

Technical Memo



Responsive partner.
Exceptional outcomes.

To: Patrick Fahn, North Dakota Public Service Commission
From: Samantha Swanberg, Wenck Associates, Inc.
Copy: Kevin Magstadt, P.E., Wenck Associates, Inc.
Date: September 8, 2016
Subject: PU-15-114 Sacagawea Crude Oil Pipeline - Construction Inspection Report

Construction Inspection Report

Site Visits: July 21 and September 1, 2016

Sacagawea Pipeline, LLC – 16-inch Crude Oil Pipeline – PSC Case No. PU-15-114

In attendance:

- Matt Finken – Environmental Inspector – Keitu Engineers & Consultants, Inc.
- Evan Whiteford – Laborers Union Great Lakes Region Organizing Committee
- Samantha Swanberg – Environmental Scientist – Wenck Associates, Inc.

The construction inspection on July 21, 2016 was accompanied by Matt Finken and on September 1, 2016 by Evan Whiteford. During the July inspection there was a welding crew working on the southern half of the pipeline right-of-way (ROW), on spread one. Other than that very little work was being completed at the time of inspection due to one of the county road permits being taken away. The environmental inspector stated that the Lake Sakakawea bore was pulled the week before and that there was approximately 5 miles of topsoil replaced on the project ROW. During the September inspection, select violation sites that Mr. Whiteford had documented were observed from roadsides/public access. Most violation locations were wetland areas with poorly located, poorly maintained, or no erosion control. During inspection of these sites and other sites along the route, erosion control devices (such as silt fences) were checked. Some sites were missing erosion control, while other sites had erosion control, but needed maintenance. It did not appear that previously documented sites had improvements to erosion control.

Some of the observed areas of interest include (see attached pictures and map):

- Temporary gate for fence put up across the ROW (Photo #1, Point #443);
- Drainage area intersected by ROW. No erosion control devices were in place and the corridor had not been necked down in this area to reduce disturbance (Photo #2, Point #446);

Mr. Patrick Fahn
ND Public Service Commission
September 8, 2016



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- Drainage area intersected by ROW, which appeared to be a potential wetland based on the topography and change in vegetation. Topsoil pile is along the left of photo. (Photo #3, Point #446);
- Drainage area intersected by ROW. Pipe trenched and backfilled along the edge of the ROW. The drainage area appeared to be a potential wetland. Notice the vegetation change. However, the environmental inspector stated it was not a wetland. No erosion control devices were observed. The PSC was informed of this site the day after the inspection (Photo #4, Point #446);
- Excavator removing mats from road ditch (far side of the road), which was used for access to the ROW. Most of the topsoil had been replaced in this area (Photo #5, Point #447);
- ROW necked down to 50 ft width through tree rows. Unknown if or how many trees were taken out in this area. Topsoil replaced back on the ROW (Photo #6, Point #448);
- Silt fence observed in drainage area near crop field, which needs maintenance. The area was rutted up and needs to be smoothed out again. Topsoil had been replaced back on the ROW (Photo #7, Point #448);
- Lake Sakakawea bore area (Photo #8, Point #449);
- ROW going up to Lake Sakakawea bore area. The bore contractor wanted mats placed on ROW up to bore area. Mats are observed on the left side of the ROW (Photo #9, Point #449);
- Open trench with partially covered pipe in trench. Orange safety blockades to the left of photo. White and black pipe rollers (visible in trench in far distance of photo) were used to guide the pipe into the bore hole (Photo #10, Point #450);
- Open trench with orange blockades to the right of photo, trench spoil to the left. White and black pipe rollers in foreground were used to guide the bore pipe. Bridge was used for a vehicle crossing to get to the bore area (Photo #11, Point #450);
- Open trench with few orange blockades ending to the right of photo, and only partial orange fence to the left of trench. White and black pipe rollers in trench were used to guide the bore pipe. Photo taken from bridge shown in photo #11 (Photo #12, Point #450);
- Area near rural water line break. Open trench to the left of photo. No standing safety fence observed, unknown how long there has been an open trench, no work going on in the area. Environmental inspector thought they hit the rural water line while they were doing boring activities (Photo #13, Point #444);
- Area near rural water line break. Extended ROW for bore area. Topsoil pile to the left of photo on left side of ROW with vegetation growing on it (Photo #14, Point #444);
- Area near rural water line break. Looks like subsoil had been pushed around, there was some ponded water in back of photo (Photo #15, Point #444);
- ROW and access road next to wetland. No erosion control devices observed (Photo #16, Point #481);
- Drainage area, no erosion control device. Area along the drainage pathway looks light in color, possibly due to topsoil erosion (Photo #17, Point #482);

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- Swamp mats floating all around wetland. ROW is next to the wetland/open water. Wetland appears it may have had an influx of water at some point, reason for this is unknown (Photo #18, Point #483);
- Swamp mats floating in wetland, no erosion control devices observed. Small orange fenced in area, possible pot holing site, under water (Photo #19, Point #483);
- Swamp mats floating in wetland. Dirt pile in water seen to left of photo on wetland edge. No erosion control devices observed (Photo #20, Point #483);
- Silt fence in drainage area, needs maintenance (Photo #21, Point #484);
- Pipeline ROW goes down the hill in the distance and wetland was bored under. No erosion control devices observed (Photo #22, Point #485);
- No erosion control devices observed. Area appears to have been bored but it looks like the wetland was driven through (Photo #23, Point #488);
- Pipeline ROW has vegetation growing. Looks like the right side of the ROW, where no vegetation is growing, has been/or is being used as a travel lane (Photo #24, Point #490).

Lead Project Manager, Kevin Magstadt, and Environmental Scientist, Samantha Swanberg, prepared the report.

Kevin Magstadt, P.E., Principal/Regional Manager

Date

Samantha Swanberg, Environmental Scientist

Date

Enclosed

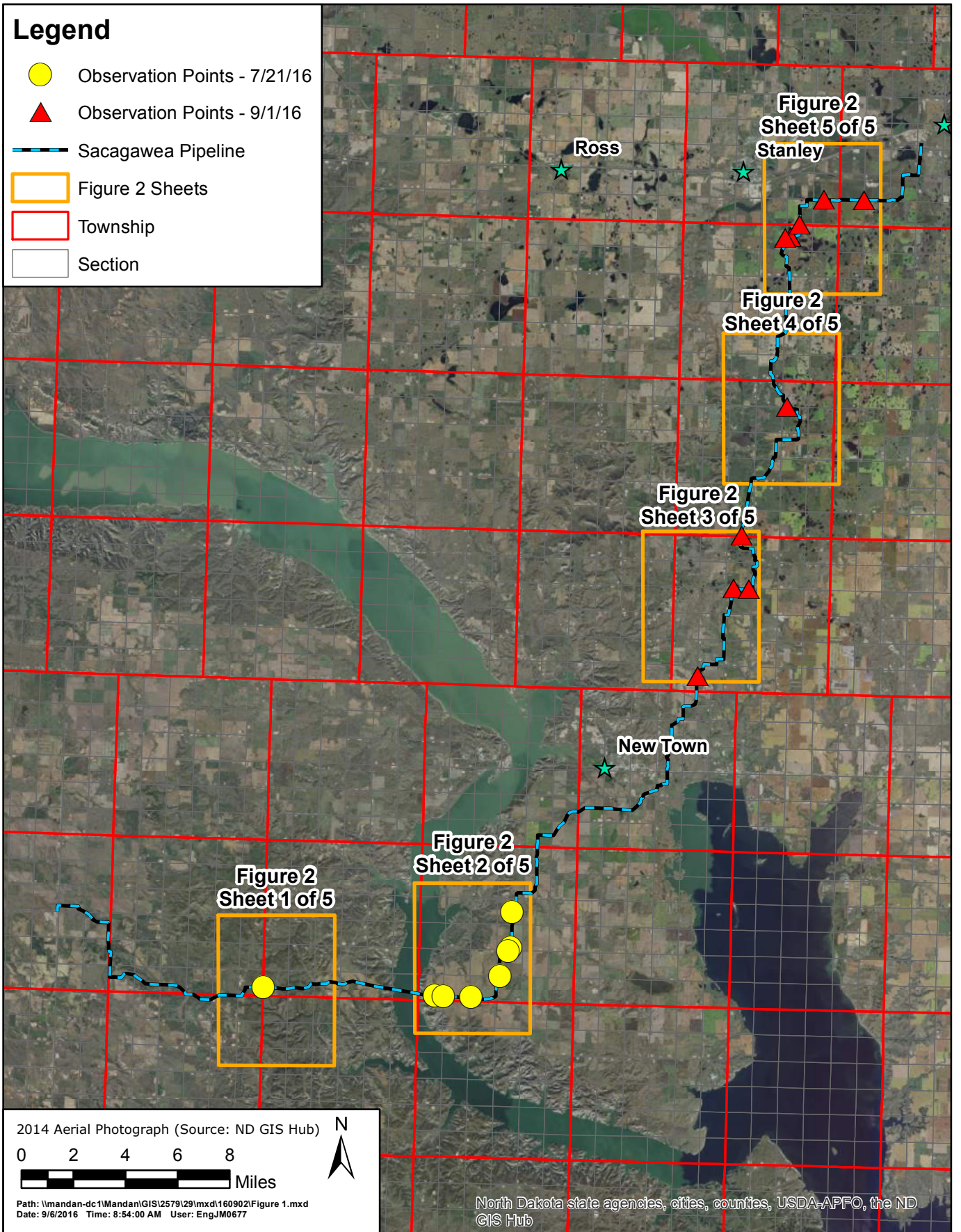
- Attachment 1: Figure 1 & 2 – Inspection GPS Waypoints
Attachment 2: Photo Log with Notes

Attachment 1

Figure 1 – Interim Inspection GPS Waypoints

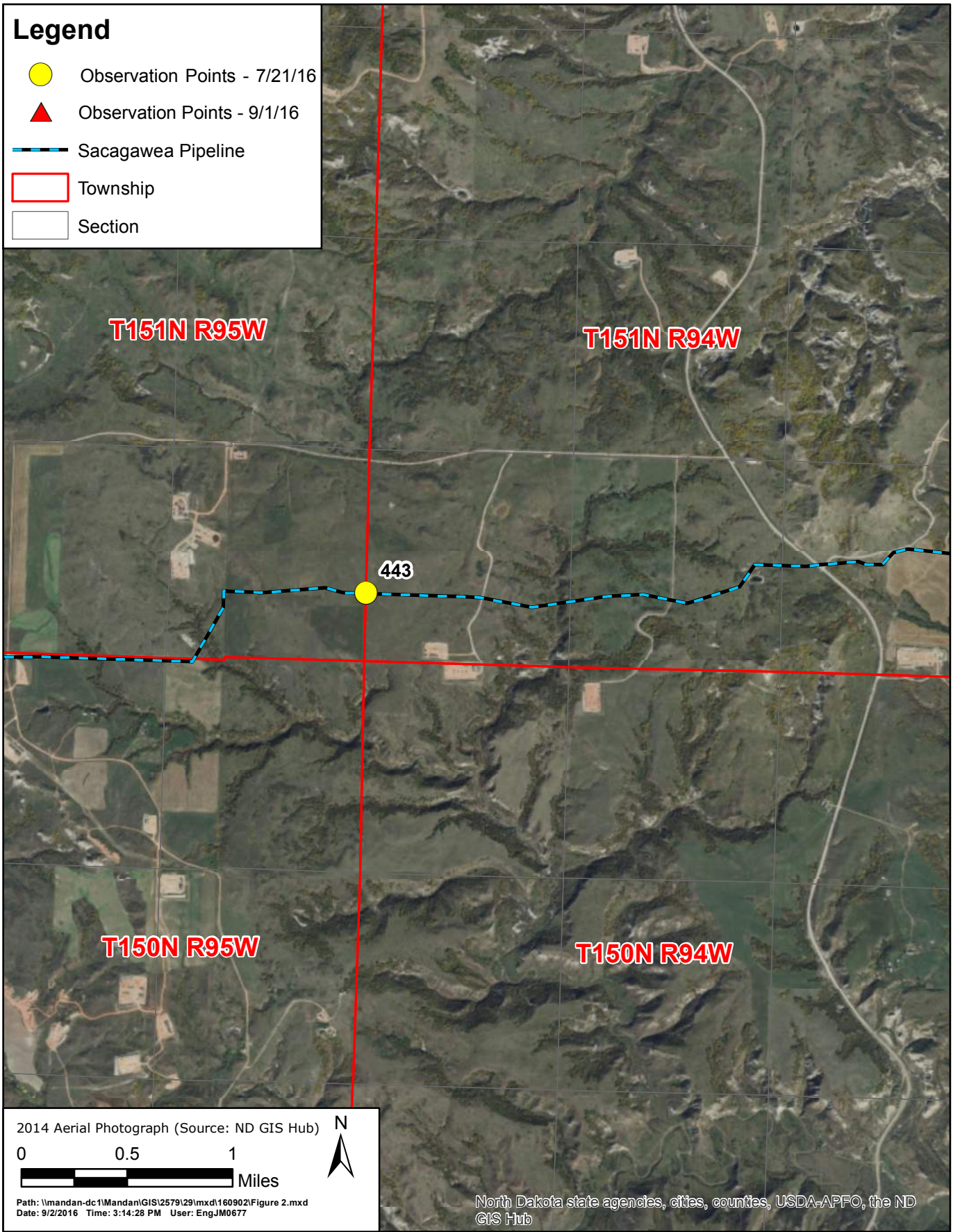
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- Observation Points - 7/21/16
- ▲ Observation Points - 9/1/16
- Sacagawea Pipeline
- Figure 2 Sheets
- Township
- Section



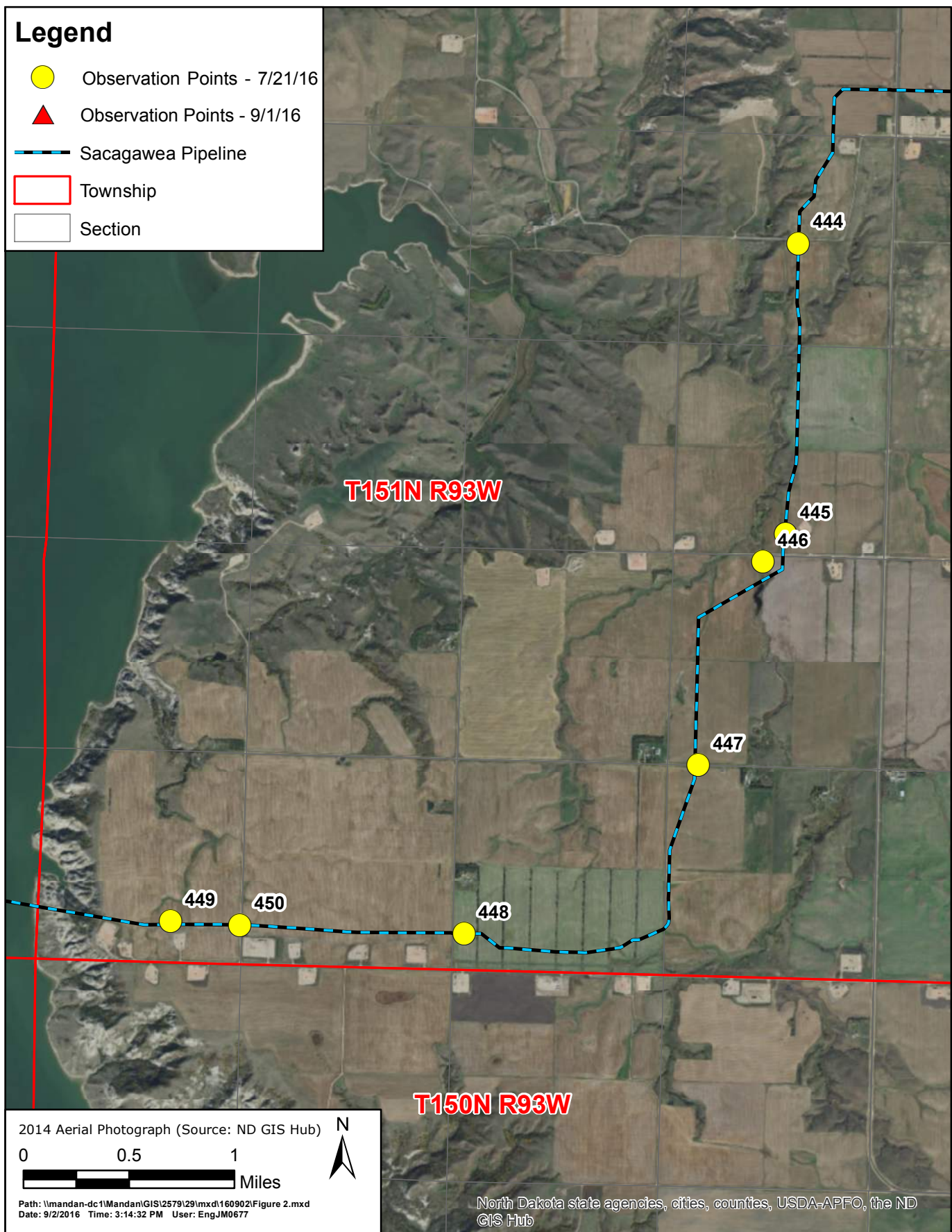
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- Observation Points - 7/21/16
- ▲ Observation Points - 9/1/16
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Legend

- Observation Points - 7/21/16
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- Section



T151N R93W

T150N R93W



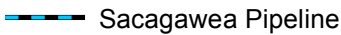


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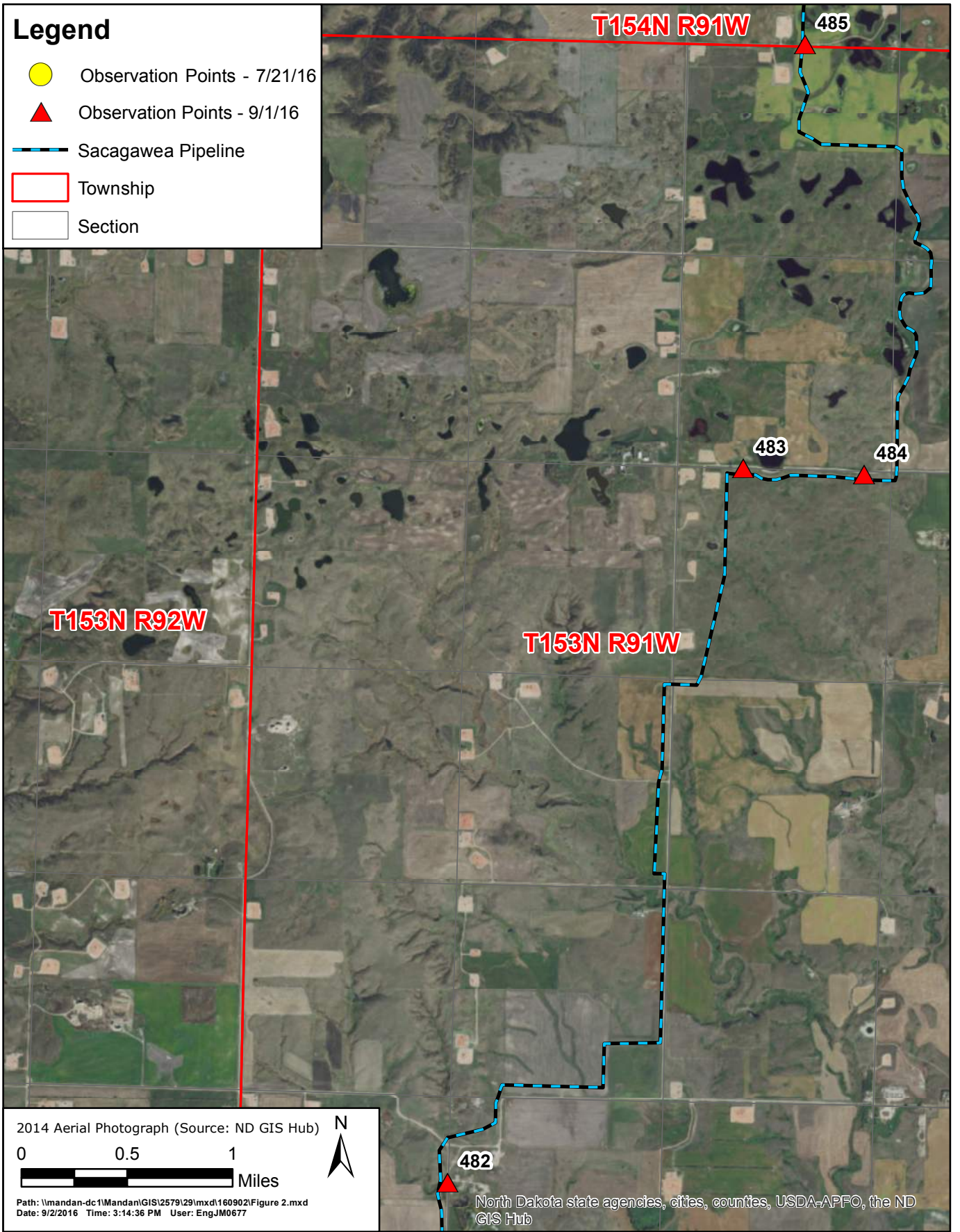
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North Dakota state agencies, cities, counties, USDA-APFO, the ND GIS Hub

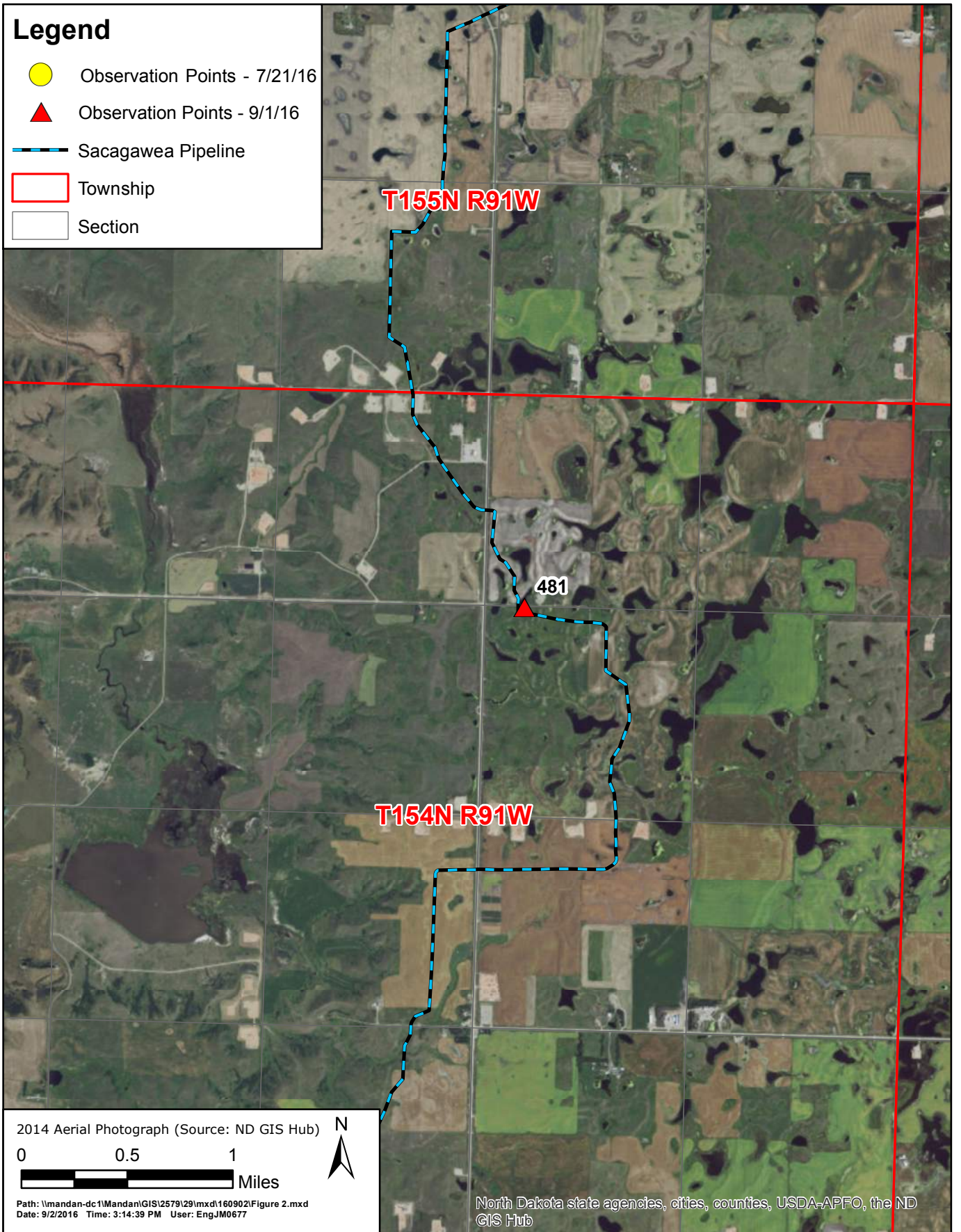
Legend

-  Observation Points - 7/21/16
-  Observation Points - 9/1/16
-  Sacagawea Pipeline
-  Township
-  Section

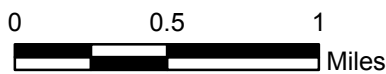


Legend

- Observation Points - 7/21/16
- ▲ Observation Points - 9/1/16
- Sacagawea Pipeline
- Township
- Section



2014 Aerial Photograph (Source: ND GIS Hub)

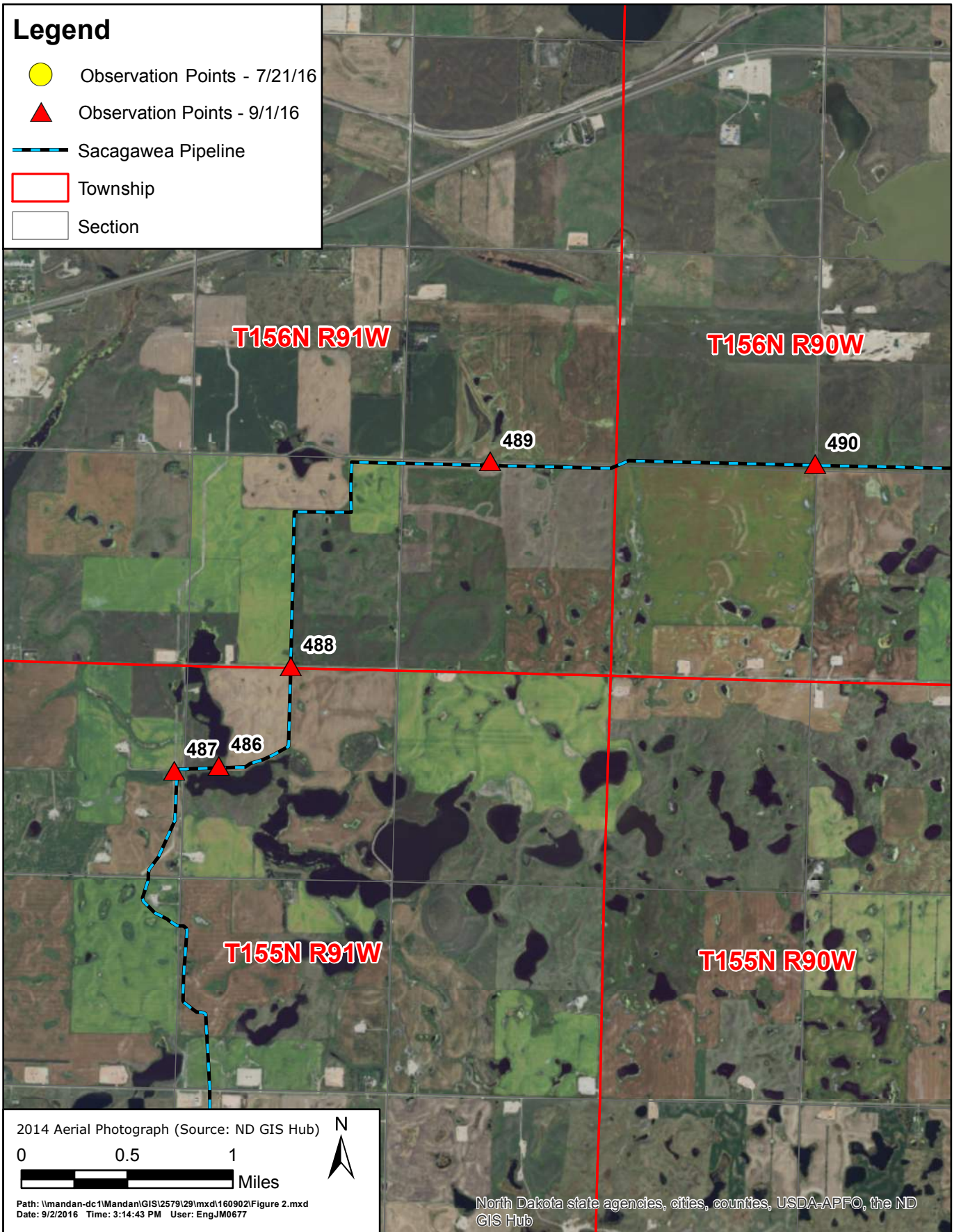


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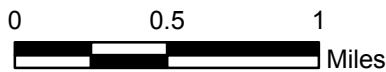
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Legend

- Observation Points - 7/21/16
- ▲ Observation Points - 9/1/16
- Sacagawea Pipeline
- Township
- Section



2014 Aerial Photograph (Source: ND GIS Hub)



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Attachment 2

Photo Log with Notes



Photo 1. (GPS Point #443) – Temporary gate for fence put up across the ROW. Site visit 7/21/2016.



Photo 2. (GPS Point #446) – Drainage area intersected by ROW. No erosion control devices were in place and the corridor had not been necked down in this area to reduce disturbance. Direction: East.



Photo 3. (GPS Point #446) - Drainage area along ROW, which appeared to be a potential wetland based on the topography, moist soil (along ROW edge) and change in vegetation. Topsoil pile along the left of photo. Drainage area looks like a potential wetland area.



Photo 4. (GPS Point #446) - Drainage area intersected by ROW. Pipe trenched and backfilled along the edge of the ROW. The drainage area appeared to be a potential wetland. Notice the vegetation change. However, the environmental inspector stated it was not a wetland. No erosion control devices were observed. The PSC was informed of this site the day after the inspection.



Photo 5. (GPS Point #447) – Excavator removing mats from road ditch (far side of the road), which was used for access to the ROW. Most of the topsoil had been replaced in this area. Direction: South



Photo 6. (GPS Point #448) – ROW necked down to 50 ft width through tree rows. Unknown if or how many trees were taken out in this area. Topsoil replaced back on the ROW. Direction: East.



Photo 7. (GPS Point #448) - Silt fence observed in drainage area near crop field, which needs maintenance. The area was rutted up and needs to be smoothed out again. Topsoil had been replaced back on the ROW.



Photo 8. (GPS Point #449) – Lake Sakakawea bore area. Direction: West



Photo 9. (GPS Point #449) – ROW going up to Lake Sakakawea bore area. The bore contractor wanted mats placed on ROW up to bore area. Mats are observed on the left side of the ROW. Direction: East



Photo 10. (GPS Point #450) - Open trench with partially covered pipe in trench. Orange safety blockades to the left of photo. White and black pipe rollers (visible in trench in far distance of photo) were used to guide the bore pipe into bore hole. Direction: West



Photo 11. (GPS Point #450) - Open trench with orange blockades to the right of photo, trench spoil to the left. White and black pipe rollers in foreground were used to guide bore pipe. Bridge was used for a vehicle crossing to get to the bore area. Direction: East



Photo 12. (GPS Point #450) - Open trench with few orange blockades ending to the right of photo, and only partial orange fence to the left of trench. White and black pipe rollers in trench were used to guide bore pipe. Photo taken from bridge shown in photo #11. Direction: East



Photo 13. (GPS Point #444) - Area near rural water line break. Open trench to the left of photo. No standing safety fence observed. Environmental inspector thought they hit the rural water line while they were doing boring activities. Direction: North



Photo 14. (GPS Point #444) - Area near rural water line break. Extended ROW for bore area. Topsoil pile to the left of photo on left side of ROW with vegetation growing on it. Direction: South



Photo 15. (GPS Point #444) - Area near rural water line break. Looks like subsoil had been pushed around, there was some ponded water in back of photo. Direction: South



Photo 16. (GPS Point #481) - ROW and access road next to wetland. No erosion control devices observed. Site visit 9/1/2016. Direction: West



Photo 17. (GPS Point #482) - Drainage area, no erosion control device. Area along the drainage pathway looks light in color, possibly due to topsoil erosion. Direction: West



Photo 18. (GPS Point #483) - Swamp mats floating all around wetland. ROW is next to the wetland/open water. Wetland appears it may have had an influx of water at some point, reason for this is unknown (there has been little to no rain in the last couple of weeks).
Direction: South



Photo 19. (GPS Point #483) - Swamp mats floating in wetland, no erosion control devices observed. Small orange fenced in area, possible pot holing site, under water. Direction: South



Photo 20. (GPS Point #483) - Swamp mats floating in wetland. Dirt pile in water seen to left of photo on wetland edge. No erosion control devices observed. Direction: South



Photo 21. (GPS Point #484) - Silt fence in drainage area, needs maintenance. Direction: South



Photo 22. (GPS Point #485) - Pipeline ROW goes down the hill in the distance and wetland was bored under. No erosion control devices observed. Direction: North



Photo 23. (GPS Point #488) - No erosion control devices observed. Area appears to have been bored but it looks like the wetland was driven through.



Photo 24. (GPS Point #490) - Pipeline ROW has vegetation growing. Looks like the right side of the ROW, where no vegetation is growing, has been/or is being used as a travel lane. Direction: East