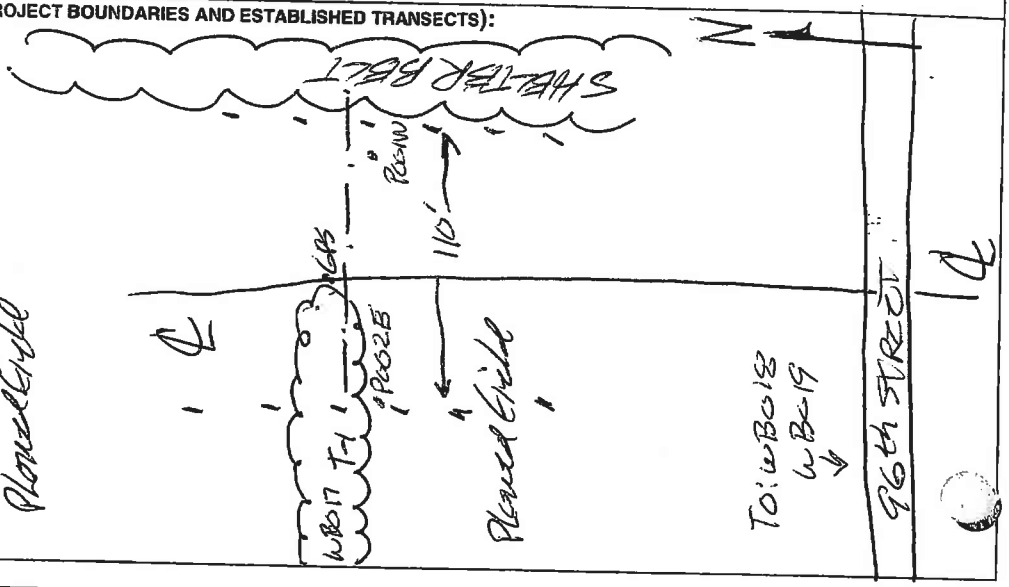
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
5 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 5
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB018	**MP ENTER/EXIT:** 13.46/13.48	**SURVEY COORDINATES:** N 5406648 E 577953
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka Cory Biber	**LOGBOOK PAGE #(S):** 1of1 40f41	**PHOTO #(S):** EN1-042508-WB018-001W ~~-~~-002E

PLANT TAXA INVENTORY

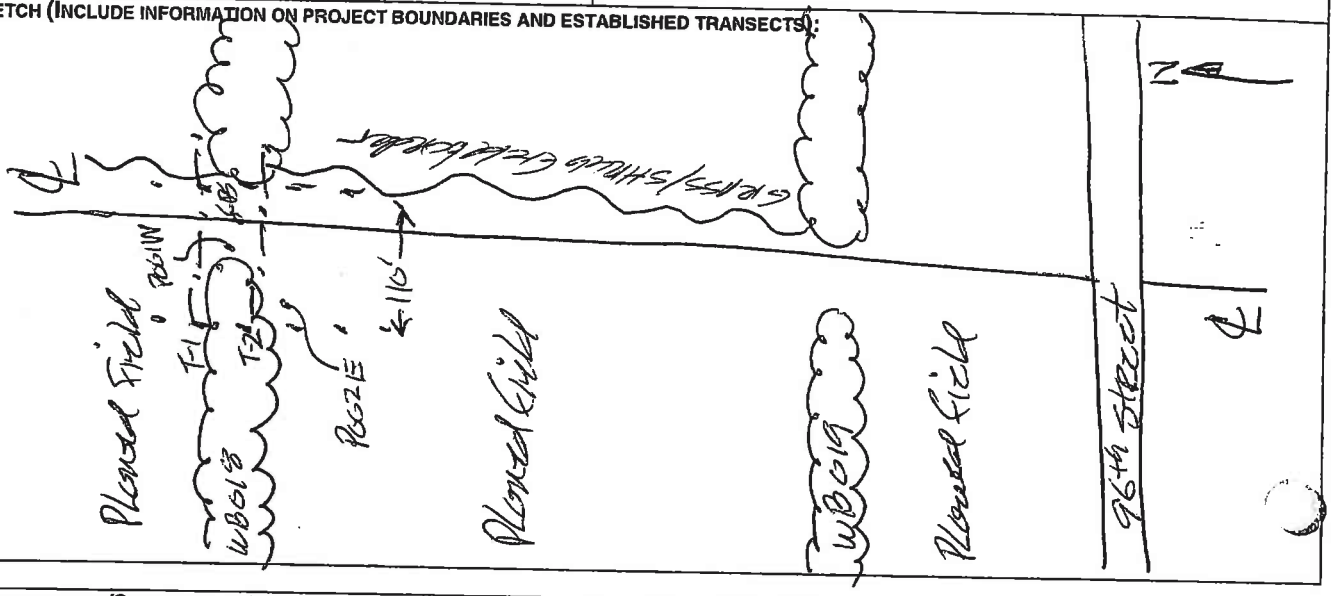
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
8 WILLOW (*SALIX SPECIES*) SALIX ALBA	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	15 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 8
	TOTAL # OF DECIDUOUS SHRUBS: 15
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB019	**MP ENTER/EXIT:** 13.59/13.59	**SURVEY COORDINATES:** N 5406449 E 577962
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boten	**LOGBOOK PAGE #(S):** 161 42&43	**PHOTO #(S):** EN1-042508-WB019-001W " - " - " -002E

PLANT TAXA INVENTORY

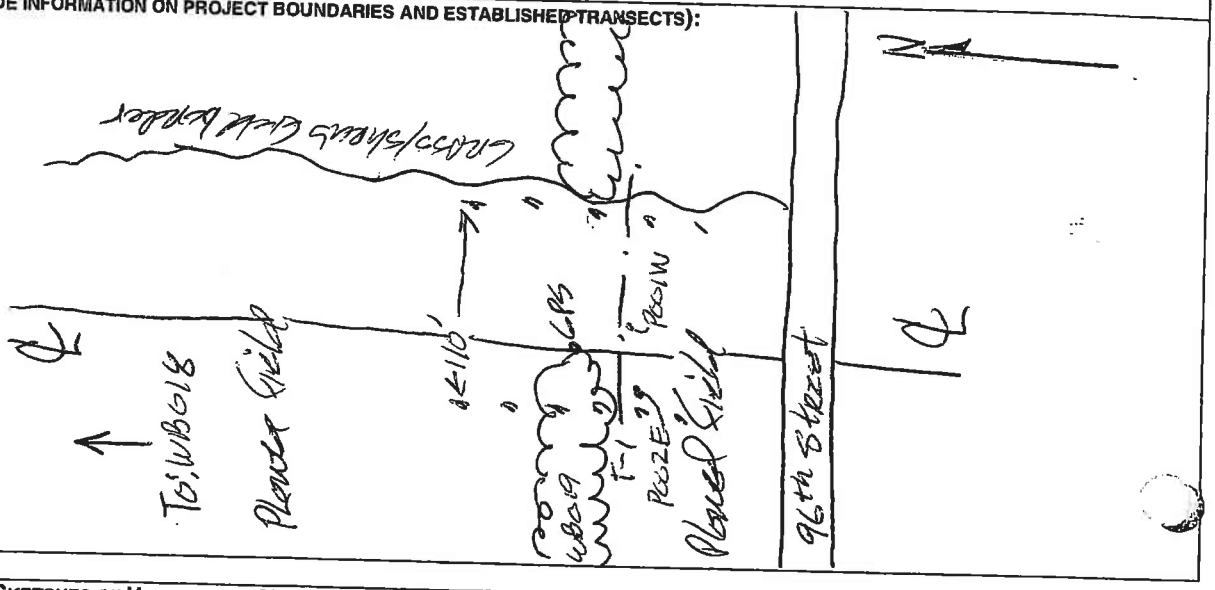
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
10 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 6
_____	TOTAL # OF DECIDUOUS TREES: 10
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042508-WB020	**MP ENTER/EXIT:** 13.75/13.76	**SURVEY COORDINATES:** N 5406201 E 577965
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** 1of1 36&37	**PHOTO #(S):** EN1-042508-WB020-001W " - " - " -002E

PLANT TAXA INVENTORY

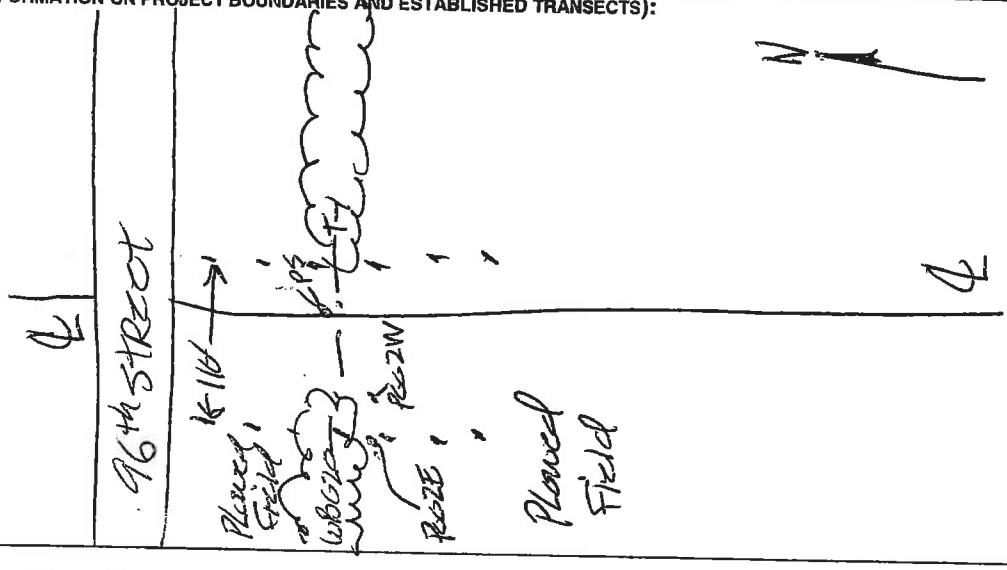
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
8 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	12 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 8
	TOTAL # OF DECIDUOUS SHRUBS: 12
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

DATE: 5-29-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	**PROJECT NUMBER:** 10623-010
FEATURE ID: NA	**MP ENTER/EXIT:** 14.22 /	**ENTER/EXIT COORDINATES:**
TEAM NAME: **INVESTIGATORS:** James Gibson	**LOGBOOK PAGE #(S):**	**PHOTO #(S):**

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
25 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
29 MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
29 unk Shrub (see photo)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 25
_____	TOTAL # OF DECIDUOUS SHRUBS: 29
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):

Counted by EI - James Gibson

OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

Project Number: 10623-010		
Date: 5-14-08	**Client/Project Name:** KEYSTONE PIPELINE PROJECT	
Feature ID: EN2Ø514Ø8WLØ1Ø	**MP Enter/Exit:** 16.11 / 16.15	**Enter/Exit Coordinates:**
Team Name: EN2 **Investigators:** Stibley, Ridenaur	**Logbook Page #(s):** 8-9	**Photo #(s):**

PLANT TAXA INVENTORY

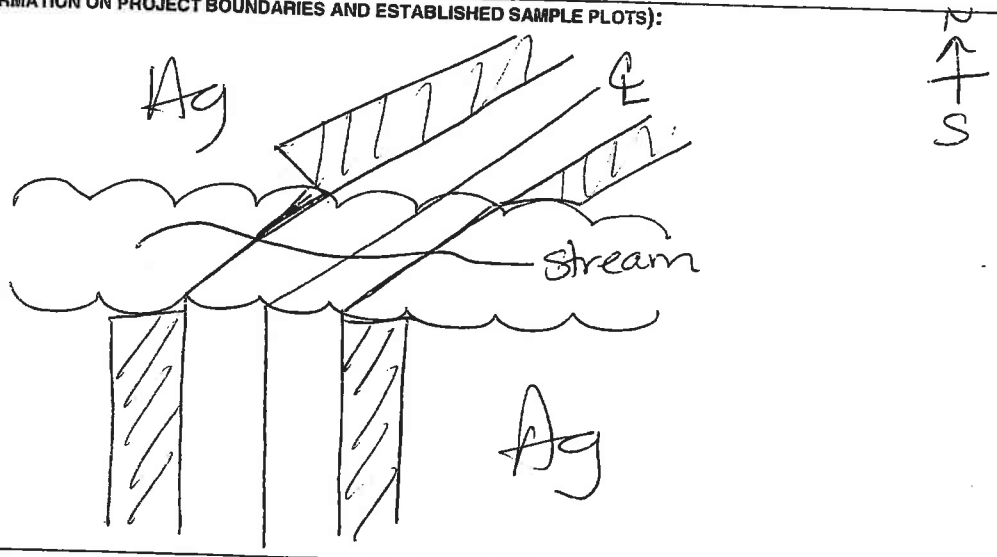
# Inventoried, Deciduous Trees:	# Inventoried, Evergreen Trees:
8 Ash, Green (*Fraxinus pennsylvanica*)	_____ Spruce, Black Hills White (*Picea glauca var. densata*)
_____ Aspen, Quaking (*Populus tremuloides*)	_____ Spruce, Colorado (*Picea pungens*)
_____ Birch, Paper (*Betula papyrifera*)	_____ Juniper, Rocky Mountain (*Juniperus scopulorum*)
_____ Cottonwood (*Populus deltoides*)	_____ Cedar, Eastern Red- (*Juniperus virginiana*)
_____ Crabapple (*Malus species*)	_____ Pine, Ponderosa (*Pinus ponderosa*)
11 Elm, Siberian (*Ulmus pumila*)	_____ Pine, Limber (*Pinus flexilis*)
_____ Hackberry, Common (*Celtis occidentalis*)	_____ Pine, Scotch (*Pinus sylvestris*)
_____ Larch, Siberian (*Larix sibirica*)	**# Inventoried, Deciduous Shrubs:**
17 Linden, American (*Tilia americana*)	_____ Buckthorn, Common (*Rhamnus cathartica*)
_____ Maple, Boxelder (*Acer negundo*)	_____ Buffaloberry Silver (*Shepherdia argentea*)
_____ Maple, Silver (*Acer saccharinum*)	_____ Cherry, Pin (*Prunus pensylvanica*)
_____ Mountain-ash, European (*Sorbus aucuparia*)	135 Chokecherry, Common & Schubert (*Prunus virginiana*)
_____ Oak, Bur (*Quercus macrocarpa*)	_____ Cinquefoil, Shrubby (*Potentilla fruticosa*)
_____ Ohio Buckeye (*Aesculus glabra*)	_____ Cotoneaster, Hedge (*Cotoneaster lucidus*)
_____ Poplar, Balsam (*Populus balsamifera*)	_____ Cranberrybush, American (*Viburnum trilobum*)
_____ Poplar, White (*Populus alba*)	_____ Dogwood, Redosier (*Cornus stolonifera*)
_____ Russian-olive (*Elaeagnus angustifolia*)	_____ Hawthorn, Round-Leaved (*Crateagus rotundifolia*)
_____ Walnut, Black (*Juglans nigra*)	_____ Hazelnut, Beaked (*Corylus cornuta*)
_____ Willow (*Salix species*)	_____ Hazelnut, American (*Corylus americana*)
# Inventoried, Invasive/Exotic Species:	_____ Honeysuckle, Tatarian (*Lonicera tatarica*)
_____ Buckthorn, Common (Rhamnus cathartica)	_____ Juneberry (*Amelanchier alnifolia*)
_____ Elm, Siberian (Ulmus pumila)	_____ Lilac, Common (*Syringa vulgaris*)
_____ Olive, Russian (Elaeagnus angustifolia)	_____ Maple, Amur (*Acer tataricum spp. ginnala*)
_____ Peashrub, Siberian (Caragana arborescens)	_____ Peashrub, Siberian (*Caragana arborescens*)
_____ Saltcedar (Tamarix ramosissima)	_____ Plum, American (*Prunus americana*)
_____ Tamarisk. Five-stamen (Tamarix chinensis)	_____ Poison Ivy (*Rhus radicans*)
_____ Tamarisk, Smallflower (Tamarix Parviflora)	_____ Silverberry (*Elaeagnus commutata*)
# Inventoried, Other:	_____ Spirea, Vanhoutte (*Spiraea x vanhouttei*)
10 Unk tree #1 chokecherry	_____ Sumac, Smooth (*Rhus glabra*)
2 Unk tree #2 (opp. green buds)	_____ Sumac, Staghorn (*Rhus typhina*)
125 Unk. shrub #1 (possibly same as unk tree #1 chokecherry)	**# Inventoried, Other:**
_____	45 raspberry
1 Unk. shrub #2	_____

WOODLOT INVENTORY FORM CONT'D.

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 36 38
_____	TOTAL # OF DECIDUOUS SHRUBS: _____ 136
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 138
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL010	ash	green ash	Fraxinus pennsylvanica	no
WL010	UNK Tree #1	chokecherry	Prunus virginiana	yes
WL010	UNK Shrub #1(possibly the same a	chokecherry	Prunus virginiana	yes
WL010	Linden	American linden	Tilia americana	no
WL010	elm	Siberian elm	Ulmus pumila	no
WL010	UNK Tree #2-(opp. Green buds)			yes
WL010	raspberry	American red raspberry	Rubus idaeus	no
WL010	UNK Shrub #2			yes

WOODLOT INVENTORY FORM

		PROJECT NUMBER: 10623-010
DATE: 5-14-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051408WL011	**MP ENTER/EXIT:** 14.55 / 14.54	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Smiley, Ridenour	**LOGBOOK PAGE #(S):** 13	**PHOTO #(S):**

PLANT TAXA INVENTORY

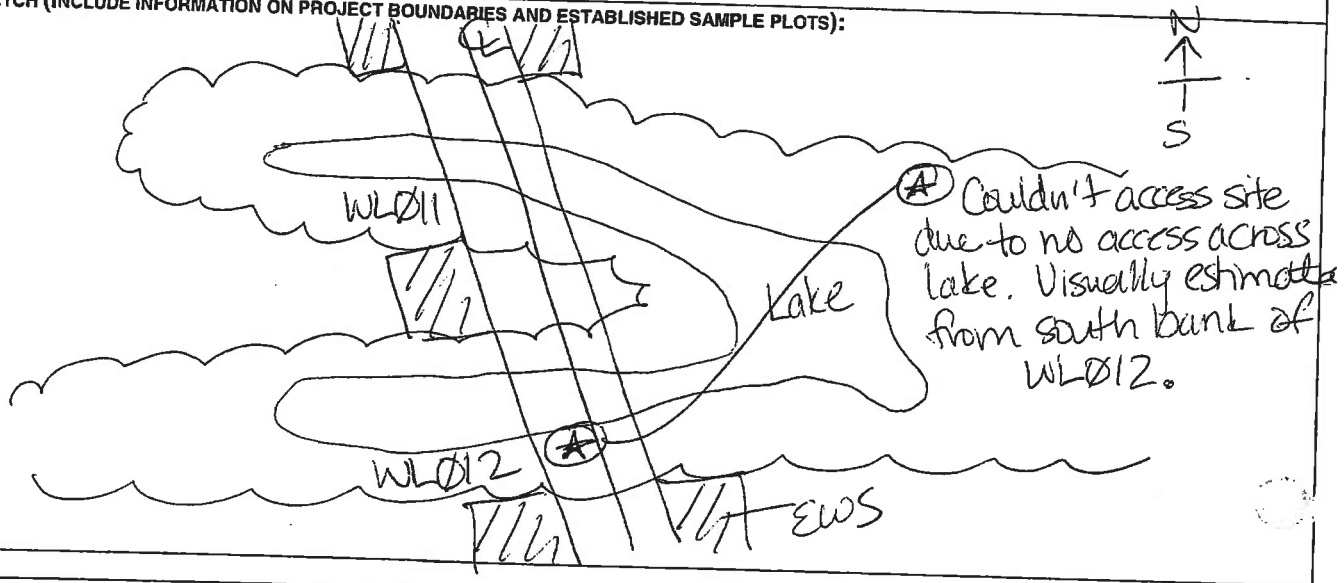
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
12 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 12
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL011	Ash	green ash	Fraxinus pennsylvanica	no

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-14-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN20514Ø8WLØ12	**MP ENTER/EXIT:** 16.61 / 16.64	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Stribley, Ridenour	**LOGBOOK PAGE #(S):** 10-12	**PHOTO #(S):**

PLANT TAXA INVENTORY

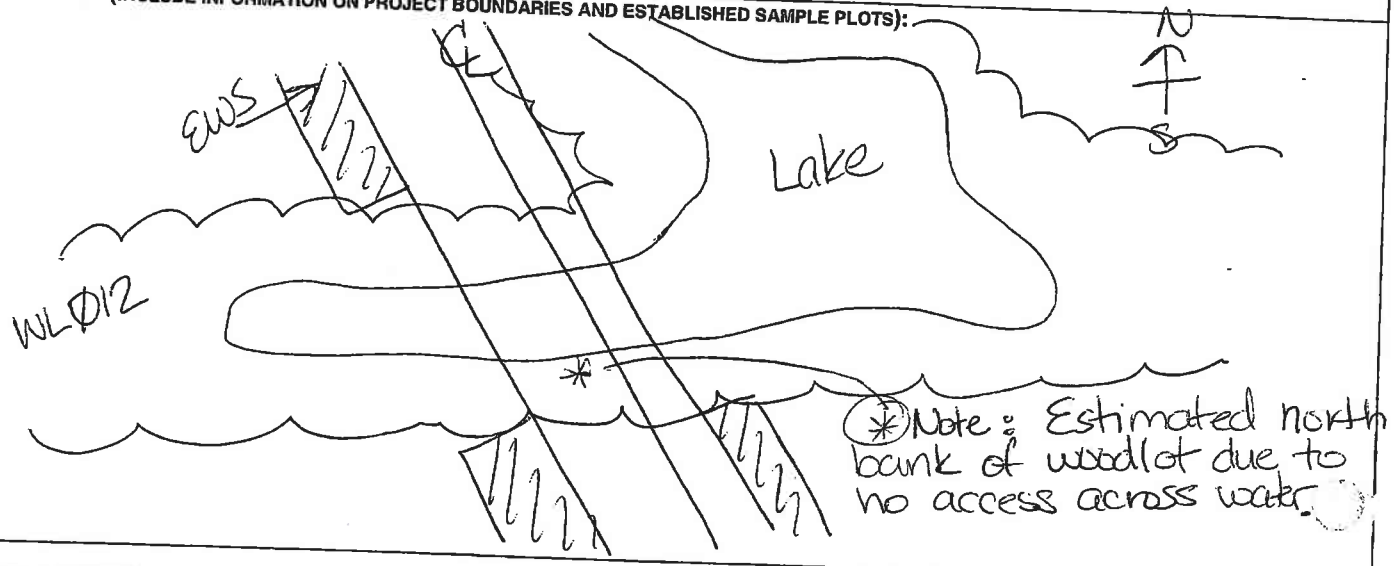
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
17 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
4 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
2 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	3 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	150 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	50 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	2 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
2 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
150 unk shrub #1 (w berries) CRANB	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
2 unk tree #1 (w catkins) WILLOW	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
50 unk shrub #2 (red bark) DOGWOOD	**# INVENTORIED, OTHER:**
100 unk shrub #3 (opp red buds)	3 unk tree #3 (radish bark, alt buds
2 unk tree #2 (thorns, alt buds) HAWTHORN	CROSSED OUT

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 25
	TOTAL # OF DECIDUOUS SHRUBS:
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 307

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

took samples of buds/branches of all unknown trees & shrubs.

Photos taken of all unknown trees & shrubs:

	Field Name	Common Name	Scientific Name	Sample
WL012	ash	green ash	Fraxinus pennsylvanica	no
WL012	UNK Tree #3 (reddish brown bark,	chokecherry	Prunus virginiana	yes
WL012	Linden	American linden	Tilia americana	no
WL012	elm	elm		no
WL012	UNK shrub #1 (berries)			yes
WL012	UNK tree #1 (catkins)	opp. red buds		yes
WL012	UNK shrub #2 (red bark, bud have white hairs)			yes
WL013	UNK shrub #3 (opp. red buds)			yes
WL012	UNK Tree #2 (thorns, alt. berries)			yes
WL012	rose			no

WOODLOT INVENTORY FORM

		PROJECT NUMBER: 10623-010
DATE: 5-14-08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2Ø514Ø8WLØ13	MP ENTER/EXIT: 16.95/17.02	ENTER/EXIT COORDINATES:
TEAM NAME: EN2 INVESTIGATORS: Shibley, Ridenour	LOGBOOK PAGE #(S): 14-15	PHOTO #(S):

PLANT TAXA INVENTORY

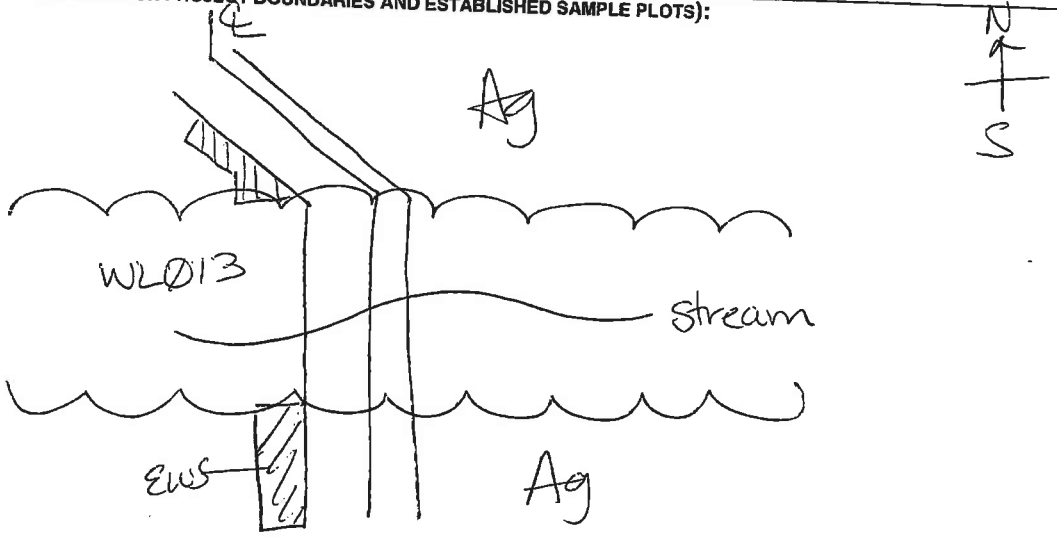
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
110 ~~ASH~~ 50 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
90 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
98 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER: chokecherry	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
300 unk Shrub #1 (reddish leaves)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
3 Oak, White	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
71 unk Shrub #2 (red stem, opp) willow?	**# INVENTORIED, OTHER:**
_____ dogwood	82 ribes sp #2
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 301
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 431 (not including ribes)
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Collected samples of all unknown species for verification back in the office.

	Field Name	Common Name	Scientific Name	Sample
WL013	UNK shrub #2 (redstem, opp.)	dogwood	Cornus sericea	yes
WL013	ash	green ash	Fraxinus pennsylvanica	no
WL013	UNK shrub #1	chokecherry	Prunus virginiana	no
WL013	white oak	bur oak	Quercus macrocarpa	yes
WL013	Linden	American linden	Tilia americana	no
WL013	Ribes sp #2		Ribes	no
WL013	elm			no

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042608WB022	**MP ENTER/EXIT:** 17.72/17.75	**SURVEY COORDINATES:** N 5399918 E 578191
TEAM NAME: ENI **INVESTIGATORS:** S. Long, K. Ruzycka, C. Boden	**LOGBOOK PAGE #(S):** 2&2 4&5	**PHOTO #(S):** ENI-042608-WB022-001N ~ ~ ~ ~ ~ -002S

PLANT TAXA INVENTORY

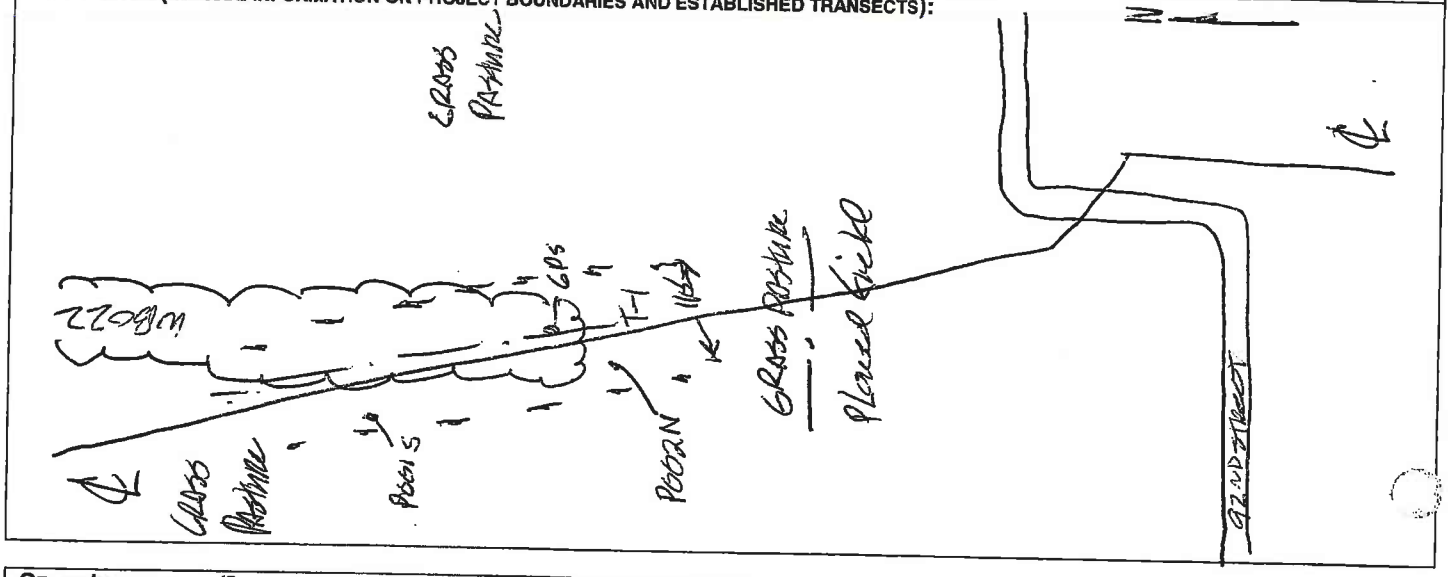
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
3 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
2 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
6 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	1 Woods Rose (*Rosa woodsii*)
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~6~~
_____	TOTAL # OF DECIDUOUS TREES: 11
_____	TOTAL # OF DECIDUOUS SHRUBS: ~~10~~ SL 4/24/08
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~ 1 SL 4/24/08
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-14-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN20514008WL014	**MP ENTER/EXIT:** 17.98 / 18.10	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Snibley, Ridenour	**LOGBOOK PAGE #(S):** 16-18	**PHOTO #(S):**

PLANT TAXA INVENTORY

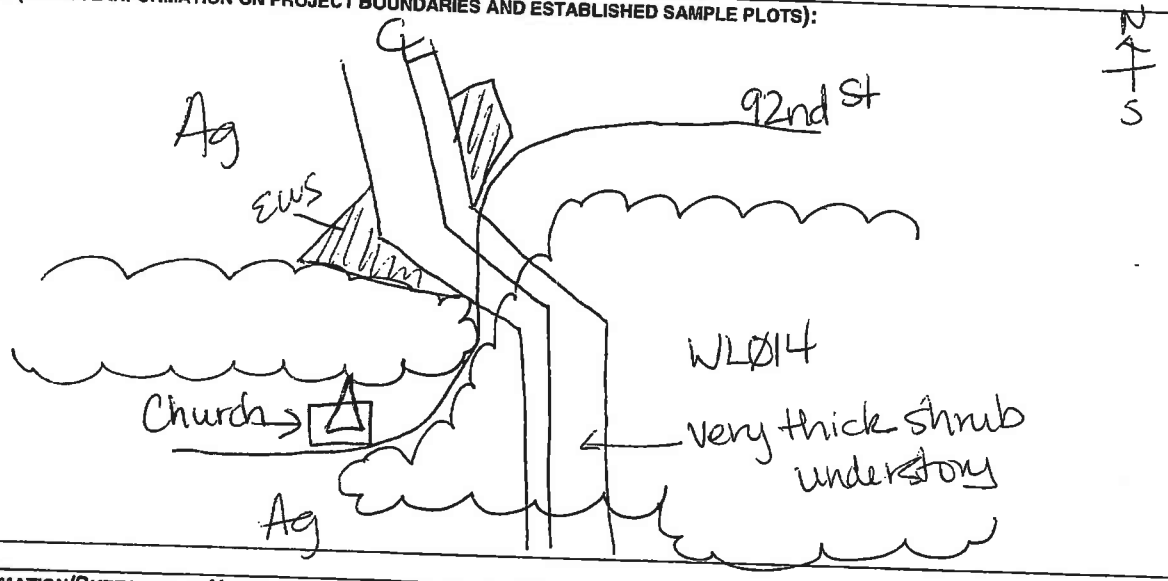
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
92 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
220 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
14 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	1780 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
79 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	15 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	8 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	69 SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
150 unk Shrub #1 (berries) raspberry	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
1780 unk Shrub #2 (red leaves) chokecherry	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
990 unk tree #1 (ul catkins) willow	**# INVENTORIED, OTHER:**
135 unk Shrub #3 (snowberry?)	2 rose spp
_____	135 snowberry

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 407 1597
_____	TOTAL # OF DECIDUOUS SHRUBS: 23 2070
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 3,055
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Collected samples of all unknown species for verification back in the office.

	Field Name	Common Name	Scientific Name	Sample
WL014	ash	green ash	Fraxinus pennsylvanica	no
WL014	aspen	quaking aspen	Populus temuloides	no
WL014	UNK shrub #2 (red leaves)	chokecherry	Prunus virginiana	yes
WL014	oak	bur oak	Quercus macrocarpa	yes
WL014	elm			no
WL014	rose			no
WL014	UNK shrub #1 (berries)			yes
WL014	UNK Tree #1 (catkins)			yes
WL014	juneberry			no
WL014	UNK shrub #3 (snowberry, opp. Gr	snowberry	Synphocarpus occidentalis	yes

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042608WB023	**MP ENTER/EXIT:** 20.20/20.23	**SURVEY COORDINATES:** N 539307 E 579300
TEAM NAME: EN1 **INVESTIGATORS:** S. Long, K. Rumpca, C. Boka	**LOGBOOK PAGE #(S):** 282 GF7	**PHOTO #(S):** EN1-042608-WB023-001NW -002NE

PLANT TAXA INVENTORY

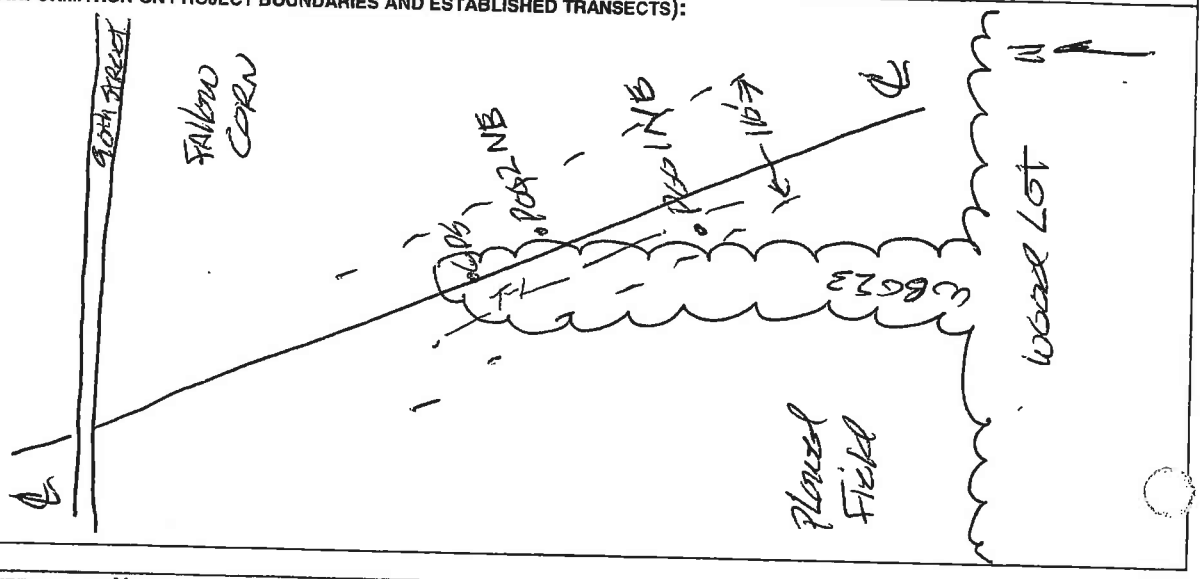
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
7 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
2 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
5 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	1 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~0~~
_____	TOTAL # OF DECIDUOUS TREES: 14
_____	TOTAL # OF DECIDUOUS SHRUBS: 1
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042608WB025	**MP ENTER/EXIT:** 20.89/20.90	**SURVEY COORDINATES:** N 5395355 E 579681
TEAM NAME: EN1 **INVESTIGATORS:** S. Long, K. Rumbley, C. Burton	**LOGBOOK PAGE #(S):** 2 of 2 10 of 11	**PHOTO #(S):** EN1-042608-WB025-001W ~ ~ ~ ~ ~ ~002E

PLANT TAXA INVENTORY

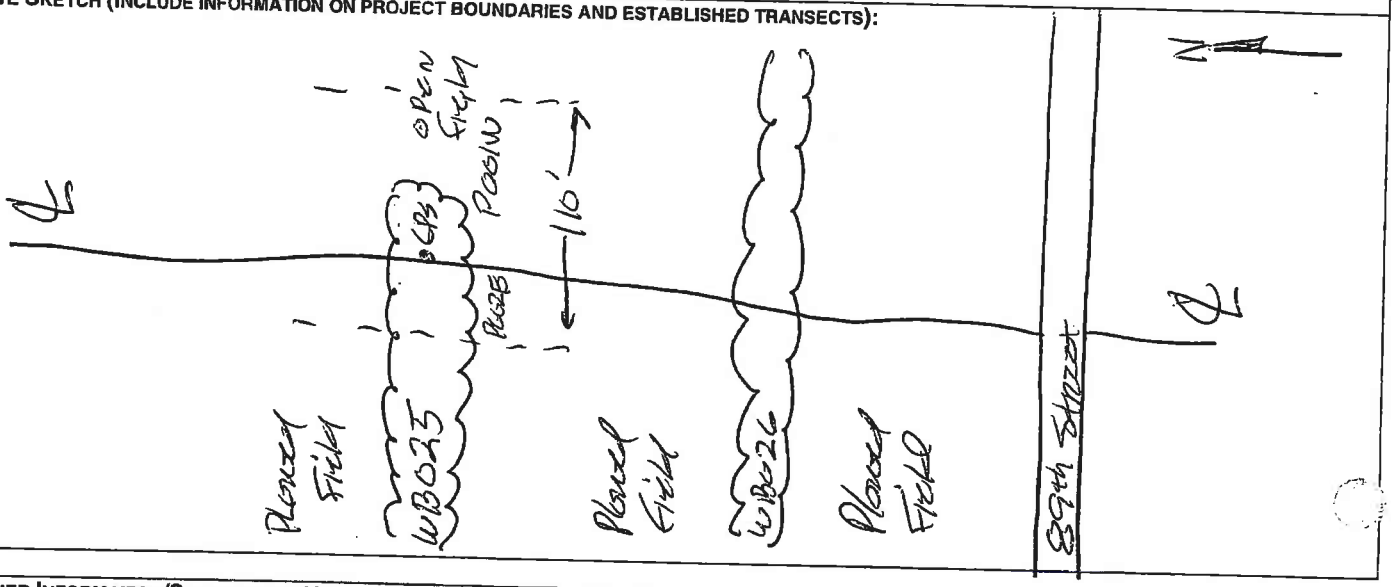
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
9 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	8 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 6
	TOTAL # OF DECIDUOUS TREES: 9
	TOTAL # OF DECIDUOUS SHRUBS: 8
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042608WB026	**MP ENTER/EXIT:** 21.00/21.01	**SURVEY COORDINATES:** N 5395179 E 579681
TEAM NAME: ENI **INVESTIGATORS:** C. Rixen, S. Lang, K. Rempkies	**LOGBOOK PAGE #(S):** RJ2 8&9	**PHOTO #(S):** ENI-042608-WB026-001W " " -002E

PLANT TAXA INVENTORY

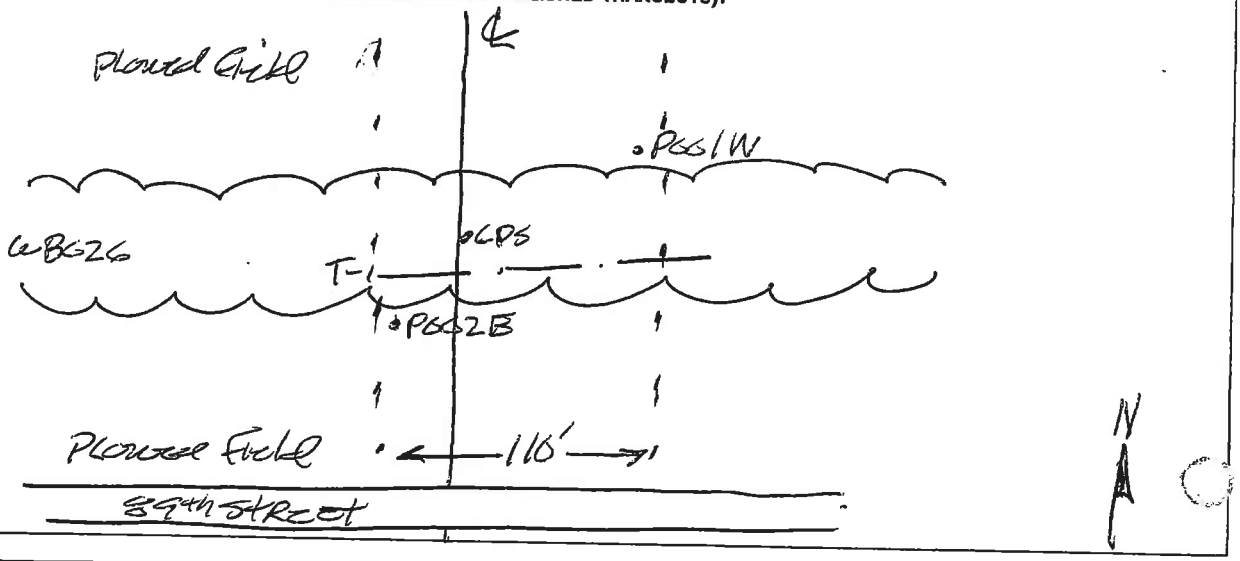
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
14 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	12 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~6~~
_____	TOTAL # OF DECIDUOUS TREES: 14
_____	TOTAL # OF DECIDUOUS SHRUBS: 12
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-14-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051408WL0016	**MP ENTER/EXIT:** 21.40 / 21.46	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Smbley, Ridenour	**LOGBOOK PAGE #(S):** 19-20	**PHOTO #(S):**

PLANT TAXA INVENTORY

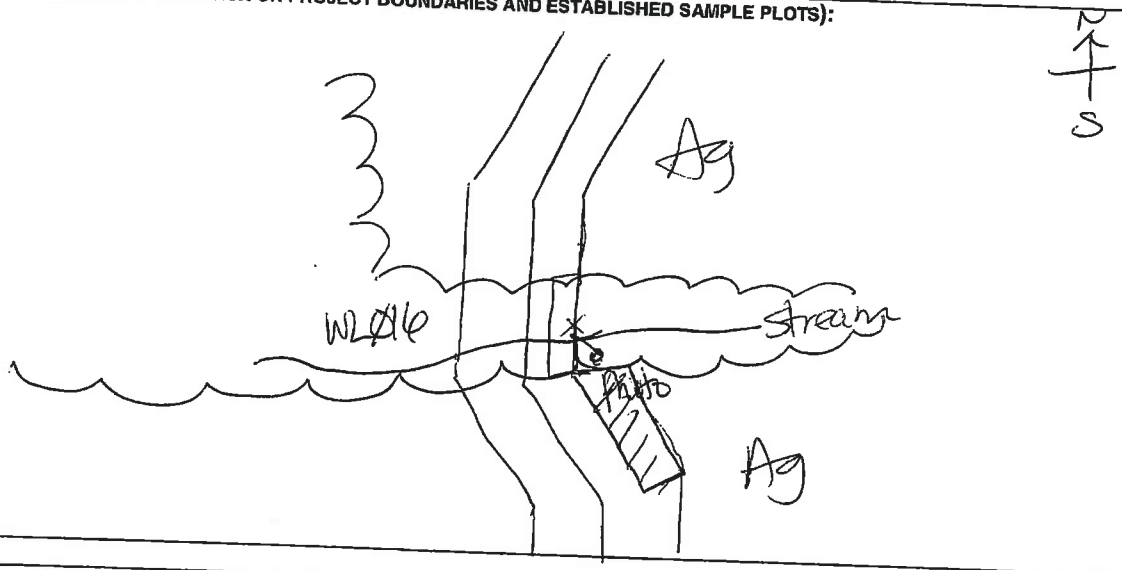
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
61 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
72 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
94 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	720 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
720 Unk Shrub #1 (redleaf) chokecherry	1 SUMAC, SMOOTH (*RHUS GLABRA*)
407 snowberry	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	24 ribes spp #1
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 227
_____	TOTAL # OF DECIDUOUS SHRUBS: 467 1117
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 120 (excluding ribes sp.)
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL016	ash	green ash	Fraxinus pennsylvanica	no
WL016	UNK shrub #1 (red leaves)	chokecherry	Prunus virginiana	no
WL016	linden	American linden	Tilia americana	no
WL016	elm			no
WL016	Ribes sp. #1			no
WL016	UNK shrub #2 (snowberry, opp. Gr	snowberry	Synphocarpus occidentalis	no

WOODLOT INVENTORY FORM

		PROJECT NUMBER: 10623-010
DATE: 5-15-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN20515Ø8 WL017	**MP ENTER/EXIT:** 22.67/22.74	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Shibley, Ridenour	**LOGBOOK PAGE #(S):** 21-22	**PHOTO #(S):**

PLANT TAXA INVENTORY

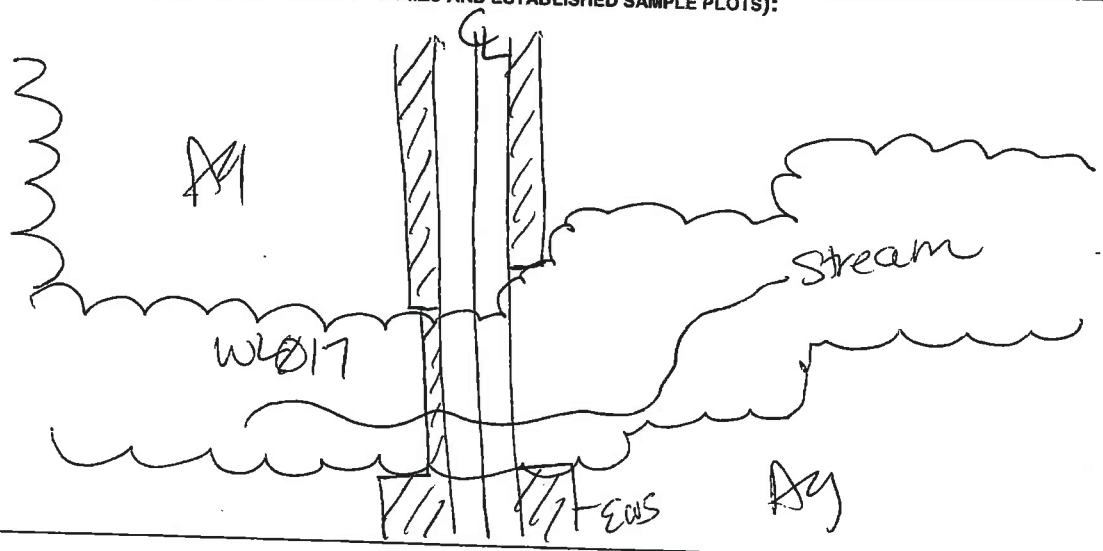
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
125 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
5 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
52 ELM, ~~SIBERIAN (*ULMUS PUMILA*)~~ American (55)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
89 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	64 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
1 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
64 Unk Shrub #1 (red leaves)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____ SMOKEBUSH	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 274
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 104
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL017	ash	green ash	Fraxinus pennsylvanica	no
WL017	aspen	quaking aspen	Populus temuloides	no
WL017	UNK shrub #1 (red leaves)	chokecherry	Prunus virginiana	no
WL017	burr oak	bur oak	Quercus macrocarpa	no
WL017	linden	American linden	Tilia americana	no
WL017	elm			no

100% Inventory

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-15-08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN2051508WL018

MP ENTER/EXIT: 23.63 / 23.67

ENTER/EXIT COORDINATES:

TEAM NAME: EN2

INVESTIGATORS: Shibley, Ridenour

LOGBOOK PAGE #(S): 23-24

PHOTO #(S):

PLANT TAXA INVENTORY

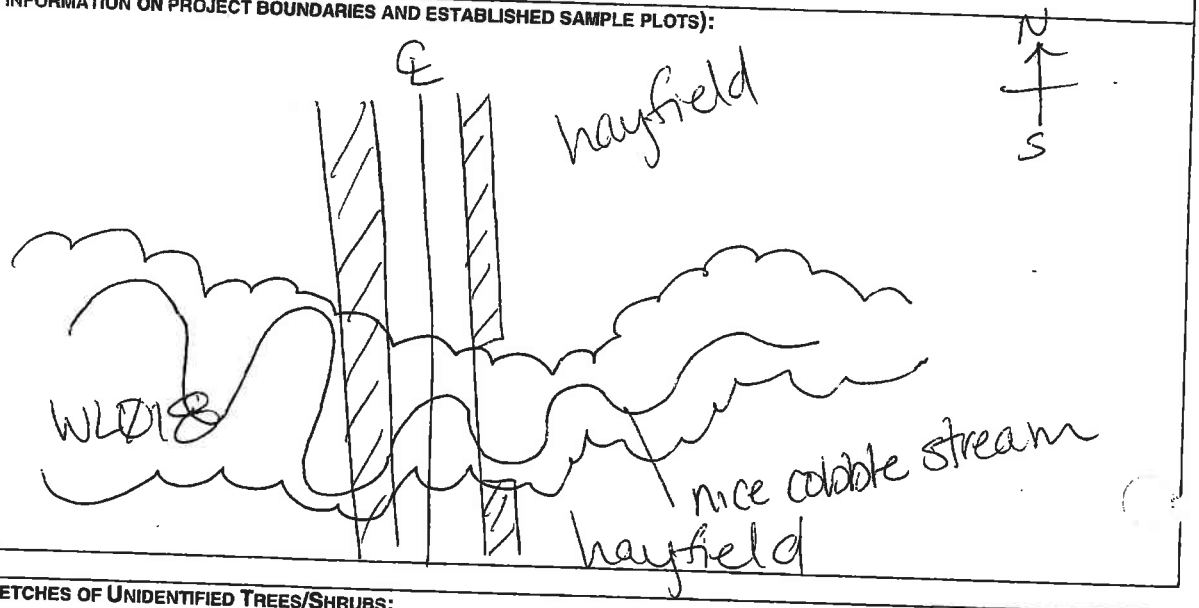
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
12 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
1 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
10 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	30 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
1 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
53 unk shrub #1 snowberry	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
30 unk shrub #2 (red leaves) honeysuckle	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
1 unk tree #1 boxelder	**# INVENTORIED, OTHER:**
2 unk tree #2	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 84 87
_____	TOTAL # OF DECIDUOUS SHRUBS: _____ 83
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 82
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL018	UNK Tree #1	boxelder	Acer negundo	yes
WL018	ash	green ash	Fraxinus pennsylvanica	no
WL018	UNK shrub #2 (red leaves)	chokecherry	Prunus virginiana	no
WL018	linden	American linden	Tilia americana	no
WL018	elm			no
WL018	UNK shrub #1 (opp. Greenbud)	snowberry	Synphocarpus occidentalis	yes
WL018	[illegible]			yes
WL018	[illegible]			yes

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-15-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051508WL019	**MP ENTER/EXIT:** 24.64 / 24.67	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Smiley, Ridenour	**LOGBOOK PAGE #(S):** 25-26	**PHOTO #(S):**

PLANT TAXA INVENTORY

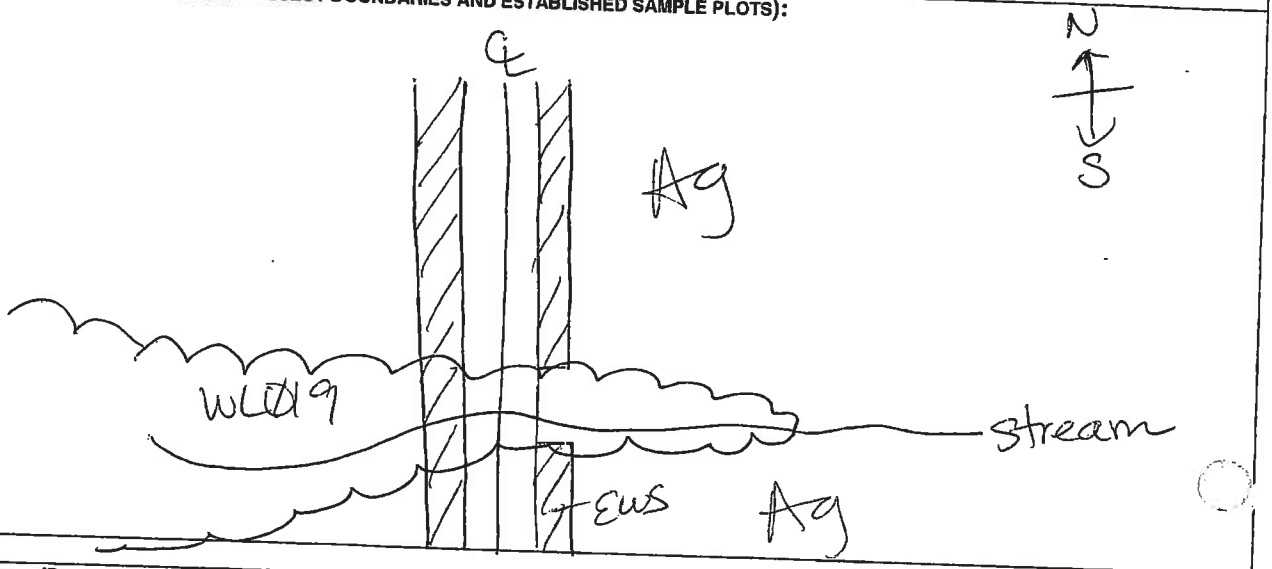
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
20 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
45 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
24 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	230 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
4 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	1 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	5 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
230 unk Shrub #1 (red leaves)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____ chokecherry?	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 93
_____	TOTAL # OF DECIDUOUS SHRUBS: 6 236
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 230
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL019	boxelder	boxelder	Acer negundo	no
WL019	UNK shrub #1 (red leaves)	chokecherry	Prunus virginiana	no
WL019	linden	American linden	Tilia americana	no
WL019	elm			no
WL019	hawthorn			no
WL019	juneberry			yes

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-15-08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051508WL020	MP ENTER/EXIT: 25.06 / 25.11	ENTER/EXIT COORDINATES:
TEAM NAME: EN2 INVESTIGATORS: Smiley, Ridenour	LOGBOOK PAGE #(s): 27-28	PHOTO #(s):

PLANT TAXA INVENTORY

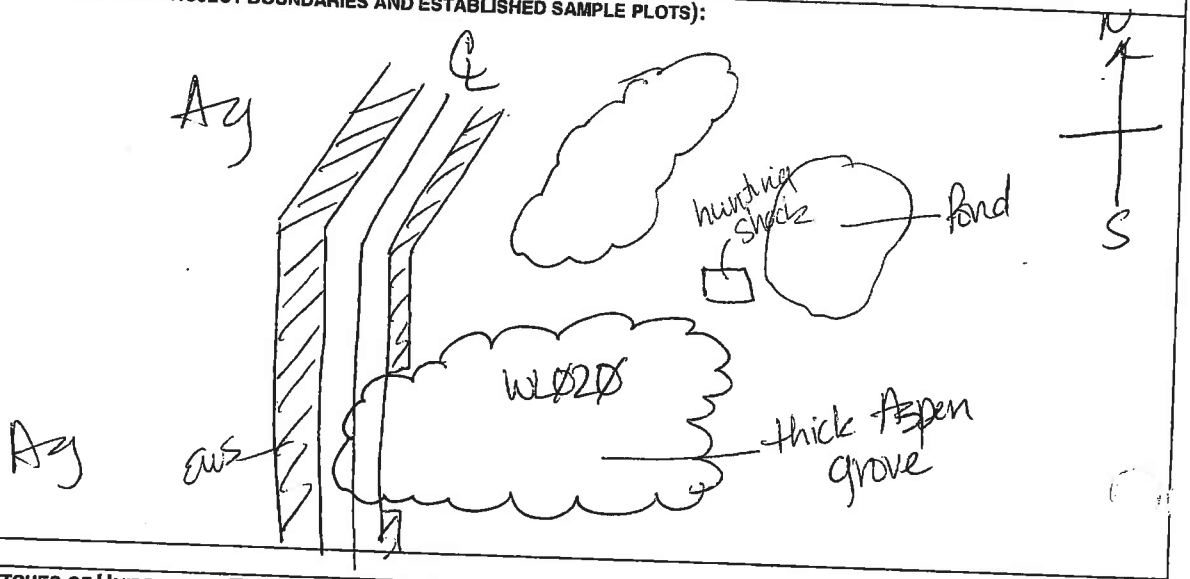
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
7 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
300 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
7 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	79 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	310 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	64 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	3 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	10 HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	4 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
310 unk shrub #1 (gm opp buds)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
3 unk tree #1 (green catkins)	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
79 unk shrub #2 (red leaves)	**# INVENTORIED, OTHER:**
10 unk tree #2 (brown catkins)	Beaked hazelnut
64 unk. shrub #3 (red bark)	rose
	basswood

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 314 327
_____	TOTAL # OF DECIDUOUS SHRUBS: 4 493
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 463
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042708WB027	**MP ENTER/EXIT:** 25.15/25.15	**SURVEY COORDINATES:** N 5388517 E 579748
TEAM NAME: ENI **INVESTIGATORS:** S. Lenz, C. Bitten, K Rumpka	**LOGBOOK PAGE #(S):** 2 of 2 12&13	**PHOTO #(S):** EN1-042708-WB027 - 001 W " - " - " - 002 E

PLANT TAXA INVENTORY

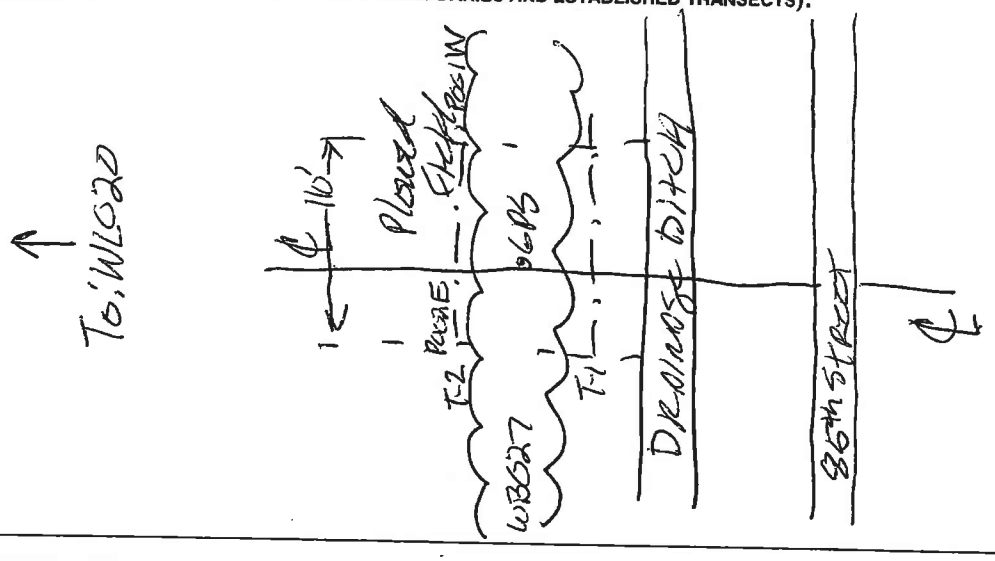
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	25 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	16 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
30 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 31
_____	TOTAL # OF DECIDUOUS SHRUBS: 41
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042708WB028	**MP ENTER/EXIT:** 25.91 / 25.92	**SURVEY COORDINATES:** N 5387292 E 579797
TEAM NAME: EN1 **INVESTIGATORS:** S. Long, K. Ruzycka, C. Boles	**LOGBOOK PAGE #(S):** 2of2 16&17	**PHOTO #(S):** EN1-042708-WB028-001 W " - " - " - 002 E

PLANT TAXA INVENTORY

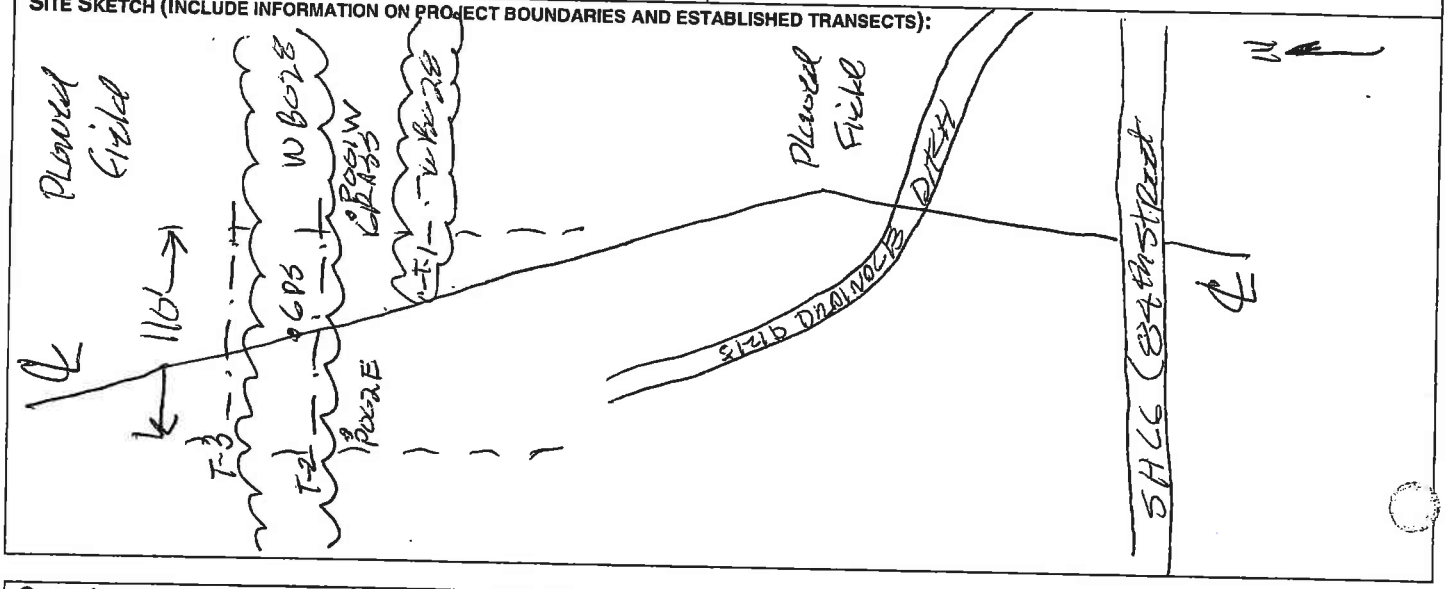
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
20 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	65 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	10 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
2 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 6
	TOTAL # OF DECIDUOUS TREES: 22
	TOTAL # OF DECIDUOUS SHRUBS: 75
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 2
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042708WB029	**MP ENTER/EXIT:** 28.51 / 28.51	**SURVEY COORDINATES:** N 5383132 E 579701
TEAM NAME: ENI **INVESTIGATORS:** S. Long, C. Boden, K. Rumpka	**LOGBOOK PAGE #(S):** 2 of 2 20 & 21	**PHOTO #(S):** ENI-042708-WB029-001W " - " - " -002E

PLANT TAXA INVENTORY

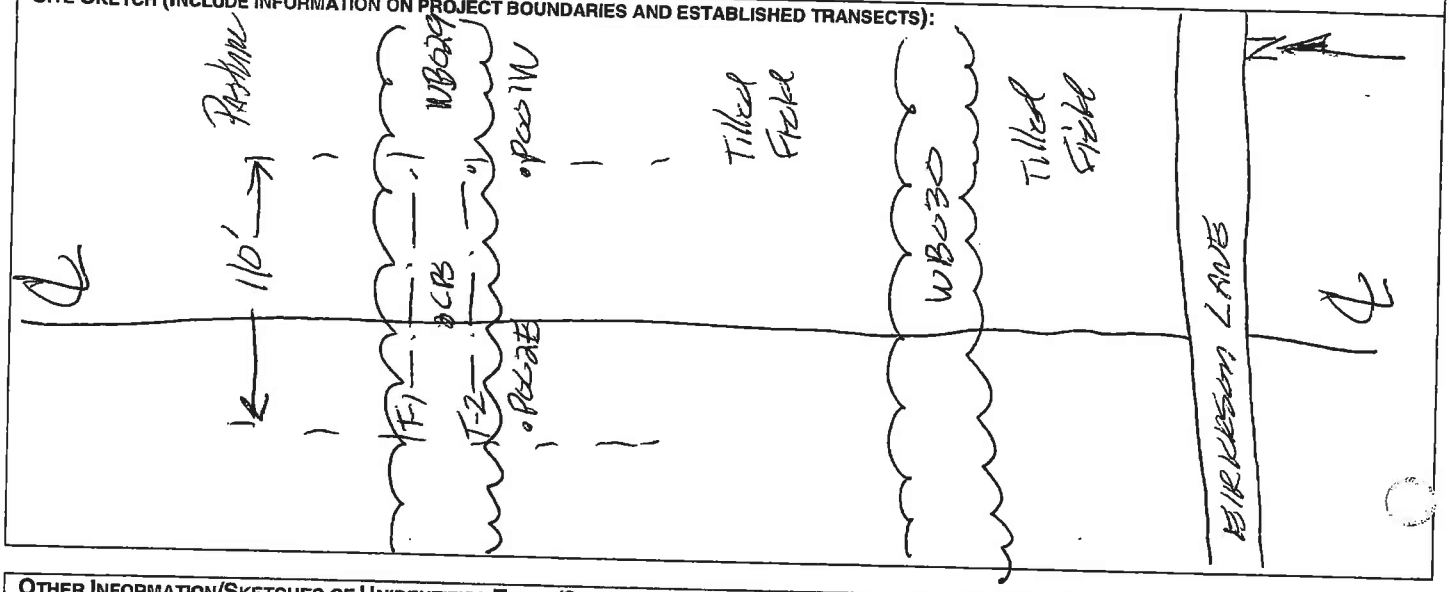
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
12 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	44 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 12
	TOTAL # OF DECIDUOUS SHRUBS: 44
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/22/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042708WB030	**MP ENTER/EXIT:** 28.58, 28.58	**SURVEY COORDINATES:** N 5383023 E 579690
TEAM NAME: ~~EN1~~ **INVESTIGATORS:** K. Rempka, S. Long, C. Bolen	**LOGBOOK PAGE #(S):** 2of2 18&19	**PHOTO #(S):** EN1-042708-WB030-001W " " " -002E

PLANT TAXA INVENTORY

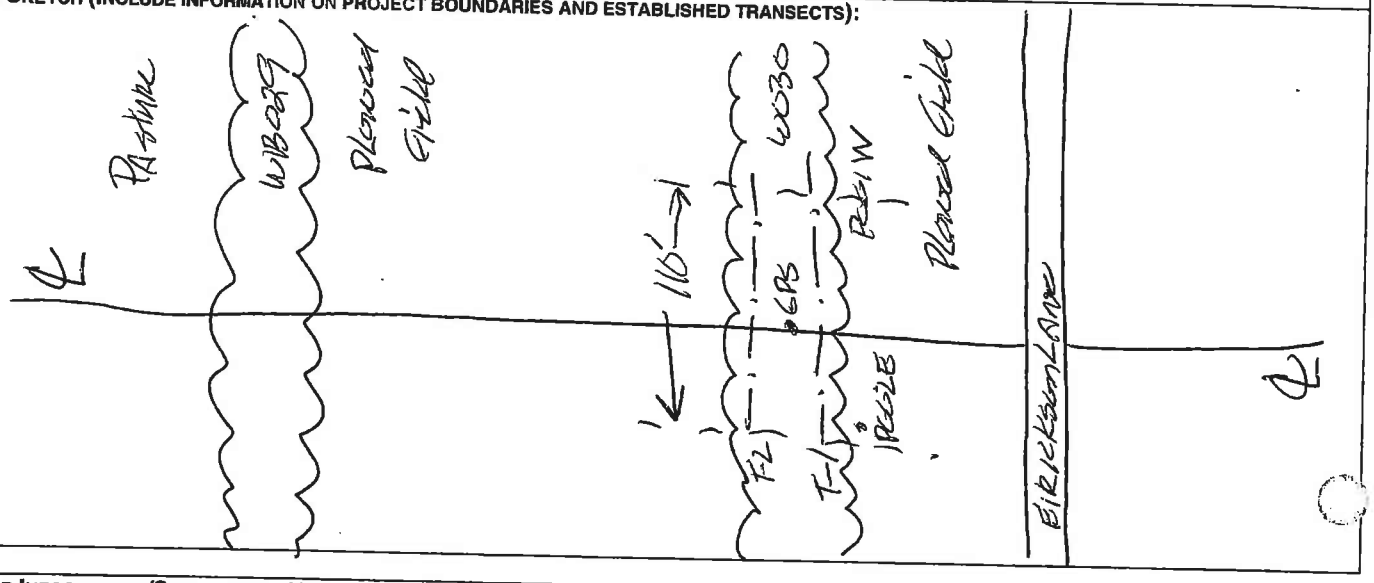
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
13 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	82 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 13
	TOTAL # OF DECIDUOUS SHRUBS: 82
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-15-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EW2051508WL021	**MP ENTER/EXIT:** 29.31 / 29.41	**ENTER/EXIT COORDINATES:**
TEAM NAME: EW2 **INVESTIGATORS:** Stibley, Ridenaur	**LOGBOOK PAGE #(S):** 29-30	**PHOTO #(S):**

PLANT TAXA INVENTORY

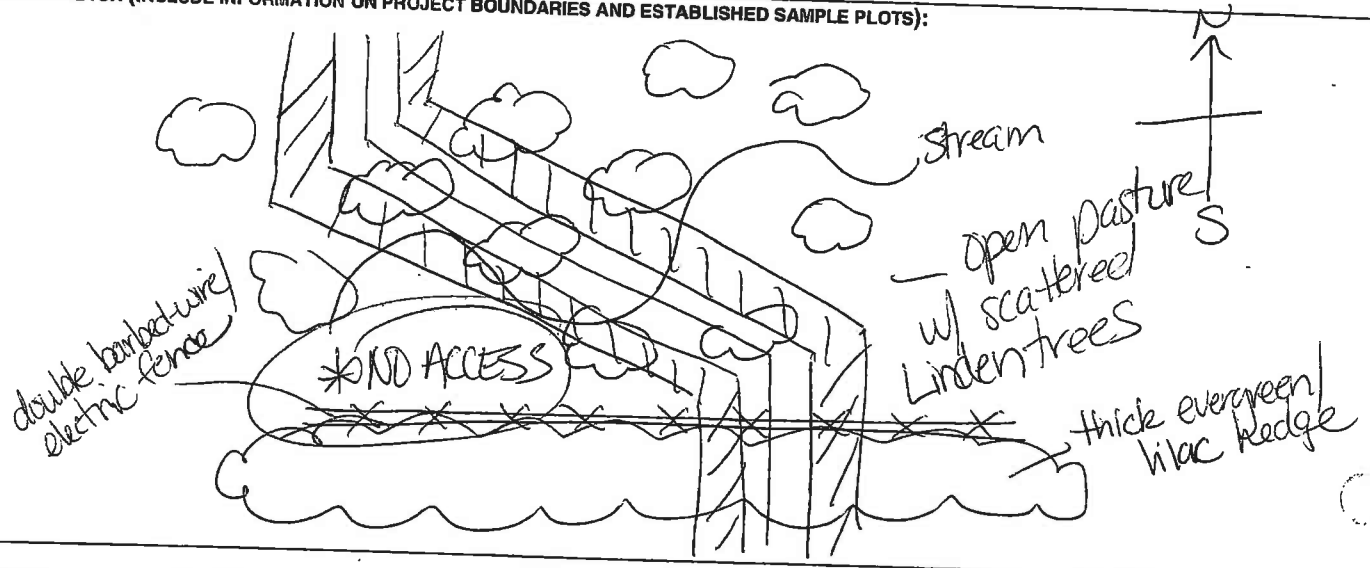
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
35 LINDEN, AMERICAN (*TILIA AMERICANA*) (from Aerial review)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 35
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Will get estimate of # of trees from GIS aerial review back at office.

	Field Name	Common Name	Scientific Name	Sample
WL021	Linden	American linden	Tilia americana	no

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042708WB031	**MP ENTER/EXIT:** 29.44/29.45	**SURVEY COORDINATES:** N 5381675 E 579908
TEAM NAME: EN1	**LOGBOOK PAGE #(S):** 21 of 22 to 23	**PHOTO #(S):** EN1 - 042708 - WB031 - 001W - 002E
INVESTIGATORS: C. Boden, S. Lang, K. Ruzicka		

PLANT TAXA INVENTORY

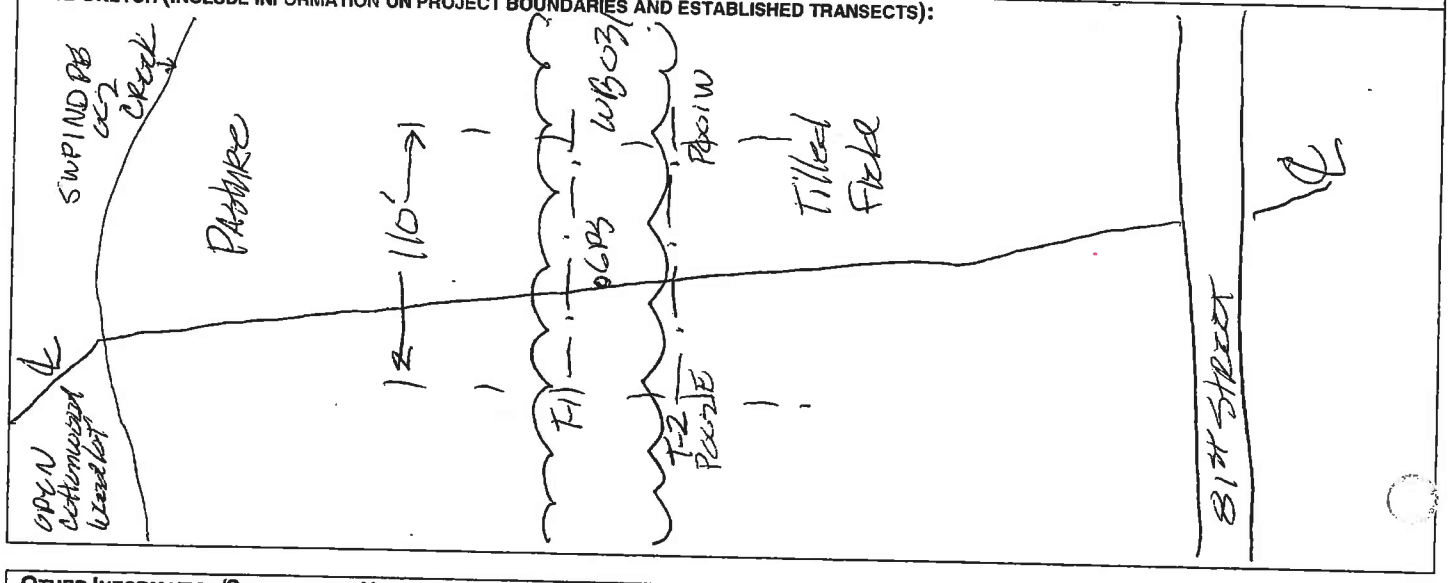
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
1 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	20 SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	66 LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 20 SD 4/22/08
	TOTAL # OF DECIDUOUS TREES: 1
	TOTAL # OF DECIDUOUS SHRUBS: 66
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 60

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-15-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2015Ø8WLØ22	**MP ENTER/EXIT:** 29.94 / 30.10	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Imbay, Ridenaur	**LOGBOOK PAGE #(S):** 31-32	**PHOTO #(S):**

PLANT TAXA INVENTORY

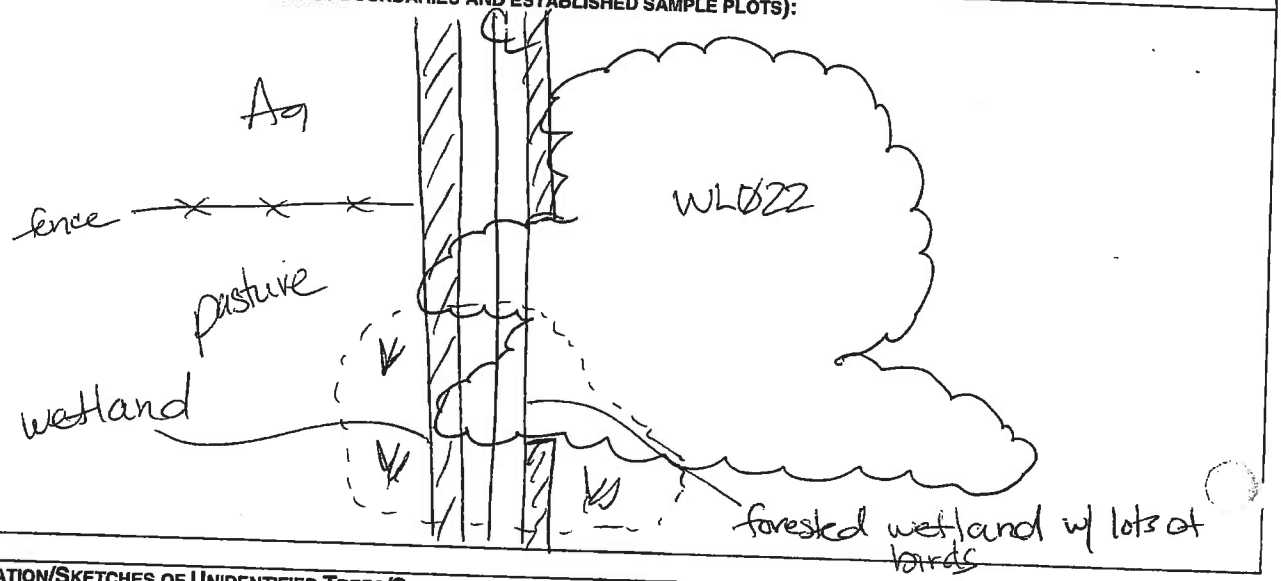
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
50 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
47 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
2 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
28 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	465 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
4 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	550 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	150 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
30 unk tree #1 (knobby buds, opp)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
465 Prunus spp. (red leaf)	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
550 unk shrub #1 (red stem)	**# INVENTORIED, OTHER:**
385 unk shrub #2 (opp grn buds)	119 unk shrub #4 (green fuzzy flower)
150 unk shrub #3 (brn catkins)	

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 137 167
	TOTAL # OF DECIDUOUS SHRUBS: 1669
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 1699

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Collected samples/photos of all unknown species for verification back in the office.

	Field Name	Common Name	Scientific Name	Sample
WL022	boxelder	boxelder	Acer negundo	no
WL022	UNK shrub #1 (redstem)	dogwood	Cornus sericea	yes
WL022	UNK Tree #1 (knobby buds)	green ash	Fraxinus pennsylvanica	yes
WL022	ash	green ash	Fraxinus pennsylvanica	no
WL022	Prunus sp.	chokecherry	Prunus virginiana	no
WL022	burr oak	bur oak	Quercus macrocarpa	no
WL022	linden	American linden	Tilia americana	no
WL022	elm			no
WL022	UNK shrub #2 (opp. Greenbud)	snowberry	Synphocarpus occidentalis	yes
WL022	UNK shrub #3 (brown catkins)			no
WL022	UNK shrub #4 (green fuzzy flower)			yes

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/20/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN4-052008-WL023	**MP ENTER/EXIT:** 30.99 / 31.01	**ENTER/EXIT COORDINATES:** n/a
TEAM NAME: EN4 **INVESTIGATORS:** Erin Bergquist Cory Bolen	**LOGBOOK PAGE #(S):** 2	**PHOTO #(S):** EN4-052008-WL023-001N

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
4 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
1 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
22 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 27
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/20/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4-052008-WL024

MP ENTER/EXIT: 31.33/31.43

ENTER/EXIT COORDINATES: n/a

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Boles

LOGBOOK PAGE #(S): 4, 5

PHOTO #(S): 1-South

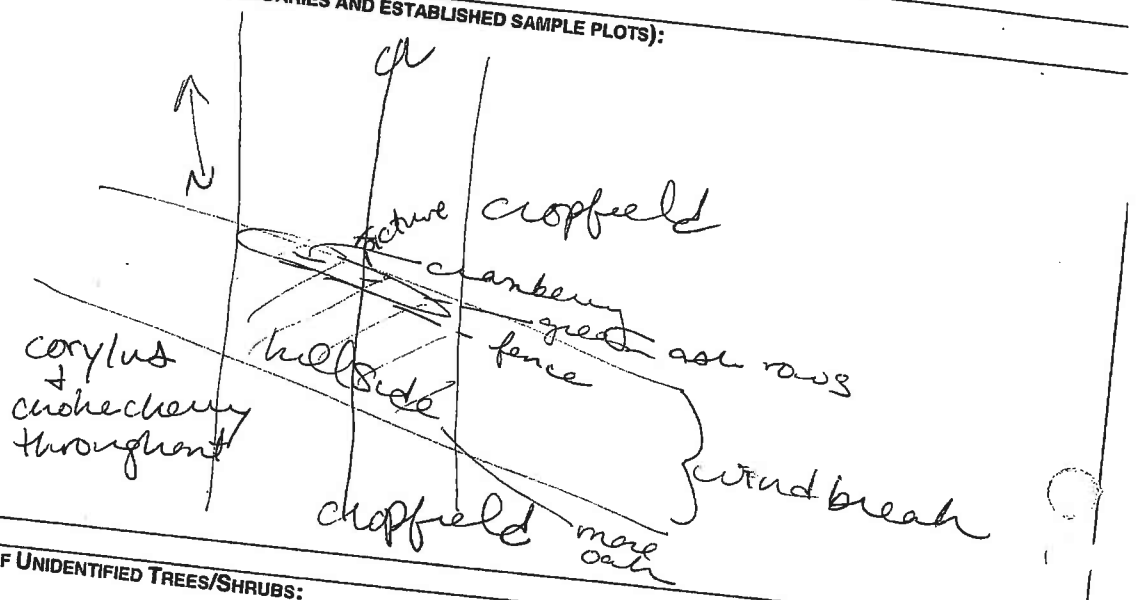
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
107 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
13 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
3 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	129 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
75 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	84 COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	3 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	113 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	14 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
5 Ulmus americana	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____ American elm	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____ 259	_____
_____ + 84	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 198
	TOTAL # OF DECIDUOUS SHRUBS: 343
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 5

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/20/05

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4-052005-WL025

MP ENTER/EXIT: 31.74 \ 31.95

ENTER/EXIT COORDINATES: n/a

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Boles

LOGBOOK PAGE #(S): 6-7

PHOTO #(S): 1-North

PLANT TAXA INVENTORY

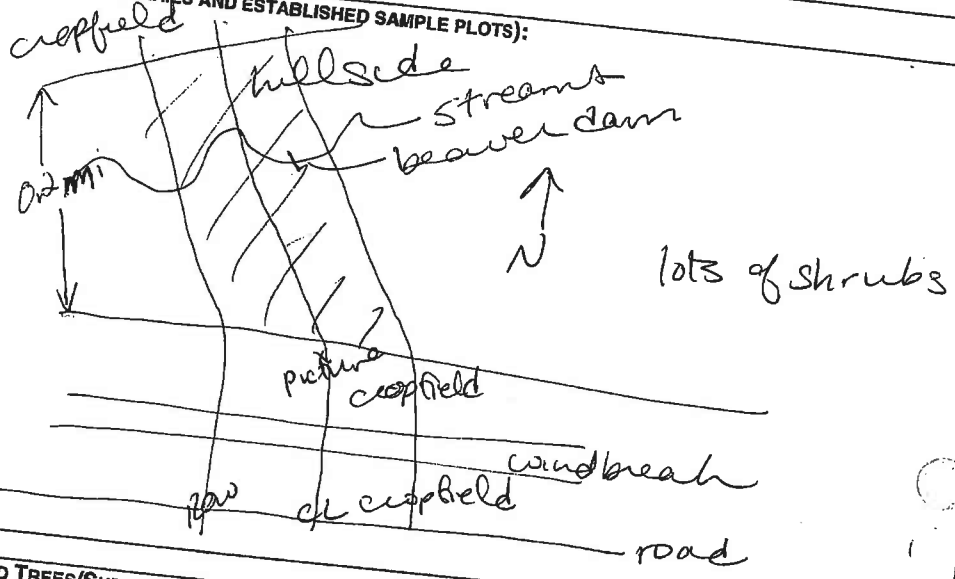
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
110 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
1 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
2 COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
15 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
10 MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	352 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
230 OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	442 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	3 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	1003 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	577 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
15 Ulmus americana	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____ American elm	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	300 Symphoricarpos sp. Snowberry
____	____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: ~~352~~ 368
	TOTAL # OF DECIDUOUS SHRUBS: ~~2,377~~ 2677
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 315

PROJECT NUMBER: 10623-010

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: E. 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1042708WB032	**MP ENTER/EXIT:** 320 1/32.01	**SURVEY COORDINATES:** N 5377631 E 579887
TEAM NAME: EN1 **INVESTIGATORS:** S. Long, C. Bolton, K. Ruczyska	**LOGBOOK PAGE #(S):** 24 2 24 25	**PHOTO #(S):** EN1-042708-WB032- 001 W " - " - " - 002 E

PLANT TAXA INVENTORY

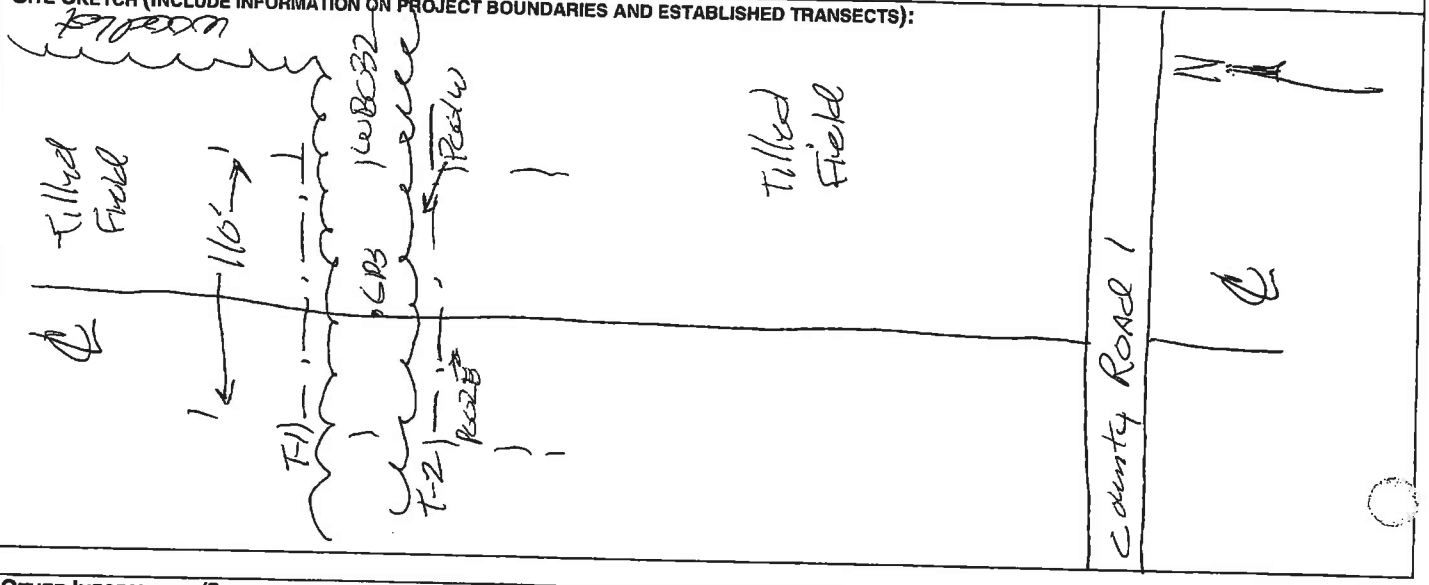
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
3 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	35 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
6 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	2 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	8 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	39 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 6
	TOTAL # OF DECIDUOUS TREES: 9
	TOTAL # OF DECIDUOUS SHRUBS: 84
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/20/09	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN4-OS2009-WL026	**MP ENTER/EXIT:** 32.29/32.36	**ENTER/EXIT COORDINATES:** n/a
TEAM NAME: EN4 **INVESTIGATORS:** Erin Bergquist Cory Bolen	**LOGBOOK PAGE #(S):** 8-9	**PHOTO #(S):** 1-South

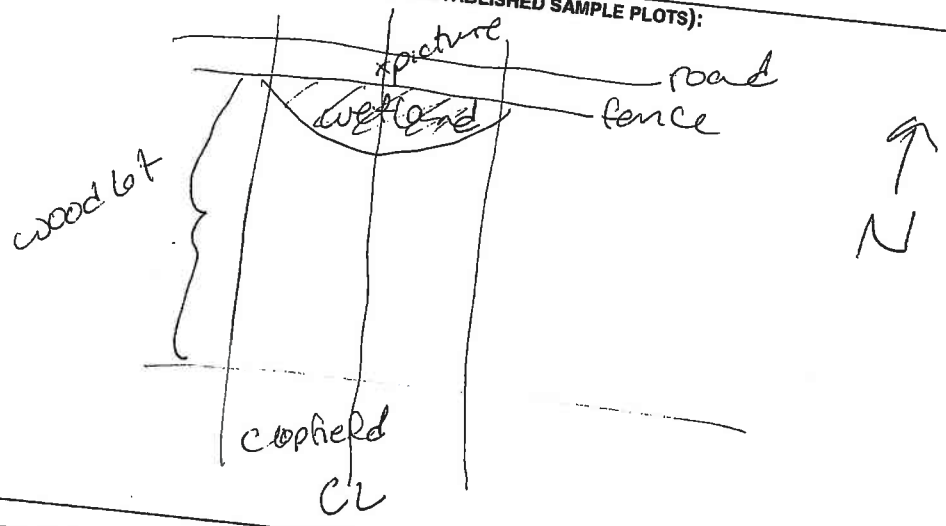
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
7 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
6 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	28 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
22 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	271 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	5 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
8 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	3 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	550 Symphoricarpos sp. SNOWBERRY
_____	2 Ribes sp. CURRANT

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	TOTALS:	PROJECT NUMBER: 10623-010
	TOTAL # OF EVERGREEN TREES: 0	
	TOTAL # OF DECIDUOUS TREES: 43	
	TOTAL # OF DECIDUOUS SHRUBS: 307	
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0	
	TOTAL # OF OTHER TREES/SHRUBS: 552	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: June 10, 2008

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN1061008 WL027

MP ENTER/EXIT: 33.22 / 33.43

ENTER/EXIT COORDINATES:
North GPS = N48.53008 W097.92421
South GPS = N48.52781 W097.92509

TEAM NAME: Jim Duncan
INVESTIGATORS: Steve Long

LOGBOOK PAGE #(S): 18, 19, 20, 21

PHOTO #(S): P001 N, P0025, P003 N, P004 S
EN1061008 WL027 – P005 N, P005 S

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
77 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
3 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
1 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
27 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	29 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
190 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	5 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	3 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	40 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
8 American Elm	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	107 Snowberry
_____	_____

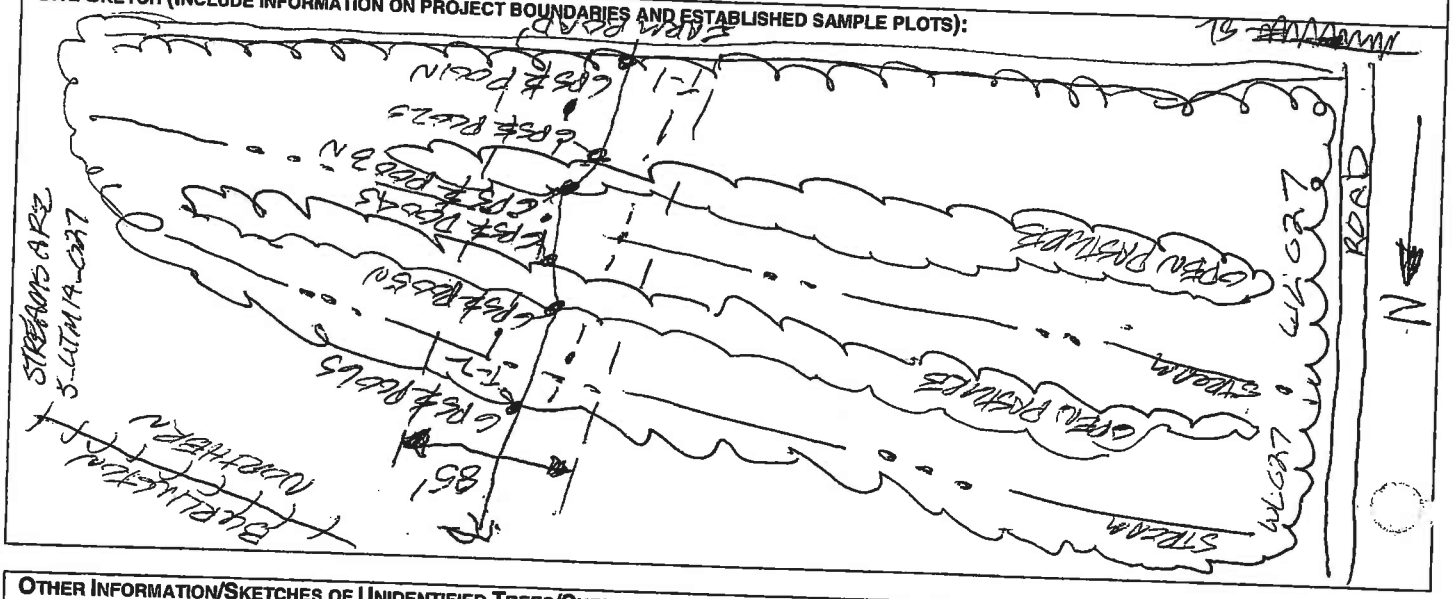
EN106008 WL027 6/10/08

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 306
	TOTAL # OF DECIDUOUS SHRUBS: 184
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Shrub Counts between North and Middle Segments = Snowberry 135

Shrub Counts between Middle and South Segments = Snowberry 75

Total Snowberry = 210

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/09	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042808-WB033	**MP ENTER/EXIT:** 34.45 / 34.46	**SURVEY COORDINATES:** N 5373840 E 579484
TEAM NAME: EN1 **INVESTIGATORS:** Cory Boles, Ken Ruzicka, Steve Long	**LOGBOOK PAGE #(S):** 242 34 & 35	**PHOTO #(S):** EN1-042808-WB033-001W " " -002E

PLANT TAXA INVENTORY

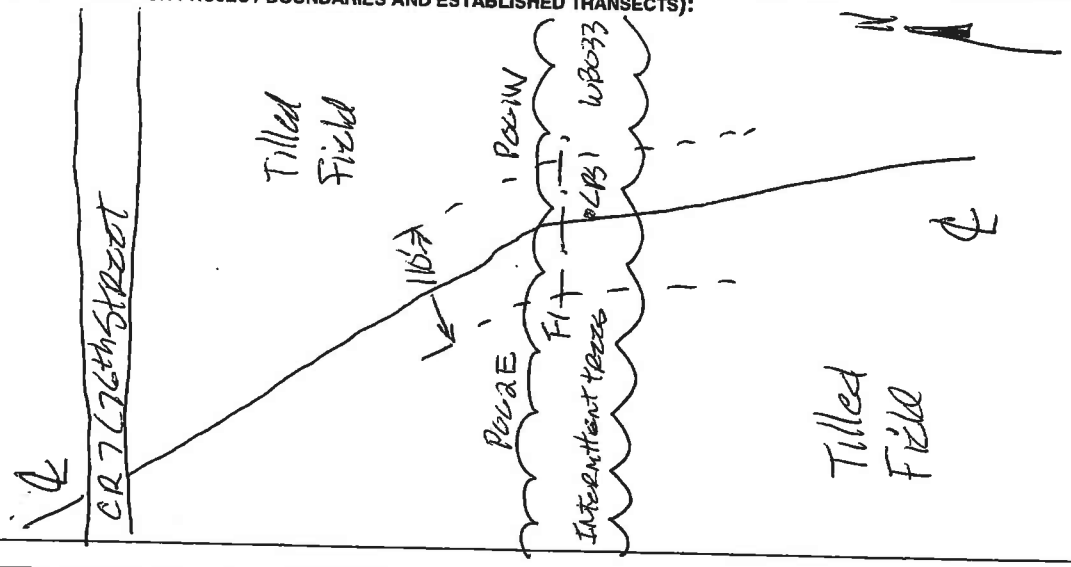
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
4 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 4
_____	TOTAL # OF DECIDUOUS SHRUBS: 6
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/20/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4-0502008-WL028

MP ENTER/EXIT: 34.74/34.79

ENTER/EXIT COORDINATES: n/a

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Bolen

LOGBOOK PAGE #(S): 12-13

PHOTO #(S): 1-South

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
1 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
4 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
10 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	29 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
25 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	180 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	4 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	3 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	182 Symphoricarpos Sp. Snowberry
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 8
	TOTAL # OF DECIDUOUS TREES: 40
	TOTAL # OF DECIDUOUS SHRUBS: 216
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 182

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

87
29
216

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI042808WB634	**MP ENTER/EXIT:** 34.84/34.85	**SURVEY COORDINATES:** N 537320E E 575512
TEAM NAME: ENI **INVESTIGATORS:** S. Long, C. Baker, K. Rempka	**LOGBOOK PAGE #(S):** 2of2 36&38	**PHOTO #(S):** ENI042808WB634 0S1W " " " " 0N0S2E

PLANT TAXA INVENTORY

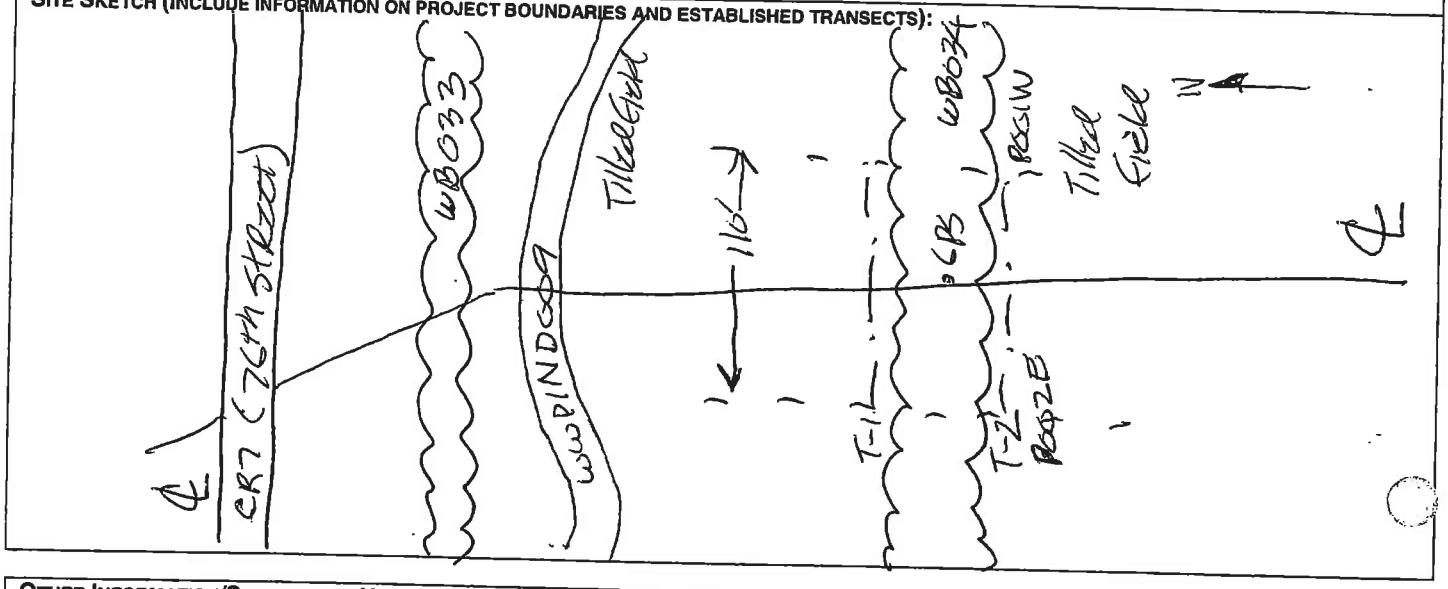
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
4 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	10 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
1 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	2 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	11 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~6~~
_____	TOTAL # OF DECIDUOUS TREES: 6
_____	TOTAL # OF DECIDUOUS SHRUBS: 23
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: En4 052108 WL029

MP ENTER/EXIT: 35.23 / 35.36

ENTER/EXIT COORDINATES: N/A

TEAM NAME: En4

INVESTIGATORS: Erin Bergquist, Cory Boleff

LOGBOOK PAGE #(S): 16/17

PHOTO #(S): En4 052108 WL029-001

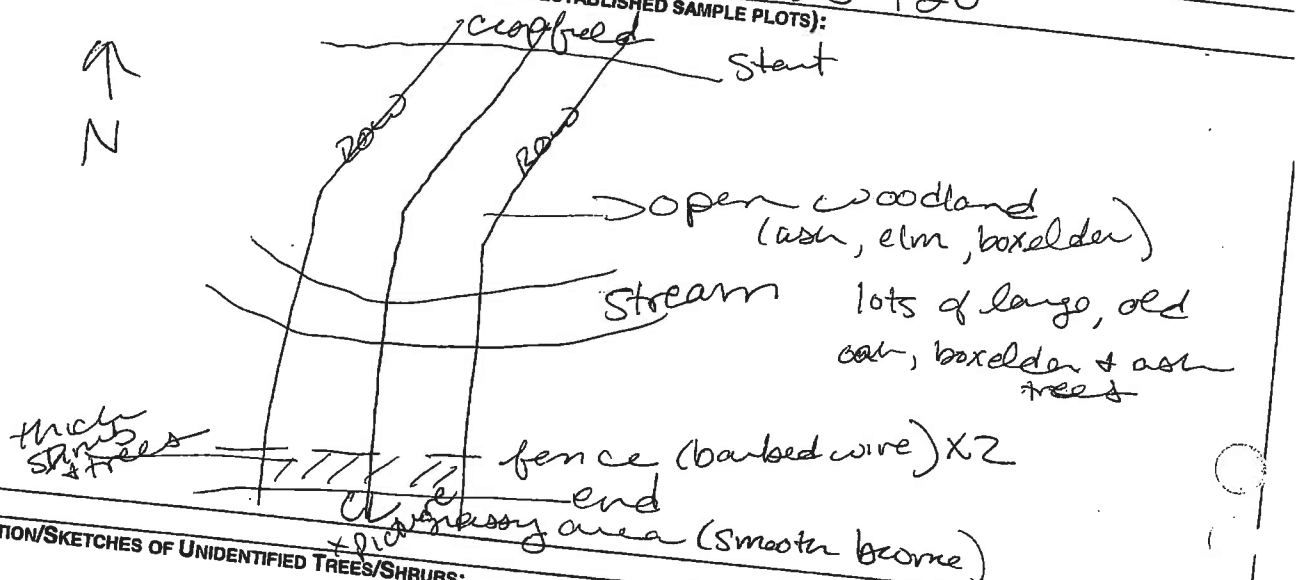
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
165 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
17 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	39 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
145 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	19 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	62 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
5 American elm (Ulmus americana)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	19 Snowberry (Symphocarpos)
_____	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 352
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 227
	TOTAL # OF DECIDUOUS SHRUBS: 120
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 5
	# trees 232
	# shrubs 120

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4 052108 WL030

MP ENTER/EXIT: 36.26/36.32

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Bolen

LOGBOOK PAGE #(S): 18/19

PHOTO #(S): EN4 052108 WL030 - 001

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
4 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
____ COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
____ ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
____ MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	25 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	2 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____ 163	~~DOG~~ 28 Snowberry (Symphocarpos)
____	3 ribes

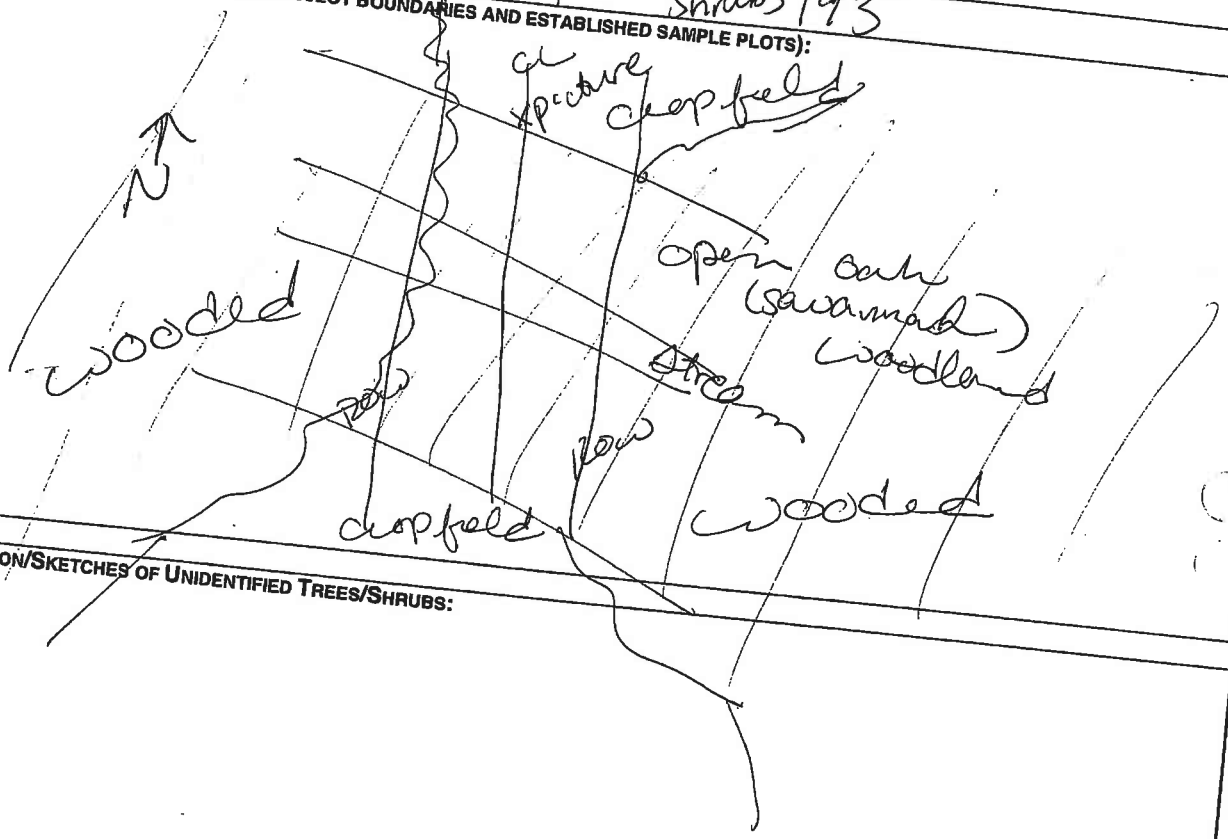
WOODLOT INVENTORY FORM CONT'D

 # INVENTORIED, OTHER CONT'D:

	TOTALS: 197
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 4
	TOTAL # OF DECIDUOUS SHRUBS: 27
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 166
	trees 4
	shrubs 193

PROJECT NUMBER: 10623-010

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 6/10/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI06100BWL031	**MP ENTER/EXIT:** 37.11 37.29	**ENTER/EXIT COORDINATES:** N48.47431, W097.92177 N48.47185, W097.92175
TEAM NAME: ENI **INVESTIGATORS:** S. Long, J. Duncan	**LOGBOOK PAGE #(S):** 16 17	**PHOTO #(S):** ENI06100BWL031-001IN ENI06100BWL031-0025

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
21 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
8 ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
15 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	174 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
211 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	16 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	2 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
2 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
11 American elm (*Ulmus americana*)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	1352 Snowberry (*Symphoricarpos occidentalis*)
_____	2222

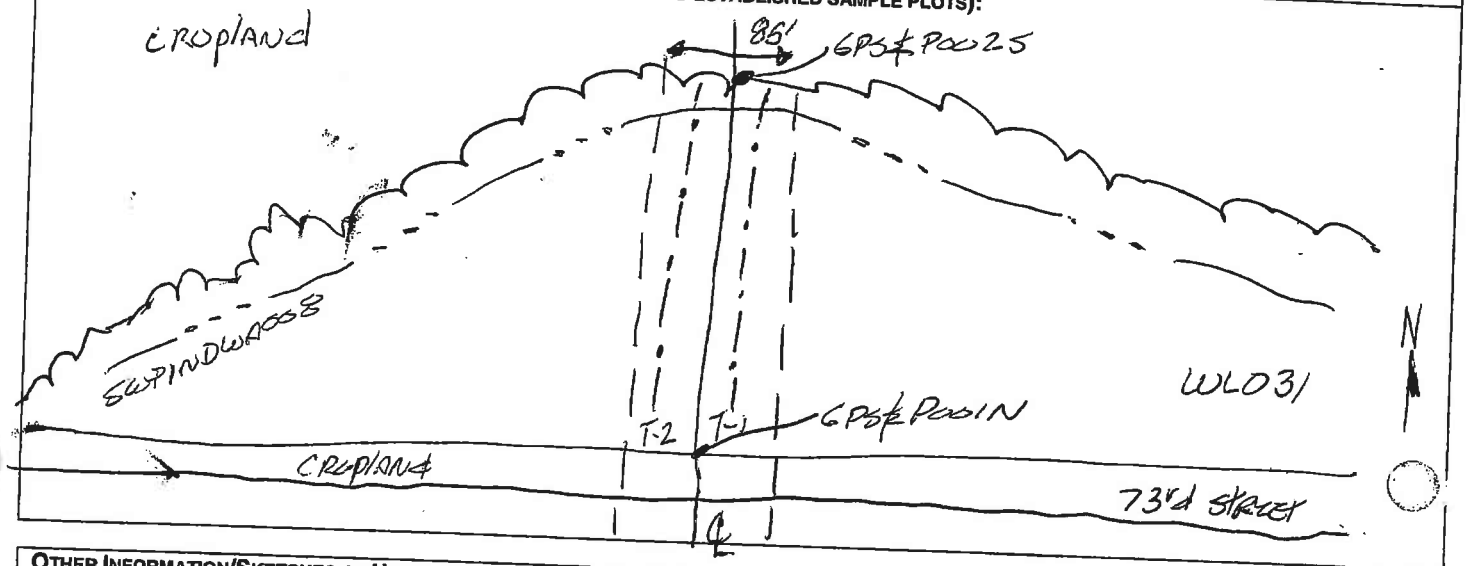
ENL 061008 WL031 6-10-08

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 255
	TOTAL # OF DECIDUOUS SHRUBS: 192
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 2
	TOTAL # OF OTHER TREES/SHRUBS: 2,233

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- many large dense groupings of Silverberry
- many dead trees immediately adjacent to stream.

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN40S2108WL032

MP ENTER/EXIT: 38.10/38.18

ENTER/EXIT COORDINATES: —

TEAM NAME: EN4

INVESTIGATORS: Erin Beegle, Cory Boler

LOGBOOK PAGE #(S): 20/21

PHOTO #(S): EN40S2108WL032-001

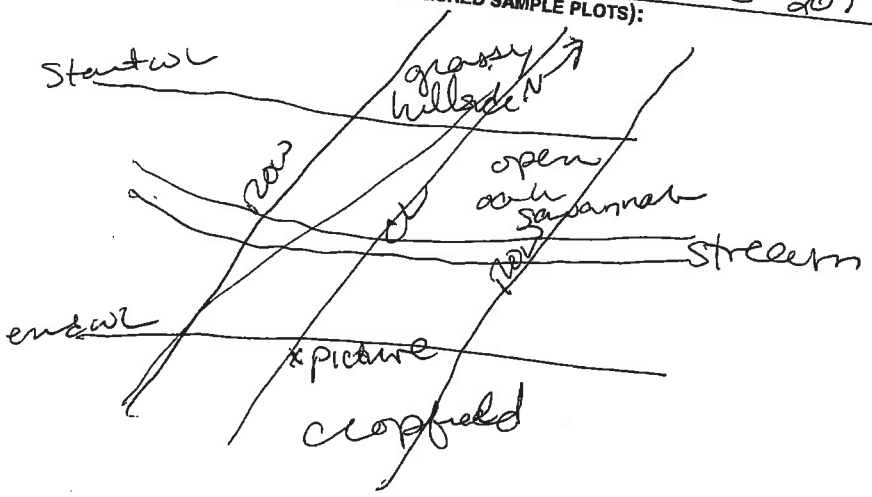
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
6 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
____ COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
____ ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
____ MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	25 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
75 OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	4 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	240 ~~Snowberry~~ Symphocarpos
____	____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 350
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 81
	TOTAL # OF DECIDUOUS SHRUBS: 29
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 240
	trees 81
	Shrubs 269

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042808-WB035	**MP ENTER/EXIT:** 40.07/40.08	**SURVEY COORDINATES:** N 5364868 E 579544
TEAM NAME: EN1 **INVESTIGATORS:** Cory Boles Steve Long Ken Ruzicka	**LOGBOOK PAGE #(S):** 242 42&43	**PHOTO #(S):** EN1-042808-WB035-001W " - " - " -002E

PLANT TAXA INVENTORY

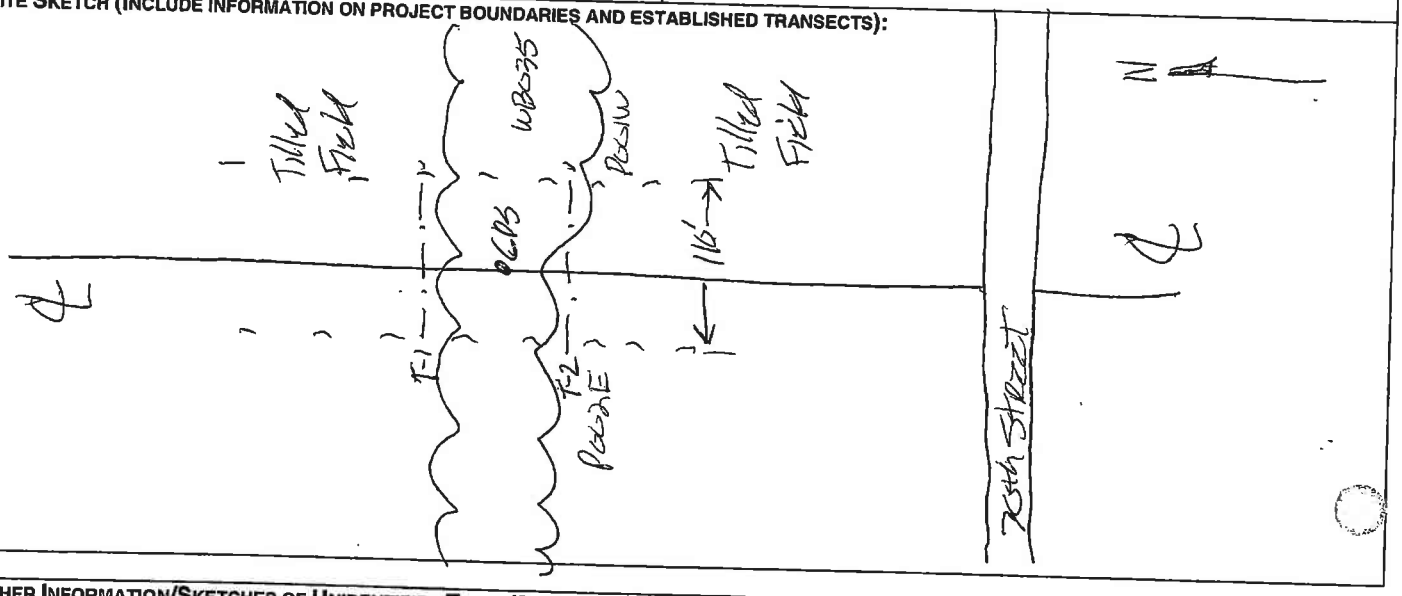
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
14 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	12 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 12
	TOTAL # OF DECIDUOUS TREES: 14
	TOTAL # OF DECIDUOUS SHRUBS: 12
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4OS2108WL033

MP ENTER/EXIT: 41.33/41.51

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Bolton

LOGBOOK PAGE #(S): 22/23

PHOTO #(S): EN4OS2108WL033-001

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
39 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
20 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
11 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	137 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
114 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	60 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	111 HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	21 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
3 american elm	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	745 Snowberry (Symphoricarpos)
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

 # INVENTORIED, OTHER CONT'D:

TOTALS: 1261

TOTAL # OF EVERGREEN TREES: ____

TOTAL # OF DECIDUOUS TREES: 189

TOTAL # OF DECIDUOUS SHRUBS: 329

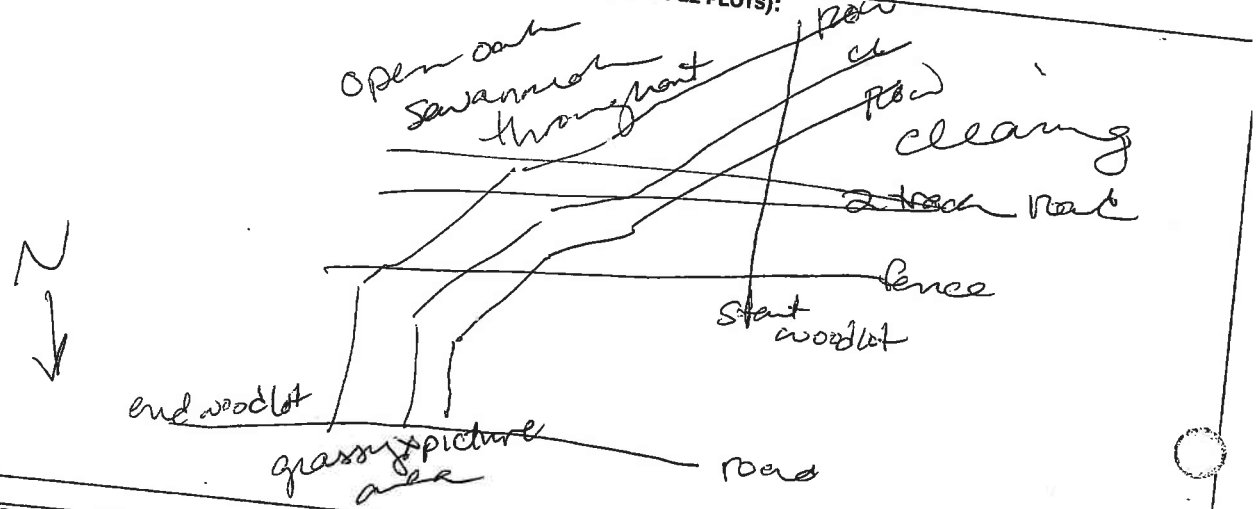
TOTAL # OF INVASIVE/EXOTIC SPECIES: ____

TOTAL # OF OTHER TREES/SHRUBS: 748

trees 187

Shrubs 1074

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN40521 08 wL038

MP ENTER/EXIT: 42.33/42.35

ENTER/EXIT COORDINATES: —

TEAM NAME: EN4

INVESTIGATORS: Erin Berggust, Cory Bolesh

LOGBOOK PAGE #(S): 26/27

PHOTO #(S): EN40521 08wL038-001

PLANT TAXA INVENTORY

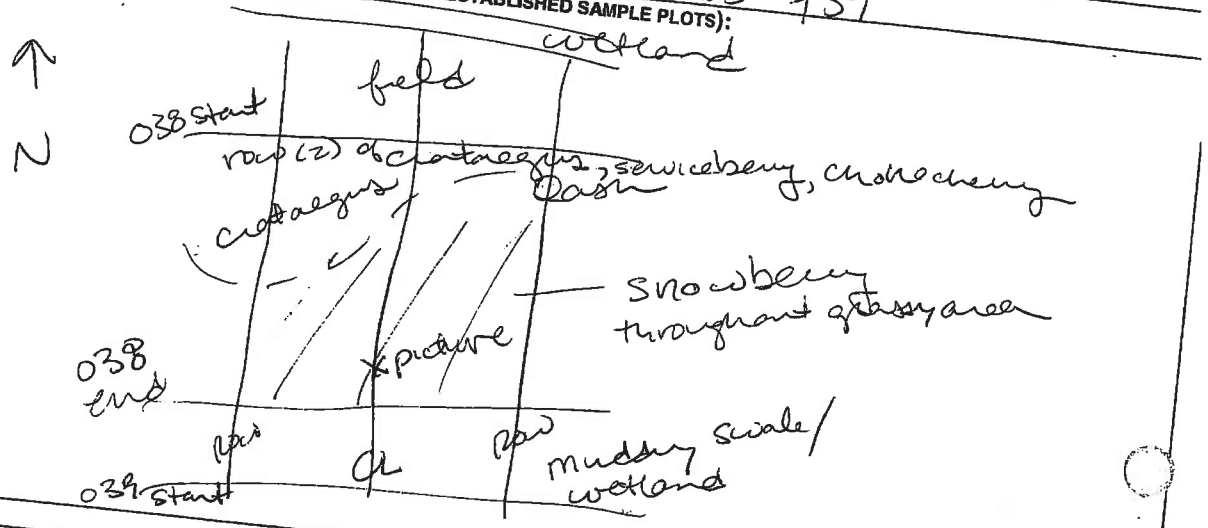
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
1 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
____ COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
____ ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
____ MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	22 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	130 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	5~~535~~ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	~~535~~ Snowberry (Symphocarpus)
____	____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	
	TOTALS: 740
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 1
	TOTAL # OF DECIDUOUS SHRUBS: 204
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 535
	trees 1
	shrubs 739

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 05/21/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4052108WL039

MP ENTER/EXIT: 42.40-42.46

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Berggust, Cory Bilek

LOGBOOK PAGE #(S): 28/29

PHOTO #(S): EN4052108WL039-001

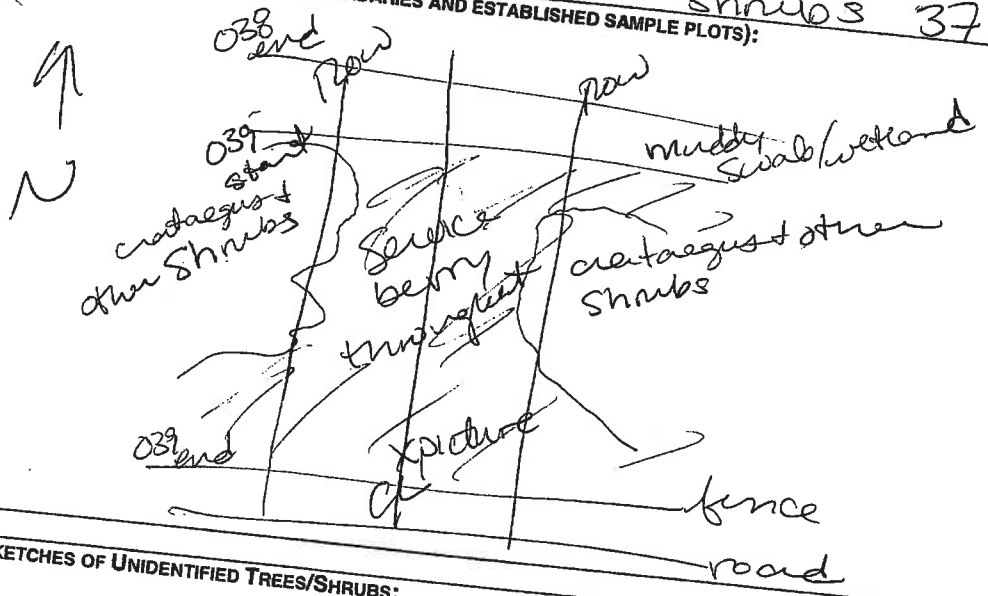
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
1 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	116 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	1078 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	30 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	1665 Snowberry (Symphocarpos)
_____	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 3790
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 1
	TOTAL # OF DECIDUOUS SHRUBS: 2124
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 1665
	trees 1
	shrubs 3789

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 09/21/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN4 09s21 08 w LO40	**MP ENTER/EXIT:** 42.69 - 42.71	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN4 **INVESTIGATORS:** Erin Bergquist Cory Bolch	**LOGBOOK PAGE #(S):** 30/31	**PHOTO #(S):** EN4 09s21 08 w LO40 - 001

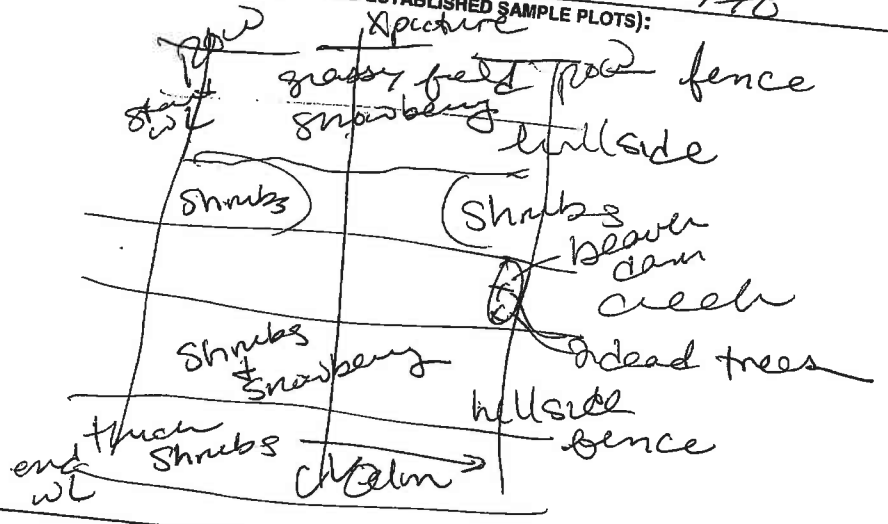
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
2 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	295 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	4 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	265 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	13 HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	52 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	90 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
10 rosa spp	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
1 american elm	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	238 Snowberry (Symphocarpos)
_____	3 ribes

WOODLOT INVENTORY FORM CONT'D.

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 973
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 2
	TOTAL # OF DECIDUOUS SHRUBS: 719
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 252
	trees 3
	Shrubs 970

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 6/10/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN10610088WL042	**MP ENTER/EXIT:** 46.38 46.51	**ENTER/EXIT COORDINATES:** N48.34251; W097.92813 N48.34075; W097.92931
TEAM NAME: EN **INVESTIGATORS:** SLong, V. Dunkou	**LOGBOOK PAGE #(S):** 14,15	**PHOTO #(S):** EN10610088WL042-0015 " " " -002N

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
11 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	1 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
2 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	26 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
73 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	42 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
1 American Elm (Ulmus americana)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	3 Snowberry (Symphoricarpos occidentalis)
_____	_____

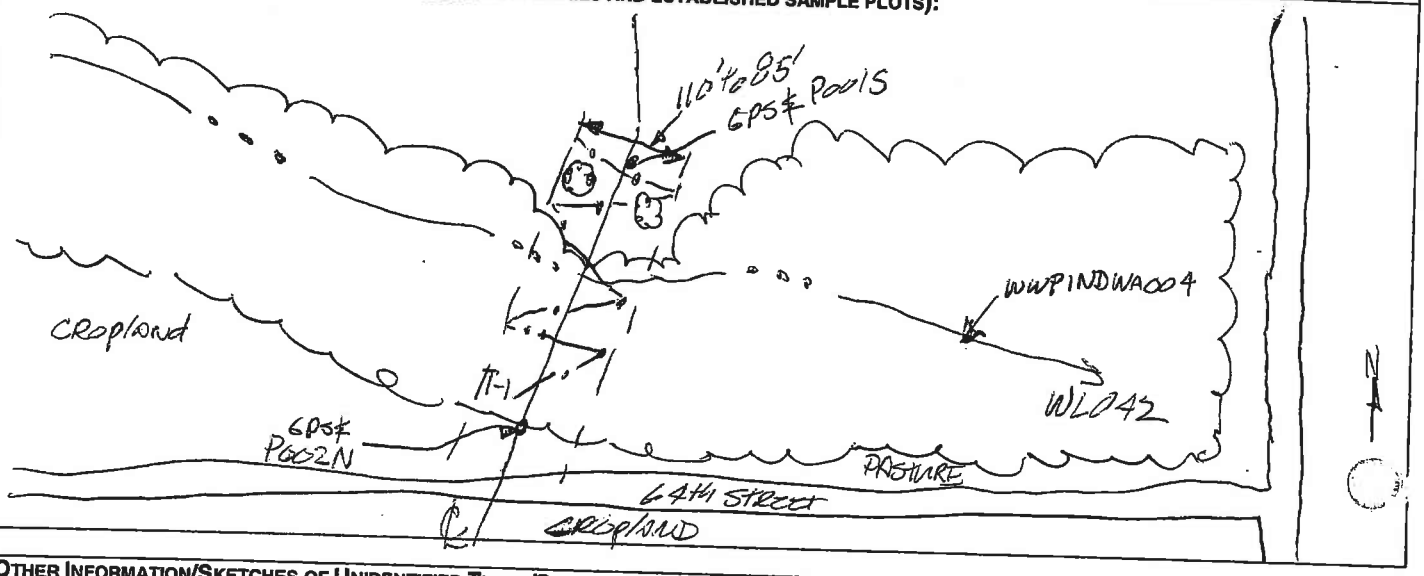
ENL 060008 WL042 6-10-08

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 1
	TOTAL # OF DECIDUOUS TREES: 88
	TOTAL # OF DECIDUOUS SHRUBS: 71
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4052208WL043

MP ENTER/EXIT: 49.21 - 49.26

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Boles

LOGBOOK PAGE #(S): 46, 47

PHOTO #(S): EN4052208WL043-001

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
93 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
49 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	93 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	4 COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	30 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
1 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	14 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	7 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

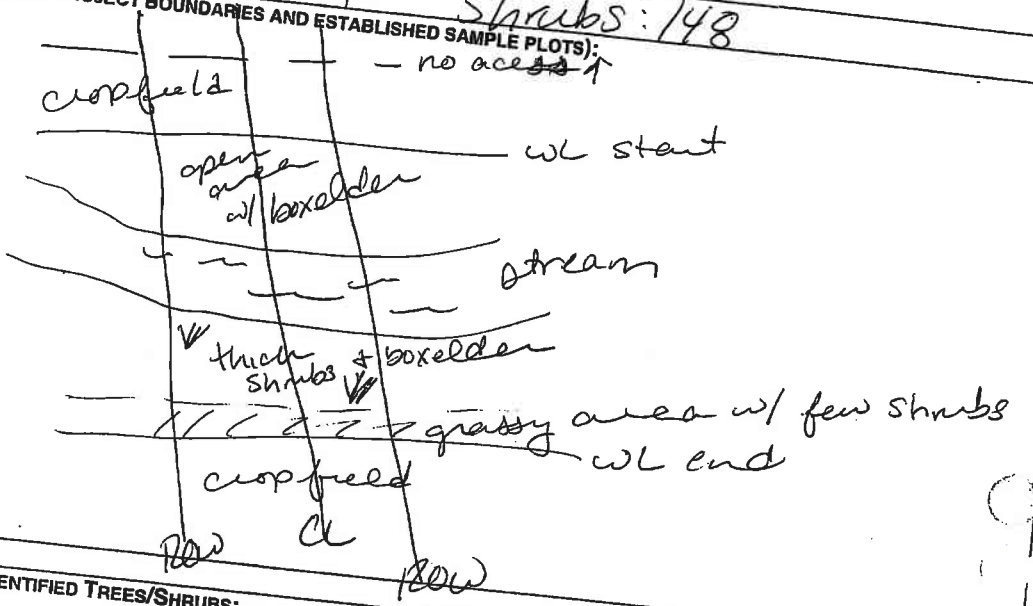
PROJECT NUMBER: 10623-010

 # INVENTORIED, OTHER CONT'D:

	TOTALS: 291
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 143
	TOTAL # OF DECIDUOUS SHRUBS: 148
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS:

Trees: 143
Shrubs: 148

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN1-CH2908-WL015

MP ENTER/EXIT: 49.21 / 49.23

ENTER/EXIT COORDINATES: N 5350474 / N 5350530; E 579118 / E 579086

TEAM NAME: EN1

INVESTIGATORS: Steve Long, Ken Ruzicka, Cory Boles

LOGBOOK PAGE #(S): Book, 4#5

PHOTO #(S): EN1-CH2908-WL015 - 001S, 002N, 003S, 004N

PLANT TAXA INVENTORY

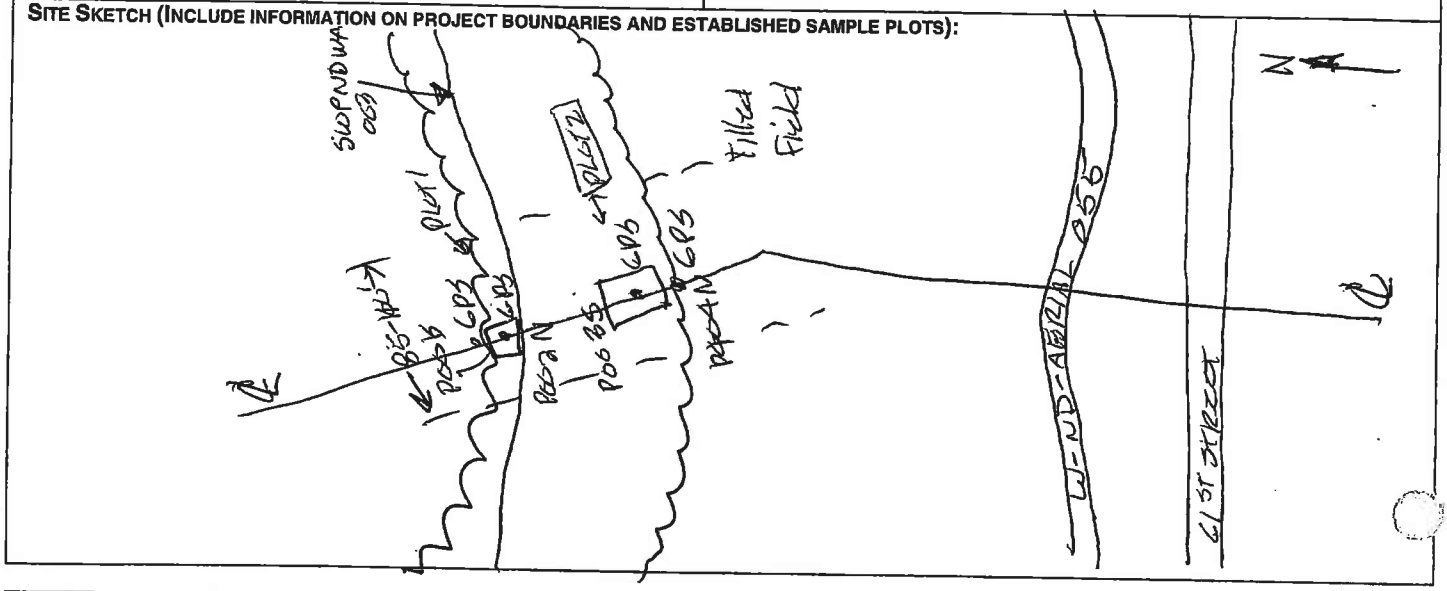
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
7 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	19 BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
6 MAPLE, BOXELDER (*ACER NEGUNDO*)	7 BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	11 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	2 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	1 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	1 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
19 BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D.

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~6~~
_____	TOTAL # OF DECIDUOUS TREES: 13
_____	TOTAL # OF DECIDUOUS SHRUBS: 15
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 19
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WB037	**MP ENTER/EXIT:** 52.43/52.45	**SURVEY COORDINATES:** N 534 5439 E 579393
TEAM NAME: EN1 **INVESTIGATORS:** Steve Lorg, Ken Ruzicka, Cory Boten	**LOGBOOK PAGE #(S):** Book 3, 8 of 9	**PHOTO #(S):** EN1-042908-WB037-001 W ~~002 E~~

PLANT TAXA INVENTORY

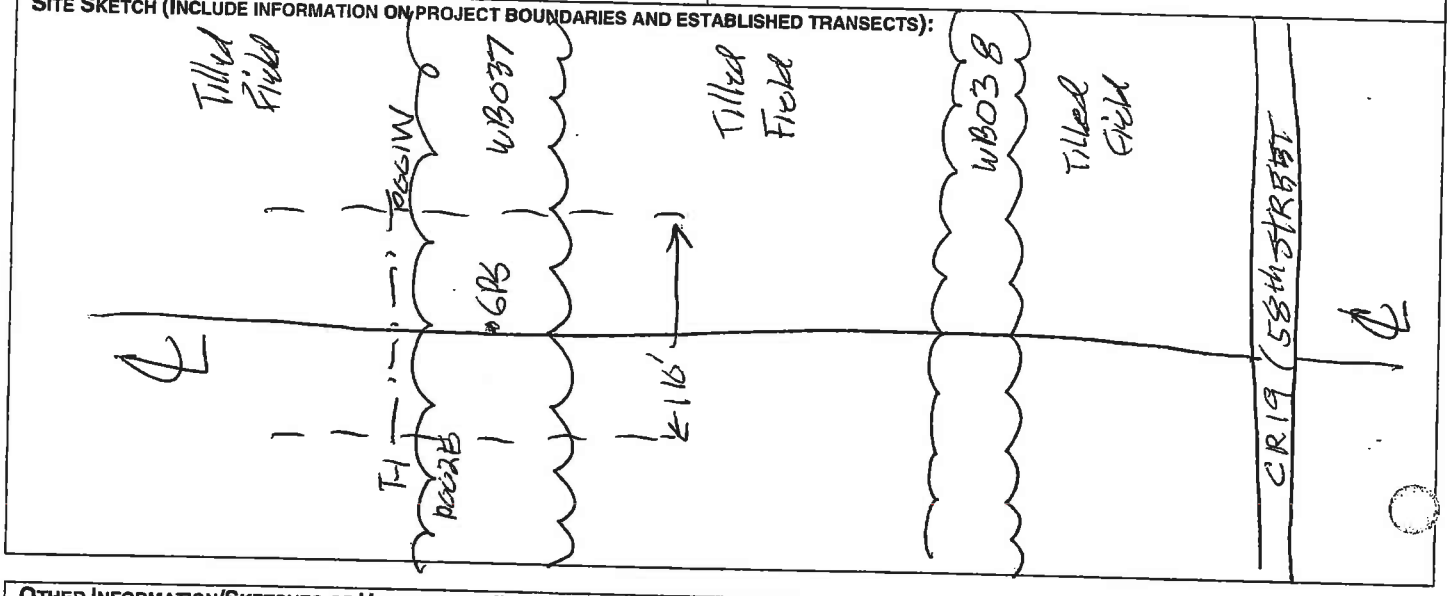
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
12 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
2 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 14
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WB038	**MP ENTER/EXIT:** 52.57/52.57	**SURVEY COORDINATES:** N 5345213 E 579399
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Rueda, Cory Boles	**LOGBOOK PAGE #(S):** Book 3, 67	**PHOTO #(S):** EN1-042908-WB038-001W " - " - " - 002E

PLANT TAXA INVENTORY

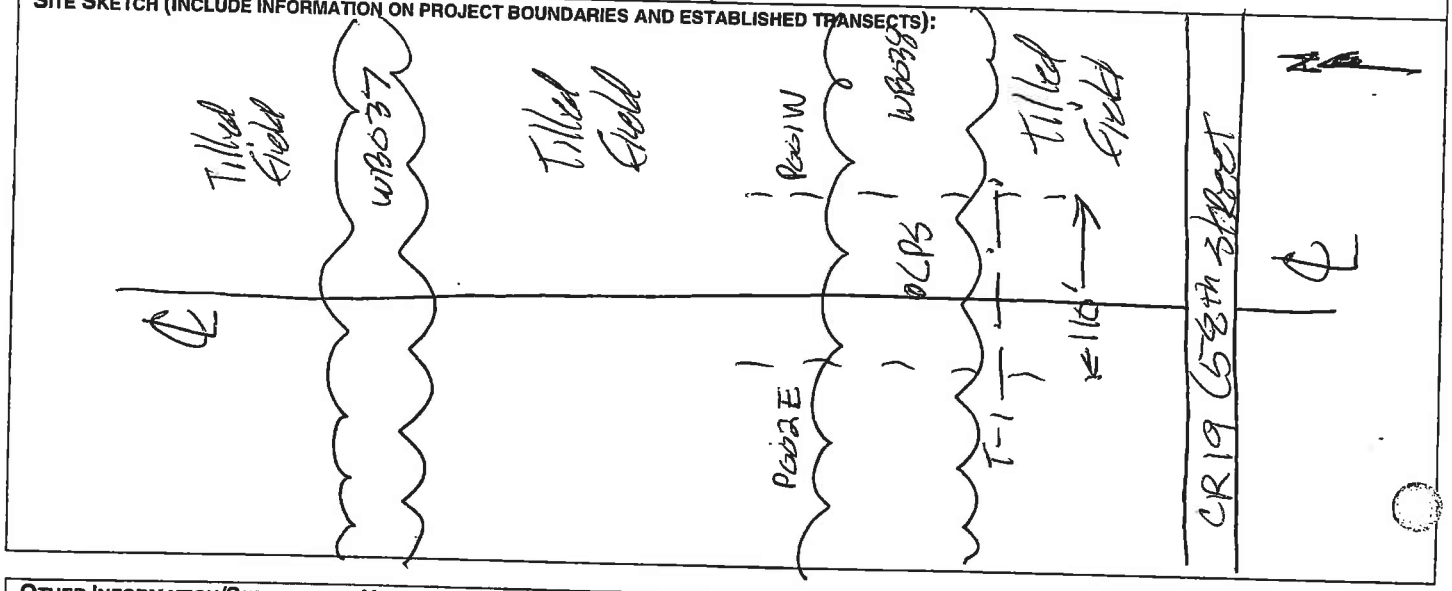
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	18 SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 18
	TOTAL # OF DECIDUOUS TREES: 0
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4052208wL044

MP ENTER/EXIT: 52.85 - 52.86

ENTER/EXIT COORDINATES: —

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Boleen

LOGBOOK PAGE #(S): 2, 3

PHOTO #(S): EN4052208wL044-001

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
2 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
4 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	100 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	80 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	20 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

 # INVENTORIED, OTHER CONT'D:

TOTALS: 206

TOTAL # OF EVERGREEN TREES: ____

TOTAL # OF DECIDUOUS TREES: 6

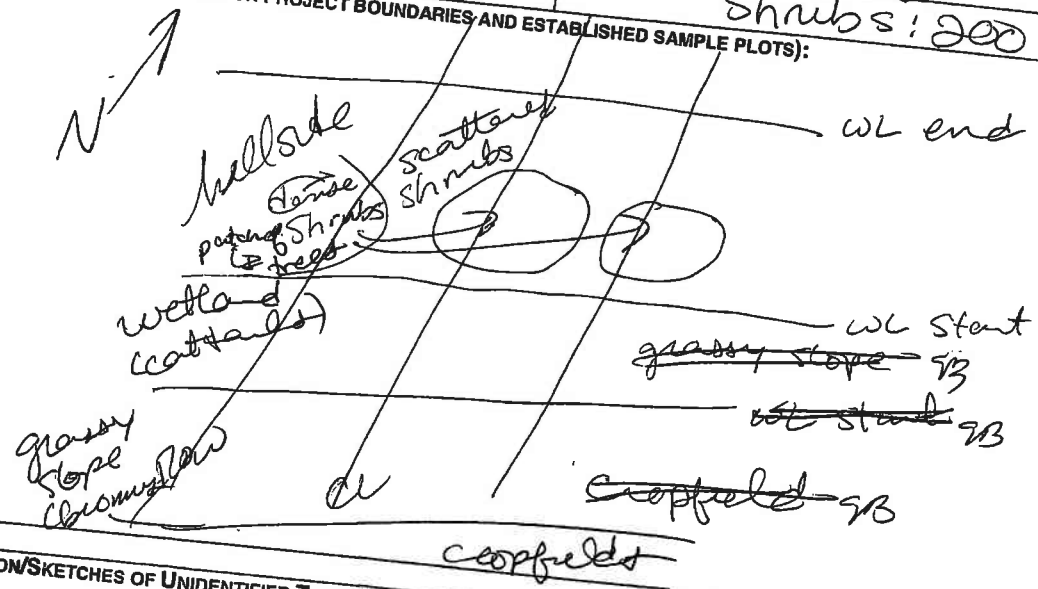
TOTAL # OF DECIDUOUS SHRUBS: 200

TOTAL # OF INVASIVE/EXOTIC SPECIES: ____

TOTAL # OF OTHER TREES/SHRUBS: ____

Trees: 6
Shrubs: 200

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WB039	**MP ENTER/EXIT:** 53.04 / 53.05	**SURVEY COORDINATES:** N 5344443 E 579430
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Bock	**LOGBOOK PAGE #(S):** Book 3, 10 & 11	**PHOTO #(S):** EN1-042908-WB039-001W " - " - " -002E

PLANT TAXA INVENTORY

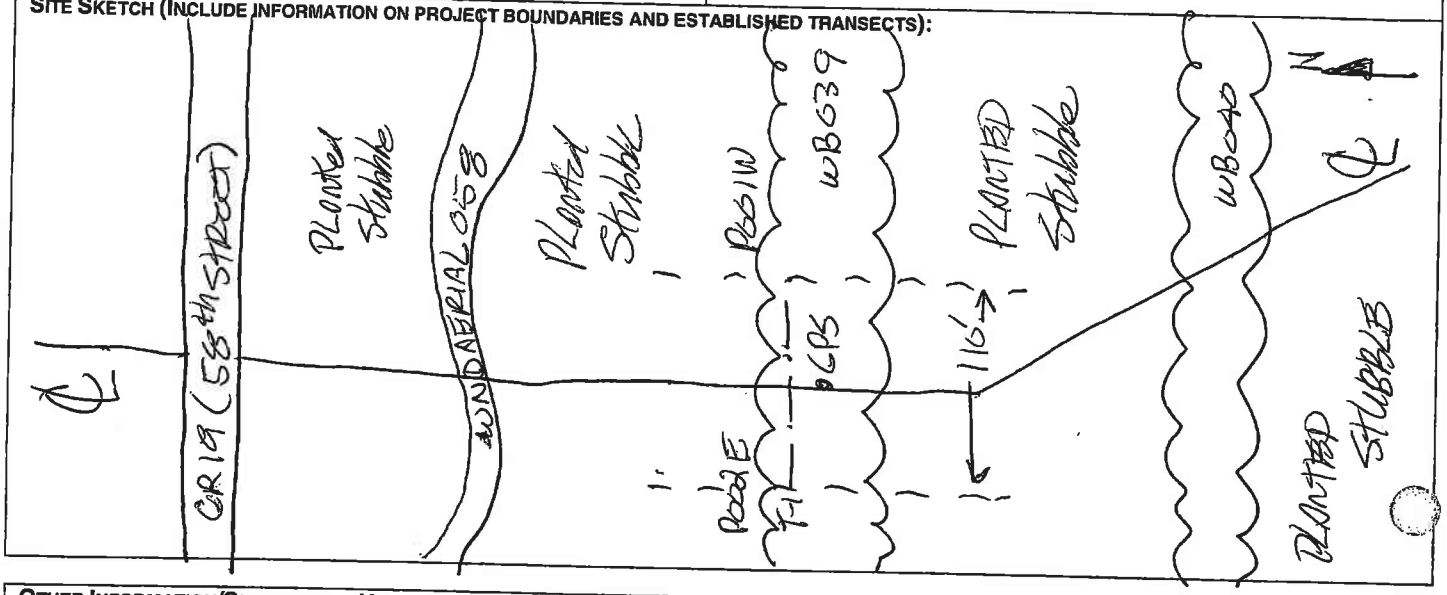
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	15 SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 15
_____	TOTAL # OF DECIDUOUS TREES: 6
_____	TOTAL # OF DECIDUOUS SHRUBS: 6
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WB040	**MP ENTER/EXIT:** 53.16 / 53.17	**SURVEY COORDINATES:** N 5344253 E 579424
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** Book 3, 12 & 13	**PHOTO #(S):** EN1-042908-WB040-001W " - " - " -002E

PLANT TAXA INVENTORY

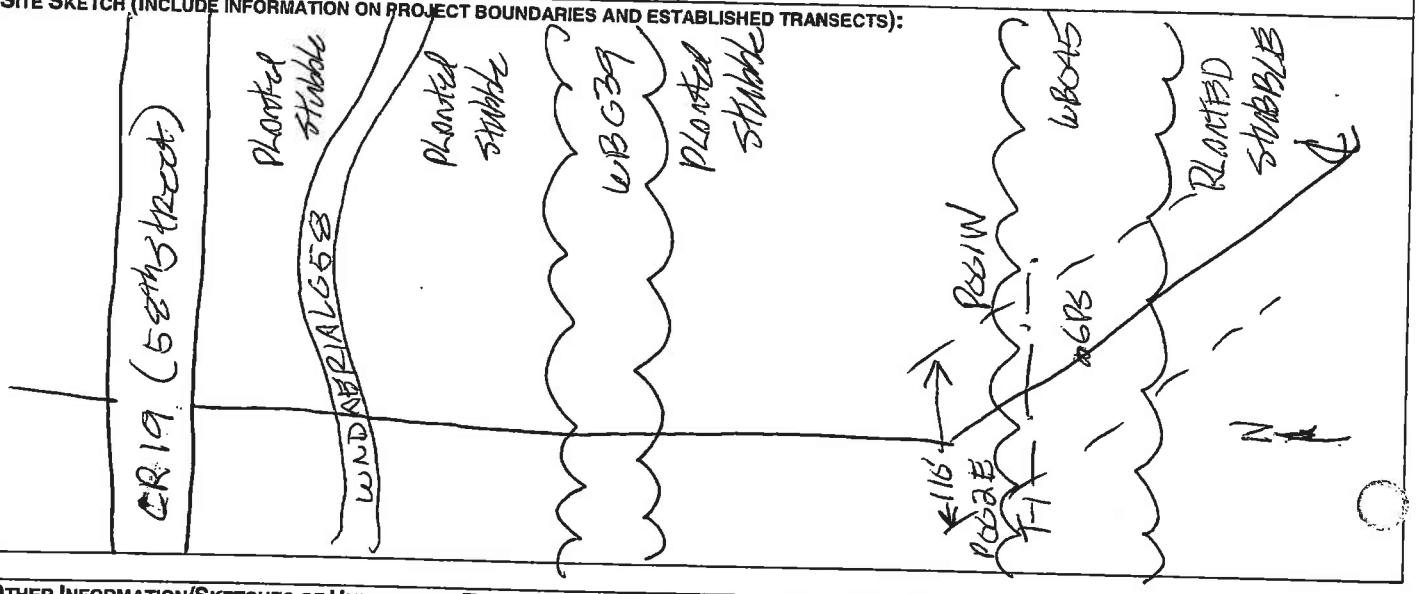
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	8 SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 8
	TOTAL # OF DECIDUOUS TREES: 0
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WB041	**MP ENTER/EXIT:** 53.93/54.00	**SURVEY COORDINATES:** N 5343103 E 579951
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boden	**LOGBOOK PAGE #(S):** Book 3, 14/15	**PHOTO #(S):** EN1-042908-WB041-001N " - " - " - 002S

PLANT TAXA INVENTORY

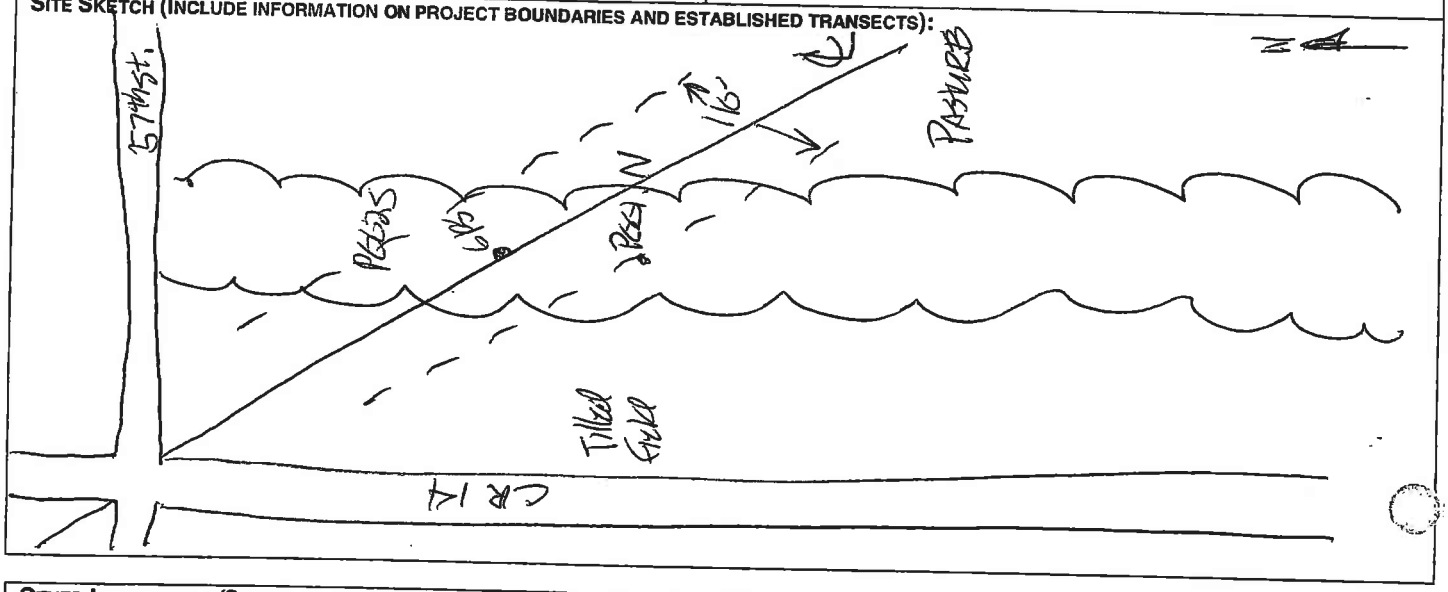
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
44 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	63 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 45
	TOTAL # OF DECIDUOUS SHRUBS: 63
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

1 hairy/downy woodpecker in tree withdrawal

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN40S22W08WL045

MP ENTER/EXIT: 54.64 - 54.90

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Boles

LOGBOOK PAGE #(S): 4,5

PHOTO #(S): EN40S22 08WL045-001

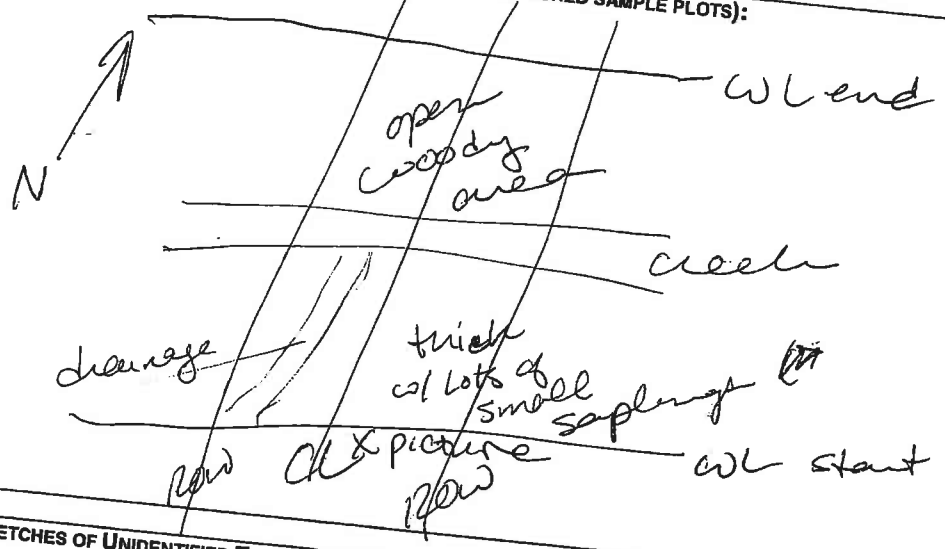
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
23 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
5 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
427 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
24 LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
18 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	91 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
96 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	309 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
~~24~~ ~~American elm (?)~~ Tilia americana	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
603 Snowberry (viburnum ?)	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
417 Ostrya virginiana	_____
_____ (eastern hophornbeam)	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 1593
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 564
	TOTAL # OF DECIDUOUS SHRUBS: 406
	TOTAL # OF INVASIVE/EXOTIC SPECIES: cb Rha(oc)
	TOTAL # OF OTHER TREES/SHRUBS: ~~629~~ 1032
	trees 588
	Shrubs 1005

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-WL045	**MP ENTER/EXIT:** 54.64 / 54.90	**ENTER/EXIT COORDINATES:** N 5341598 E 580236 / N E n/a
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Biber	**LOGBOOK PAGE #(S):** Book3, 16 & 17	**PHOTO #(S):** EN1-042908-WL045-001N, 0025, 003, 5, & 004

PLANT TAXA INVENTORY

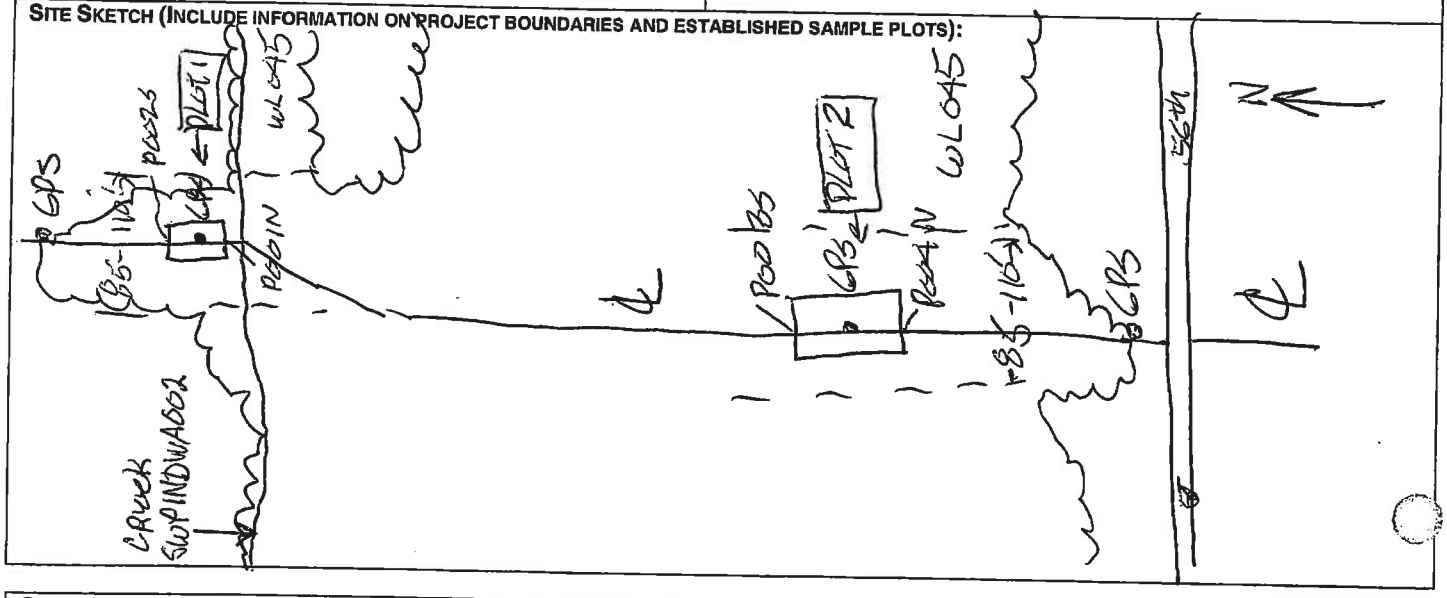
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
4 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
4 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
6 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	3 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	19 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	1 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 14
	TOTAL # OF DECIDUOUS SHRUBS: 22
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908 – ~~WB044~~ ~~WB043~~ WB042	**MP ENTER/EXIT:** ~~58.01~~ 58.03 / ~~57.04~~ 57.02	**SURVEY COORDINATES:** N 5336602 E 580137
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boken	**LOGBOOK PAGE #(S):** 3, 26, 27	**PHOTO #(S):** EN1-042908-001W ~~-002E~~

PLANT TAXA INVENTORY

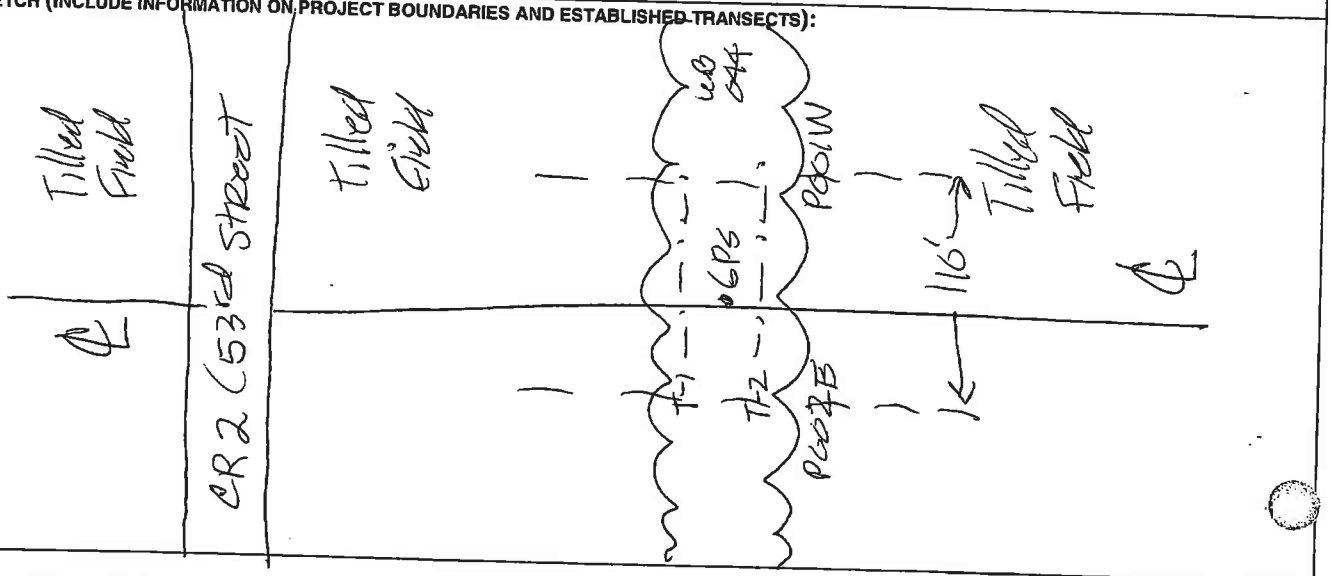
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
2G MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 29
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4052208WL046

MP ENTER/EXIT: 58.42 - 58.44

ENTER/EXIT COORDINATES: —

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Bolch

LOGBOOK PAGE #(S): 6, 7

PHOTO #(S): EN4052208WL046-001

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
____ COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
____ ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
5 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
2 MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	65 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
9 OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	2 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	65 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	3 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	1 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
280 Snowberry	____ SUMAC, SMOOTH (*RHUS GLABRA*)
5 Rosa spp	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	____
____	____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

 # INVENTORIED, OTHER CONT'D:

_____
_____
_____
_____
_____
_____
_____

TOTALS: 434

TOTAL # OF EVERGREEN TREES: _____

TOTAL # OF DECIDUOUS TREES: 16

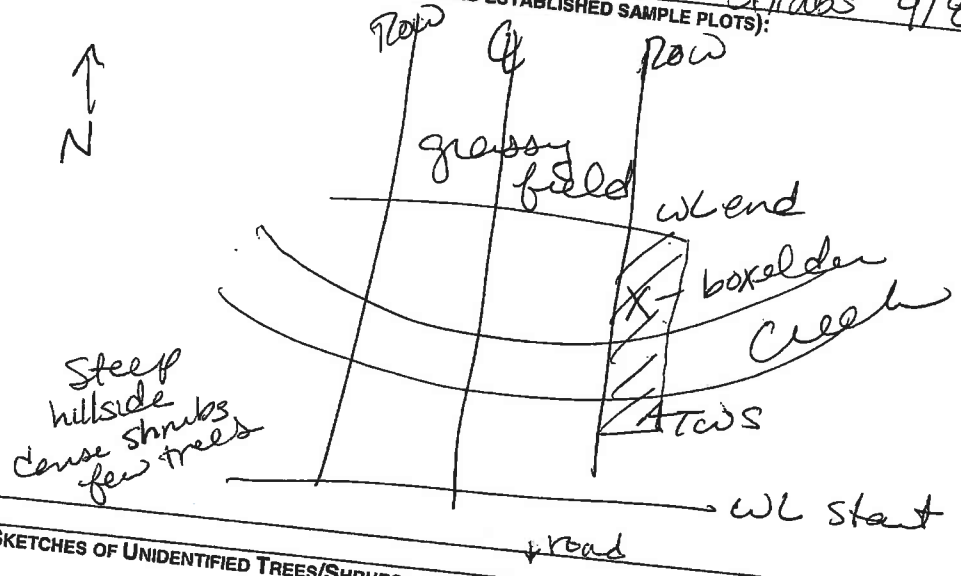
TOTAL # OF DECIDUOUS SHRUBS: 136

TOTAL # OF INVASIVE/EXOTIC SPECIES: _____

TOTAL # OF OTHER TREES/SHRUBS: 282

trees 16
shrubs 418

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/09	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB045	**MP ENTER/EXIT:** 61.88/61.90	**SURVEY COORDINATES:** N 5330386 E 590169
TEAM NAME: EN1 **INVESTIGATORS:** Cory Boden, Ken Ruzicka Steve Long	**LOGBOOK PAGE #(S):** Book 3 - 24,25	**PHOTO #(S):** EN1-043008-WB045-001W ~~-002E~~

PLANT TAXA INVENTORY

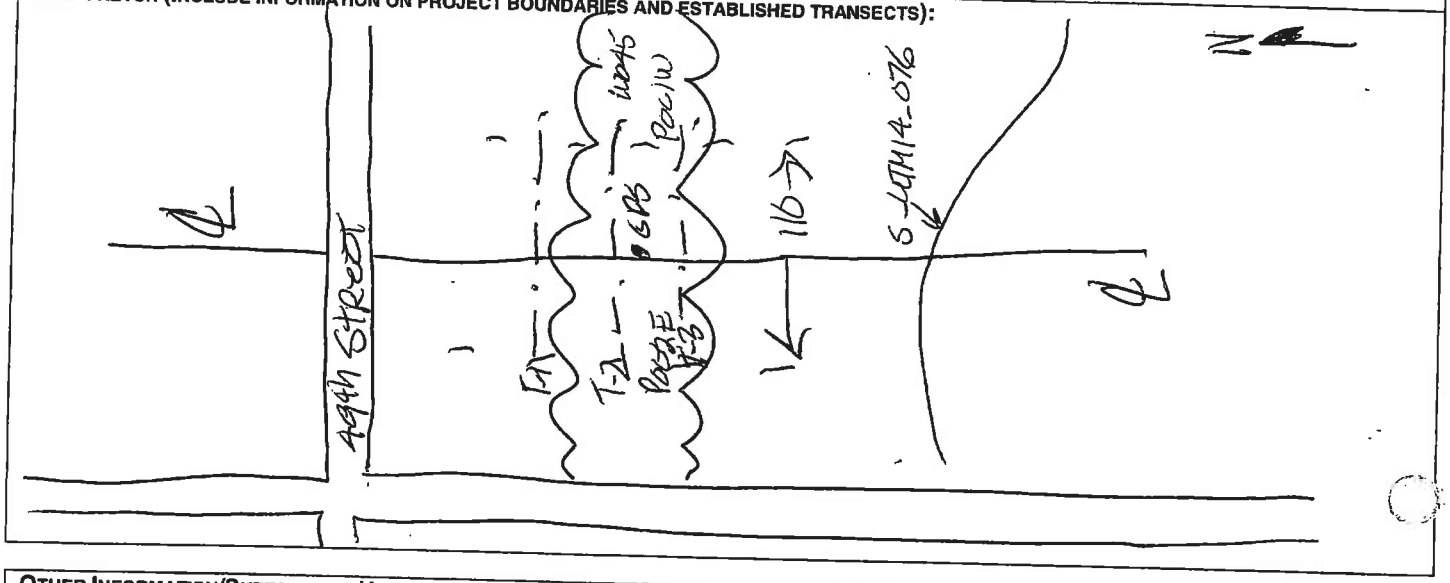
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
14 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
5 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
22 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	11 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	1 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	25 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	5 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 51
	TOTAL # OF DECIDUOUS SHRUBS: 42
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB046	**MP ENTER/EXIT:** CB 61.88/63.77/63.79	**SURVEY COORDINATES:** N 5327376 E 580258
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Baker	**LOGBOOK PAGE #(S):** Book 3, 26-27	**PHOTO #(S):** EN1-043008-001W 002E

PLANT TAXA INVENTORY

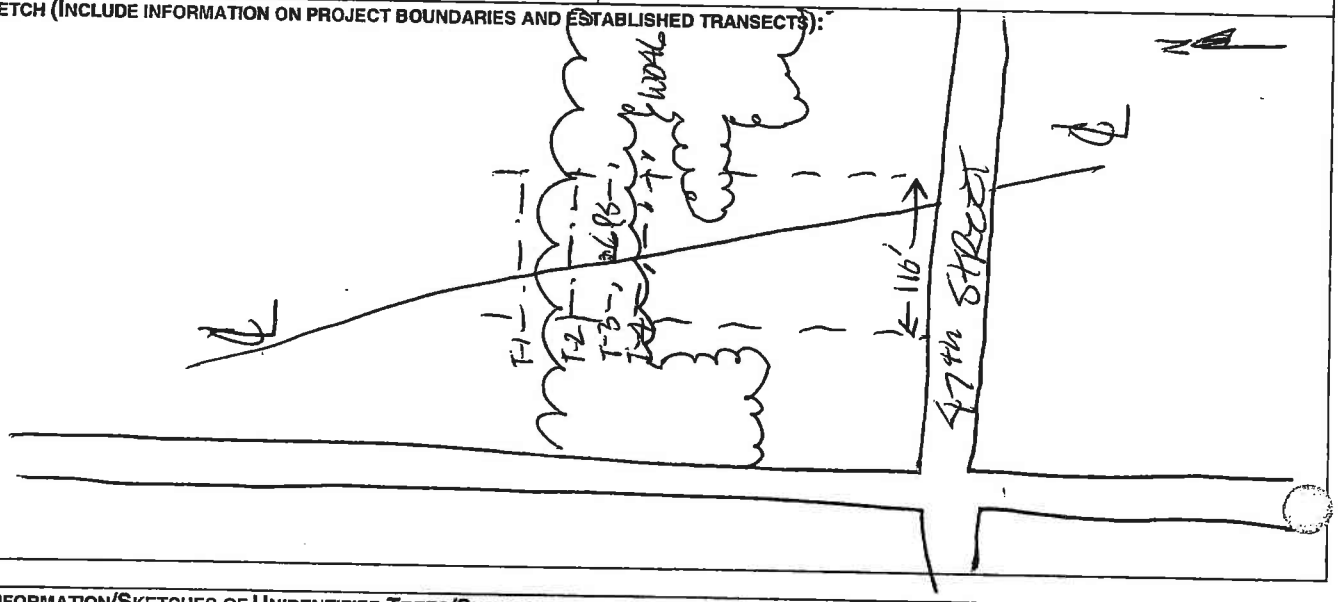
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
16 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
13 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
33 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	3 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	1 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	6 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: ~~6~~
_____	TOTAL # OF DECIDUOUS TREES: 62
_____	TOTAL # OF DECIDUOUS SHRUBS: 10
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
_____	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB047	**MP ENTER/EXIT:** 64.88/64.89	**SURVEY COORDINATES:** N 5325615 E 580301
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Rutzka, Cory Foster	**LOGBOOK PAGE #(S):** Book 3 - 28, 29	**PHOTO #(S):** EN1-043008-WB047-001 W " - " - " - 002 E

PLANT TAXA INVENTORY

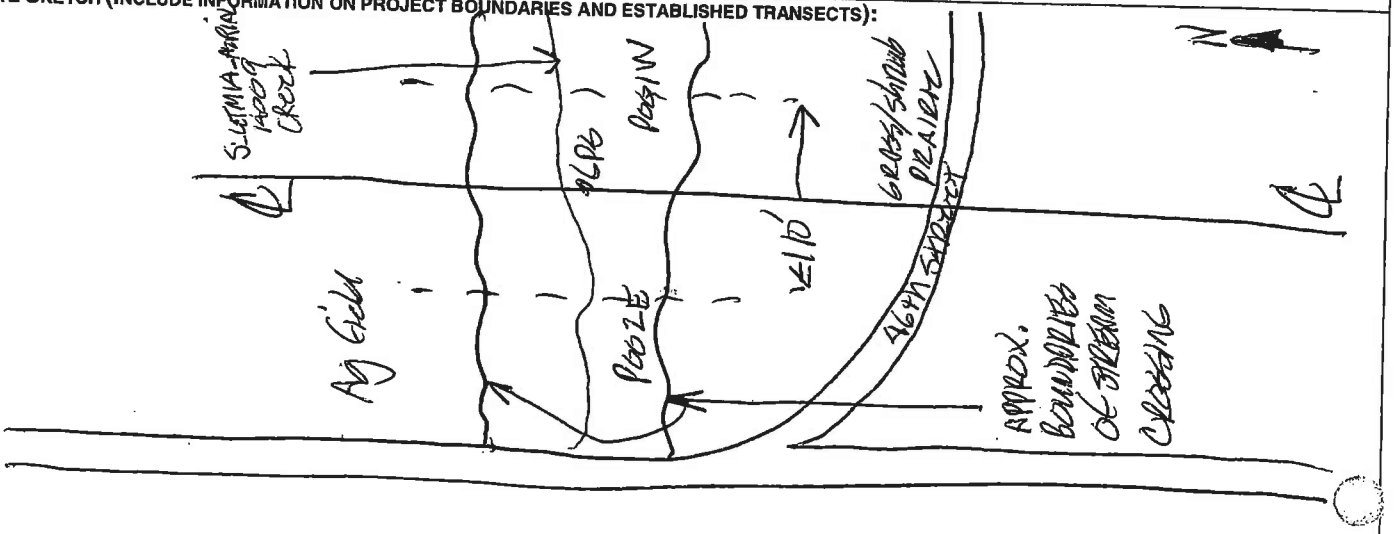
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	5 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	6 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	6 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	22 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	6 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	171 SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	36 ROSA ACICULARIS
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 0
	TOTAL # OF DECIDUOUS SHRUBS: 216
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 36

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- This is a stream crossing, not a shelterbelt.
- Transects were surveyed within the boundaries of the stream crossing.

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI043008SWB048	**MP ENTER/EXIT:** 65.48/65.49	**SURVEY COORDINATES:** N 6324626 E 580222
TEAM NAME: ENI **INVESTIGATORS:** S. Long, C. Baker, K. Ruzicka	**LOGBOOK PAGE #(S):** Book 3 32-33	**PHOTO #(S):** ENI043008SWB048-0011 " " " -0012

PLANT TAXA INVENTORY

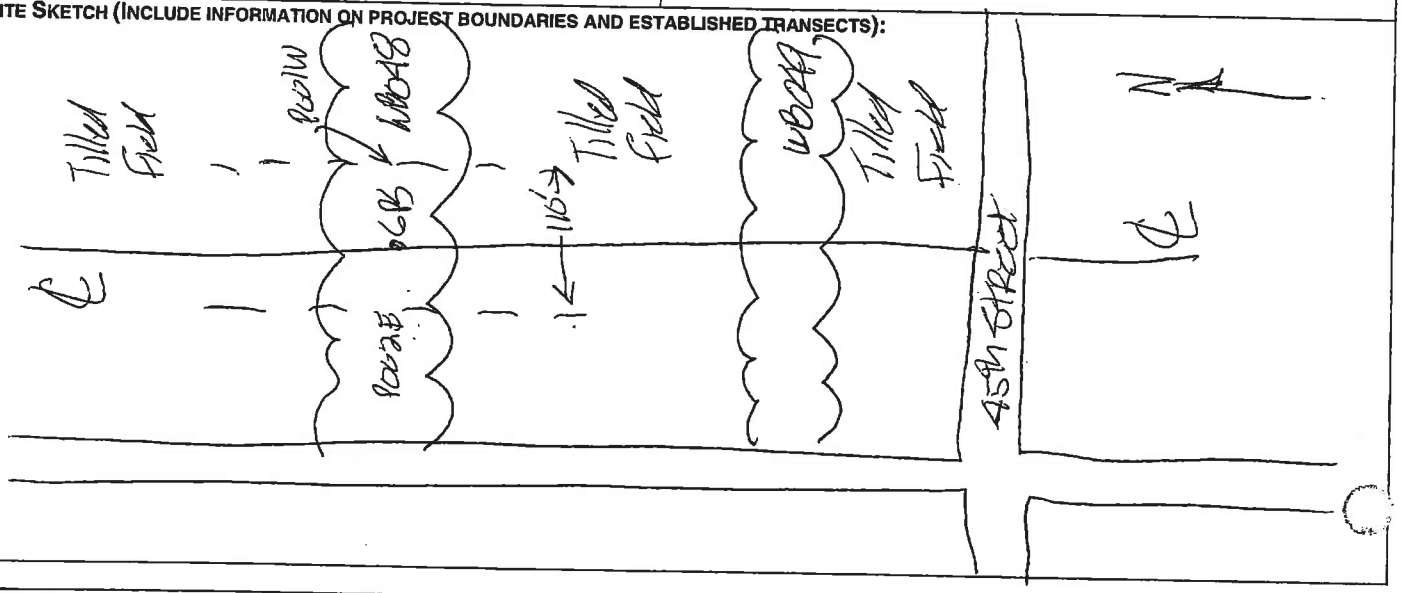
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
11 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
____	TOTAL # OF EVERGREEN TREES: 0
____	TOTAL # OF DECIDUOUS TREES: 11
____	TOTAL # OF DECIDUOUS SHRUBS: 0
____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
____	TOTAL # OF OTHER TREES/SHRUBS: 0
____	
____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB049	**MP ENTER/EXIT:** 65.66/65.68	**SURVEY COORDINATES:** N 5324351 E 580234
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Vin Ruzicka, Cory Biter	**LOGBOOK PAGE #(S):** Book 3, 30-31	**PHOTO #(S):** EN1-043008-WB049-001W " - " - " - 002E

PLANT TAXA INVENTORY

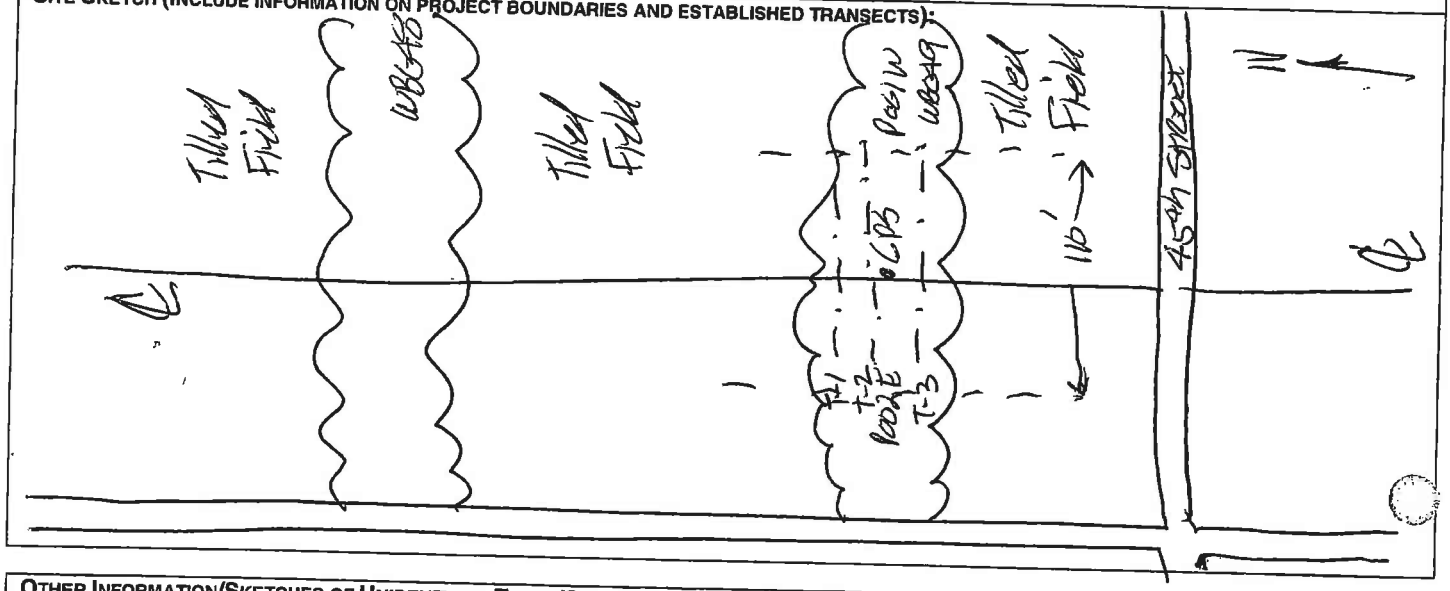
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
12 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
9 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
5 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	27 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	16 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	7 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 26
	TOTAL # OF DECIDUOUS SHRUBS: 50
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB050	**MP ENTER/EXIT:** 73.83 / 73.84	**SURVEY COORDINATES:** N 5311498 E 579729
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long Ken Ruzicka Cory Boles	**LOGBOOK PAGE #(S):** Book 3, 34-35	**PHOTO #(S):** EN1-043008-WB050-001W -002E

PLANT TAXA INVENTORY

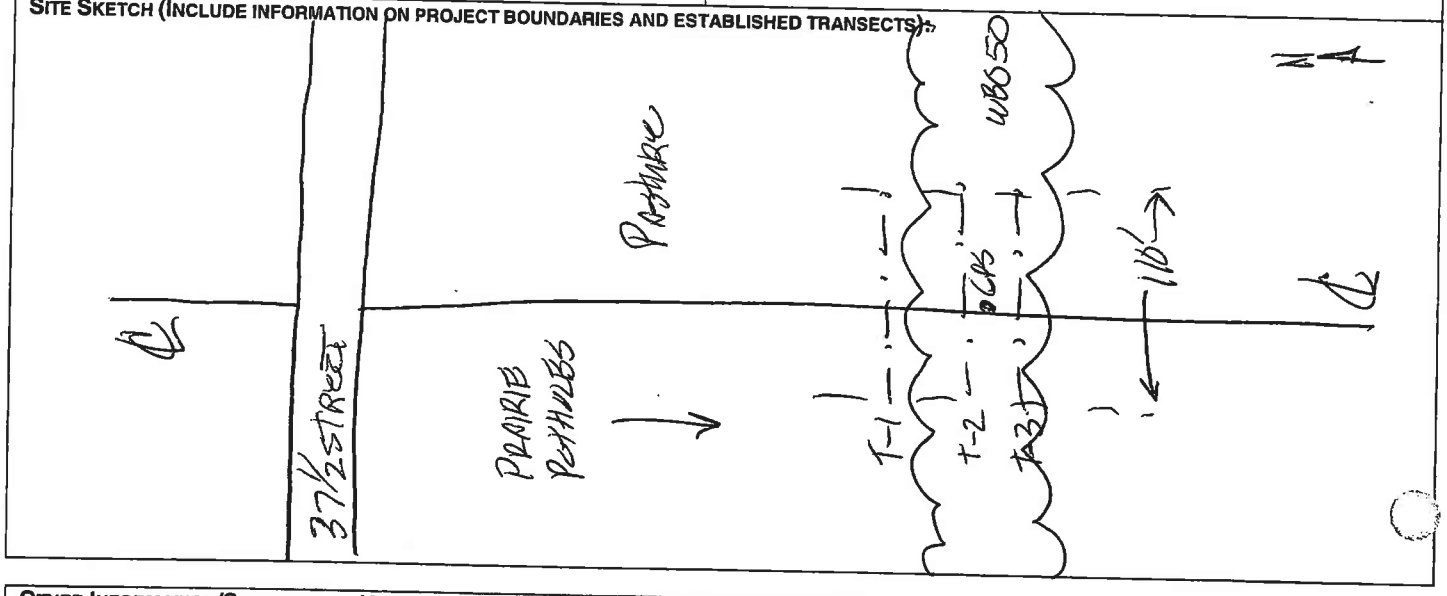
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
20 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
8 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	255 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 28
_____	TOTAL # OF DECIDUOUS SHRUBS: 255
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB051	**MP ENTER/EXIT:** 77.55/77.60	**SURVEY COORDINATES:** N 5305794 E 580560
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** Book 3, 36-37	**PHOTO #(S):** EN1-043008-WB051-001W ~~-002E~~

PLANT TAXA INVENTORY

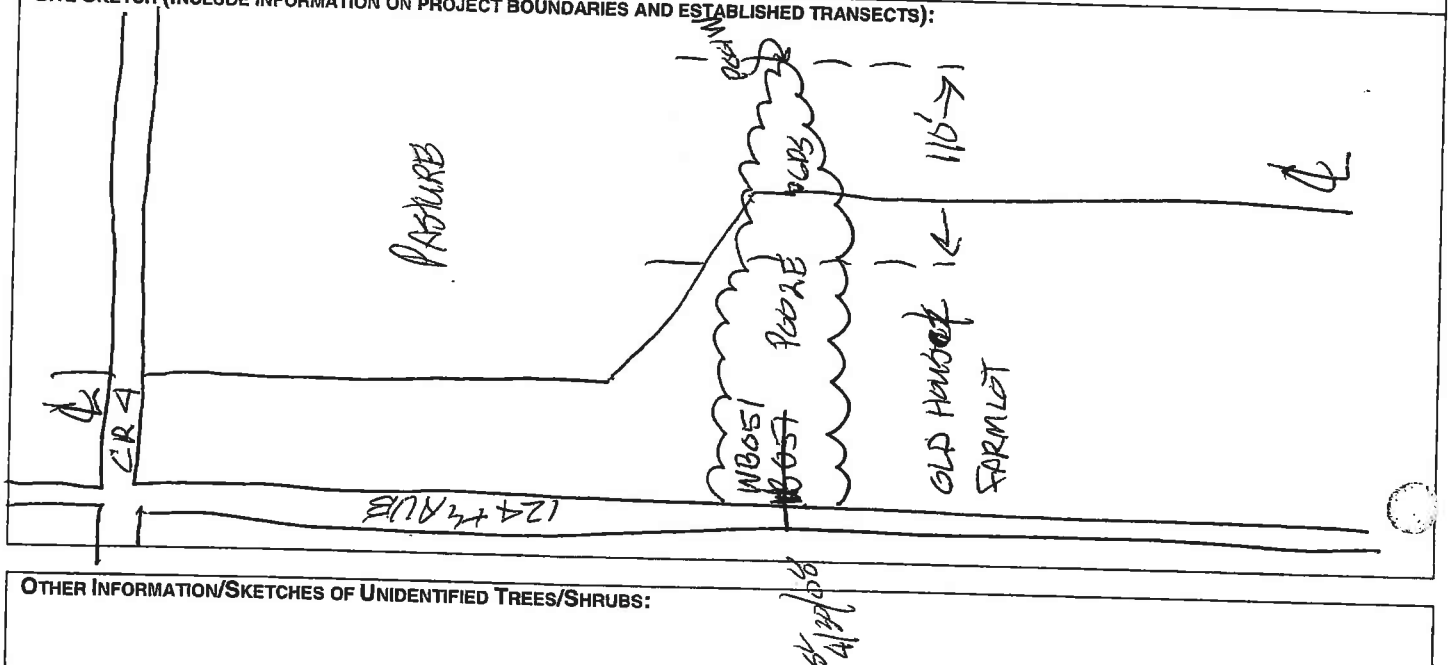
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
12 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
11 WILLOW (*SALIX SPECIES*) (SALIX ALBA)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 24
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

SK 4/29/66

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB052	**MP ENTER/EXIT:** 84.04/84.04	**SURVEY COORDINATES:** N 5295741 E 580156
TEAM NAME: EN1	**LOGBOOK PAGE #(S):**	**PHOTO #(S):**
INVESTIGATORS: Steve Long, Ken Ruzicka, Cory Boles	Book 3, 38-39	EN1-043008-WB052-001W " - " - " -002E

PLANT TAXA INVENTORY

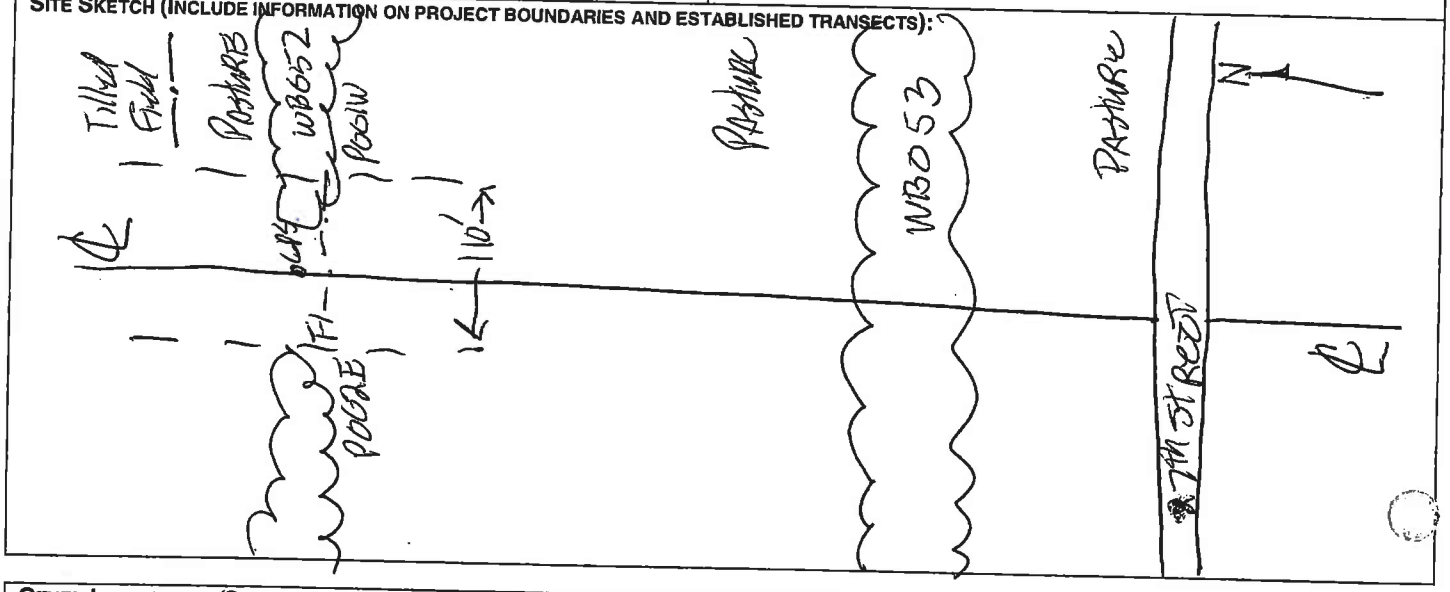
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
V COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 2
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

The Herbert determining

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB053	**MP ENTER/EXIT:** 84.28/84.28	**SURVEY COORDINATES:** N 5295333 E 580126
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Beken	**LOGBOOK PAGE #(S):** Book 3 40-41	**PHOTO #(S):** EN1-043008-WB053-001 W " - " - " - 002 E

PLANT TAXA INVENTORY

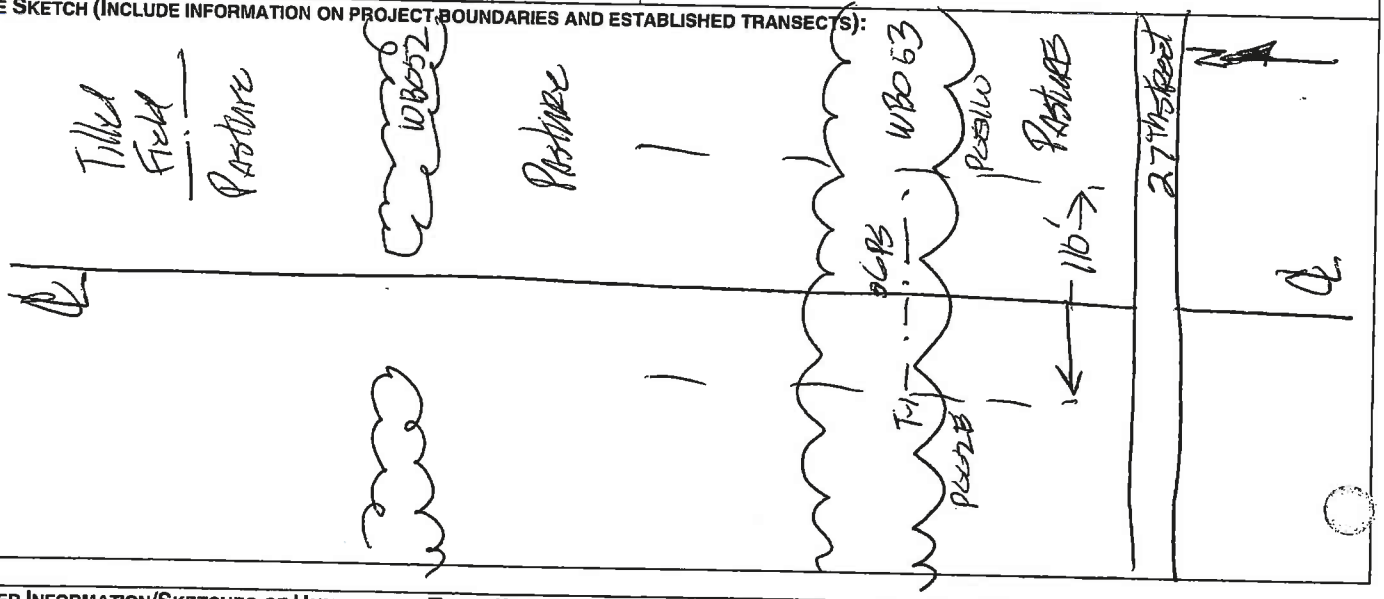
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
4 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 4
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- this shelter belt deteriorating.
- Trees are intermittent.

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-WB054	**MP ENTER/EXIT:** 92.85/92.85	**SURVEY COORDINATES:** N 5281803 E 5804183
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Bolen	**LOGBOOK PAGE #(S):** Book 3, 42-43	**PHOTO #(S):** EN1-043008-WB054-001W " - " - " - 002E

PLANT TAXA INVENTORY

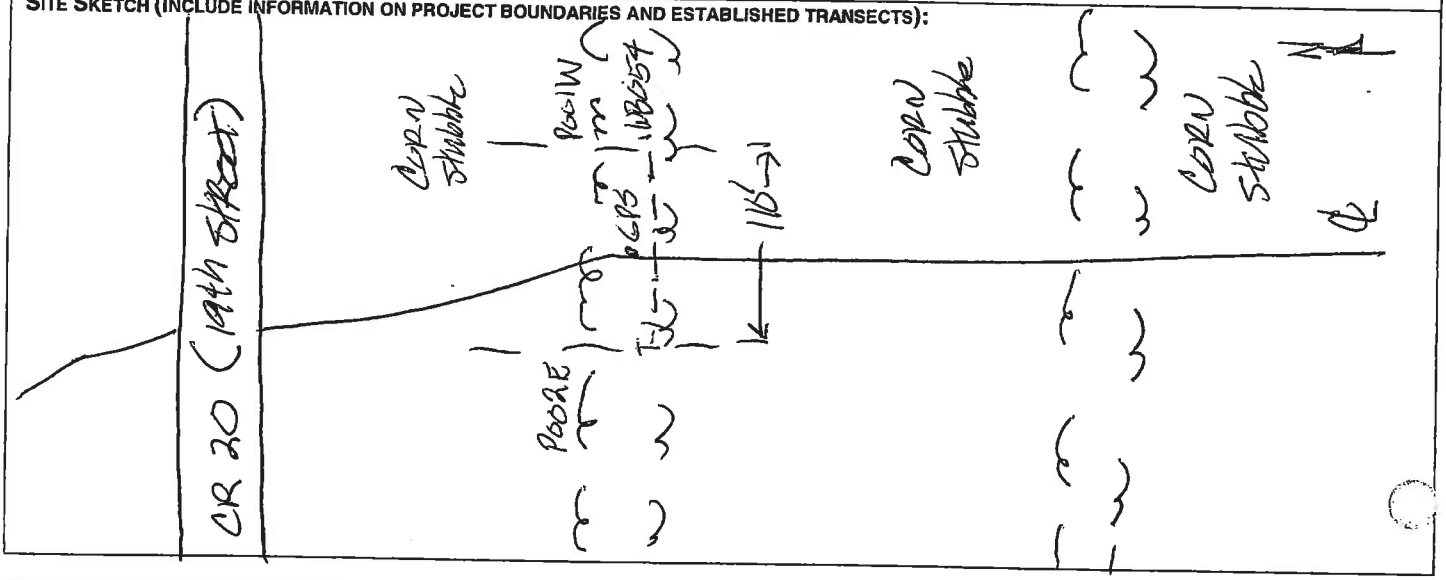
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
5 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 5
_____	TOTAL # OF DECIDUOUS SHRUBS: 6
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 6
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- Shelter belt deteriorating
- Trees widely spaced.

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/05	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008 - WB055	**MP ENTER/EXIT:** 92.96/92.96	**SURVEY COORDINATES:** N 5581637 E 580483
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longi Ken Ruzicka Cory Boten	**LOGBOOK PAGE #(S):** Book 3, 44-45	**PHOTO #(S):** EN1-043008-WB055-001W -" -" -002E

PLANT TAXA INVENTORY

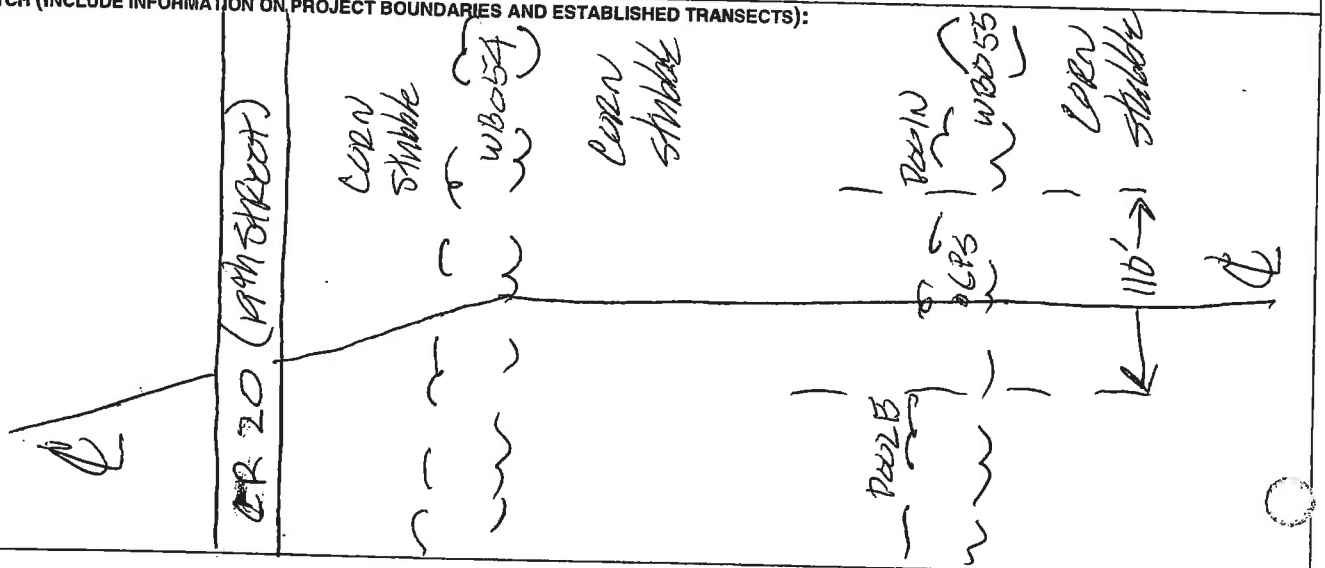
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
4 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~0~~
	TOTAL # OF DECIDUOUS TREES: 4
	TOTAL # OF DECIDUOUS SHRUBS: ~~0~~
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~0~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~0~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- Shelter belt deteriorating
- Trees widely spaced.

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-50108-WB056	**MP ENTER/EXIT:** 94.60/94.61	**SURVEY COORDINATES:** N 5279272 E 580382
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Rueda, Cory Boles	**LOGBOOK PAGE #(S):** 4of4 2&3	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

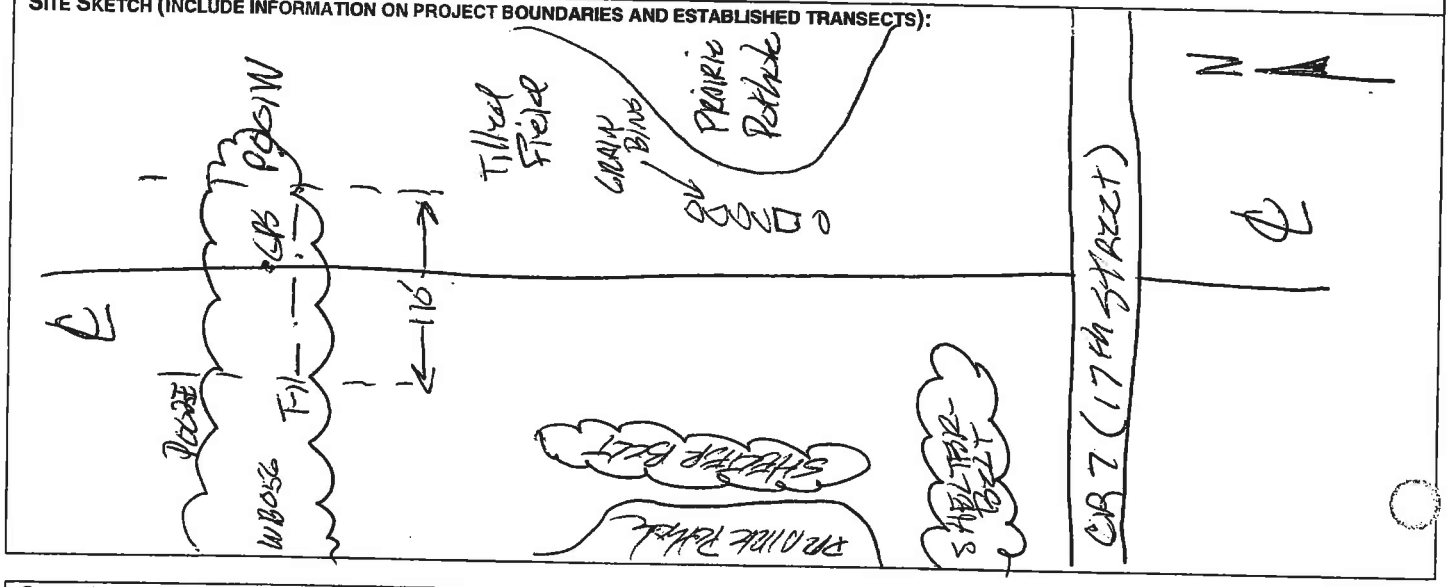
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
3 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 3
	TOTAL # OF DECIDUOUS SHRUBS: 0
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 6

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB057	**MP ENTER/EXIT:** 96.17/96.19	**SURVEY COORDINATES:** N 5276554 E 580521
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longo, Ken Rutecka, Cory Boden	**LOGBOOK PAGE #(S):** 444, 647	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

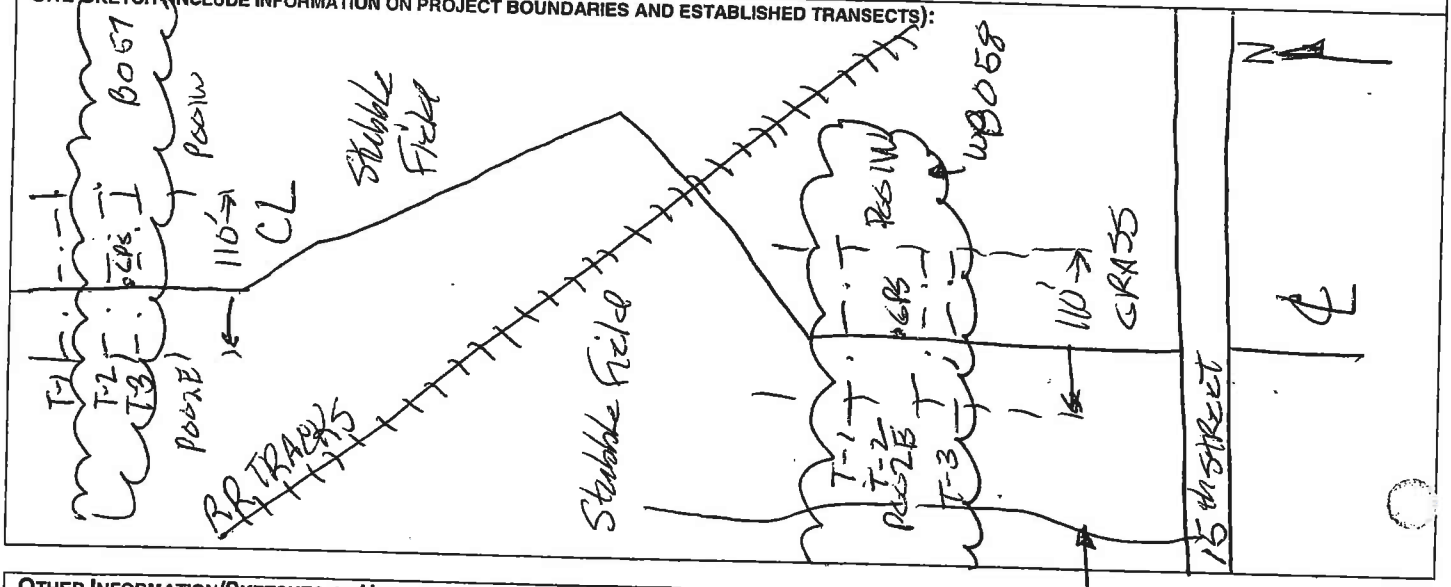
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
15 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	34 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

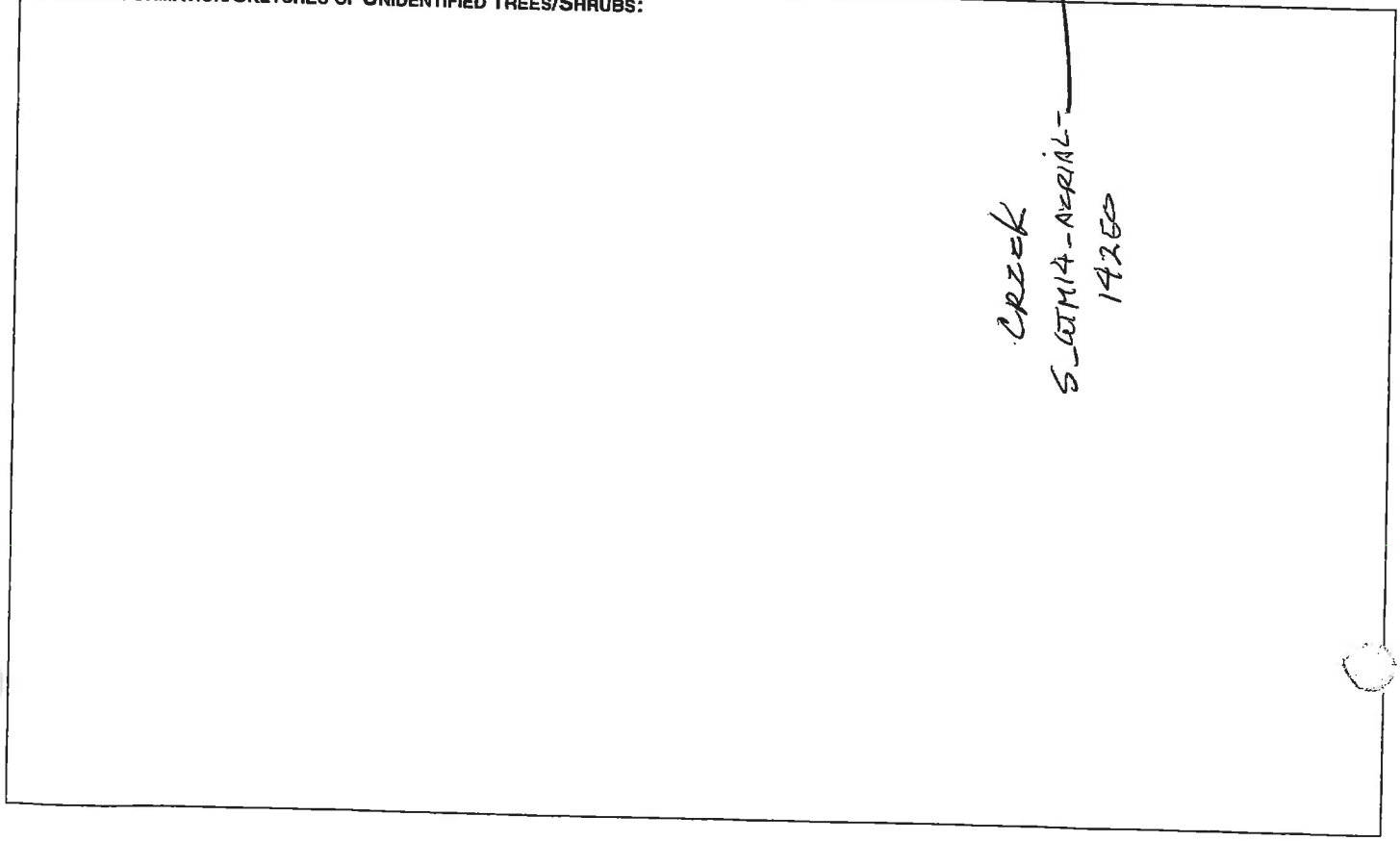
PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 15
	TOTAL # OF DECIDUOUS SHRUBS: 34
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:



WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: FJN10501084B058	**MP ENTER/EXIT:** 96.64/96.70	**SURVEY COORDINATES:** N 5275790 E 680634
TEAM NAME: JFN	**LOGBOOK PAGE #(S):** 4f4, 4f5	**PHOTO #(S):** 001W 002E
INVESTIGATORS: S. Long, C. Bekay, K. Ringkob		

PLANT TAXA INVENTORY

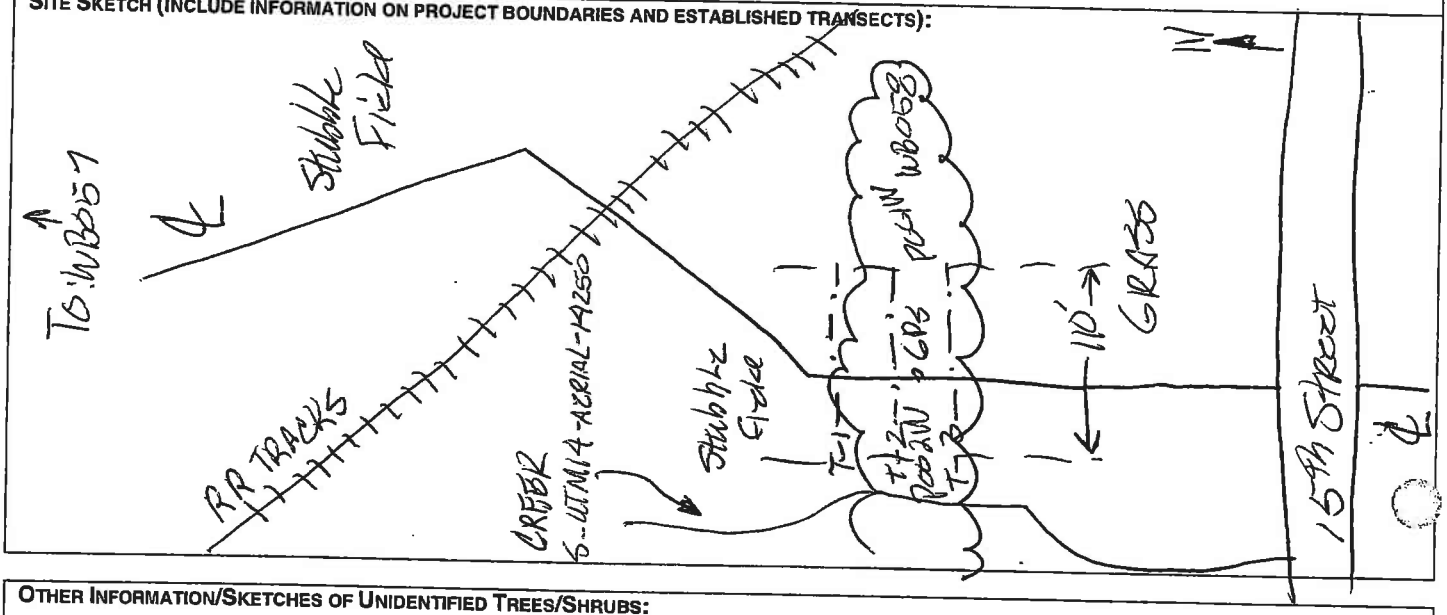
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
20 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
22 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	34 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	63 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	14 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	18 SNOWBERRY (*SYMPHORICARPOS OCCIDENTALIS*)
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 42
	TOTAL # OF DECIDUOUS SHRUBS: 111
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 6
	TOTAL # OF OTHER TREES/SHRUBS: 18

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB059	**MP ENTER/EXIT:** 104.52/104.53	**SURVEY COORDINATES:** N 5263625 E 590259
TEAM NAME: EN1 **INVESTIGATORS:** Steve Longo, Ken Ruzicka, Cory Boles	**LOGBOOK PAGE #(S):** 4of4, 879	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

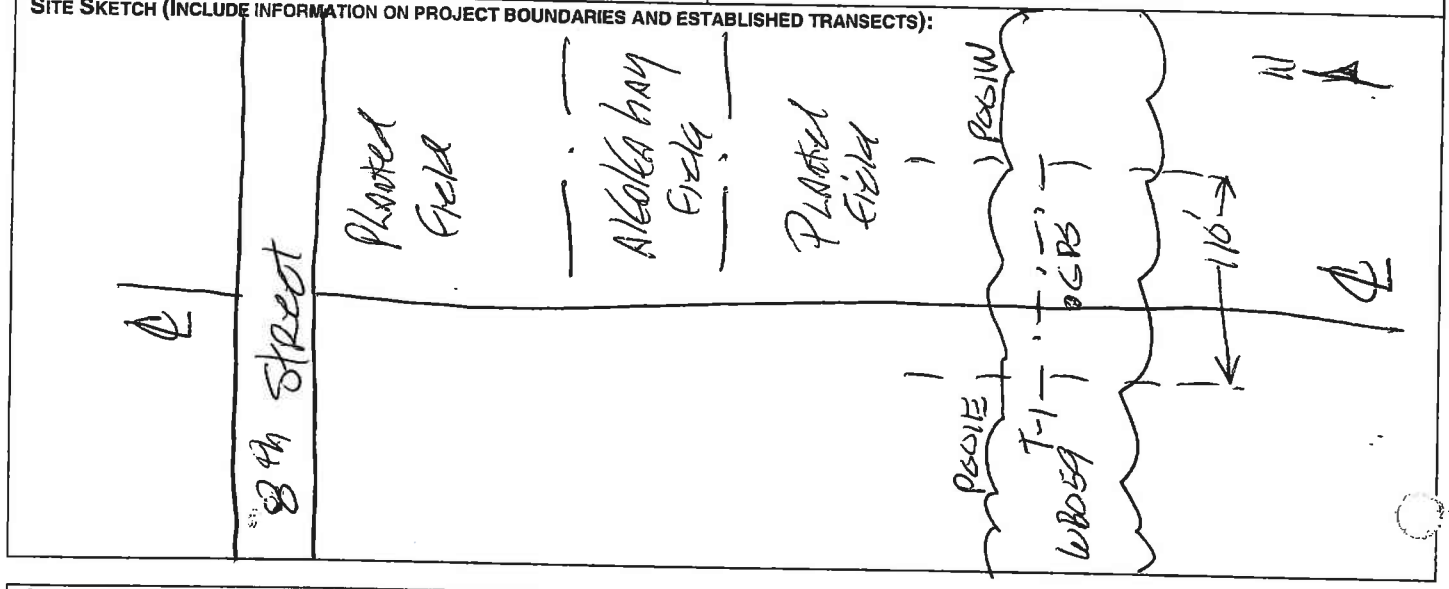
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
62 ELM, SIBERIAN (*ULMUS PUMILA*) (45 seedlings)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 62
_____	TOTAL # OF DECIDUOUS SHRUBS: 0
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/09	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB060	**MP ENTER/EXIT:** 107.04 / 107.12	**SURVEY COORDINATES:** N 5259609 E 580259
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Runzler, Cory Boles	**LOGBOOK PAGE #(S):** 4of4, 10f11	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

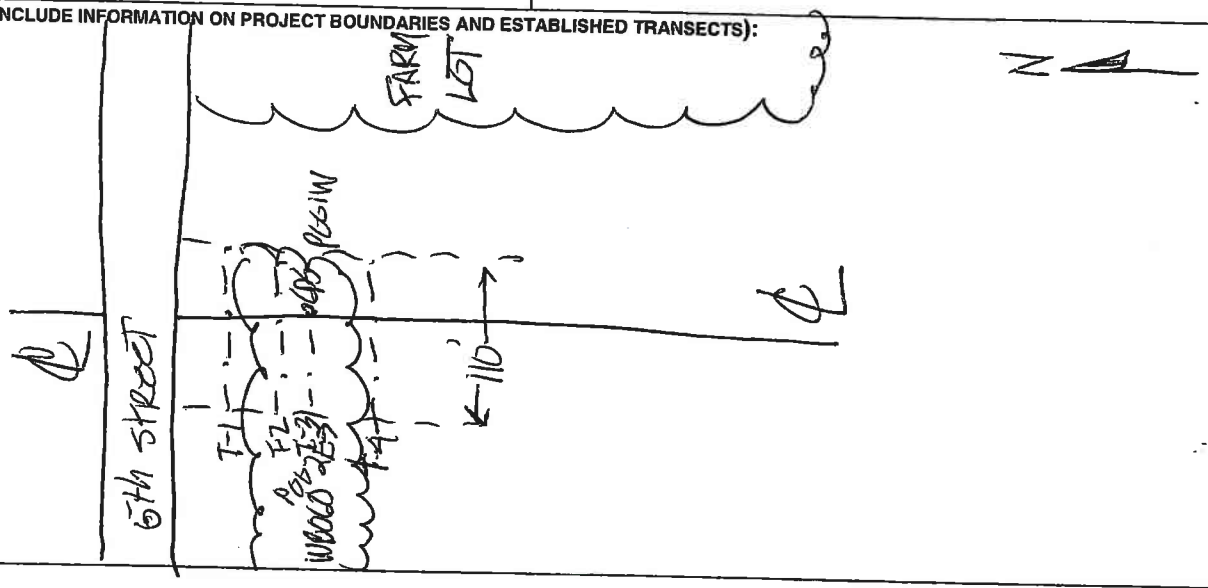
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
53 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
26 COTTONWOOD (*POPULUS DELTOIDES*)	2 CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	4 PINE, PONDEROSA (*PINUS PONDEROSA*)
15 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	65 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	1 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	35 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____ wild black currant (*Ribes americanum*)
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 6
_____	TOTAL # OF DECIDUOUS TREES: 94 sk 5/1pb
_____	TOTAL # OF DECIDUOUS SHRUBS: ~~102~~ 101
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 1
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB061	**MP ENTER/EXIT:** 117.14 / 117.17	**SURVEY COORDINATES:** N 5243557 E 580525
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long; Ken Ruzicka Cory Buten	**LOGBOOK PAGE #(S):** 484, 12&13	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

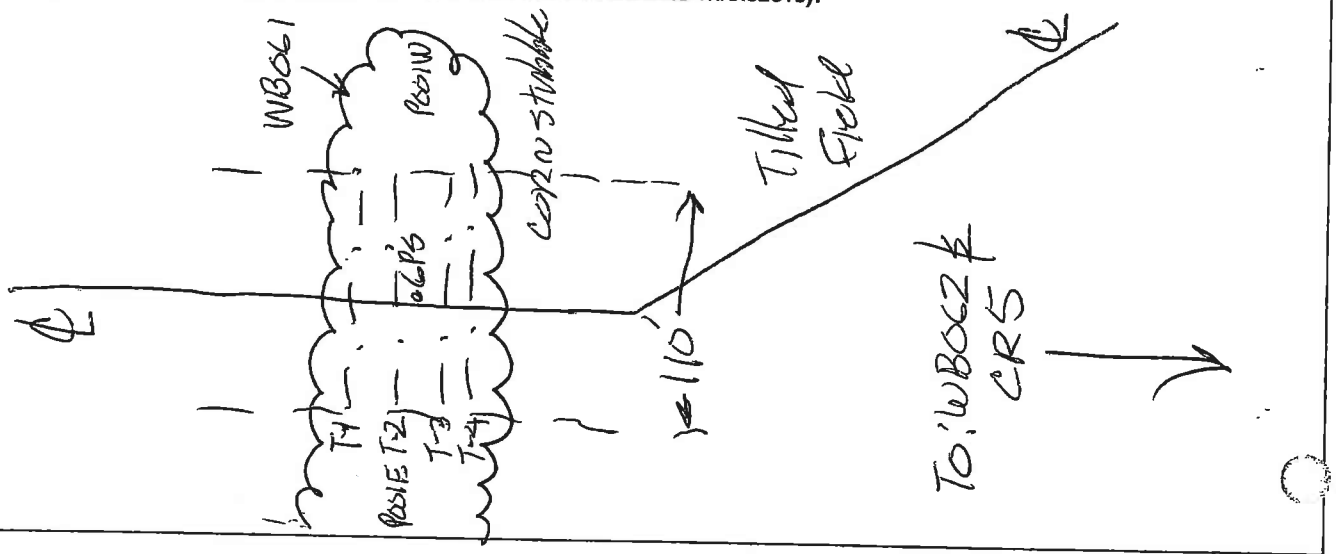
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
6 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
26 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	62 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____ wild black currant (*Ribes*) *AMERICANUM*
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
____	TOTAL # OF EVERGREEN TREES: 6
____	TOTAL # OF DECIDUOUS TREES: 32
____	TOTAL # OF DECIDUOUS SHRUBS: 62
____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
____	TOTAL # OF OTHER TREES/SHRUBS: 1
____	
____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB062	**MP ENTER/EXIT:** 118.14 / 118.15	**SURVEY COORDINATES:** N 5242096 E 580961
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Bitz	**LOGBOOK PAGE #(S):** 4 of 4, 14 of 15	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

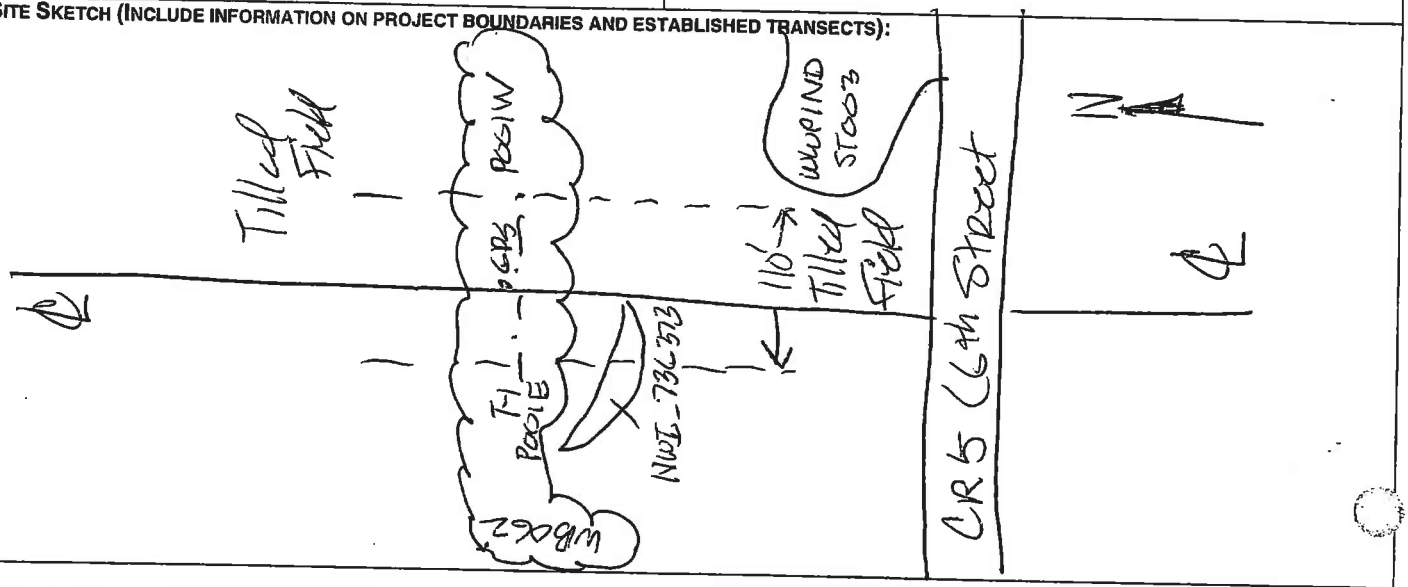
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
7 COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
2 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
____ MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	4 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	____
____	____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 9
	TOTAL # OF DECIDUOUS SHRUBS: 4
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB063	**MP ENTER/EXIT:** 121.38/121.40	**SURVEY COORDINATES:** N 5237075 E 581967
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Bolen	**LOGBOOK PAGE #(S):** 44, 16&17	**PHOTO #(S):** 001-W 002-E

PLANT TAXA INVENTORY

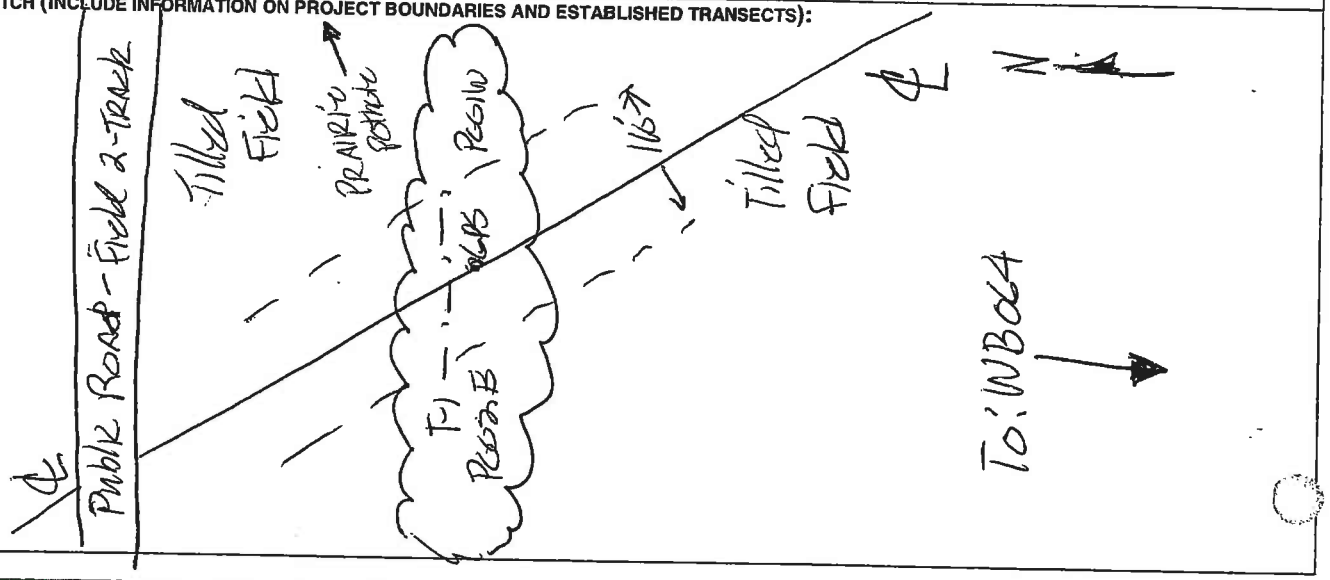
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
3 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	14 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 3
_____	TOTAL # OF DECIDUOUS SHRUBS: 14
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB064	**MP ENTER/EXIT:** 121.54 / 121.56	**SURVEY COORDINATES:** N 5236852 E 582094
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Cory Boles, Ken Ruricha	**LOGBOOK PAGE #(S):** 4of4, 18&19	**PHOTO #(S):** 001W 001E

PLANT TAXA INVENTORY

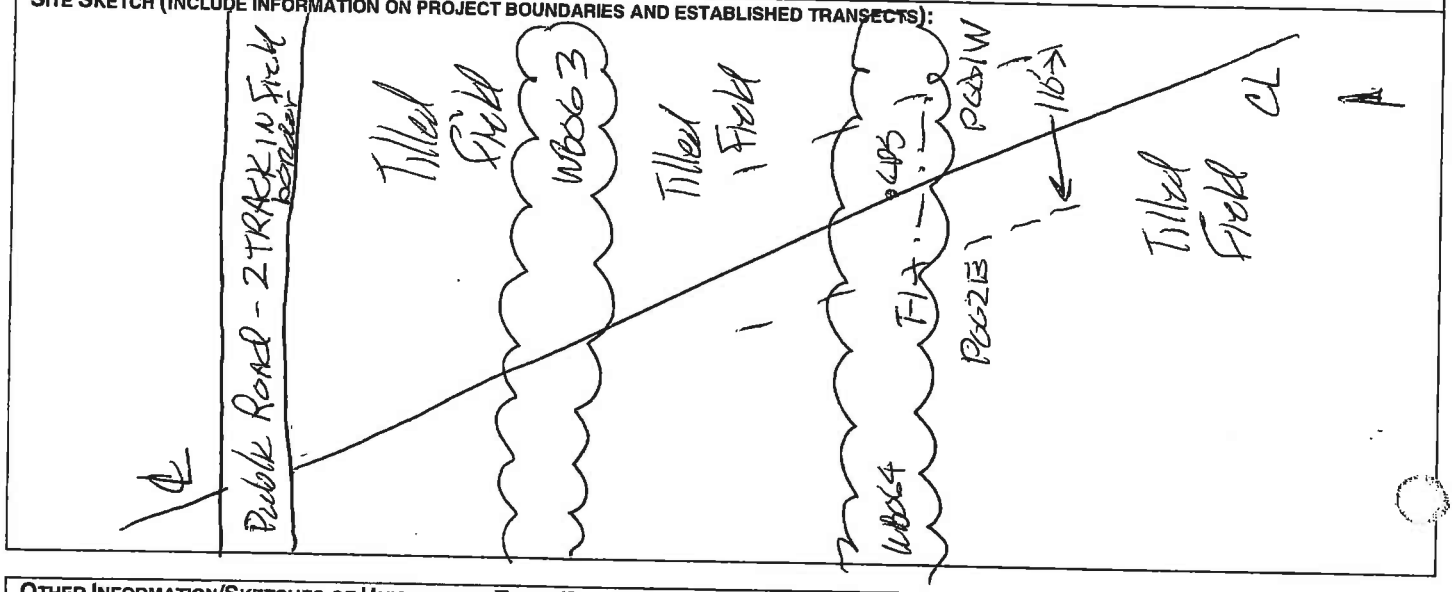
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
26 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	23 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 6
_____	TOTAL # OF DECIDUOUS TREES: 26
_____	TOTAL # OF DECIDUOUS SHRUBS: 23
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
_____	TOTAL # OF OTHER TREES/SHRUBS: 0
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/1/06	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-050108-WB065	**MP ENTER/EXIT:** 123.45/123.49	**SURVEY COORDINATES:** N 5234047 E 582619
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Biden	**LOGBOOK PAGE #(S):** 494, 20+21	**PHOTO #(S):** 001W -002E

PLANT TAXA INVENTORY

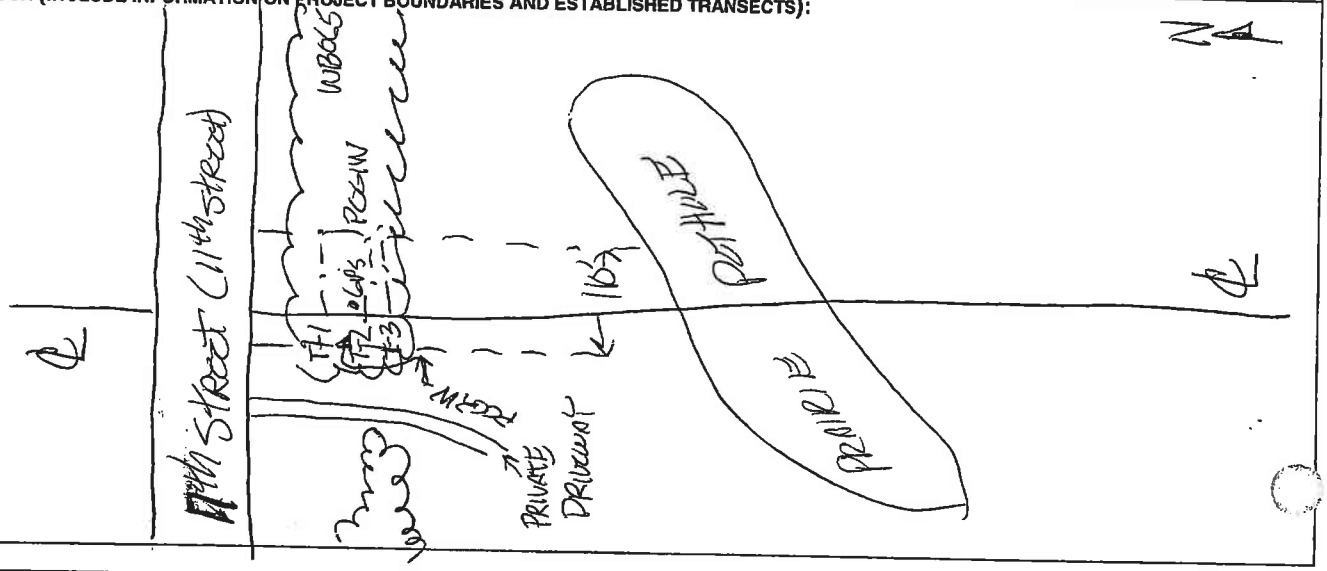
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
35 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
4 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
29 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
18 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	11 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
2 RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	119 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 89
	TOTAL # OF DECIDUOUS SHRUBS: 130
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN4052308WL048

MP ENTER/EXIT: 124.49-124.54

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Bergquist, Cory Bolen

LOGBOOK PAGE #(S): 8,9

PHOTO #(S): EN4052308WL048-001

EN4052308WL048-002

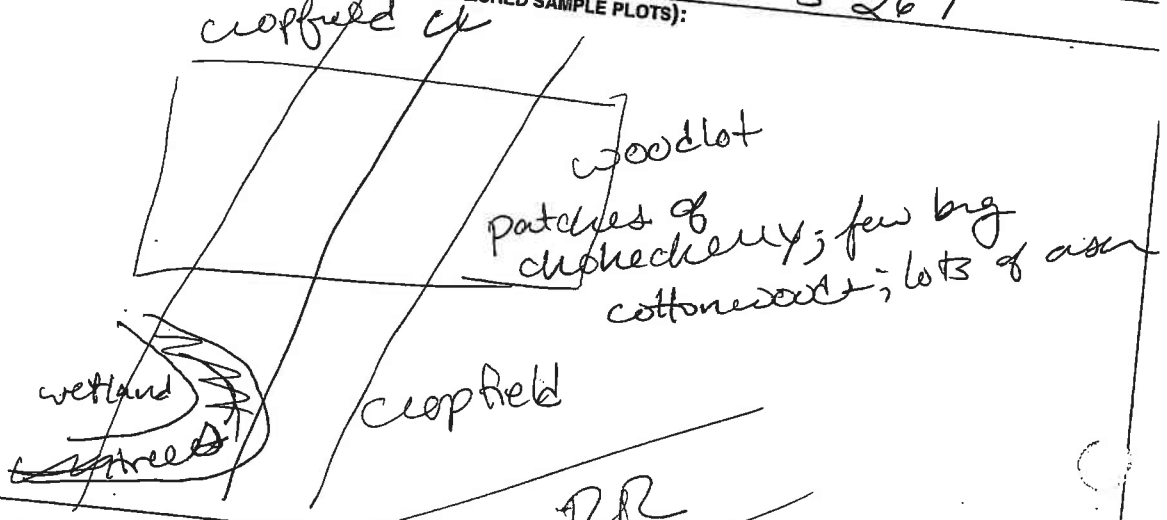
PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
158 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
~~Est~~ COTTONWOOD (*POPULUS DELTOIDES*) 35	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	235 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
3 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
33 Snowberry	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
1 Tibes	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: ~~468~~ 465
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 196
	TOTAL # OF DECIDUOUS SHRUBS: 235
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: 34
	Trees 196
	Shrubs 269

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/23/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EM3[illegible] W2046	**MP ENTER/EXIT:** 130.71 / 130.73	**SURVEY COORDINATES:** [illegible]
TEAM NAME: 3A **INVESTIGATORS:** Erin B, Dan H, Cory B, Ken R, Steve L	**LOGBOOK PAGE #(S):** 2,3	**PHOTO #(S):** 1, 2, 3 (unknown shrubs)

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
5 ELM, SIBERIAN (*ULMUS PUMILA*) (repeats count of below)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
41/36 MAPLE, BOXELDER (*ACER NEGUNDO*) (76 Total)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	30 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
5 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
10 OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
33 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
15 Prunus americana	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
33 unknown legume = Caragana	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
30 unknown shrub = Prunus virginiana	**# INVENTORIED, OTHER:**
~~5~~ STAT EB-4/30/08	_____
_____	_____

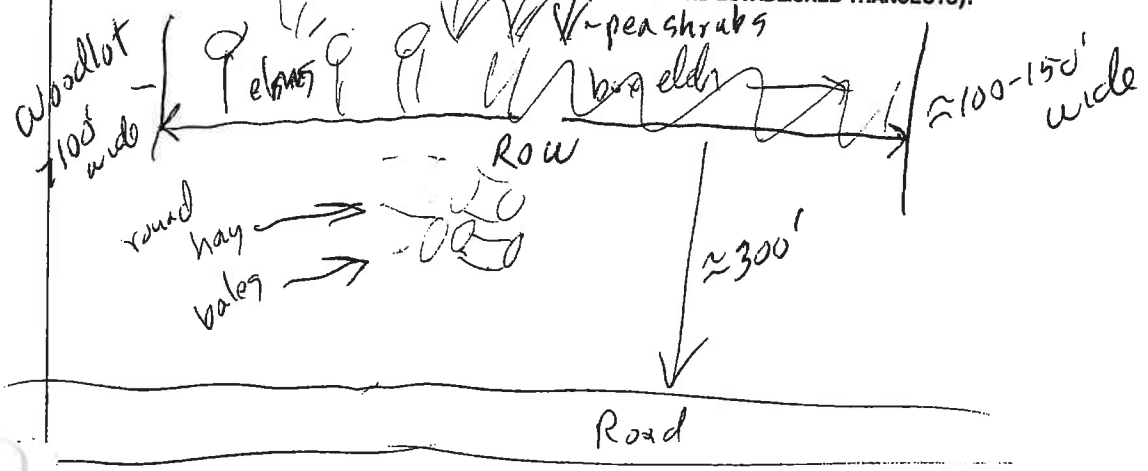
5 (in 2 places) ONE COUNT

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010 Lucille

# INVENTORIED, OTHER CONT'D:	TOTALS: 154
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 76 + 5 = 81
	TOTAL # OF DECIDUOUS SHRUBS: 30
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 43
	TOTAL # OF OTHER TREES/SHRUBS: ✓

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Prunus virginiana has a strong, disagreeable smell — not leafed out yet!

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/23/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ~~EB~~ EM3042308 on Bok 7	**MP ENTER/EXIT:** 133.17/133.17	**SURVEY COORDINATES:** 0577788, 5218343
TEAM NAME: EM3 **INVESTIGATORS:** Erin B, Dan H, Kevin R, Steve L, Craig B	**LOGBOOK PAGE #(S):** 3,4	**PHOTO #(S):** 4, 5

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
13 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
13 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

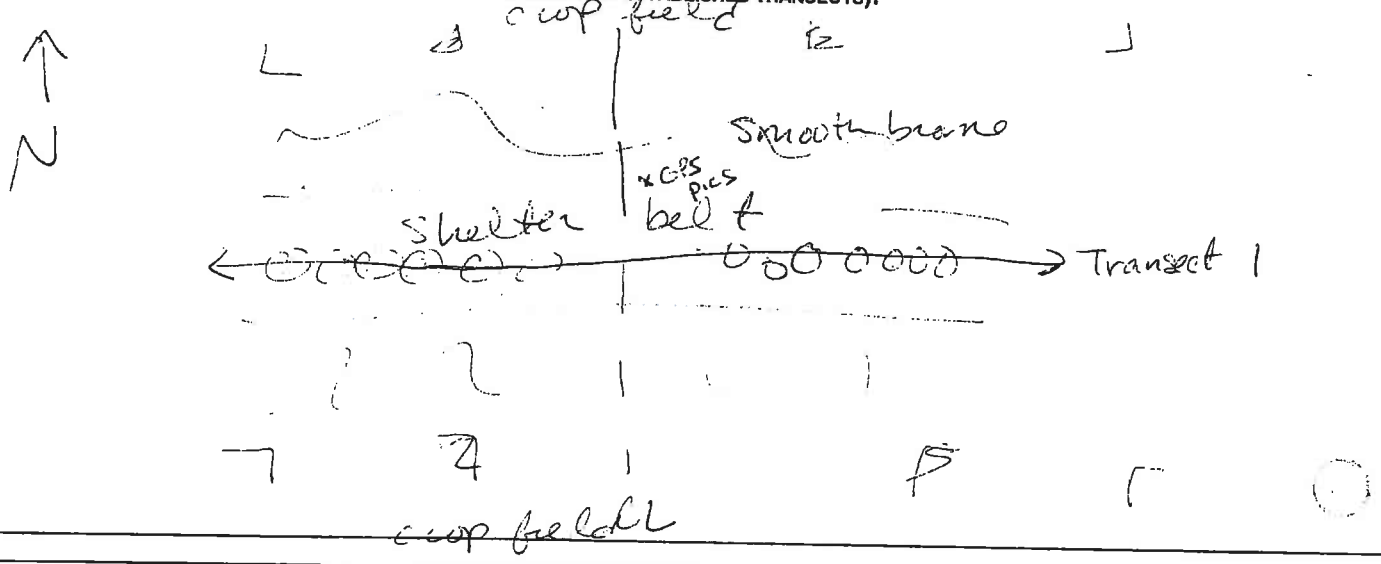
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WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010 Circle 7

# INVENTORIED, OTHER CONT'D:	TOTALS: 13
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 13
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 6/9/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENV06090858WB068	**MP ENTER/EXIT:** 141.82, 141.83	**SURVEY COORDINATES:** None Taken - see logbook
TEAM NAME: ENV **INVESTIGATORS:** S. Long, J. Duncan	**LOGBOOK PAGE #(S):** 12, 13	**PHOTO #(S):** ENV06090858WB068-001.NW - second photo, no number - showing disturbance

PLANT TAXA INVENTORY

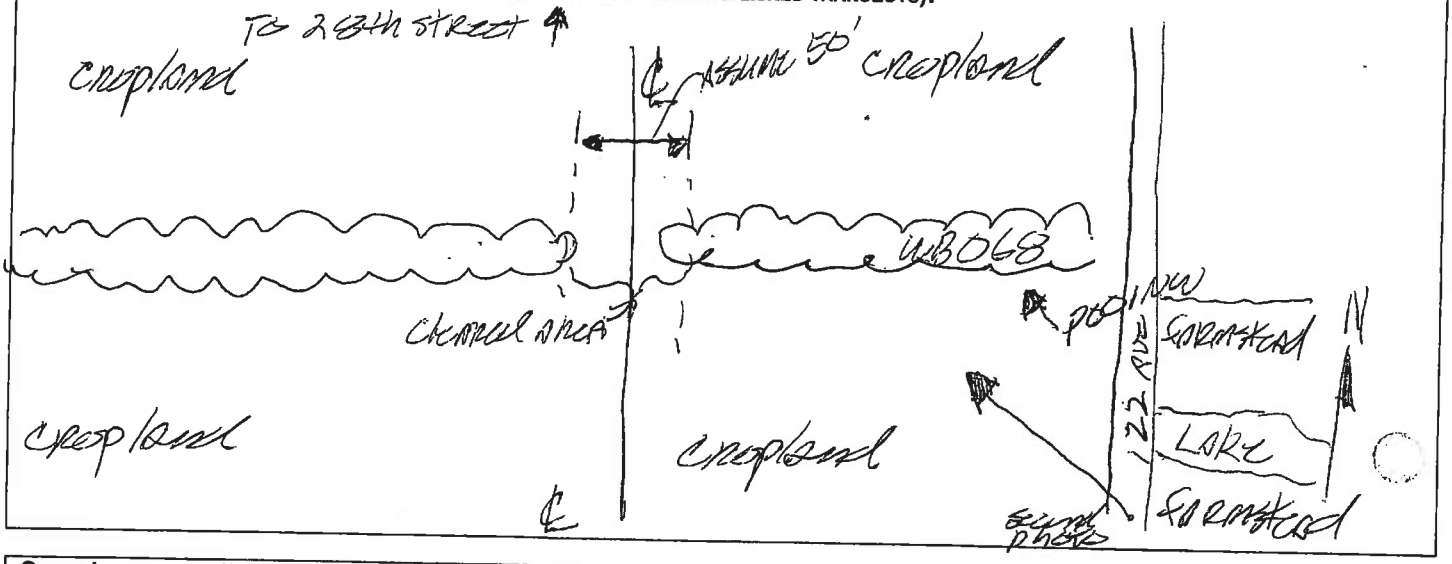
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
9 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	2 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	15 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 0
	TOTAL # OF DECIDUOUS TREES: 9
	TOTAL # OF DECIDUOUS SHRUBS: 17
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

This windbreak already transect through. The vegetation survey was completed as an estimate from the rest of windbreak characteristics as per instructions from S. Streiby.

ERI06090846WB068

13-14

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EM3 042408 WB068	**MP ENTER/EXIT:** 141.80	**SURVEY COORDINATES:** 0582287 / 5805470 (offset from site taken on road is west 320 ft)
TEAM NAME: EM3 **INVESTIGATORS:** Erin Bergquist Don Hazlett	**LOGBOOK PAGE #(S):** 3031	**PHOTO #(S):** 1

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
15 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
~~1~~ 2 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
11 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

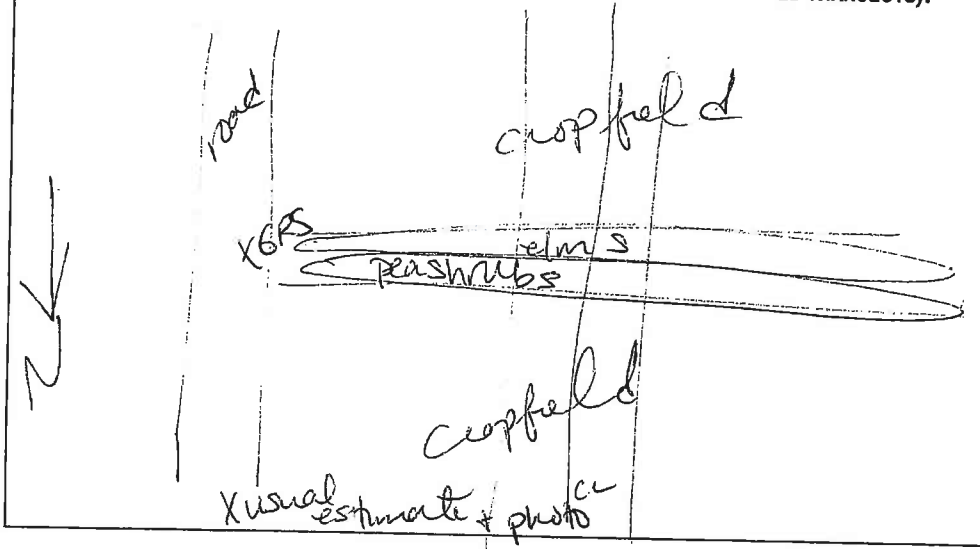
WB068

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 26
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 15
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~26~~ 11
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/23/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3C423CBLW069	**MP ENTER/EXIT:** 147.81 / 148.87	**SURVEY COORDINATES:** 582303 5196032
TEAM NAME: Evi3 **INVESTIGATORS:** Erin, Dan, Cory, Penny, Steve	**LOGBOOK PAGE #(S):** 6, 7	**PHOTO #(S):** 35 6

PLANT TAXA INVENTORY unable to enter site counted from 30 ft away

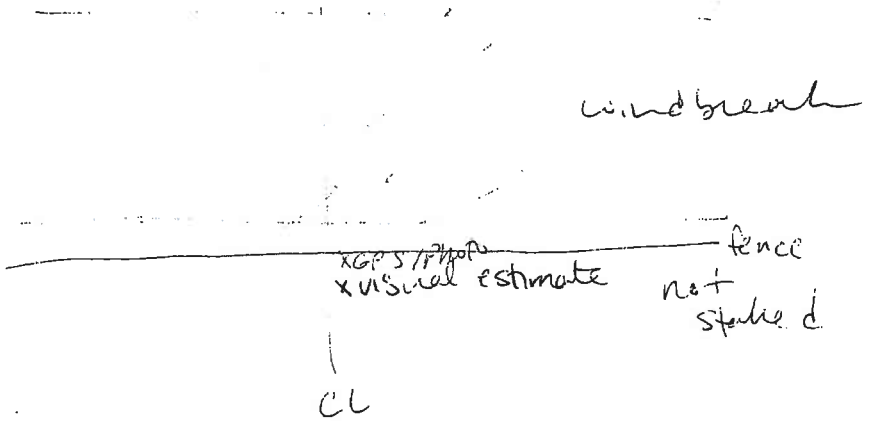
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	1 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
55 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	1 PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	100-125 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
30 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	30 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 187-212
_____	TOTAL # OF EVERGREEN TREES: 2
_____	TOTAL # OF DECIDUOUS TREES: 35
_____	TOTAL # OF DECIDUOUS SHRUBS: 102-125
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 30
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

4 - 21 - 16

DATE: 4/23/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: EN30+12308 - 070	MP ENTER/EXIT: 148.54 / 148.55	SURVEY COORDINATES: [illegible]
TEAM NAME: EnS INVESTIGATORS: Erin & Dan Bergquist Hazlett	LOGBOOK PAGE #(S): 28 ~~FT~~ 8,7	PHOTO #(S): 7,8

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	9 SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	DNM PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

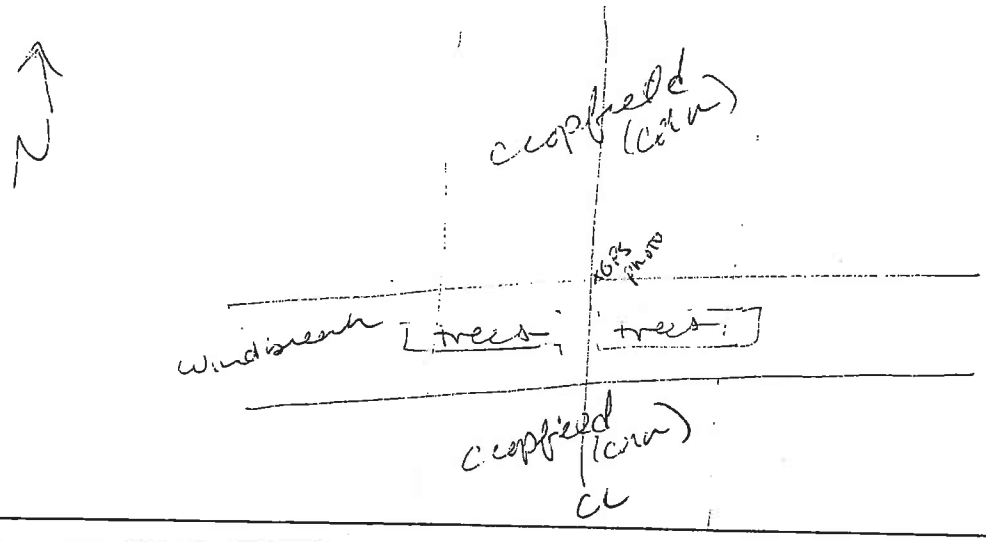
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

5 of 12

PROJECT NUMBER: 10623-010
LX070

# INVENTORIED, OTHER CONT'D:	TOTALS: 9
_____	TOTAL # OF EVERGREEN TREES: 5
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 5
_____	5- Artemisia absintium (half-shrubs)
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

7 - 6 16

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 4/23/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010 (2071)
FEATURE ID: EN1304230800071	MP ENTER/EXIT: 148.81 / 148.83	SURVEY COORDINATES: 0582358 / 5194438
TEAM NAME: EN13 INVESTIGATORS: Erin Bergquist Don Hatfield	LOGBOOK PAGE #(S): 7, 8	PHOTO #(S): 9, 10

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
53 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
53 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

4 = IN 4 SPOTS

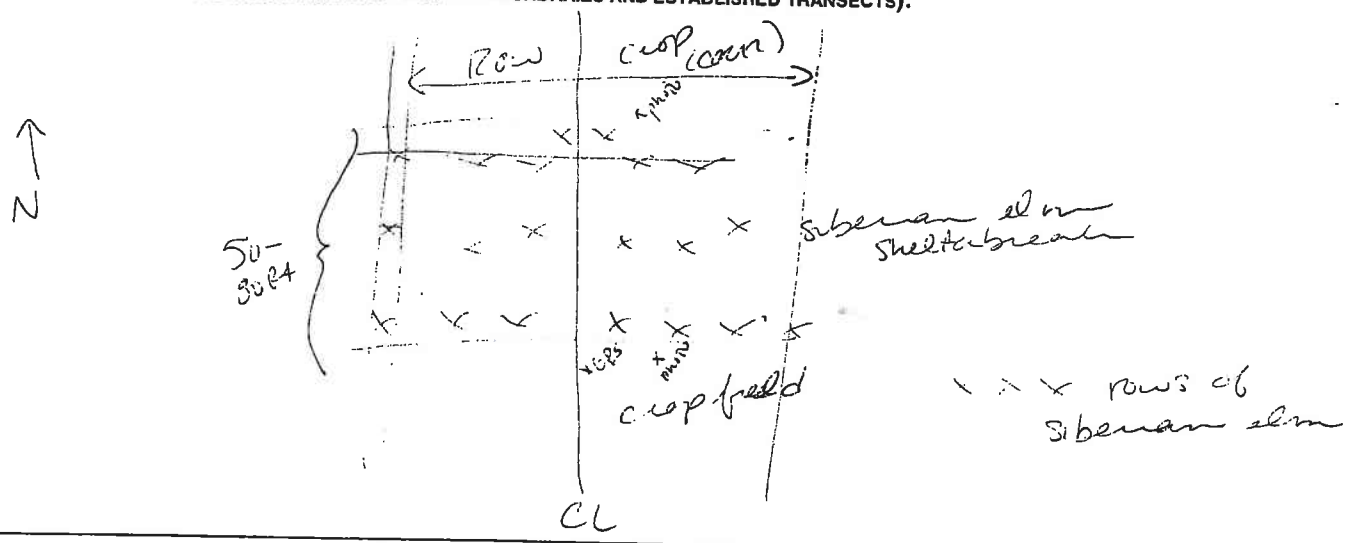
ONE

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 53
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 53
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 53
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

11- 04 16

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 4/23/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: EM 30423083WB092	MP ENTER/EXIT: 149.5/149.5	SURVEY COORDINATES: 0582299/5193850
TEAM NAME: EM13 INVESTIGATORS: Erin Bergquist Don Hazlett	LOGBOOK PAGE #(S): 12,13	PHOTO #(S): 11,12

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
14 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
14 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
14 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	14 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

one to

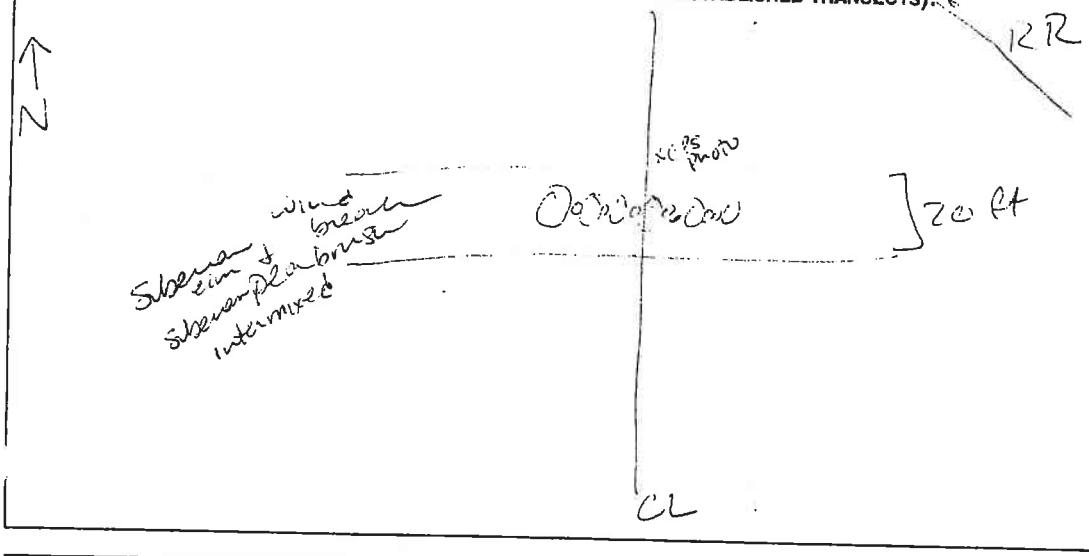
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

12 - 4

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 28
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 14
_____	TOTAL # OF DECIDUOUS SHRUBS: 14
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 28
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

13-1

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 7/23/13	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: EW3049308 WB073	MP ENTER/EXIT: 149.7/149.7	SURVEY COORDINATES: 0502359 5493034
TEAM NAME: EW3 INVESTIGATORS: Erin Bergquist Don Hazlett	LOGBOOK PAGE #(S): 14,15	PHOTO #(S): ~~12~~ 13,14

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	9 SPRUCE, COLORADO (*PICEA PUNGENS*) (4 are topped)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

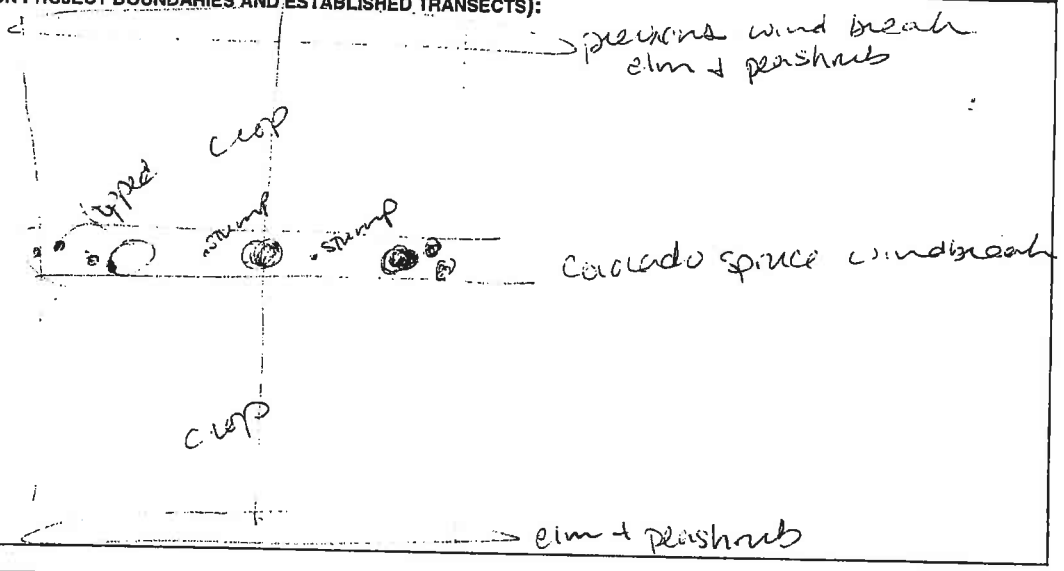
14

PROJECT NUMBER: 10623-010

CO3073

# INVENTORIED, OTHER CONT'D:	TOTALS: 9
_____	TOTAL # OF EVERGREEN TREES: 9
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

15 - 1

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/23/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN30423080WB074	**MP ENTER/EXIT:** 149.88/149.88	**SURVEY COORDINATES:** 0582358/5193045
TEAM NAME: EN13 **INVESTIGATORS:** Erin Bergquist Don Hazlett	**LOGBOOK PAGE #(S):** 16,17	**PHOTO #(S):** 15,16

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
24 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
24 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
17 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	17 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

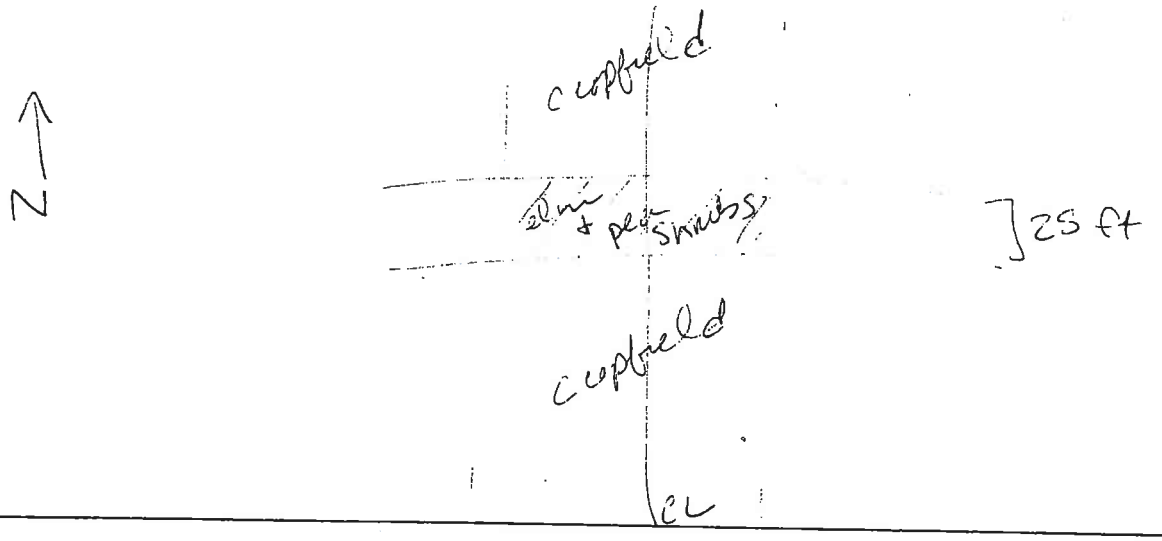
OTHER

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010
COB074

# INVENTORIED, OTHER CONT'D:	TOTALS: 41
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 24
_____	TOTAL # OF DECIDUOUS SHRUBS: 17
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 41
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	
FEATURE ID: EWB042408WS075	MP ENTER/EXIT: 153.08/153.09	SURVEY COORDINATES: (10) 0589431 5187605
TEAM NAME: EWB INVESTIGATORS: Erin Ben	LOGBOOK PAGE #(S): 18, 19	PHOTO #(S): 1, 2

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	8 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	10 PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
2 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

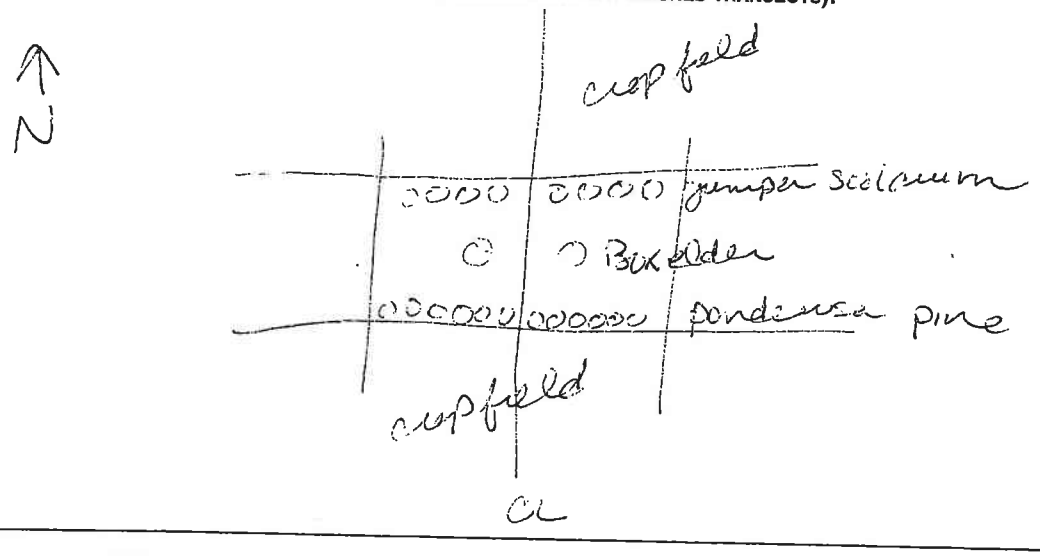
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

UB075

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 22
_____	TOTAL # OF EVERGREEN TREES: 20
_____	TOTAL # OF DECIDUOUS TREES: 2
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042408WB076	**MP ENTER/EXIT:** ~~#5~~ 23.484 / 53.21 / 53.23	**SURVEY COORDINATES:** 0582448 / 5187422
TEAM NAME: EN3	**LOGBOOK PAGE #(S):** 20, 21	**PHOTO #(S):** 1, 2
INVESTIGATORS: Erin Berquist JD		

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	10 SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

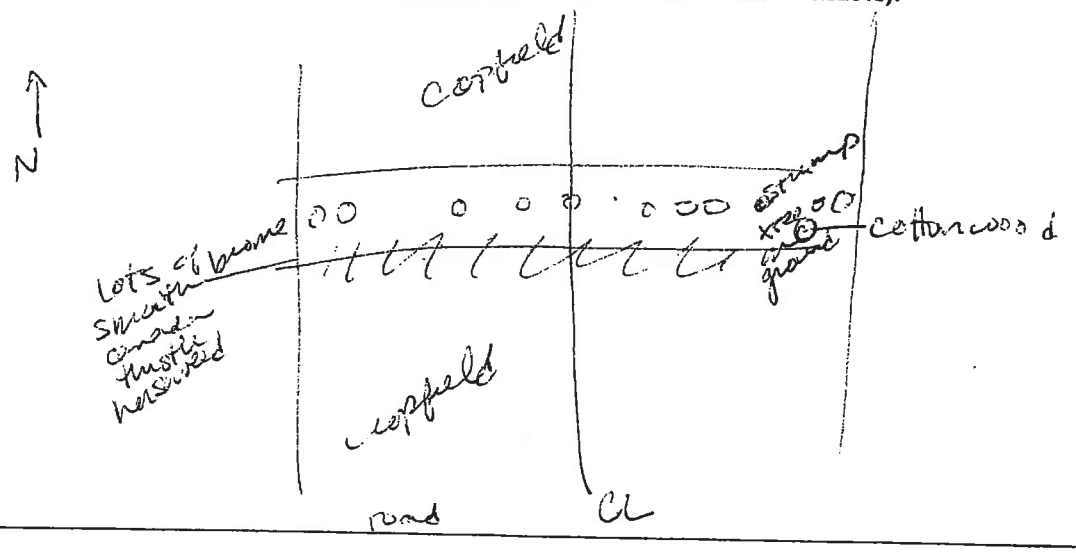
WB076b

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 11
_____	TOTAL # OF EVERGREEN TREES: 10
_____	TOTAL # OF DECIDUOUS TREES: 1
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 7/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN324 24D8 WB [illegible] WB08	**MP ENTER/EXIT:** 153.5	**SURVEY COORDINATES:** 0583460 5189027
TEAM NAME: EN3 **INVESTIGATORS:** Erin Berquist, Dan Hazlett	**LOGBOOK PAGE #(S):** 22, 23	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
10 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
4 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

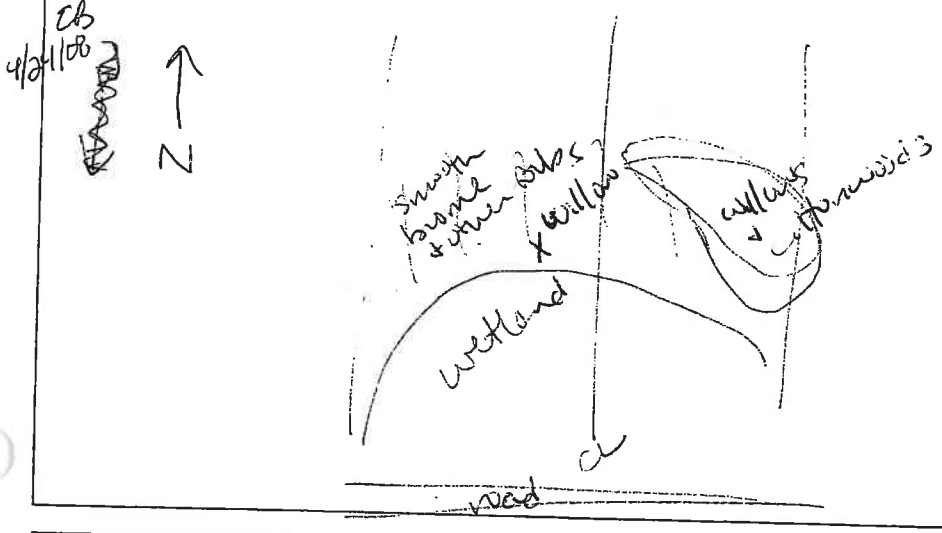
WB076a

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 14
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 14
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-16-08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN2051608WL048

MP ENTER/EXIT: 157.37 / 157.40

ENTER/EXIT COORDINATES:

TEAM NAME: EN2

INVESTIGATORS: Stibbey, Ridenour

LOGBOOK PAGE #(S): 34-35

PHOTO #(S):

PLANT TAXA INVENTORY

 # INVENTORIED, DECIDUOUS TREES:

- 2 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)
- _____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)
- 2 BIRCH, PAPER (*BETULA PAPYRIFERA*)
- _____ COTTONWOOD (*POPULUS DELTOIDES*)
- _____ CRABAPPLE (*MALUS SPECIES*)
- _____ ELM, SIBERIAN (*ULMUS PUMILA*)
- _____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)
- _____ LARCH, SIBERIAN (*LARIX SIBIRICA*)
- _____ LINDEN, AMERICAN (*TILIA AMERICANA*)
- _____ MAPLE, BOXELDER (*ACER NEGUNDO*)
- _____ MAPLE, SILVER (*ACER SACCHARINUM*)
- _____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)
- _____ OAK, BUR (*QUERCUS MACROCARPA*)
- _____ OHIO BUCKEYE (*AESCULUS GLABRA*)
- _____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)
- _____ POPLAR, WHITE (*POPULUS ALBA*)
- _____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)
- _____ WALNUT, BLACK (*JUGLANS NIGRA*)
- _____ WILLOW (*SALIX SPECIES*)

 # INVENTORIED, INVASIVE/EXOTIC SPECIES:

- _____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)
- _____ ELM, SIBERIAN (ULMUS PUMILA)
- _____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)
- _____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)
- _____ SALTCEDAR (TAMARIX RAMOSISSIMA)
- _____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)
- _____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)

 # INVENTORIED, OTHER:

- 2 unk Shrub #1 (serrated, round leaves, alt buds)
- _____
- _____
- _____

 # INVENTORIED, EVERGREEN TREES:

- _____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
- _____ SPRUCE, COLORADO (*PICEA PUNGENS*)
- _____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
- _____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
- _____ PINE, PONDEROSA (*PINUS PONDEROSA*)
- _____ PINE, LIMBER (*PINUS FLEXILIS*)
- _____ PINE, SCOTCH (*PINUS SYLVESTRIS*)

 # INVENTORIED, DECIDUOUS SHRUBS:

- _____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
- _____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
- _____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
- _____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
- _____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
- _____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
- _____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
- _____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
- _____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
- _____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
- _____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
- _____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
- _____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
- _____ LILAC, COMMON (*SYRINGA VULGARIS*)
- _____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
- _____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
- _____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
- _____ POISON IVY (*RHUS RADICANS*)
- _____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
- _____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
- _____ SUMAC, SMOOTH (*RHUS GLABRA*)
- _____ SUMAC, STAGHORN (*RHUS TYPHINA*)

 # INVENTORIED, OTHER:

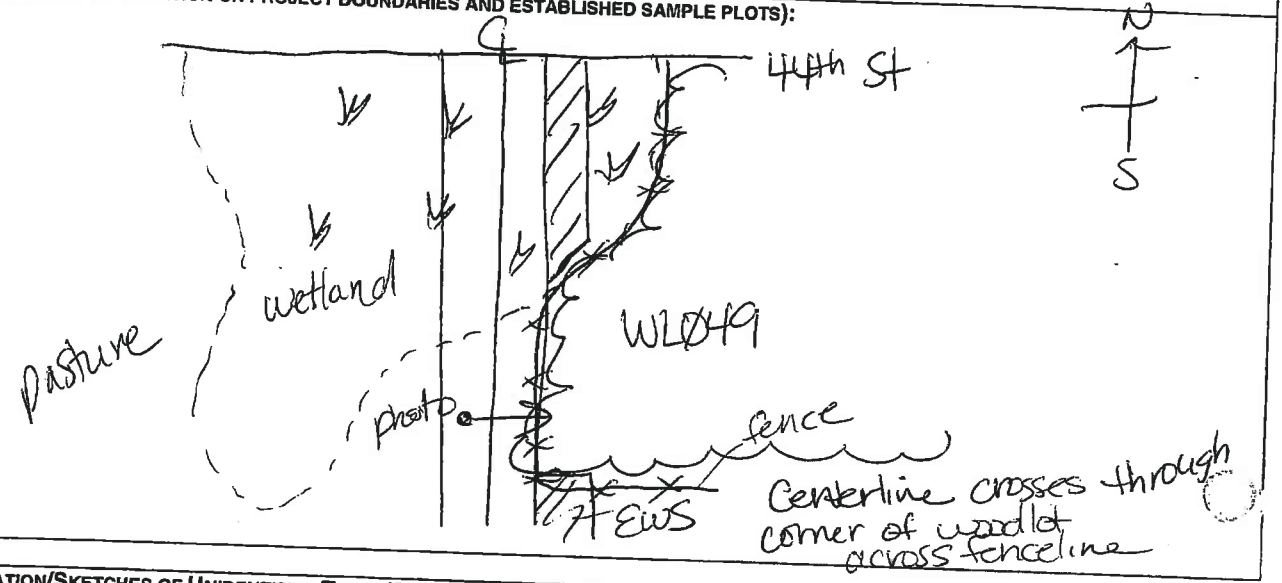
- 10 prunus spp. (red leaves)
- _____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: Ø
_____	TOTAL # OF DECIDUOUS TREES: 4
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 12
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

—

	Field Name	Common Name	Scientific Name	Sample
WL049	Cottonwood	Cottonwood	Populus deltoides	no
WL049	ash	green ash	Fraxinus pennsylvanica	yes
WL049	Prunus sp.	chokecherry	Prunus virginiana	yes
WL049	UNK shrub #1 (alt, serrated round leaves)			yes

7-14

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042408 ~~WB078~~ WB3077	**MP ENTER/EXIT:** 165.54 - 165.55	**SURVEY COORDINATES:** 0583267/5167657
TEAM NAME: EN3	**LOGBOOK PAGE #(S):** 24, 25	**PHOTO #(S):** 1, 2
INVESTIGATORS: Erin Bergquist, Dan Hazlett		

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	37 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	2 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	1 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____ Snowberry WB
_____	_____

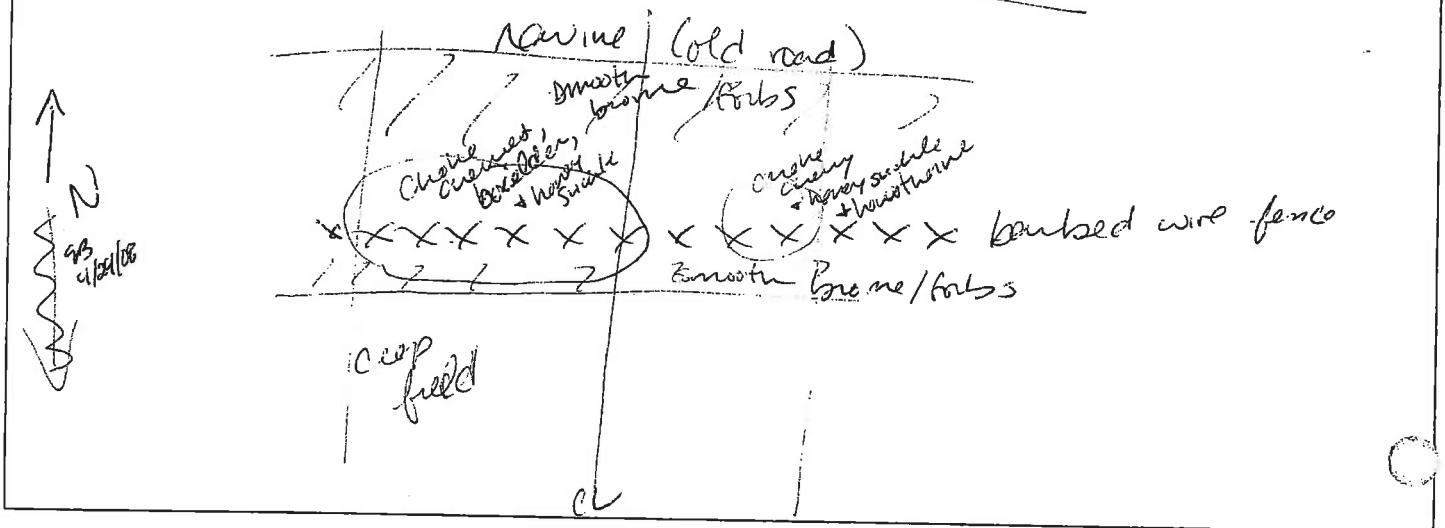
WB 077

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 32
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 1
_____	TOTAL # OF DECIDUOUS SHRUBS: 31
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

9-14

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN30424 08 ~~WL030~~ WL049 -a

MP ENTER/EXIT: N/A (168.11/168.37) Enter

ENTER/EXIT COORDINATES: 0583237S / 5163651 | 0583269 / 5163655 Enter | Exit 0582347 / 5163662

TEAM NAME: EN3

INVESTIGATORS: Erin Bergquist, Don Hazlett

LOGBOOK PAGE #(S): 26, 27

PHOTO #(S): 001, 002

PLANT TAXA INVENTORY ~~50~~ 20 x 20 square Plot 1

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	1 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
~~9~~ 8 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
5 OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	~~8~~ 5 Symphocarpus
_____	~~8~~ 4 Ribes

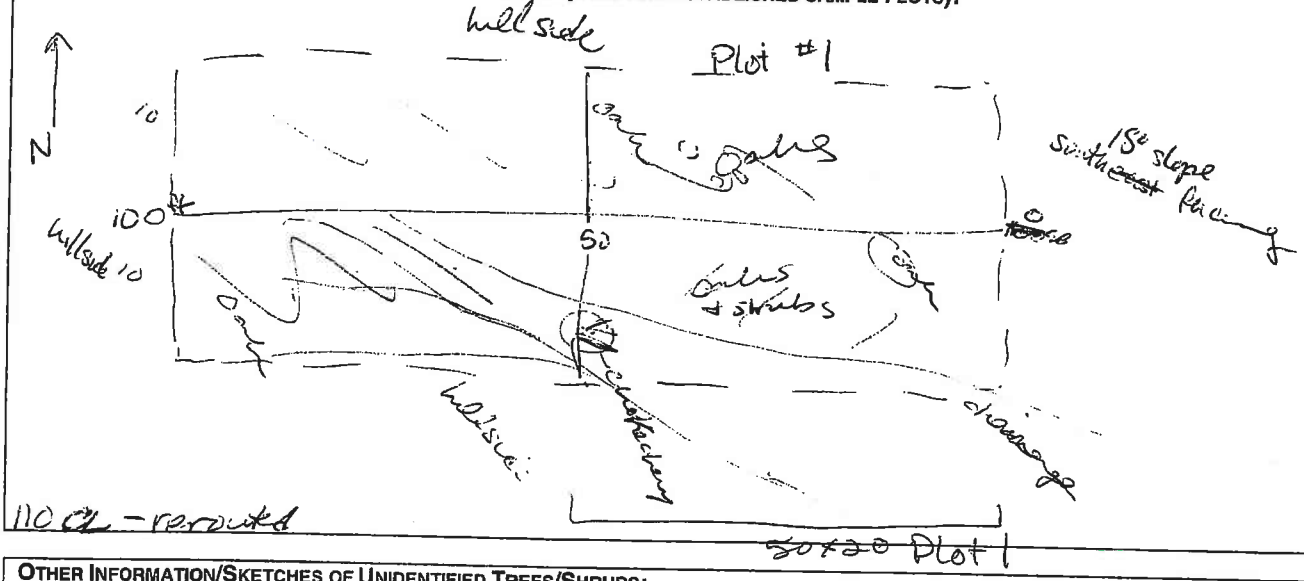
WL049-a

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	
	TOTALS: ~~34~~ 19 (~~for a 100ft x 20ft square~~) CB 4/24
	TOTAL # OF EVERGREEN TREES: 4/30/24
	TOTAL # OF DECIDUOUS TREES: 18 9
	TOTAL # OF DECIDUOUS SHRUBS: 1
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS: ~~18~~ 9 4/30/24

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

- Rhamnus cathartica and Rhus glabra were scattered in this forest, but were not in plots
- Also present: Crataegus cf. rotundifolia

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/24/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042408WLO49-b	**MP ENTER/EXIT:** N/A (168.11 / 168.27)	**ENTER/EXIT COORDINATES:** 0582354 / 5163663 (Enter) | 0582366 / 5163638 (center) | 0582354 / 5163642 (Exit)
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Dan Hazlett	**LOGBOOK PAGE #(S):** 28, 29	**PHOTO #(S):** 3, 4

PLANT TAXA INVENTORY

Plot 2

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
9 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
Many OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	7 Symphocarpus
_____	2 Ribes

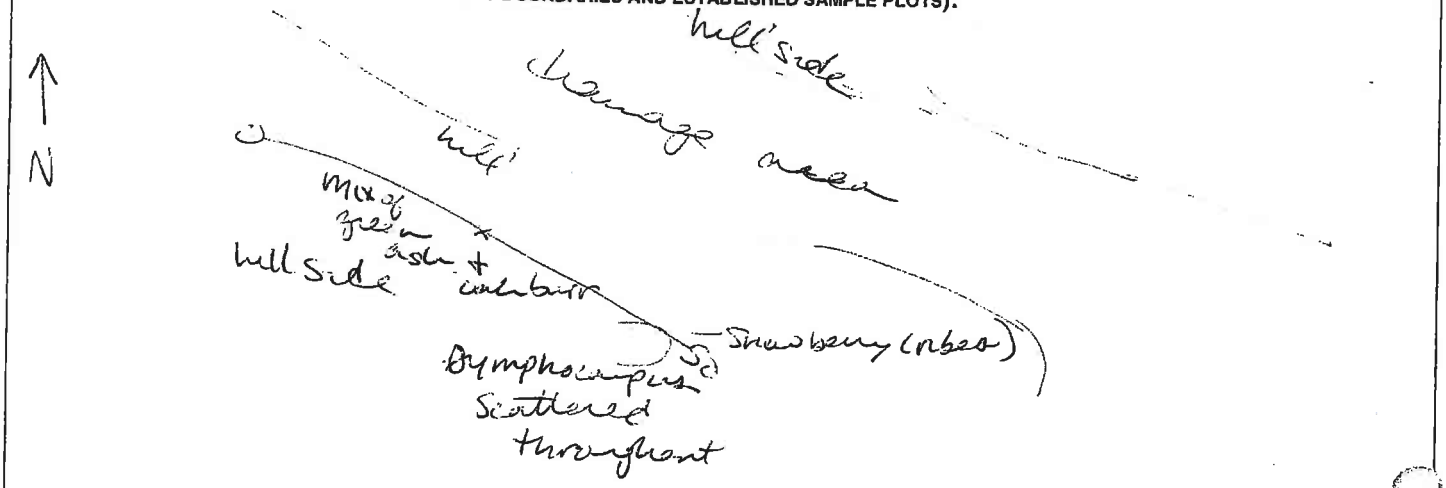
WL049-b

WOODLOT INVENTORY FORM CONT'D

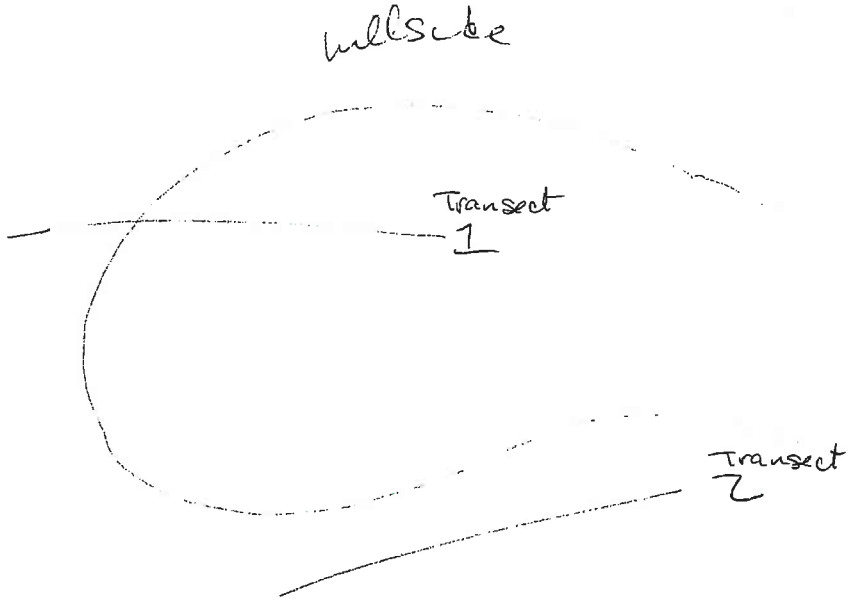
PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 32
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 23
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 9
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:



a

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: CN130425080LOSO

MP ENTER/EXIT: 168.64/168.74

ENTER/EXIT COORDINATES: 0582071 / 5162801 | 0582041 / 5162715 | 0582084 / 5162789

TEAM NAME: CN3

INVESTIGATORS: Erin Bergquist, Don Hazlett

LOGBOOK PAGE #(S): 3931

PHOTO #(S): 1, 2-, 3, 4 | 0582080 / 5162813 ENTER 0582093 / 5162829 EXIT | 0582079 / 5162850 CENTER

PLANT TAXA INVENTORY GPS (# 24-29)

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
5/8 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	17 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
2 OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	35/35 Grass Forbs
_____	2/5 Symphoricarpos
	2/5 Rhubes

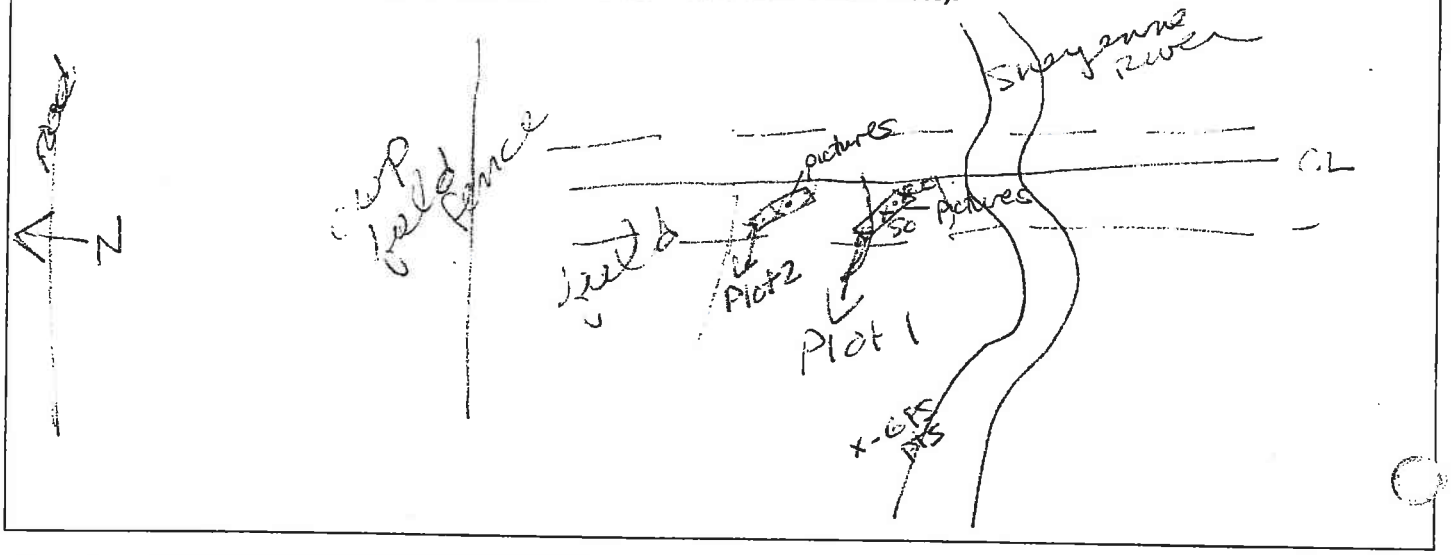
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WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 47+83=130 Plot 2 Plot 1
	TOTAL # OF EVERGREEN TREES: _____ Plot 2
	TOTAL # OF DECIDUOUS TREES: 7+9 = 16
	TOTAL # OF DECIDUOUS SHRUBS: 3
	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
	TOTAL # OF OTHER TREES/SHRUBS: 37+30 = 67
Total 16 trees	Plot 1 trees 7 Plot 2 trees 9
70 shrubs	shrubs 40 shrubs 30

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN30012708 ~~BCST~~ WL031 (as 4/27)

MP ENTER/EXIT: 108.85 / 169.13

ENTER/EXIT COORDINATES: N (1) 5305820 08 5162142 | (54) 0582008 5162140 | (55) 0582011 5162125 (enter center exit)

TEAM NAME: EN3

INVESTIGATORS: Ervin Bergquist, Don Hazlett JD

LOGBOOK PAGE #(S): bk2 32, 33

PHOTO #(S): 0015 0024 0033 0041 N (2) (56) 0582040 5162286 enter | 0582033 5162280 center (57) | (58) 0582026 5162268 exit

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
(1) 1 OAK, BUR (*QUERCUS MACROCARPA*) = (12) Total (* both Transects)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
(2) ~~WAYFARING-TREE~~ (*LONICERA INVOLUCRATA*) (2) Total (both transects)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____ Lonicera virginiana	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____ (NOW KNOWN)	(35) Symphoricarpos occidentalis
_____	_____ (clonal groups)

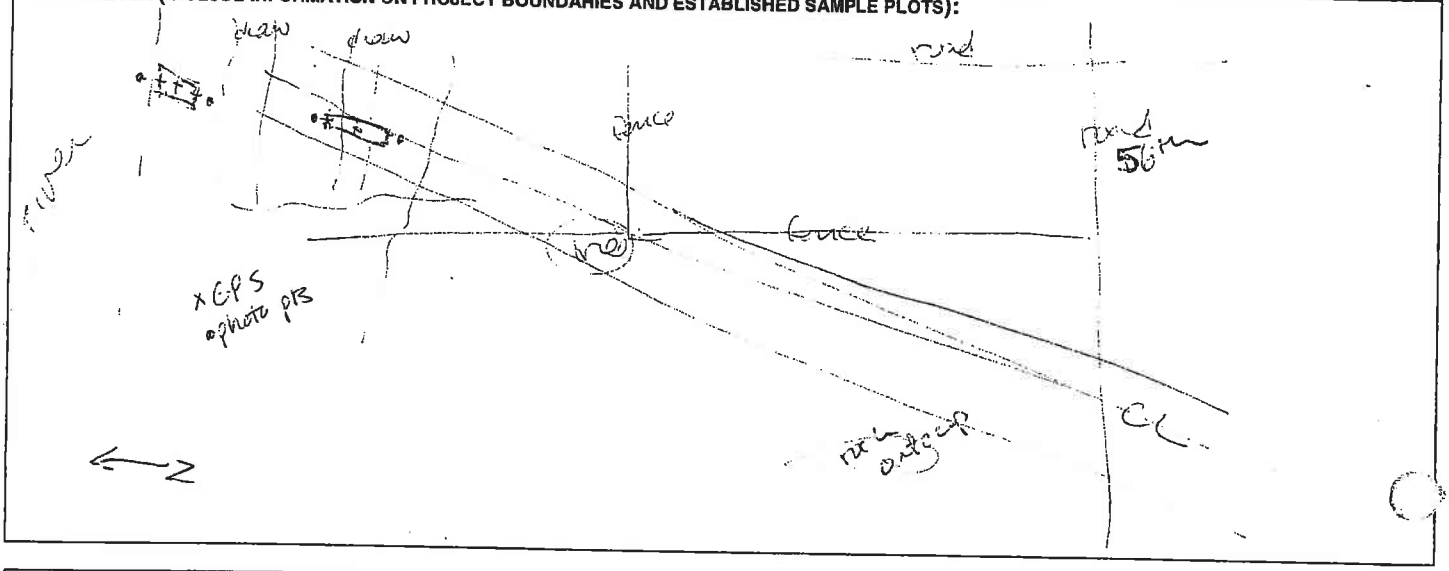
WOODLOT INVENTORY FORM CONT'D.

PROJECT NUMBER: 10623-010

WL051

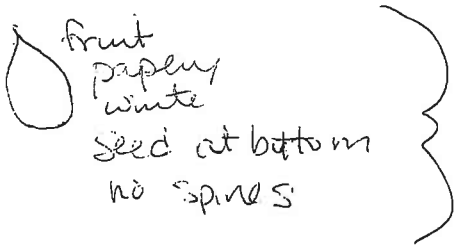
# INVENTORIED, OTHER CONT'D:	TOTALS: 49
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 14
	TOTAL # OF DECIDUOUS SHRUBS: 35
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS:
	Trees 14
	Shrubs 35

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

fuzzy twig
serrate margins



Ironwood
Hop Birch
Ostrya Virginiana

- This is a native, Sheyenne river Riparian forest (not a woodlot)

WOODLOT INVENTORY FORM | **PROJECT NUMBER: 10623-010**

DATE: 5-14-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ~~WL~~ EN20514080WL053	**MP ENTER/EXIT:** 171.85 / 171.89	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** ~~Smiley~~, Ridenour	**LOGBOOK PAGE #(S):** 38-39	**PHOTO #(S):**

PLANT TAXA INVENTORY

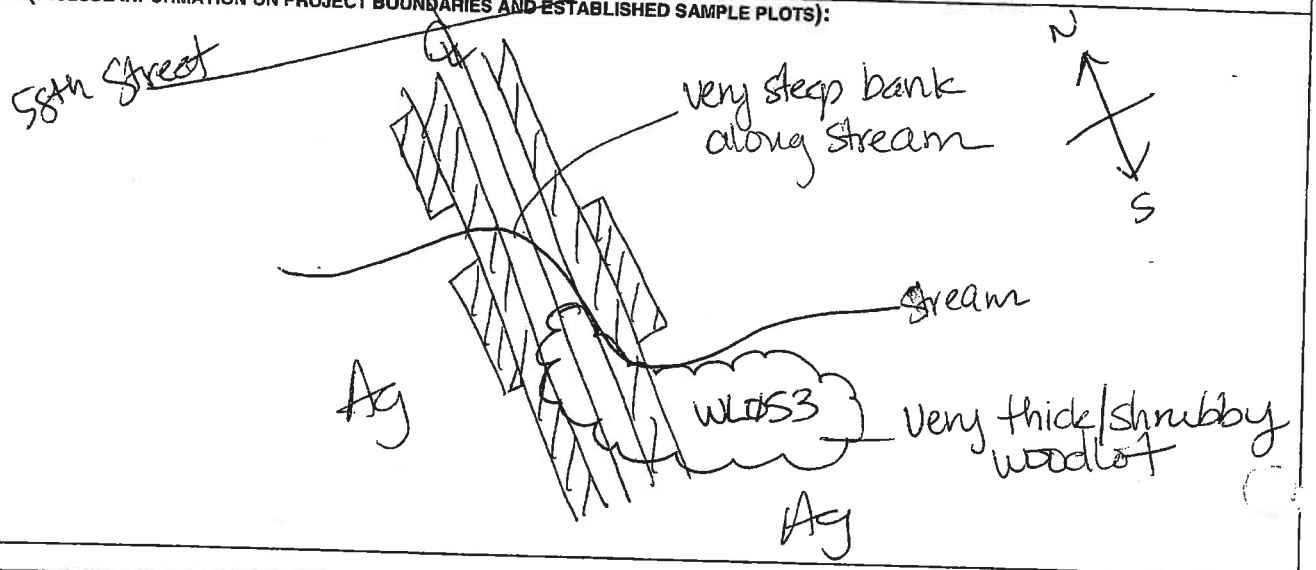
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
____ COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
1 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
17 MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	140 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	42 HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	40 JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
____ ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	7 PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER: American Plum	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
7 unk tree #1 (alt, corn buds, wht flowers)	____ SUMAC, SMOOTH (*RHUS GLABRA*)
140 unk tree #2 (red leaves, raceme, alt)	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
11 unk tree #3 (alt, md, serrated leaves, partial thorns)	**# INVENTORIED, OTHER:**
~~unk tree #4~~	____
40 unk tree #4 (wht flowers, ~~smooth~~	JUNEBERRY (wht flowers)

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
18 unk tree #5 (opp, rounded leaves, smooth margin, berries)	TOTAL # OF EVERGREEN TREES:
43 unk tree #6 (alt, serrated lvs, 1.5 in	TOTAL # OF DECIDUOUS TREES:
335 unk shrub #1 (opp gm buds) thorns)	TOTAL # OF DECIDUOUS SHRUBS:
7 ribes #1	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS:

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL053	UNK Tree #2 (red leaves, raceams	chokecherry	Prunus virginiana	yes
WL053	elm	American elm	Ulmus americana	yes
WL053	Ribes #1	Canadian gooseberry	Ribes oxyacanthoides	no
WL053	UNK Tree #1 (alt. greenbuds, white	American plum	Prunus americana	yes
WL053	UNK Tree #3 (alt. round serrated leaves, semi-armed)			yes
WL053	UNK Tree #4 (white flowers, fuzzy,	juneberry	Amelanchier alnifolia	yes
WL053	UNK Tree #5 (opp. Round leaves, smooth margin, berries)			yes
WL053	UNK Tree #6 (alt. serrated leaves,	hawthorn	Crateagus rotundifolia	yes
WL053	UNK shrub #1 (opp. Greenbud)	snowberry	Synphocarpus occidentalis	no

Photo does not match desciption or sample

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3041270208W30880	**MP ENTER/EXIT:** 174.36 - 174.36	**SURVEY COORDINATES:** (US) 0579872 5153373
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bengtsen Dan Hatten	**LOGBOOK PAGE #(S):** 32/34/35	**PHOTO #(S):** 0019

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
9 POPLAR, BALSAM* (*POPULUS cf. BALSAMIFERA*) (probably)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____ *Definately Populus spp.	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

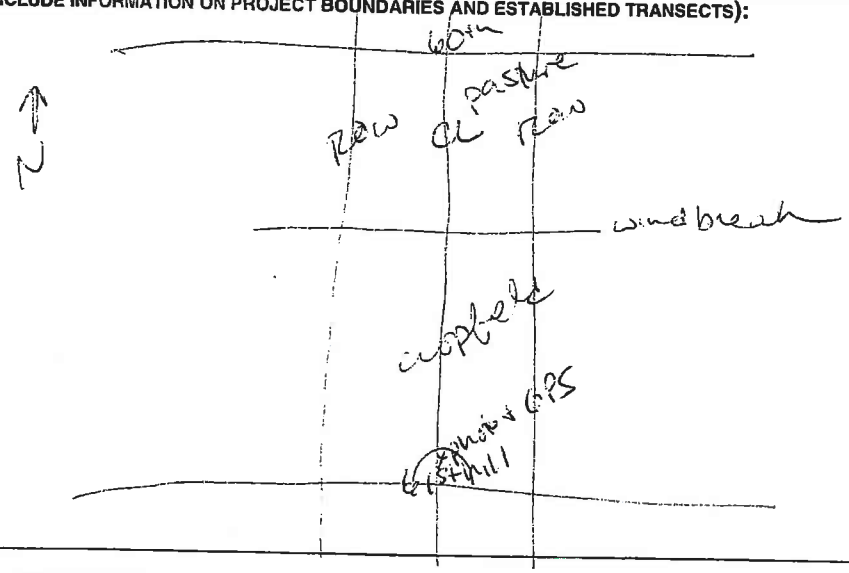
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

WB080

# INVENTORIED, OTHER CONT'D:	TOTALS: 9
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 9
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 9
_____	Shrubs 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

2

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ER3041208 WB3079	**MP ENTER/EXIT:** 172.08 / 172.13	**SURVEY COORDINATES:** 0580591 5157720 GPS #31
TEAM NAME: ER3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 34, 35	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

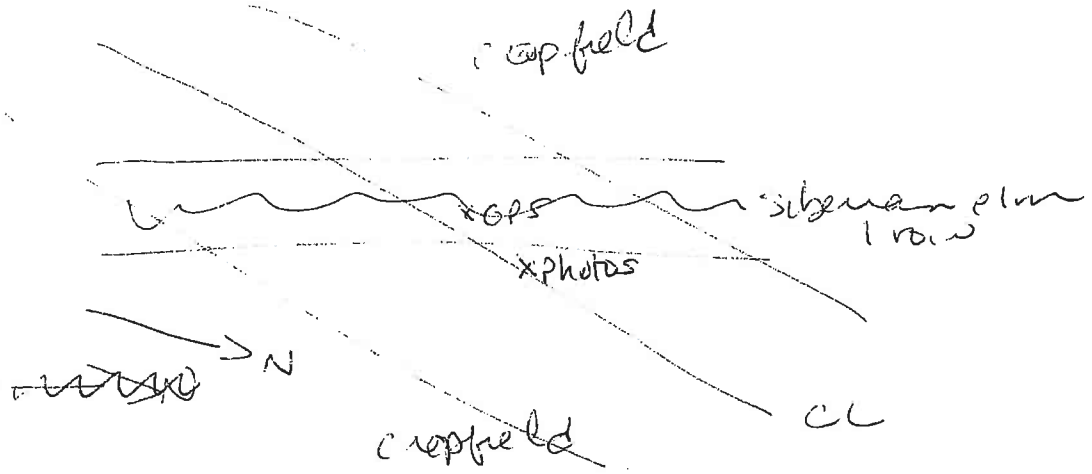
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
28 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
36 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 38
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 38
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5-16-08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN2051608WL054	**MP ENTER/EXIT:** 175.19 / 175.26	**ENTER/EXIT COORDINATES:**
TEAM NAME: EN2 **INVESTIGATORS:** Shibley, Ridenour	**LOGBOOK PAGE #(S):** 36-37	**PHOTO #(S):**

PLANT TAXA INVENTORY

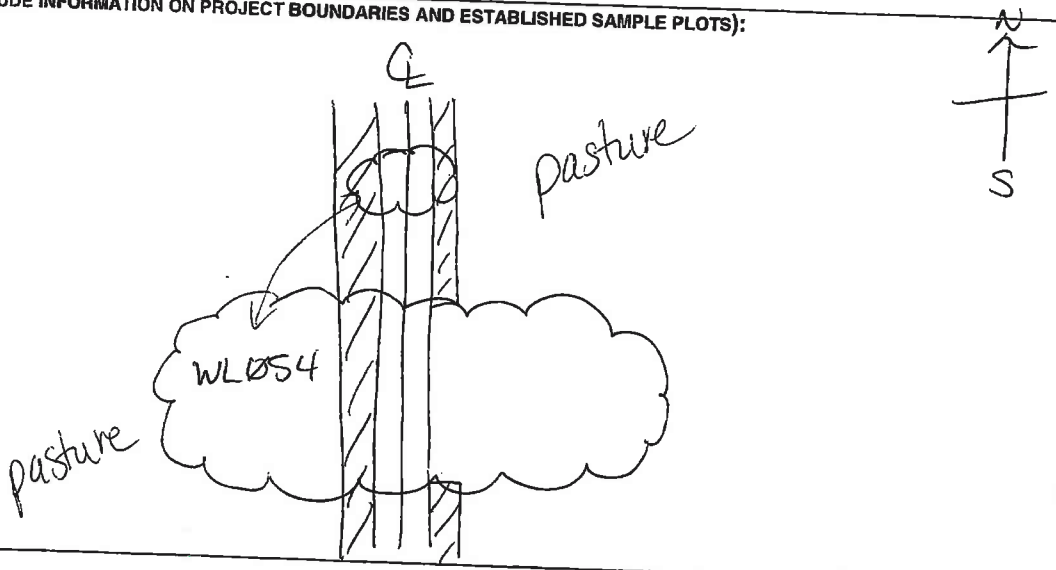
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
83 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
47 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	11 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
11 Prunus spp (no fruit)	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
100 unk shrub #1 (opp grn buds)	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
6 ribes spp #1	**# INVENTORIED, OTHER:**
_____	105 Snowberry
_____	6 Juneberry

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: 0
_____	TOTAL # OF DECIDUOUS TREES: 130
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: 117
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

	Field Name	Common Name	Scientific Name	Sample
WL054	boxelder	boxelder	Acer negundo	no
WL054	ash	green ash	Fraxinus pennsylvanica	yes
WL054	prunus sp.	chokecherry	Prunus virginiana	no
WL054	Ribes sp	gooseberry	Ribes spp.	no
WL054	UNK shrub #1 (opp. Greenbud)	snowberry	Synphocarpus occidentalis	yes

3

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042508cWB081	**MP ENTER/EXIT:** 177.93 - 177.94	**SURVEY COORDINATES:** 32) 0579748 5348440
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Dan Hazlett	**LOGBOOK PAGE #(S):** 36, 37	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

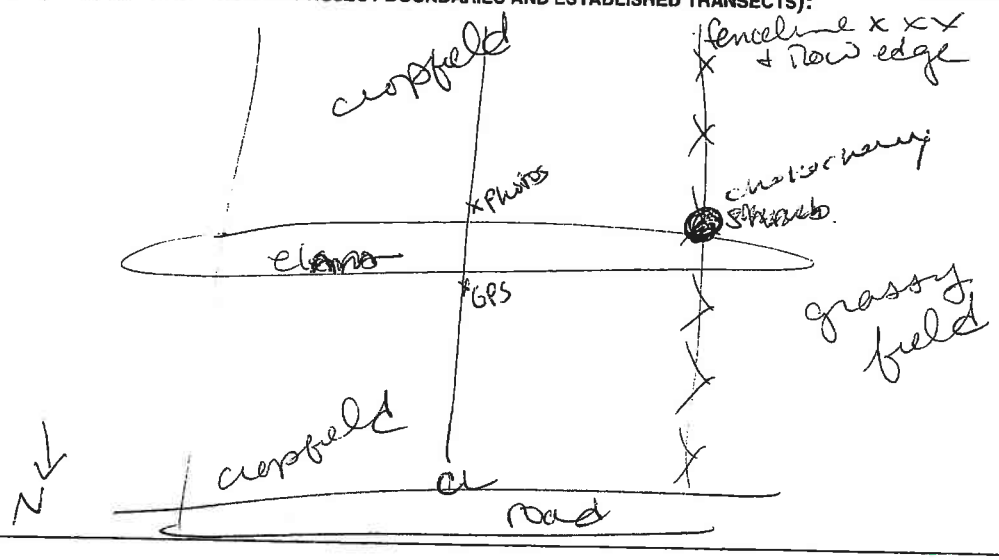
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
14 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
4 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	1/2 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
14 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	1 RHIBES
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 34
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 34
_____	TOTAL # OF DECIDUOUS SHRUBS: 17
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 14
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042508WB082	**MP ENTER/EXIT:** 178.02/178.03	**SURVEY COORDINATES:** (33) 0579746. 5148286
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 38, 39	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

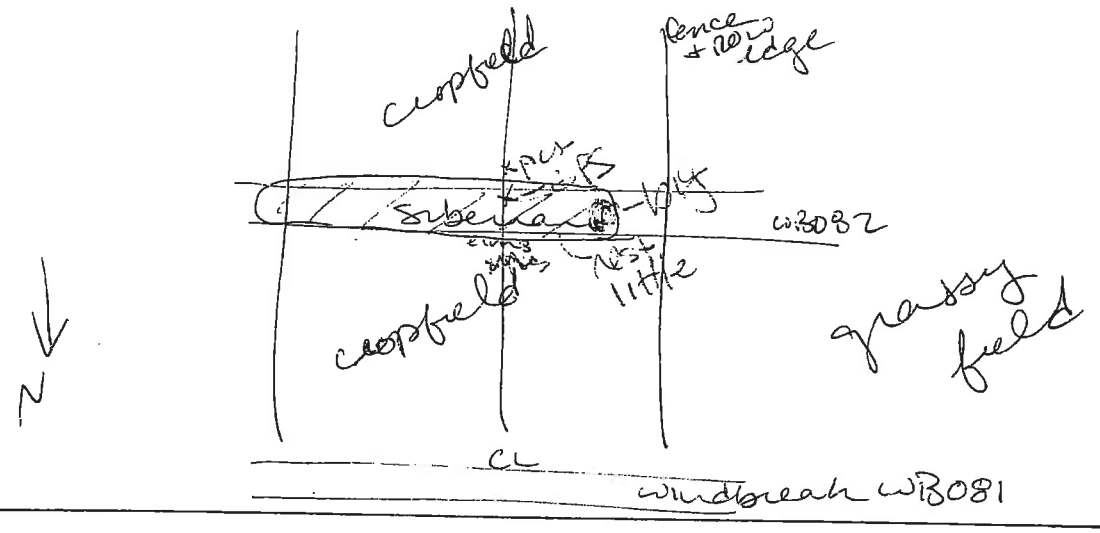
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
9 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
9 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 9
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 9
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

5

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042808WB083	**MP ENTER/EXIT:** 178.13/178.13	**SURVEY COORDINATES:** (34) 0579743 5148287
TEAM NAME: EN3 **INVESTIGATORS:** Erin Berguist Dan Hazlett	**LOGBOOK PAGE #(S):** 40, 41	**PHOTO #(S):** 1

PLANT TAXA INVENTORY

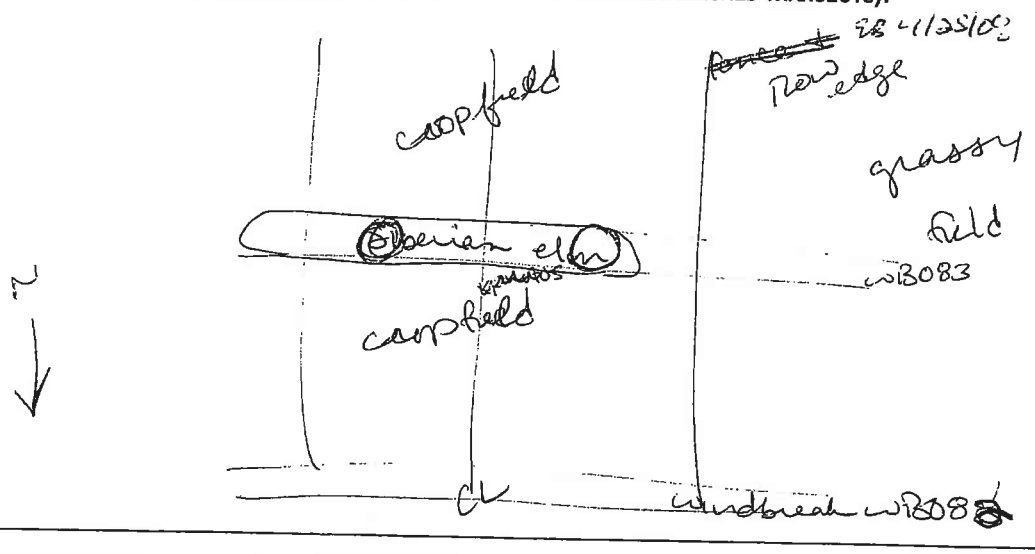
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
2 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
2 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 2
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 2
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

6

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042508cwB084	**MP ENTER/EXIT:** 178.38/178.39	**SURVEY COORDINATES:** (35) 0579756 5147716 (SK1 36 GPS PT 94)
TEAM NAME: EN3 **INVESTIGATORS:** Erin Berggrust, Don Hazlett	**LOGBOOK PAGE #(S):** 42,43	**PHOTO #(S):** 1,2

PLANT TAXA INVENTORY

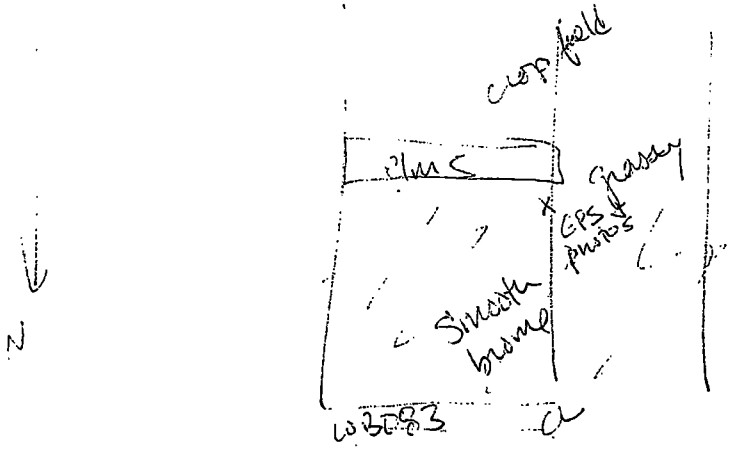
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
10 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
10 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 10
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 10
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ER30427080B085	**MP ENTER/EXIT:** 180.48 - 180.49	**SURVEY COORDINATES:** (68) 0378965 5144509
TEAM NAME: ER3 **INVESTIGATORS:** Erin Berquist, Don Hazleff	**LOGBOOK PAGE #(S):** WY 36, 37	**PHOTO #(S):** 001W ~~002~~ ER3

PLANT TAXA INVENTORY

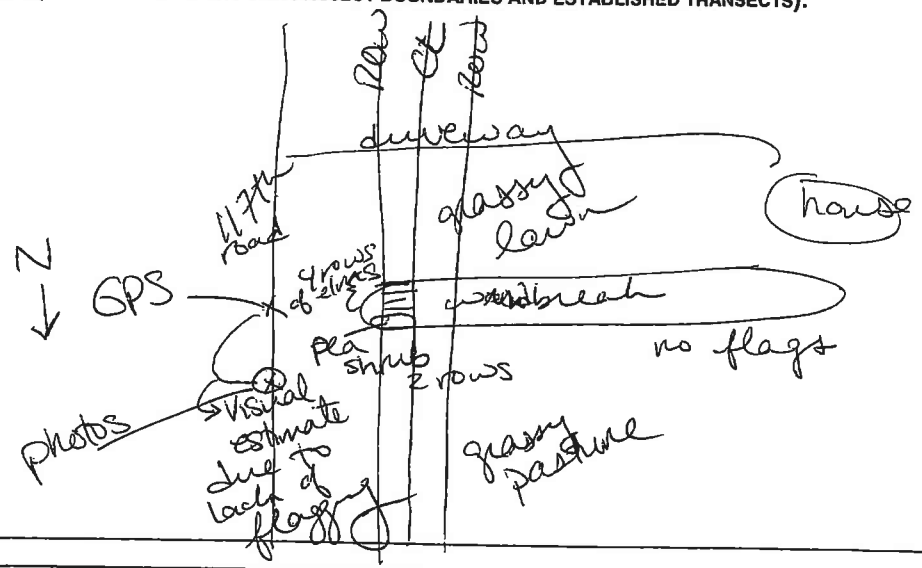
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
31 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
31 ~~2~~ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
15 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	15 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: WB085
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 31+15 = 46
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 31
_____	Shrub 15

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042708WB086	**MP ENTER/EXIT:** 180.65 - 180.66	**SURVEY COORDINATES:** ~~(70)~~ (67) ~~0578852~~ 0578853 ~~5410469~~ 5144228
TEAM NAME: EN3	**LOGBOOK PAGE #(S):** 36, 37	**PHOTO #(S):** 0018 0022W
INVESTIGATORS: Erin Bergquist, Don Hazlett		

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
20 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
20 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

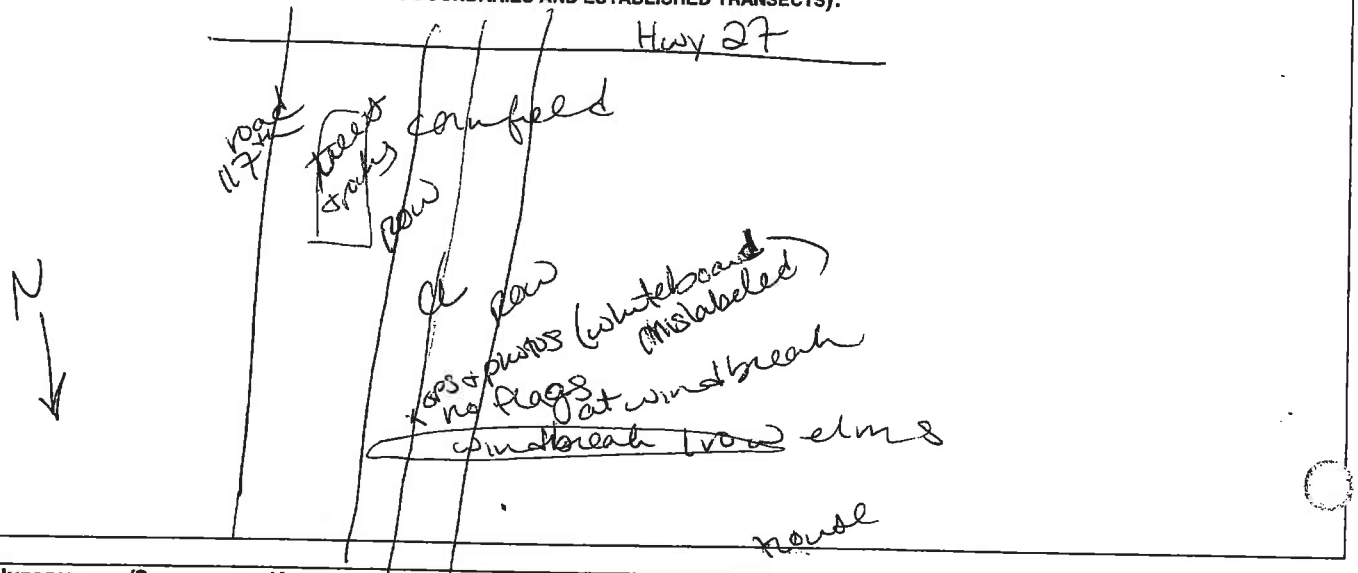
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

WB086

# INVENTORIED, OTHER CONT'D:	TOTALS: 20
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 20
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 20
_____	Shrubs 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 6/09/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENI060908WB087	**MP ENTER/EXIT:** 182.48 182.50	**SURVEY COORDINATES:** N 46.42031 W 097.97577
TEAM NAME: ENI **INVESTIGATORS:** S. Lung, J. Duncan	**LOGBOOK PAGE #(S):** 191	**PHOTO #(S):** ENI060908WB087-PDOIE ENI060908WB087-PDO2:W

PLANT TAXA INVENTORY

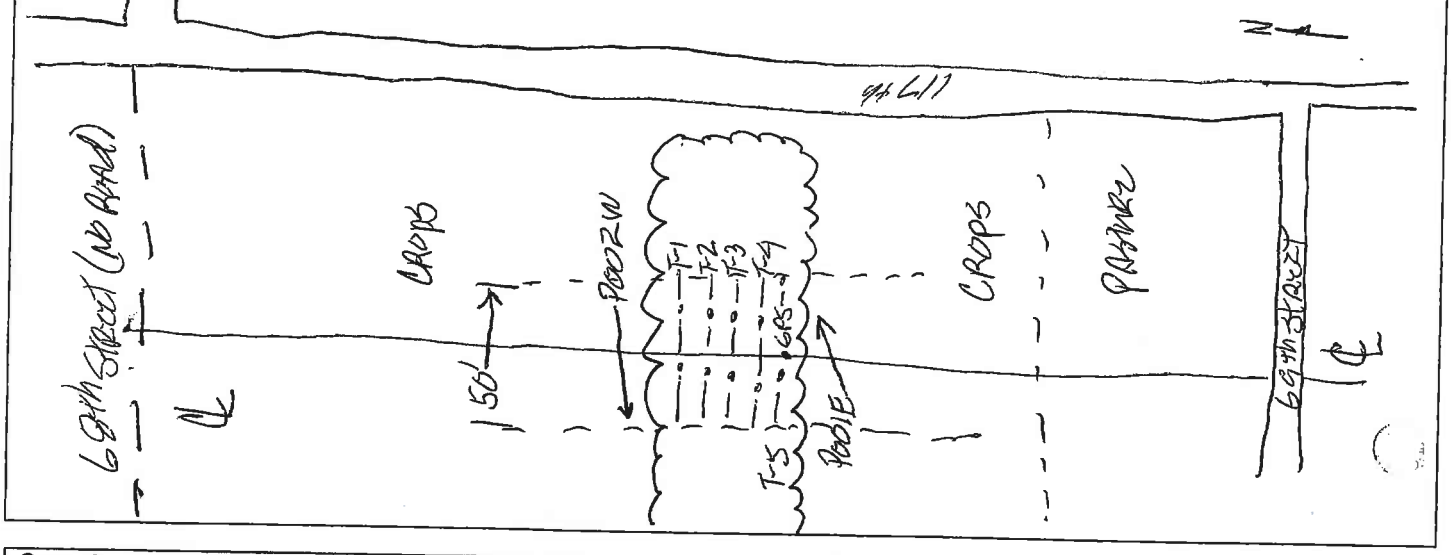
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
25 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	26 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
6 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	36 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 26
	TOTAL # OF DECIDUOUS TREES: 31
	TOTAL # OF DECIDUOUS SHRUBS: 36
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Several dead tree stumps.

EN1060908W3087

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EM042708WB088	**MP ENTER/EXIT:** 182.90 - 182.91	**SURVEY COORDINATES:** (70) 0378722 5140463
TEAM NAME: EM3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 40,41 bWr	**PHOTO #(S):** 001 N

PLANT TAXA INVENTORY

visually estimated from road due to lack of flagging (easily seen along roadside)

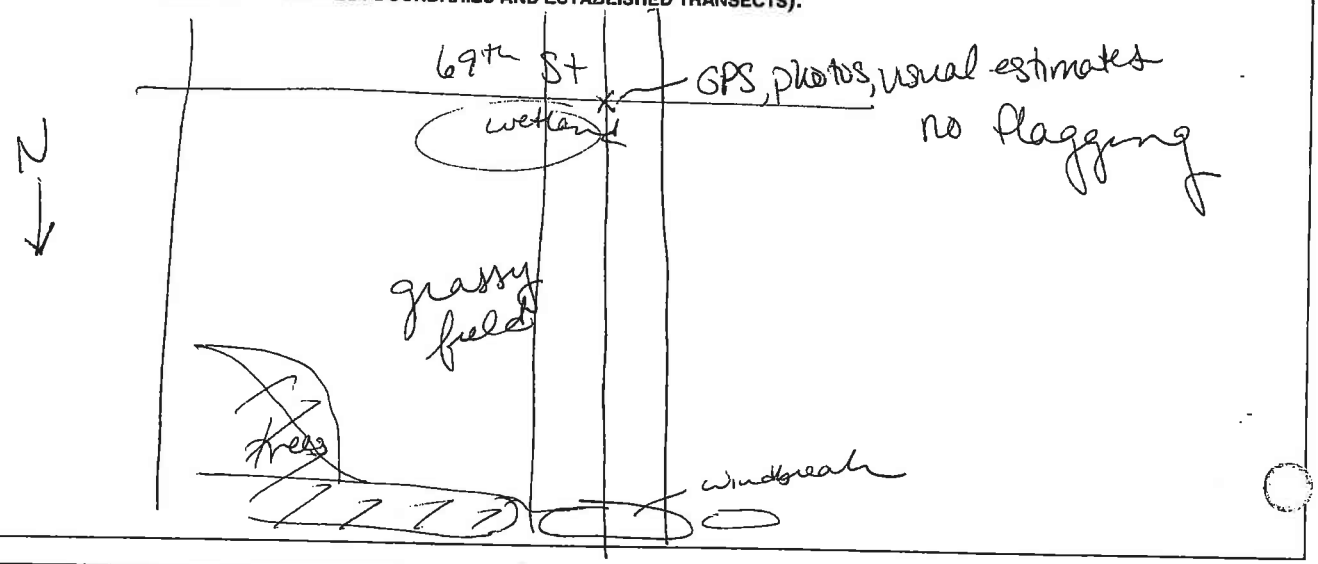
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
1 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
1 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
X ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
3 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	3 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 11
_____	TOTAL # OF EVERGREEN TREES: 1 (WB0881)
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 10
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 8
_____	Shrub 3

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042708WB089	**MP ENTER/EXIT:** 183.50 - 183.51	**SURVEY COORDINATES:** 0579019 5139733 72 observed a raptor along windbreak
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 44, 45 bk2	**PHOTO #(S):** 001SW

PLANT TAXA INVENTORY estimate from road NOT flagged

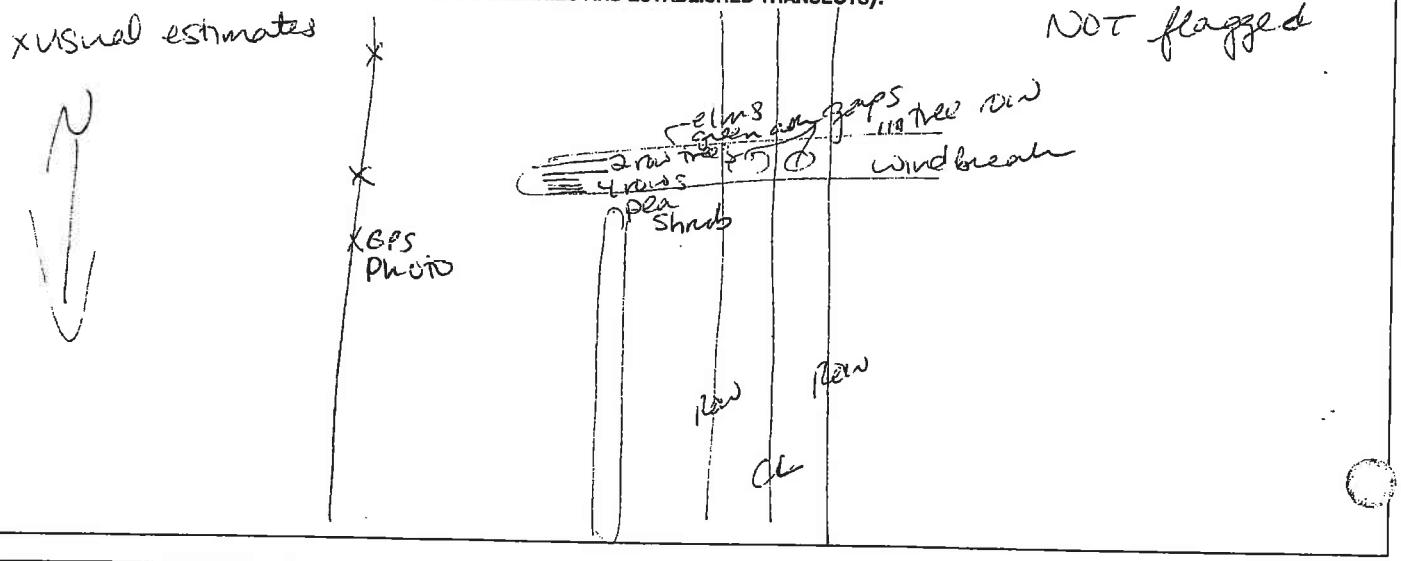
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
2 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
7 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
24 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	24 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 24 (WB089)
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 5
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 24
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 5
_____	Shrubs 24

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042708CWB090	**MP ENTER/EXIT:** 183.78 - 183.76	**SURVEY COORDINATES:** (71) 0578749 5138858
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Dan Hazlett	**LOGBOOK PAGE #(S):** 42, 43 bk2	**PHOTO #(S):** 001 visual estimate from road NOT Flagged

PLANT TAXA INVENTORY

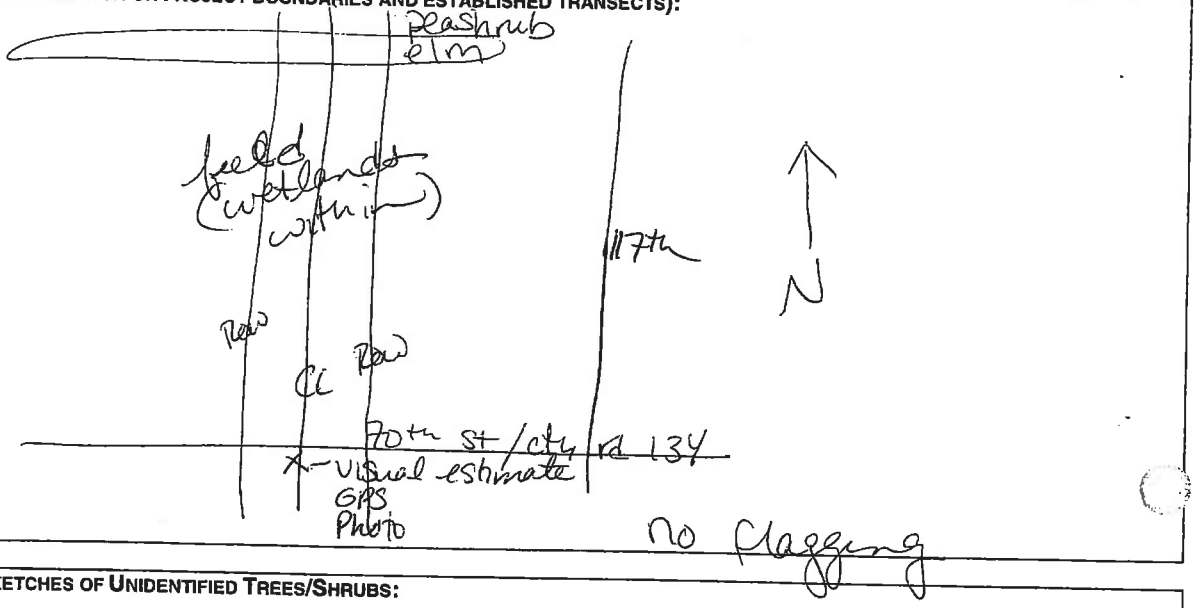
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
2 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
10 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
12 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	12 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 24 (WB090)
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 12
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 12
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 12
_____	Shrubs 12

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042708 WB091	**MP ENTER/EXIT:** 184.66 - 184.68	**SURVEY COORDINATES:** 13 ~~0584964/50~~ 4/27 (73) 0579041 5187825
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hurtt	**LOGBOOK PAGE #(S):** 44, 45 bk2	**PHOTO #(S):** 001W

PLANT TAXA INVENTORY

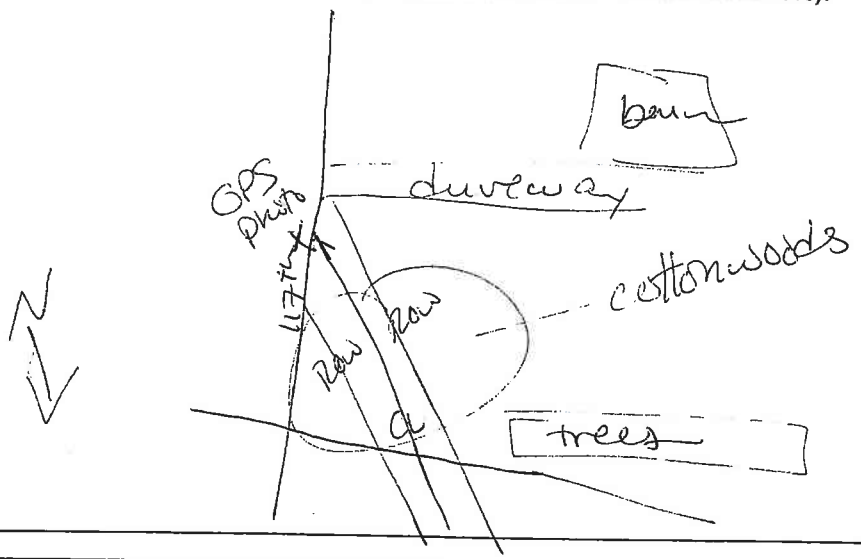
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
11 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
2 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
2 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 13 (WB091)
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 11
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 2
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	Trees 13
_____	Shrubs 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

9

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENT042508WB092	**MP ENTER/EXIT:** 190.12 / 190.14	**SURVEY COORDINATES:** 0579232 5129212 (37) (Skip GPS file #38 NAD 27)
TEAM NAME: ENT **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** Logbook #2 (2,3)	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

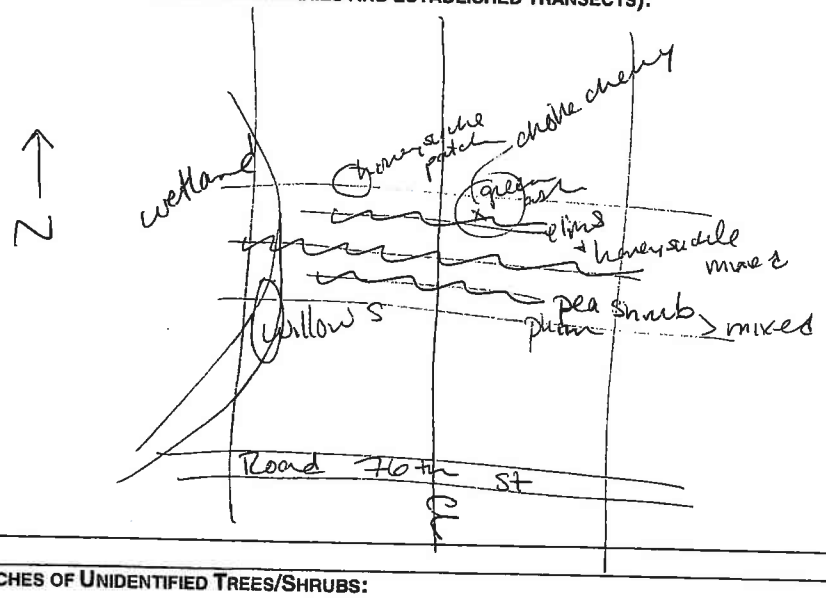
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
15 R4 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
22 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	1 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
1 RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
55 WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
55 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	30 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
22 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
1 OLIVE, RUSSIAN (*ELAEAGNUS ANGUSTIFOLIA*)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
9 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)	9 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (*TAMARIX RAMOSISSIMA*)	6 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (*TAMARIX CHINENSIS*)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (*TAMARIX PARVIFLORA*)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	10 Prunus [illegible] EB 4/25/08
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 124
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 59
_____	TOTAL # OF DECIDUOUS SHRUBS: 33
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 32
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

7

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: ENO42508COB093	**MP ENTER/EXIT:** 191.96/191.99	**SURVEY COORDINATES:** —
TEAM NAME: ENG3	**LOGBOOK PAGE #(S):** Book 2 (P9)	**PHOTO #(S):** 0012
INVESTIGATORS: Erin Berggust, Don Hazlett		

PLANT TAXA INVENTORY has been cut + plowed

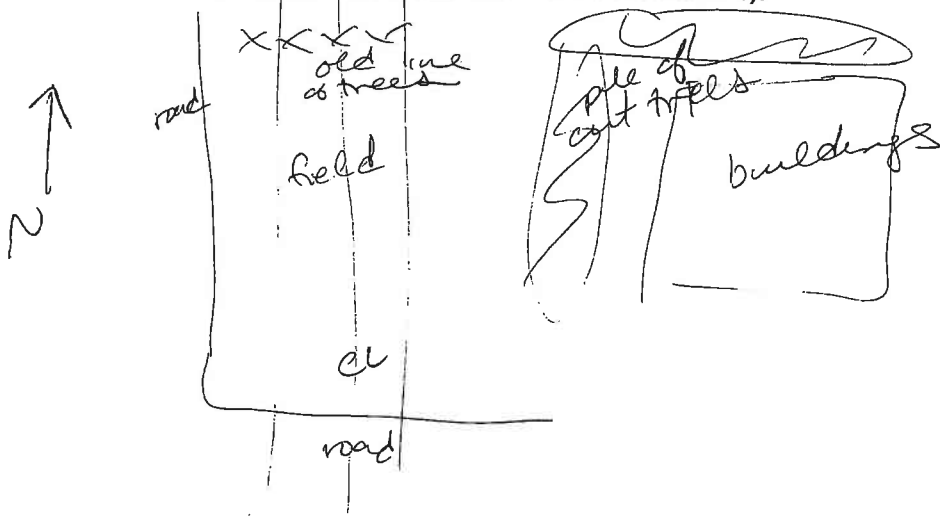
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

8

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042508cwB094	**MP ENTER/EXIT:** 192.02 - 192.03	**SURVEY COORDINATES:** ———
TEAM NAME: EN3 **INVESTIGATORS:** Erin Berggust Don Hayles	**LOGBOOK PAGE #(S):** Book 2 (1)	**PHOTO #(S):** 001E

PLANT TAXA INVENTORY has been cut + plowed

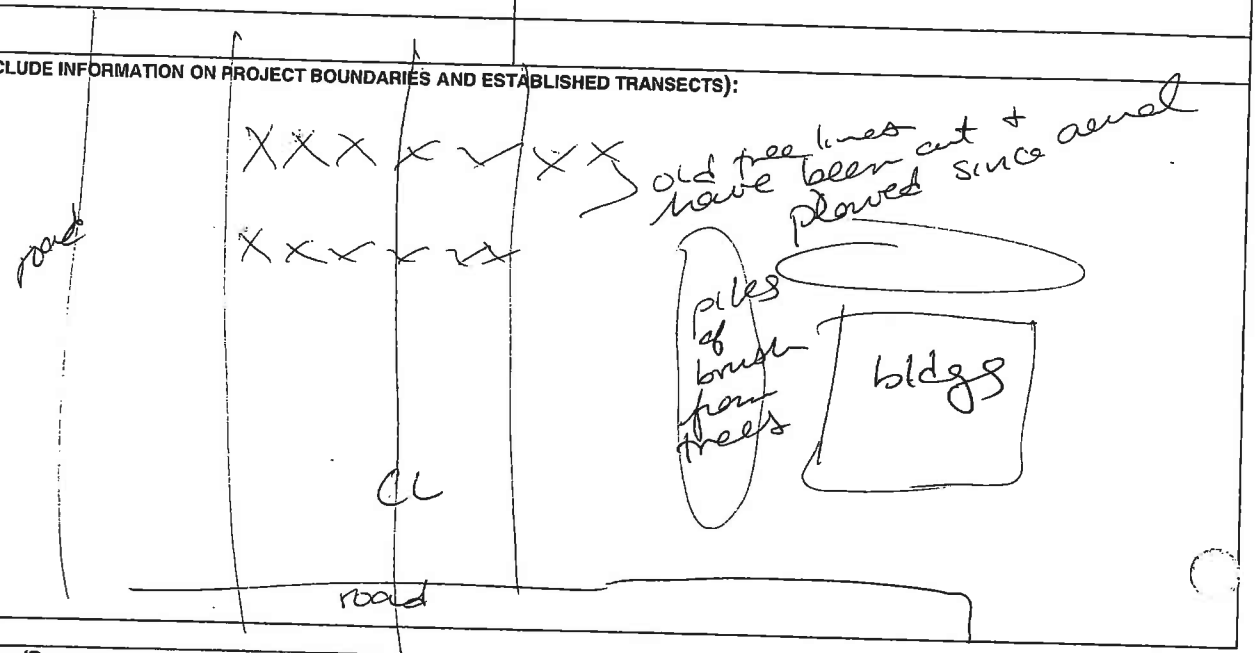
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 0
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EM3042608WB095	**MP ENTER/EXIT:** 193.89/193.91	**SURVEY COORDINATES:** 0581070 5122858 (offset ~ 3/4 mile)
TEAM NAME: EM3	**LOGBOOK PAGE #(S):** 30, 31	**PHOTO #(S):** 001 NW
INVESTIGATORS: Erin Berglund, Don Hazlett		

F1

PLANT TAXA INVENTORY

 # INVENTORIED, DECIDUOUS TREES:

- _____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)
- _____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)
- _____ BIRCH, PAPER (*BETULA PAPYRIFERA*)
- 12 _____ COTTONWOOD (*POPULUS DELTOIDES*)
- _____ CRABAPPLE (*MALUS SPECIES*)
- _____ ELM, SIBERIAN (*ULMUS PUMILA*)
- _____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)
- _____ LARCH, SIBERIAN (*LARIX SIBIRICA*)
- _____ LINDEN, AMERICAN (*TILIA AMERICANA*)
- _____ MAPLE, BOXELDER (*ACER NEGUNDO*)
- _____ MAPLE, SILVER (*ACER SACCHARINUM*)
- _____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)
- _____ OAK, BUR (*QUERCUS MACROCARPA*)
- _____ OHIO BUCKEYE (*AESCULUS GLABRA*)
- _____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)
- _____ POPLAR, WHITE (*POPULUS ALBA*)
- _____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)
- _____ WALNUT, BLACK (*JUGLANS NIGRA*)
- _____ WILLOW (*SALIX SPECIES*)

 # INVENTORIED, INVASIVE/EXOTIC SPECIES:

- _____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)
- _____ ELM, SIBERIAN (ULMUS PUMILA)
- _____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)
- _____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)
- _____ SALTCEDAR (TAMARIX RAMOSISSIMA)
- _____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)
- _____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)

 # INVENTORIED, OTHER:

- _____
- _____
- _____
- _____
- _____

 # INVENTORIED, EVERGREEN TREES:

- _____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
- _____ SPRUCE, COLORADO (*PICEA PUNGENS*)
- _____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
- _____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
- _____ PINE, PONDEROSA (*PINUS PONDEROSA*)
- _____ PINE, LIMBER (*PINUS FLEXILIS*)
- _____ PINE, SCOTCH (*PINUS SYLVESTRIS*)

 # INVENTORIED, DECIDUOUS SHRUBS:

- _____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
- _____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
- _____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
- _____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
- _____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
- _____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
- _____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
- _____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
- _____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
- _____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
- _____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
- _____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
- _____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
- _____ LILAC, COMMON (*SYRINGA VULGARIS*)
- _____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
- _____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
- _____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
- _____ POISON IVY (*RHUS RADICANS*)
- _____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
- _____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
- _____ SUMAC, SMOOTH (*RHUS GLABRA*)
- _____ SUMAC, STAGHORN (*RHUS TYPHINA*)

 # INVENTORIED, OTHER:

- _____
- _____

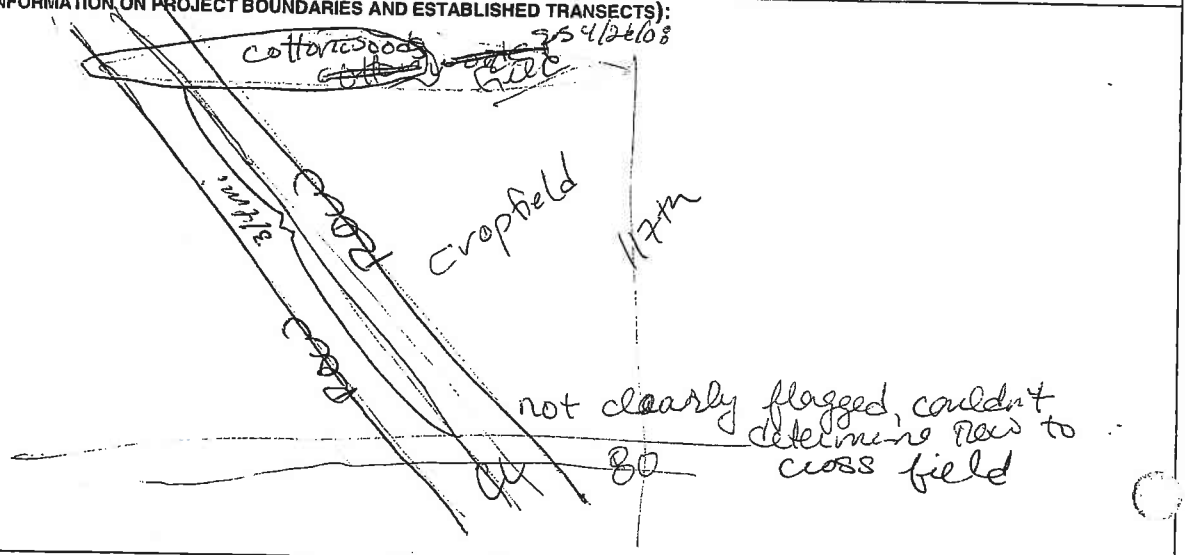
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 12
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 12
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

F2

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

10

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042808WB096	**MP ENTER/EXIT:** 196.84 - 196.86	**SURVEY COORDINATES:** 0581877 5199710 (37)
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist Don Hazlett	**LOGBOOK PAGE #(S):** 4, 5 (BOOK2)	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
24 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	10 SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
12 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
12 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
MK 15 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	15 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

+D SPRUCE CB 4/25/08

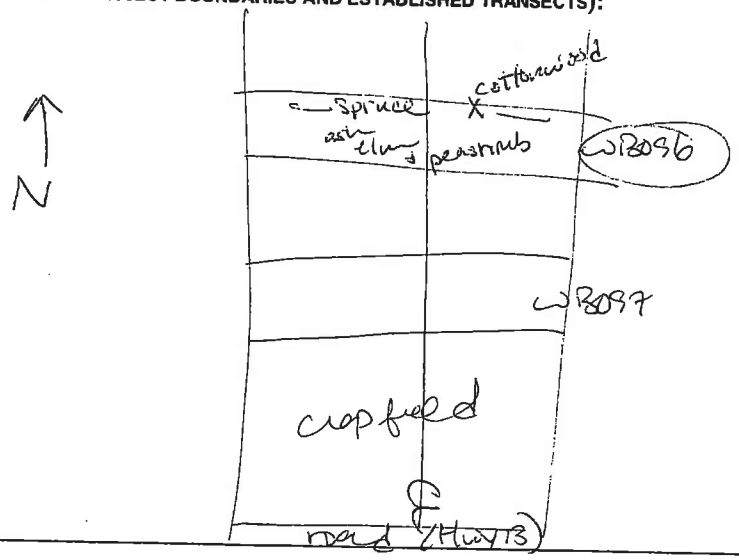
0

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 63
_____	TOTAL # OF EVERGREEN TREES: 10
_____	TOTAL # OF DECIDUOUS TREES: 28
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 25
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

11

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/25/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3042508CWB097	**MP ENTER/EXIT:** 196.60 - 196.63	**SURVEY COORDINATES:** (40) 05 18 49 / 114 19 19
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 6, 7 BOOK 2	**PHOTO #(S):** 1, 2

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
34 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	70 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
8 COTTONWOOD (*POPULUS DELTOIDES*)	16 CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
5 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
13 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
30 LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
3 POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
5 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	8 MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
20 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	20 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

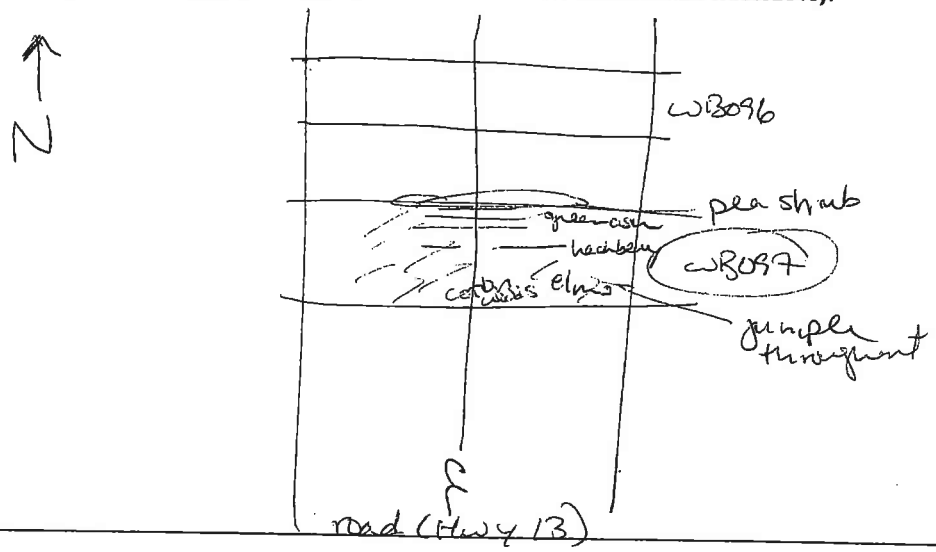
11

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 141
_____	TOTAL # OF EVERGREEN TREES: 70
_____	TOTAL # OF DECIDUOUS TREES: 46
_____	TOTAL # OF DECIDUOUS SHRUBS: 70
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 25
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: Ein30426 08 WB09B	**MP ENTER/EXIT:** 206.8 / 206.83	**SURVEY COORDINATES:** (51) 0585917 5108610
TEAM NAME: Ein3 **INVESTIGATORS:** Erin Berguist, Don Hazlett	**LOGBOOK PAGE #(S):** 28, 29	**PHOTO #(S):** COIN

PLANT TAXA INVENTORY

10 trees

* visual estimate from road due to lack of foliage, black from across from other side next to condemnation property

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	10 trees counted id unable (1 boxelder (Acer negundo) 1 willow (Salix) 8 elms or cottonwoods)

F1

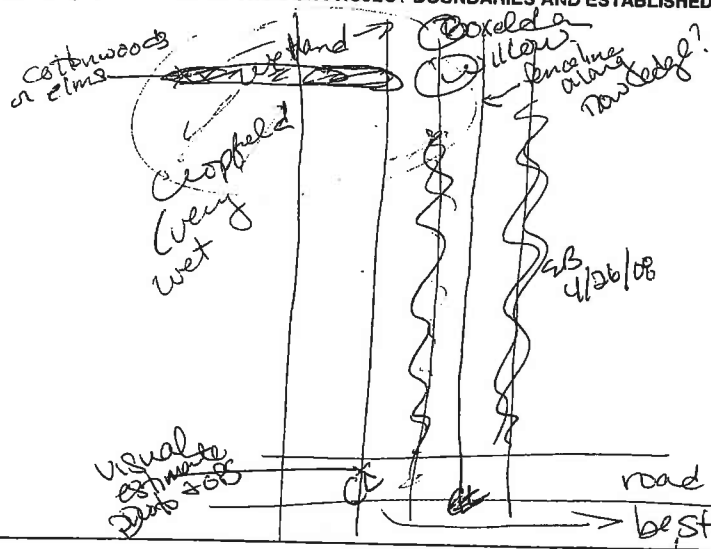
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 10
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 10 (visual estimate from road due to lack of flagging & lack of access from other side
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

E2

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



civil survey didn't flag due to proximity to condemnation property

best estimate of CL + ROW due to no flagging

OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3 04260B WB 099 EB 4/26/08	**MP ENTER/EXIT:** 208.91/208.97	**SURVEY COORDINATES:** (SO) OS84893 S101163
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** 26, 27 bk 2	**PHOTO #(S):** 001 EB 4/26/08 002 EB 4/26/08

D 1 7

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
10 _____ MAPLE, BOXELDER (*ACER NEGUNDO*) EB 4/26/08	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	30 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	3 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

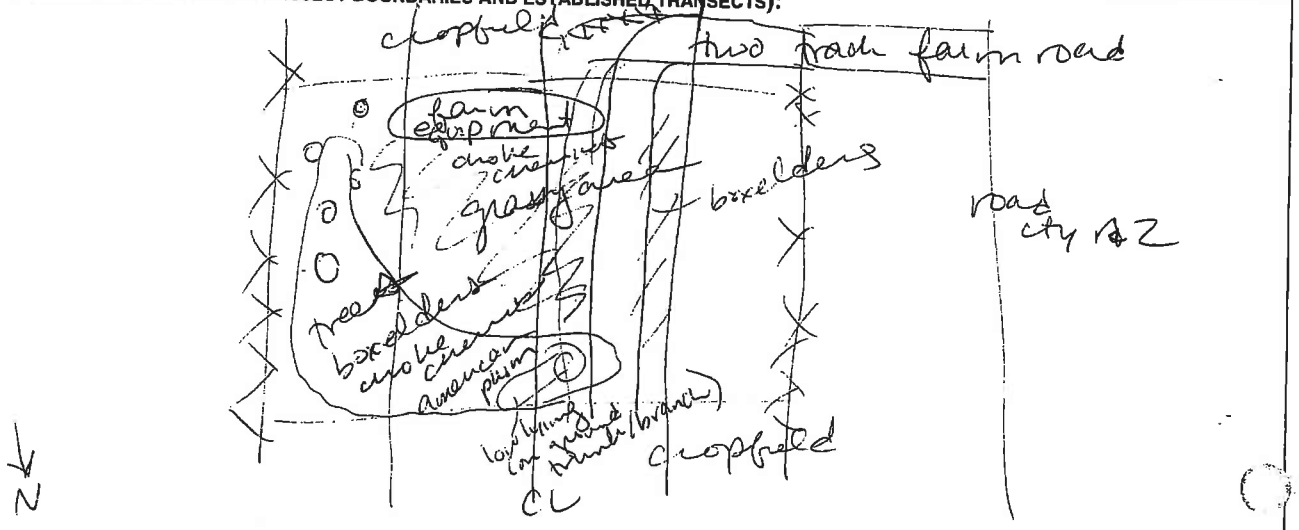
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 43
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 10
_____	TOTAL # OF DECIDUOUS SHRUBS: 33
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

D2

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN042608WB100	**MP ENTER/EXIT:** 212.47/214.48	**SURVEY COORDINATES:** (47) 0584981 5097059
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist, Don Hazlett	**LOGBOOK PAGE #(S):** ~~24,25~~ 20,21	**PHOTO #(S):** 001W 002E

PLANT TAXA INVENTORY

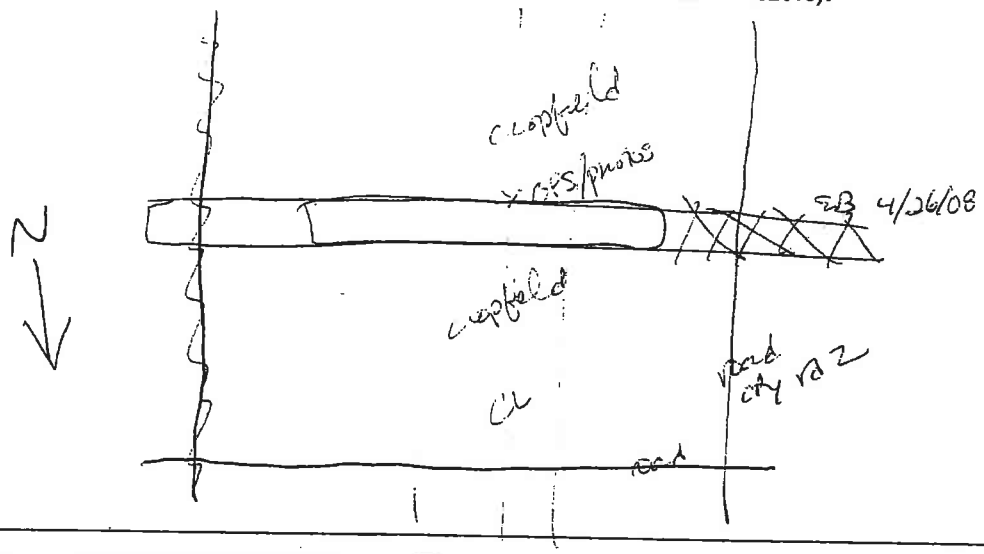
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
10 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
1 HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
10 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 16 WB100
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 16
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN042608WB101	**MP ENTER/EXIT:** 211.60/211.61	**SURVEY COORDINATES:** 48 0584943 5096843 B1
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist Don Hazlett	**LOGBOOK PAGE #(S):** ~~20,21~~ 22,23	**PHOTO #(S):** 001E 002W

PLANT TAXA INVENTORY

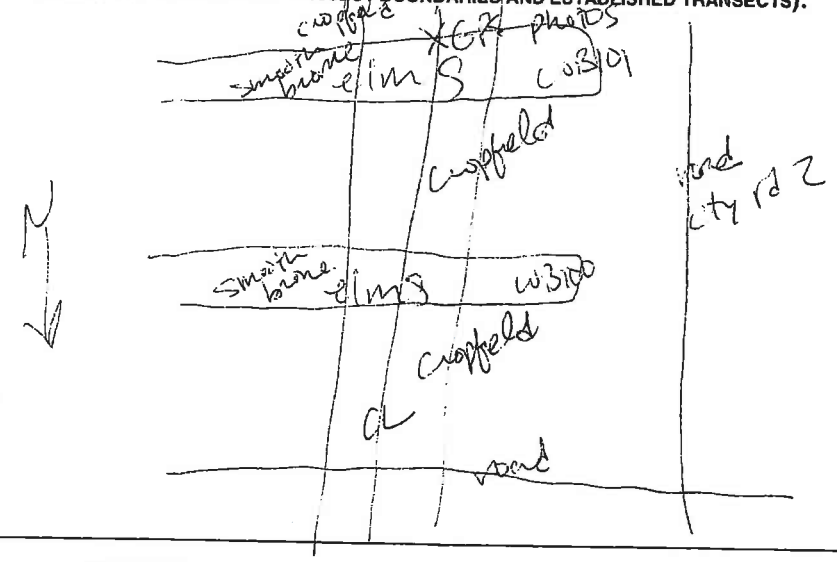
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*) *	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
10 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*) *	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*) *	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
13 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 18
_____	TOTAL # OF EVERGREEN TREES: _____
B2 _____	TOTAL # OF DECIDUOUS TREES: 18
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN 042608cwB102	**MP ENTER/EXIT:** 211.72/211.73	**SURVEY COORDINATES:** (NAD 83) 0584969 5096655
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist Don Hazlett	**LOGBOOK PAGE #(S):** ~~22,23~~ 24,23	**PHOTO #(S):** 2014 0026

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
24 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

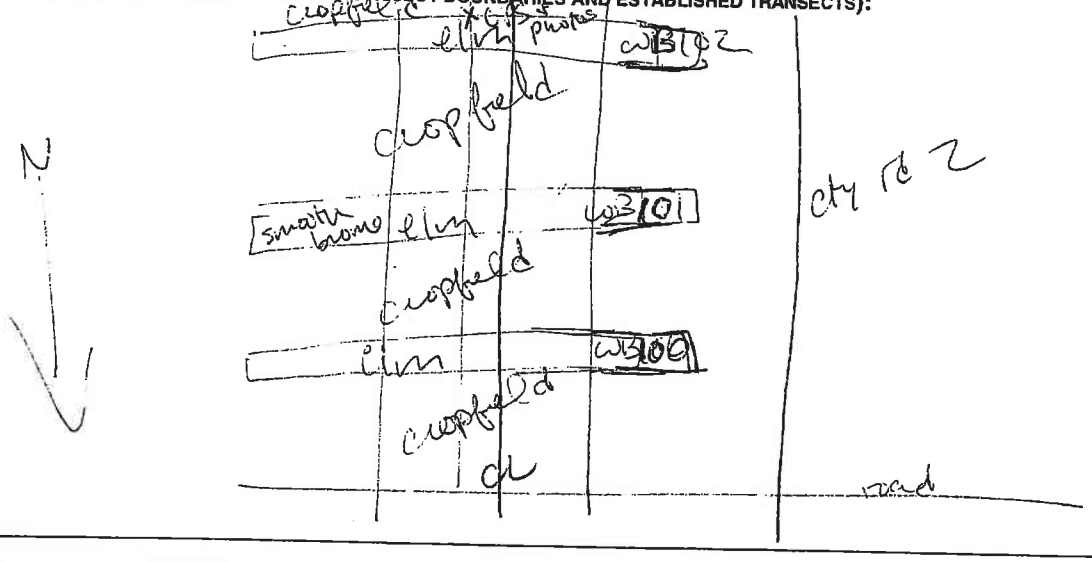
WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 24
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 24
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

C2

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 04/26/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: EN3042608CWB103	MP ENTER/EXIT: 212.29 / 212.33	SURVEY COORDINATES: (41) 0584940 5095760
TEAM NAME: EN3 INVESTIGATORS: Erin Bergquist Don Hazlett	LOGBOOK PAGE #(S): 8,9	PHOTO #(S): COINE.002SE

PLANT TAXA INVENTORY

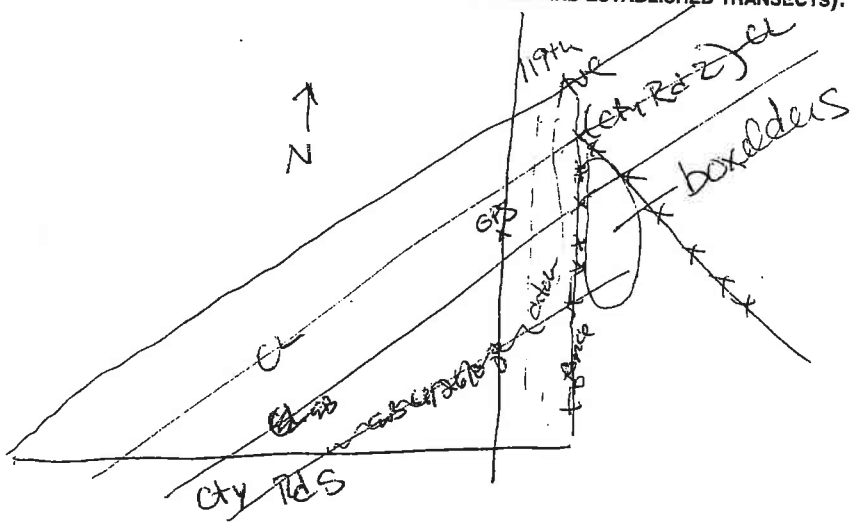
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
8 MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010
W13C3

# INVENTORIED, OTHER CONT'D:	TOTALS: 8
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 8
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	**PROJECT NUMBER:** 10623-010
FEATURE ID: EM 042608 WB 101	**MP ENTER/EXIT:** 212.47/212.52	**SURVEY COORDINATES:** (12) 0584707 5195533
TEAM NAME: EM3	**LOGBOOK PAGE #(S):** 10, 11	**PHOTO #(S):** 0015 0025W
INVESTIGATORS: Erin Berggust		

PLANT TAXA INVENTORY

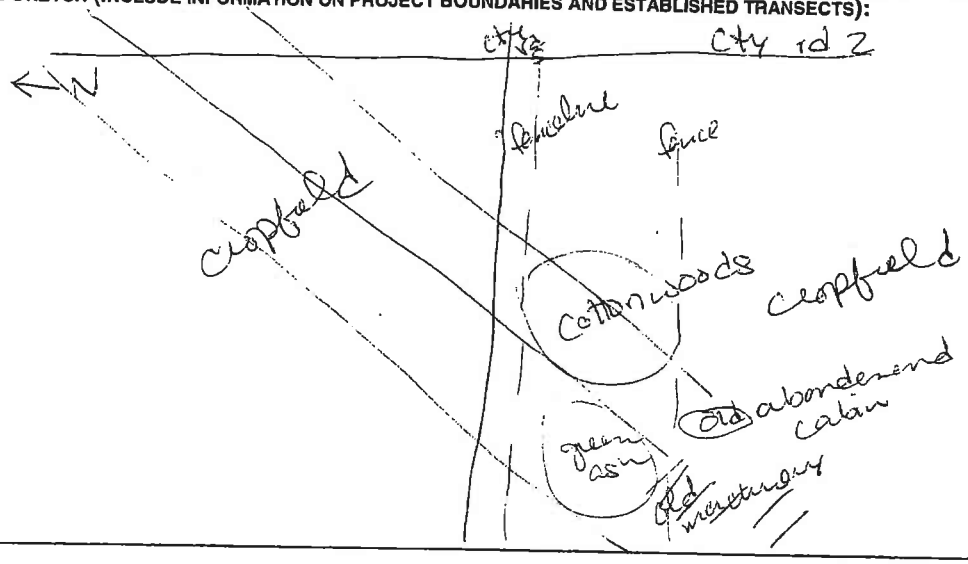
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
15 COTTONWOOD (*POPULUS DELTOIDES*) (+2 dead cottonwood)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
15 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
____ MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
____ WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
15 ELM, SIBERIAN (ULMUS PUMILA) (+3 dead elms)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	____
____	____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010
W3104

# INVENTORIED, OTHER CONT'D:	TOTALS: 30
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 15
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 15
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 7/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3 EN3072608LO3DS	**MP ENTER/EXIT:** 213.42 / 213.45	**SURVEY COORDINATES:** 0544650 4973989
TEAM NAME: EN3 **INVESTIGATORS:** Erin Bergquist Don Hartlett	**LOGBOOK PAGE #(S):** 12, 13	**PHOTO #(S):** 001E 002W

PLANT TAXA INVENTORY

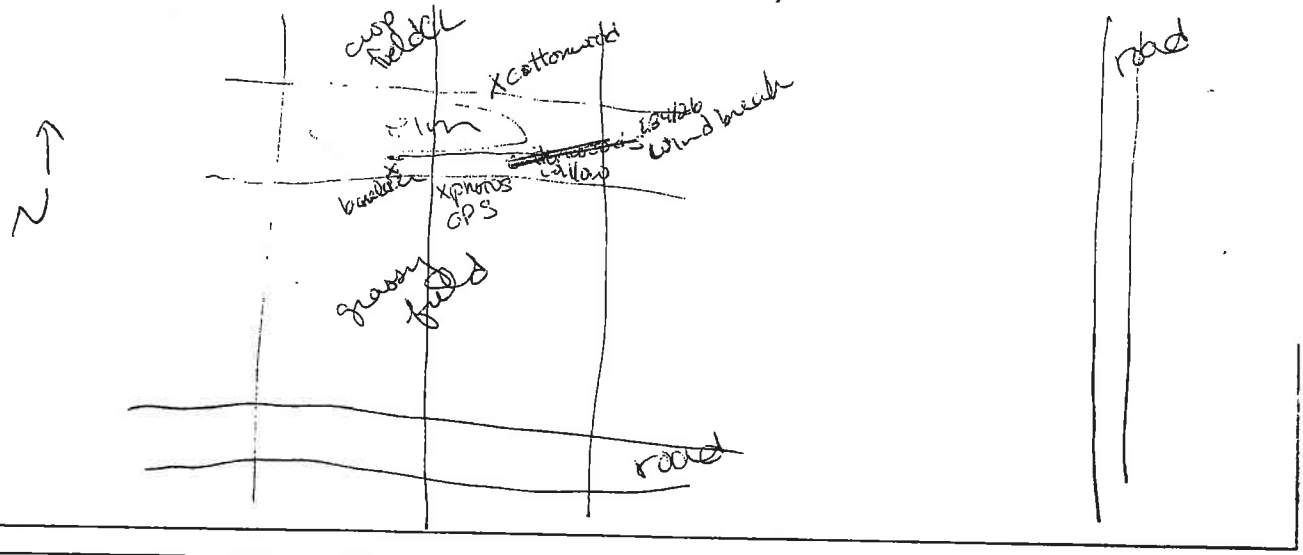
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
24 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
1 MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
62 WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
24 ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
____	____ SUMAC, SMOOTH (*RHUS GLABRA*)
____	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
____	**# INVENTORIED, OTHER:**
____	____
____	____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010 WBIOS

# INVENTORIED, OTHER CONT'D:	TOTALS: 32
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 23
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~9
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/26/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN3642608C0B1106	**MP ENTER/EXIT:** 213.98 / 213.99	**SURVEY COORDINATES:** -5 [illegible]
TEAM NAME: EnS **INVESTIGATORS:** Erin Bergquist Dan Hazlett	**LOGBOOK PAGE #(S):** 14, 15	**PHOTO #(S):** 001W ; 002E, 0035

PLANT TAXA INVENTORY

☐ main windbreak ☐ dead

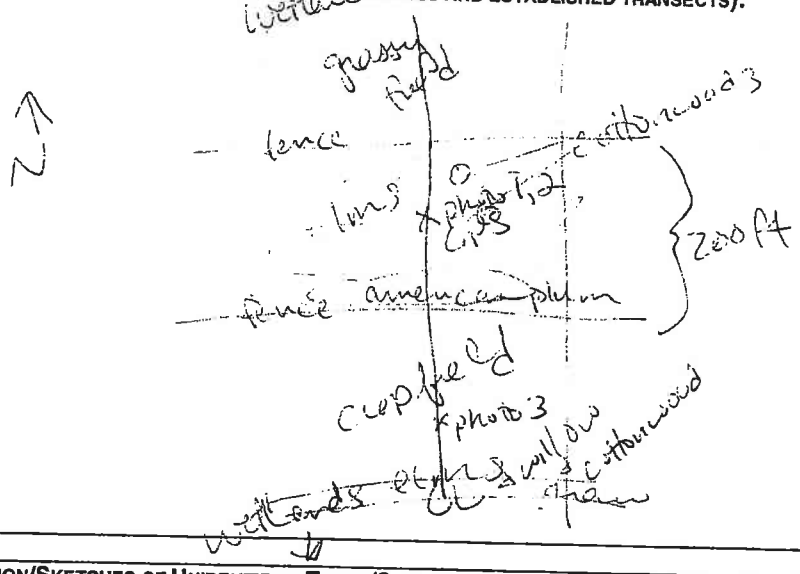
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
1 COTTONWOOD (*POPULUS DELTOIDES*) [illegible]	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
116 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
30 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
13 ELM, SIBERIAN (ULMUS PUMILA) [illegible] ~100 ft	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	10 PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 103
	TOTAL # OF EVERGREEN TREES: 93
	TOTAL # OF DECIDUOUS TREES: 77
	TOTAL # OF DECIDUOUS SHRUBS: 10
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 16
	TOTAL # OF OTHER TREES/SHRUBS:

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 5/22/08

CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT

FEATURE ID: EN40S2208WL059*

MP ENTER/EXIT: 215.03-215.10

ENTER/EXIT COORDINATES:

TEAM NAME: EN4

INVESTIGATORS: Erin Berggren, Cory Bolen

LOGBOOK PAGE #(S): 44, 45

PHOTO #(S): EN40S2208WL059-001

PLANT TAXA INVENTORY

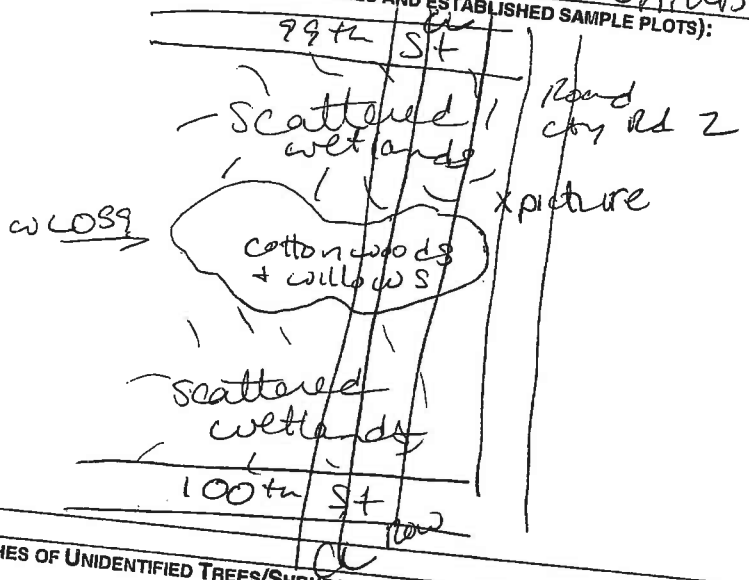
* surveyed from road

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
39 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
10 WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

# INVENTORIED, OTHER CONT'D:	PROJECT NUMBER: 10623-010
	TOTALS: 49
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: 49
	TOTAL # OF DECIDUOUS SHRUBS:
	TOTAL # OF INVASIVE/EXOTIC SPECIES:
	TOTAL # OF OTHER TREES/SHRUBS:
	trees 49
	Shrubs 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

DATE: 4/26/08	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: EM3042608co3108	MP ENTER/EXIT: 216.23/216.25	SURVEY COORDINATES: 0584904 5089503
TEAM NAME: EM3	LOGBOOK PAGE #(S): 18, 19	PHOTO #(S): 001 W
INVESTIGATORS: Erin Berquist, Dan Hazlett		

PLANT TAXA INVENTORY

visual estimate from road

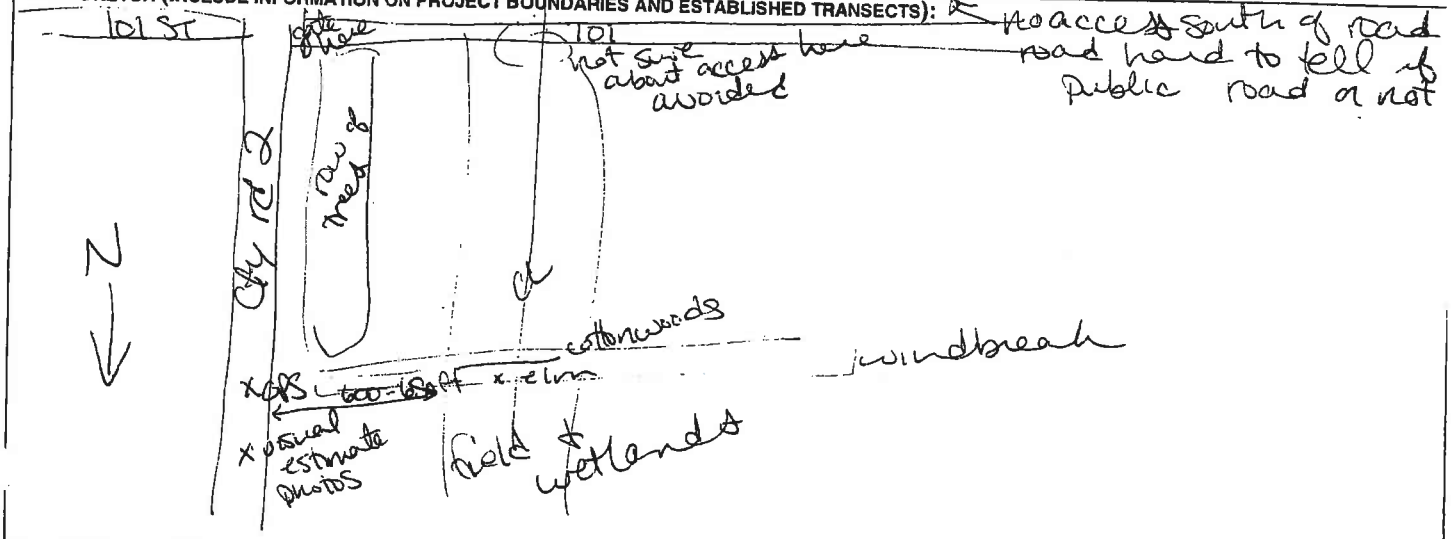
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
X COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
1 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
1 ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: 8
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 7
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: 1
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/27/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: Oakes Rail Siding	**MP ENTER/EXIT:** N/A	**SURVEY COORDINATES:** (76) 0569773/5107206 south side
TEAM NAME: EN3	**LOGBOOK PAGE #(S):** bk2:41	**PHOTO #(S):** (77) 0569883/5108141 north side
INVESTIGATORS: Erin Bergquist, Don Hazlett		COON

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
110 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	____ SPRUCE, COLORADO (*PICEA PUNGENS*)
____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
2 COTTONWOOD (*POPULUS DELTOIDES*)	____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
____ CRABAPPLE (*MALUS SPECIES*)	____ PINE, PONDEROSA (*PINUS PONDEROSA*)
76 ELM, SIBERIAN (*ULMUS PUMILA*)	____ PINE, LIMBER (*PINUS FLEXILIS*)
____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:** ★counts from subplots estimate for entire area
____ LINDEN, AMERICAN (*TILIA AMERICANA*)	7 BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*) 600-800 y
24 MAPLE, BOXELDER (*ACER NEGUNDO*)	____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
____ MAPLE, SILVER (*ACER SACCHARINUM*)	____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	420★ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
____ OAK, BUR (*QUERCUS MACROCARPA*)	____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
____ OHIO BUCKEYE (*AESCULUS GLABRA*)	____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
____ POPLAR, WHITE (*POPULUS ALBA*)	____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
____ WALNUT, BLACK (*JUGLANS NIGRA*)	____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
8 WILLOW (*SALIX SPECIES*)	____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	14 HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
76 ELM, SIBERIAN (ULMUS PUMILA)	____ LILAC, COMMON (*SYRINGA VULGARIS*)
____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
8 PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	8 PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
____ SALTCEDAR (TAMARIX RAMOSISSIMA)	19 PLUM, AMERICAN (*PRUNUS AMERICANA*)
____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	____ POISON IVY (*RHUS RADICANS*)
____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
10 Quercus spp white oak	____ SUMAC, SMOOTH (*RHUS GLABRA*)
50 unknown ornamental (hairy)	____ SUMAC, STAGHORN (*RHUS TYPHINA*)
1 ~~Elder~~ (Ribes)	**# INVENTORIED, OTHER:**
____	____
____	____

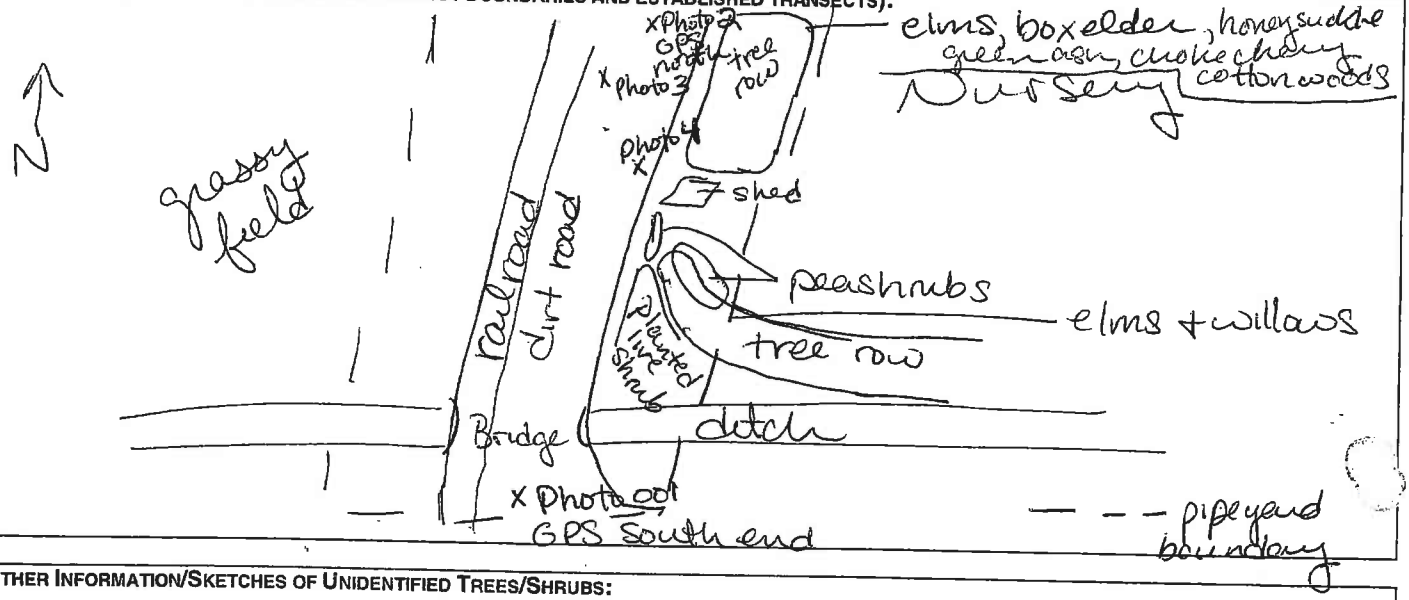
Rail siding

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS: ~~753~~ 749
	TOTAL # OF EVERGREEN TREES:
	TOTAL # OF DECIDUOUS TREES: ~~154~~ 144
	TOTAL # OF DECIDUOUS SHRUBS: ~~511~~ 460
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 84
	TOTAL # OF OTHER TREES/SHRUBS: 61
	Trees: 230
	Shrubs: 519

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WOODLOT INVENTORY FORM

DATE: 5/28/15	CLIENT/PROJECT NAME: KEYSTONE PIPELINE PROJECT	PROJECT NUMBER: 10623-010
FEATURE ID: 2N3042808 Valley City ND	MP ENTER/EXIT: N/A	ENTER/EXIT COORDINATES: 5753575 / 5196414 (78)
TEAM NAME: 2N3 Pipeyard 1 INVESTIGATORS: Erin Bergquist Don Hazlett	LOGBOOK PAGE #(S): DW2 pg 16	PHOTO #(S): 5575642 (77) COE, COW 5196122

PLANT TAXA INVENTORY

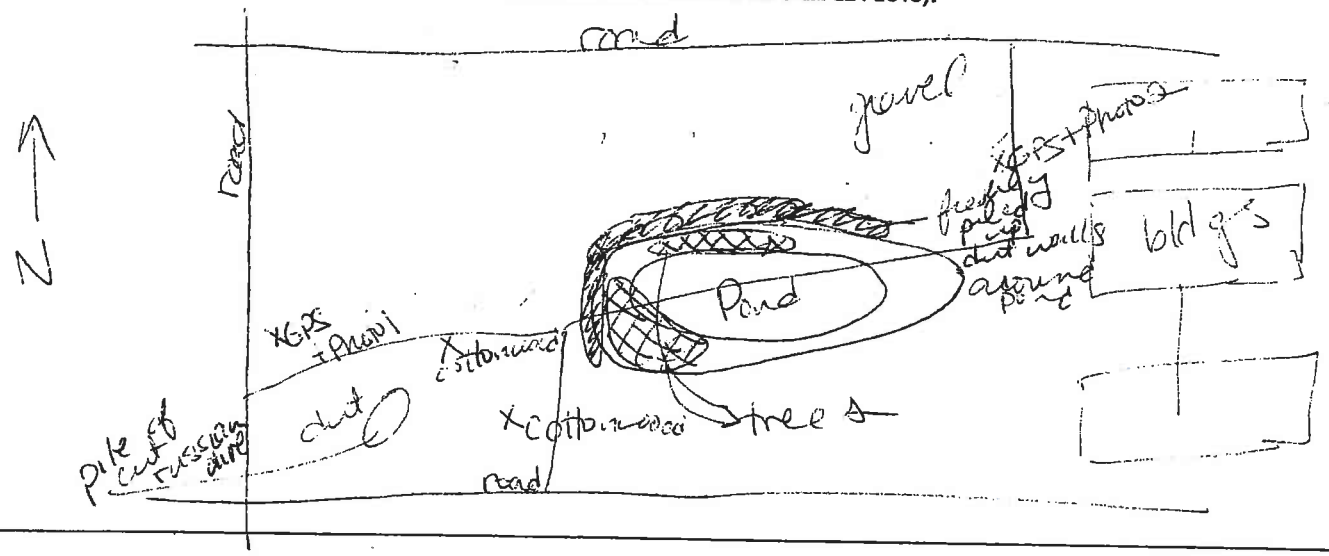
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
14 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
7 RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
7 OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: 21
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

Valley City pipeyard is

WORK ORDER #: | **PROJECT NUMBER: 10623-010**

DATE: 4/28/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EM3041208C3 Valley City pipeyard B	**MP ENTER/EXIT:** N/A	**ENTER/EXIT COORDINATES:** (80 0373981 5136231 E, 0374594 5136249 W)
TEAM NAME: EM3 **INVESTIGATORS:** Erin Benthusi Don Hultgren	**LOGBOOK PAGE #(S):** 47	**PHOTO #(S):** CRW_0092

PLANT TAXA INVENTORY

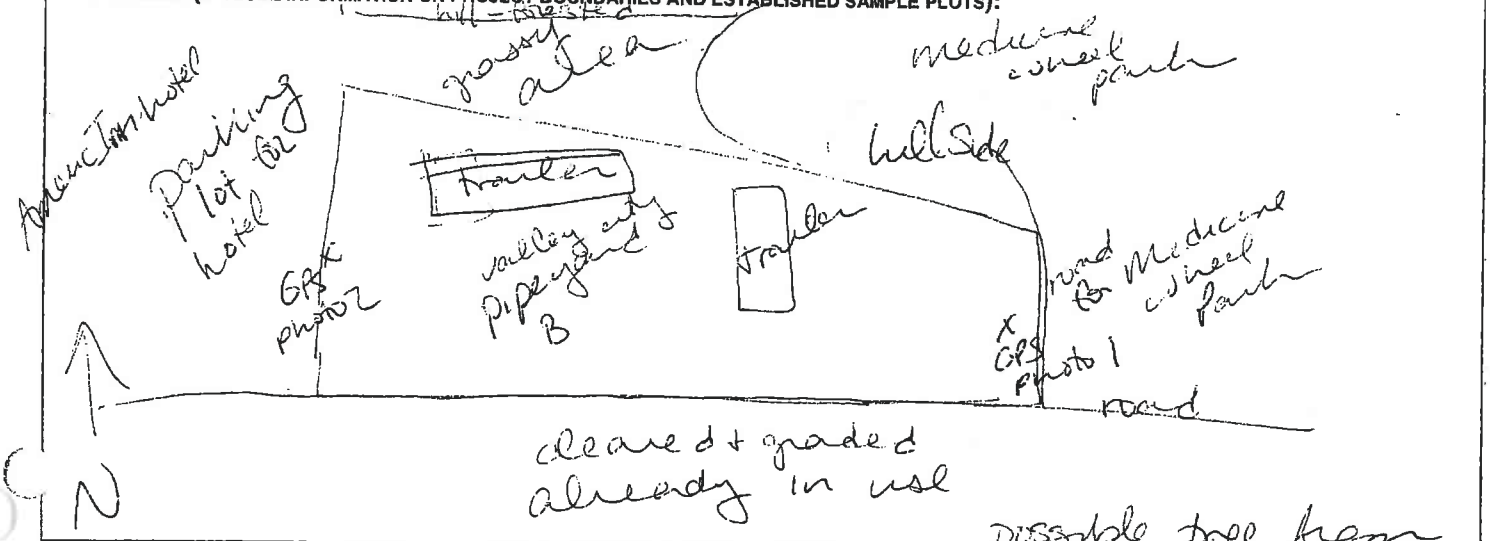
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
_____ ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
_____ ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK, FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
1 cm photo may have been 1	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
unknown tree, pipeyard already cleared - currently	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
none, artemisia absinthium common	**# INVENTORIED, OTHER:**
	_____
	_____

WOODLOT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
_____	TOTAL # OF EVERGREEN TREES: _____
_____	TOTAL # OF DECIDUOUS TREES: _____
_____	TOTAL # OF DECIDUOUS SHRUBS: _____
_____	TOTAL # OF INVASIVE/EXOTIC SPECIES: _____
_____	TOTAL # OF OTHER TREES/SHRUBS: _____
_____	
_____	

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED SAMPLE PLOTS):



dissimilar trees from adjacent, currently none

OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-Fordville 2 Railsiding	**MP ENTER/EXIT:** Access Rd.	**SURVEY COORDINATES:** N 5341143 E 588593 > Center of Access Rd ← WB
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long Ken Ruzicka Cory Boler	**LOGBOOK PAGE #(S):** Book 3, 22 & 23	**PHOTO #(S):** EN1-042908-Fordville Railsiding-001E -002N, 003W

PLANT TAXA INVENTORY

# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
54 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
9 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*) .	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	39 CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	_____ DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

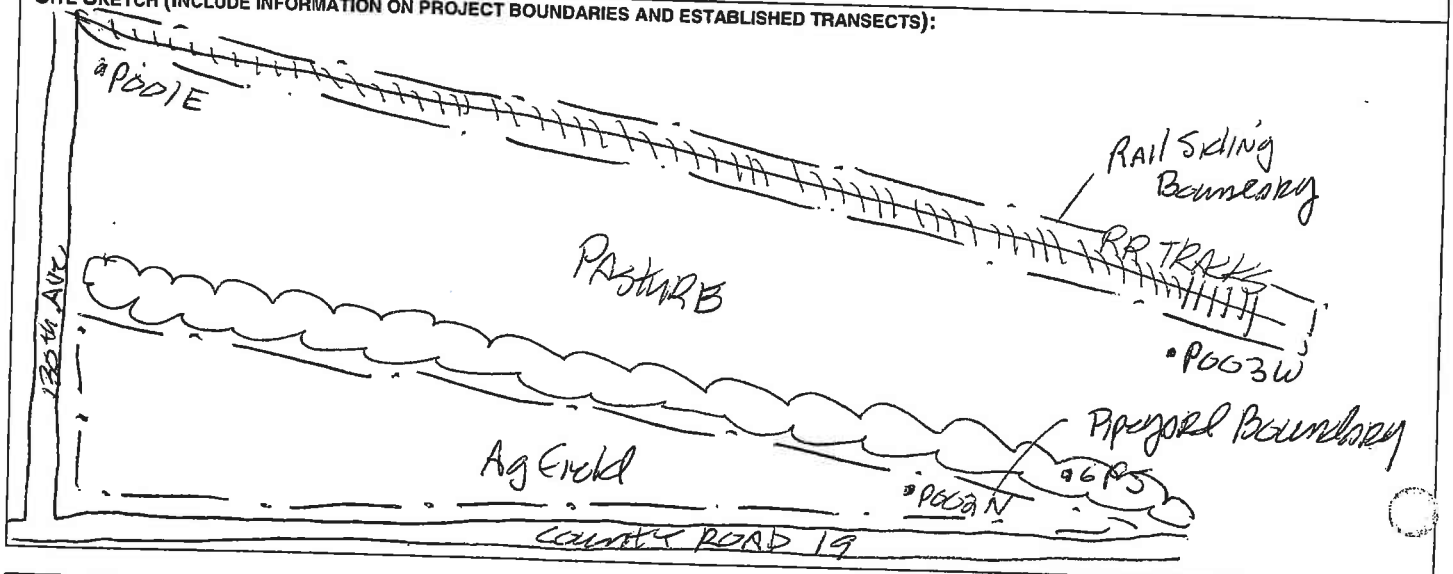
CB 4/29/08

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~6~~
	TOTAL # OF DECIDUOUS TREES: ~~13~~ 14 (CB) 4/29/08
	TOTAL # OF DECIDUOUS SHRUBS: 39
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/29/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-042908-	**MP ENTER/EXIT:** Grafton, ND	**SURVEY COORDINATES:** N 5363961 E 616330 > Pipeyard North
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzzo, Cory Boles	**LOGBOOK PAGE #(S):** Book 3, 2 & 3	**PHOTO #(S):** Photo 1 Photo 2 } North Yard Pics (South yard)

PLANT TAXA INVENTORY

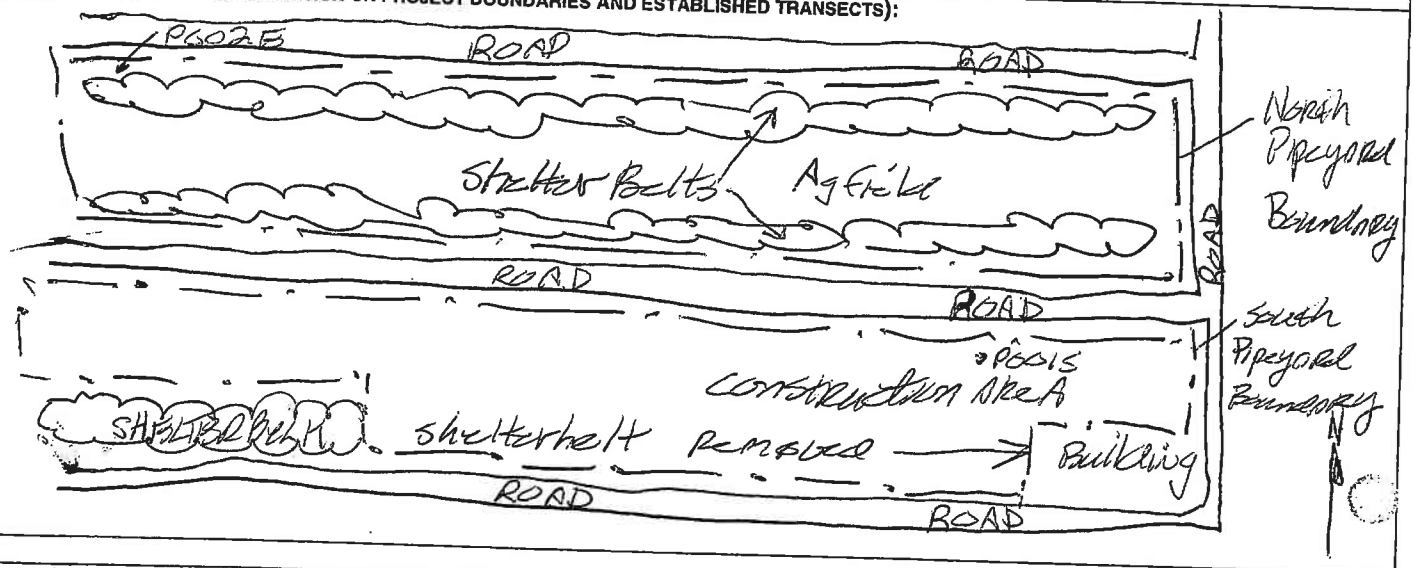
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
110 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	_____ SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	_____ JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
4 COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	_____ PINE, PONDEROSA (*PINUS PONDEROSA*)
95 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	_____ PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	_____ BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*) 175 > ~~94~~	_____ CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*) SL 4/29/08
_____ POPLAR, WHITE (*POPULUS ALBA*)	6 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*) SL 4/29/08
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATAEGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
_____ WILLOW (*SALIX SPECIES*)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	_____ SILVERBERRY (*ELAEAGNUS COMMUTATA*)
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: ~~8~~
	TOTAL # OF DECIDUOUS TREES: ~~99~~ 209 SL 4/29/08
	TOTAL # OF DECIDUOUS SHRUBS: ~~95~~ 181 SL 4/29/08
	TOTAL # OF INVASIVE/EXOTIC SPECIES: ~~6~~
	TOTAL # OF OTHER TREES/SHRUBS: ~~6~~

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

WINDBREAK/SHELTERBELT INVENTORY FORM

PROJECT NUMBER: 10623-010

DATE: 4/30/08	**CLIENT/PROJECT NAME:** KEYSTONE PIPELINE PROJECT	
FEATURE ID: EN1-043008-Aneta Pipeyard	**MP ENTER/EXIT:** Aneta, ND	**SURVEY COORDINATES:** N 5281829 E 576014
TEAM NAME: EN1 **INVESTIGATORS:** Steve Long, Ken Ruzicka, Cory Bitz	**LOGBOOK PAGE #(S):** Book 46 & 47	**PHOTO #(S):** C001 - E C003-W C002 - N

PLANT TAXA INVENTORY

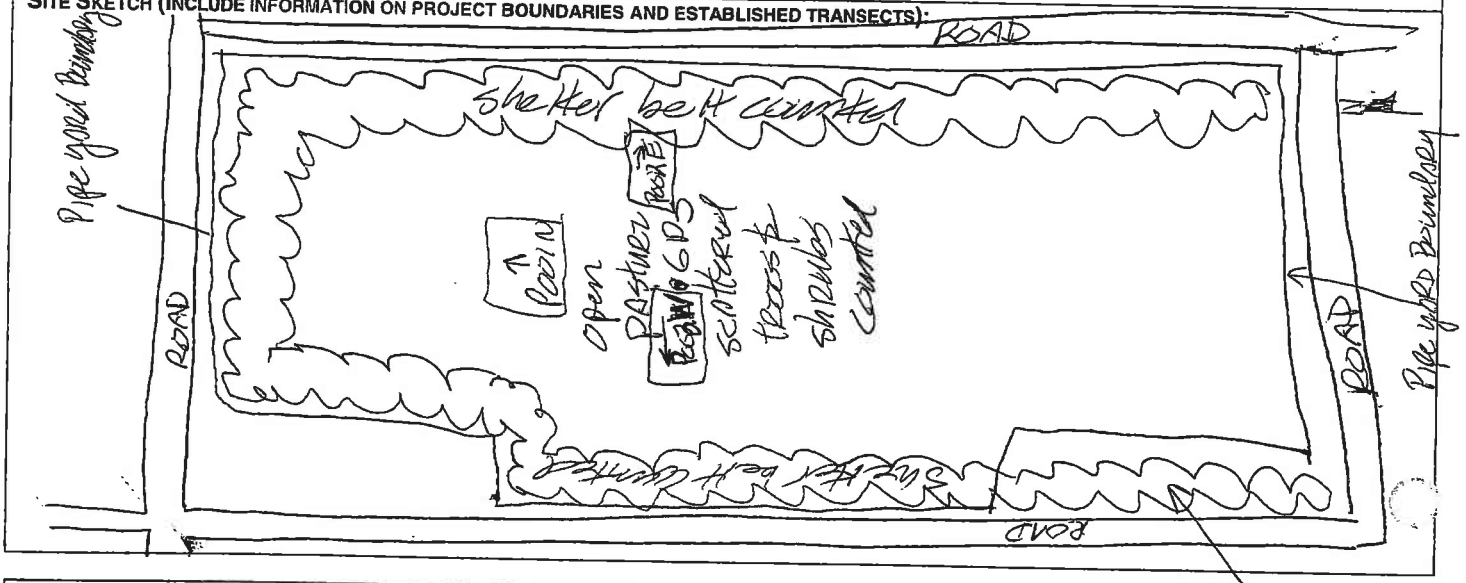
# INVENTORIED, DECIDUOUS TREES:	# INVENTORIED, EVERGREEN TREES:
368 ASH, GREEN (*FRAXINUS PENNSYLVANICA*)	_____ SPRUCE, BLACK HILLS WHITE (*PICEA GLAUCA VAR. DENSATA*)
_____ ASPEN, QUAKING (*POPULUS TREMULOIDES*)	75 SPRUCE, COLORADO (*PICEA PUNGENS*)
_____ BIRCH, PAPER (*BETULA PAPYRIFERA*)	6 JUNIPER, ROCKY MOUNTAIN (*JUNIPERUS SCOPULORUM*)
_____ COTTONWOOD (*POPULUS DELTOIDES*)	_____ CEDAR, EASTERN RED- (*JUNIPERUS VIRGINIANA*)
_____ CRABAPPLE (*MALUS SPECIES*)	352 PINE, PONDEROSA (*PINUS PONDEROSA*)
458 ELM, SIBERIAN (*ULMUS PUMILA*)	_____ PINE, LIMBER (*PINUS FLEXILIS*)
_____ HACKBERRY, COMMON (*CELTIS OCCIDENTALIS*)	6 PINE, SCOTCH (*PINUS SYLVESTRIS*)
_____ LARCH, SIBERIAN (*LARIX SIBIRICA*)	**# INVENTORIED, DECIDUOUS SHRUBS:**
_____ LINDEN, AMERICAN (*TILIA AMERICANA*)	_____ BUCKTHORN, COMMON (*RHAMNUS CATHARTICA*)
_____ MAPLE, BOXELDER (*ACER NEGUNDO*)	382 BUFFALOBERRY SILVER (*SHEPHERDIA ARGENTEA*)
_____ MAPLE, SILVER (*ACER SACCHARINUM*)	_____ CHERRY, PIN (*PRUNUS PENSYLVANICA*)
_____ MOUNTAIN-ASH, EUROPEAN (*SORBUS AUCUPARIA*)	_____ CHOKECHERRY, COMMON & SCHUBERT (*PRUNUS VIRGINIANA*)
_____ OAK, BUR (*QUERCUS MACROCARPA*)	_____ CINQUEFOIL, SHRUBBY (*POTENTILLA FRUTICOSA*)
_____ OHIO BUCKEYE (*AESCULUS GLABRA*)	_____ COTONEASTER, HEDGE (*COTONEASTER LUCIDUS*)
_____ POPLAR, BALSAM (*POPULUS BALSAMIFERA*)	118 CRANBERRYBUSH, AMERICAN (*VIBURNUM TRILOBUM*)
_____ POPLAR, WHITE (*POPULUS ALBA*)	94 DOGWOOD, REDOSIER (*CORNUS STOLONIFERA*)
_____ RUSSIAN-OLIVE (*ELAEAGNUS ANGUSTIFOLIA*)	_____ HAWTHORN, ROUND-LEAVED (*CRATEAGUS ROTUNDIFOLIA*)
_____ WALNUT, BLACK (*JUGLANS NIGRA*)	_____ HAZELNUT, BEAKED (*CORYLUS CORNUTA*)
14 WILLOW (*SALIX SPECIES*) (Salix Alba)	_____ HAZELNUT, AMERICAN (*CORYLUS AMERICANA*)
# INVENTORIED, INVASIVE/EXOTIC SPECIES:	_____ HONEYSUCKLE, TATARIAN (*LONICERA TATARICA*)
_____ BUCKTHORN, COMMON (RHAMNUS CATHARTICA)	_____ JUNEBERRY (*AMELANCHIER ALNIFOLIA*)
_____ ELM, SIBERIAN (ULMUS PUMILA)	_____ LILAC, COMMON (*SYRINGA VULGARIS*)
_____ OLIVE, RUSSIAN (ELAEAGNUS ANGUSTIFOLIA)	_____ MAPLE, AMUR (*ACER TATARICUM SPP. GINNALA*)
_____ PEASHRUB, SIBERIAN (CARAGANA ARBORESCENS)	_____ PEASHRUB, SIBERIAN (*CARAGANA ARBORESCENS*)
_____ SALTCEDAR (TAMARIX RAMOSISSIMA)	_____ PLUM, AMERICAN (*PRUNUS AMERICANA*)
_____ TAMARISK. FIVE-STAMEN (TAMARIX CHINENSIS)	_____ POISON IVY (*RHUS RADICANS*)
_____ TAMARISK, SMALLFLOWER (TAMARIX PARVIFLORA)	382 SILVERBERRY (*ELAEAGNUS COMMUTATA*) SL-4/24/08
# INVENTORIED, OTHER:	_____ SPIREA, VANHOUTTE (*SPIRAEA X VANHOUTTEI*)
_____	_____ SUMAC, SMOOTH (*RHUS GLABRA*)
_____	_____ SUMAC, STAGHORN (*RHUS TYPHINA*)
_____	**# INVENTORIED, OTHER:**
_____	_____
_____	_____

WINDBREAK/SHELTERBELT INVENTORY FORM CONT'D

PROJECT NUMBER: 10623-010

# INVENTORIED, OTHER CONT'D:	TOTALS:
	TOTAL # OF EVERGREEN TREES: 439
	TOTAL # OF DECIDUOUS TREES: 840
	TOTAL # OF DECIDUOUS SHRUBS: 594
	TOTAL # OF INVASIVE/EXOTIC SPECIES: 0
	TOTAL # OF OTHER TREES/SHRUBS: 0

SITE SKETCH (INCLUDE INFORMATION ON PROJECT BOUNDARIES AND ESTABLISHED TRANSECTS):



OTHER INFORMATION/SKETCHES OF UNIDENTIFIED TREES/SHRUBS:

many of ponderosa pine counted were volunteer seedlings.

Appendix D

Representative Field Photographs



Figure D-1. Feature EN1-042408-WB001, facing west.



Figure D-2. Feature EN1-042408-WB002, facing west.



Figure D-3. Feature EN1-042408-WB003, facing east.



Figure D-4. Feature EN1-042408-WB004, facing west (whiteboard mislabeled).



Figure D-5. Feature EN1-042408-WB005, facing east.



Figure D-6. Feature EN1-042408-WB006, facing west.



Figure D-7. Feature EN1-042408-WB007, facing east.



Figure D-8. Feature EN1-042408-WB008, facing east.



Figure D-9. Feature EN1-042408-WB009, facing east.



Figure D-10. Feature EN1-042408-WB010, facing west.



Figure D-11. Feature EN1-042408-WB011, facing west.



Figure D-12. Feature EN1-042408-WB012, facing west.



Figure D-13. Feature EN1-042408-WB013, facing west.



Figure D-14. Feature EN1-042408-WB014, facing west.



Figure D-15. Feature EN1-042408-WB015, facing east.



Figure D-16. Feature EN1-042408-WB016, facing west.



Figure D-17. Feature EN1-042408-WB017, facing west.



Figure D-18. Feature EN1-042408-WB018, facing west.



Figure D-19. Feature EN1-042408-WB019, facing east.



Figure D-20. Feature EN1-042408-WB020, facing west.



Figure D-21. Feature EN1-042608-WB022, facing north.



Figure D-22. Feature EN1-042608-WB023, facing northwest.



Figure D-23. Feature EN1-042608-WB025, facing east.



Figure D-24. Feature EN1-042608-WB026, facing west.



Figure D-25. Feature EN1-042608-WL001, facing south.



Figure D-26. Feature EN1-042608-WL009, facing north.



Figure D-27. Feature EN1-042608-WL013, facing south.



Figure D-28. Feature EN1-042708-WB027, facing west.



Figure D-29. Feature EN1-042708-WB028, facing east (shows both WB027 and WB028).



Figure D-30. Feature EN1-042708-WB029, facing west.



Figure D-31. Feature EN1-042708-WB030, facing west.



Figure D-32. Feature EN1-042708-WB031, facing west.



Figure D-33. Feature EN1-042708-WB032, facing west (whiteboard mislabeled).



Figure D-34. Feature EN1-042708-WL017, facing north.



Figure D-35. Feature EN1-042708-WL020, facing north.



Figure D-36. Feature EN1-042708-WL022, facing south.



Figure D-37. Feature EN1-042808-WB033, facing east.



Figure D-38. Feature EN1-042808-WB034, facing east.



Figure D-39. Feature EN1-042808-WB035, facing west.



Figure D-40. Feature EN1-042808-WL024, facing north.



Figure D-41. Feature EN1-042808-WL025, facing south.



Figure D-42. Feature EN1-042808-WL029, facing south.



Figure D-43. Feature EN1-042808-WL033, facing south.



Figure D-44. Feature EN1-042808-WL042, facing north.



Figure D-45. Feature EN1-042908-FRS-002 (whiteboard mislabeled), facing north.



Figure D-46. Feature EN1-042908-GPYN-001, facing west.



Figure D-47. Feature EN1-042908-GPYS-001, facing south.



Figure D-48. Feature EN1-042908-WB037, facing west.



Figure D-49. Feature EN1-042908-WB038, facing east.



Figure D-50. Feature EN1-042908-WB039, facing east.



Figure D-51. Feature EN1-042908-WB040, facing east.



Figure D-52. Feature EN1-042908-WB041, facing south.



Figure D-53. Feature EN1-042908-WB042 (whiteboard mislabeled), facing east.



Figure D-54. Feature EN1-042908-WB044, facing east.



Figure D-55. Feature EN1-042908-WL015, facing south.

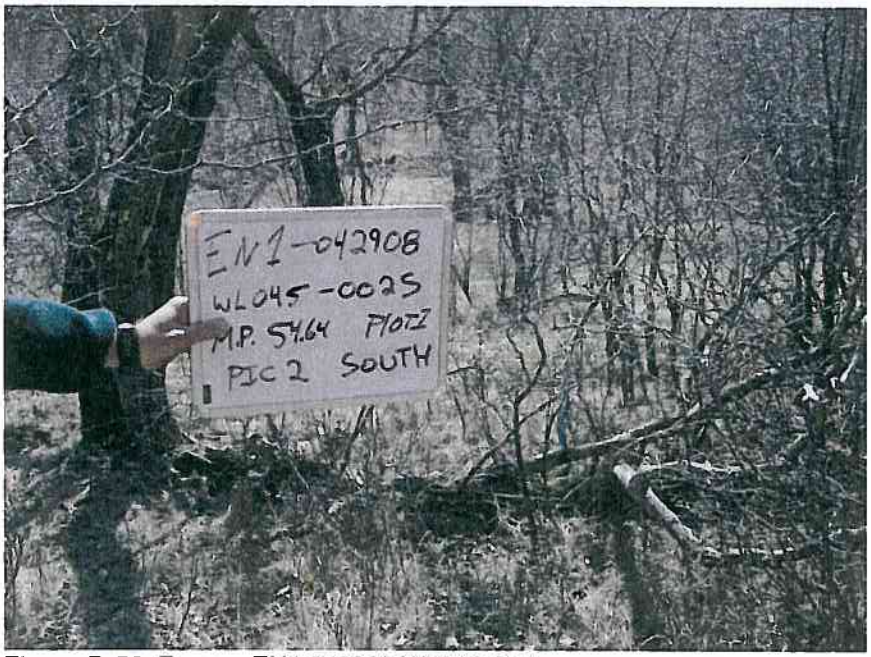


Figure D-56. Feature EN1-042908-WL045, facing south.



Figure D-57. Feature EN1-043008-WB050, facing east.



Figure D-58. Feature EN1-043008-WB051, facing west.



Figure D-59. Feature EN1-043008-WB052, facing east.



Figure D-60. Feature EN1-043008-WB053, facing east.



Figure D-61. Feature EN1-043008-WB054, facing west.



Figure D-62. Feature EN1-043008-WB055, facing west.



Figure D-63. Feature EN1-050108-WB056, facing west.



Figure D-64. Feature EN1-050108-WB057, facing east.



Figure D-65. Feature EN1-050108-WB058, facing west.



Figure D-66. Feature EN1-050108-WB059, facing west.



Figure D-67. Feature EN1-050108-WB060, facing west.



Figure D-68. Feature EN1-050108-WB061, facing east.



Figure D-69. Feature EN1-050108-WB062, facing west.



Figure D-70. Feature EN1-050108-WB063, facing west.



Figure D-71. Feature EN1-050108-WB064, facing west.



Figure D-72. Feature EN1-050108-WB065, facing east.



Figure D-73. Feature EN1-060808-WL002, facing north.



Figure D-74. Feature EN1-060808-WL003, facing south.



Figure D-75. Feature EN1-060808-WL004, facing north.



Figure D-76. Feature EN1-060908-WB068, facing northwest.



Figure D-77. Feature EN1-060908-WB087, facing west.



Figure D-78. Feature EN1-061008-WL027, facing north.



Figure D-79. Feature EN1-061008-WL031, facing south.



Figure D-80. Feature EN2-051408-WL016.



Figure D-81. Feature EN2-051508-WL018.

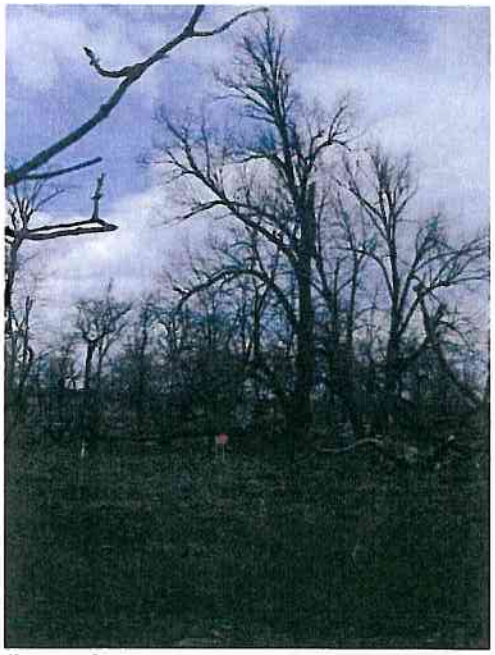


Figure D-82. Feature EN2-051508-WL021.



Figure D-83. Feature EN2-051608-WL049.



Figure D-84. Feature EN2-051608-WL053.



Figure D-85. Feature EN2-051608-WL054.



Figure D-86. Feature EN3042208-WB066.



Figure D-87. Feature EN3042208-WB067.



Figure D-88. Feature EN3042208-WB069.



Figure D-89. Feature EN3042208-WB0670.



Figure D-90. Feature EN3042208-WB0671.



Figure D-91. Feature EN3042208-WB072.



Figure D-92. Feature EN3042208-WB073.



Figure D-93. Feature EN3042208-WB074.



Figure D-94. Feature EN3042408-WB068.



Figure D-95. Feature EN3042408-WB075.



Figure D-96. Feature EN3042408-WB076.



Figure D-97. Feature EN3042408-WB076B.



Figure D-98. Feature EN3042408-WB077.



Figure D-99. Feature EN3042408-WL049.

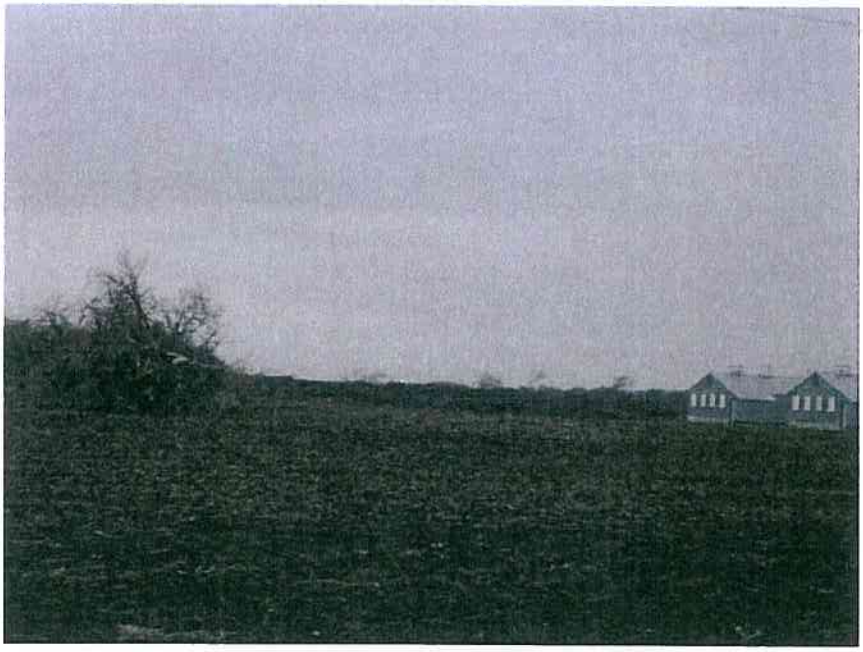


Figure D-100. Brush Piles Feature EN3042508-nearWB093.



Figure D-101. Feature EN3042508-WB078.



Figure D-102. Feature EN3042508-WB079.



Figure D-103. Feature EN3042508-WB081.



Figure D-104. Feature EN3042508-WB082.



Figure D-105. Feature EN3042508-WB083.



Figure D-106. Feature EN3042508-WB084.



Figure D-107. Feature EN3042508-WB092.



Figure D-108. Feature EN3042508-WB093.



Figure D-109. Feature EN3042508-WB094.



Figure D-110. Feature EN3042508-WB096.



Figure D-111. Feature EN3042508-WB097.



Figure D-112. Feature EN3042508-WL050.



Figure D-113. Feature EN3042608-WB095.



Figure D-114. Feature EN3042608-WB099.



Figure D-115. Feature EN3042608-WB098.



Figure D-116. Feature EN3042608-WB100.



Figure D-117. Feature EN3042608-WB101.



Figure D-118. Feature EN3042608-WB102.



Figure D-119. Feature EN3042608-WB103.



Figure D-120. Feature EN3042608-WB104.



Figure D-121. Feature EN3042608-WB105.



Figure D-122. Feature EN3042608-WB106.



Figure D-123. Feature EN3042608-WB107.



Figure D-124. Feature EN3042608-WB107.



Figure D-125. Feature EN3042608-WB108.



Figure D-126. Feature EN3042708-WB080.



Figure D-127. Feature EN3042708-WB086.



Figure D-128. Feature EN3042708-WB087.



Figure D-129. Feature EN3042708-WB089.



Figure D-130. EN3042708-WB090.



Figure D-131. Feature EN3042708-WB091.



Figure D-132. Feature EN3042708-WB085.



Figure D-133. Feature EN3042708-WB086.



Figure D-134. Feature EN3042708-WB088.



Figure D-135. Feature EN3042708-WB105.



Figure D-136. Feature EN3042608-WB106.

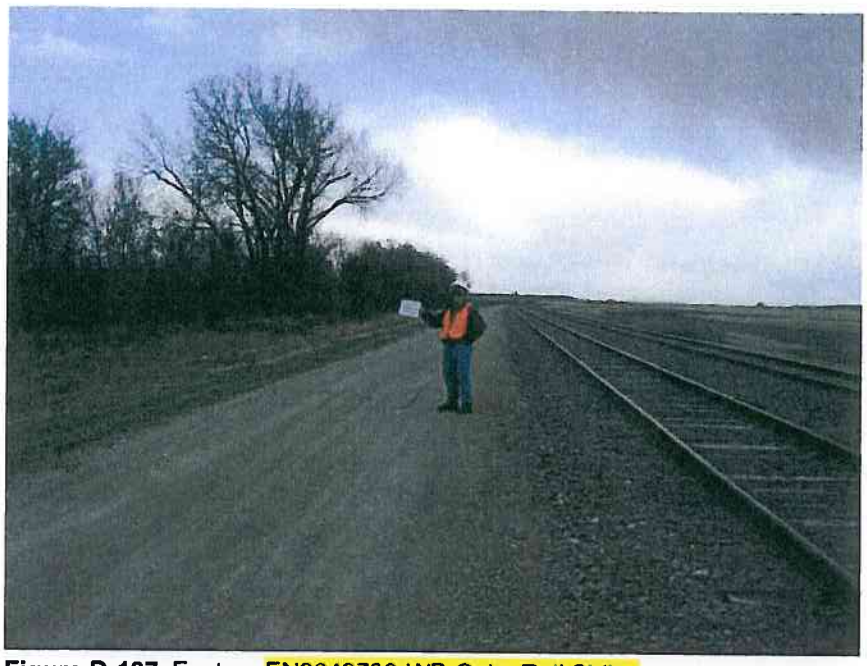


Figure D-137. Feature EN3042708-WB Oaks Rail Siding



Figure D-138. Feature EN3042708-WL051.



Figure D-139. Feature EN3042708-WL052.



Figure D-140. Feature EN4052008-WL023.



Figure D-141. Feature EN4052008-WL024.



Figure D-142. Feature EN4052008-WL025.



Figure D-143. Feature EN4052008-WL026.



Figure D-144. Feature EN4052008-WL028.



Figure D-145. Feature EN4052108-WL029.



Figure D-146. Feature EN4052108-WL030.



Figure D-148. Feature EN4052108-WL032.



Figure D-149. Feature EN4052108-WL033.



Figure D-150. Feature EN4052108-WL038.



Figure D-151. Feature EN4052108-WL039.



Figure D-152. Feature EN4052108-WL040.



Figure D-153. Feature EN4052108-WL041.

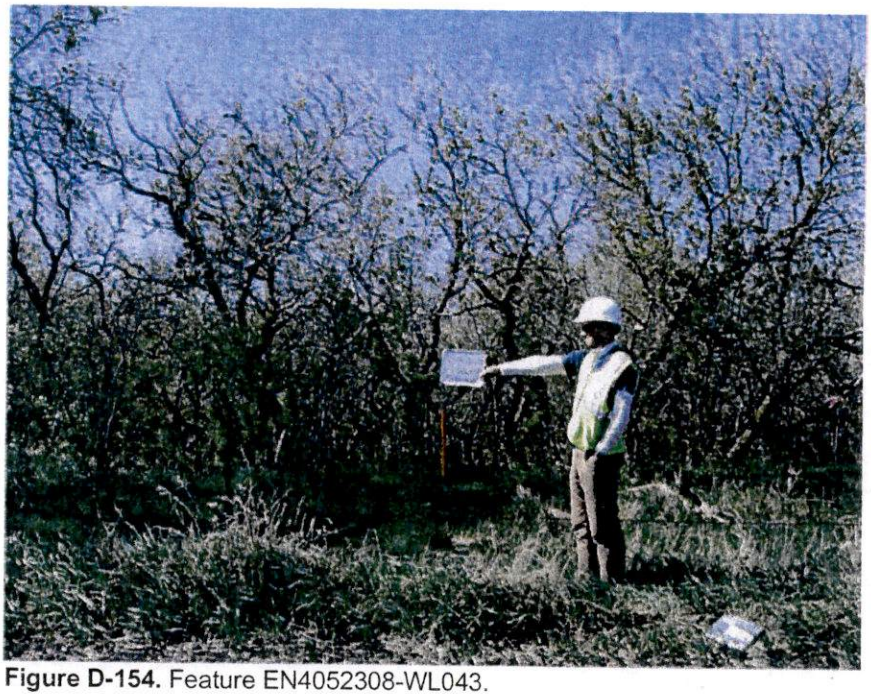


Figure D-154. Feature EN4052308-WL043.



Figure D-155. Feature EN4052308-WL044.



Figure D-156. Feature EN4052308-WL045.

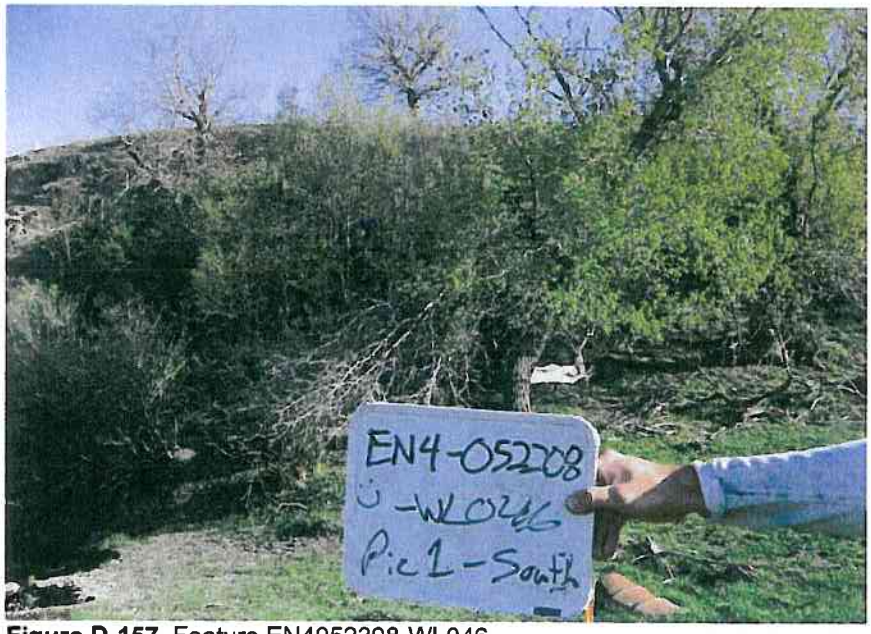


Figure D-157. Feature EN4052308-WL046.



Figure D-158. Feature EN4052308-WL048 (whiteboard mislabeled).



Figure D-159. Feature EN4052308-WL056.



Figure D-160. Feature EN4052308-WL059.