

**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**Enbridge Pipelines (Southern Lights) L.L.C.  
Pembina County LP Pipeline  
Siting Application**

**Case No. PU-07-75**

**FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER**

**December 31, 2007**

**Appearances**

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

Brian R. Bjella, Attorney-at-Law, Fleck, Mather & Strutz, Ltd., 400 East Broadway, Suite 600, Bismarck, North Dakota 58502, on behalf of Enbridge Pipelines (Southern Lights) LLC.

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, 1701 North 9th Street, Bismarck, ND 58501-1882, as Procedural Hearing Officer.

**Preliminary Statement**

On February 22, 2007, Enbridge Pipelines (Southern Lights) L.L.C. (Enbridge SL) filed a Letter of Intent with the Public Service Commission ("Commission"). Enbridge SL proposes to construct 28 miles of 20-inch liquid petroleum pipeline adjacent and parallel to its existing pipelines in Pembina County, North Dakota (LSr Line).

On March 7, 2007, the Commission acknowledged Enbridge SL's Letter of Intent, shortened the waiting period for filing the siting application to one day, and assessed a filing fee of \$100,000.00 due upon filing of the application.

On April 16, 2007, Enbridge SL filed an application for a waiver of procedures and time schedules, and consolidated applications for a certificate of corridor compatibility and route permit authorizing the construction of the LSr Line.

On August 22, 2007, the Commission deemed the application of Enbridge SL complete and issued a Notice of Filing and Notice of Hearing scheduling a public hearing for October 2, 2007, at 1:30 p.m. at the Cavalier Law Enforcement Center, Lower Level Meeting Room, Courthouse Drive, Cavalier, North Dakota. The public hearing was held as scheduled in conjunction with Enbridge Energy Limited, Partnership Case No. PU-07-108.

Enbridge SL requests the Commission waive the procedures set forth in North Dakota Century Code §§ 49-22-08 and 49-22-08.1 to allow for single consolidated applications for corridor certificate and route permit for this project. Enbridge SL further requests that the Commission reduce the minimum width of the corridor for this project, from 2.8 miles, required under North Dakota Administrative Code § 69-06-04-02, to one mile.

The issues to be considered in this matter 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 December 4, 2007 Enbridge notified the Commission of an archeological site next to the Red River of the North.

On December 7, 2007 Enbridge filed a copy of Contractual Resolution of Dispute Between the North Valley Water District and Enbridge Pipelines (Southern Lights, LLC), Enbridge Energy, Limited Partnership concerning nine locations where existing Enbridge Energy, Limited Partnership pipelines and the proposed LSr line will cross North Valley Water District water lines.

On December 20, 2007 Enbridge filed an alternative for the proposed pipeline route at the Tongue River crossing with a map showing the route for this pipeline on the north and east side of the existing pipelines and expanding the width of the existing maintained clear cut right-of-way approximately 50 feet on each side of the river crossing.

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. Enbridge SL is a limited liability company with its operations center located at 1401 Hammond Avenue, Superior, Wisconsin.
2. Enbridge LP operates the Lakehead System beginning at the international border near Neche, North Dakota. There are currently five pipelines operating as a part of this system. When combined with the Canadian portion of the system, they form the longest liquid petroleum pipeline in the world. These two systems together are referred to as the Enbridge Mainline System. The first pipelines were constructed in the 1950s.
3. The purpose of the LSr Line is to ship crude oil from Canada to markets in the United States primarily in the Minneapolis, St. Paul and Chicago areas. The LSr Line will transport light and medium crude petroleum from Cromer, Manitoba and deliver such supplies into the Lakehead System tank farm and terminal facilities at Clearbrook, Minnesota. At the Clearbrook terminal, the crude oil and other liquid hydrocarbons can be further transported by a non-affiliated connecting carrier (Minnesota Pipe Line) for redelivery to Minnesota refineries or delivered into Midwest refinery markets via the Lakehead System.
4. Western Canadian supplies of crude oil are expected to increase, due primarily to production of oil sands in the Province of Alberta. Such production is expected to more than double for the forecast period between 2010 and 2015. Additionally, the American demand for petroleum products as an energy source and for other purposes is growing, and will continue to escalate throughout the Midwest area as population increases and economic activity expands, despite energy conservation, use of alternative energy and efficiency measures. With this rising demand for petroleum products as domestic supplies decline, refiners are looking to supplies from Canada as economical and secure alternatives to oil production countries outside North America. Thus, this pipeline provides the capacity necessary for transporting such increasing

volumes of western Canadian crude oil supplies to the Midwest and helps reduce the United States' dependence on crude oil from the Middle East.

5. The proposed LSr pipeline project consists of approximately 313 miles of 20-inch diameter pipeline. The pipeline will originate at Cromer, Manitoba, Canada and terminate at Clearbrook, Minnesota. This pipeline will parallel the Alberta Clipper Pipeline which was also the subject of the joint hearing, Commission Case No. PU-07-108. The LSr Line will enter Pembina County near Neche and extend southeasterly for approximately 28 miles and cross the Red River approximately two miles northeast of Bowsmont, North Dakota.

6. The LSr Line will have an annual capacity of approximately 186,000 barrels per day. No new pumping stations will be constructed within the State of North Dakota.

7. During construction, Enbridge SL will require construction corridor of 140 feet. However, an extra temporary area of up to 75 feet may be required in locations such as where the pipeline approaches roads, railroads and water bodies. Anticipated construction start date for the LSr Line is June 2008. The estimated construction completion date is on or before December 31, 2008, with the pipeline placed in service on that date.

8. Installing the proposed LSr Line in the existing pipeline corridor allows Enbridge SL to minimize land disturbances.

9. The design, construction, and operation of the pipeline will conform to the Department of Transportation regulations prescribed in 49 CFR Part 195-Transportation of Hazardous Liquids by Pipeline.

10. 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.

11. Enbridge SL evaluated a corridor width of one-mile for the exclusion, avoidance, selection and policy criteria of the Commission.

12. Direct impacts on the local economy will be minimal due to the size and duration of the project. Construction of the pipeline may affect, but is not likely to jeopardize, the continued existence of any listed endangered species and is not likely to destroy or adversely modify critical habitat. The project will have no significant impact on fish and wildlife resources, and no endangered or threatened plant or animal species are known to occupy the proposed route.

13. A total of six previous archeological surveys have been completed that directly relate to the proposed pipeline route. A review of SHPO's files identified one archeological site, being a historical ox-cart trail referred to as an Angle Road, which has been determined eligible for nomination to the National Register of Historic Places. Previous Enbridge LP pipelines have avoided impacts to the site by using conventional boring construction methods. Enbridge SL also proposes to bore beneath Angle Road for construction of this pipeline project. Thus, the historic site will be avoided. Enbridge SL completed a Class III cultural resource inventory for the proposed route through consultation with the North Dakota State Historic Preservation Office (SHPO).

14. The U.S. Fish and Wildlife Service owns land included within the Juhl National Wildlife Management Area, which is crossed by existing Enbridge LP pipelines. Enbridge SL has reviewed its proposed route and determined it is possible to avoid the Juhl National Wildlife Management Area by making a slight route deviation within the corridor. Therefore, the proposed pipeline will avoid this area.

15. The Pembina River also will be crossed by the pipeline. The Pembina River has been designated on the National Rivers Inventory ("NRI"). Thus, state and federal agencies need to avoid or mitigate actions that would adversely affect designated NRI river segments. Enbridge SL witness Mark S. Sitek provided Exhibit 3 showing an amendment to the original route proposal at the Pembina River crossing and testified that Enbridge would utilize a horizontal directional drilling method to cross underneath the Pembina River. Sitek testified that, on the North side of the Pembina River, the directional drill would start far enough from the river to drill under all the trees.

16. The pipeline will also cross the Tongue River and the Red River of the North. Enbridge's original proposed route deviates approximately 200 feet south and west of

the existing maintained right-of-way. Enbridge SL's December 20, 2007 filing proposes an alternative pipeline route that would cross the Tongue River immediately adjacent to and on the north and east side of the existing maintained right-of-way using an open cut method. For this pipeline, a swath of trees approximately 50 feet wide would be cleared for construction. Enbridge SL has not completed an archeological survey for the alternative pipeline route at the Tongue River crossing. The results of the archeological survey will be presented to the SHPO and the Commission. In the event SHPO determines there are archeological findings that preclude use of the alternative pipeline route, Enbridge SL will cross the Tongue River using the original proposed route and will utilize a horizontal directional drilling method to cross underneath the Tongue River. The directional drill will start far enough from the river to drill under all trees.

17. Sitek provided Exhibit 5 showing an amendment to the original route proposal in order to go around a very deep pond.

18. Sitek provided Exhibit 6 showing an amendment to the original proposed route crossing the Red River of the North. The amended route proposes a crossing closer to existing pipelines owned by Enbridge Energy, Limited Partnership. Sitek testified that due to use of the horizontal directional drilling method at the crossing, all trees will be avoided.

19. The proposed pipeline route is located within 500 feet of three inhabited rural residences. Enbridge SL has obtained waivers from the owners of each of the residences to allow construction within 500 feet.

20. A cathodic protection system will be installed to prevent against corrosion. In addition, Enbridge SL will monitor flow of crude oil by a SCADA (Supervisory Control and Data Acquisition) system.

21. The vast majority of the land in the proposed corridor is agricultural land. Enbridge SL's application provides mitigation measures to minimize the impacts of construction on agricultural land.

22. Enbridge SL will work with landowners to make sure the appropriate amount of topsoil is being removed according to landowners' requirements and according to the requirements of the Commission.

23. An estimated 27 wetlands will be crossed by the route. No surface facilities will be installed within the wetlands as requested by the North Dakota Game and Fish Department. Enbridge SL anticipates issuance of a wetlands crossing permit by the U.S. Army Corps of Engineers. No wetlands will be permanently drained or filled as a

result of construction, and effects on wetlands are expected to be short term and minor. Enbridge SL's application describes mitigation measures to be implemented to minimize the impact of construction on wetlands.

24. The proposed pipeline will cross approximately 0.1 mile of wooded areas, primarily associated with the crossings of the Pembina and Tongue Rivers. Enbridge SL has agreed to reduce the width of the construction in wooded areas to 50 feet, to selectively cut and remove shrubs and trees within the work area leaving mature shrubs and trees in place where practical.

25. Enbridge SL consulted with the following state and federal agencies: the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, North Dakota Game and Fish Department, North Dakota State Health Department, North Dakota Department of Transportation, and the North Dakota State Water Commission. The North Dakota Game and Fish Department has reviewed the project and foresees no identifiable conflict with wildlife or wildlife habitat based on the information provided to it by Enbridge SL. The Department recommended measures to mitigate impacts to wetlands. The Department requested that every effort be made to prevent destruction of trees and shrubs, and that any of those removed be replaced at a two-to-one ratio. The North Dakota Game and Fish Department and the U.S. Fish and Wildlife Service have recommended that construction of major water body crossings be scheduled to avoid fish spawning periods. In addition, the U.S. Fish and Wildlife Service also recommended that construction of wetlands be scheduled to avoid disruption of waterfowl and other wildlife during the nesting season. Enbridge SL has incorporated all these requests into its construction plans.

26. Enbridge SL will utilize an environmental inspector on the project during active construction that will be responsible for overseeing contractor's compliance with the environmental requirements and permits during construction. The environmental inspector will have stop work authority.

27. After construction, Enbridge SL will conduct post construction monitoring of the project area until the right-of-way has been successfully restored and crossings stabilized. Post-construction monitoring will be conducted on all areas disturbed during construction to determine successful revegetation of all project areas.

28. Enbridge SL's Cultural Resource Report will be submitted to the SHPO. Enbridge SL anticipates SHPO concurrence with the report's recommendations.

29. Enbridge SL submitted Exhibit Nos. 3-6 at the hearing which identifies several minor re-routes. These re-routes are clear from any cultural resources.

30. Enbridge SL agreed to comply with the Tree and Shrub Mitigation Specifications submitted as Exhibit A at the hearing.

31. Enbridge SL intended to bury the proposed pipeline to a depth of 36 inches to top of pipe. However, at the hearing Enbridge SL agreed to bury the pipe 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.

32. Enbridge SL agreed to, 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 a description of methods used by Enbridge SL to reclaim those access roads.

33. At the hearing, a representative on behalf of North Valley Water District testified with respect to its rural water lines which will cross under the proposed pipeline at approximately nine locations. Enbridge SL committed that it will work with the water district to minimize disruption to its rural water lines. Enbridge SL and the North Valley Water District have reached an agreement regarding mitigation measures needed at the nine crossings and have filed a copy of that agreement with the Commission.

34. On December 4, 2007 Enbridge notified the Commission of an archeological site next to the Red River of the North. Enbridge proposes to avoid impacting the site by boring under it. It is anticipated that the North Dakota SHPO will concur with this recommendation.

35. The proposed pipeline was evaluated for the exclusion, avoidance, and selection of policy criteria. Based on this analysis, the Commission believes the proposed route is the best location for the pipeline.

36. North Dakota Century Code § 49-22-07.2 authorizes the Commission to waive procedures, time schedules, and public hearings otherwise required by the Siting Act, when the Commission finds that a proposed facility is of such length, design, location or purpose that it will produce minimal adverse effects.

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

### **Conclusions of Law**

1. The Commission has jurisdiction over the applicant, Enbridge Pipelines (Southern Lights) L.L.C., and over the subject matter of this application under North Dakota Century Code Chapter 49-22.
2. Enbridge SL is a utility as defined in North Dakota Century Code Section 49-22-03(13).
3. The pipeline proposed by Enbridge SL is a transmission facility as defined in North Dakota Century Code Section 49-22-03(12).
4. Enbridge SL 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 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 are compatible with the environmental preservation and the efficient use of resources.
7. The proposed pipeline corridor and route 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 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. Enbridge Pipelines (Southern Lights) L.L.C.'s application for waiver of procedures and time schedules is granted.
2. Enbridge SL is issued Certificate of Corridor Compatibility No. 99 and Route Permit No. 109 to construct the 28-mile, 20-inch transmission pipeline. The route that is approved for this purpose is the route identified on Exhibit D to the Application, as

supplemented by Exhibit Nos. 3-6 as submitted at the hearing and as amended by Enbridge's December 20, 2007 filing of the alternate route at the Tongue River crossing.

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

4. Certificate of Corridor Compatibility No. 99 and Route Permit No. 109 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. Enbridge SL 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. Enbridge SL 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. Enbridge SL shall conduct a preconstruction conference to be held prior to the commencement of any construction. The conference must include an Enbridge SL representative, Enbridge SL's construction supervisor, and Commission staff, to ensure that Enbridge SL fully understands the conditions set forth in this order.

8. Enbridge SL 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. Enbridge SL 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 Enbridge SL to open cut the road.

12. The alternative pipeline route proposed by Enbridge SL at the Tongue River is approved subject to completion of an archeological survey for the alternative pipeline route at Tongue River crossing and approval of the alternative pipeline route by SHPO. The alternative route will be adjacent to, parallel to, and northeast of existing pipelines. The crossing of the Tongue River will be open cut. The pipeline construction at the Tongue River shall avoid trees to the extent practicable. In the event SHPO determines there are archeological findings that preclude use of the alternative pipeline route, Enbridge SL will cross the Tongue River using the original proposed route and will utilize a horizontal directional drilling method to cross underneath the Tongue River. The directional drill will start far enough from the river to drill under all trees.

13. The width of the clear cuts through any wooded areas and shelterbelts must be kept at a maximum of 50 feet unless otherwise approved by the Commission.

14. Enbridge SL 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 Enbridge SL becomes aware of and that were not previously reported to the Commission.

15. 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.

16. All cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office (SHPO) and approved by the SHPO prior to the start of any fieldwork or construction activity. 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.

17. 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.

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

19. 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.

20. Enbridge SL 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 Enbridge SL to reclaim those access roads.

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

22. Enbridge SL shall comply with the Commission's Tree and Shrub Mitigation Specifications submitted as Exhibit A at the hearing. The Commission may order additional plantings if, after three years from the anniversary of the plantings, survival rates of plantings are less than 75% after three years.

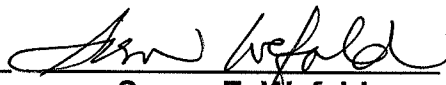
23. Enbridge SL shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed transmission facility.

24. Enbridge SL 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 3 months of the completion of the construction.

25. Enbridge SL's obligation for reclamation and maintenance of the right-of-way shall continue throughout the life of the pipeline.

**PUBLIC SERVICE COMMISSION**

  
**Tony Clark**  
**Commissioner**

  
**Susan E. Wefald**  
**President**

  
**Kevin Cramer**  
**Commissioner**

**PUBLIC SERVICE COMMISSION  
STATE OF NORTH DAKOTA**

**Certificate of Corridor Compatibility**

**Number 99**

*This is to certify that the Commission has designated a transmission facility corridor for Enbridge Pipelines (Southern Lights) L.L.C. to construct and operate a 28-mile, 20-inch pipeline with associated facilities and pipeline interconnections in Pembina County, North Dakota.*

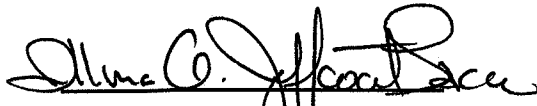
*The transmission facility corridor is designated by the Commission's December 31, 2007 Order in Case No. PU-07-75.*


*This certificate is subject to the conditions and limitations noted in that Order.*

*Bismarck, North Dakota, December 31, 2007.*

**ATTEST:**

**PUBLIC SERVICE COMMISSION**

  
**Executive Director**

  
**Commissioner**

# STATE OF NORTH DAKOTA

## Route Permit

### Number 109

*This is to certify that the Commission has designated a transmission facility route for Enbridge Pipelines (Southern Lights) L.L.C. to construct and operate approximately 28 miles of 20-inch oil pipeline with associated facilities and pipeline interconnections in Pembina County, North Dakota.*

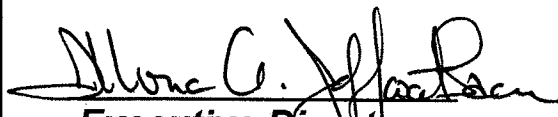
*The transmission facility route is designated by the Commission's December 31, 2007 Order in Case No. PU-07-75.*

*This permit is subject to the conditions and limitations noted in that Order.*

*Bismarck, North Dakota, December 31, 2007.*

**ATTEST:**

**PUBLIC SERVICE COMMISSION**

  
**Executive Director**

  
**Commissioner**

## 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, trees or shrubs anticipated to be cleared, regardless of size, shall be inventoried for replacement.
3. In 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 non-windbreak and non-shelterbelt areas, shrubs anticipated to be cleared in the permanent right-of-way shall be inventoried for replacement.
5. In 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 topsoil is not preserved and replaced, shrubs anticipated to be cleared shall be inventoried for replacement.

### **Clearing**

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

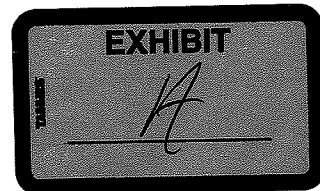
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Pages: 3

Exhibit A: Tree and Shrub Mitigation  
Specifications  
by Public Service Commission

10/02/2007 : Comm, Legal Illona, Mike, Pat Jerry, Tom



7. The width of clear cuts through woody areas shall be limited to 50 feet or less.
8. If the number of trees or shrubs actually cleared differs from the number inventoried, the difference shall be noted on the inventory.

#### **Replacement**

9. 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. 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. 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. Tree and shrub replacement shall not be conducted within 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. 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. 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. 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.