

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

**ROUTE PERMIT FOR CONSTRUCTION OF A HIGH-VOLTAGE TRANSMISSION
LINE AND ASSOCIATED FACILITIES**

IN GOODHUE AND OLMSTED COUNTIES

**ISSUED TO
NORTHERN STATES POWER COMPANY**

PUC DOCKET NO. E-002/TL-11-800

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850, this route permit is hereby issued to:

NORTHERN STATES POWER COMPANY

Northern States Power Company is authorized by this route permit to construct approximately 29 miles of new 161 kV transmission line between the North Rochester Substation in Goodhue County and the Chester Substation in Olmsted County, Minnesota, and to expand and modify the Chester substation to accommodate the new 161 kV transmission line.

The transmission line and associated facilities shall be built within the route identified in this permit, as portrayed on the official route maps, and in compliance with all other conditions specified in this permit.

Approved and adopted this 12th day of September, 2012

BY ORDER OF THE COMMISSION

Burl W. Haar,
Executive Secretary



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Blanding's Turtle Fact Sheet

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1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Northern States Power Company (Permittee) pursuant to Minnesota Statute 216E.03 and Minnesota Rules 7850. This permit authorizes the Permittee to construct approximately 29 miles of new 161 kV transmission line (Chester line) and associated facilities in Goodhue and Olmsted counties, Minnesota, as identified in the attached route permit maps, hereby incorporated into this document.

2 PROJECT DESCRIPTION

The Permittee is authorized to construct a new 161 kV transmission line and associated facilities, described as follows:

- Construction of an east-west segment, approximately 17 miles in length, of 161 kV transmission line to be double-circuited with the Hampton-Rochester-La Crosse 345 kV transmission line from the North Rochester Substation in Pine Island Township, Goodhue County, Minn. to a point in Section 9 of Farmington Township, Olmsted County, Minn., as represented on the attached permit maps;
- Construction of a north-south segment, approximately 12 miles in length, of portions with single circuit 161 kV construction and portions with 161/69 kV double circuit construction, from the point the 161kV line de-couples with the 345 kV transmission line in Farmington township to the existing Chester substation in Marion township, Olmsted County, Minn.; and,
- Modifying the existing Chester substation, on existing Rochester Public Utilities property, to include an additional 161 kV circuit breaker and associated switches, bus work and controls.

2.1 Project Location

The project is located in Goodhue County, Minn., in Pine Island township, and in Olmsted County, Minn., in Oronoco, Farmington, Haverhill, and Marion townships.

2.2 Associated Facilities and Substations

The project will modify the existing Chester substation, on existing Rochester Public Utilities property, to include an additional 161 kV circuit breaker and associated switches, bus work and controls

2.3 Structures and Conductors

For the east-west segment, the applicant proposes to place the proposed Chester Line on double circuit structures with the 345 kV Project. Double circuit structures vary from 130 to 175 feet tall. Spans between structures can vary from 600 to 1,000 feet.

For the north-south segment, the applicant proposes to use a combination of single-pole, self-weathering steel, single-circuit and double-circuit structures. The 161 kV single circuit structures

are typically 70 to 105 feet tall and the double circuit 161/69 kV structures are typically 85 to 120 feet tall. Both would be spaced approximately 400 to 700 feet apart.

For the east-west segment (on 345 kV poles), the applicant proposes to install 345 kV conductor and insulators energized at 161 kV to support a future double-circuit capable design. This includes two 954 kcmil 54/7 Aluminum Core Steel Supported (“ACSS”) conductors or conductors of comparable capacity. This design does not increase the capacity of the 345 kV circuit. The second circuit will be installed contemporaneously with the first 345 kV circuit.

For the north-south segment, the applicant proposes to install 795 kcmil 26/7 ACSS circuit and 477 kcmil or conductors of comparable capacity for portions double circuited with the Peoples Cooperative 69 kV circuit. One or two shield wires will be used to protect the conductors from lightning strikes. One of these shield wires will incorporate fiber optic to facilitate relay control communications between substations and between substations, utility offices such as control centers. Fiber optics will be used only for utility purposes.

The transmission line shall be equipped with protective devices to safeguard the public if an accident occurs, such as breakers and switches located within connecting substations that de-energize the transmission line.

The transmission line shall be designed to meet or exceed local and state codes, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. This includes standards relating to clearance to ground, clearance to crossing utilities, clearance to buildings, clearance to vegetation, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

3 DESIGNATED ROUTE

The approved route and anticipated alignment are shown on the route maps attached to this permit and further designated as follows:

3.1 Route Width and Alignment

The designated route width for the new 161 kV transmission line shall be 600 feet in the north-south segment. The designated route width for the double-circuited east-west segment will be the same route width as the CapX Hampton-Rochester-La Crosse 345 kV transmission line (1000 feet).

The route width noted above provides the Permittee with flexibility for minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized below.

The designated route identifies an alignment that minimizes the overall potential impacts to the factors identified in Minnesota Rule 7850.4100 and which was evaluated in the environmental review and permitting process. Consequently, this permit anticipates that the actual right-of-way will generally conform to the alignment shown in the attached maps, unless changes are

requested by individual landowners, unforeseen conditions are encountered, or are otherwise provided for by this permit.

Any alignment modifications within this designated route shall be located so as to have comparable overall impacts relative to the factors in Minnesota Rule 7850.4100 as does the alignment identified in this permit, and shall be specifically identified, documented, and approved as part of the plan and profile submitted pursuant to Section 4.1 of this permit.

Route width variations outside the designated route may be allowed for the Permittee to overcome potential site specific constraints. These constraints may arise from any of the following:

- 1) Unforeseen circumstances encountered during the detailed engineering and design process.
- 2) Federal or state agency requirements.
- 3) Existing infrastructure within the transmission line route, including but not limited to roadways, railroads, natural gas and liquid pipelines, high voltage electric transmission lines, or sewer and water lines.
- 4) Planned infrastructure improvements identified by state agencies and local government units (LGUs) and made part of the record for this permit.

Any alignment modifications arising from these site specific constraints that would result in right-of-way placement outside the designated route shall be located so as to have comparable overall impacts relative to the factors in Minnesota Rule 7850.4100 as does the alignment identified in this permit and shall also be specifically identified, documented, and approved as part of the plan and profile submitted pursuant to Section 4.1 of this permit.

If the Commission approves a modification of a portion of the east-west segment of the La Crosse 345 kV Project route that is co-located with the Chester Project, the approval will apply to the Chester Project and no further Permittee or Commission action will be required.

3.2 Right-of-Way Placement

Where the transmission line route parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible, consistent with the criteria in Minnesota Rule 7850.4100, the other requirements of this permit, and for highways under the jurisdiction of the Minnesota Department of Transportation (MnDOT), MnDOT rules, policies, and procedures for accommodating utilities in trunk highway rights-of-way.

3.3 Right-of-Way Width

The new 161 kV transmission line will be built primarily with single pole structures, which will require an 80-foot right-of-way for the north-south segment (40 feet on each side of the transmission line centerline), and a 150-foot right-of-way along the double-circuited east-west segment.

4 GENERAL CONDITIONS

The Permittee shall comply with the following general conditions during construction of the transmission line and associated facilities and the life of this permit.

4.1 Plan and Profile

At least thirty (30) days before right-of-way preparation for construction begins on any segment or portion of the project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, transmission structure specifications and locations, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per the permit.

The Permittee may not commence construction until the thirty (30) days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in the plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five (5) days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

4.2 Construction Practices

The Permittee shall follow those specific construction practices and material specifications described in Northern States Power Company's route permit application to the Commission, dated September 19, 2011, and as described in the environmental assessment and Findings of Fact, unless this permit establishes a different requirement, in which case this permit shall prevail.

4.2.1 Field Representative

At least fourteen (14) days prior to commencing construction, the Permittee shall advise the Commission in writing of the person or persons designated to be the field representative for the Permittee with the responsibility to oversee compliance with the conditions of this permit during construction.

The field representative's address, phone number, email, and emergency phone number shall be provided to the Commission and shall be made available to affected landowners, residents, public officials and other interested persons. The Permittee may change the field representative at any time upon written notice to the Commission.

4.2.2 Local Governments

During construction, the permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services occur, these would be temporary and the permittee will work to restore service promptly.

Where any impacts to utilities have the potential to occur, permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall cooperate with county and local road authorities to develop appropriate signage and traffic management during construction.

4.2.3 Cleanup

All waste and scrap that is the product of construction shall be removed from the area and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

4.2.4 Noise

Construction and routine maintenance activities shall be limited to daytime working hours, as defined in Minnesota Rule 7030.0200, to ensure nighttime noise level standards will not be exceeded.

4.2.5 Vegetation Removal in the Right-of-Way

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences and vegetation in areas such as trail and stream crossings, where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall tree species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed.

In many cases certain low and slow growing species that do not exceed a mature height of 15 feet can be planted in the right-of-way to blend the difference between the right-of-way and adjacent wooded areas, to the extent that the low-growing vegetation will not pose a threat to the transmission facility or impede construction.

4.2.6 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the project during construction and maintenance. Structures shall be placed at the reasonable distance, consistent with sound engineering

principles and system reliability criteria, from intersecting roads, highway, or trail crossings and could cross roads to minimize or avoid impacts.

4.2.7 Erosion Control

The Permittee shall follow standard erosion control measures outlined in Minnesota Pollution Control Agency (MPCA) guidance and best management practices regarding sediment control practice during construction include protecting storm drain inlets, use of silt fences, protecting exposed soil, immediately stabilizing restored soil, controlling temporary soil stockpiles, and controlling vehicle tracking.

The Permittee shall implement reasonable measures to minimize runoff during construction and shall promptly plant or seed, erect sediment control fences (e.g. biorolls, sandbags, and silt fences), apply mulch (e.g. hay or straw) on exposed soils, and/or use erosion control blankets and turf reinforcement mats to provide structural stability to bare surfaces and slopes.

When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select specific site characteristic seed, certified to be free of noxious weeds.

Contours shall be graded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation, provide for proper drainage, and prevent erosion. All areas disturbed during construction of the facilities shall be returned to their pre-construction condition.

Where larger areas of one acre or more are disturbed or in other areas designated by the MPCA, the Permittee shall prepare the required Stormwater Pollution Prevention Plan (SWPPP) and obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) construction stormwater permit from the MPCA.

4.2.8 Wetlands and Water Resources

Structures shall be located to span watercourses, wetlands, and floodplains to the extent practicable and consistent with sound engineering principles. Minimal grading of areas around pole locations may be required to accommodate construction vehicles and equipment.

The Permittee shall endeavor to access wetlands and riparian areas using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts wherever possible.

Construction in wetlands and riparian areas shall be scheduled during frozen ground conditions, when practicable. When construction during winter is not possible, construction mats (wooden mats or a composite mat system) shall be used to protect wetland vegetation. All-terrain construction vehicles designed to minimize soil impact in damp areas may also be used.

No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. The structures shall be assembled on upland areas before they are brought to the site for installation.

Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area. The Permittee shall also utilize erosion control methods identified in Section 4.2.7 (Erosion Control), as warranted. Areas disturbed by construction activities shall be restored to pre-construction conditions (soil horizons, contours, vegetation, etc.).

4.2.9 Temporary Work Space

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Space shall be selected to limit the removal and impacts to vegetation.

Temporary lay down areas outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact by using the shortest route possible. Construction mats may also be used to minimize impacts on access paths and construction areas.

4.2.10 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Practices to restore areas impacted by construction and maintenance activities are also described in Section 4.2.7 of this permit.

Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line.

Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities. The Permittee shall compensate landowners for any yard/landscape, crop, soil compaction, drain tile, or other damages that may occur during construction.

4.2.11 Notice of Permit

The Permittee shall inform all employees, contractors, and other persons involved in the transmission line construction of the terms and conditions of this permit.

4.3 Periodic Status Reports

The Permittee shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly.

4.4 Complaint Procedures

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements set forth in the complaint procedures attached to this permit.

4.5 Notification to Landowners

The Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures at the time of the first contact with the landowners after issuance of this permit. At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the *Rights-of-Way and Easements for Energy Facility Construction and Operation* fact sheet provided by the Department of Commerce.

The Permittee shall contact landowners prior to entering the property or conducting maintenance along the route. The Permittee shall avoid construction and maintenance practices, specifically the use of herbicides or other pesticides, which are inconsistent with the landowner's or tenant's use of the land (See also, Section 4.2.5).

The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads.

4.6 Completion of Construction

4.6.1 Notification to Commission

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

4.6.2 As-Builts

Within 60 days after completion of construction, the Permittee shall submit copies of all the final as-built plans and specifications developed during the project.

4.6.3 GPS Data

Within 60 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (ArcGIS compatible map files, GPS coordinates, associated database of characteristics, etc.) for all structures associated with the transmission line, each switch, and each substation connected.

4.7 Electrical Performance Standards

4.7.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner that the maximum induced steady-state short-circuit current shall be limited to five milliamperes (mA), root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one mA rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the NESC. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

4.7.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

4.7.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems, or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is prudently feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

4.8 Other Requirements

4.8.1 Applicable Codes

The Permittee shall comply with applicable requirements of the NESC including clearances to ground, clearance to crossing utilities, clearance to buildings, right-of-way widths, erecting power poles, and stringing of transmission line conductors. The transmission line facility shall also meet the NERC reliability standards.

4.8.2 Other Permits

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required local, state and federal permits for the project and comply with the conditions of these permits. A list of the required permits is included in the route permit application and the environmental assessment. The Permittee shall submit a copy of such permits to the Commission upon request.

4.8.3 Pre-emption

Pursuant to Minnesota Statutes 216E.10, subdivisions 1 and 2, this route permit shall be the sole route approval required to be obtained by the Permittee and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

4.8.4 Delay in Construction

If the Permittee have not commenced construction or improvement of the route within four years after the date of issuance of this permit, the Commission shall consider suspension of the permit in accordance with Minnesota Rule 7850.4700.

4.9 Archeological and Historic Resources

If any previously unrecorded archaeological sites are discovered during construction of the project, the Permittee shall immediately stop work at the site and shall mark and preserve the site(s) and notify the Commission and the State Historic Preservation Office (SHPO) of the discovery. The Commission and the SHPO shall have three (3) working days from the time the agency is notified to conduct an inspection of the site if either agency chooses to do so. On the fourth day after notification, the Permittee may begin work on the site unless the SHPO has directed that work shall cease. In such event, work shall not continue until the SHPO determines that construction can proceed.

If human remains are encountered during construction, the Permittee shall immediately halt construction at that location and promptly notify local law enforcement authorities and the State Archaeologist. Construction at the human remains location shall not proceed until authorized by local law enforcement authorities or the State Archaeologist.

If any federal funding, permit, or license is involved or required, the Permittee shall notify the SHPO as soon as possible in the planning process to coordinate section 106 (36 C.F.R. part 800) review.

Prior to construction, construction workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction.

4.10 Avian Mitigation

The Permittee's standard transmission design shall incorporate adequate spacing of conductor(s) and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

5 SPECIAL CONDITIONS

Special conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two.

5.1 Blanding's Turtle

As part of the plan and profile submission, the Permittee shall describe actions taken to follow the fact sheet of recommendations for avoiding and minimizing impacts for Blanding's turtles. The summary of recommendations attached to the permit for avoiding and minimizing impacts to these populations, including the colored photocopies of the Blanding's turtles, shall be made available to all contractors and its employees.

5.2 Wildlife-friendly Erosion Control Matting

As part of the plan and profile submission, the Permittee shall describe actions taken to use wildlife-friendly erosion control matting in areas known to be inhabited by reptile and amphibian species.

5.3 Bird Flight Diverters, Rare Plant Communities, and Listed Species Habitat

In coordination with MnDNR, the Permittee shall identify appropriate locations for bird flight diverters along the transmission line route and, to extent practicable, span rare plant communities and areas supporting listed species. The permittee shall describe actions taken and mitigative measures developed regarding implementation of this permit condition in its plan and profile submission.

6 PERMIT AMENDMENT

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

7 TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new permittee, and interested persons such process as is required.

8 REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minnesota Rule 7850.5100 to revoke or suspend the permit.

**MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLIANCE FILING PROCEDURE
FOR PERMITTED ENERGY FACILITIES**

1. Purpose

To establish a uniform and timely method of submitting information required by Commission energy facility permits.

2. Scope and Applicability

This procedure encompasses all compliance filings required by permit.

3. Definitions

Compliance Filing – A sending (filing) of information to the Commission, where the information is required by a Commission site or route permit.

4. Responsibilities

A) The permittee shall eFile all compliance filings with Dr. Burl Haar, Executive Secretary, Public Utilities Commission, through the Commission’s electronic filing system (eDockets). The system is hosted by the Department of Commerce at: <https://www.edockets.state.mn.us/EFiling/home.jsp>

General instructions are provided on the website. To eFile a document a permittee must be registered and obtain a user ID and password.

B) All filings must have a cover sheet that includes:

1. Date
2. Name of submitter / permittee
3. Type of permit (site or route)
4. Project location
5. Project docket number
6. Permit section under which the filing is made
7. Short description of the filing

C) Filings that are graphic intensive (e.g., maps, plan and profile) must, in addition to being eFiled, be submitted as paper copies and on CD. Copies and CDs should be sent to: (1) Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN, 55101-2147, and (2) Department of Commerce, Energy Facility Permitting, 85 7th Place East, Suite 500, St. Paul, MN, 55101-2198. Additionally, the Commission may request a paper copy of any eFiled document.

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PERMIT COMPLIANCE FILINGS¹

PERMITTEE(S): Northern States Power Company
PERMIT TYPE: HVTL Route Permit
PROJECT LOCATION: Goodhue and Olmsted counties
PUC DOCKET NUMBER: E002/TL-11-800

Filing Number	Permit Section	Description	Due Date
1	4.1	Plan and profile of right-of-way (ROW)	30 days before ROW preparation for construction
2	4.2.1	Contact information for field representative	14 days prior to construction
3	4.2.10	Restoration complete	60 days after completion of all restoration activities
4	4.3	Periodic status reports	Monthly
5	4.4	Complaint procedures	Prior to start of construction
6	Complaint Handling Procedures	Complaint reports	By the 15 th of each month
7	4.5	Notification to landowners	First contact with landowners after permit issuance
8	4.6.1	Notice of completion and date of placement in service	Three days prior to energizing
9	4.6.2	Provide as-built plans and specifications	Within 60 days after completion of construction
10	4.6.3	GPS data	Within 60 days after completion of construction
11	4.9	Notification of previously unrecorded archaeological sites	Upon discovery

¹ This compilation of permit compliance filings is provided for the convenience of the permittee(s) and the Commission. However, it is not a substitute for the permit; the language of the permit controls.

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**MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT HANDLING PROCEDURES
FOR
HIGH VOLTAGE TRANSMISSION LINES**

1. Purpose:

To establish a uniform and timely method of reporting complaints received by the permittee concerning permit conditions for site preparation, construction, cleanup and restoration, operation, and resolution of such complaints.

2. Scope:

This document describes complaint reporting procedures and frequency.

3. Applicability:

The procedures shall be used for all complaints received by the permittee and all complaints received by the Commission under Minn. Rule 7829.1500 or 7829.1700 relevant to this permit.

4. Definitions:

Complaint: A verbal or written statement presented to the permittee by a person expressing dissatisfaction or concern regarding site preparation, cleanup, restoration, or other transmission line route permit conditions. Complaints do not include requests, inquiries, questions, or general comments.

Substantial Complaint: A written complaint alleging a violation of a specific route permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

Unresolved Complaint: A complaint which, despite the good faith efforts of the permittee and a person(s), remains to both or one of the parties unresolved or unsatisfactorily resolved.

Person: An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

5. Complaint Documentation and Processing:

- A) The permittee shall designate an individual to summarize complaints for submission to the Commission. This person's name, phone number and e-mail address shall accompany all complaint submittals.

- B) A person presenting a complaint should to the extent possible, include the following information in their communications:
 - 1. Name of complainant, address, phone number, and e-mail address.
 - 2. Date of complaint
 - 3. Tract or parcel number
 - 4. Whether the complaint relates to (1) a route permit matter, (2) a transmission line and associated facility issue, or (3) a compliance issue.

- C) The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
 - 1. Docket number and project name
 - 2. Name of complainant, address, phone number, and e-mail address
 - 3. Precise property description or parcel number
 - 4. Name of permittee representative receiving complaint and date of receipt.
 - 5. Nature of complaint and the applicable route permit conditions(s).
 - 6. Activities undertaken to resolve the complaint.
 - 7. Final disposition of the complaint.

6. Reporting Requirements:

The permittee shall report all complaints to the Commission according to the following schedule:

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Consumer Affairs Office at 1-800-657-3782 or consumer.puc@state.mn.us. Voice messages are acceptable. For email reporting, the email subject line should read "EFP Substantial Complaint" and include the appropriate project docket number.

Monthly Reports: By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be eFiled to Dr. Burl W. Haar, Executive Secretary, Public Utilities Commission, using the Minnesota Department of Commerce eDockets system (see eFiling instructions attached to this permit).

If no Complaints were received during the preceding month, the permittee shall submit (eFile) a summary indicating that no complaints were received.

The permittee shall commence and continue to file monthly reports from the time of permit issuance through the 12 months following the notice of project completion. Thereafter, the permittee shall file a complaint report with the Commission within 14 days of the receipt of a new complaint through the term of the permit.

7. Complaints Received by the Commission or Department of Commerce:

Complaints received directly by the Commission or Department from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation, and maintenance shall be promptly sent to the permittee.

8. Commission Process for Unresolved Complaints:

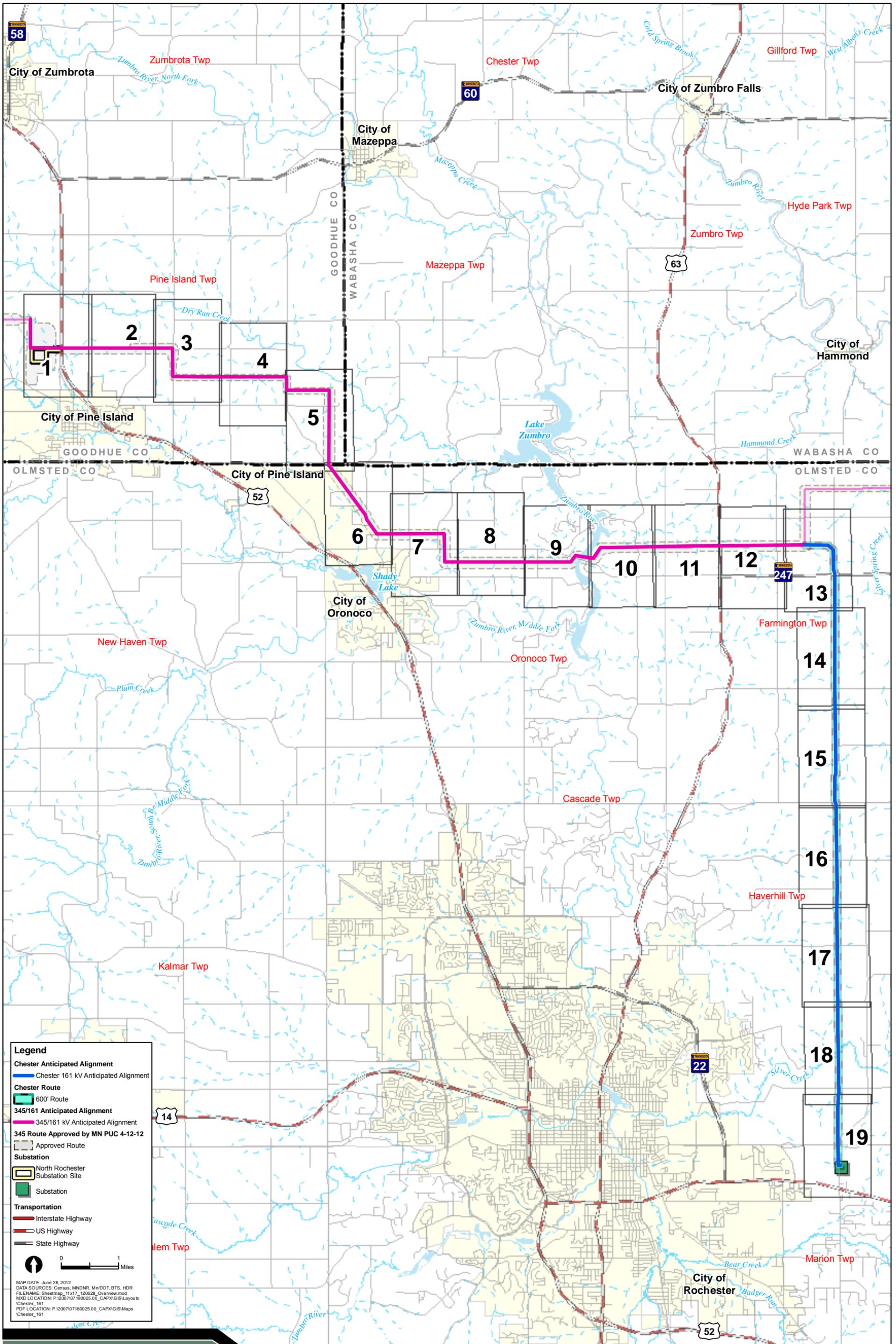
Commission staff shall perform an initial evaluation of unresolved complaints submitted to the Commission. Complaints raising substantial transmission line route permit issues shall be processed and resolved by the Commission. Staff shall notify the permittee and appropriate person(s) if it determines that the complaint is a substantial complaint. With respect to such complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the staff notification. The complaint will be presented to the Commission for a decision as soon as practicable.

9. Permittee Contact for Complaints and Complaint Reporting

The permittee will eFile the permittee's contact person for complaints within 14 days of the order granting a route permit. The permittee will include the contact person and their associated contact information (mailing address, phone number, and email address) in the permit mailing to landowners and local governments.

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HVTL ROUTE MAPS



Legend

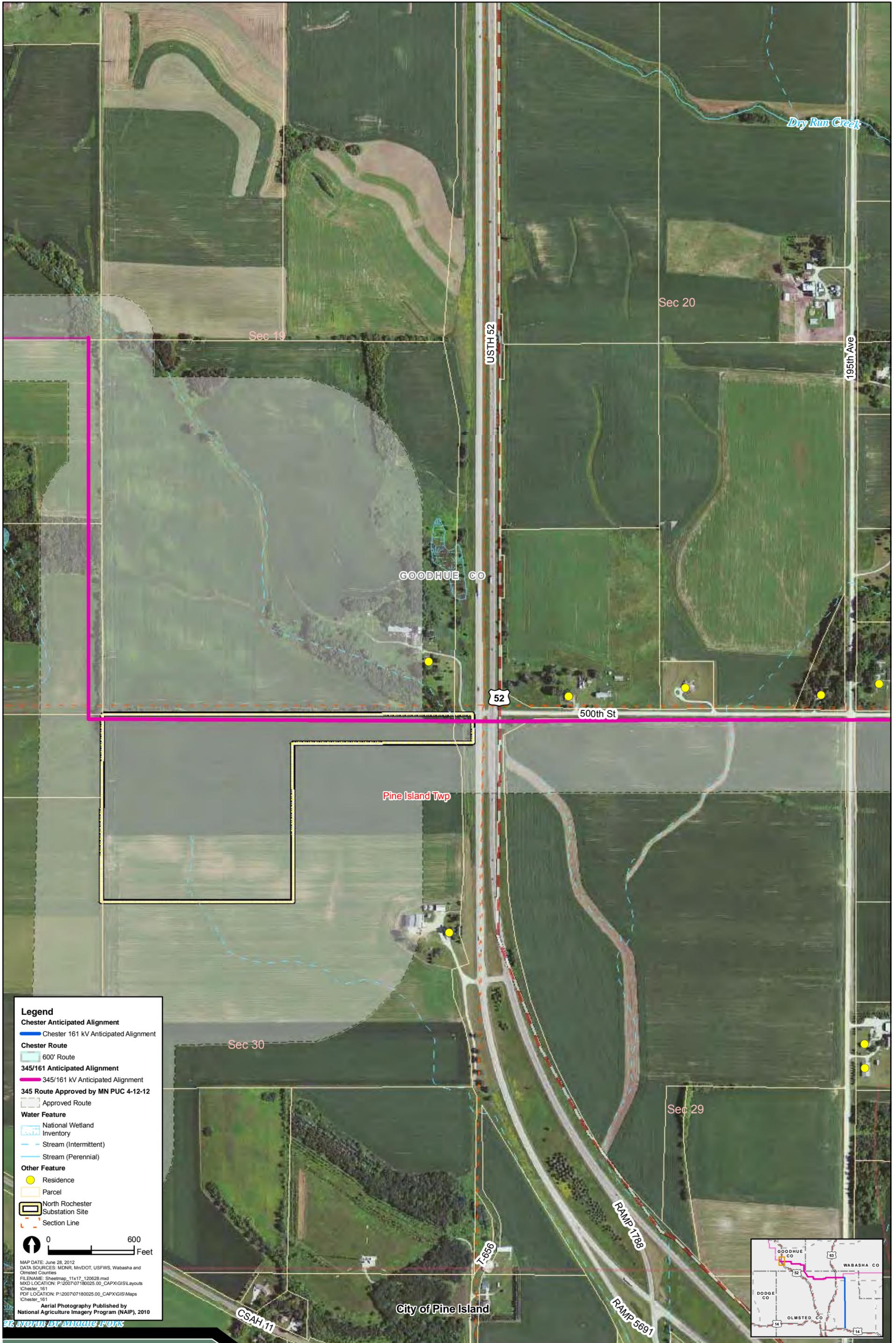
- Chester Anticipated Alignment**
 - Chester 161 kV Anticipated Alignment
- Chester Route**
 - 600' Route
- 345/161 Anticipated Alignment**
 - 345/161 kV Anticipated Alignment
- 345 Route Approved by MN PUC 4-12-12**
 - Approved Route
- Substation**
 - North Rochester Substation Site
 - Substation
- Transportation**
 - Interstate Highway
 - US Highway
 - State Highway

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PUC Docket #
E002/TL-11-800

North Rochester - Chester Transmission Project

Sheet Map Key
 June 2012



Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

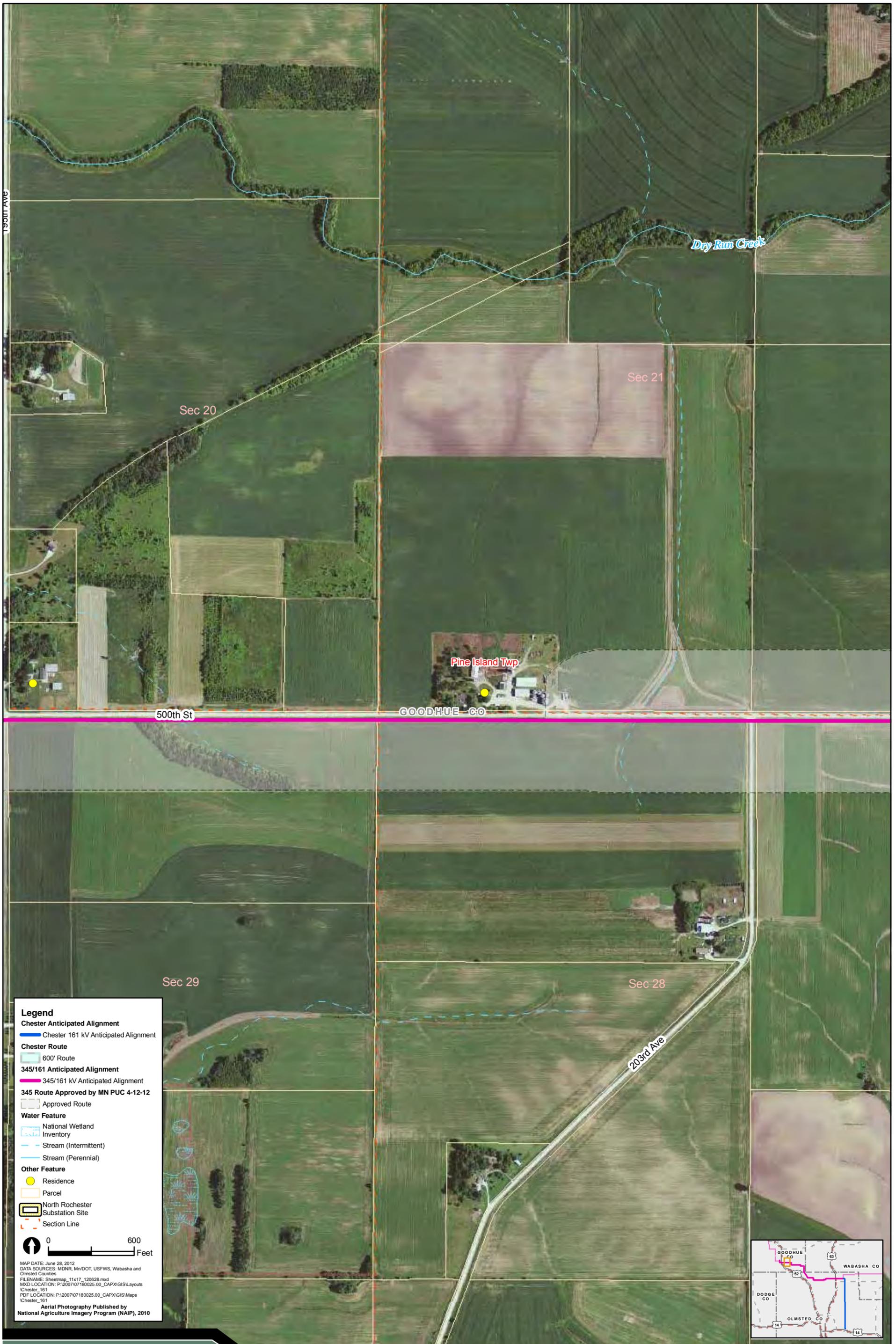
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

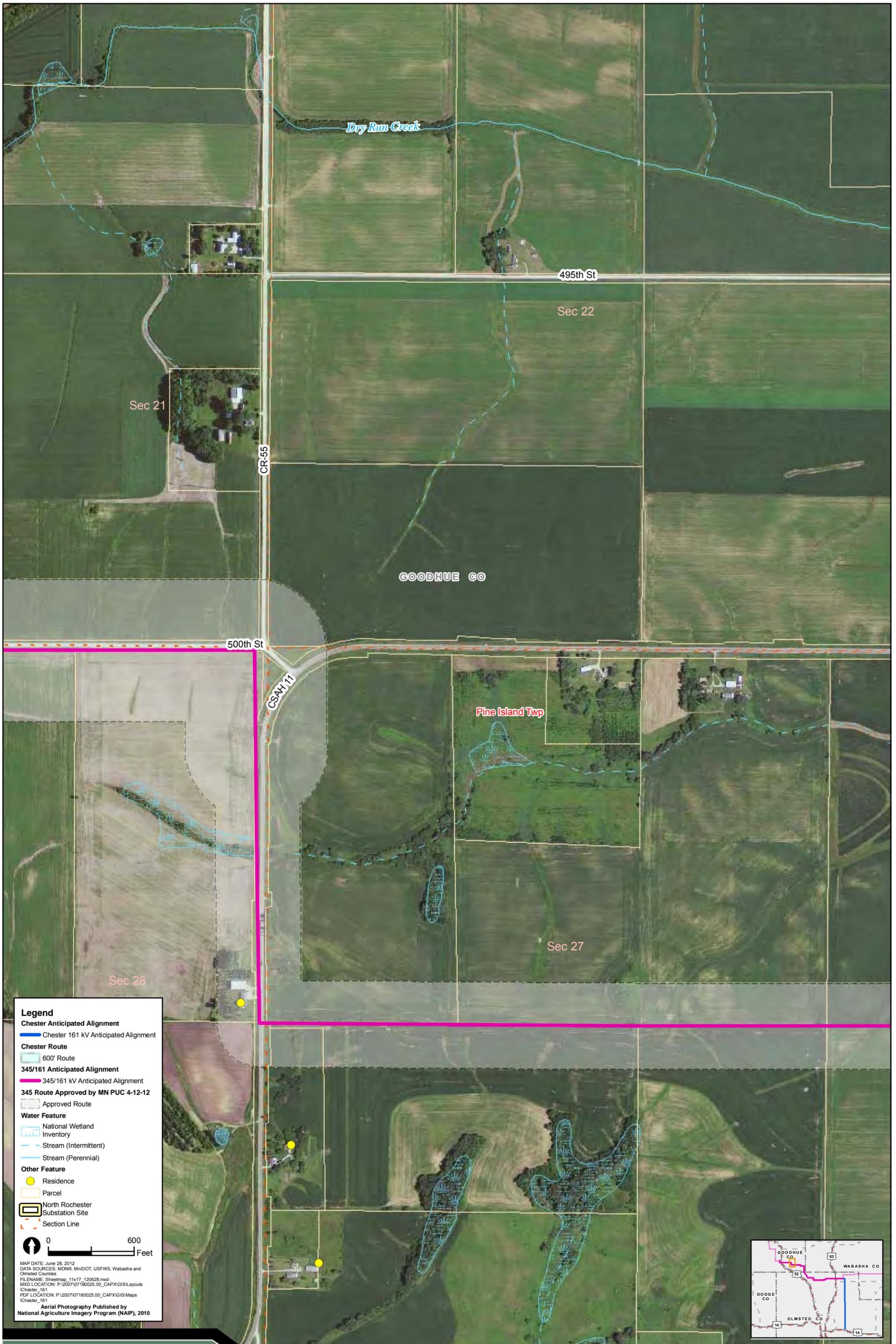
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

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- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

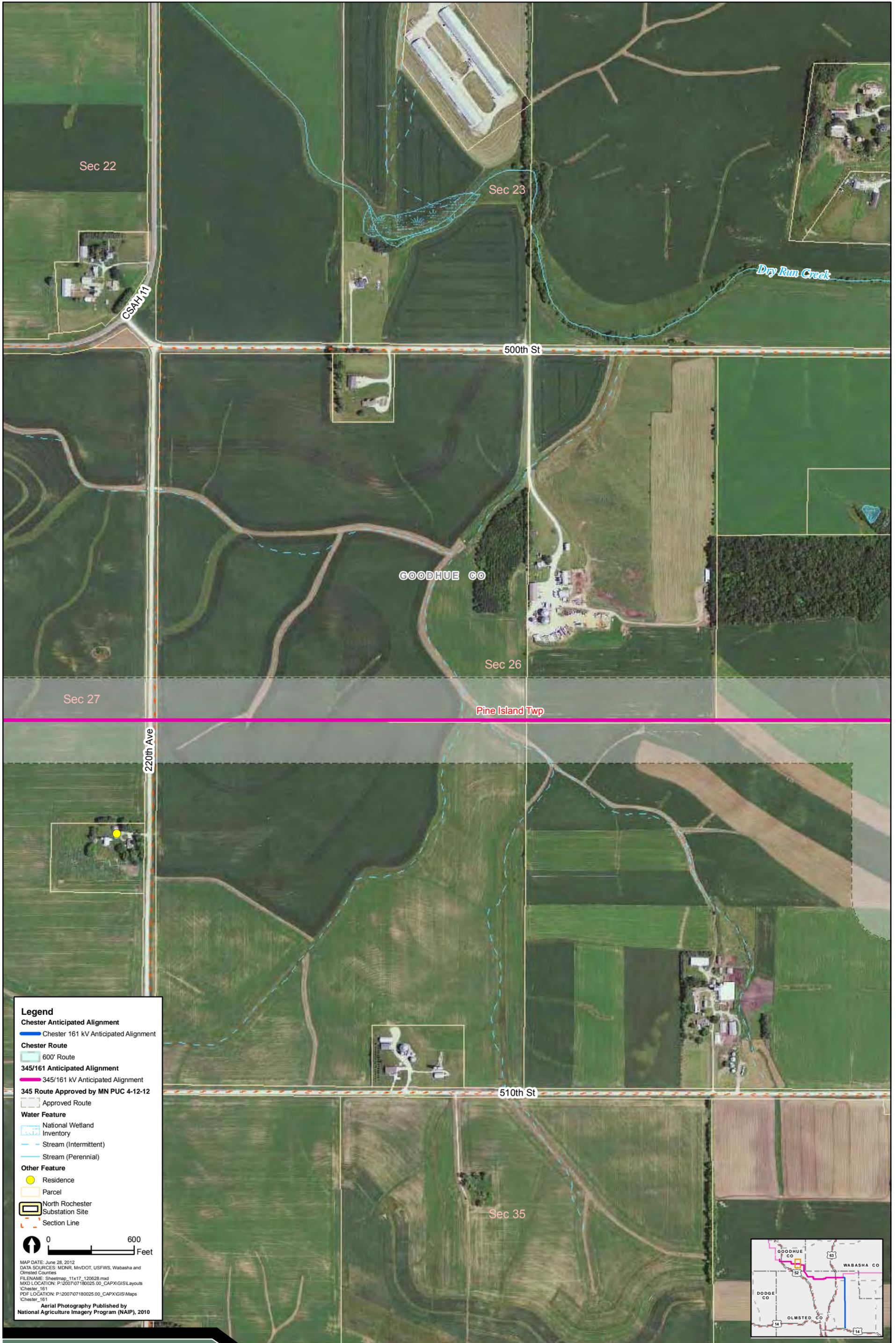
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

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Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

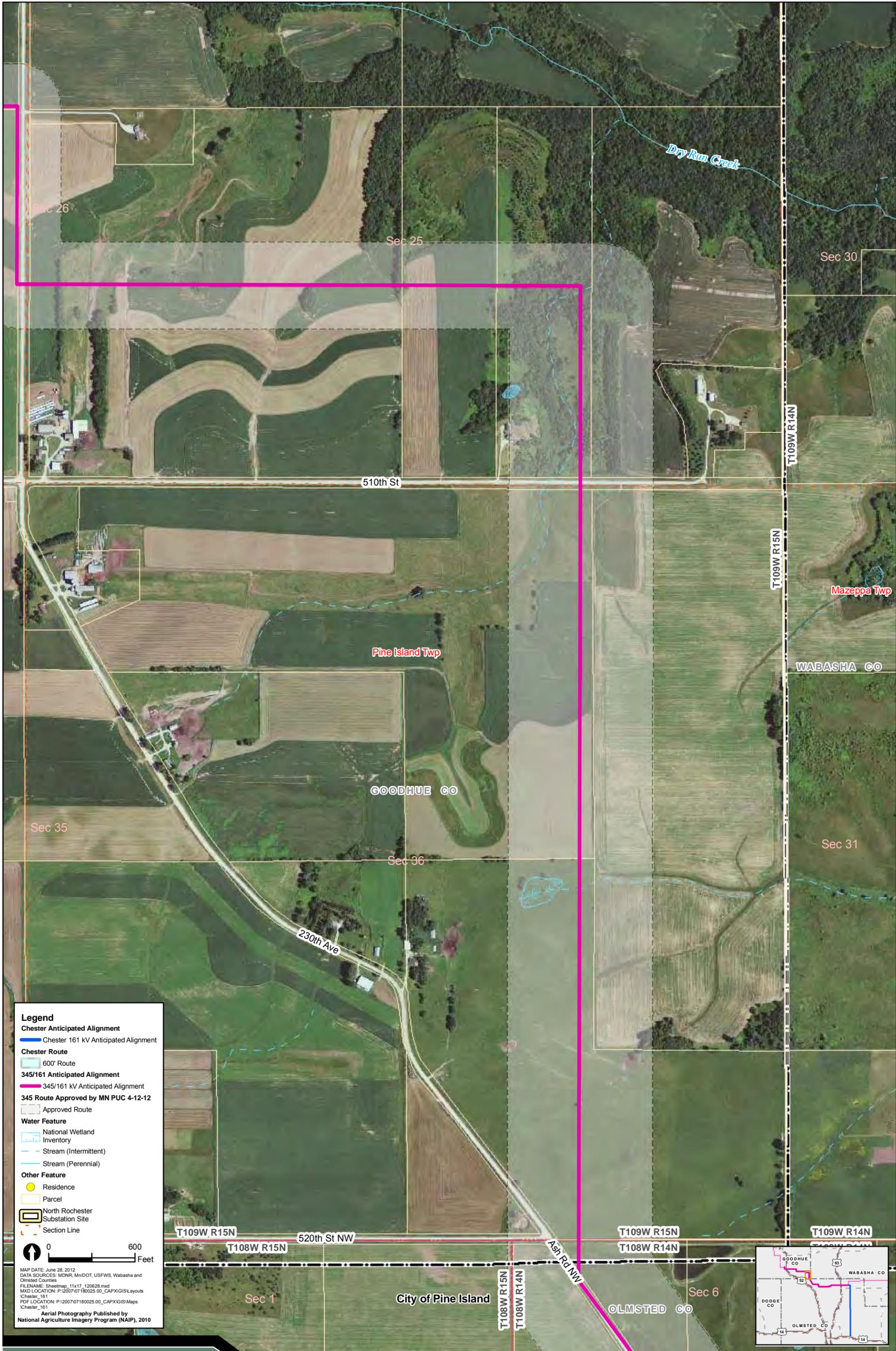
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

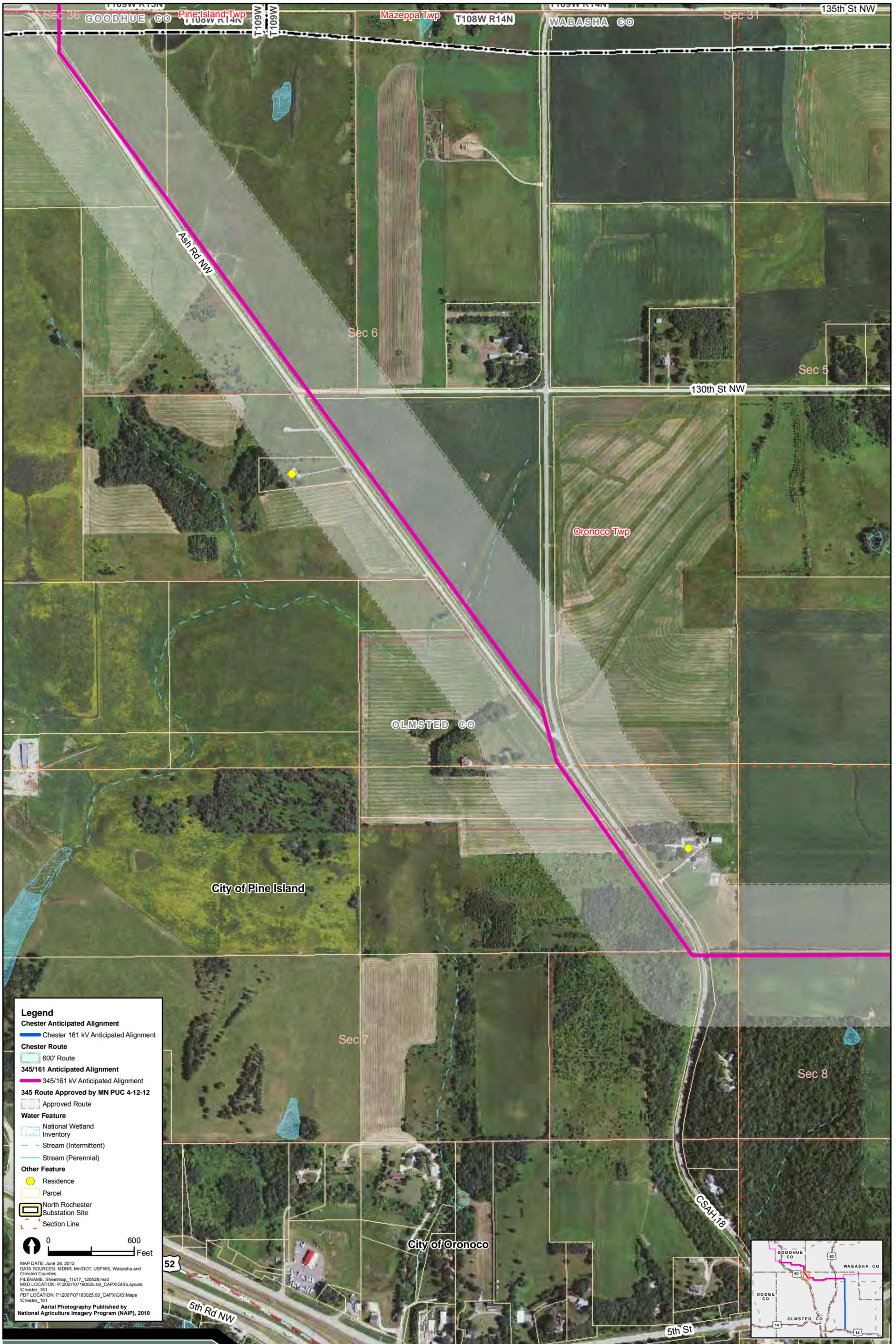
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**PUC Docket #
E002/TL-11-800**

North Rochester - Chester Transmission Project

Sheet Map 5 of 19



Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment
- Chester Route
- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment
- 345 Route Approved by MN PUC 4-12-12
- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

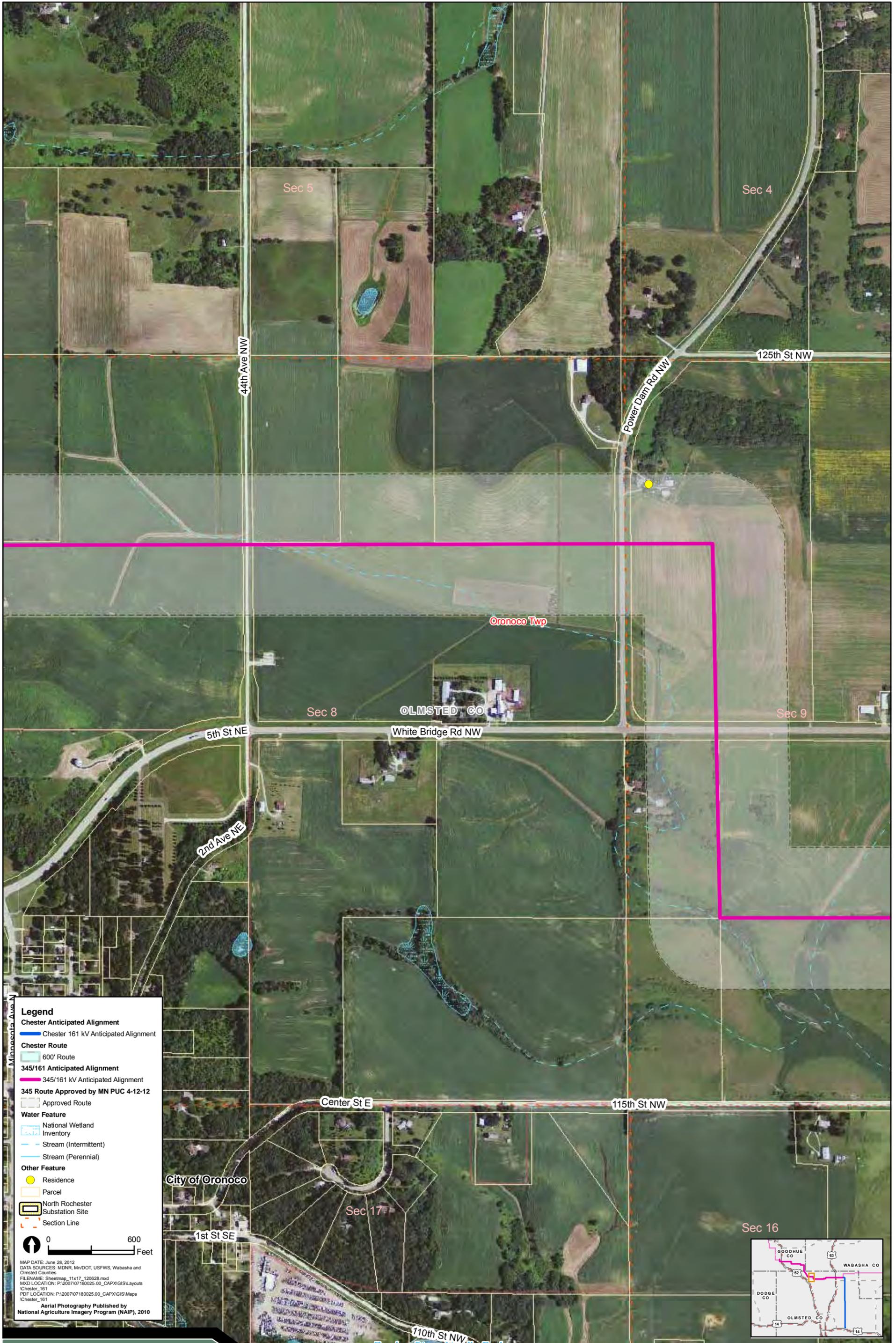
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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North Rochester - Chester Transmission Project

Sheet Map 7 of 19

Sec 4

Sec 3

125th St NW

25th Ave NW

OLMSTED CO

Oronoco Twp

White Bridge Rd NW

Sec 9

Sec 10

115th St NW

Sec 16

Sec 15

Legend

Chester Anticipated Alignment

Chester 161 kV Anticipated Alignment

Chester Route

600' Route

345/161 Anticipated Alignment

345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

Approved Route

Water Feature

National Wetland Inventory

Stream (Intermittent)

Stream (Perennial)

Other Feature

Residence

Parcel

North Rochester Substation Site

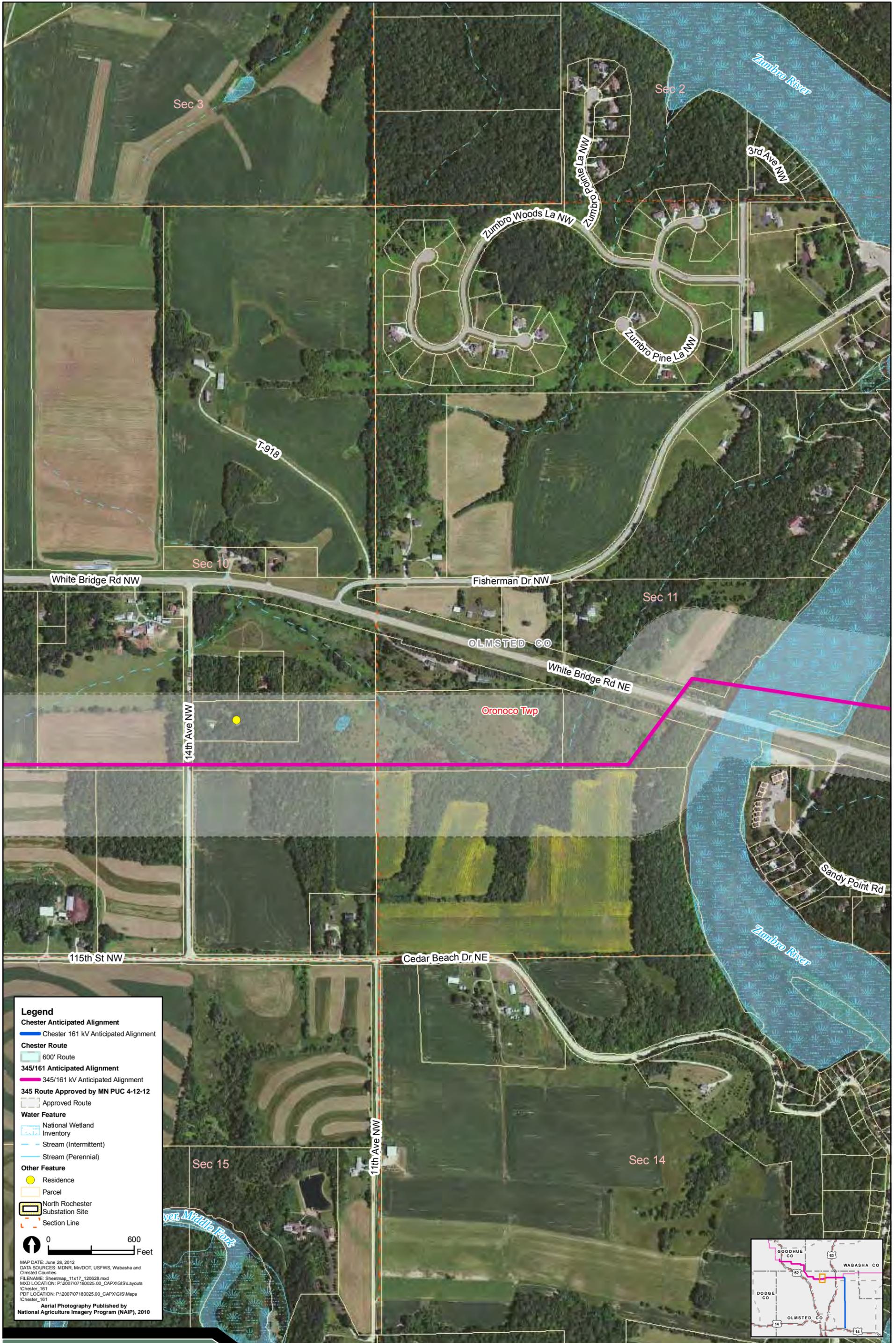
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Aerial Photography Published by National Agriculture Imagery Program (NAIP), 2010





Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

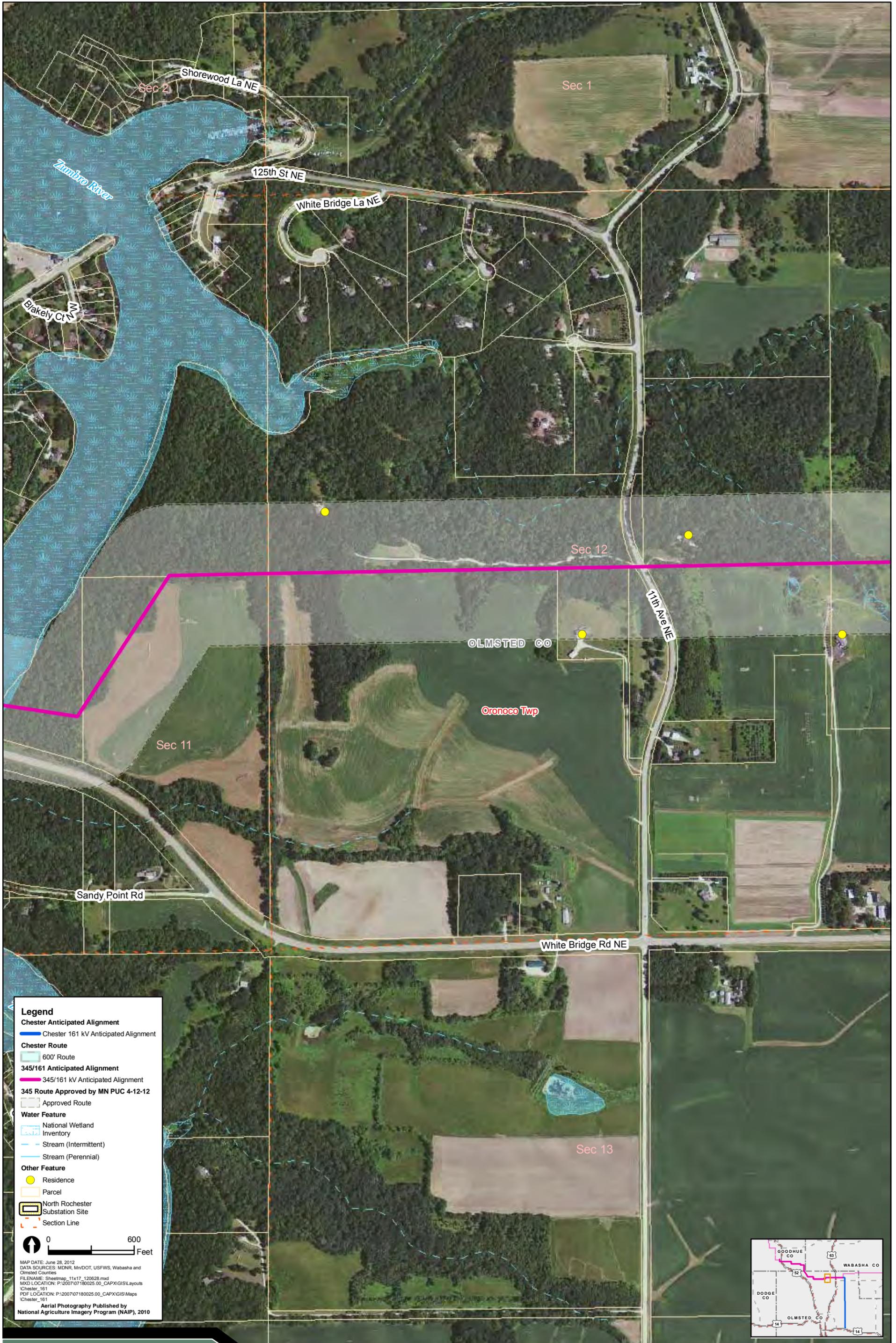
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E002/TL-11-800**

North Rochester - Chester Transmission Project

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Legend

Chester Anticipated Alignment

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Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

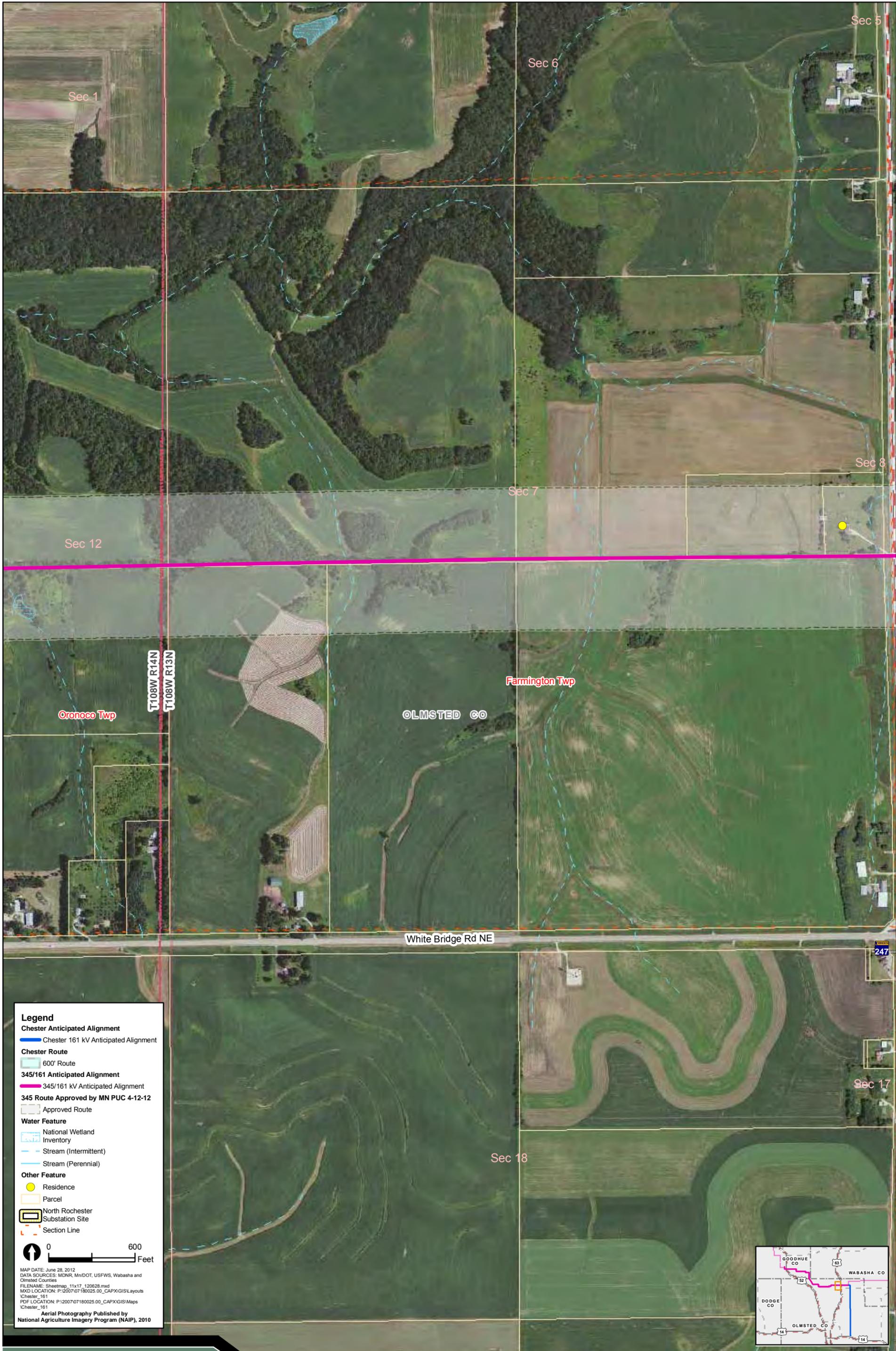
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

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Chester Route

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345/161 Anticipated Alignment

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345 Route Approved by MN PUC 4-12-12

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Water Feature

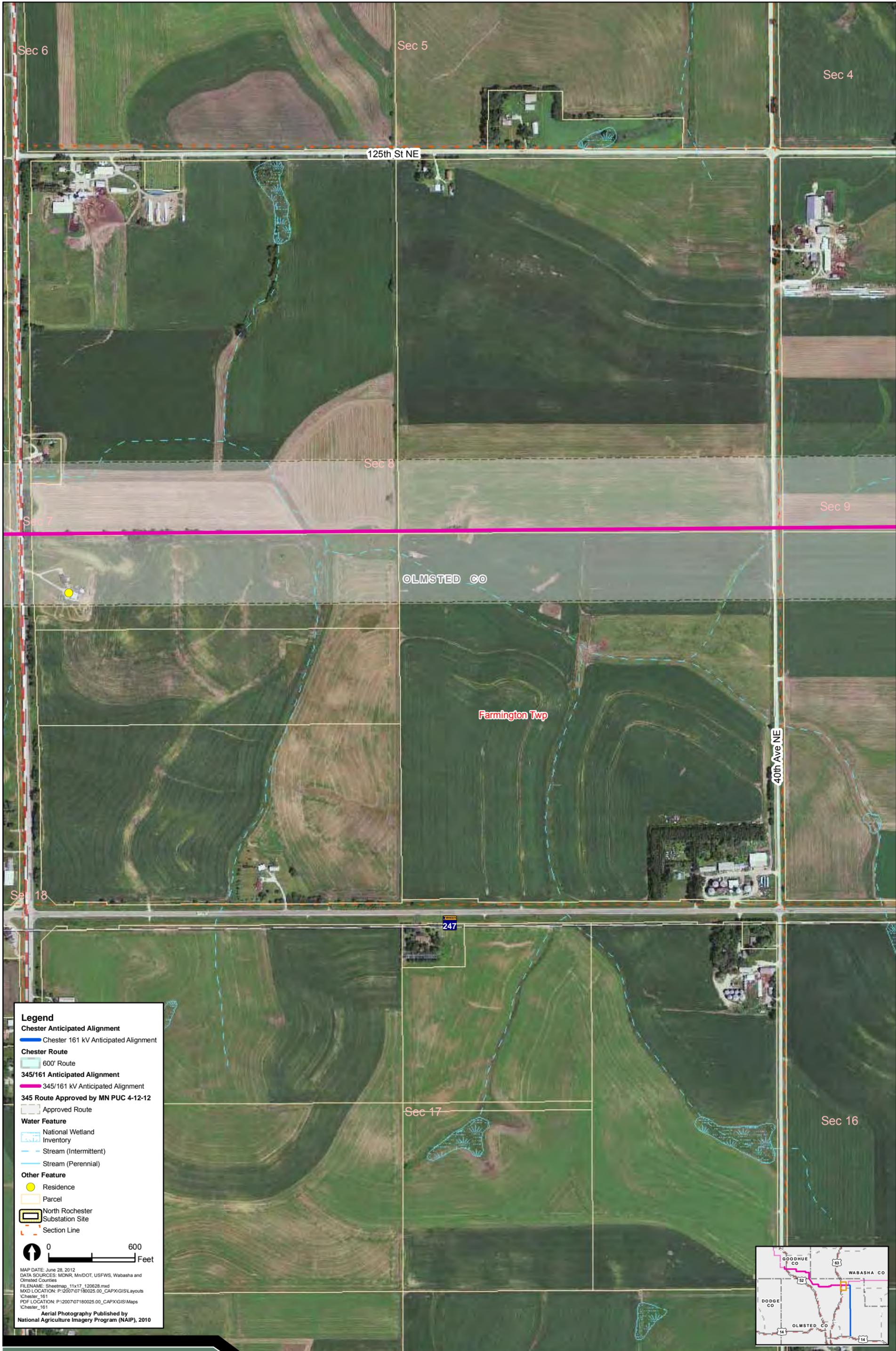
- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

- Residence
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- Section Line

0 600 Feet

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Legend

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Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

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Water Feature

- National Wetland Inventory
- Stream (Intermittent)
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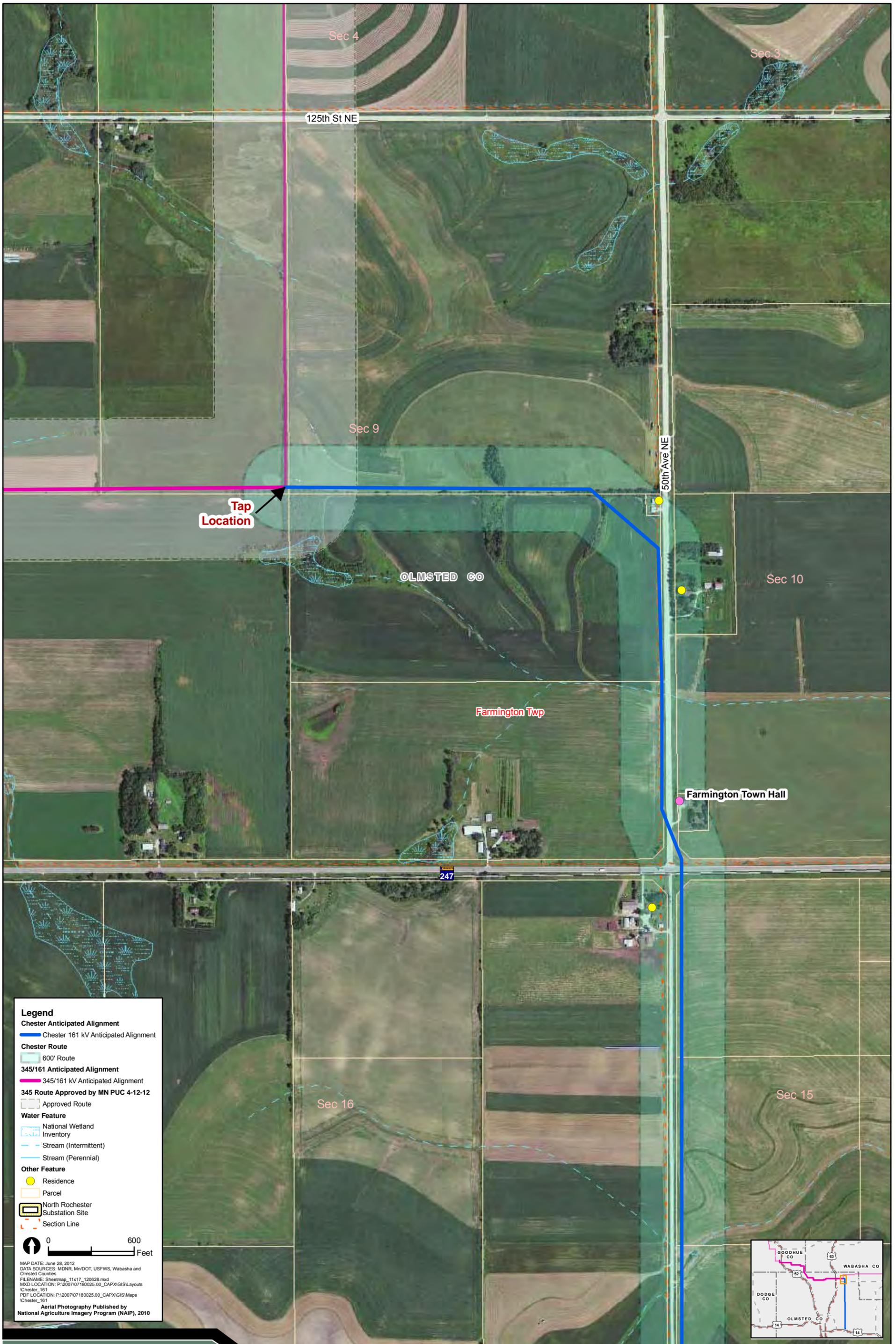
Other Feature

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- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

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Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

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Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

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- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

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Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

- Approved Route

Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

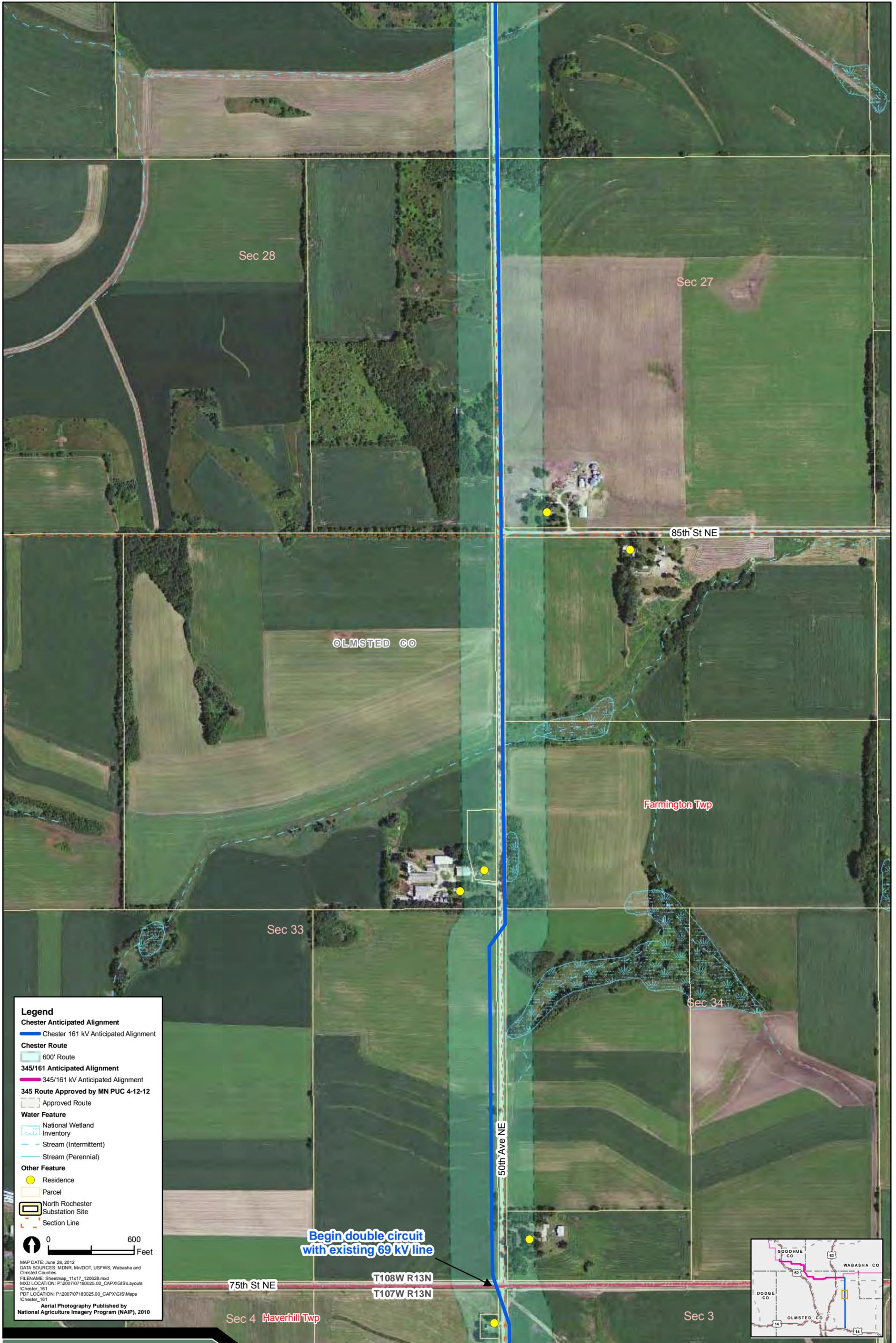
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

Chester Anticipated Alignment
 Chester 161 kV Anticipated Alignment

Chester Route
 600' Route

345/161 Anticipated Alignment
 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12
 Approved Route

Water Feature
 National Wetland Inventory
 Stream (Intermittent)
 Stream (Perennial)

Other Feature
 Residence
 Parcel
 North Rochester Substation Site
 Section Line

0 600 Feet

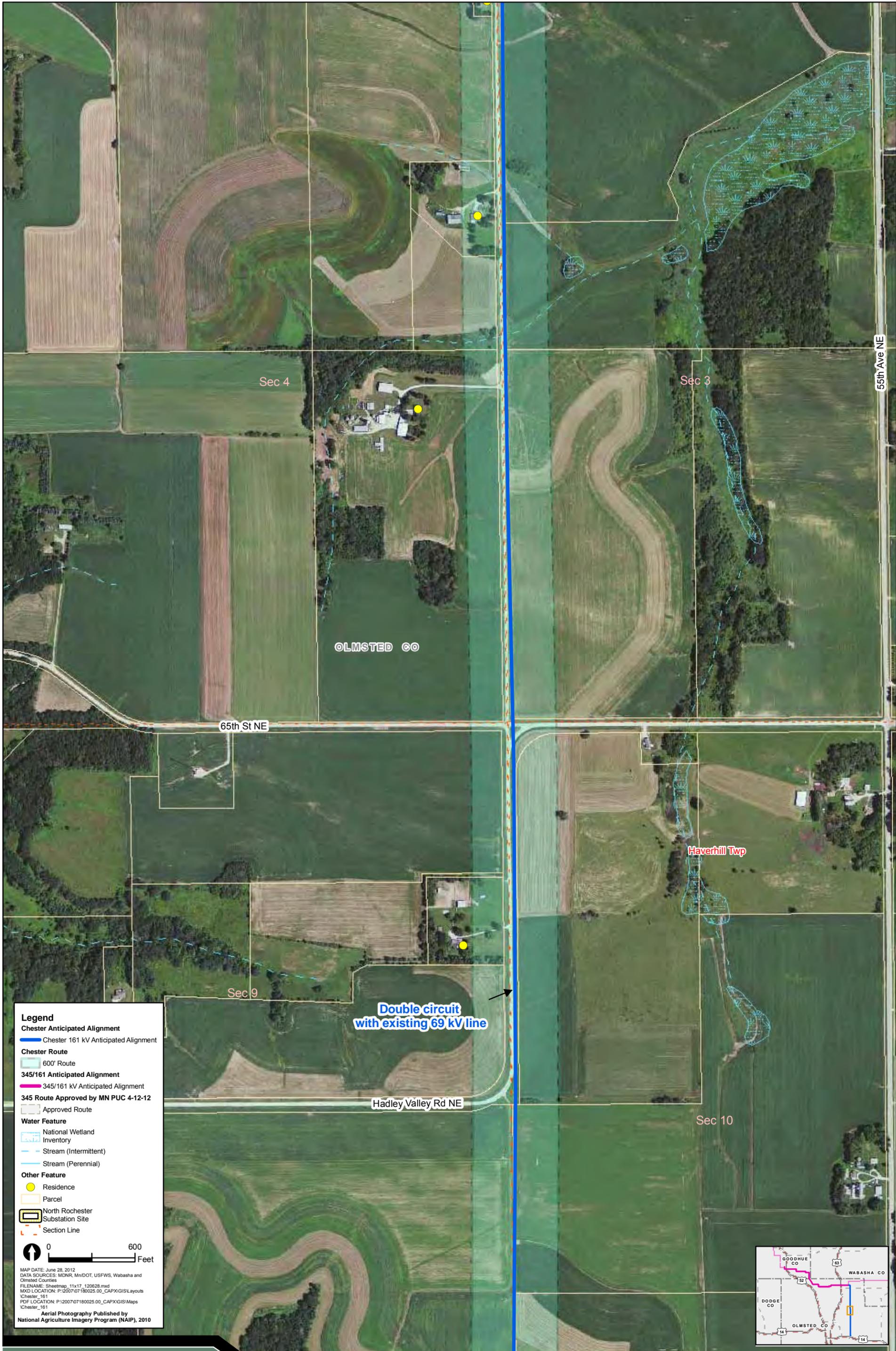
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North Rochester - Chester Transmission Project

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Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI Energy • Southern Minnesota Municipal Power Agency



Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

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Water Feature

- National Wetland Inventory
- Stream (Intermittent)
- Stream (Perennial)

Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

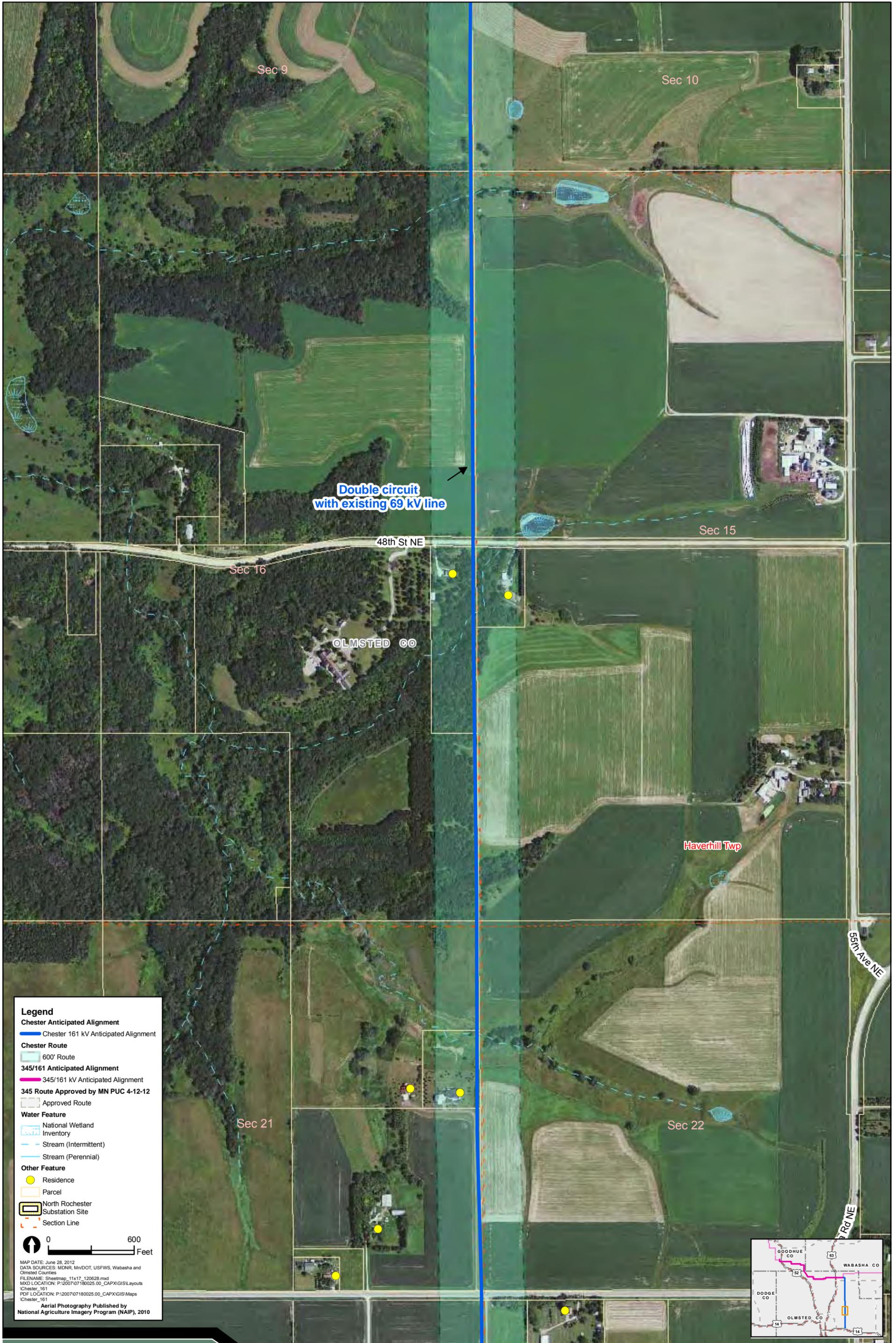
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**PUC Docket #
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North Rochester - Chester Transmission Project

Sheet Map 16 of 19

Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI Energy • Southern Minnesota Municipal Power Agency



Double circuit
with existing 69 kV line

48th St NE

Sec 16

OLMSTED CO

Haverhill Twp

59th Ave NE

Sec 21

Sec 22

Legend

Chester Anticipated Alignment

- Chester 161 kV Anticipated Alignment

Chester Route

- 600' Route

345/161 Anticipated Alignment

- 345/161 kV Anticipated Alignment

345 Route Approved by MN PUC 4-12-12

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Water Feature

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- Stream (Intermittent)
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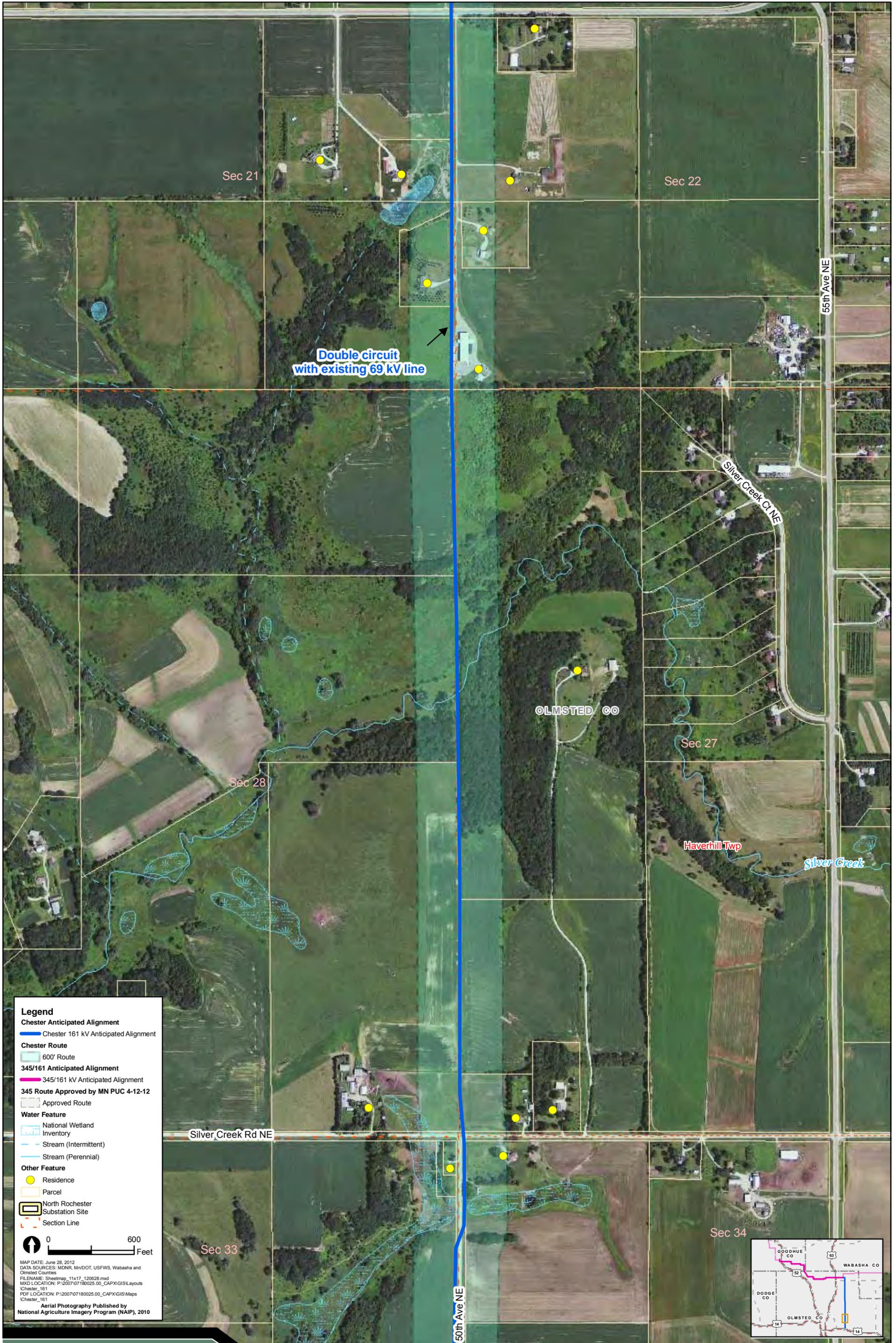
Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

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Legend

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Water Feature

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- Stream (Perennial)

Other Feature

- Residence
- Parcel
- North Rochester Substation Site
- Section Line

0 600 Feet

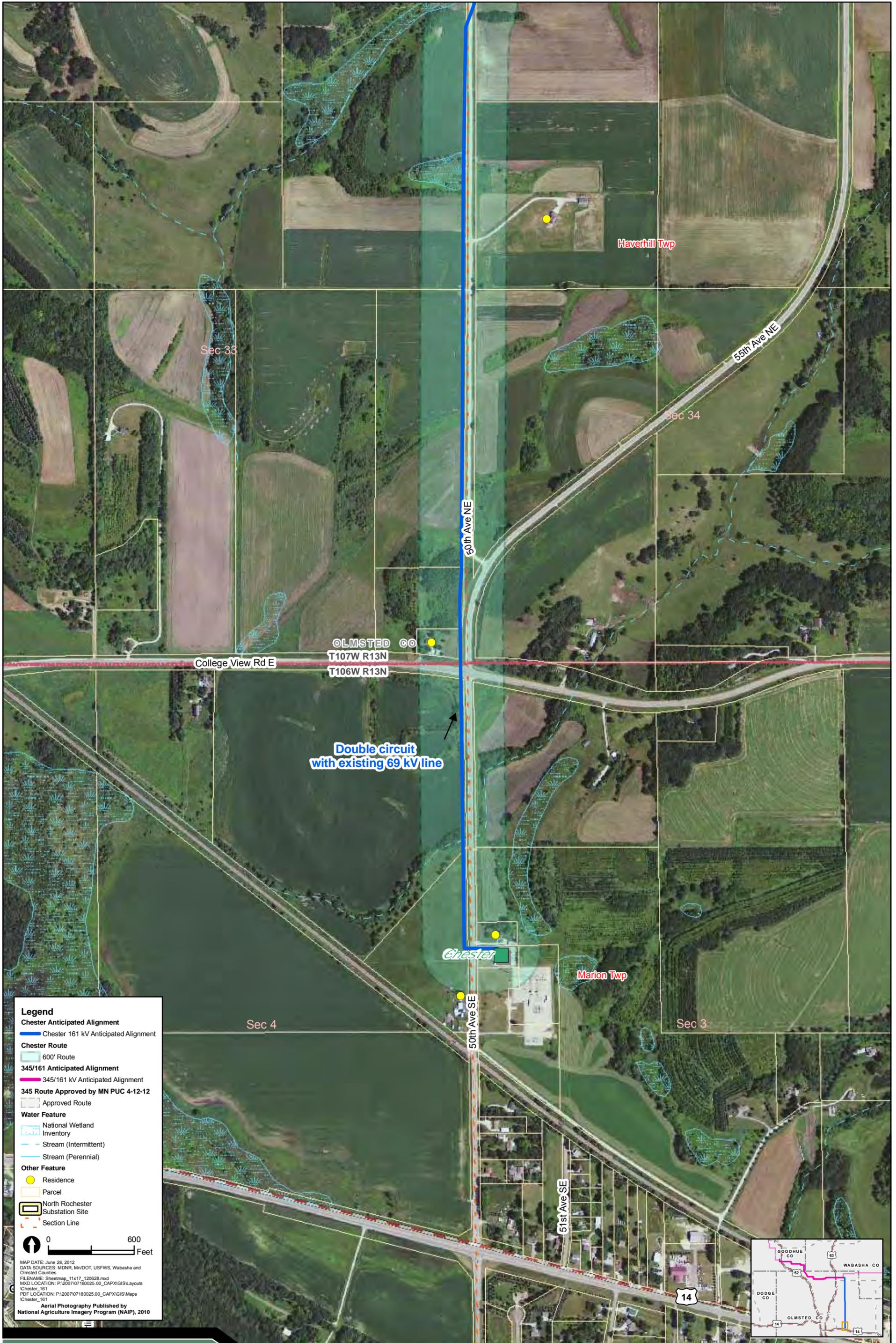
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North Rochester - Chester Transmission Project

Sheet Map 18 of 19



- Legend**
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 - Chester 161 kV Anticipated Alignment
 - Chester Route**
 - 600' Route
 - 345/161 Anticipated Alignment**
 - 345/161 kV Anticipated Alignment
 - 345 Route Approved by MN PUC 4-12-12**
 - Approved Route
 - Water Feature**
 - National Wetland Inventory
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 - Stream (Perennial)
 - Other Feature**
 - Residence
 - Parcel
 - North Rochester Substation Site
 - Section Line

0 600 Feet

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North Rochester - Chester Transmission Project

Sheet Map 19 of 19

Looming Issue with Loose Net Plastic Mesh in Erosion Control Products

Plastic mesh netting is a common material in erosion control products. It is utilized to hold loose fibrous materials in place (EG straw) until vegetation is established. These products have been used extensively and are successful for reducing soil erosion, benefitting both soil health and water quality. Unfortunately there is a negative side of this component: It is increasingly being documented that it poses dangers to reptiles.

Potential Problems:

- Plastic netting lays on the surface long after other components have decomposed.
- Plastic mesh netting can result in entanglement and death of a variety of reptiles (snakes, frogs, toads, and turtles). Ducklings have also been documented entangled in the netting.
- Road maintenance machinery can snag the plastic mesh and pull up long lengths into machinery, thus binding up machinery and causing damage and/or loss of time cleaning it out.

Suggested Alternatives:

- Use biodegradable material in all components of erosion control blanket and biologs (fiber rolls) that are to be left on site as part of final stabilization. Areas with a 2:1 slope or flatter can be considered for this option.
- Smaller mesh size.
- Limit use where reptiles are likely (near wetlands, lakes or watercourses).



Areas near wetlands, lakes and watercourses are likely habitat for reptiles and may not be suitable for plastic mesh erosion control materials.



Snakes get caught in the plastic mesh

Environmental Review Fact Sheet Series

Endangered, Threatened, and Special Concern Species of Minnesota

Blanding's Turtle (*Emydoidea blandingii*)

Minnesota Status: Threatened
Federal Status: none

State Rank¹: S2
Global Rank¹: G4

HABITAT USE

Blanding's turtles need both wetland and upland habitats to complete their life cycle. The types of wetlands used include ponds, marshes, shrub swamps, bogs, and ditches and streams with slow-moving water. In Minnesota, Blanding's turtles are primarily marsh and pond inhabitants. Calm, shallow water bodies (Type 1-3 wetlands) with mud bottoms and abundant aquatic vegetation (e.g., cattails, water lilies) are preferred, and extensive marshes bordering rivers provide excellent habitat. Small temporary wetlands (those that dry up in the late summer or fall) are frequently used in spring and summer -- these fishless pools are amphibian and invertebrate breeding habitat, which provides an important food source for Blanding's turtles. Also, the warmer water of these shallower areas probably aids in the development of eggs within the female turtle. Nesting occurs in open (grassy or brushy) sandy uplands, often some distance from water bodies. Frequently, nesting occurs in traditional nesting grounds on undeveloped land. Blanding's turtles have also been known to nest successfully on residential property (especially in low density housing situations), and to utilize disturbed areas such as farm fields, gardens, under power lines, and road shoulders (especially of dirt roads). Although Blanding's turtles may travel through woodlots during their seasonal movements, shady areas (including forests and lawns with shade trees) are not used for nesting. Wetlands with deeper water are needed in times of drought, and during the winter. Blanding's turtles overwinter in the muddy bottoms of deeper marshes and ponds, or other water bodies where they are protected from freezing.

LIFE HISTORY

Individuals emerge from overwintering and begin basking in late March or early April on warm, sunny days. The increase in body temperature which occurs during basking is necessary for egg development within the female turtle. Nesting in Minnesota typically occurs during June, and females are most active in late afternoon and at dusk. Nesting can occur as much as a mile from wetlands. The nest is dug by the female in an open sandy area and 6-15 eggs are laid. The female turtle returns to the marsh within 24 hours of laying eggs. After a development period of approximately two months, hatchlings leave the nest from mid-August through early-October. Nesting females and hatchlings are often at risk of being killed while crossing roads between wetlands and nesting areas. In addition to movements associated with nesting, all ages and both sexes move between wetlands from April through November. These movements peak in June and July and again in September and October as turtles move to and from overwintering sites. In late autumn (typically November), Blanding's turtles bury themselves in the substrate (the mud at the bottom) of deeper wetlands to overwinter.

IMPACTS / THREATS / CAUSES OF DECLINE

- loss of wetland habitat through drainage or flooding (converting wetlands into ponds or lakes)
- loss of upland habitat through development or conversion to agriculture
- human disturbance, including collection for the pet trade* and road kills during seasonal movements
- increase in predator populations (skunks, racoons, etc.) which prey on nests and young

*It is illegal to possess this threatened species.

RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS

These recommendations apply to typical construction projects and general land use within Blanding's turtle habitat, and are provided to help local governments, developers, contractors, and homeowners minimize or avoid detrimental impacts to Blanding's turtle populations. **List 1** describes minimum measures which we recommend to prevent harm to Blanding's turtles during construction or other work within Blanding's turtle habitat. **List 2** contains recommendations which offer even greater protection for Blanding's turtles populations; this list should be used *in addition to the first list* in areas which are known to be of state-wide importance to Blanding's turtles (contact the DNR's Natural Heritage and Nongame Research Program if you wish to determine if your project or home is in one of these areas), or in any other area where greater protection for Blanding's turtles is desired.

List 1. Recommendations for all areas inhabited by Blanding's turtles.	List 2. <i>Additional</i> recommendations for areas known to be of state-wide importance to Blanding's turtles.
GENERAL	
A flyer with an illustration of a Blanding's turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.	Turtle crossing signs can be installed adjacent to road-crossing areas used by Blanding's turtles to increase public awareness and reduce road kills.
Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed.	Workers in the area should be aware that Blanding's turtles nest in June, generally after 4pm, and should be advised to minimize disturbance if turtles are seen.
If a Blanding's turtle nests in your yard, do not disturb the nest.	If you would like to provide more protection for a Blanding's turtle nest on your property, see "Protecting Blanding's Turtle Nests" on page 3 of this fact sheet.
Silt fencing should be set up to keep turtles out of construction areas. It is <u>critical</u> that silt fencing be removed after the area has been revegetated.	Construction in potential nesting areas should be limited to the period between September 15 and June 1 (this is the time when activity of adults and hatchlings in upland areas is at a minimum).
WETLANDS	
Small, vegetated temporary wetlands (Types 2 & 3) should not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer).	Shallow portions of wetlands should not be disturbed during prime basking time (mid morning to mid- afternoon in May and June). A wide buffer should be left along the shore to minimize human activity near wetlands (basking Blanding's turtles are more easily disturbed than other turtle species).
Wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.	Wetlands should be protected from road, lawn, and other chemical run-off by a vegetated buffer strip at least 50' wide. This area should be left unmowed and in a natural condition.
ROADS	
Roads should be kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles need to cross).	Tunnels should be considered in areas with concentrations of turtle crossings (more than 10 turtles per year per 100 meters of road), and in areas of lower density if the level of road use would make a safe crossing impossible for turtles. Contact your DNR Regional Nongame Specialist for further information on wildlife tunnels.
Roads should be ditched, not curbed or below grade. If curbs must be used, 4 inch high curbs at a 3:1 slope are preferred (Blanding's turtles have great difficulty climbing traditional curbs; curbs and below grade roads trap turtles on the road and can cause road kills).	Roads should be ditched, not curbed or below grade.

ROADS cont.	
Culverts between wetland areas, or between wetland areas and nesting areas, should be 36 inches or greater in diameter, and elliptical or flat-bottomed.	Road placement should avoid separating wetlands from adjacent upland nesting sites, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details).
Wetland crossings should be bridged, or include raised roadways with culverts which are 36 in or greater in diameter and flat-bottomed or elliptical (raised roadways discourage turtles from leaving the wetland to bask on roads).	Road placement should avoid bisecting wetlands, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details). This is especially important for roads with more than 2 lanes.
Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.	Roads crossing streams should be bridged.
UTILITIES	
Utility access and maintenance roads should be kept to a minimum (this reduces road-kill potential).	
Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.	
LANDSCAPING AND VEGETATION MANAGEMENT	
Terrain should be left with as much natural contour as possible.	As much natural landscape as possible should be preserved (installation of sod or wood chips, paving, and planting of trees within nesting habitat can make that habitat unusable to nesting Blanding's turtles).
Graded areas should be revegetated with native grasses and forbs (some non-natives form dense patches through which it is difficult for turtles to travel).	Open space should include some areas at higher elevations for nesting. These areas should be retained in native vegetation, and should be connected to wetlands by a wide corridor of native vegetation.
Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1 st and before June 1 st).	Ditches and utility access roads should not be mowed or managed through use of chemicals. If vegetation management is required, it should be done mechanically, as infrequently as possible, and fall through spring (mowing can kill turtles present during mowing, and makes it easier for predators to locate turtles crossing roads).

Protecting Blanding's Turtle Nests: Most predation on turtle nests occurs within 48 hours after the eggs are laid. After this time, the scent is gone from the nest and it is more difficult for predators to locate the nest. Nests more than a week old probably do not need additional protection, unless they are in a particularly vulnerable spot, such as a yard where pets may disturb the nest. Turtle nests can be protected from predators and other disturbance by covering them with a piece of wire fencing (such as chicken wire), secured to the ground with stakes or rocks. The piece of fencing should measure at least 2 ft. x 2 ft., and should be of medium sized mesh (openings should be about 2 in. x 2 in.). It is *very important* that the fencing be **removed before August 1st** so the young turtles can escape from the nest when they hatch!

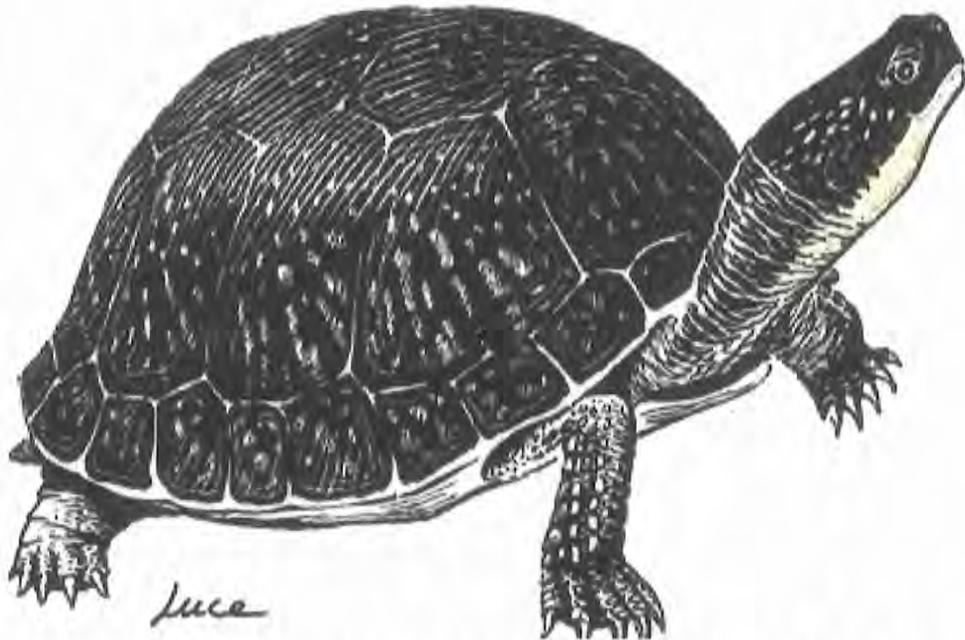
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CAUTION



BLANDING'S TURTLES MAY BE ENCOUNTERED IN THIS AREA

The unique and rare Blanding's turtle has been found in this area. Blanding's turtles are a State Threatened species and are protected under Minnesota Statute 84.095, Protection of Threatened and Endangered Species. Please be careful of turtles on roads and in construction sites. For additional information on turtles, or to report a Blanding's turtle sighting, contact the DNR Nongame Specialist nearest you: Bemidji (218-308-2641); Grand Rapids (218-327-4518); New Ulm (507-359-6033); Rochester (507-280-5070); or St. Paul (651-259-5764).

DESCRIPTION: The Blanding's turtle is a medium to large turtle (5 to 10 inches) with a black or dark blue, dome-shaped shell with muted yellow spots and bars. The bottom of the shell is hinged across the front third, enabling the turtle to pull the front edge of the lower shell firmly against the top shell to provide additional protection when threatened. The head, legs, and tail are dark brown or blue-gray with small dots of light brown or yellow. A distinctive field mark is the bright yellow chin and neck.

Illustration by Don Luce, from Turtles in Minnesota, Natural History Leaflet No. 9, June 1989, James Ford Bell Museum of Natural History

SUMMARY OF RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS TO BLANDING'S TURTLE POPULATIONS

(see Environmental Review Fact Sheet Series for full recommendations)

- A flyer with an illustration of an adult Blanding's turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.
- Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed to continue their travel among wetlands and/or nest sites.
- If a Blanding's turtle nests in your yard, do not disturb the nest, and do not allow pets near the nest.
- Blanding's turtles do not make good pets. It is illegal to keep this threatened species in captivity.
- Silt fencing should be set up to keep turtles out of construction areas. It is critical that silt fencing be removed after the area has been revegetated.
- Small, vegetated temporary wetlands should not be dredged, deepened, or filled.
- All wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.
- Roads should be kept to minimum standards on widths and lanes.
- Roads should be ditched, not curbed or below grade. If curbs must be used, 4" high curbs at a 3:1 slope are preferred.
- Culverts under roads crossing wetland areas, between wetland areas, or between wetland and nesting areas should be at least 36 in. diameter and flat-bottomed or elliptical.
- Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.
- Utility access and maintenance roads should be kept to a minimum.
- Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.
- Terrain should be left with as much natural contour as possible.
- Graded areas should be revegetated with native grasses and forbs.
- Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1st and before June 1st).