ATTACHMENT B

LARIMER COUNTY
COMMITTED TO EXCELLENCE
Planning Department
200 W. Oak Street, 3rd Floor
Fort Collins, CO 80521
(970) 498-7683
larimer.org/planning

Land Use Application

All applications must be complete. To be complete, the application must include all items identified on the submittal requirement checklist. Any application which is not complete will not be accepted, processed, or scheduled for review.

Development Review Process

- [x] 1041
- [ ] Appeal
- [ ] Add-on Agreement
- [ ] Amended Plat
- [ ] Boundary Line Adjustment
- [ ] Condominium Map Review
- [ ] Extended Family Dwelling
- [ ] Farmstead
- [ ] Location & Extent
- [ ] Lot Consolidation
- [ ] Minor Land Division
- [ ] Minor Special Review
- [ ] Nonconformities
- [ ] Plat Vacation
- [ ] Public Site Plan
- [ ] Rezoning
- [ ] ROW or Easement Vacation
- [ ] Site Plan Review
- [ ] Special Exception
- [ ] Special Review
- [ ] Variance
- [ ] Wireless Facility
- [ ] Other:

Application Phase
What process phase are you applying for?

- [ ] Admin Review
- [ ] Sketch Plan Review
- [x] Public Hearing

REQUIRED INFORMATION

Property Owner
Name: Northern Colorado Water Conservancy District
Mailing Address: 220 Water Ave.
City/State/Zip: Berthoud, CO 80513
Phone: (970) 622-2243 (Jim Struble: Real Estate Manager)
Email *(required)*: jstruble@northernwater.org

Property Owner
Name:
Mailing Address:
City/State/Zip:
Phone:
Email *(required)*:

Applicant Company *(if applicable)*
Name: Northern Integrated Supply Project Water Activity Enterprise
General Company Email *(required)*: cbrouwer@northernwater.org

Applicant Contact Info
Name: Northern Integrated Supply Project Water Activity Enterprise
Mailing Address: 220 Water Ave.
City/State/Zip: Berthoud, CO 80513
Phone: (970) 622-2298 (Carl Brouwer: Project Manager)
Email *(required)*: cbrouwer@northernwater.org

Engineer/Surveyor
Name: Glade Res: Mike Johnson P.E. Black & Veatch (BV) & Pipelines: Randy Park P.E. Dewberry (Db.)
Mailing Address: 4600 S. Syracuse St. Suite 800 (BV) and 990 S Broadway Suite 400 (Db.)
City/State/Zip: Denver, CO 80237 (BV) and Denver, CO 80209 (Db.)
Phone: (720) 834-4231 (BV) and (303) 951-0613 (Db.)
Email *(required)*: JohnsonMS@bv.com (BV) and RParks@dewberry.com (Db.)

PROJECT IDENTIFICATION (list all parcel #'s that pertain to the project)
0811000930, 0813000902, 0812000944, 0812000946, 0812000949, 0801000902, 0801000904, 0801000905, 9931000908, 9931000909, 9930000948, 9930000946, 0925000908, 0925000902, 0925000905, 0924000945

Signatures required by ALL Property Owners and the Applicant

I hereby certify that I am the lawful owner of the parcel(s) of land that this application concerns and consent to the action. I hereby permit county officials to enter upon the property for the purposes of inspection relating to the application. Building Permits will not be accepted while this application is in process.

Jim Struble (Real Estate Department Manager) Date: 2/14/2020
Property Owner(s) Printed Name

Jim Struble Date: 2/14/2020
Property Owner(s) Signature

Date:
Property Owner(s) Printed Name

Date:
Property Owner(s) Signature

In submitting the application materials and signing this application agreement, I acknowledge and agree that the application is subject to the applicable processing and public hearing requirements set forth in the Larimer County Land Use Code (which can be viewed at larimer.org)

Carl Brouwer Date: 2-14-2020
Applicant Signature

February 21, 2020

Larimer County Planning Department
200 W. Oak Street, 3rd Floor
Fort Collins, CO 80521

Dear Board of County Commissioners, Planning Department Staff, and Larimer County residents:

I write to you today to announce the submission of a Land Use Application on behalf of the Northern Integrated Supply Project Water Activity Enterprise for the development of a water storage reservoir, transmission pipelines and associated features. The Enterprise, in cooperation with Northern Water, seeks a permit to address local impacts for a project of state concern, otherwise known as a 1041 Permit.

As a water provider to Northeastern Colorado, Northern Water strives to ensure that its water users have a reliable water supply. For over 80 years we have worked in collaboration with municipal and rural domestic water providers, utilities and farmers to supply water to Larimer County and Northeastern Colorado. Whether that water is being put to beneficial use by irrigating crops to grow our food or delivered to a municipality to be filtered and provided as drinking water to its customers, water is not only the backbone of our society, but life itself. At the same time, Northern Water believes that securing and providing a water supply should not come at the expense of other equal, though sometimes competing, values that we share. Of special emphasis is the preservation of our natural environment, including our rivers, wetlands, riparian areas, and the wildlife that call that area home.

The Northern Integrated Supply Project, or NISP, represents a unique opportunity to secure a needed water supply while protecting and enhancing the environment we all love and respect. Additionally, NISP will help protect and preserve portions of Northern Colorado's irrigated agriculture, provide a new water-based recreational opportunity in Larimer County, and create a positive economic impact to Larimer County.

As municipal water demands increase in Northeastern Colorado, there is an ongoing and growing threat to nearby irrigated farmland. In fact, without the construction and operation of NISP, it is projected that more than 60,000 acres of irrigated agriculture may ultimately disappear to meet the anticipated demands of the Participants in NISP. The loss of those critical lands would have a very real impact to the livelihood and economic vitality of Larimer County and to Northeastern Colorado's existing and future residents. Northern Water not only finds that impact to be unacceptable, but also avoidable through the construction of NISP.

The benefits of NISP also extend to outdoor recreation. Glade Reservoir, a key water storage component of NISP, will provide a new water-based recreational opportunity in Larimer County.

Any weekend visit to neighboring Horsetooth Reservoir, one of the Colorado-Big Thompson Project's existing reservoirs, illustrates just how important outdoor recreation is to Larimer County residents. On the other hand, it is also evidence of just how much nearby reservoirs and surrounding hiking trails have reached their capacity in providing a safe and appropriate recreational experience. Glade Reservoir will provide new opportunities for boating, camping, hiking, and fishing and help bring balance between satisfying the regions' desire for outdoor recreation and preservation of the environment. As the recreational plans progress in final details and design, the NISP Participants are committed to working collaboratively with Larimer County and the public to ensure recreation at Glade Reservoir will be consistent with the County's Parks Master Plan, while also being responsive to the public's comments for their recreational vision at Glade Reservoir.

It is recognized that large, regional projects such as NISP do have the potential of creating environmental impacts even while benefiting the public, agriculture, and recreation sectors. The Participants recognize this and have participated in extensive federal and state environmental reviews to identify related impacts and reduce, eliminate, or mitigate them. Through the environmental permitting process numerous mitigation and enhancement projects have been identified, and in the case of the Watson Lake Fish Passage project near LaPorte, have already been completed. In the recently approved State of Colorado 401 Water Quality Certification, the state concluded that no significant degradation is expected because of the Project. The 401 Certification requires ongoing monitoring, which in some cases, will continue for decades. The Participants completed a State of Colorado Fish and Wildlife Mitigation and Enhancement Plan which identifies $60 million in mitigation and enhancements to be funded by Project Participants. In total, nearly 90% of the identified mitigation and enhancement projects will occur within Larimer County.

Northern Water embraces a core value to continually engage with the public and participate in a transparent process. It is for the public's benefit that we exist and operate, and we look not only to public officials, but also to the public itself, for comments and critique to help ensure that what we do reflects their input. To date, Northern Water has convened more than 60 public meetings related to NISP, including open house events and water user meetings. In addition, Northern Water staff have had hundreds of informal conversations with homeowners' associations, ditch and canal companies, and many other local community groups.

An example of this collaboration can be found in a significant Project modification which came to be known as the "refined conveyance" concept. Based on comments received during the federal environmental permitting process and associated public comment period, Northern Water made design and operation modifications that will result in 14,000 acre-feet of Glade Reservoir's water being conveyed through 12 miles of the Poudre River. With the refined conveyance, the Poudre River through Fort Collins will see an increase to its current base flows in eight out of 12 months in average years, and 10 out of 12 months in dry years. In conjunction with other mitigation and enhancement commitments, NISP will eliminate present-day dry-up locations along the Poudre River, enhance the aquatic habitat, and improve water quality. That refined conveyance modification came from a public collaboration process and ultimately makes NISP a better project.

It is for all the above reasons that we are excited to embark on the next step in the permitting process which is the submittal of this 1041 Permit application to the Larimer County Planning Department. Staff from Northern Water and Larimer County Planning Department held the required pre-application conference on December 4, 2019. Based on that meeting, the attached application has been developed to be responsive of the County's requirements. The two components of NISP to be reviewed under the 1041 process are:

1. Pipeline routes through Larimer County
2. Glade Reservoir, including proposed recreational facilities.

The other NISP components situated outside of Larimer County, the environmental effects and proposed mitigation of those impacts, and the U.S. Highway 287 realignment will be analyzed and permitted through additional federal, state, and local government regulatory processes that are outside of the 1041 Permit process. A description of other permits that have been obtained or will be obtained for the Project can be found in Section 10.1 of Technical Memo #1.

As we submit this application, we would like to highlight two important legal distinctions. Although Northern Water takes on varied projects and activities in its role as a water conservancy district, NISP is being pursued and will be operated through the Northern Integrated Supply Project Water Activity Enterprise ("NISP Enterprise"), a separate legal entity within Northern Water. It should also be noted that Northern Water's involvement in and responsibilities for the Colorado-Big Thompson (C-BT) Project are separate from NISP and operates under established procedures. Additionally, we acknowledge that the designs as presented are subject to modifications as our design efforts progress, or as federal or state requirements and permits may mandate.

Finally, as the County works with advisory committees, the Larimer County Planning Commission, and Board of County Commissioners to evaluate this application, please know that Northern Water staff and our legal team are available to answer any related questions.

Thank you for the opportunity to discuss with you the many benefits NISP has to offer Larimer County and we look forward advancing our pursuit of a Larimer County 1041 Permit.

Sincerely,

Bradley D. Wind, P.E.

General Manager, Northern Water

For ease of navigating this application, the following serves both as a table of contents and as a summary for the required 1041 Permit information. The bold titles are the specific items or documents required to be submitted, the italicized text shows where you can find the complete material, and the regular text is a summary description of the item. Please consider the descriptions below 'for reference only' as the referenced materials are the official responses to the 1041 Permit requirements.

APPLICATION FORM *SEE LAND USE APPLICATION*

A completed Land Use Application has been completed and signed by Northern Water as the applicant who is also the primary Glade Reservoir property owner. Larimer County staff determined at the pre-application meeting that it is not a requirement for other individuals owning land underlying Glade Reservoir sign the application form.

PROJECT DESCRIPTION *SEE TECHNICAL MEMO #1*

NISP is a proposed water storage and distribution project that will supply 15 Northern Front Range water providers with 40,000 acre-feet of new and reliable water supplies. The two primary components of NISP are the Glade Reservoir Complex and the South Platte Water Conservation Project.

Glade Reservoir will be a new 170,000 acre-foot off-channel reservoir located in Larimer County and is the primary water supply reservoir from which all deliveries to NISP participants would be made. Diversions into Glade Reservoir will come from the Poudre River via the Poudre Valley Canal diversion structure and canal. Appurtenant facilities to Glade Reservoir include the pump station, forebay, roads for access and recreation, parking, facilities and structures needed for operation and maintenance, and electrical transmission line improvements or upgrades needed to operate the pump station. These features in coordination with the 170-acre recreation area comprise the Glade Reservoir Complex, which is also referred to as the Glade Unit or Glade Area.

Galeton Reservoir will be a new 45,624 acre-foot off-channel reservoir located in Weld County, and its purpose is to facilitate water exchanges with Glade Reservoir to allow the full 40,000 acre-feet of NISP yield to be realized. Diversions into Galeton Reservoir will come from the South Platte River downstream of its confluence with the Poudre River. This reservoir and associated pipelines are known as the South Platte Water Conservation Project, which is a part of NISP, but is in Weld County.

Pipelines to be constructed in Larimer County include the Northern Tier Pipeline, Glade Release/Poudre Release Pipeline, Poudre Intake Pipeline, and the County Line Pipeline which are necessary for the operation of the Glade Reservoir Complex.

Glade Reservoir will inundate a portion of U.S. Highway 287 and therefore will necessitate a realignment of the highway. The U.S. Highway 287 realignment will be conducted by Colorado Department of Transportation and is not included in Larimer County's 1041 regulations though it is being paid for by NISP Participants.

VICINITY MAPS *SEE TECHNICAL MEMO # 1 ATTACHMENTS C & D*

Vicinity information such as parcel boundaries, existing buildings, land developments and municipal boundaries, and significant natural features in the vicinity of the Project has been provided.

SITE INVENTORY MAPS *SEE TECHNICAL MEMO # 1 ATTACHMENTS C & D*

Site inventory information that identifies all resources and environmental conditions potentially impacted by the proposed Project has been provided.

1041 PERMIT SITE MAPS *SEE TECHNICAL MEMO # 1 ATTACHMENTS A, C & D*

Site map information that shows the location of existing and proposed reservoir and pipeline development associated with this 1041 permit application has been provided. The recreational concept plan is also included in Technical Memo #1 Attachment A.

LEGAL DESCRIPTION *SEE TECHNICAL MEMO #5*

Conveyance pipeline alignment descriptions for the Northern Tier Pipeline, Glade Release/Poudre Release Pipeline, Poudre Intake Pipeline, and the County Line Pipeline are included in Technical Memo #5. Copies of the warranty deeds, which contain boundary descriptions certified by a licensed surveyor for the 16 parcels owed by Northern Water are also included.

WETLAND MITIGATION PLAN *SEE TECHNICAL MEMO #6*

Pinyon Environmental prepared the Wetland Mitigation Plan. This plan documents impacts to wetlands; identifies strategies for avoiding, minimizing, mitigating, and enhancing wetlands; proposes a plan to implement those strategies; and confirms that applicable requirements will be followed. The plan documents the Project's extensive coordination efforts and commitments to avoid, mitigate, and enhance wetlands that would be impacted by the Project.

WILDLIFE CONSERVATION PLAN *SEE TECHNICAL MEMO #7*

Pinyon Environmental prepared the Wildlife Conservation Plan. This plan documents impacts to wildlife; identifies strategies for avoiding, minimizing, mitigating, and enhancing wildlife; proposes a plan to implement those strategies; and confirms that applicable requirements will be followed. The plan documents the Project's extensive coordination efforts and commitments to avoid, mitigate, and enhance wildlife that would be impacted by the Project.

Note that the Project has undergone an extensive planning process in coordination with Colorado Parks and Wildlife and private stakeholders and has a Fish and Wildlife Mitigation and Enhancement Plan approved by Colorado Parks and Wildlife Commission and the Colorado Water Conservation Board.

NATURAL HAZARD MITIGATION PLAN *SEE TECHNICAL MEMO #8*

Black & Veatch and AECOM prepared the Natural Hazard Mitigation Plan. The geologic hazards analyzed include floods, landslides, rockfalls, debris flows, faults, collapsible soils, and ground subsidence. In general, the identified hazards do not pose a great risk to the Project and mitigation efforts have been identified that will further mitigate these risks. Additionally, a wildfire hazard analysis was performed which shows the Project generally falls within the "Moderate" to "Lowest" hazard range. Wildfire mitigation strategies are identified in the analysis.

TRAFFIC IMPACT STUDY *SEE TECHNICAL MEMO #9*

Black & Veatch and Dewberry prepared the Traffic Impact Study. This report analyzes the short- and long-term impacts of vehicular traffic associated with the Project. Traffic impacts during and after construction for Glade Reservoir and the Pipeline conveyance activities was analyzed and mitigation strategies are identified. It is noted that a more detailed evaluation of recreation traffic will be completed in association with the future Recreation Development Plan, and at a time when anticipated traffic generation and associated impacts can be more accurately assessed. Additionally, Chapter 4.13.3 of the Final Environmental Impact Statement, released July 20, 2018, describes traffic impacts in greater detail.

DRAINAGE AND EROSION CONTROL REPORT AND PLAN *SEE TECHNICAL MEMO #10*

These reports gauge stormwater impacts associated with the Project. The reports document the Project's extensive coordination efforts and commitments to avoid, minimize, and mitigate construction-related stormwater impacts by the Project in accordance with Larimer County's Land Use Code.

Black & Veatch prepared the drainage narrative for Glade Reservoir. The document analyzes the 16.3 square-mile drainage basin above the reservoir and the 3.8 square mile drainage basin above the forebay in order to identify the inflow design flood and probable maximum precipitation event. The analysis shows that improvements downstream of Glade Reservoir will be implemented to safely convey spillway flows under State Highway 14. Those improvements are included as part of the Glade Reservoir design for NISP. The report identifies the need for additional stormwater analysis and design to be completed as recreation infrastructure design progresses. That additional design will also be completed in compliance with Larimer County Stormwater Design Standards.

Pinyon Environmental prepared the drainage narrative for the pipeline conveyances. The document identifies major rivers, streams, named ditches, and reservoirs that the pipeline will be adjacent to or will cross. The analysis also identifies control measures to minimize possible impacts from erosion or other nonpoint source pollutants during construction. After construction, disturbed areas will match pre-existing conditions through regrading and revegetation efforts to mitigate long-term effects.

FLOODPLAIN HYDRAULIC/HYDROLOGIC MODELING REPORT *SEE TECHNICAL MEMO #11*

This report identifies floodplain impacts associated with the Project and identifies improvements necessary to mitigate any impacts. Black & Veatch prepared the report for the Glade Reservoir Complex. The analysis determined the only facilities in the Poudre River floodplain is the existing Poudre Valley Canal diversion structure. This structure will be replaced as a part of the Project. The new diversion will be at the same elevation as the existing structure and will be improved to provide small boat and fish passage. The preliminary design indicates that the new diversion structure is not anticipated to cause a rise in the existing floodplain. This will be confirmed as final design progresses.

Dewberry prepared the report for the pipeline conveyances. Its analysis identifies floodplains that are crossed by the pipelines and identifies best management practices to reduce impacts to the floodplain as well as floodplain impacts to the pipeline.

GROUNDWATER MODELING REPORT *SEE TECHNICAL MEMO #12*

Dewberry prepared the Groundwater Modeling Report which presents an overview of the anticipated groundwater levels, construction methodologies, and best management practices to mitigate impacts to groundwater associated with conveyance pipeline construction. Detailed geotechnical exploration and site-specific groundwater issues will be addressed during final design.

SIMULATION OF THE APPEARANCE OF THE FACILITY *SEE TECHNICAL MEMO #13*

A two minute virtual flyover video of the Glade Reservoir Complex with descriptions about its features and NISP operations is provided here: https://www.youtube.com/watch?v=kCEol8NujxE.

Included in this application are three renderings of Glade Reservoir's proposed dam. The 1041 Permit does not require visual simulations of the pipeline conveyance as there will be no structures 40-feet or greater in height.

NOISE ANALYSIS *SEE TECHNICAL MEMO #14*

This report identifies Larimer County's current Noise Level Policy in relation to the conveyance pipeline system. Noise effects from construction activities will be temporary and be subject to the County noise ordinance. Permanent noise increases from pump stations will be minimized as the construction design will maintain noise levels below action thresholds. No permanent adverse noise impacts will result from this Project for residential and commercial properties adjacent to the pipe alignment and pump station locations.

AIR QUALITY IMPACT AND MITIGATION REPORT *SEE TECHNICAL MEMO #15*

Pinyon Environmental prepared this report which documents potential sources of air emissions, identifies strategies for minimizing emissions, proposes a plan to implement those strategies, and confirms all applicable state and federal requirements will be followed. NISP will comply with all applicable air quality standards and will follow through with the mitigation commitments.

ADJACENT PROPERTY OWNERS LIST *LARIMER COUNTY TO PREPARE*

As agreed at the pre-application meeting, Larimer County will prepare this list and invoice the applicant.

APPLICATION FEE

A check in the amount of $7,704.75 has been submitted to the Larimer County Planning Department.

Northern Water
Northern Integrated Supply Project

Larimer County Analysis – Technical Memorandum No. 1

Project Description

Prepared for:
Larimer County

Prepared by:
Northern Integrated Supply Project
Water Activity Enterprise

February 2020

CONTENTS

LIST OF FIGURES

ATTACHMENTS

1.0 Organization of Application Materials

The purpose of this submittal is to provide reports, maps, and associated information for the Northern Integrated Supply Project (NISP or Project) as outlined and requested in the Larimer County (County) 1041 Permit application. As set forth at the pre-application meeting, which took place on December 4, 2019 with Larimer County staff, the scope of the 1041 Permit evaluation is the siting and development of proposed conveyance pipelines and the site selection and construction of Glade Reservoir and its appurtenant facilities including voluntary commitments to develop recreation facilities at Glade Reservoir. The Technical Memoranda included with this submittal are:

- TM No. 1: Project Description
- TM No. 2: Larimer County 1041 Evaluation Criteria
- TM No. 3: Conveyance Routing Assessment
- TM No. 4: Glade Reservoir Recreation Voluntary Permit Conditions
- TM No. 5: Legal Description
- TM No. 6: Wetland Mitigation Plan
- TM No. 7: Wildlife Conservation Plan
- TM No. 8: Natural Hazard Mitigation Plan
- TM No. 9: Traffic Impact Study
- TM No. 10: Drainage Plan
- TM No. 11: Floodplain Report
- TM No. 12: Groundwater Modeling Report
- TM No. 13: Glade Dam Appearance Simulation
- TM No. 14: Conveyance Pipeline Noise Analysis
- TM No. 15: Air Quality Impact and Mitigation Report

This content was determined by Larimer County staff as part of the Project's pre-application meeting and checklist.

2.0 Project Description

NISP is a proposed water storage and distribution project that will supply 15 Northern Front Range water providers with 40,000 acre-feet of new, reliable water supplies. As proposed, NISP would consist of two new reservoirs; forebay reservoirs and pumping plants to deliver water from the Cache la Poudre and South Platte rivers to the reservoirs; pipelines to deliver water for exchange with irrigation companies and to deliver water to water users; and improvements to existing canals that divert water from the Poudre River near the canyon mouth northwest of Fort Collins. NISP is a Water Activity Enterprise of Northern Water created by the Northern

Water Board of Directors under the authority of Colorado statute and is formally known as the Northern Integrated Supply Project Water Activity Enterprise (NISP WAE).

The Participants are a group of rapidly growing communities and domestic water districts located throughout Northern Water district boundaries, and include Central Weld County Water District, City of Dacono, Town of Eaton, Town of Erie, City of Evans, Town of Firestone, Fort Collins-Loveland Water District, City of Fort Lupton, City of Fort Morgan, Town of Frederick, City of Lafayette, Left Hand Water District, Morgan County Quality Water District, Town of Severance, and the Town of Windsor. The Fort-Collins Loveland Water District and the Town of Windsor both provide water to Larimer County residents.

The proposed Project would be constructed, owned, and managed by the NISP WAE. The Participants would own a perpetual contractual right to a defined portion of the Project facilities and a defined portion of the water diverted by the Project.

2.1. Project Components

The two primary components of NISP are the Glade Reservoir Complex and the South Platte Water Conservation Project. Glade Reservoir would be a new off-channel reservoir and is the primary water supply reservoir from which all deliveries to NISP Participants would be made. Diversions from the Poudre River into Glade Reservoir would be made via the existing Poudre Valley Canal diversion structure and canal, a new forebay reservoir, and new pump station from the forebay reservoir into Glade Reservoir. Water conveyance to NISP Participants will be made from Glade Reservoir via Poudre River delivery and multiple pipelines.

The South Platte Water Conservation Project would divert and store water from the South Platte River. Stored water would be delivered to the existing Larimer & Weld Irrigation Company and New Cache la Poudre Irrigating Company. NISP would then exchange and convey a like amount of water from the diversion structures of these irrigation companies for storage in Glade Reservoir and/or delivery to NISP Participants. An exchange allows an upstream diverter to take water a downstream diverter would otherwise receive, if the water is replaced. South Platte Water Conservation Project facilities would include the new off-channel Galeton Reservoir east of Ault, and a diversion, forebay reservoir, and pump station just downstream of the confluence of the Poudre and South Platte rivers. It will also include pipelines from the pump station to Galeton Reservoir and from Galeton Reservoir to the existing ditches. Each of the Project components is shown in Figure 1, and more detail is included in subsequent subsections.

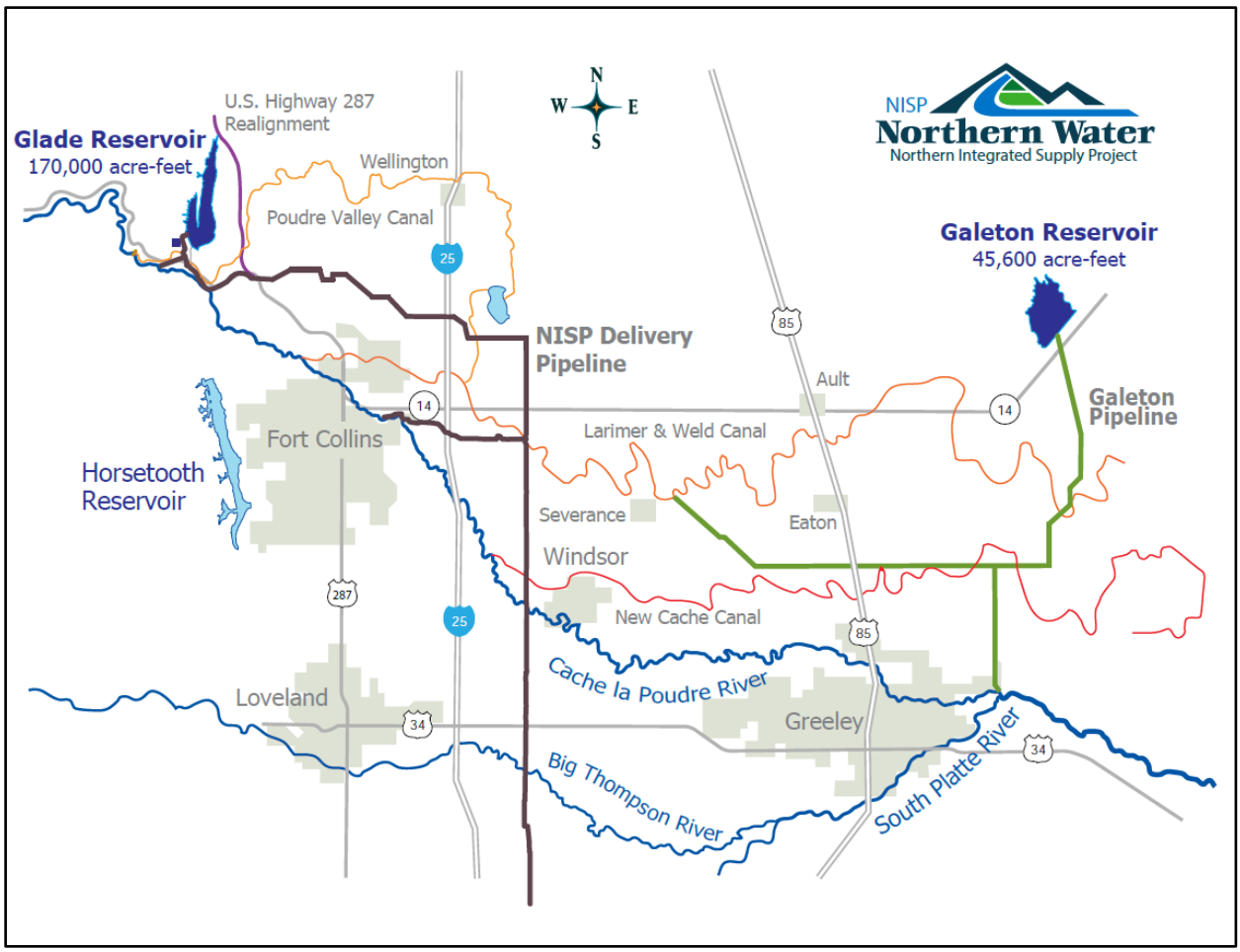


Figure 1: NISP Infrastructure and Features

2.1.1 Glade Reservoir Unit

Glade Reservoir will be located northwest of Fort Collins near the intersection of U.S. Highway 287 and State Highway 14. It will be 5 miles long, 250 feet deep, and have the capacity to store 170,000 acre-feet of water, slightly larger than the existing Horsetooth Reservoir. The reservoir surface area at full capacity would be approximately 1,600 acres (2.5 square miles). The dam would be approximately 275 feet high and be a zoned earth fill or zoned earth-rock fill dam. The dam would include a spillway structure, low level inlet/outlet works, and a multi-level inlet/outlet tower.

The existing Poudre Valley Canal would convey NISP diversions from the Poudre River to the Glade Reservoir Forebay. The existing diversion structure would be removed and replaced. The capacity of the diversion structure and approximately 10,800 feet (2.0 miles) of canal would be expanded by 1,200 cubic feet per second (cfs) to accommodate NISP diversions.

Diversions made through the Poudre Valley Canal would be delivered by gravity to the Glade forebay reservoir, where the water would then be pumped into Glade Reservoir itself. The forebay reservoir would have a capacity of up to 2,000 acre-feet. The pump station from the forebay reservoir would be approximately 40,000 horsepower, with a capacity of approximately 1,200 cfs when reservoir storage levels are low to 800 cfs when reservoir storage levels are high.

Because the reservoir would inundate a portion of the existing Poudre Valley Supply Canal (also known as Munroe Canal), facilities would be constructed to convey the canal through the reservoir through a buried pipeline encased in concrete and tunnels.

The reservoir site is divided by U.S. Highway 287 that travels between Fort Collins and Wyoming. Therefore, about seven miles of the highway will be relocated to the east. The relocated road will primarily be aligned along an abandoned haul road for the former Holcim cement plant mining operation. A "cut" will be required through the "hogback" geologic formation at the north end of the alignment. The "cut alignment" was the alignment chosen by the Colorado Department of Transportation as its preferred route. NISP WAE is currently developing the preliminary and final design of the roadway alignment in coordination with the Colorado Department of Transportation.

2.1.2 South Platte Water Conservation Project

Galeton Reservoir will be located east of Ault and northeast of Greeley, just north of Highway 14. It will store about 45,600 acre-feet of water at full capacity. The surface area at full capacity would be approximately 1,700 acres, with a depth of 75 feet. Galeton Dam would be approximately 90 feet high and be constructed primarily of on-site materials with imported filter-drain materials and riprap. The dam would include inlet/outlet works and a spillway.

The water to fill Galeton will be diverted from the South Platte River downstream from Greeley. A new diversion structure would be located on the South Platte and would divert water into a forebay reservoir. Water would be pumped from the forebay reservoir to Galeton Reservoir via a 15,000-horsepower pump station and approximately 16 miles of mostly 70-inch pipe with a total capacity of 200 cfs.

Water stored in Galeton Reservoir would be delivered to the Larimer & Weld and New Cache irrigation companies in exchange for a portion of the Poudre River water they currently use. Pipelines from Galeton Reservoir would be used to deliver water to each ditch system west of U.S. Highway 85 at a rate of approximately 100 cfs each.

2.1.3 Conveyance to NISP Participants

The Project's Supplemental Draft Environmental Impact Statement (SDEIS) analyzed multiple options for conveyance of water from Glade Reservoir to the NISP Participants including exchanges using Colorado-Big Thompson (C-BT) water, pipelines to existing C-BT facilities, and direct conveyance to the Participants. Following review of agency and public comment on the SDEIS, the NISP Participants are proposing a refined-conveyance concept with the goal of keeping more flows in the Poudre River year-round along with direct conveyance. The refined-conveyance concept was incorporated into the Final Environmental Impact Statement, and as discussed in that document, the proposal avoids and minimizes impacts to and enhances the aquatic environment while mitigating other environmental effects. Under the refined-conveyance concept, water would be delivered from Glade Reservoir to Project Participants through the following means:

- Pipeline Deliveries – Participants would be delivered NISP water from Glade Reservoir via a pipeline. The main delivery pipeline is the County Line Pipeline, which generally follows the Larimer-Weld county line and Weld County Road 13 south to the existing Southern Water Supply Pipeline just north of State Highway 66. Water would be delivered from Glade Reservoir to the County Line Pipeline using two mechanisms:
    - Northern Tier Pipeline – The Northern Tier Pipeline would deliver water directly from Glade Reservoir to the County Line Pipeline. The pipeline would be a 45-inch to 54-inch diameter pipeline capable of conveying 81 to 106 cfs of water to the NISP Participants, depending upon the need for redundancy. The need for redundancy will be determined following additional analyses.
    - Glade Release Pipeline (also known at the Poudre Release Pipeline) and Poudre Intake Pipeline – Water from Glade Reservoir would be conveyed directly to the Poudre River at the entrance to the canyon, below the Poudre Valley Canal diversion, through the Glade Release Pipeline. The water would travel down 13 miles of the Poudre River before being pumped into the Participant conveyance

system via the Poudre Delivery Pipeline. The intake for that water is the Poudre River Intake and Pump Station, which would be located upstream of the City of Fort Collins' Mulberry Water Pollution Control Facility (MWPCF) discharge location and constructed to allow for 18 to 25 cfs, or 14,350 acre-feet annually, of NISP delivery. The Poudre River Intake would have a diversion structure, sedimentation basin, and pump station (1,000 to 1,300 horsepower). Water would be delivered from the intake to the County Line Pipeline via the approximately 32-inch diameter Poudre Intake Pipeline.

Sections 5.2.2.4 and 2.4 of the Project's Fish and Wildlife Mitigation and Enhancement Plan (available online at https://www.northernwater.org/Kentico/getmedia/ee3c1a4c-dcc6-4083-a462-67047e4ce704/2017-State-Fish-and-Wildlife-Mitigation-and-Enhancement-Plan.pdf) go into further detail regarding the Poudre River refined conveyance, where 18 to 25 cfs of NISP deliveries will be added to the Poudre River. The preferred Poudre River Intake location is upstream of the existing MWPCF discharge point for water quality reasons as described in the next paragraph. In addition, C-BT exchanges through Bureau of Reclamation facilities are no longer part of the Project or the Clean Water Act Section 404 Permitting and associated National Environmental Policy Act assessments.

NISP will divert Poudre River water for use by the NISP Participants at a location upstream of the effluent discharge point for the MWPCF. Wastewater treatment plant (WWTP) effluent contributes nutrients, metals, total organic carbon (TOC), microbiological contaminants, and compounds of emerging concern to receiving water bodies. Diversion of Poudre River water upstream of the MWPCF will provide water of the highest quality for domestic use.

Our understanding of Poudre River water quality, including the water quality conditions above and below the MWPCF, has been obtained through numerous data collection efforts and studies conducted over the years by Northern Water and other entities. These data collection and data analysis efforts have resulted in an understanding of the concentrations of various constituents and their spatial and temporal patterns as the water flows from above the canyon mouth, through Fort Collins, and downstream to the South Platte River. Some sources of Poudre River water quality data and information that have provided the basis for our understanding include:

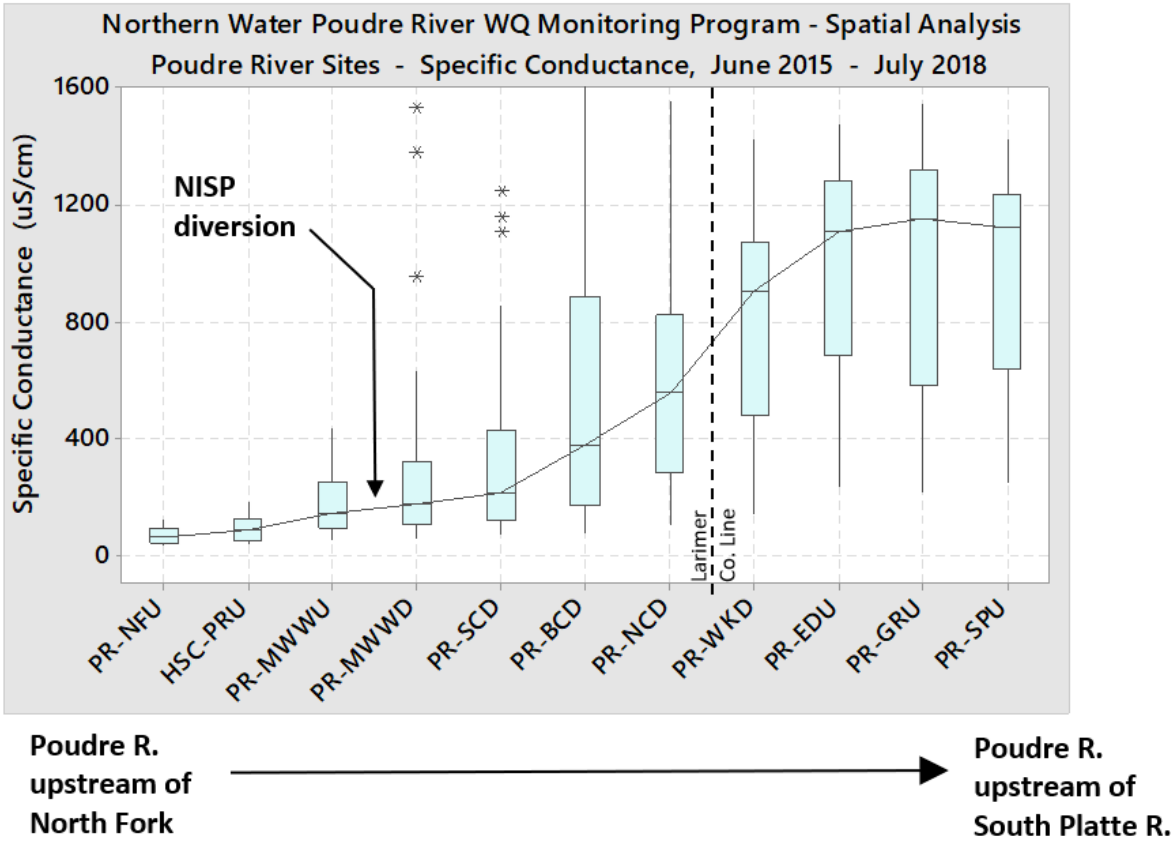
- Upper Poudre Collaborative Water Quality Monitoring Program: Fort Collins, Greeley, Tri-Districts https://www.fcgov.com/utilities/what-we-do/water/water-quality/source-water-monitoring/upper-poudre-quality-monitoring
- Lower Poudre Monitoring Alliance: Cities of Fort Collins and Greeley, Town of Windsor, Boxelder Sanitation District, South Fort Collins Sanitation District, Carestream Health https://www.fcgov.com/utilities/what-we-do/water/water-quality/lower-poudre-monitoring

- Poudre River Water Quality Monitoring Program: Northern Water https://www.northernwater.org/Kentico/getmedia/244f12cd-a04d-4a44-b9da-d3346ab6041e/Poudre-River-water-quality-monitoring-brochure.pdf
- Cache la Poudre River Water Quality Analysis - Model Development & Calibration, prepared by Hydros Consulting, September 19, 2017.
- Northern Colorado Compounds of Emerging Concern Program (CEC Program): Cities of Boulder, Broomfield, Fort Collins, Greeley, Longmont, and Loveland, Town of Estes Park, and Northern Water https://www.northernwater.org/docs/WaterQuality/CEC%20Monitoring%20Program.pdf

The wastewater treatment plant effluent is a known source of compounds of emerging concern (CEC) in surface waters. Monitoring by Northern Water for the Northern Colorado CEC Program at locations upstream and downstream of the MWPCF confirms their presence in the Poudre River as a result of discharges from the MWPCF. CECs include pharmaceuticals, personal care products, pesticides, and endocrine disrupting compounds. Research continues to evolve regarding the human health effects of exposure to chronic, low level concentrations of CECs in drinking water, and information is also evolving as to the effectiveness of drinking water treatment processes for the removal of the long list of possible CECs. The presence of these compounds in water intended to be used specifically for a drinking water supply would be of critical concern to both water treatment managers and consumers.

As water moves further downstream in the Poudre River, its quality continues to change as more substances are introduced from the watershed, reflecting changes in geology and land use. Downstream of the MWPCF, there are three additional WWTPs in the Larimer County reach of the Poudre River watershed that influence Poudre River water quality, including the Boxelder Sanitation District WWTP, the City of Fort Collins Drake Water Pollution Control Facility, and the South Fort Collins Sanitation District WWTP.

Key drinking water treatment parameters, including total dissolved solids (TDS), major ions, hardness, turbidity, TOC, and alkalinity, increase in the Poudre River as water flows downstream. Specific conductance, a measure of TDS, increases in the downstream direction as indicated in the figure below because WWTP effluent, urban runoff, irrigation return flows and the Pierre Shale bedrock all add major ions (calcium, magnesium, sulfate), and other dissolved substances to the water and therefore increase specific conductance. Concentrations of selenium and arsenic also increase in the downstream direction.



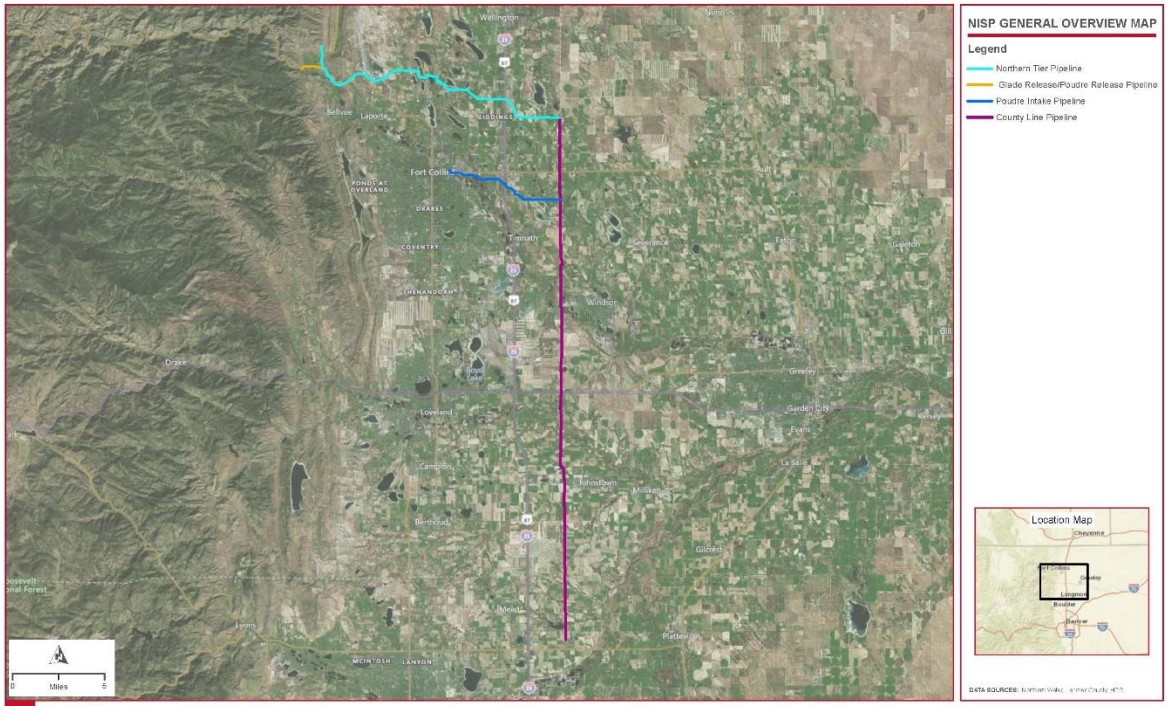


Figure 2: NISP Conveyance Map

These pipeline routes are further described in TM No. 3 as part of the routing analysis.

3.0 Voluntary Recreation Enhancement Measures

As a commitment to the County to provide substantial benefit to the community where key components of NISP are located (delivery pipelines and Glade Reservoir), the NISP WAE is voluntarily proposing to allow recreation on Glade Reservoir and to dedicate and develop a 170-acre recreation area on the southeast corner of Glade Reservoir.

Over the course of a year, meetings with County staff regarding potential recreation amenities and facilities have occurred to make sure recreation facility planning is conducted in concert with Larimer County's master plans and recreation vision. Based on those discussions, a Recreation Concept Master Plan has been developed by AECOM on behalf of the applicant that utilizes information gained from site visits with County staff, public outreach efforts in the County and with neighborhoods in the vicinity of the reservoir, and early engineering analysis. The plan provides a description of the major recreation components and provides a conceptual layout and details for how those components can be integrated at Glade Reservoir as shown below. It also includes provisions for Americans with Disability Act (ADA) access and multi-modal transportation options. The Recreation Concept Master Plan is included as Attachment A, and a summary of the plan's major recreation components is included below.

NOTE: Plan depicts a conceptual range of options and is subject to change.

GLADE RESERVOIR RECREATION AREA - ILLUSTRATIVE SITE PLAN
JANUARY 2020

AECOM

SCALE 1" = 200'

Northern Water
Northern Integrated Supply Project

1. **CAMPING AREA 1:** 15-20 CAMPSITES
2. **CAMPING AREA 2:** 10-15 CAMPSITES
3. **CAMPING AREA 3:** 10-15 CAMPSITES
4. **CAMPING AREA 4:** 10-15 CAMPSITES
5. **CAMPING AREA 5:** 5-15 CAMPSITES

A. **FULL SERVICE CAMPING AREA:** 70-80 RENTAL UNITS
B. **POUDRE CANYON PUBLIC PARKING:** 125-145 SPACES
C. **VISITOR CENTER:** 8,000-10,000 SF BUILDING + 40-50 SPACES
D. **BOAT RAMP PARKING - LONG TERM:** 20-30 SPACES + 40-50 TRAILER SPACES
E. **BOAT RAMP PARKING - SHORT TERM:** 15 SPACES + 18 TRAILER SPACES

Figure 3: Glade Reservoir Recreation Area Illustrative Site Plan

3.1. Major Recreation Components

3.1.1 Educational Visitor Center

The Glade Reservoir recreational area visitor center is envisioned to be a key amenity for the nearby community and the general public. This facility could provide information and exhibits related to the available recreational opportunities, historic and cultural education, endangered and protected native wildlife species, regional geology, water stewardship and conservation, agricultural interests including the preservation of irrigated lands, and reservoir operations.

Water Recreation

3.1.2

Water recreation is anticipated to be the strongest draw for recreation and outdoor enthusiasts in the area. Over a variety of reservoir operations scenarios (from low-water to high-water years), Glade Reservoir will provide a large, inviting surface area to recreate on. Surface area during the recreation season would be greater than 1,308 acres (80 percent of maximum surface area) nearly 75 percent of the time. Water depth during

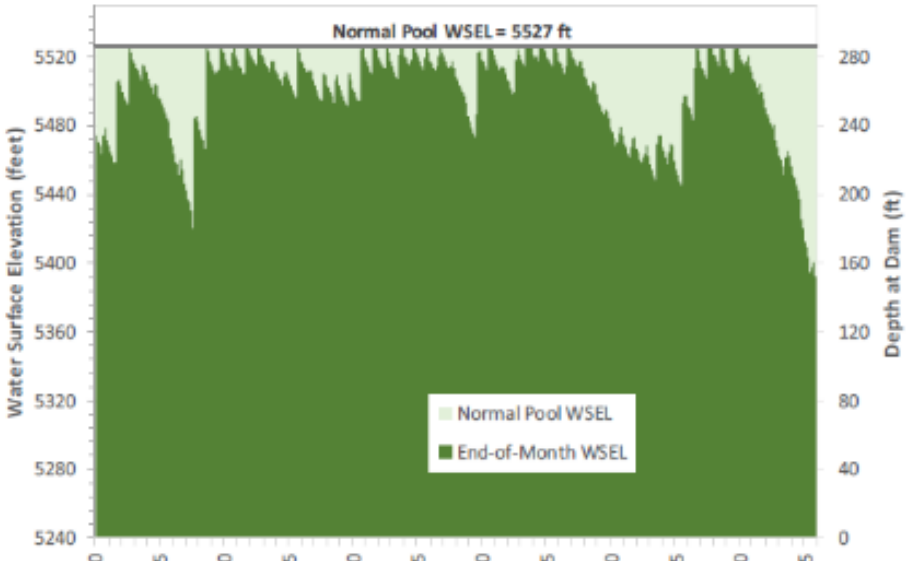


Figure 4: Normal Pool WSEL

the recreation season would be greater than 88 percent of maximum depth (or greater than 253 feet) nearly 75 percent of the time. Water levels will change more during the reservoir fill cycle than during the drawdown cycle. During the fill cycle, average monthly increases in water elevation are 7.2 feet per month. Drawdowns will typically be in the range of 1 to 4 feet per month.

A variety of boating recreation options are being considered, from powered to low-powered and non-motorized watercraft. Additionally, low-wake activities such as paddle boarding, bird watching, and fishing bring the opportunity for a quiet experience on the water, to reconnect with the area, wildlife, and preservation areas surrounding the reservoir.

Attention has been and will be given to effectively managing and locating boating areas within the reservoir. Designated portions of the reservoir could be reserved for both motorized and non-motorized water recreation. Possible noise or light impacts from motorized boating could be managed through natural or designated no-wake zones. For instance, the northern extents of the reservoir will be considerably shallower creating limitations for motorized boats. This limitation will naturally create a buffer between motorized boating and neighboring land uses.

3.1.3 Fishing

Fishing at Glade Reservoir will provide opportunities for people of all skill levels and physical capabilities to learn and participate in fishing activities. To strengthen ADA-compliant access, the entry road configuration is being studied to include accessible parking and drop-off at the boat launch area, with easy access to a possible boardwalk area, accessible to mobility wheelchairs or scooters, to provide better accessibility to fishing and recreation at the reservoir.

In coordination with Colorado Parks and Wildlife (CPW), NISP has committed to establishing and maintaining a cool water fishery at Glade similar to those at Horsetooth Reservoir and Carter Lake as defined in the 2017 CPW Fish and Wildlife Mitigation and Enhancement Plan and the 2018 NISP Final Environmental Impact Statement Conceptual Mitigation Plan. Due to CPW fish hatchery production currently being near capacity, implementation of the cool-water fishery will also require and include expansion of current fishery facilities. Funding for required hatchery expansion is provided associated with this recreation plan.

3.1.4 Boat Ramp

A Glade Reservoir boat ramp, at the south abutment, will provide controlled access to the reservoir for a range of watercraft. The Recreation Concept Master Plan illustrates a four-lane boat ramp with two floating docks.

3.1.5 Camping

One of the most exciting activities for the recreation area will be camping. Campground use areas are being studied to allow for a mix of camping experiences and programs from walk in and drive in camping to full scale RV camping. NISP is actively seeking to acquire the existing KOA Campground at the U.S. Highway. 287 and State Highway 14 intersection for incorporation into the Recreation Concept Master Plan. This existing facility allows for a range of camping options, containing primary service hookups for larger scale and RV camping. It would also expand the area available for recreation from 170 acres to 190 acres.

Campfire control and fire incident mitigation will be central to the campsite operational policy and program requirements. Working in close coordination and cooperation with the County, State, and Federal regulations on campsites and campfires, the Glade Reservoir recreation area will develop policies and best management practices to control and regulate fire burning.

3.1.6 Trails

As part of the Recreation Concept Master Plan, internally networked looping trails are provided. The trail opportunities at the Glade Reservoir recreation area will be flexible and dynamic enough to offer a host of different trail uses such as biking, running, and hiking and will be managed to maximize safety and avoid conflict.

Extending beyond the recreational area, the East Shoreline Trail, an unpaved trail, will be developed along the east shoreline that could serve a variety of recreational uses such as hiking, snowshoeing, mountain biking, camping, rock climbing and fishing activities. The East Shoreline Trail will be approximately 5 miles in length and will connect to a north trailhead located at the northerly limit of Glade Reservoir. By vehicle, access to the north trailhead will be available from the future section of U.S. Highway 287 being realigned as part of NISP.

The Recreation Concept Master Plan provides an example of how these facilities could be developed. The exact layout of and design of the recreation program will be completed in a future Recreation Development Plan based on coordination between County staff and the NISP WAE.

3.2. Benefit to Larimer County

These new recreation opportunities within the County will bring tourism and economic growth to the County along with additional sales tax revenues. Development of Glade Reservoir Recreation is estimated to provide $13 million to $30 million per year in total economic benefits as described in the Project's Final Environmental Impact Statement.

The County has indicated a desire to manage recreation at Glade Reservoir. As a benefit to Larimer County, the County and NISP WAE will enter into a 25-year lease agreement for the County to act as the managing partner to manage recreation at Glade Reservoir.

Additionally, $21.8 million is being committed to develop these facilities. The NISP WAE will contribute 75% ($16.35 million) and the County will contribute the remaining 25%. This funding is a substantial commitment by the NISP Participants and represents a guarantee to share the benefits of the project with Larimer County and the people of Larimer County.
During NISP WAE's public outreach efforts, several recreation groups in the County expressed a desire for more recreation opportunities and indicated that Glade Reservoir could provide an identified need for fishing, paddle boarding, rock climbing, hiking, and other recreation options.

Recreation at Glade Reservoir provides value to residents of Larimer County including those located near the project's infrastructure. In surveys of Larimer County residents, users chose county facilities as their favorite place(s) to visit because of their proximity to home, as well as

the experiences provided according to the County's 2017 Reservoir Parks Master Plan. Glade Reservoir will provide a close-to-home recreation option.

Additionally, John Compton, a professor at Texas A&M University, has studied effects of parks and opens space extensively and published his findings in a book called The Proximate Principle. Compton studied 25 instances of open space near residential developments, and he found that 20 of the 25 cases resulted in higher property values, which would be a benefit to neighbors located near the reservoir.[1] Development around Carter Lake and Horsetooth Reservoir also demonstrates the desirability of properties with views of and in proximity of local reservoirs.

Glade Reservoir could provide approximately 1,600 surface acres of new water-based recreation opportunities and approximately 170 acres of new land-based recreation opportunities.

4.0 1041 Permit Scope

Larimer County has designated the following project components as Areas and Activities of State Interest, which are regulated under Section 14 of the Larimer County Land Use Code and associated 1041 Permits:

- Siting and development of new or extended domestic raw-water transmission lines.
- Site selection and construction of a new water storage reservoir resulting in a surface area in excess of 50 acres used for the storage of water for domestic use. A water storage reservoir shall also include all appurtenant uses, structures, and facilities, roads, parks, parking, trails, and other uses, which are developed as part of the water storage reservoir.

As described above, the scope of the 1041 Permit evaluation is the siting and development of proposed conveyance pipelines and the site selection and construction of Glade Reservoir and its appurtenant facilities including voluntary commitments to develop recreation facilities at Glade Reservoir. These project components are the subject of the evaluations and discussions in the remainder of this permit application and associated application materials.

4.1. Voluntary U.S. Highway 287 Commitments

Larimer County in its designation of areas and activities of state interest and associated 1041 permitting process declined to regulate state highways. As a result, the Relocation of U.S.

[1] https://www.nar.realtor/blogs/spaces-to-places/placemaking-the-value-to-real-estate (Accessed November 18, 2019)

Highway 287 is not included in the permit application and associated application materials. Further explanation is included in Attachment B.

Nevertheless, the NISP WAE commits to working with the Colorado Department of Transportation (CDOT), impacted property owners, and Larimer County to provide that proper access for the affected property owners is in place as the design for the relocated highway is developed. Thirty-five-acre or larger parcels typically have simplified water-well permitting standards. Any right-of-way acquisitions that would reduce parcel sizes below that 35-acre threshold will be completed using easements or through the Larimer County land subdivision process to maintain 35-acre-lot water-well permitting standards. Additionally, the NISP WAE will coordinate with CDOT to complete a safety study of the LCR 21C and U.S. Highway 287 intersection to analyze the need for safety upgrades at that intersection and evaluate potential solutions if warranted.

5.0 Purpose and Need for the Project

The purpose and need for this project are:

> The Northern Integrated Supply Project Water Activity Enterprise, on behalf of 15 towns, municipalities and rural domestic water providers, is pursuing NISP to provide 40,000 acre-feet of reliable water supplies.

See Final Environmental Impact Statement (FEIS) Vol.1 Chapter 1 available online at: https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Colorado/EIS-NISP/ or in the formal record of this 1041 Permit Application. Larimer County accepted status as a cooperating agency with the U.S. Army Corps of Engineers (Army Corps or USACE) through a formal agreement signed by Larimer County officials in 2005 and has participated in the federal permitting process.

This 1041 Permit application is consistent with state and federal permit requirements. A Fish and Wildlife Mitigation and Enhancement Plan (FWMEP) as required by state law (C.R.S. 37-60-122.2) was approved in 2017 by both the Colorado Parks and Wildlife Commission and the Colorado Water Conservation Board. The FWMEP, available online at https://www.northernwater.org/Kentico/getmedia/ee3c1a4c-dcc6-4083-a462-67047e4ce704/2017-State-Fish-and-Wildlife-Mitigation-and-Enhancement-Plan.pdf, includes both a Mitigation Plan, which mitigates fish and wildlife related impacts of NISP, as well as an Enhancement Plan, which outlines fish and wildlife related environmental commitments that go above and beyond direct mitigation of NISP effects. A portion of those permit conditions and mitigation and enhancements agreements occur in Larimer County.

The Colorado Department of Public Health and Environment Water Quality Control Division (Division) also completed a review of the NISP Clean Water Act Section 401 Certification Application including an antidegradation determination conducted pursuant to Regulation No. 31 (5 CCR 1002-31) § 31.8(3) and Regulation No. 82 (5 CCR 1002-82) § 82.5(A)(1)(a). The Division certified on January 28, 2020, that there is reasonable assurance that the project will be conducted in a manner that complies with all applicable water quality requirements.

A Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers is pending, and three federal environmental reports predate this 1041 Permit Application:

- A Draft Environmental Impact Statement (EIS)
- A Supplemental Draft EIS
- A Final EIS

These reports are available online at https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Colorado/EIS-NISP/. All these documents have been submitted to Larimer County and have been publicly available in Larimer County.

5.1. Description of the Site Selection Process

The federal permitting process for NISP included study and analysis of more than 200 potential water storage facilities and 16 potential water supply sources with four project alternatives being carried forward in the EIS. The four alternatives were No Action Alternative, Glade with modified conveyance and South Platte Water Conservation Project, Cactus Hill and the South Platte Water Conservation Project, Cactus Hill and Multiple Diversion Locations and the South Platte Water Conservation Project.

See NISP FEIS Vol.2 Chapter 4 available online at:
https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Colorado/EIS-NISP/
or in the formal record of this 1041 Permit Application.

The four alternatives are discussed at length in the EIS. Larimer County submitted comments on both the Draft EIS on September 12, 2008, and again on the Supplemental DEIS on September 2, 2015, which comments addressed project alternatives as well as other topics. At this juncture the alternatives have been determined through the state and federal processes. Larimer County, as a formal cooperating agency, submitted comments on the site selection and other issues.

5.2. Explanation of Why No Reasonable Alternatives are Available

After many years of federal scientific studies and required environmental compliance with substantial public input, including input from Larimer County, approvals by the agencies of the State of Colorado and the permits issuing for the current project configuration, which is the subject of this permit application, it is not possible at this juncture for the Applicant to submit a Permit request for another Project configuration or alternative. Having incongruent permit applications at the various agencies is not a viable option, therefore no reasonable alternatives are possible at this time as the other state and federal permitting agencies have acted.

6.0 Project Location and Area

Glade Reservoir, its supporting infrastructure, and proposed recreation areas are located in unincorporated Larimer County just to the north of the junction of U.S. Highway 287 and State Highway 14, about 10 miles northwest of Fort Collins. The area occupied by these features is approximately 2,700 acres. Maps showing that infrastructure and nearby features is included as Attachment C.

The proposed conveyance pipelines located in Larimer County consist of the following three proposed pipeline alignments:

- The County Line Pipeline
- The Northern Tier Pipeline
- The Poudre Intake Pipeline and Glade Release Pipeline

The main delivery pipeline is the County Line Pipeline which generally follows the Larimer-Weld county line south to the existing Southern Water Supply Pipeline just north of Highway 66 in Weld County. The County Line Pipeline would receive water from the Northern Tier Pipeline and the Poudre Intake Pipeline. This pipeline construction corridor is approximately 410 acres in size including areas outside of unincorporated Larimer County. The Glade Release Pipeline will convey water from Glade Reservoir to the Poudre River at the mouth of the Poudre Canyon generally along State Highway 14. That water will be released to the Poudre River and conveyed by river to just upstream of the Lemay Avenue and Mulberry Street intersection in Fort Collins. From that point the water will be conveyed in the Poudre Intake Pipeline east to the County Line Pipeline. This pipeline construction corridor is approximately 100 acres in size including areas outside of unincorporated Larimer County. The Northern Tier Pipeline will convey water directly from Glade Reservoir to the County Line Pipeline. The pipeline construction corridor is approximately 240 acres in size including areas outside of unincorporated Larimer County. Maps showing these pipeline routes and nearby features are included as Attachment D.

7.0 Project Maps

Project maps are contained in Attachments C and D. These maps show proposed infrastructure footprints and nearby vicinity information including:

- Parcel boundaries
- Nearby residences and businesses
- Municipality boundaries
- Roads and significant features in the vicinity of the Project

They include site inventory information such as:

- Nearby subdivisions, existing buildings, structures, utilities, irrigation facilities, and roads
- Existing vegetation, soils types, water bodies, and other natural features
- Floodplains including floodway and flood fringe where applicable
- Geologic hazards and commercial mineral deposits
- Topographic contours, drainage patterns, and general direction of flow on and through the site
- Wetlands, wildlife habitat, wildlife migration corridors, and rare and endangered species habitat

They also include site map information such as:

- Project boundaries
- Proposed buildings and structures
- Proposed access points
- Parking areas
- Adjacent rights-of-way

An evaluation of cultural, historical, and paleontological resources is required as part of the Project's Clean Water Act Section 404 permit and associated National Environmental Policy Act (NEPA) requirements. Northern Water will enter into a Programmatic Agreement with the U.S. Army Corps of Engineers, Colorado State Historic Preservation Office, and the Advisory Council on Historic Preservation to set forth how cultural resources will be addressed. A Class III level survey and evaluation will be conducted prior to any ground-disturbing activities on the Project. This survey will include both reservoir sites and the conveyance system. This survey will include an intensive inventory and systematic effort to identify all resources within the area of concern and will record information sufficient to permit their evaluation or to indicate what further work is necessary to accomplish their evaluation. After all structures or sites are identified and documented and evaluation of all resources is complete, any needed treatment plans will be developed as outlined in the Project's Programmatic Agreement. Additional information on and

associated mapping for cultural resources can be found in the Project's Final Environmental Impact Statement.

A Natural Hazard Mitigation Plan for Glade Reservoir, associated infrastructure, and the proposed recreation area is included in Technical Memo 8. This plan evaluates the potential for wildfire or geologic hazards in the Glade Reservoir area and purposes mitigation measures for any identified impacts. A Wetlands Mitigation Plan and Wildlife Conservation Plan corresponding to information shown on these maps are also included in Technical Memos 6 and 7.

7.1. Descriptions of Existing Land Uses

Existing land uses for Glade Reservoir and the surrounding area include rural residences and a rural residential subdivision along and adjacent to LCR 29C, the Poudre Valley Canal and Munroe Canal irrigation ditches, irrigated cropland, pastures, an existing KOA campground, a gas station, a sandstone quarry, and state managed lands.

Existing lands uses for the conveyance pipeline alignments include rural residences and subdivisions, irrigated and dry cropland, pastures, industrial business parks, natural areas and open space, school campuses, and towns.

These land uses are shown in the maps included as Attachments C and D.

8.0 1041 Permit Review Criteria

An evaluation of the 12 review criteria for approval of 1041 permits, as described in Larimer County Land Use Code Section 14.10.D, is included in Technical Memo 2. This evaluation addresses the review criteria and how they are met in order to demonstrate that this proposal, including mitigation measures, complies with the requirements for approval of 1041 permits. This report provides a detailed explanation on how the proposed reservoir and associated infrastructure, proposed recreation areas, and proposed conveyance pipelines are consistent with direction set forth in Larimer County's master plans. It also outlines how impacts to public health and safety will be avoided, minimized, or mitigated.

9.0 Description of Existing and Proposed Utilities

The proposed conveyance pipelines are unmanned facilities and will not require sewage disposal facilities or water supply. Access to these pipelines will be via the existing, public county road network on paved or dirt roads or via private pipeline easements. The pipeline corridor will be regraded and revegetated to match preconstruction conditions without the need for additional site improvements.

A description of the existing and proposed utilities needed for the development and operation of Glade Reservoir, it's supporting infrastructure, and the proposed recreation area is included in Attachment E. This report includes an evaluation of sewage treatment, water, fire protection, transportation access, and electrical service needed to support the complex. Electrical infrastructure will include the relocation and construction of electric lines. The use of and extent of these lines were discussed with Larimer County Planning Department Staff and were determined to be minor appurtenant uses to the Glade Reservoir Unit and not upgrades to existing lines.

10.0 Project Development Schedule

Construction of Glade Reservoir, forebay, and pump station is anticipated to start early in 2023, and that construction is anticipated to continue to the end of 2027. Construction of the Poudre Valley Canal (PVC) Improvements is anticipated to occur during winter, non-operational periods for the ditch starting in 2022. PVC construction is anticipated to continue until the spring of 2026. Construction of the conveyance pipelines is anticipated to start in early 2024 and will continue through 2029.

Diversions into and operation of Glade Reservoir is anticipated to start in 2029. Operation of the pipelines is anticipated to start in 2030.

This anticipated schedule is presented in the figure below.

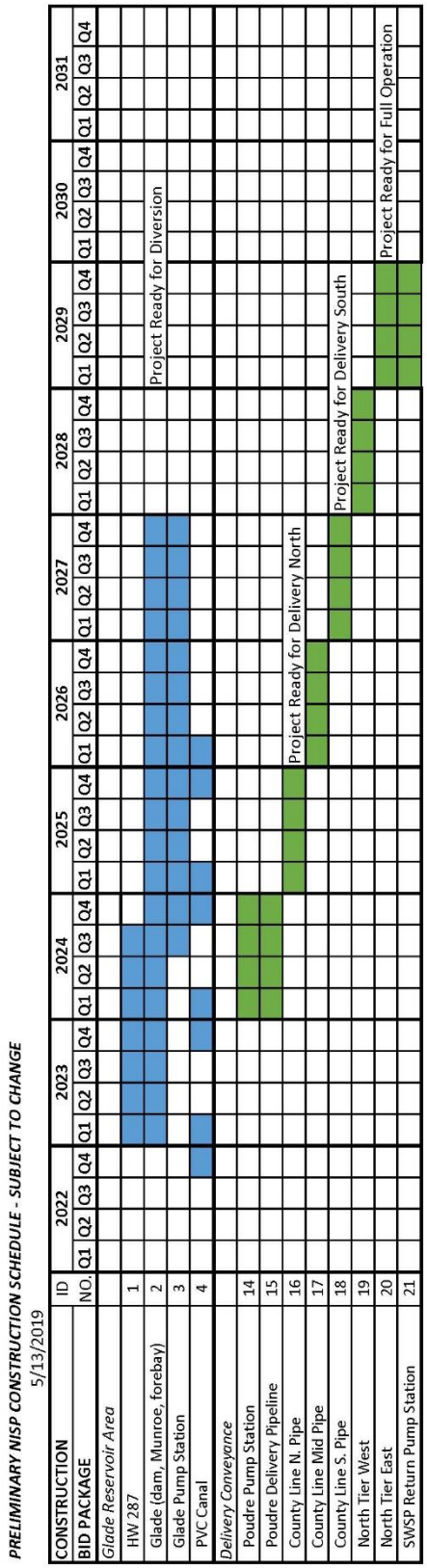


Figure 5: Anticipated Project Development Schedule

10.1. Permit Requirements and Associated Schedule

To construct the Northern Integrated Supply Project, local, state, and federal permits are required. This section provides an overview of those permits and the associated permitting process occurring in concert with the development of the Larimer County 1041 Permit.

The Clean Water Act Section 404 Permit and associated regulations administered by the U.S. Army Corps of Engineers (USACE) approves impacts to wetlands and waters of the U.S. through the NEPA process and other federal agency requirements, such as compliance with the Endangered Species Act and the National Historic Preservation Act, impacts associated with the development and operation of the Project have been thoroughly analyzed and will be mitigated and approved.

Through the NEPA process, Project alternatives were developed, and the impacts and benefits of those alternatives were thoroughly evaluated in the environmental impact statement. This process allowed for numerous public comment opportunities. Various federal and state approvals are forthcoming. A summary of the major milestones of that process follows:

- **Letter of Intent (2004):** This provided official notification of the proposed construction of the Northern Integrated Supply Project and the beginning of the NEPA process. Northern Water met with the USACE and an independent third-party consultant was selected to prepare the environmental impact statement under the direction of the USACE.

- **Alternatives Development and Screening (2004-2008):** A comprehensive list of alternatives and Project configurations to potentially meet the Project's goals were prepared. These alternatives were rigorously evaluated and screened through criteria, including environmental, engineering, and economic considerations. Studies and analysis were done to evaluate the affected environment, impacts, including beneficial impacts, and to include considerations of impact avoidance, minimization, and mitigation for all alternatives. A representative list of the resources evaluated included:

Environmental Impact Statement Topics		
Surface Water Quality	Wildlife Impacts	Land Use
Stream Morphology and Sediment Transport	Special Status Species Impacts	Visual Resources and Aesthetics
Groundwater Impacts	Aquatic Biological Resources	Cultural and Historical Resources
Geology	Traffic and Transportation	Paleontological Resources
Soils	Air Quality	Socioeconomic Resources
Vegetation	Noise	Hazardous Material
Wetlands and Riparian Resources	Recreation	Energy Use

- **Draft Environmental Impact Statement (2008**): A draft environmental impact statement was prepared and was made available to the public for review and input. Public hearings were also held to get input on the Project.

- **Supplemental Draft Environmental Impact Statement (2015):** The USACE updated the environmental impact statement and associated alternatives to incorporate public input. They released the updated document to the public for review and input in 2015. Public hearings were also held to get input on the Project.

- **Final Environmental Impact Statement (2018):** The USACE updated the environmental impact statement and associated alternatives to incorporate public input. They released the updated document to the public for review and input in 2018.

- **Record of Decision (anticipated in 2020):** After input on the final environmental impact statement is addressed, the USACE will issue a Record of Decision identifying the alternative with the least environmental impact and discussing all factors used in reaching that decision.

Larimer County is a cooperating agency to the USACE in the development of the Project's environmental impact statement and reviewed and provided input on the development of the environmental impact statement and alternatives assessments in that role.

The Project also requires several other permits from other federal agencies and the State of Colorado, which also regulate aspects of the Project not included in the Larimer County 1041 Permit. These permits include:

- **Endangered Species Act Consultation:** The U.S. Fish and Wildlife Service evaluates the Project's impacts to threatened or endangered species through the development of a Biological Opinion. This was originally completed in 2007 and will be updated in 2020.

- **401 Water Quality Certification:** The Colorado Department of Public Health and Environment analyzes the Project impacts to water quality and has authority to develop permit conditions to provide mitigation for adverse impacts. This process included a period for public review and input on water quality effects. This certification was issued in January of 2020.

- **Fish and Wildlife Mitigation and Enhancement Plan:** The Colorado Parks and Wildlife Commission, Colorado Water Conservation Board, and the governor reviewed Project impacts to fish and wildlife and required mitigation and enhancement measures for those impacts as reviewed and approved in this plan. This process included an open house and multiple public hearings to solicit public input on the plan. This plan was approved in 2017.

- **Permit for Dam Construction:** The Colorado Division of Water Resources reviews and approves the engineering evaluations and designs for reservoir and dam construction. This is anticipated to be completed by the start of 2023.

- **Other Construction Permits:** Permits for stormwater management, air quality management, historic preservation, protection of migratory birds and eagles, groundwater discharges, local road, development, and construction permits, and other construction topics will be acquired, as needed, as the Project progresses. Needed permits will be in place by the start of construction anticipated in 2023.

10.2. On Site Workers and Work Schedule

During construction of Glade Reservoir and associated facilities, approximately 250 workers are anticipated to be on site on average. A second construction shift for dam construction might be required. If this second shift is implemented, the approximate number of workers for that shift would decrease to 100. During peak summer construction timeframes, the number of workers could temporarily increase to approximately 500 workers. Work is anticipated to be scheduled

six days a week. After construction is complete, during operation of the pump station and reservoir, up to five Northern Water employees will visit Project facilities each day.

During construction of the conveyance pipelines approximately 25 workers are anticipated to be on a construction site on average, and there is the potential that crews could work at multiple construction sites to construct multiple pipeline segments or parts of a segment concurrently. Work is anticipated to be scheduled six days a week and will occur in one shift. After construction is complete, during operation of the pipelines there will be no employees on site. On average, maintenance is anticipated to require only a few trips to Project features each month.

11.0 Public Input Process

Over the 16-year NISP development and permitting process, continuous effort has been made to inform, engage, involve, and receive input from the public on the Project. Independent of the Larimer County 1041 Permitting process, hundreds of outreach events have been held in and around Northern Colorado, including in Larimer County, to get the word out about NISP. This effort is further described in the NISP Public Engagement History memo included in Attachment F. The NISP Participants and Water Activity Enterprise are committed to timely, accurate, and consistent community engagement associated with the Project.

In addition to this NISP related outreach, public outreach platforms and events have been developed specifically for the Larimer County 1041 permitting process. A public engagement platform NISPTalk.com has been developed to engage and listen to the public, inform the community about the facts of the Project, display important content, and receive public feedback. On this site, individual pages were developed for the Project components listed below with means of communication and engagement customized to each topic. Specific pages on this site have been developed for:

- NISP Overview
- Pipeline Conveyance Routes
- Recreation at Glade Reservoir
- Larimer County 1041 Permitting Process

Content on the pipeline conveyance routes includes an interactive map allowing landowners to geospatially reference a point and provide comments. This page contains a question-and-answer section where the public can post questions, and answers are provided. There is also an option to submit comments directly to staff.

Content on the Glade Reservoir recreation page includes a conceptual recreation map allowing interested parties to reference and comment on recreation concepts. This page contains a recreation-option poll to help measure public support for various recreation options. This page also contains a question-and-answer section where the public can post questions, and answers are provided. There is also an option to submit comments directly to staff.

The Larimer County 1041 Permitting Process page provides an overview of the Larimer County 1041 permitting and review process as it relates to NISP. This page contains a question-and-answer section where the public can post questions and answers are provided.

Postcard invitations to visit NISPTalk.com were sent to:

- Properties within 500 feet of the proposed conveyance pipelines in Larimer County
- Any reservoir or ditch companies that could have pipeline crossings near dams or large canals
- The Bonner Peak neighborhood and properties within 1 mile of the reservoir and recreation areas

Multiple approaches were utilized to reach out to the general public regarding NISPTalk.com and the associated Larimer County permitting process. Social medial outreach included posting the website and information on the following:

- Primary NISP website, www.gladereservoir.org
- Northern Water social media accounts
- Larimer County Social Media Accounts
- Northern Water E-News
- NISP Participants located in Larimer County Social Media Accounts (including the Fort Collins Loveland Water District and Town of Windsor)
- Posters at recreation vendors or recreation spots

A summary of the feedback submitted to NISPTalk.com as well as responses to that feedback is provided in Attachment G.

Additional outreach specific to the development of the Larimer County 1041 Permit has occurred through Project specific open houses on June 29, 2017, October 9, 2019, and December 18, 2019. Each of these open houses is described in more detail below.

An open house to discuss pipeline conveyance alignments in Larimer County was held on June 29, 2017. Notifications for this open house were sent to all property owners within 500 feet of the proposed pipeline routes. A total of 144 people signed in at the open house.

Multiple handouts, posters, and large-scale maps of the pipeline areas were displayed at the open house. Twenty-seven comment cards were received, and a breakdown of major areas of feedback received is included below:

Issue	No. of Comments*
Douglas Road Pipeline concerns (Use Northern Route, not Douglas Road)	11
Douglas Road Traffic and Roadway Concerns	6
Northern Route Concerns (Use Douglas Road, not Northern Route)	5
Easement Width issues	3
Safety Concerns	2
Opposed to NISP Entirely	2
Thanks for hosting open house	2
Terry Lake wetlands issues	1
Highway 14 impacts	1
Request additional NEPA Review	1
Water Quality Issues	1
Request more Public Meetings	1
Notify others, including all Terry Point residents	1

*Some cards contained multiple comments/ issues.

Feedback received from this open house was considered as part of the pipeline alternatives analyses to inform pipeline routes and specific alignments. Additional information on this open house can be found in Attachment H.

An open house was held on October 9, 2019. Notifications for this open house were sent to:

- Properties and property owners within 500 feet of the proposed pipeline routes
- Properties and property owners in the Bonner Peak neighborhood
- Properties and property owners within 1 mile of either Glade Reservoir or the associated recreation area

The Loveland Reporter Herald, Longmont Times Call, The Fence Post, and KUNC also had articles or segments notifying the public about the open house. The open house was also advertised on NISPTalk.com, Northern Water social medial channels, and Northern Water's electronic newsletters. A total of 95 people signed in at the open house.

Multiple handouts, posters, and large-scale maps of the pipeline areas were displayed at the open house. Information explaining the NISP Project, the U.S. Highway 287 relocation, proposed pipeline alignments in Larimer County, proposed recreation options at Glade Reservoir, and the content and scope of the proposed permitting process with Larimer County were presented.

Staff received 32 comment cards from the open house. A breakdown of major comment themes is included below:

Issue		No. of Comments*
Pipelines	Damage or impact to property from construction	2
	Opposition to pipelines entirely	1
	Suggested alternative pipeline alignments	3
Recreation	Support for camping	7
	Support for fishing	10
	Support for recreation plan	2
	Support for trails	15
	Support for picnic pavilion	3
	Support for boating	8
	Concerns regarding noise and impacts from motorized boating	10
	Suggested boat ramp locations and configuration	3
	Suggested trial and trailhead configurations	3

*Some cards contained multiple comments/ issues.

Information received on the pipelines conveyances was considered as part of the pipeline alternatives analyses to inform pipeline routes and specific alignments. Feedback on the recreation options at Glade Reservoir will be incorporated into the development of recreation options and associated management plans and designs when that information is developed. More information on this open house can be found in Attachment I.

Another open house was held on December 18, 2019. Notifications for this open house were sent to:

- Properties and property owners in the LCR 29C neighborhood
- Properties and property owners in the Bonner Peak neighborhood

Emails were also sent to the limited number of property owners in these neighborhoods that email addresses were available for, with invitations to the open house and the request that those property owners share that invitation with their neighbors. A total of 34 people signed in at the open house.

Multiple handouts, posters, and large-scale maps of the proposed Glade Reservoir recreation plan and recreation areas, U.S. Highway 287 relocation, and pipeline areas were displayed at the

open house. Information explaining the NISP Project and the content and scope of the proposed 1041 Permit with Larimer County were also presented.

Staff received 22 comment cards from the open house. A breakdown of major comment themes is included below:

Issue	No. of Comments	In Support or Neutral	In Opposition
Position on project in general	4	2	2
Boating on reservoir	14	11	3
Request for non-motorized boating	9	-	-
Night-time boating on reservoir	18	1	17
Camping at recreation area	19	13	6
Fishing on reservoir	19	12	7
Trails in recreation area	19	14	5
Call for turn lanes at Bonner Peaks or other 287 safety issues	8	-	-

*Some cards contained multiple comments/ issues.

Feedback received on the recreation options at Glade Reservoir will be incorporated into the development of recreation options and associated management plans and designs when that information is developed. U.S. Highway 287 relocation comments focused on safety issues associated with the existing U.S. Highway 287 alignment and a desire for turn lanes at the entrance to the Bonner Peak neighborhood. While that entrance (the Bonner Springs Ranch Road and U.S. Highway 287 Intersection) is outside of the scope of the U.S. Highway 287 Relocation and Larimer County 1041 Permit, we have been in contact with CDOT sharing the neighborhood's concerns with the intersection, the Owl Canyon intersection, and the overall safety of U.S. Highway 287. Finally, there were no submitted comments on the pipeline routes. More information on this open house can be found in Attachment J.

Information on NISP and its conveyance pipelines was also presented at the Thornton Water Project's public outreach events at the request of Larimer County Staff.

In addition to these outreach efforts, staff has worked with individuals and recreation groups one-on-one to answer questions and receive feedback on the project. These efforts have included contract with rock-climbing, bass-fishing, and paddle boarding groups who are in support of the Project and look forward to coordinating on future design of recreation facilities at Glade Reservoir as those designs relate to their form of recreation. One-on-one conversations

have also occurred with individuals and home-owners associations along pipeline conveyance routes to inform them on the scope and location of construction as it relates to their properties. Feedback received on the pipeline routes was considered as part of the pipeline routing analysis.

12.0 Final Design and Permit Coordination

Plans and designs presented in this 1041 Permit application have been developed at a conceptual level. Additional refinement and changes are anticipated as design efforts progress. Plans and designs presented will also be subject to final federal permit requirements for the Project, which will control in the event of a conflict.

Soil Types Legend

- No Category
- Aquepts
- Aquolls
- Clayey, montmorillonitic (calcareous), mesic, shallow Ustic Torriorthents
- Coarse-loamy, mixed (calcareous), mesic Aridic Ustorthents
- Coarse-loamy, mixed (calcareous), mesic Cumulic Haplaquolls
- Coarse-loamy, mixed (calcareous), mesic Ustic Torriorthents
- Coarse-loamy, mixed Pachic Haploborolls
- Coarse-loamy, mixed, mesic Pachic Haplustolls
- Coarse-loamy, mixed, superactive, calcareous, mesic Aridic Ustorthents
- Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents
- Coarse-loamy, mixed, superactive, mesic Aridic Haplustalfs
- Coarse-loamy, mixed, superactive, mesic Pachic Haplustolls
- Coarse-loamy, mixed, superactive, mesic Ustollic Haplargids
- Fine, mixed, mesic Aridic Argiustolls
- Fine, montmorillonitic (calcareous), mesic Aeric Halaquepts
- Fine, montmorillonitic, mesic Aridic Argiustolls
- Fine, montmorillonitic, mesic Ustollic Haplargids
- Fine, smectitic, mesic Aridic Argiustolls
- Fine, smectitic, mesic Ustertic Haplocambids
- Fine, smectitic, mesic Ustollic Haplargids
- Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic Fluvaquentic Haplaquolls
- Fine-loamy over sandy or sandy-skeletal, mixed, mesic Aridic Argiustolls
- Fine-loamy over sandy or sandy-skeletal, mixed, mesic Ustollic Haplargids
- Fine-loamy, mixed (calcareous), mesic Ustic Torriorthents
- Fine-loamy, mixed Typic Argiborolls
- Fine-loamy, mixed, active, calcareous, mesic Ustic Torriorthents
- Fine-loamy, mixed, frigid Fluvaquentic Haplustolls
- Fine-loamy, mixed, mesic Aridic Argiustolls
- Fine-loamy, mixed, mesic Aridic Haplustalfs
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- Fine-loamy, mixed, mesic Ustollic Haplargids
- Fine-loamy, mixed, superactive, calcareous, mesic Aridic Ustifluvents
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- Fine-loamy, mixed, superactive, mesic Aridic Haplustalfs
- Fine-loamy, mixed, superactive, mesic Torrifluventic Haplustolls
- Fine-loamy, mixed, superactive, mesic Ustollic Haplargids
- Fine-silty, mixed (calcareous), mesic Aridic Ustorthents

- Fine-silty, mixed, superactive, mesic Aridic Haplustalfs
- Haploborolls
- Haplustolls
- Loamy, mixed (calcareous), mesic, shallow Ustic Torriorthents
- Loamy, mixed, mesic Lithic Haplustolls
- Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
- Loamy-skeletal, mixed Lithic Cryoboralfs
- Loamy-skeletal, mixed Lithic Eutroboralfs
- Loamy-skeletal, mixed, mesic Lithic Haplustolls
- Loamy-skeletal, mixed, mesic Ustollic Haplargids
- Loamy-skeletal, mixed, shallow Typic Haploborolls
- Sandy, mixed, mesic Ustic Torrifluvents
- Sandy-skeletal, mixed, mesic Ustollic Calciorthids
- Typic Fluvaquents
- Ustic Torriorthents

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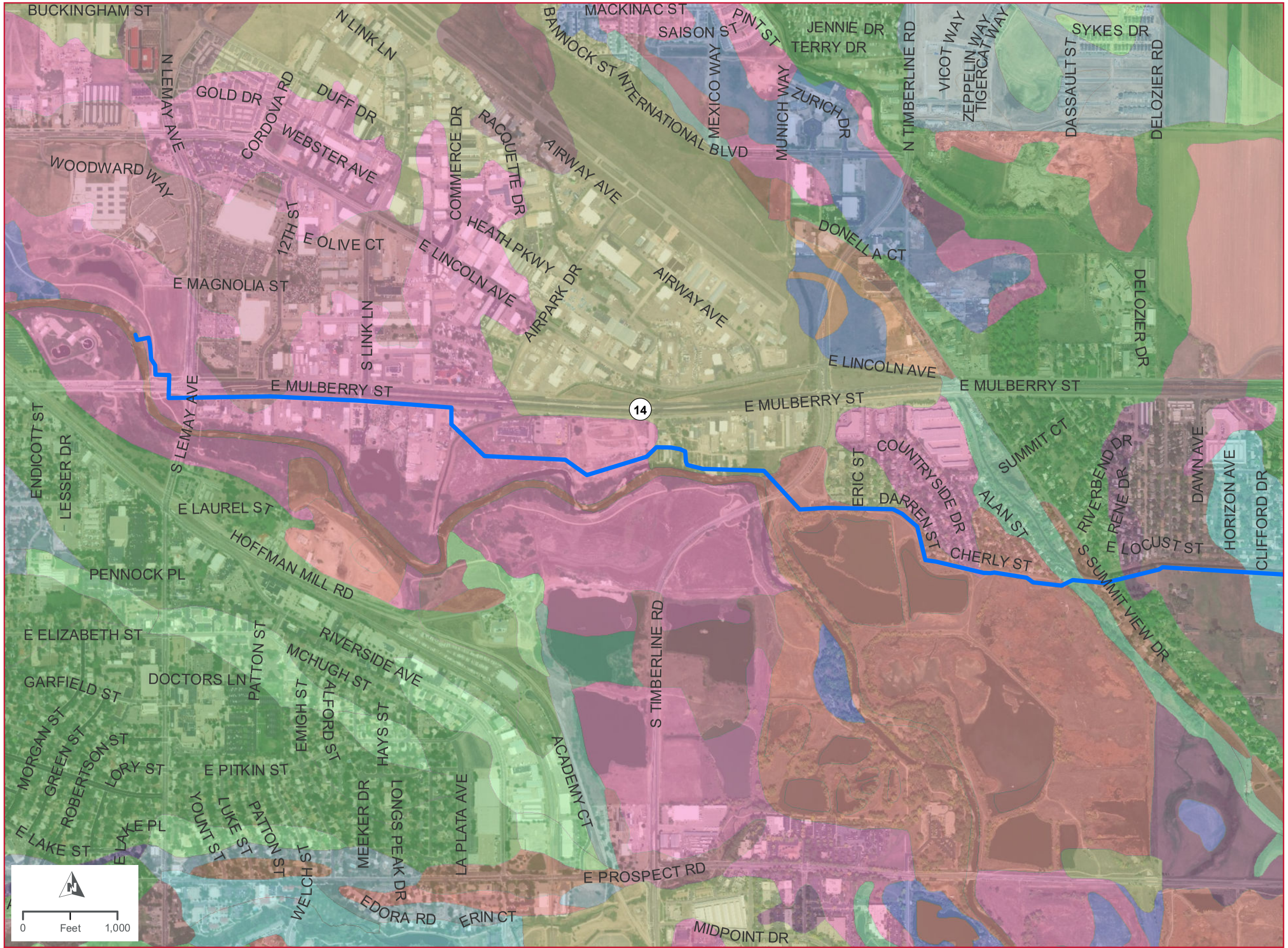
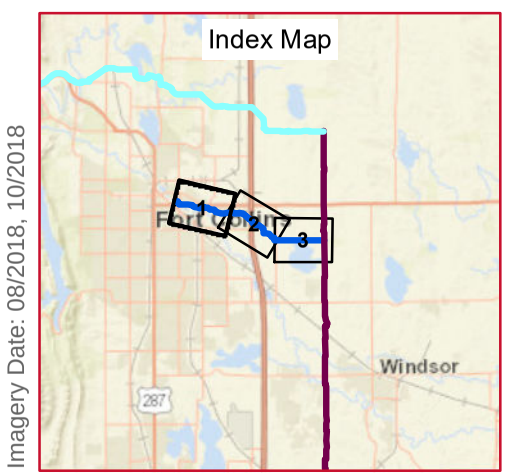
POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline

See complete legend at the beginning of this map series





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DATA SOURCES: Northern Water, Larimer County, HDR

Soil Data Source: Natural Resouces Conservation Service- USDA

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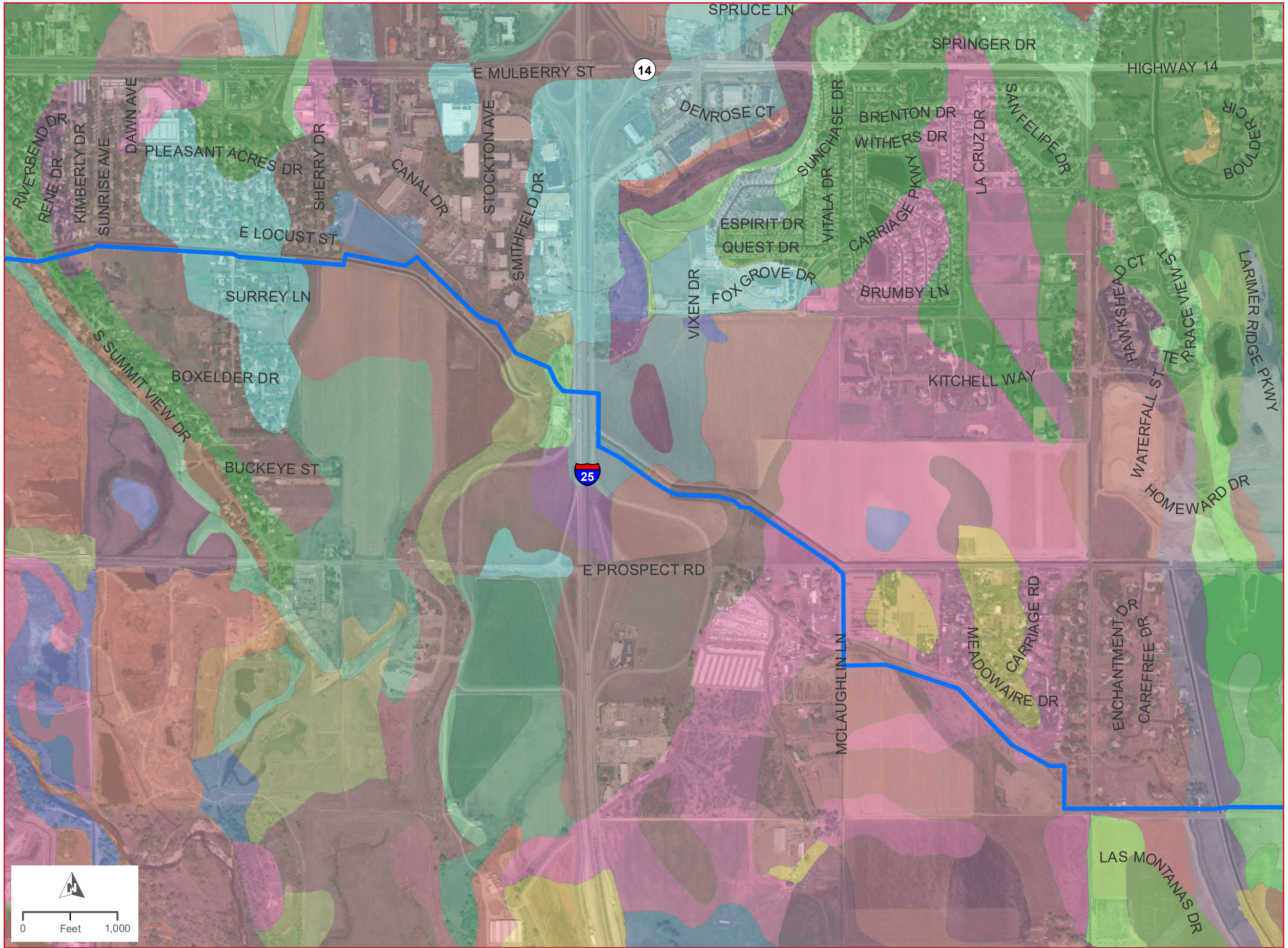
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 2: SOIL TYPES



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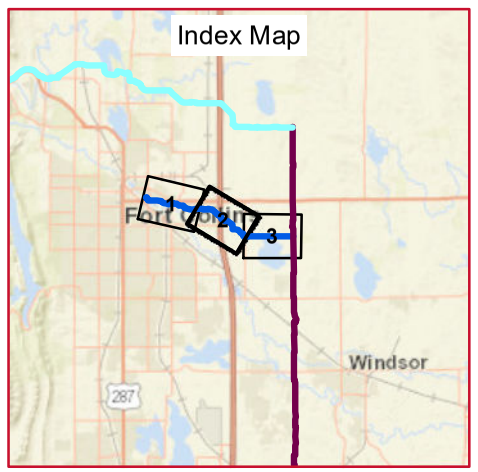
- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline

See complete legend at the beginning of this map series



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Soil Data Source: Natural Resouces Conservation Service- USDA

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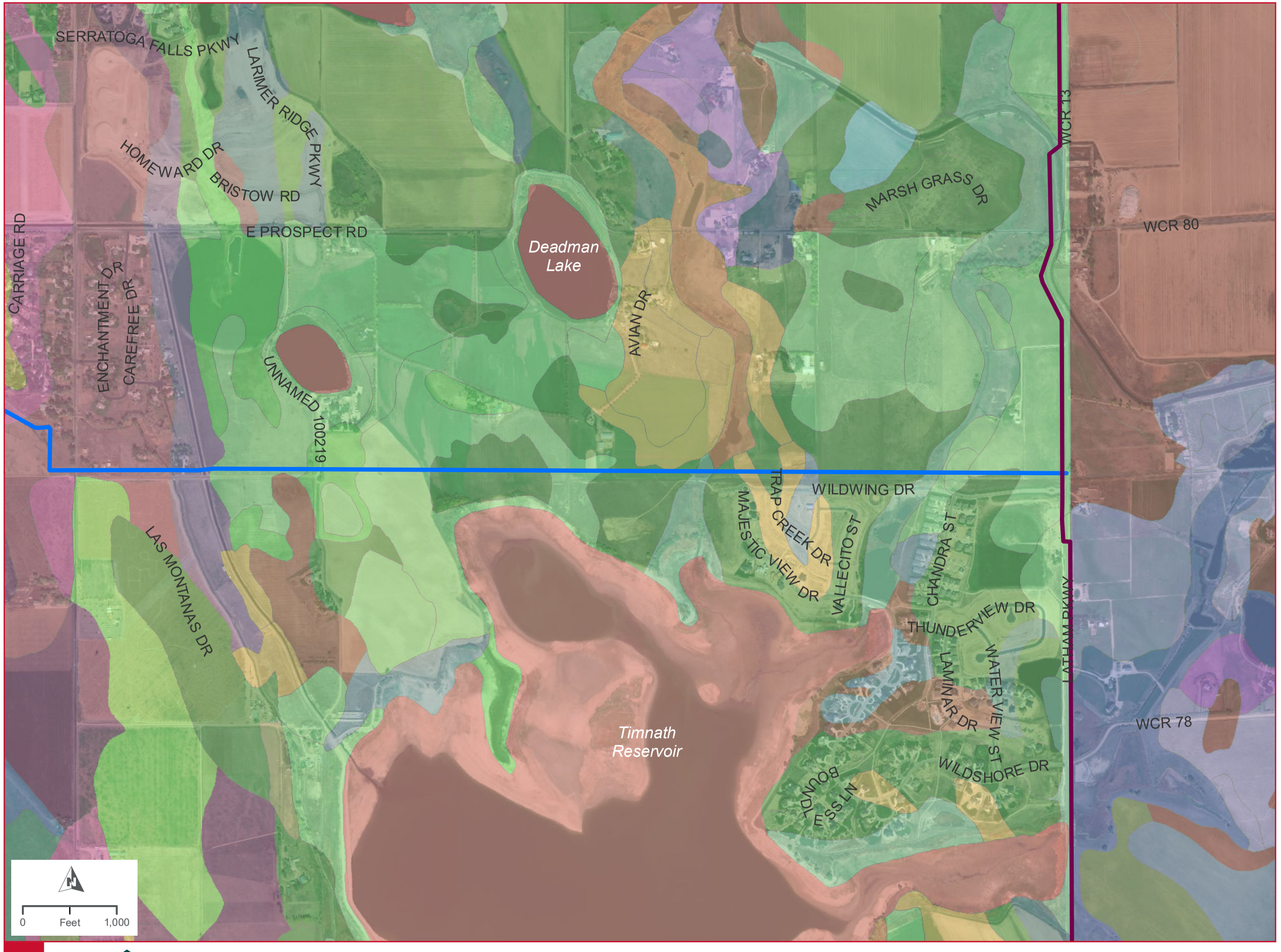
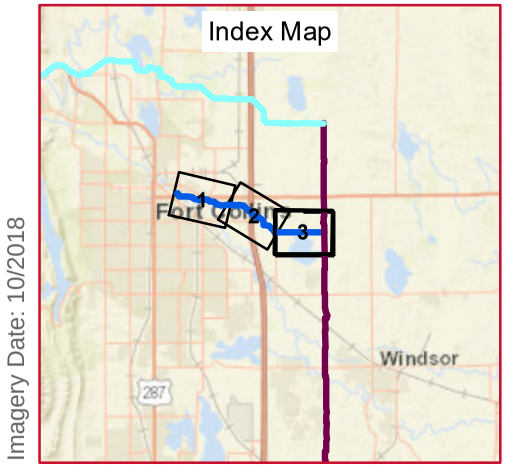


POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline

See complete legend at the beginning of this map series



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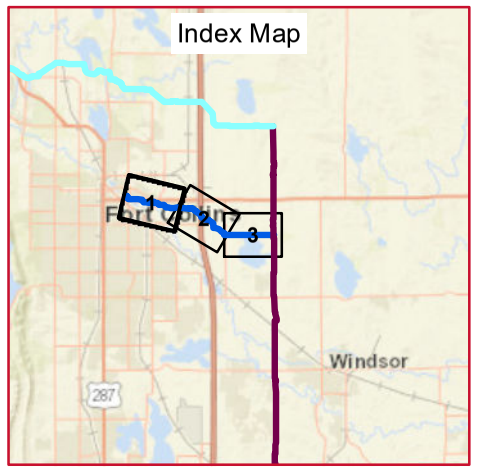
POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 1: GENERAL

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Subdivision Boundary
- City Boundary
- Approx. Pump Station Location
- Boxelder SS Approx.
- Greeley Watermain
- Anheuser Busch SS Approx



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DATA SOURCES: Northern Water, Larimer County, HDR

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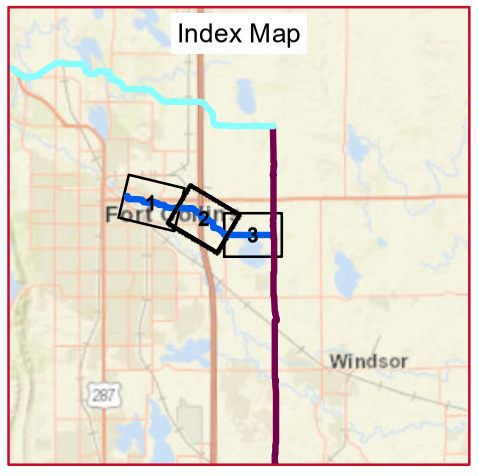
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 1: GENERAL

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management
- Subdivision Boundary
- City Boundary
- Approx. Pump Station Location
- Boxelder SS
- Greeley Watermain



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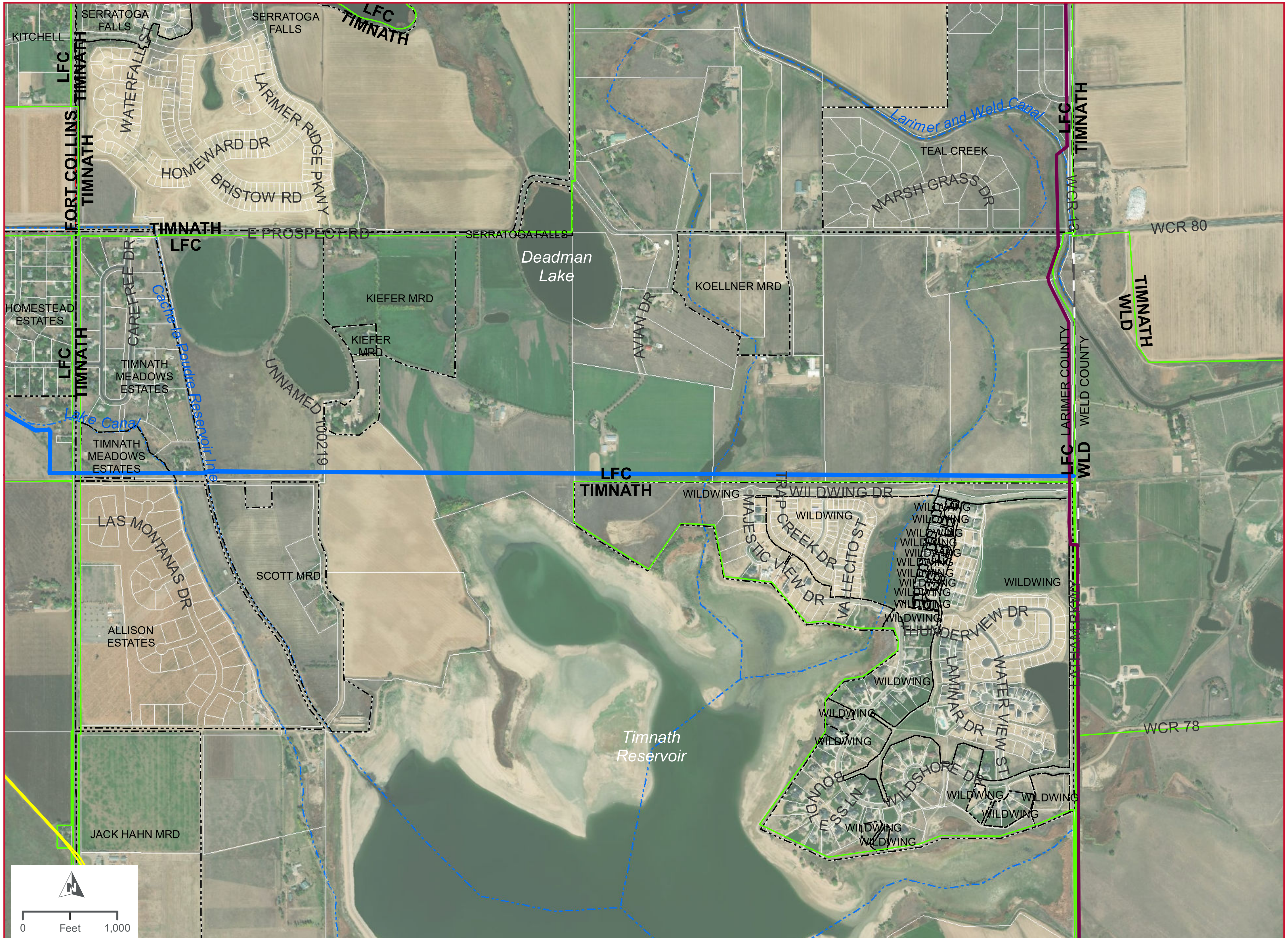
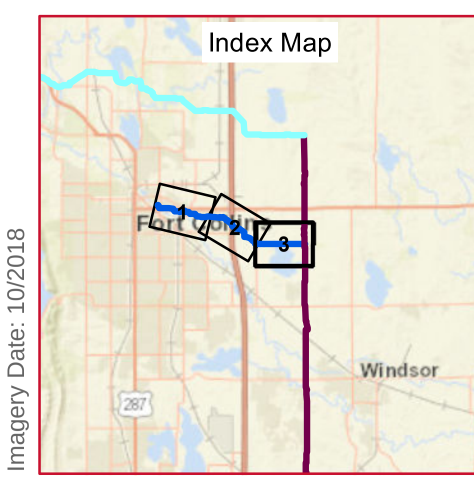
POUDRE INTAKE PIPELINE
SHEET 3 OF 3

MAP SERIES 1: GENERAL



Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management
- Subdivision Boundary
- City Boundary
- Approx. Pump Station Location
- Greeley Watermain



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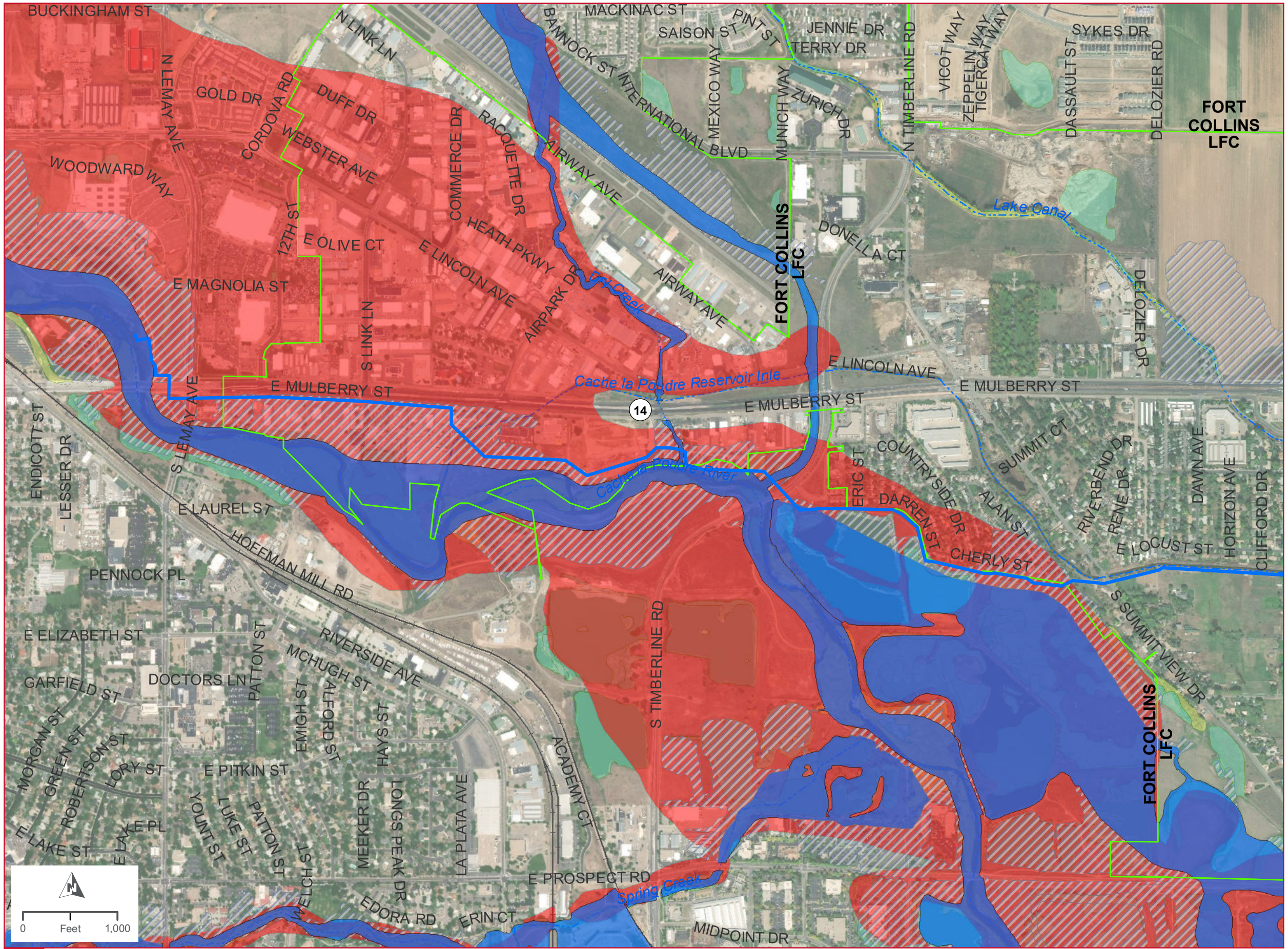
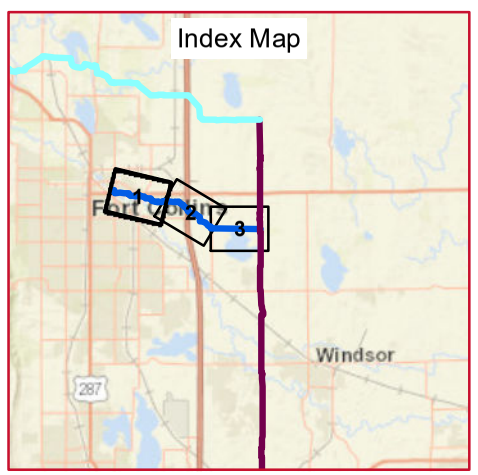
POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 3: ENVIRONMENTAL

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- City Boundary
- National Wetland Inventory Wetlands*
- Riparian Corridor*
- 100 Year Floodplain
- Floodway
- Geologic Hazard

*See 1041 Permit Wetlands Memo for detailed information.





DATA SOURCES: Northern Water, Larimer County, HDR

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NORTHERN INTEGRATED SUPPLY PROJECT

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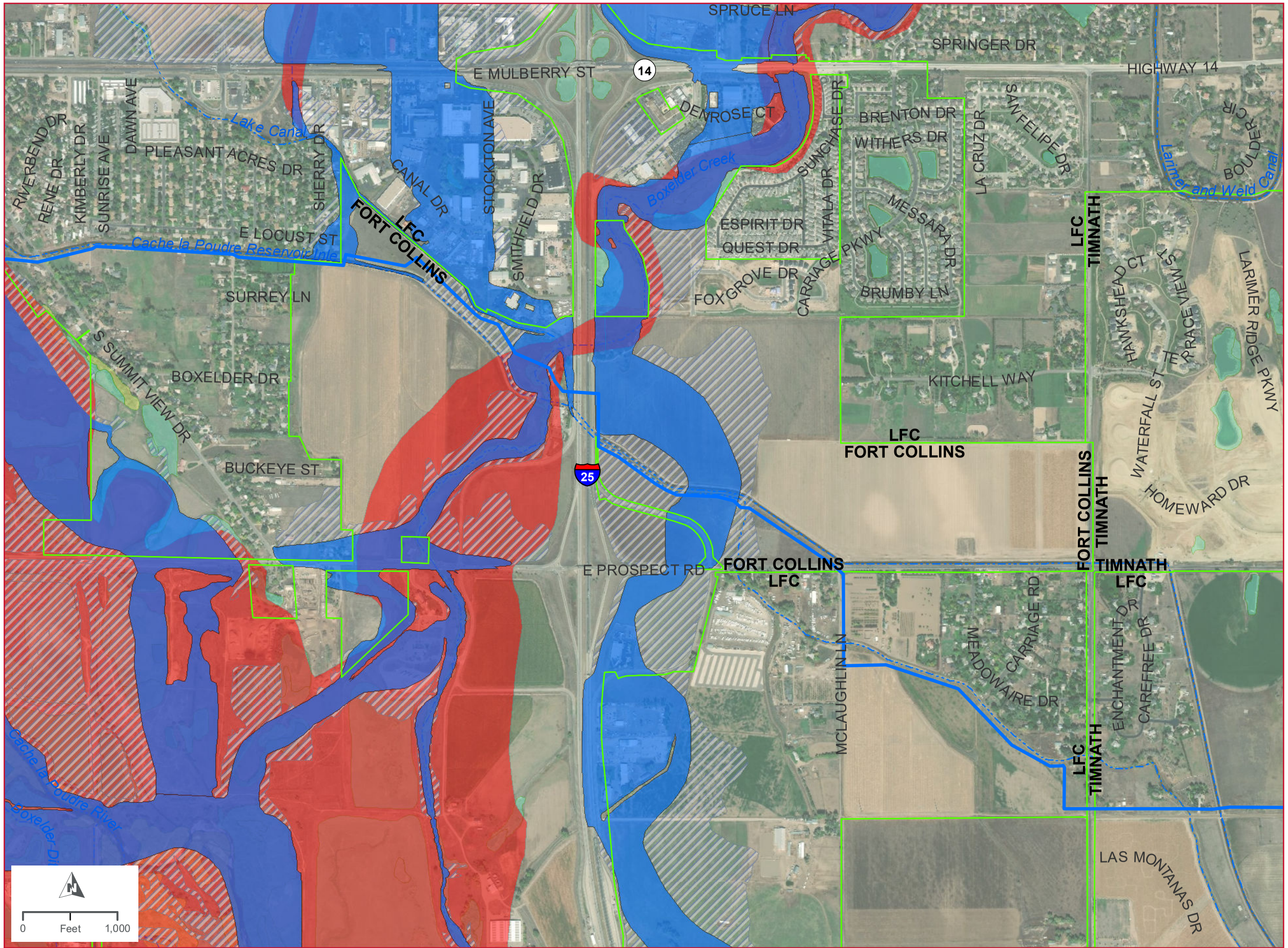
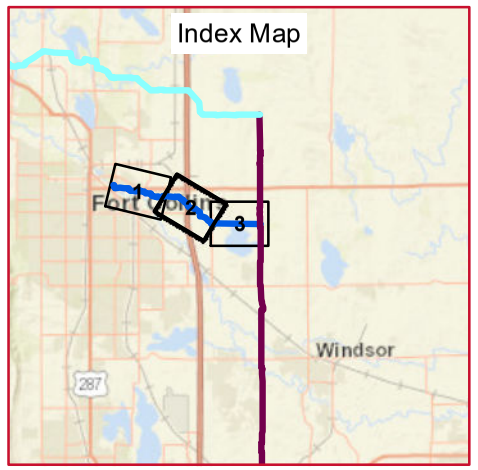
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 3: ENVIRONMENTAL

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- City Boundary
- National Wetland Inventory Wetlands*
- Riparian Corridor*
- 100 Year Floodplain
- Floodway
- Geologic Hazard

*See 1041 Permit Wetlands Memo for detailed information.





DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

HDR Dewberry

NORTHERN INTEGRATED SUPPLY PROJECT

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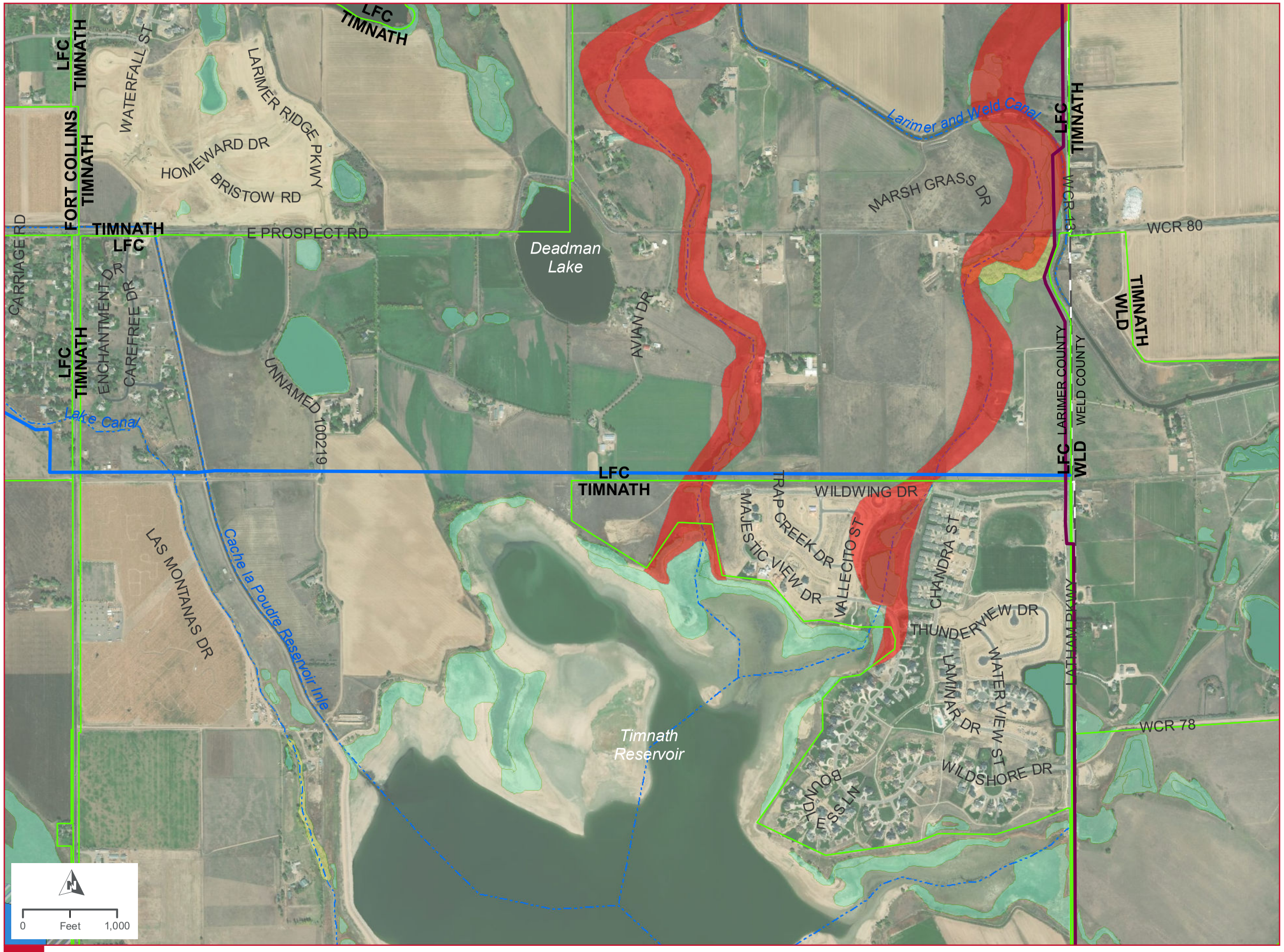
POUDRE INTAKE PIPELINE
SHEET 3 OF 3

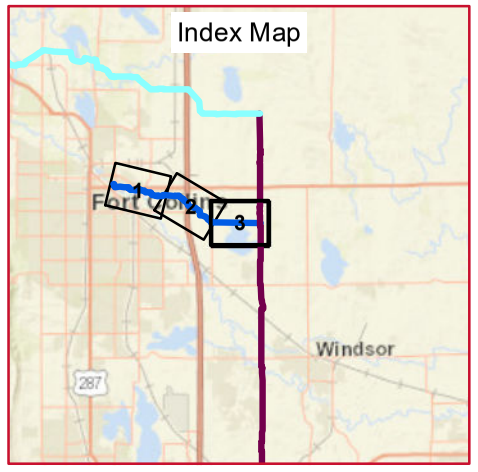
MAP SERIES 3: ENVIRONMENTAL

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- City Boundary
- National Wetland Inventory Wetlands*
- Riparian Corridor*
- 100 Year Floodplain
- Floodway
- Geologic Hazard

*See 1041 Permit Wetlands Memo for detailed information.





DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

NISP

100

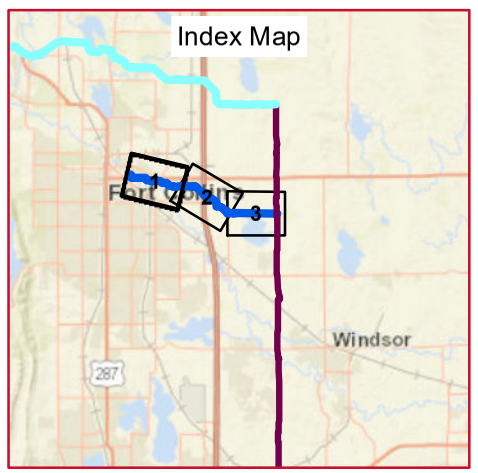
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP3_ENV..MXD - USER: MHARRIS - DATE: 2/10/2020

BCC 08/17/20

POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 4: TOPOGRAPHY

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Index Contour
- Intermediate Contour



DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

101

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP4_TOPOGRAPHY.MXD - USER: MHARRIS - DATE: 2/5/2020

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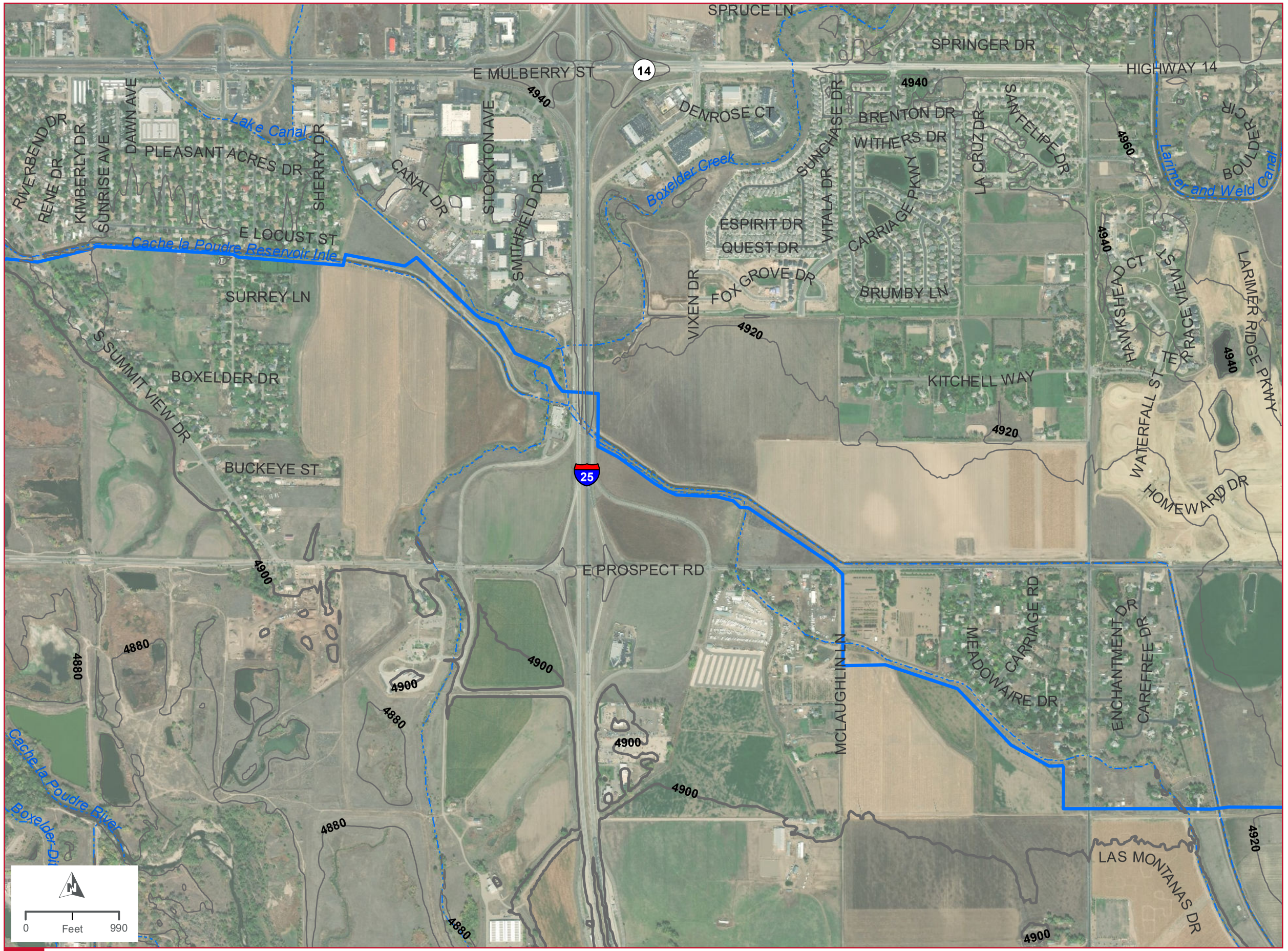
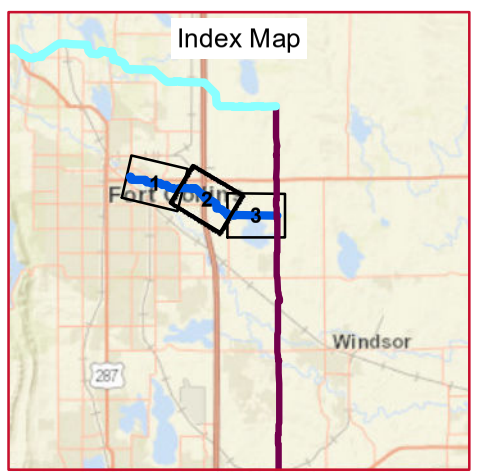
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 4: TOPOGRAPHY

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Index Contour
- Intermediate Contour





DATA SOURCES: Northern Water, Larimer County, HDR

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NORTHERN INTEGRATED SUPPLY PROJECT

NISP

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PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP4_TOPOGRAPHY.MXD - USER: MHARRIS - DATE: 2/5/2020

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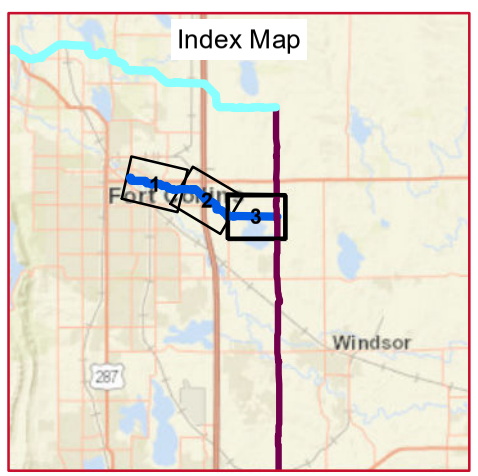
POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 4: TOPOGRAPHY

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Index Contour
- Intermediate Contour



DATA SOURCES: Northern Water, Larimer County, HDR

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NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP4_TOPOGRAPHY.MXD - USER: MHARRIS - DATE: 2/5/2020

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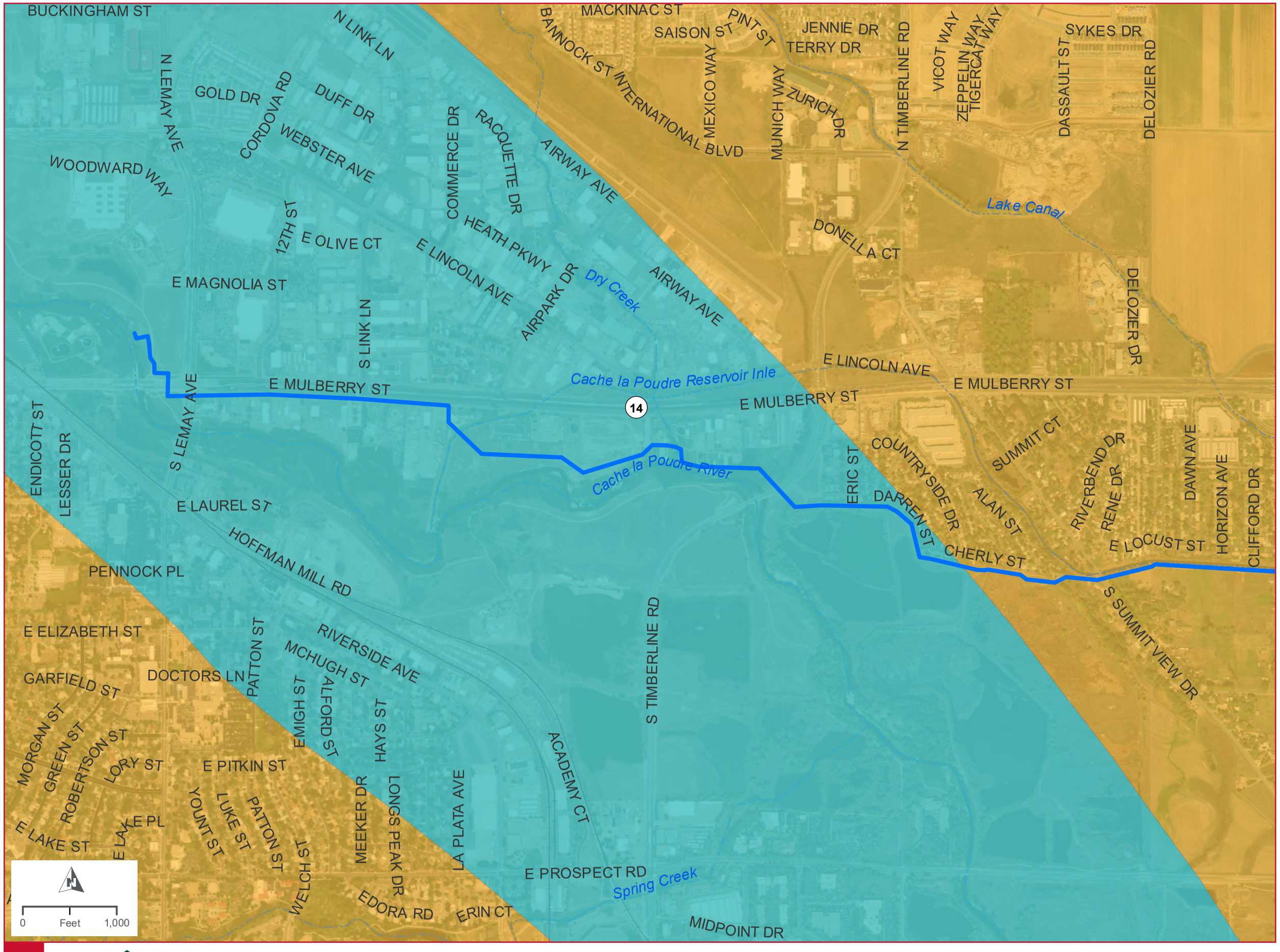
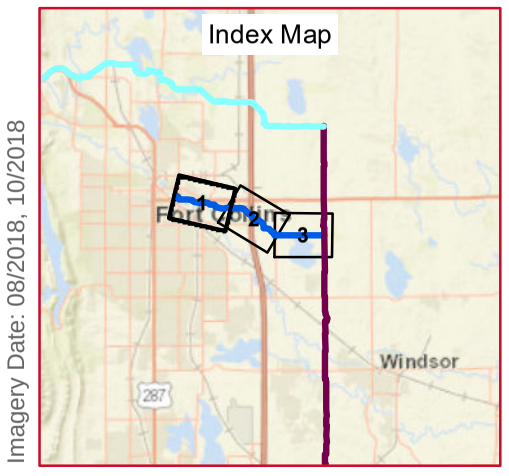
POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 5A: WILDLIFE (WHITE TAIL DEER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- White Tail Deer Concentration Area
- White Tail Deer Winter Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.





Imagery Date: 08/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

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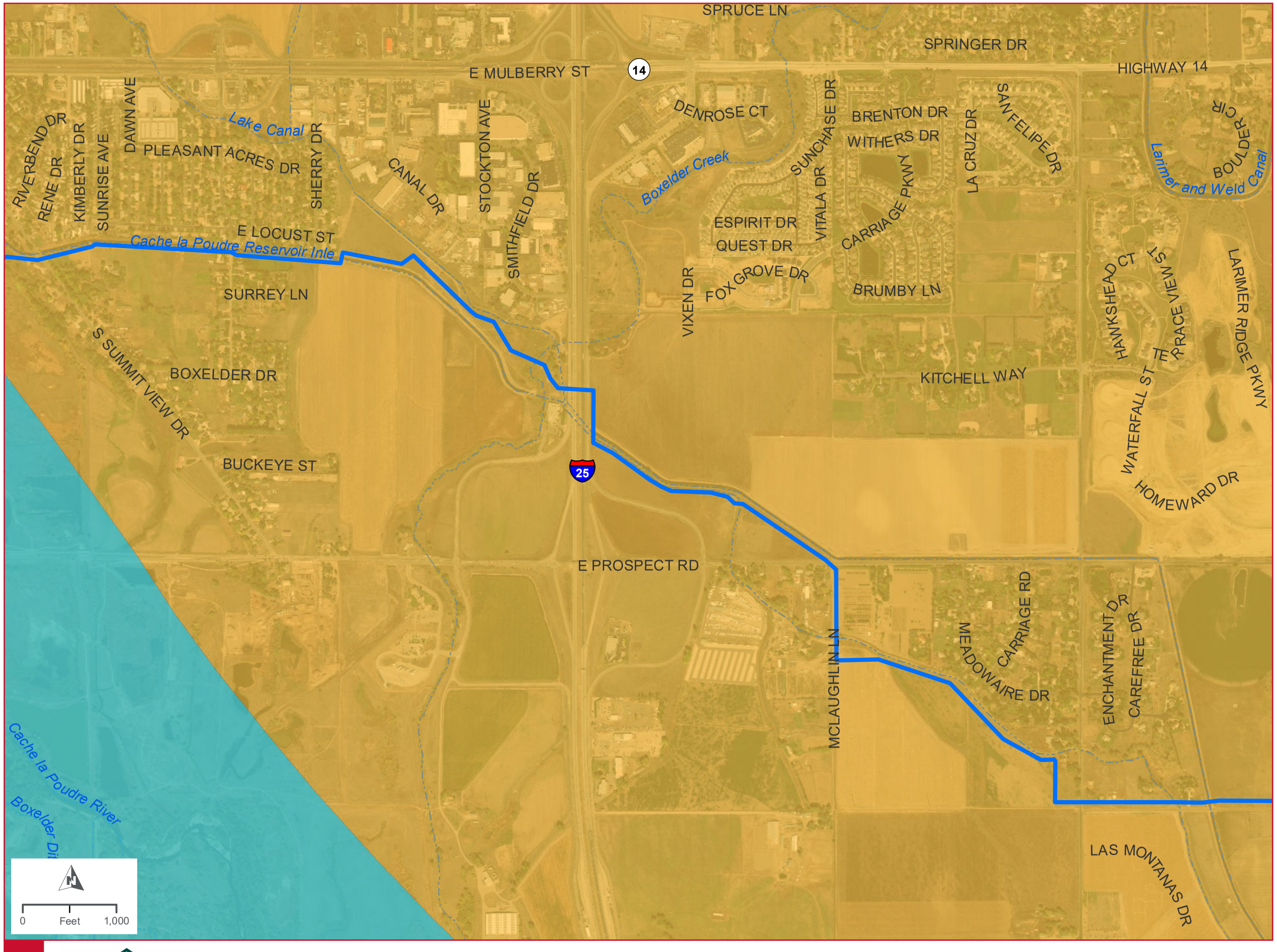
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAPS_WILDLIFE_WTDEER.MXD - USER: MHARRIS - DATE: 2/5/2020

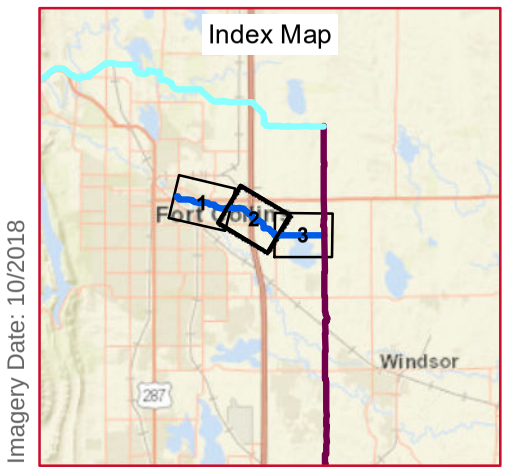
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 5A: WILDLIFE (WHITE TAIL DEER)



Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- White Tail Deer Concentration Area
- White Tail Deer Winter Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.

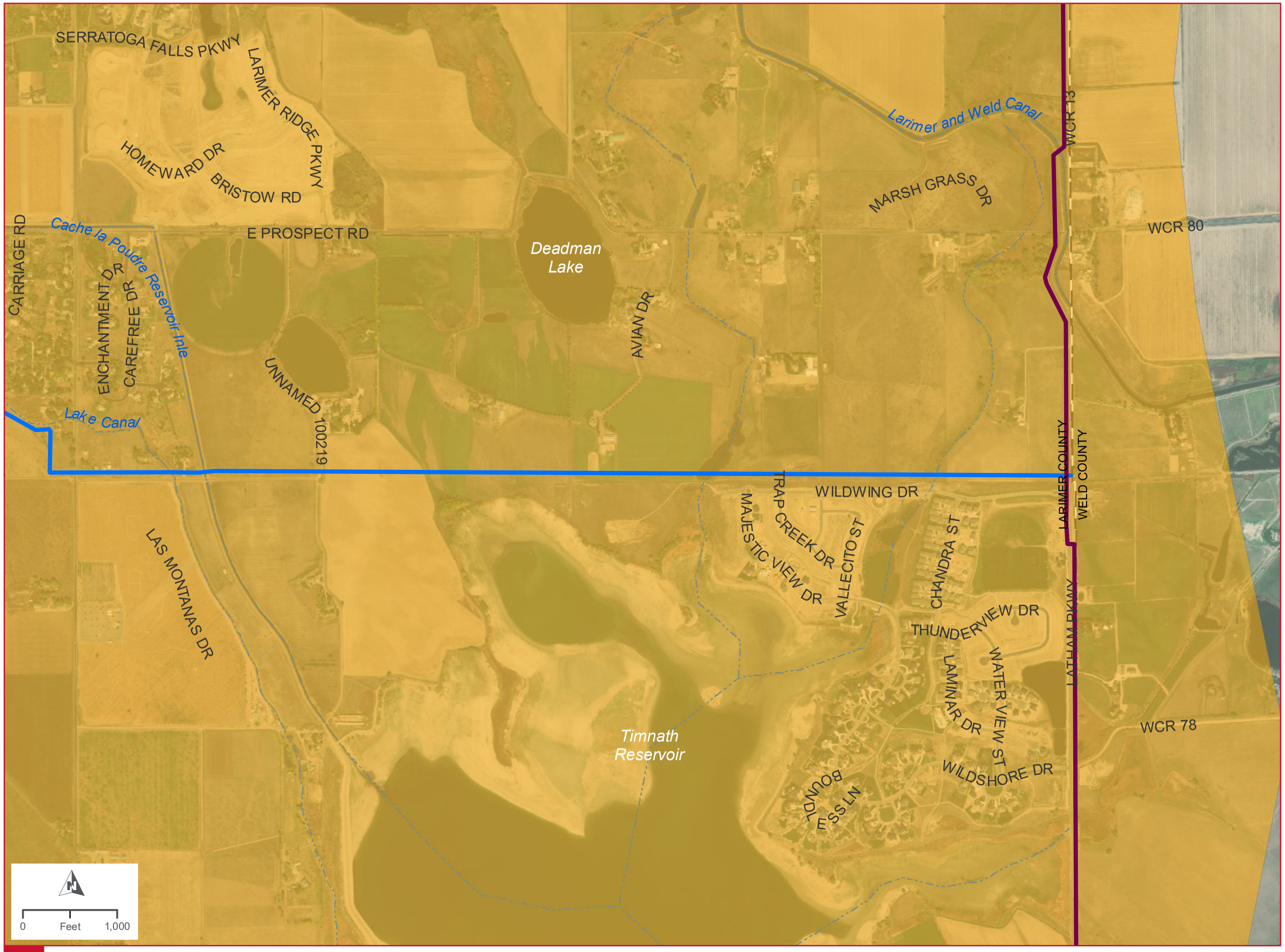


Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

BCC 08/17/20

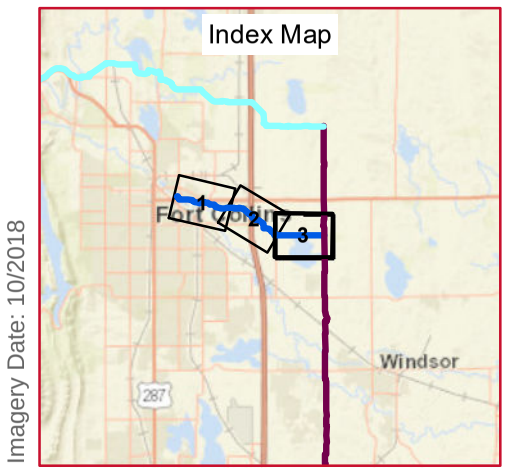


POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 5A: WILDLIFE (WHITE TAIL DEER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- White Tail Deer Concentration Area
- White Tail Deer Winter Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

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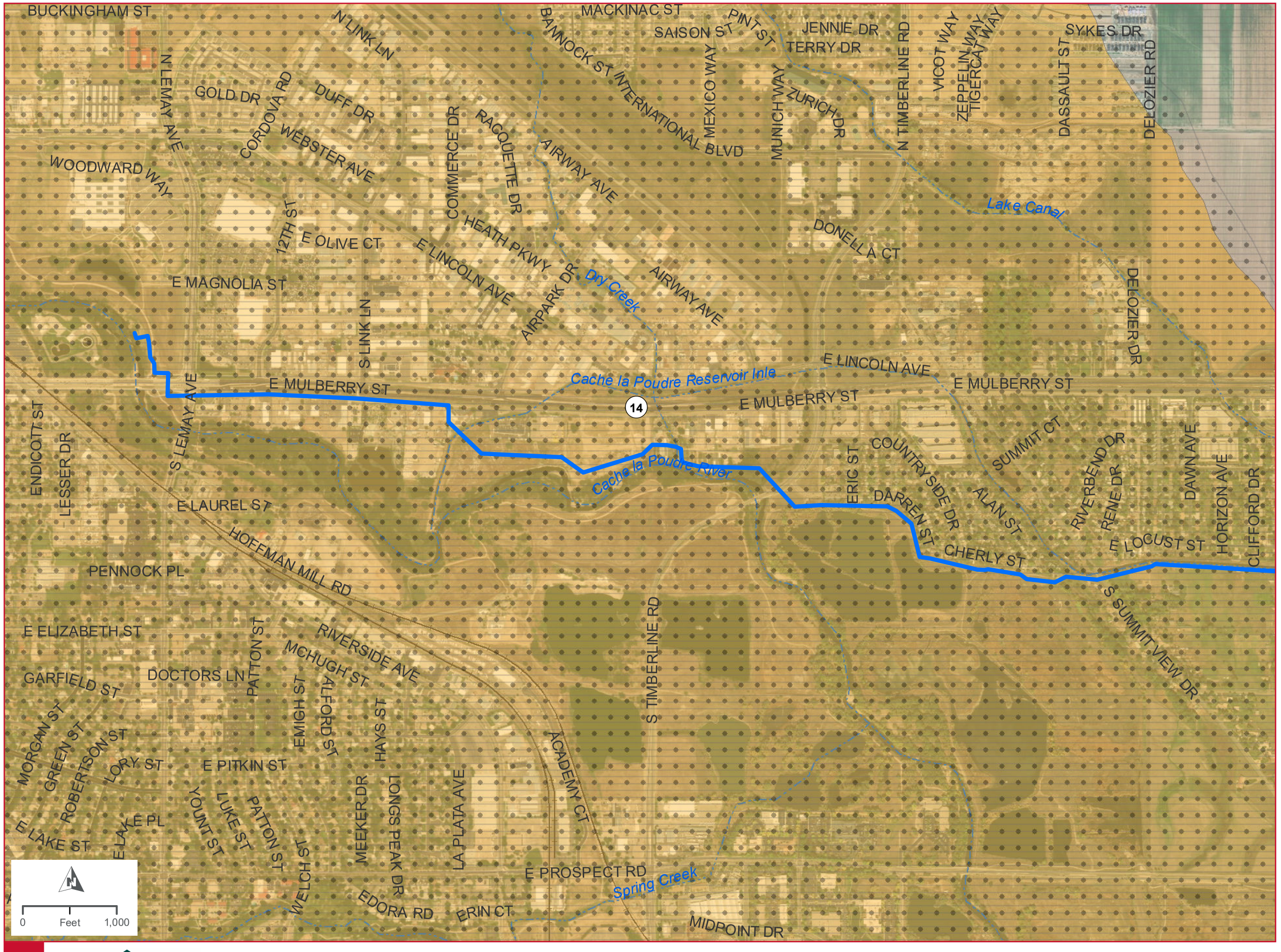
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAPS_WILDLIFE_WTDEER.MXD - USER: MHARRIS - DATE: 2/5/2020

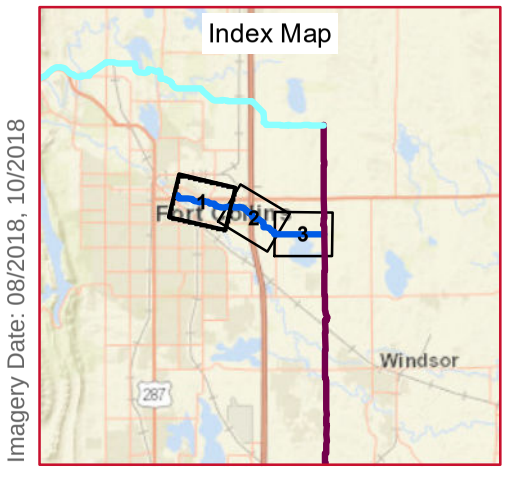
POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 5B: WILDLIFE (MULE DEER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Mule Deer Overall Range
- Mule Deer Winter Range
- Mule Deer Summer Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.





Imagery Date: 08/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

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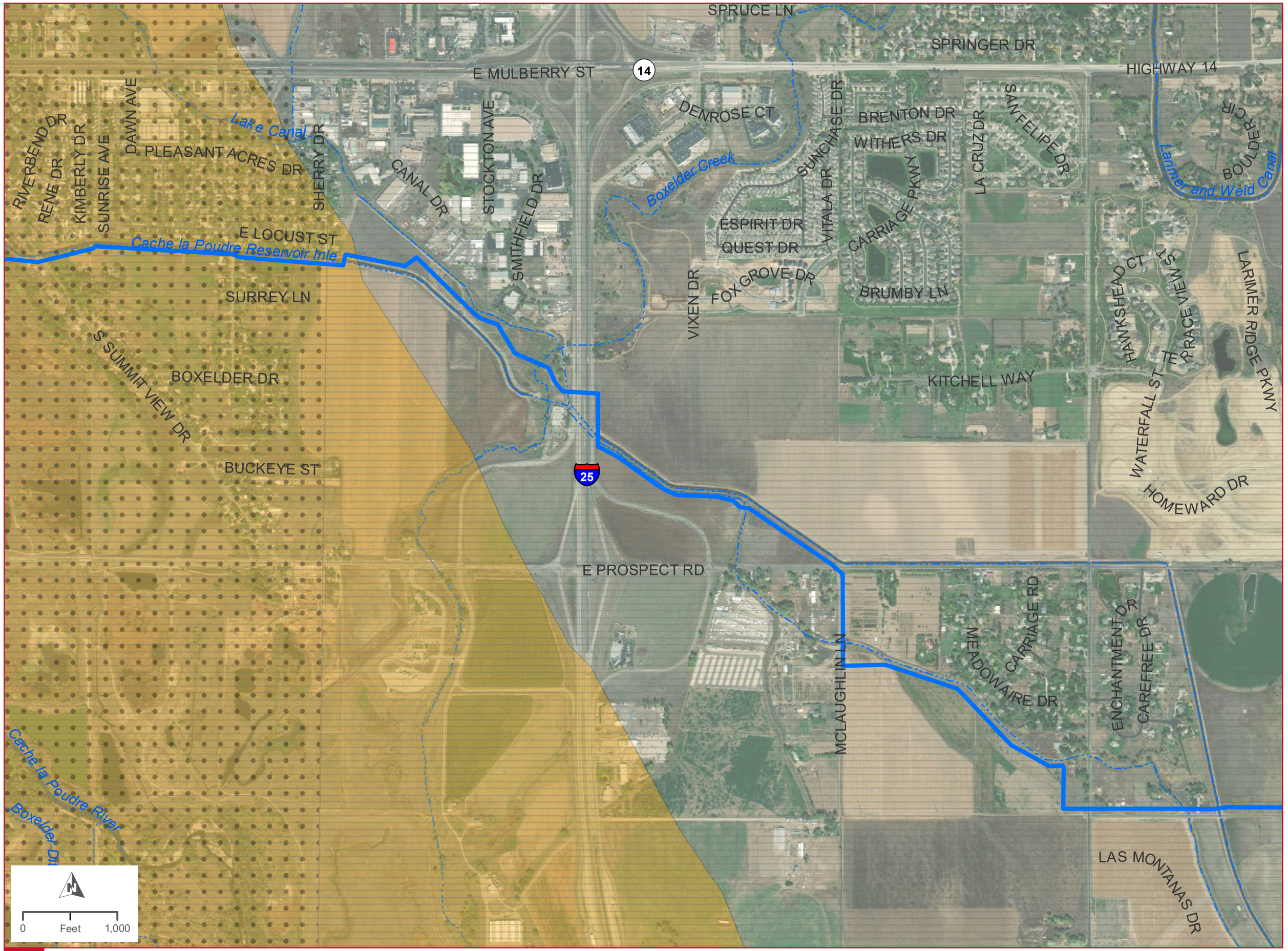
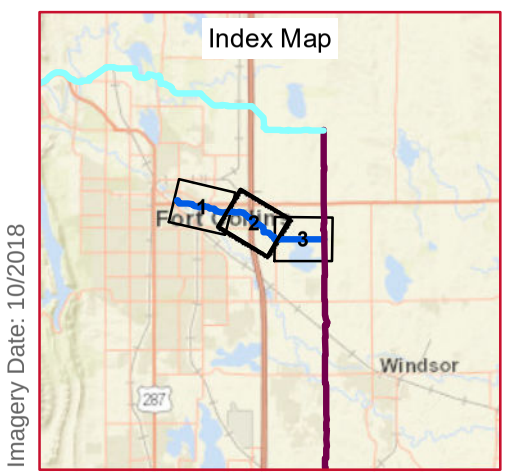
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 5B: WILDLIFE (MULE DEER)



Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Mule Deer Overall Range
- Mule Deer Winter Range
- Mule Deer Summer Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

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NORTHERN INTEGRATED SUPPLY PROJECT

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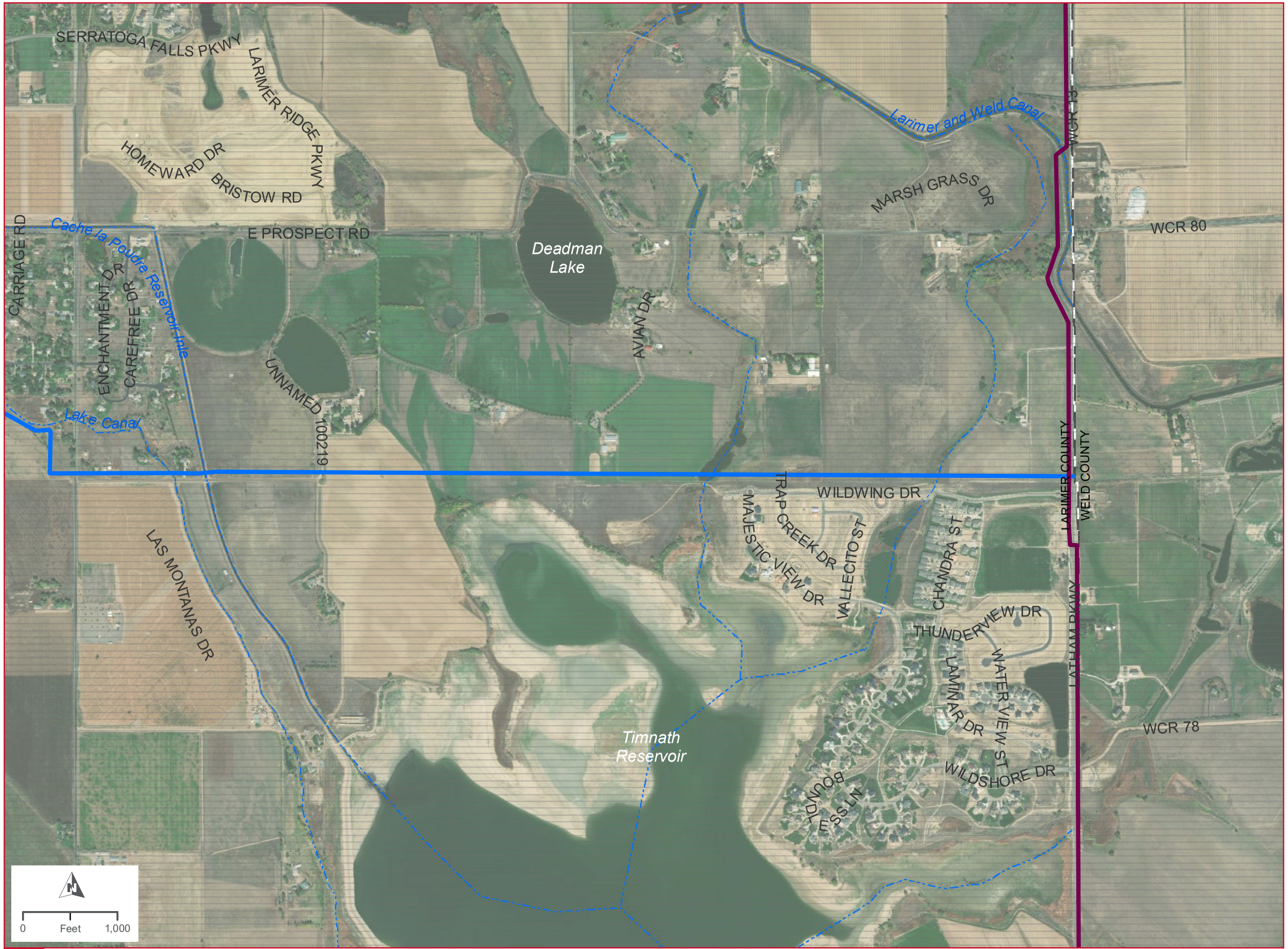
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP5_WILDLIFE_MULEDEER.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

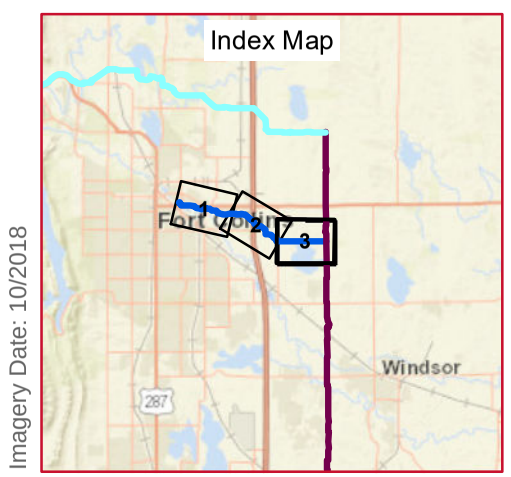
POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 5B: WILDLIFE (MULE DEER)



Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Mule Deer Overall Range
- Mule Deer Winter Range
- Mule Deer Summer Range

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

NISP Northern Water Northern Integrated Supply Project

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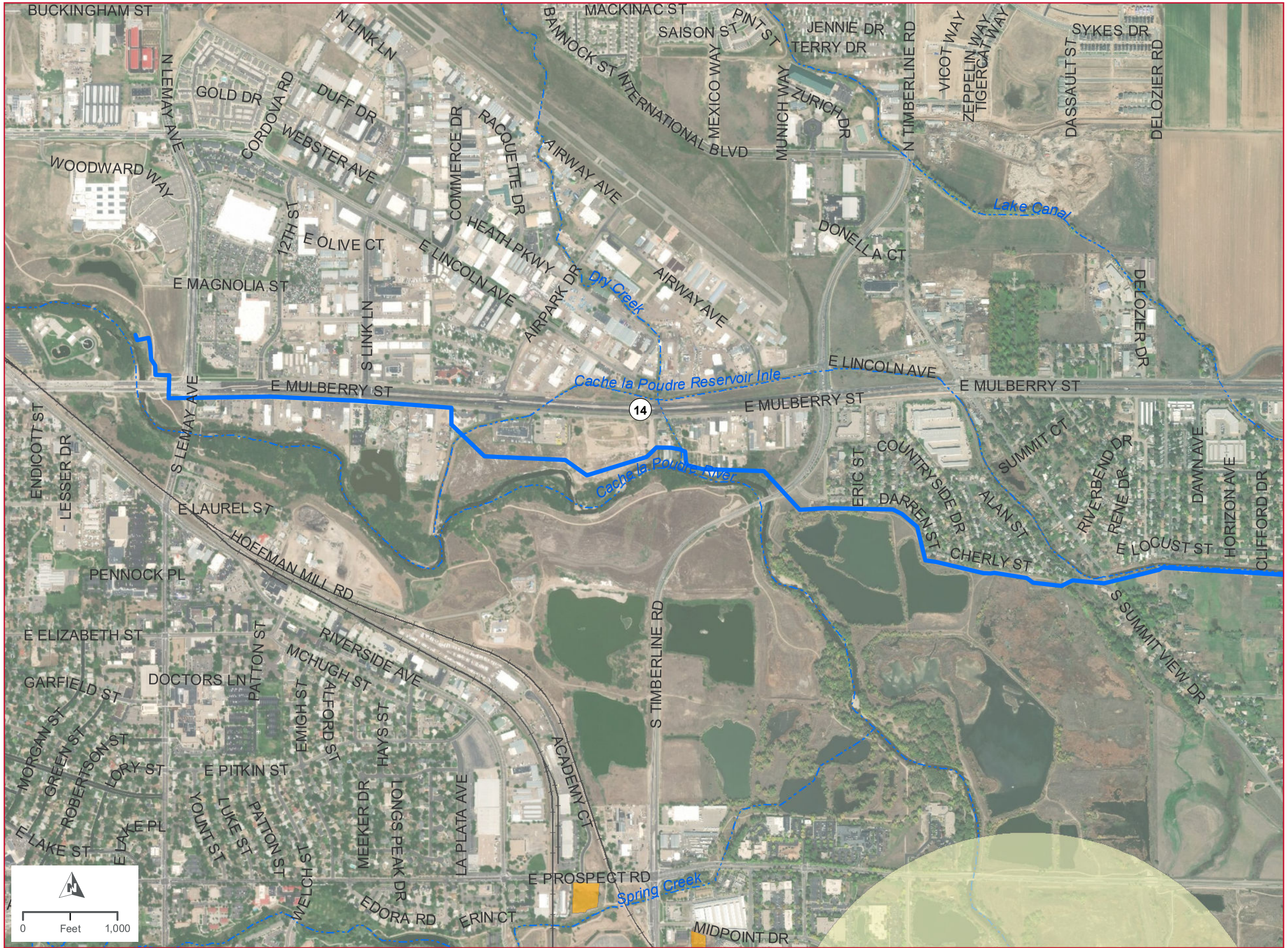
NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAPS_WILDLIFE_MULEDEER.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20



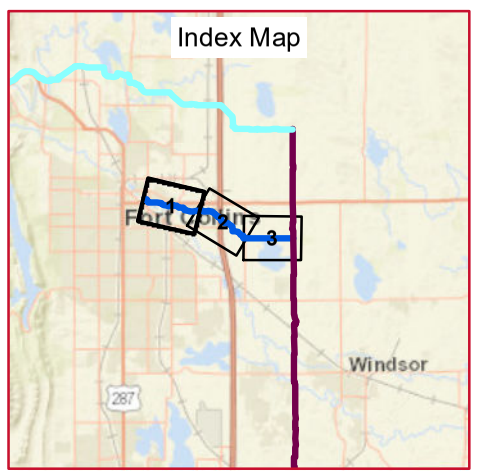
POUDRE INTAKE PIPELINE
SHEET 1 OF 3

MAP SERIES 5C:
WILDLIFE (OTHER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Prairie Dog Colony
- Bald Eagle Active Nest Buffer

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.



Imagery Date: 08/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

NISP

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PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP5_WILDLIFE_OTHER.MXD - USER: MHARRIS - DATE: 2/5/2020

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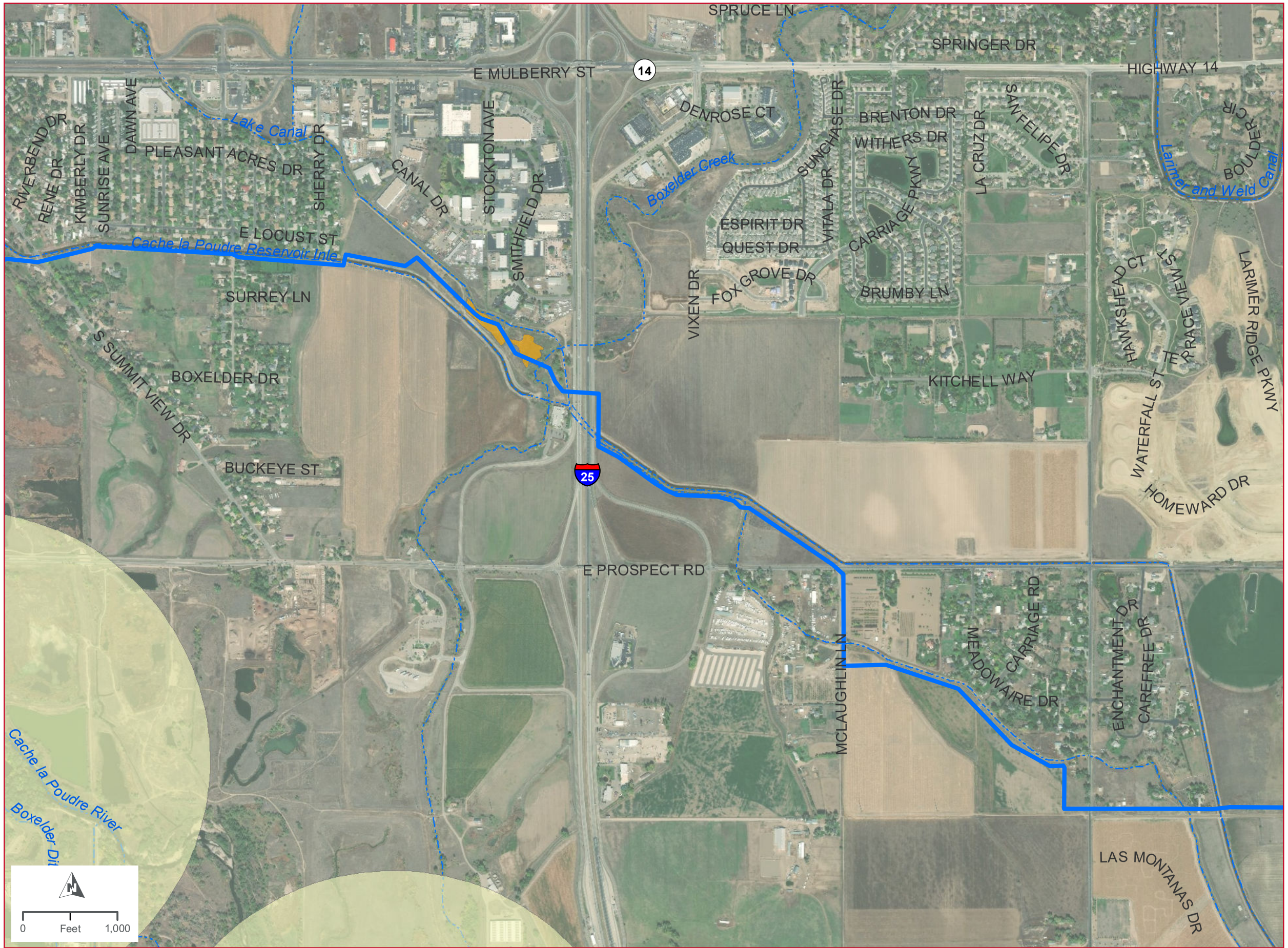
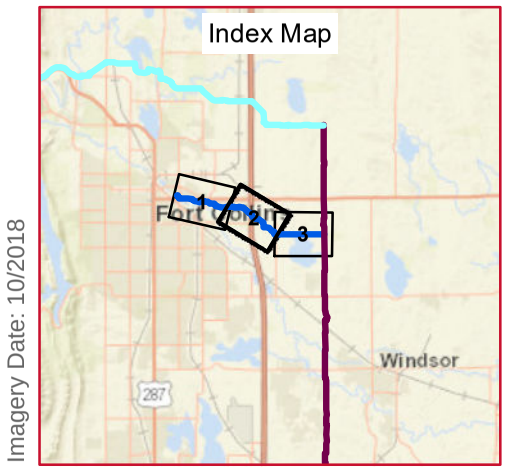
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 5C: WILDLIFE (OTHER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Prairie Dog Colony
- Bald Eagle Active Nest Buffer

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.





Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT
NORTHERN COLORADO WATER CONSERVANCY DISTRICT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP5_WILDLIFE_OTHER.MXD - USER: MHARRIS - DATE: 2/5/2020

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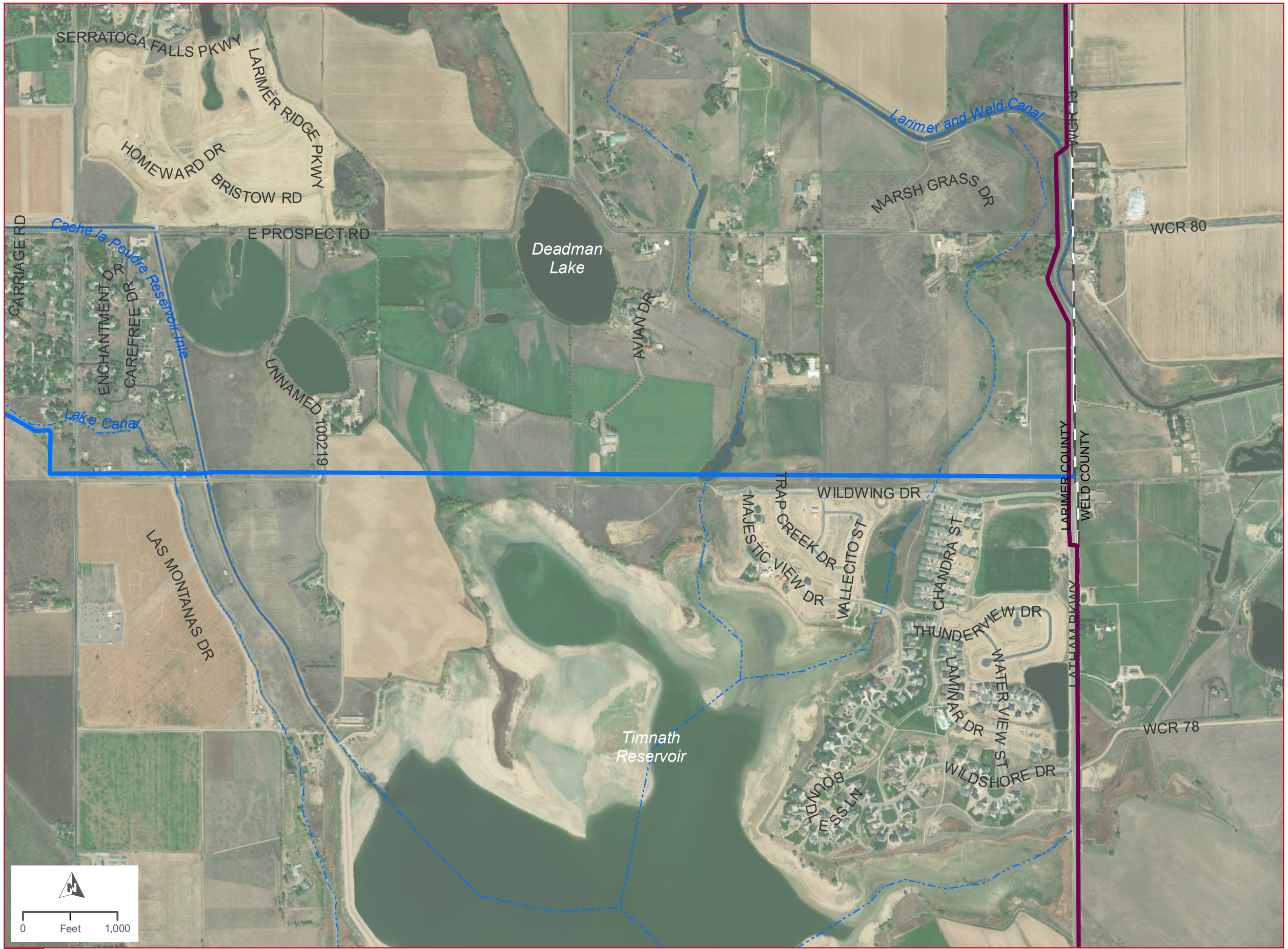
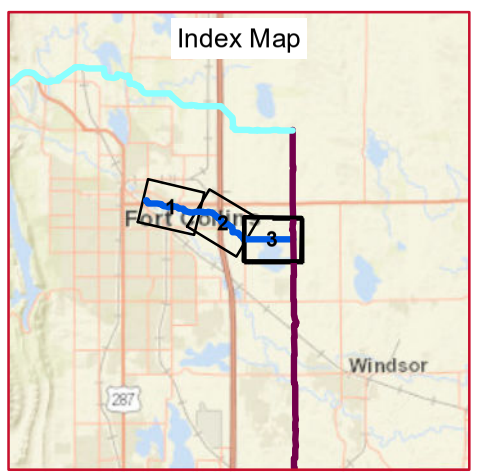


POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 5C: WILDLIFE (OTHER)

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Prairie Dog Colony
- Bald Eagle Active Nest Buffer

For information about historic/cultural resouces, please view the Final Environmental Impact Statement.



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Wildlife Data Source: USACE and Colorado Parks and Wildlife

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT
NORTHERN COLORADO WATER CONSERVANCY DISTRICT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAPS_WILDLIFE_OTHER.MXD - USER: MHARRIS - DATE: 2/5/2020

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POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 6: TRAFFIC STUDY

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- TS#: Traffic Station Number
- ADC: Average Daily Count
- Larimer County Traffic Count Station
- CDOT Traffic Count Station

TS#: 100637
ADC: 31000

TS#: 100638
ADC: 40000

Area P-1

Area P-2

Area P-3

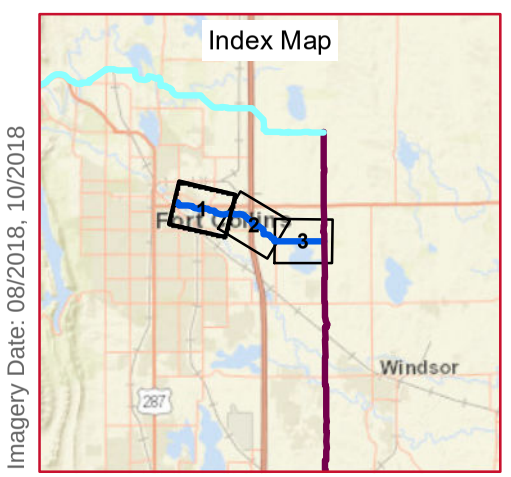
Area P-4

TS#: 134
ADC: 2200

No Data

(approx. 1 mile south)
TS#: 192
ADC: 4500

0 Feet 1,000



Imagery Date: 08/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

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PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP6_TRAFFICSTUDY.MXD - USER: MHARRIS - DATE: 2/5/2020

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POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 6: TRAFFIC STUDY

Legend

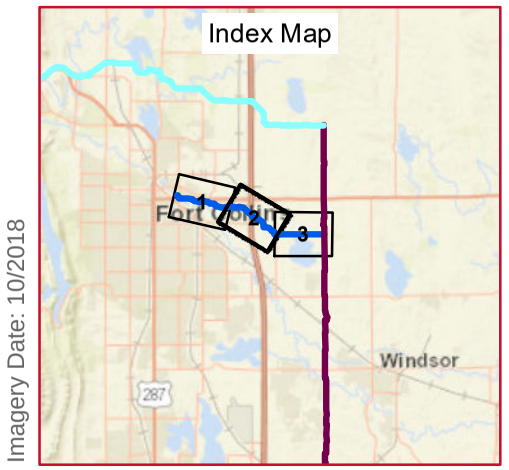
- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch

TS#: Traffic Station Number

ADC: Average Daily Count

△ Larimer County Traffic Count Station

◇ CDOT Traffic Count Station



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

HDR Dewberry

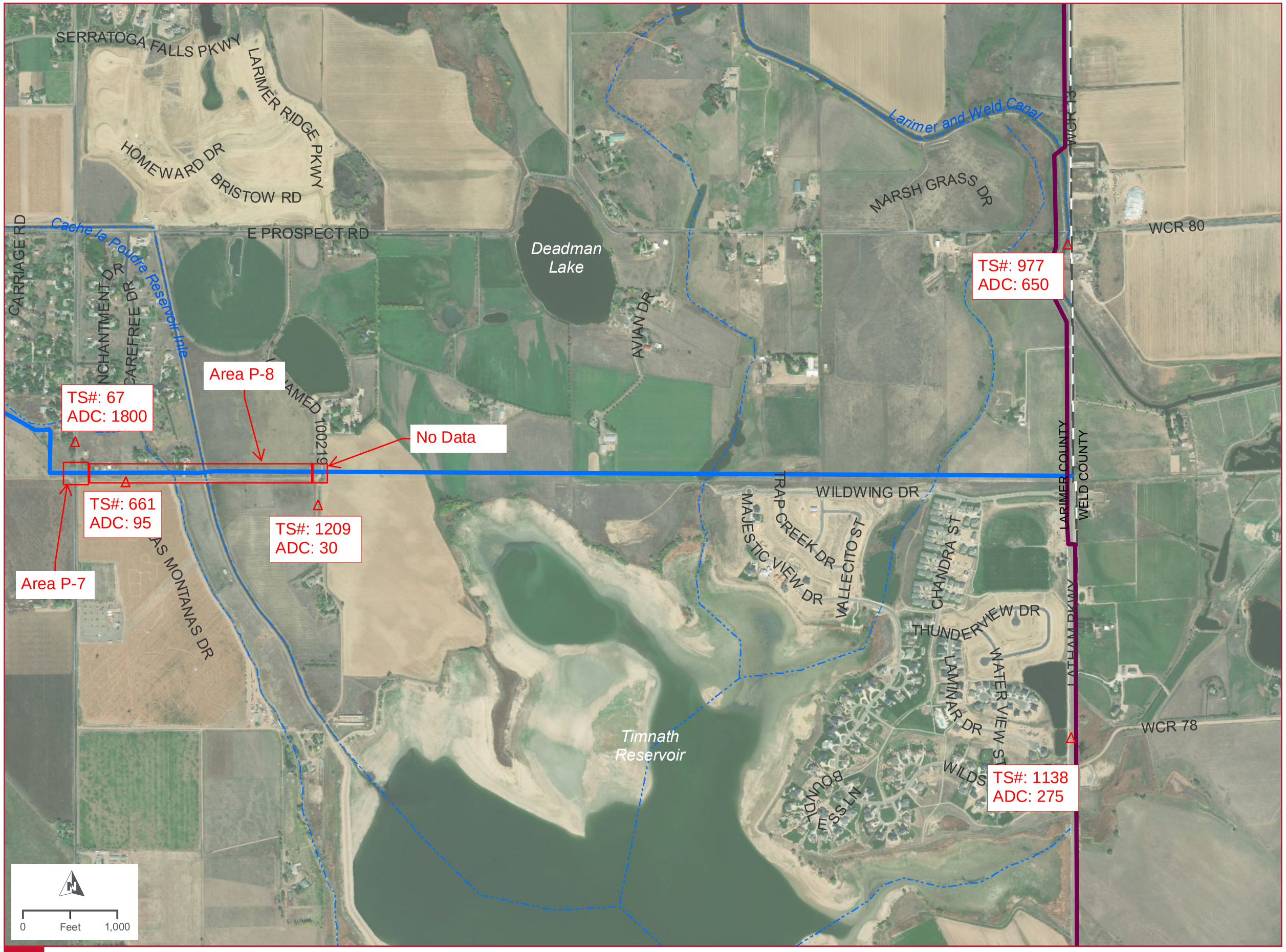
NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP6_TRAFFICSTUDY.MXD - USER: MHARRIS - DATE: 2/5/2020

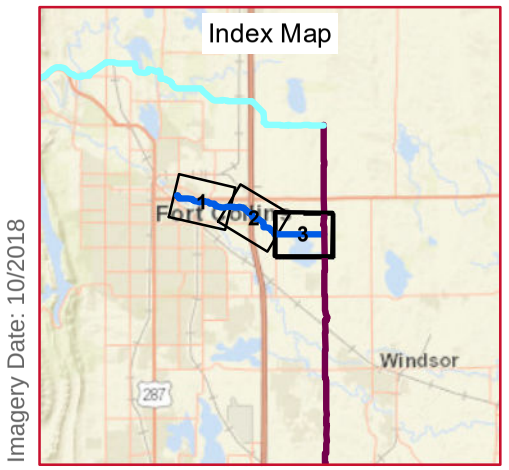
BCC 08/17/20

POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 6: TRAFFIC STUDY



Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- TS#: Traffic Station Number
- ADC: Average Daily Count
- Larimer County Traffic Count Station
- CDOT Traffic Count Station



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

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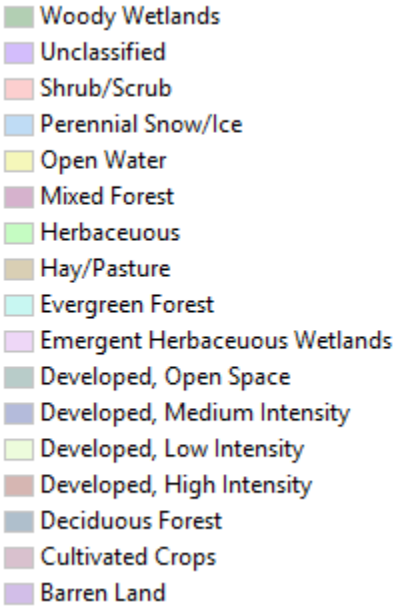
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP6_TRAFFICSTUDY.MXD - USER: MHARRIS - DATE: 2/5/2020

Vegetation Legend



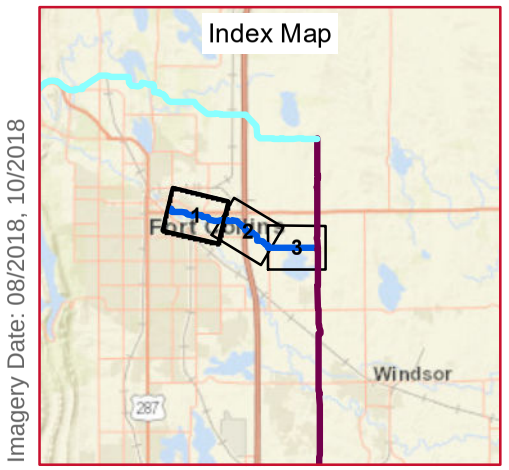
BCC 08/17/20

POUDRE INTAKE PIPELINE
SHEET 1 OF 3
MAP SERIES 7: VEGETATION

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch

See complete legend at the beginning of this map series



Imagery Date: 08/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP7_VEGETATION.MXD - USER: MHARRIS - DATE: 2/5/2020

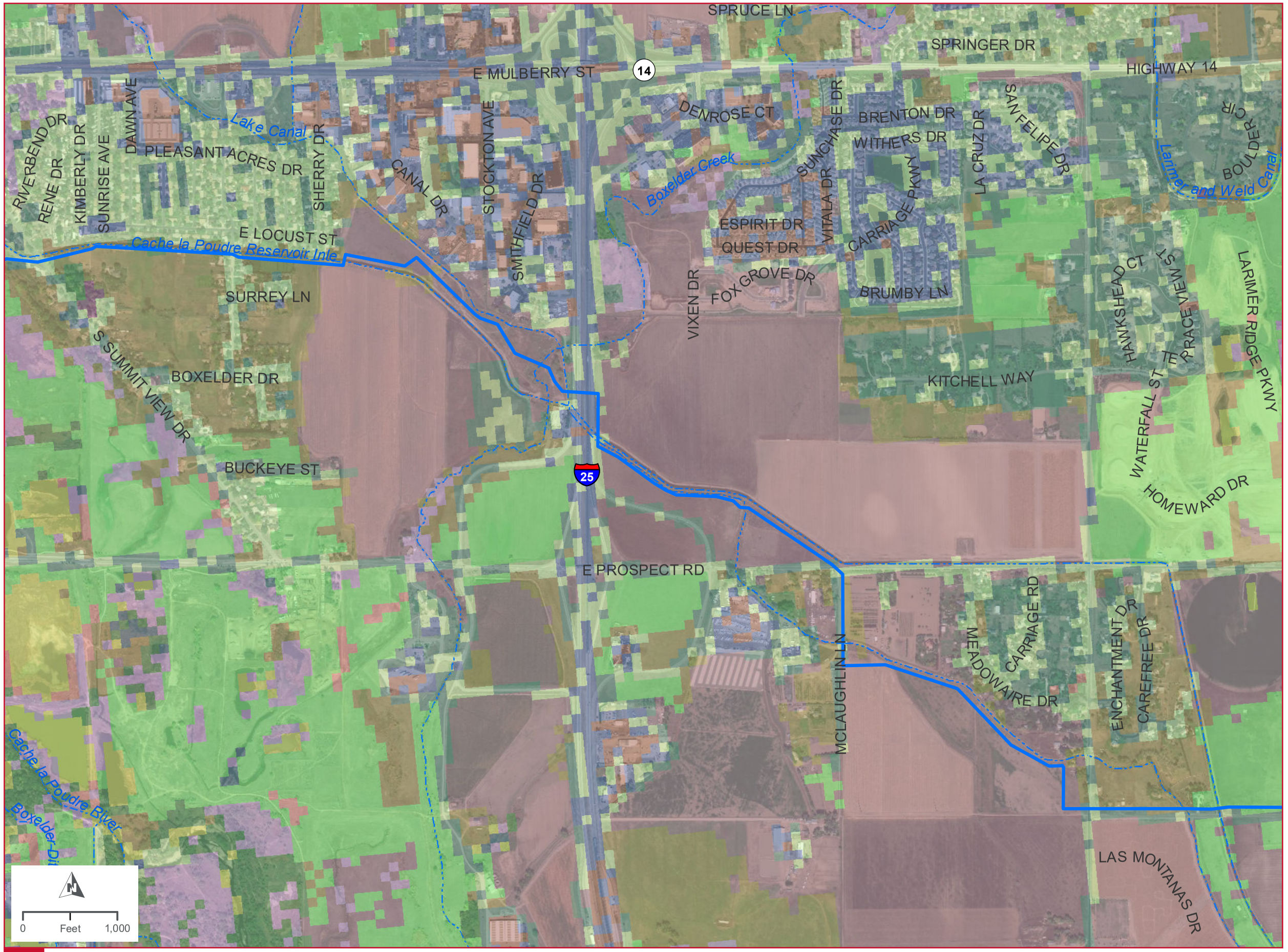
BCC 08/17/20

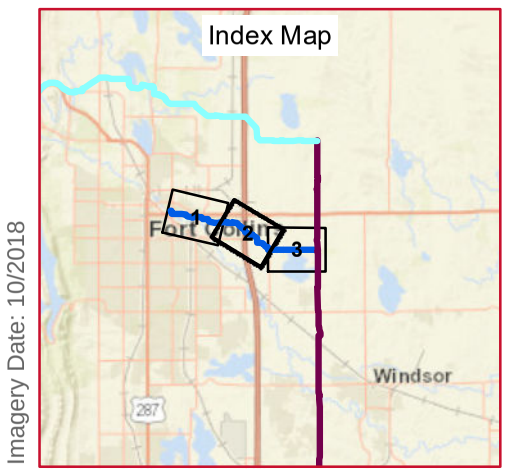
POUDRE INTAKE PIPELINE
SHEET 2 OF 3
MAP SERIES 7: VEGETATION

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch

See complete legend at the beginning of this map series





Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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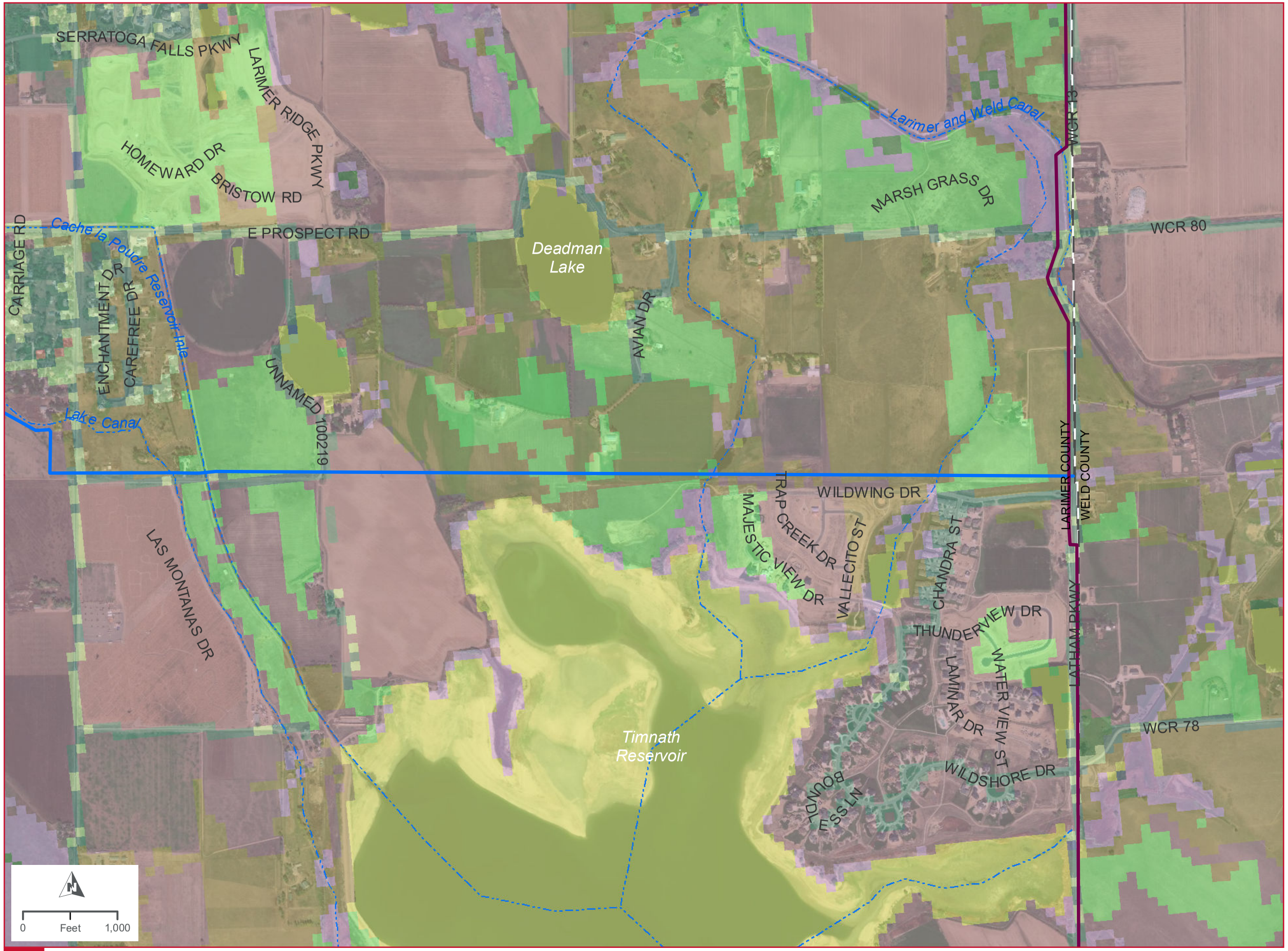
NORTHERN INTEGRATED SUPPLY PROJECT

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT POUDRE WEST_DELIVERY\NISP_MAPBOOK_POUDRE_MAP7_VEGETATION.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

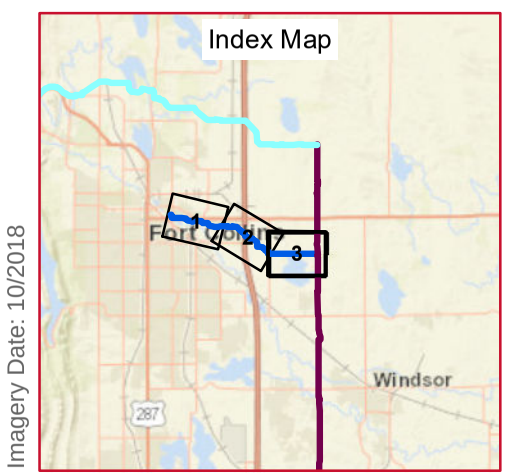


POUDRE INTAKE PIPELINE
SHEET 3 OF 3
MAP SERIES 7: VEGETATION

Legend

- Poudre Intake Pipeline
- County Line Pipeline
- Northern Tier Pipeline
- County Boundary
- Railroad
- Stream/Ditch

See complete legend at the beginning of this map series



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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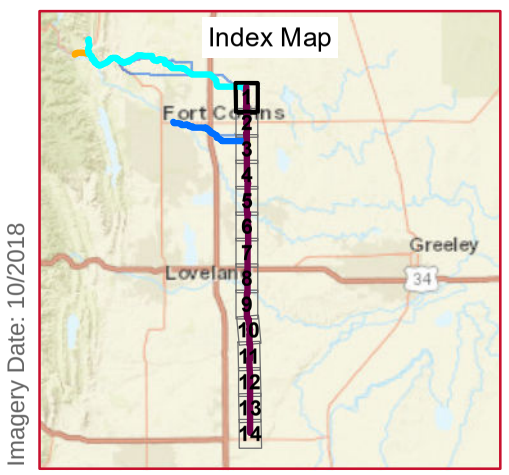
COUNTY LINE PIPELINE
SHEET 1 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- North Weld County Water
- Anheuser Busch



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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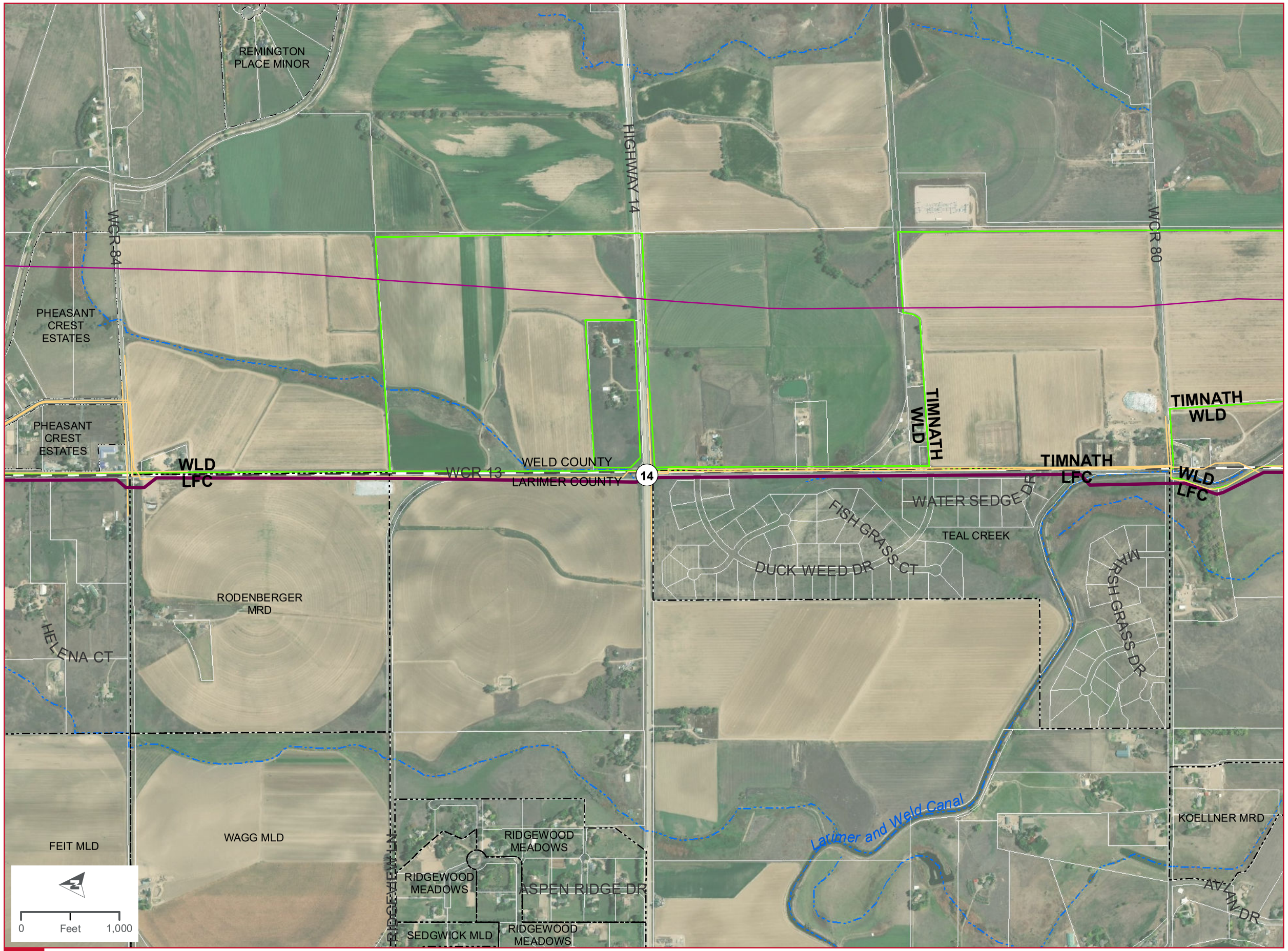
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

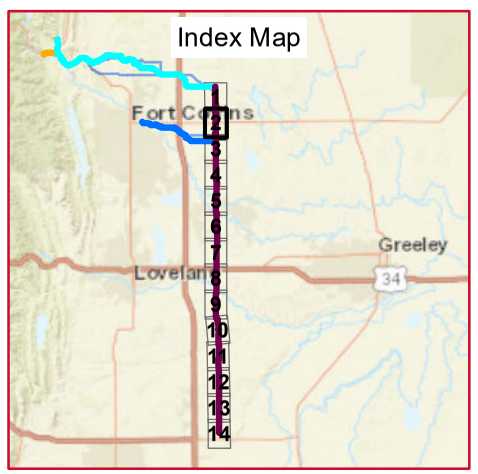
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 2 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- North Weld County Water



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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NISP

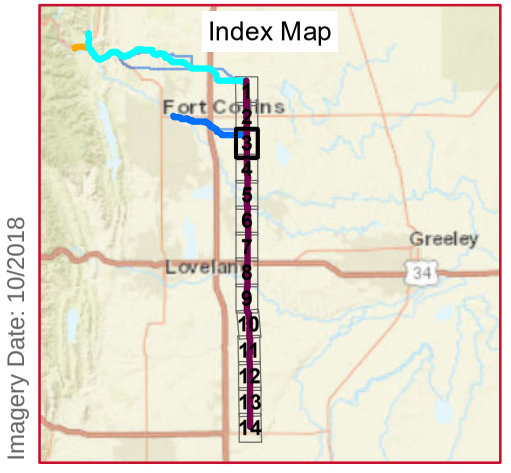
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

COUNTY LINE PIPELINE
SHEET 3 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Windsor
- Sinclair Oil, Medicine Bow
- North Weld County Water
- Fort Collins/Loveland Water
- Boxelder



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

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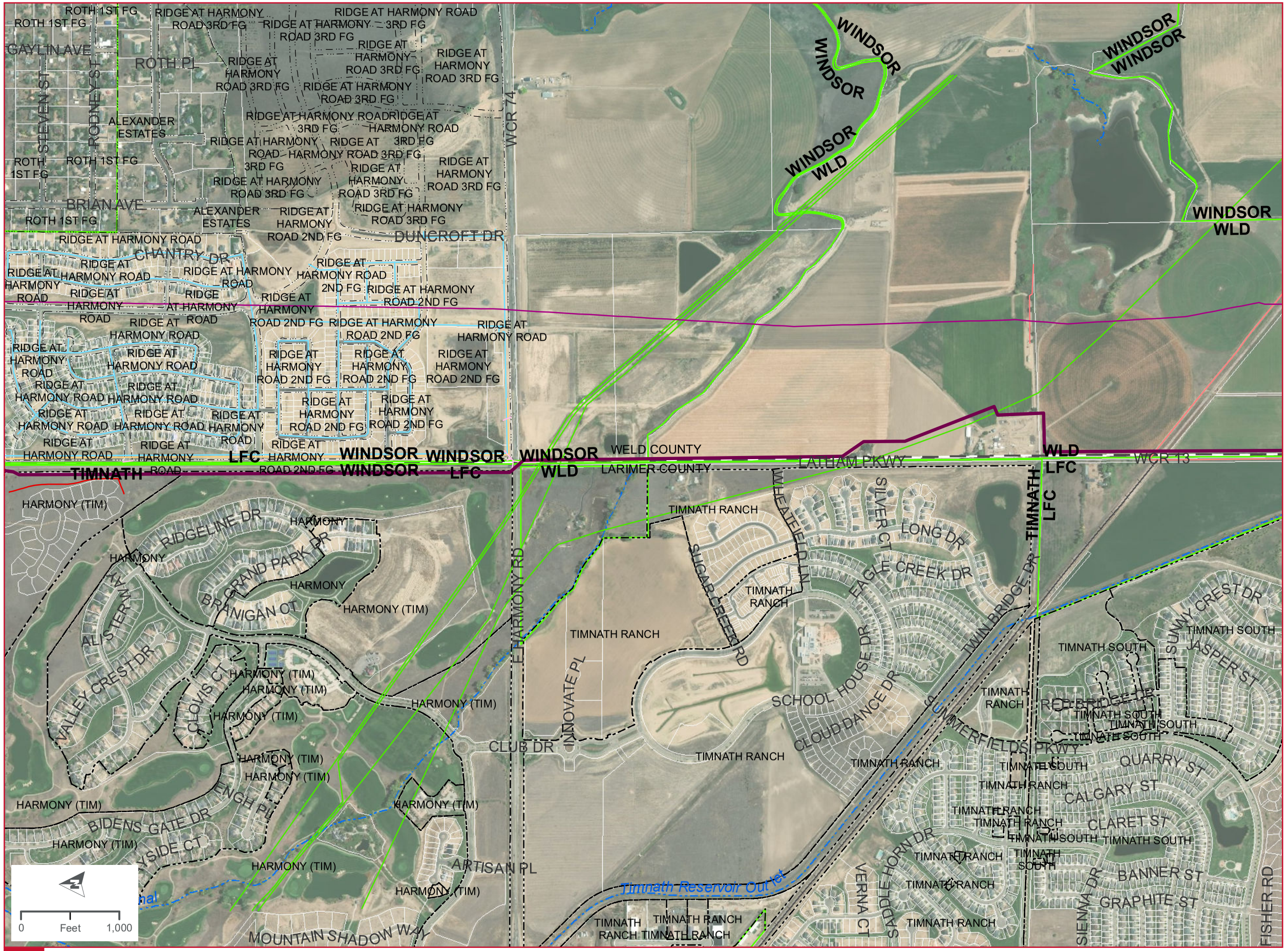
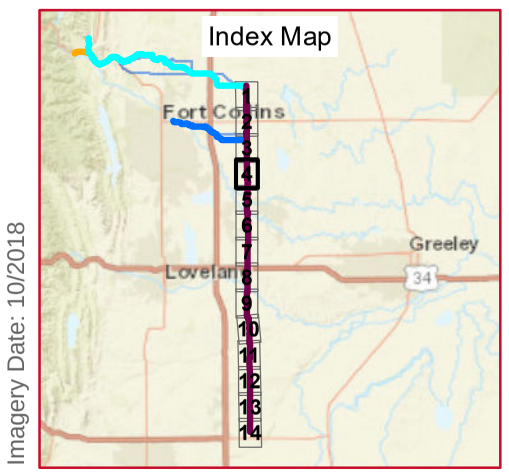
COUNTY LINE PIPELINE
SHEET 4 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Windsor
- Sinclair Oil, Medicine Bow
- North Weld County Water
- Fort Collins/Loveland Water
- DCP Midstream
- Greeley
- Boxelder





Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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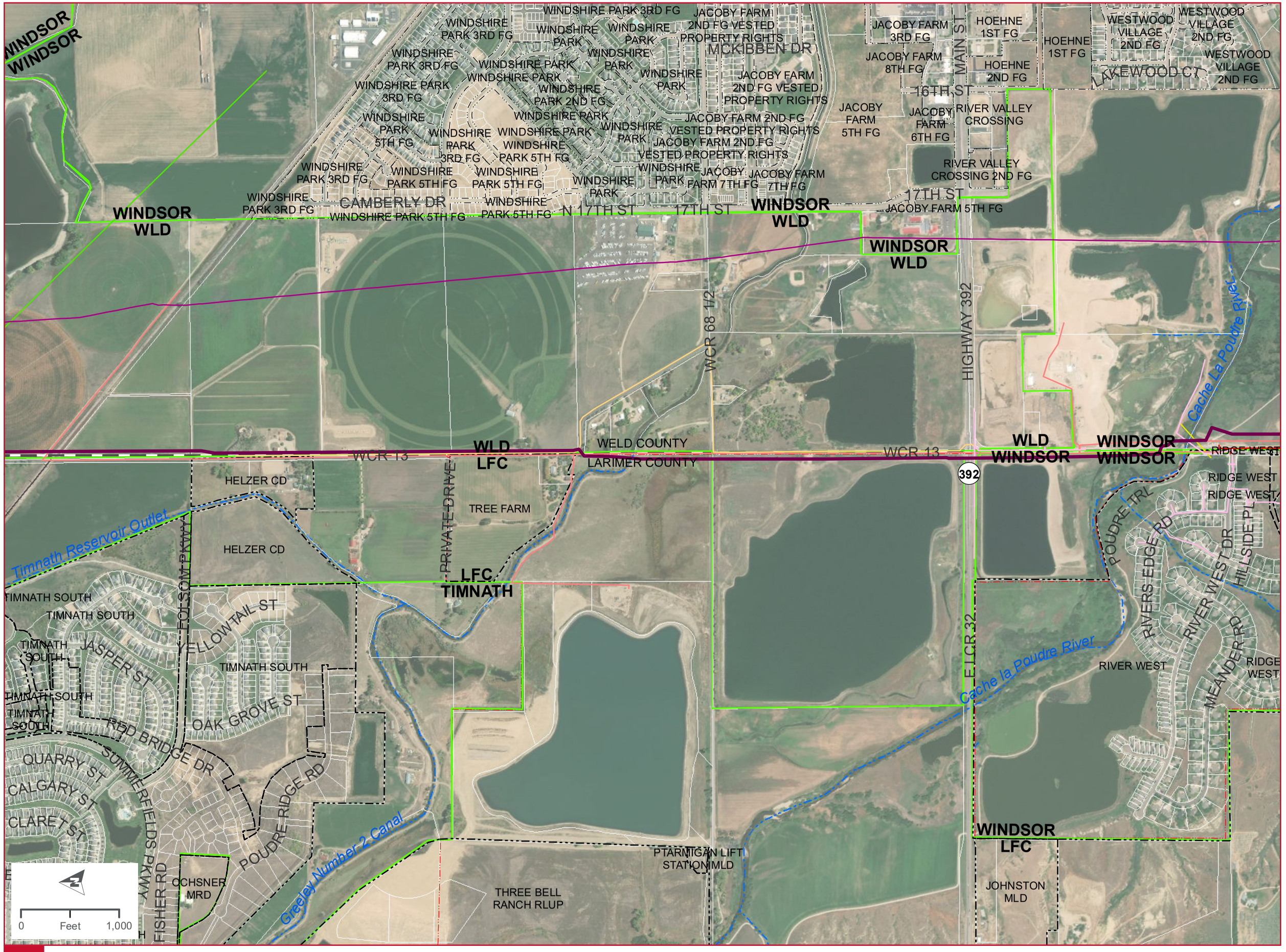
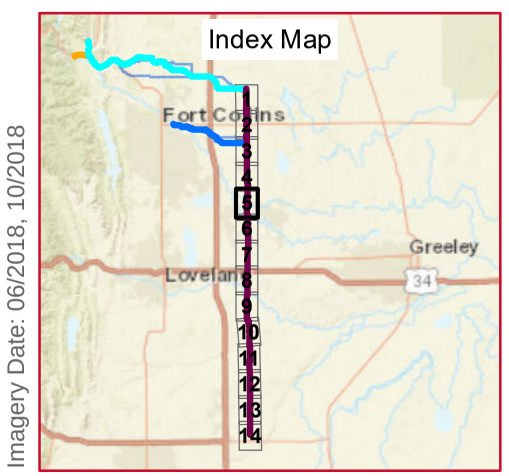
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

COUNTY LINE PIPELINE
SHEET 5 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Larimer Co. Growth Management Area
- Windsor
- Sinclair Oil, Medicine Bow
- North Weld County Water
- Fort Collins/Loveland Water
- DCP Midstream
- Greeley
- CCWCB





Imagery Date: 06/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

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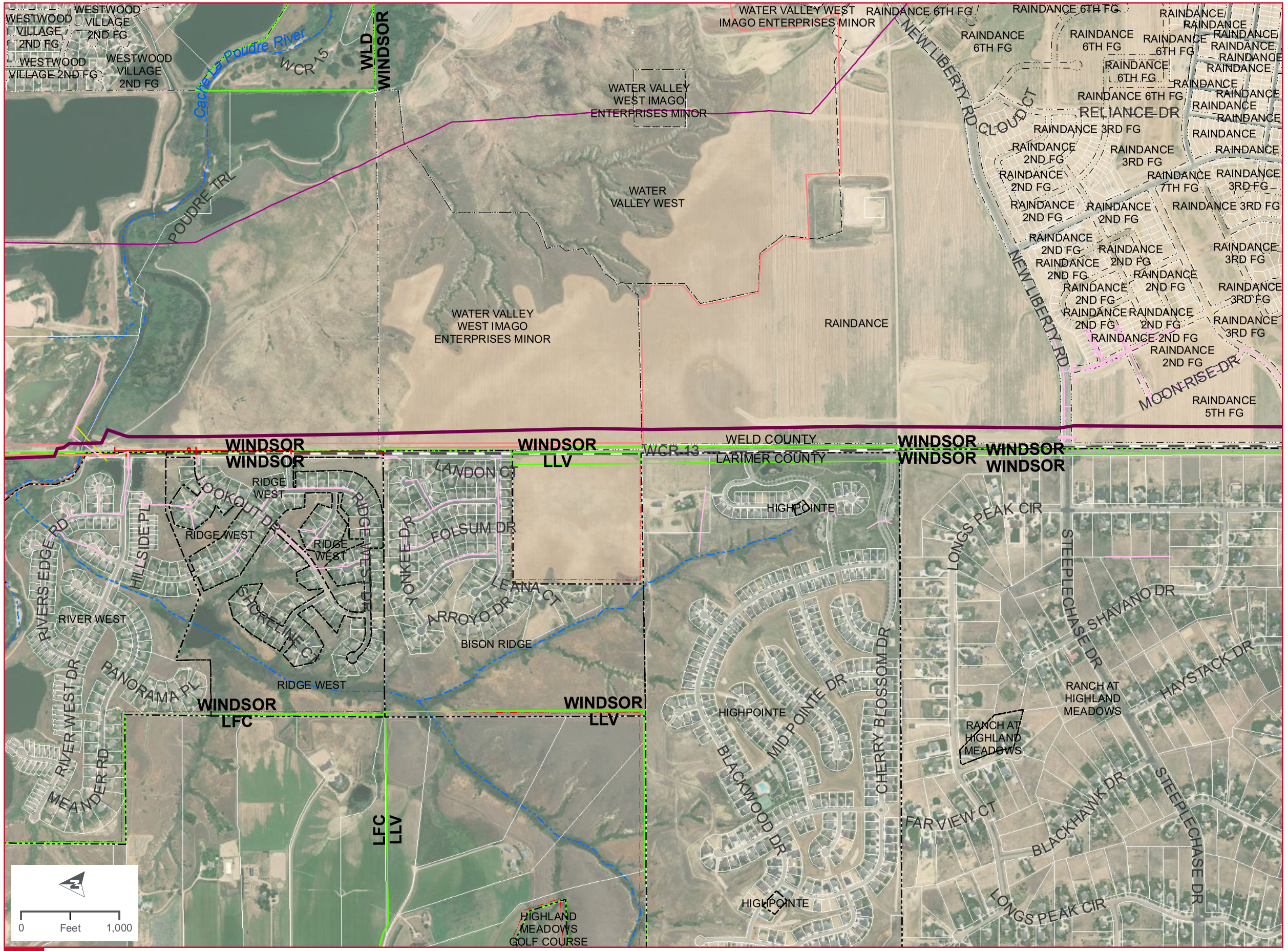
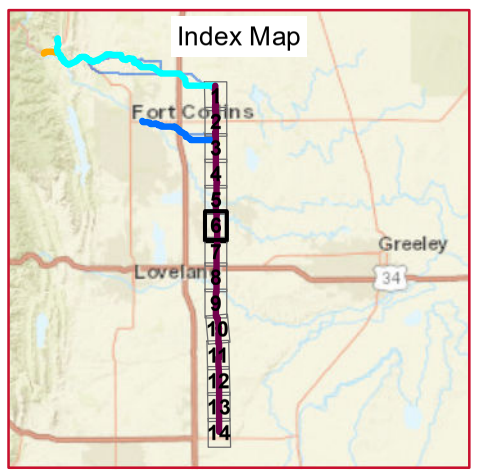
COUNTY LINE PIPELINE
SHEET 6 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Larimer Co. Growth Management Area
- Windsor
- Sinclair Oil, Medicine Bow
- Fort Collins/Loveland Water
- DCP Midstream
- CCWCB





Imagery Date: 06/2018, 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

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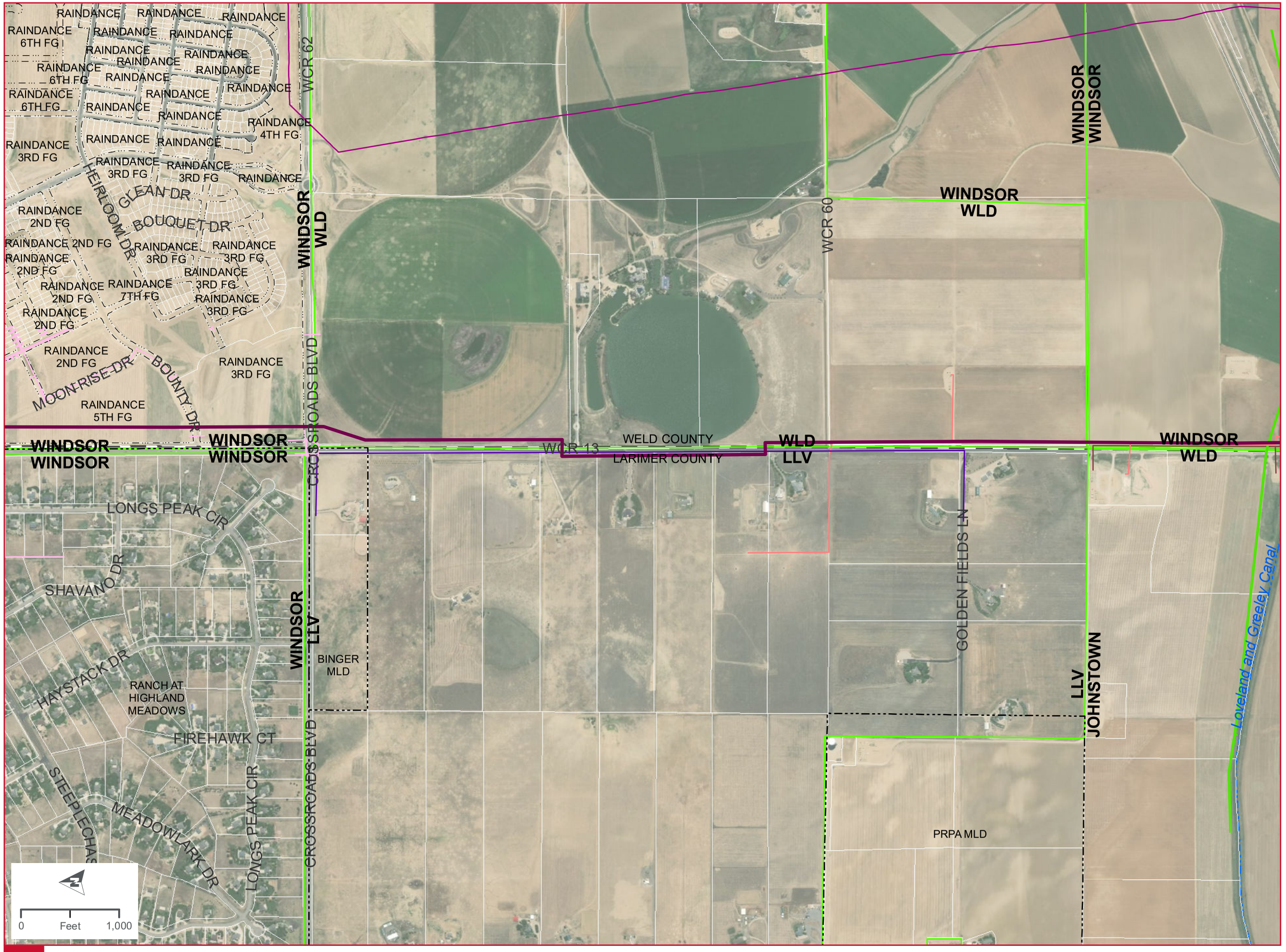
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

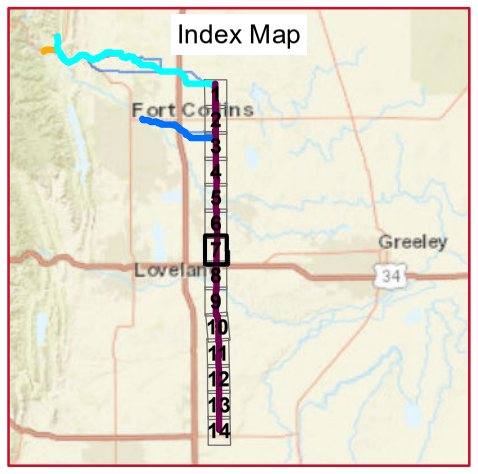
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 7 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Windsor
- Sinclair Oil, Medicine Bow
- Little Thompson Water
- DCP Midstream
- Greeley
- Andarko



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

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NORTHERN INTEGRATED SUPPLY PROJECT

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

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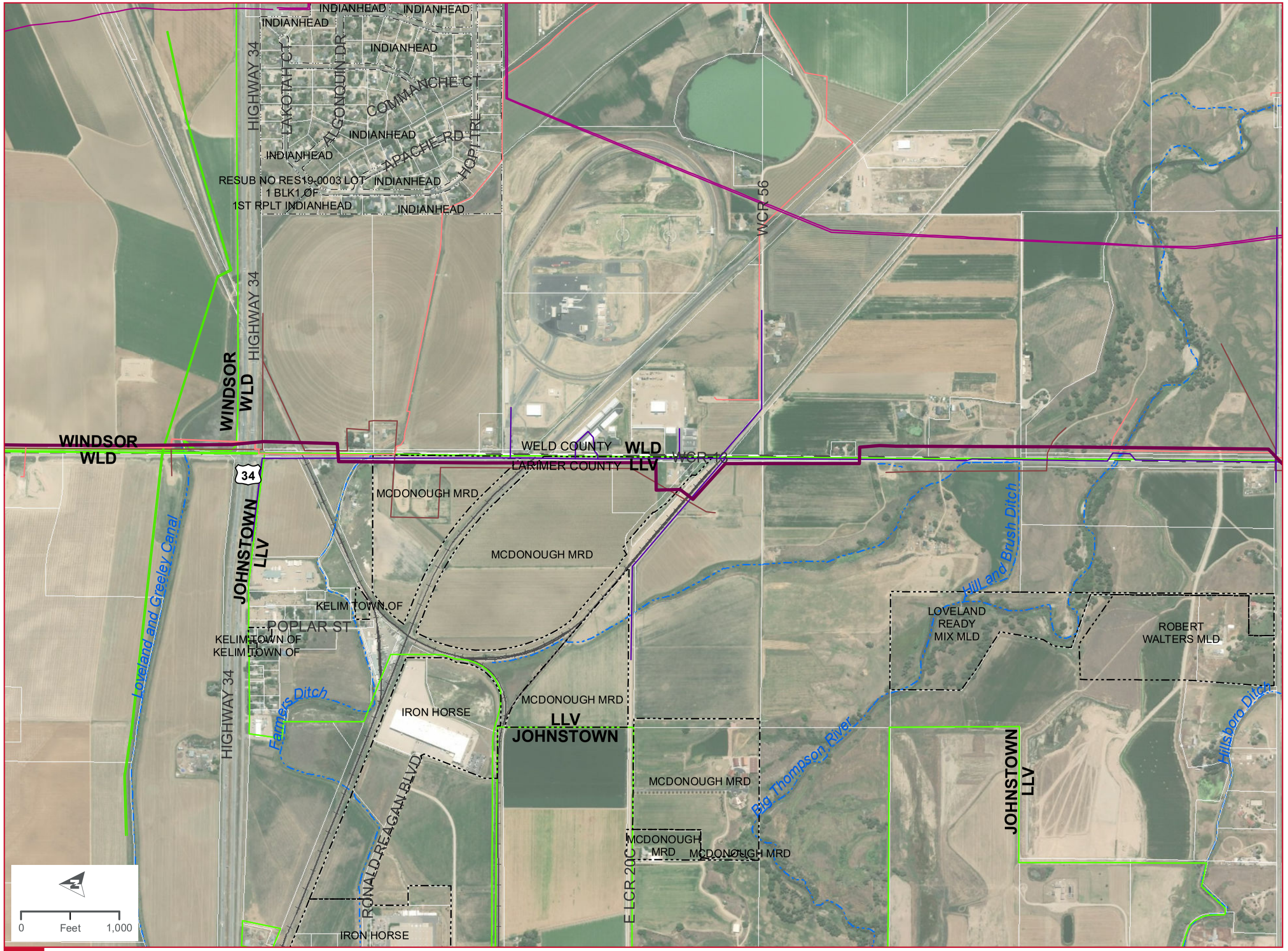
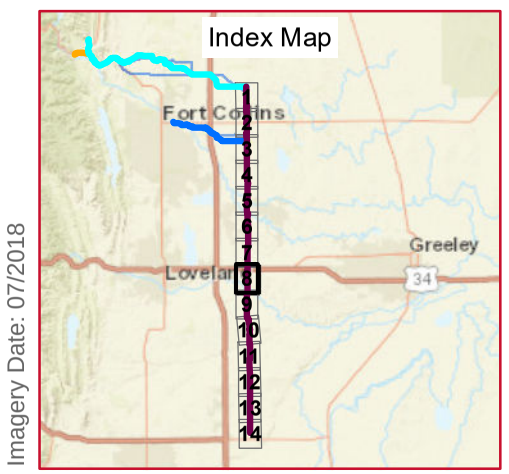
COUNTY LINE PIPELINE
SHEET 8 OF 14
MAP SERIES 1: GENERAL



Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- Little Thompson Water
- DCP Midstream
- Greeley
- Andarko



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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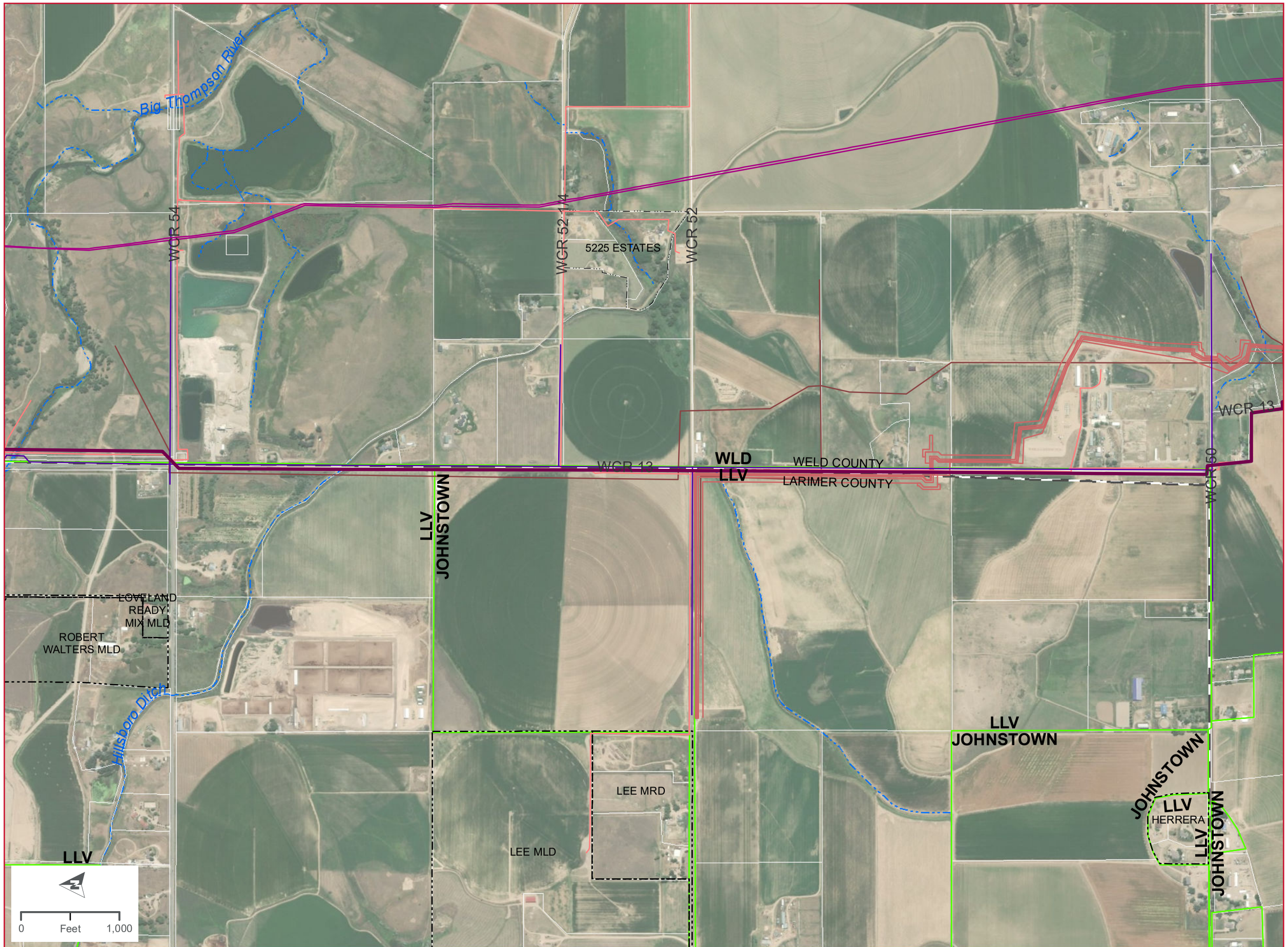
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

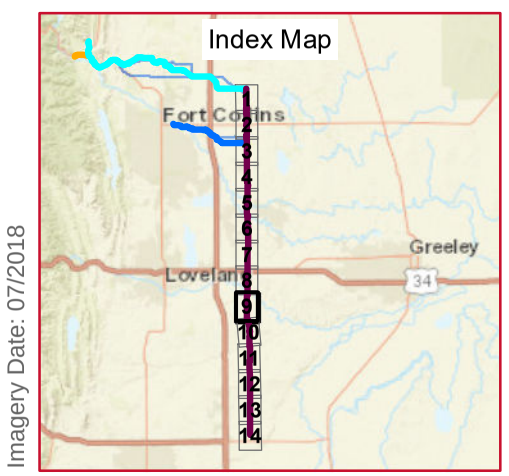
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 9 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- Little Thompson Water
- DCP Midstream
- ARB Midstream
- Andarko



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

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NORTHERN INTEGRATED SUPPLY PROJECT

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

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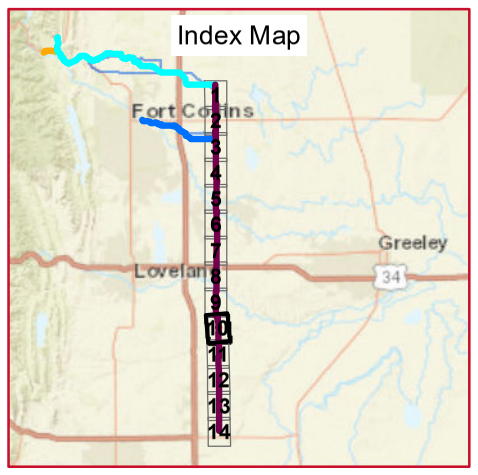
COUNTY LINE PIPELINE
SHEET 10 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- Noble Midstream
- Little Thompson Water
- DCP Midstream
- ARB Midstream
- Andarko



Imagery Date: 06/2018, 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

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NISP Northern Water
Northern Integrated Supply Project

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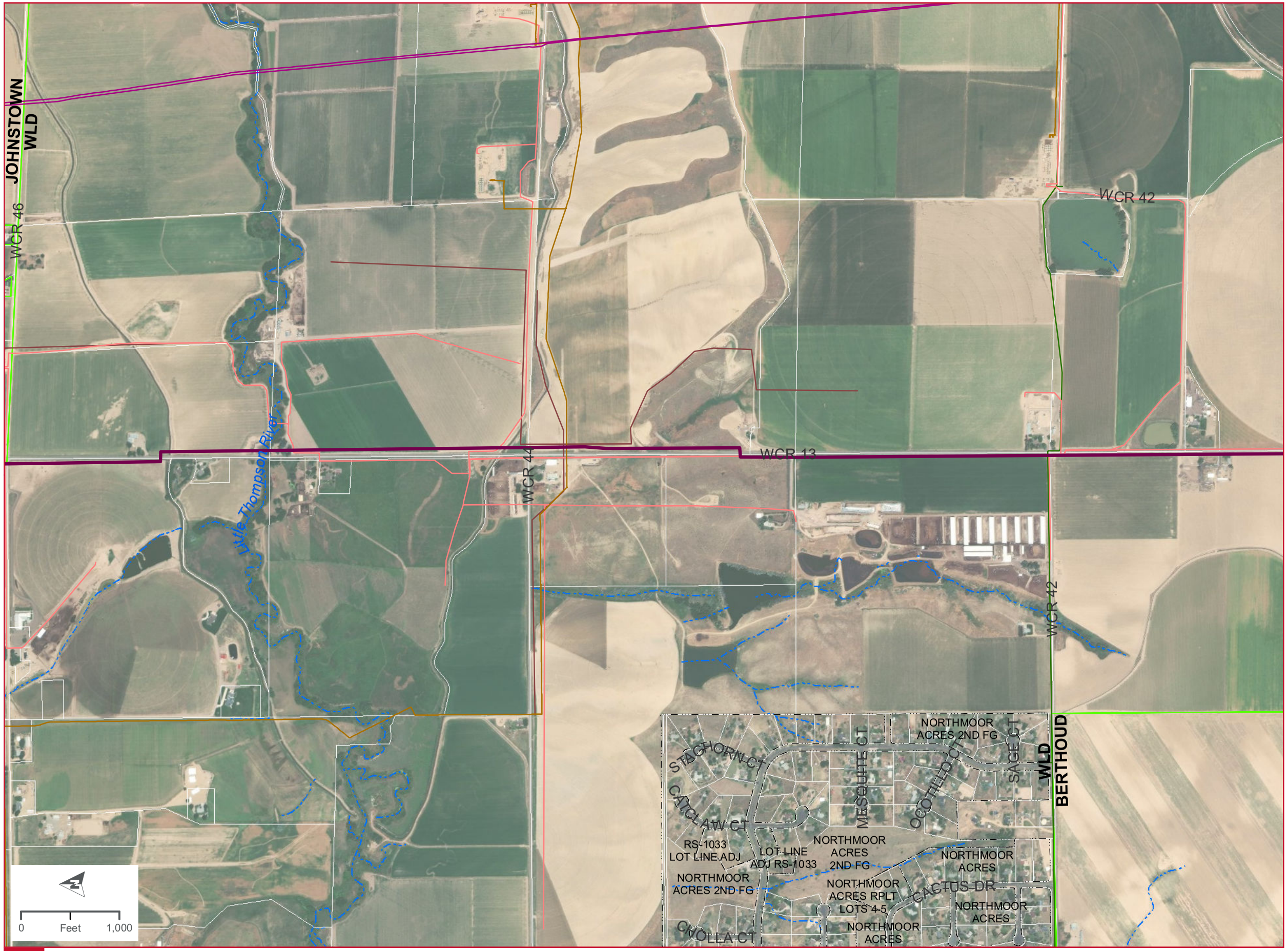
NORTHERN INTEGRATED SUPPLY PROJECT

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

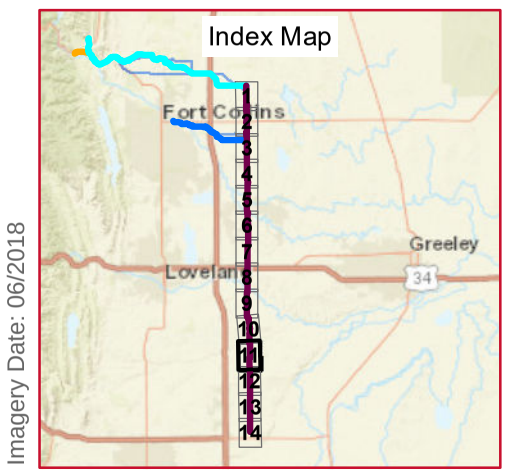
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 11 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- Noble Midstream
- DCP Midstream
- Central Weld County
- Andarko



Imagery Date: 06/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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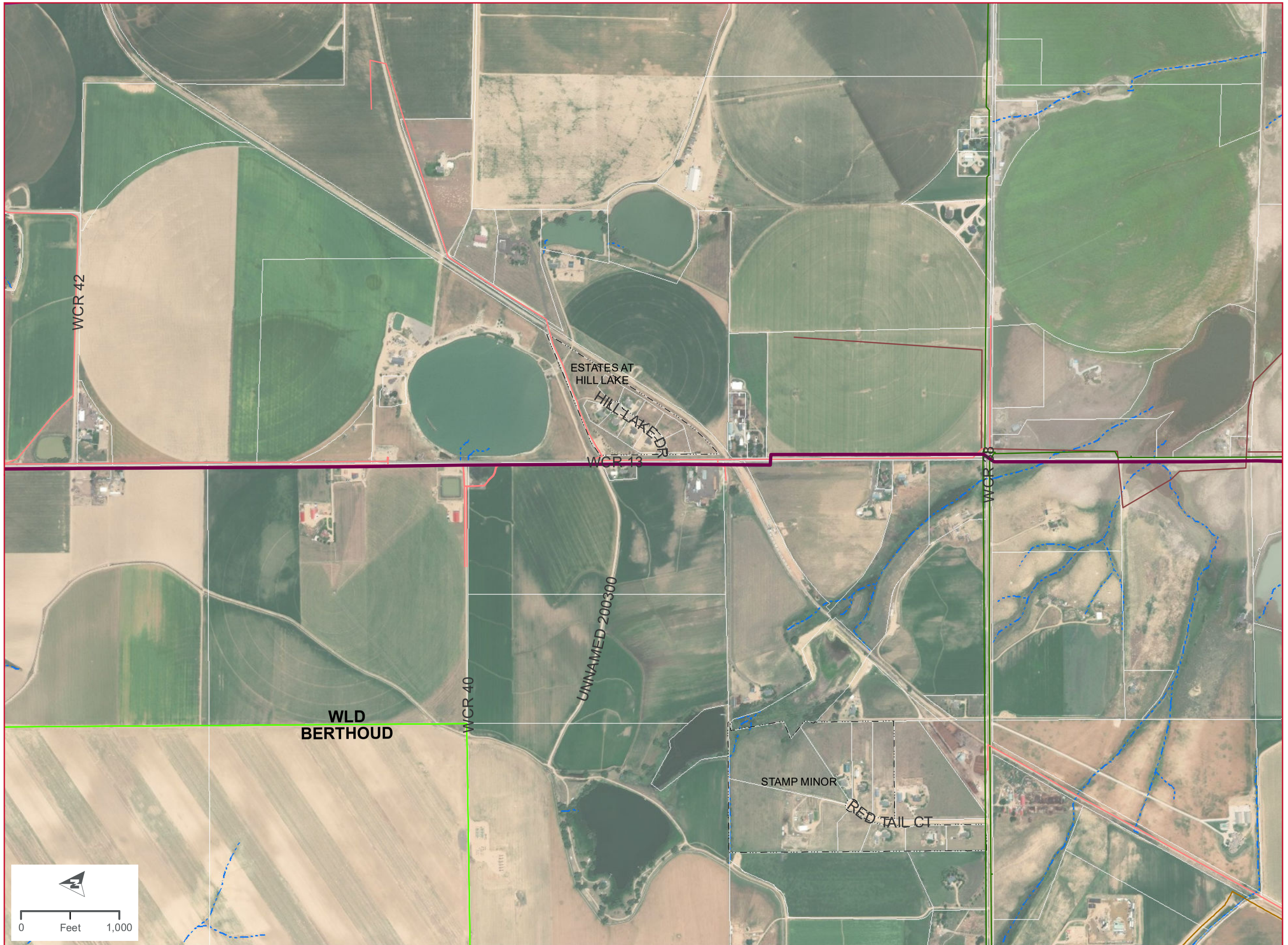
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

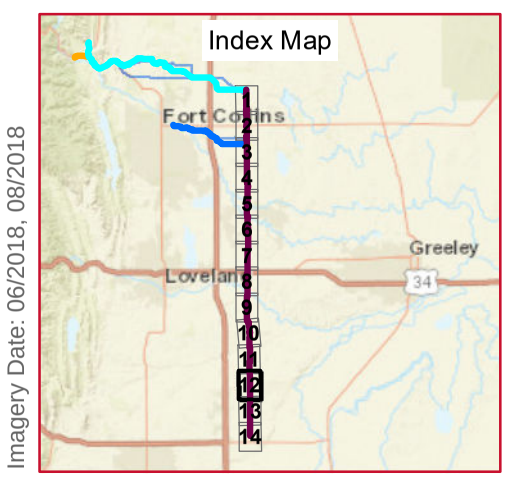
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 12 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Sinclair Oil, Medicine Bow
- Noble Midstream
- DCP Midstream
- Central Weld County
- Andarko



Imagery Date: 06/2018, 08/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

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NORTHERN INTEGRATED SUPPLY PROJECT

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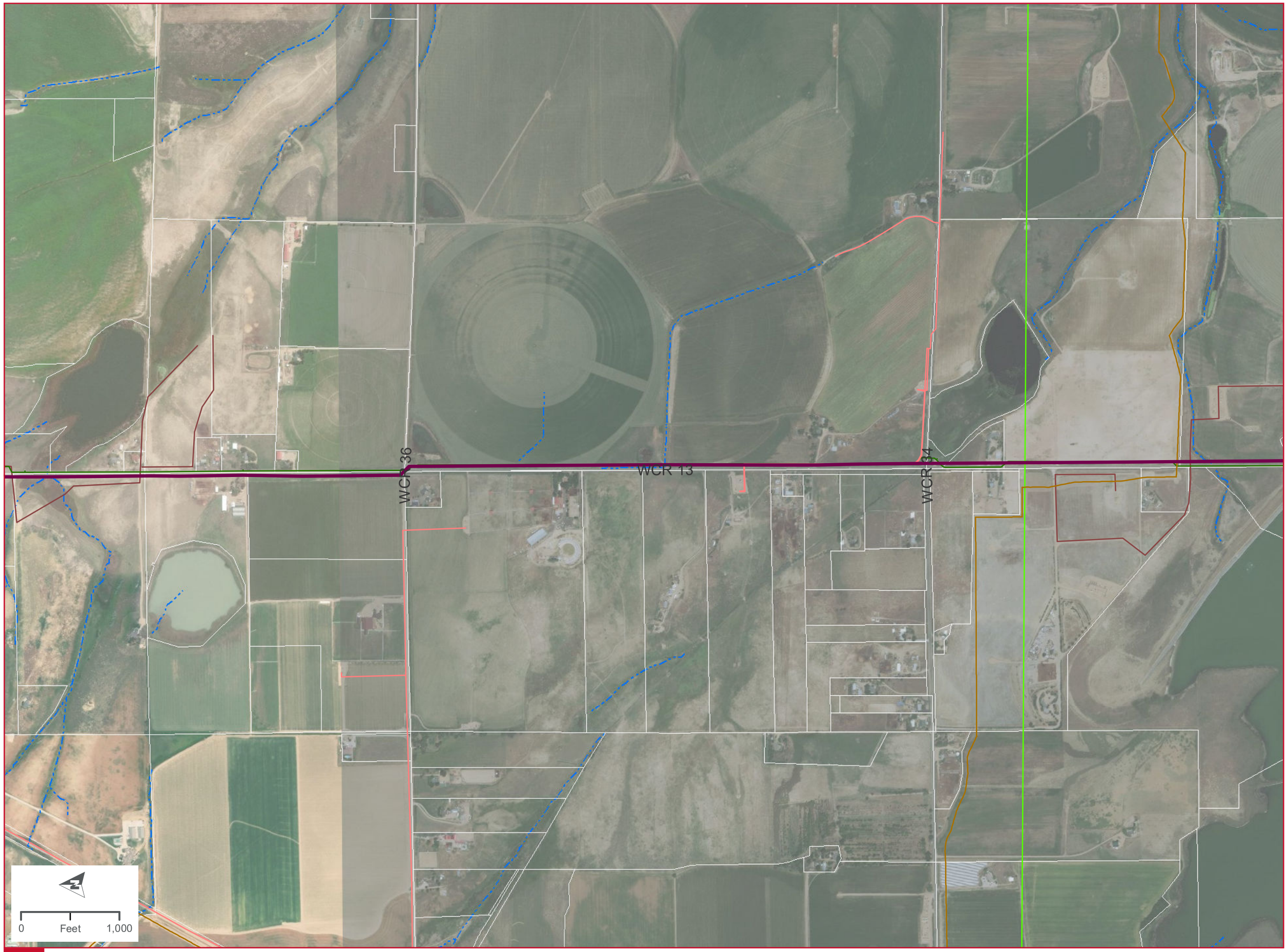
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

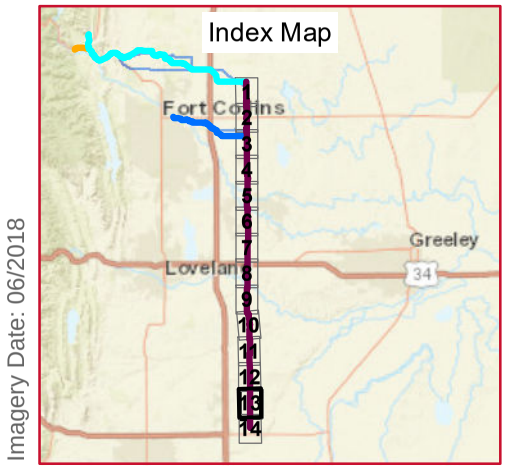
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 13 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- Noble Midstream
- DCP Midstream
- Central Weld County
- Andarko



Imagery Date: 06/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

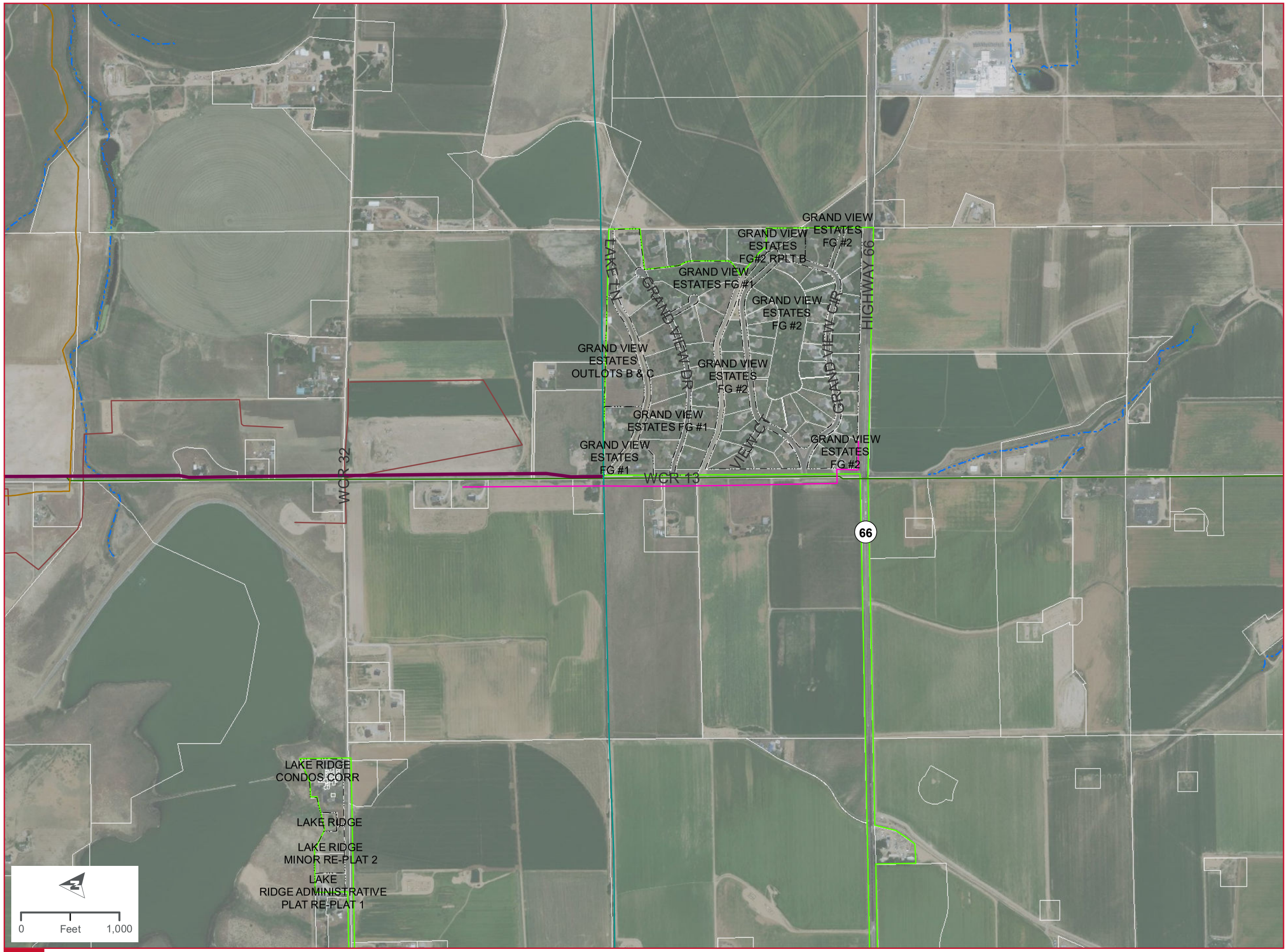
HDR Dewberry

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

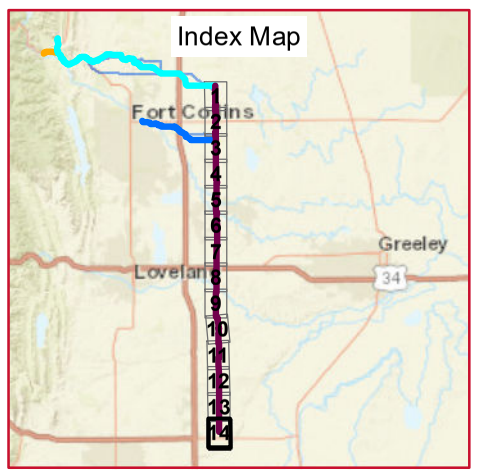
BCC 08/17/20



COUNTY LINE PIPELINE
SHEET 14 OF 14
MAP SERIES 1: GENERAL

Legend

- County Line Pipeline
- Northern Tier Pipeline
- Poudre Intake Pipeline
- County Boundary
- Railroad
- Stream/Ditch
- Parcel
- Larimer Co. Growth Management Area
- Weld Co. Urban Growth Boundary
- Subdivision Boundary
- City Boundary
- St. Vrain Sanitation
- Northern Water Conservancy
- Noble Midstream
- Central Weld County
- Andarko



Imagery Date: 06/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

HDR Dewberry

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

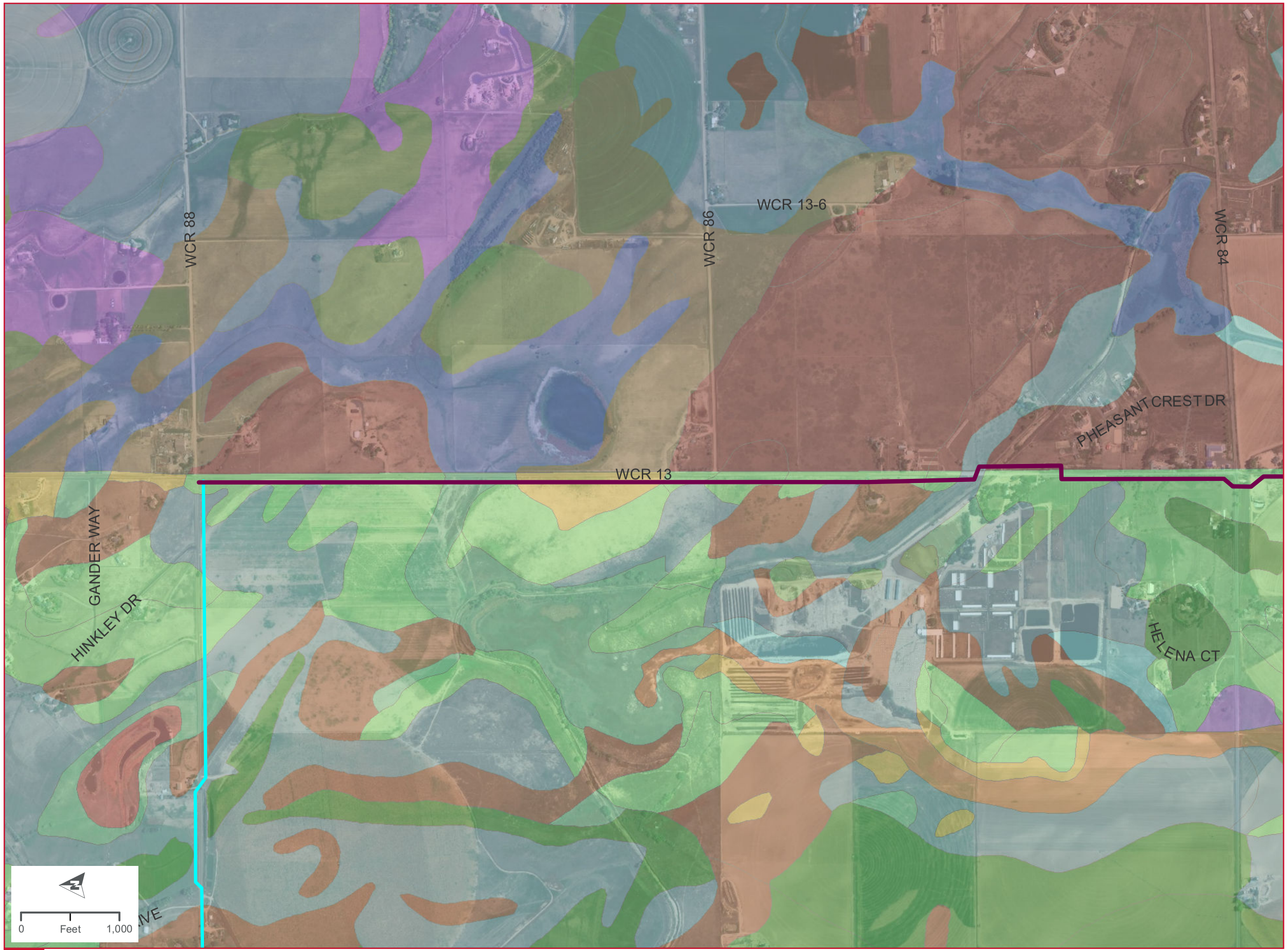
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP1_GENERAL.MXD - USER: MHARRIS - DATE: 2/5/2020

Soil Types Legend

- No Category
- Aquepts
- Aquolls
- Clayey, montmorillonitic (calcareous), mesic, shallow Ustic Torriorthents
- Coarse-loamy, mixed (calcareous), mesic Aridic Ustorthents
- Coarse-loamy, mixed (calcareous), mesic Cumulic Haplaquolls
- Coarse-loamy, mixed (calcareous), mesic Ustic Torriorthents
- Coarse-loamy, mixed Pachic Haploborolls
- Coarse-loamy, mixed, mesic Pachic Haplustolls
- Coarse-loamy, mixed, superactive, calcareous, mesic Aridic Ustorthents
- Coarse-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents
- Coarse-loamy, mixed, superactive, mesic Aridic Haplustalfs
- Coarse-loamy, mixed, superactive, mesic Pachic Haplustolls
- Coarse-loamy, mixed, superactive, mesic Ustollic Haplargids
- Fine, mixed, mesic Aridic Argiustolls
- Fine, montmorillonitic (calcareous), mesic Aeric Halaquepts
- Fine, montmorillonitic, mesic Aridic Argiustolls
- Fine, montmorillonitic, mesic Ustollic Haplargids
- Fine, smectitic, mesic Aridic Argiustolls
- Fine, smectitic, mesic Ustertic Haplocambids
- Fine, smectitic, mesic Ustollic Haplargids
- Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic Fluvaquentic Haplaquolls
- Fine-loamy over sandy or sandy-skeletal, mixed, mesic Aridic Argiustolls
- Fine-loamy over sandy or sandy-skeletal, mixed, mesic Ustollic Haplargids
- Fine-loamy, mixed (calcareous), mesic Ustic Torriorthents
- Fine-loamy, mixed Typic Argiborolls
- Fine-loamy, mixed, active, calcareous, mesic Ustic Torriorthents
- Fine-loamy, mixed, frigid Fluvaquentic Haplustolls
- Fine-loamy, mixed, mesic Aridic Argiustolls
- Fine-loamy, mixed, mesic Aridic Haplustalfs
- Fine-loamy, mixed, mesic Pachic Argiustolls
- Fine-loamy, mixed, mesic Pachic Haplustolls
- Fine-loamy, mixed, mesic Torriorthentic Haplustolls
- Fine-loamy, mixed, mesic Ustollic Haplargids
- Fine-loamy, mixed, superactive, calcareous, mesic Aridic Ustifluvents
- Fine-loamy, mixed, superactive, calcareous, mesic Ustic Torriorthents
- Fine-loamy, mixed, superactive, mesic Aridic Argiustolls
- Fine-loamy, mixed, superactive, mesic Aridic Haplustalfs
- Fine-loamy, mixed, superactive, mesic Torrifluventic Haplustolls
- Fine-loamy, mixed, superactive, mesic Ustollic Haplargids
- Fine-silty, mixed (calcareous), mesic Aridic Ustorthents

- Fine-silty, mixed, superactive, mesic Aridic Haplustalfs
- Haploborolls
- Haplustolls
- Loamy, mixed (calcareous), mesic, shallow Ustic Torriorthents
- Loamy, mixed, mesic Lithic Haplustolls
- Loamy, mixed, superactive, calcareous, mesic, shallow Ustic Torriorthents
- Loamy-skeletal, mixed Lithic Cryoboralfs
- Loamy-skeletal, mixed Lithic Eutroboralfs
- Loamy-skeletal, mixed, mesic Lithic Haplustolls
- Loamy-skeletal, mixed, mesic Ustollic Haplargids
- Loamy-skeletal, mixed, shallow Typic Haploborolls
- Sandy, mixed, mesic Ustic Torrifluvents
- Sandy-skeletal, mixed, mesic Ustollic Calciorthids
- Typic Fluvaquents
- Ustic Torriorthents

BCC 08/17/20

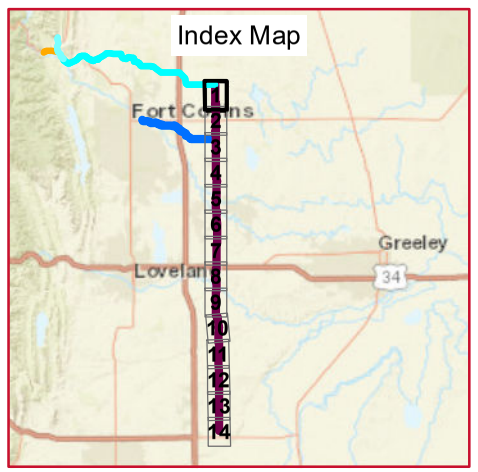


COUNTY LINE PIPELINE
SHEET 1 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

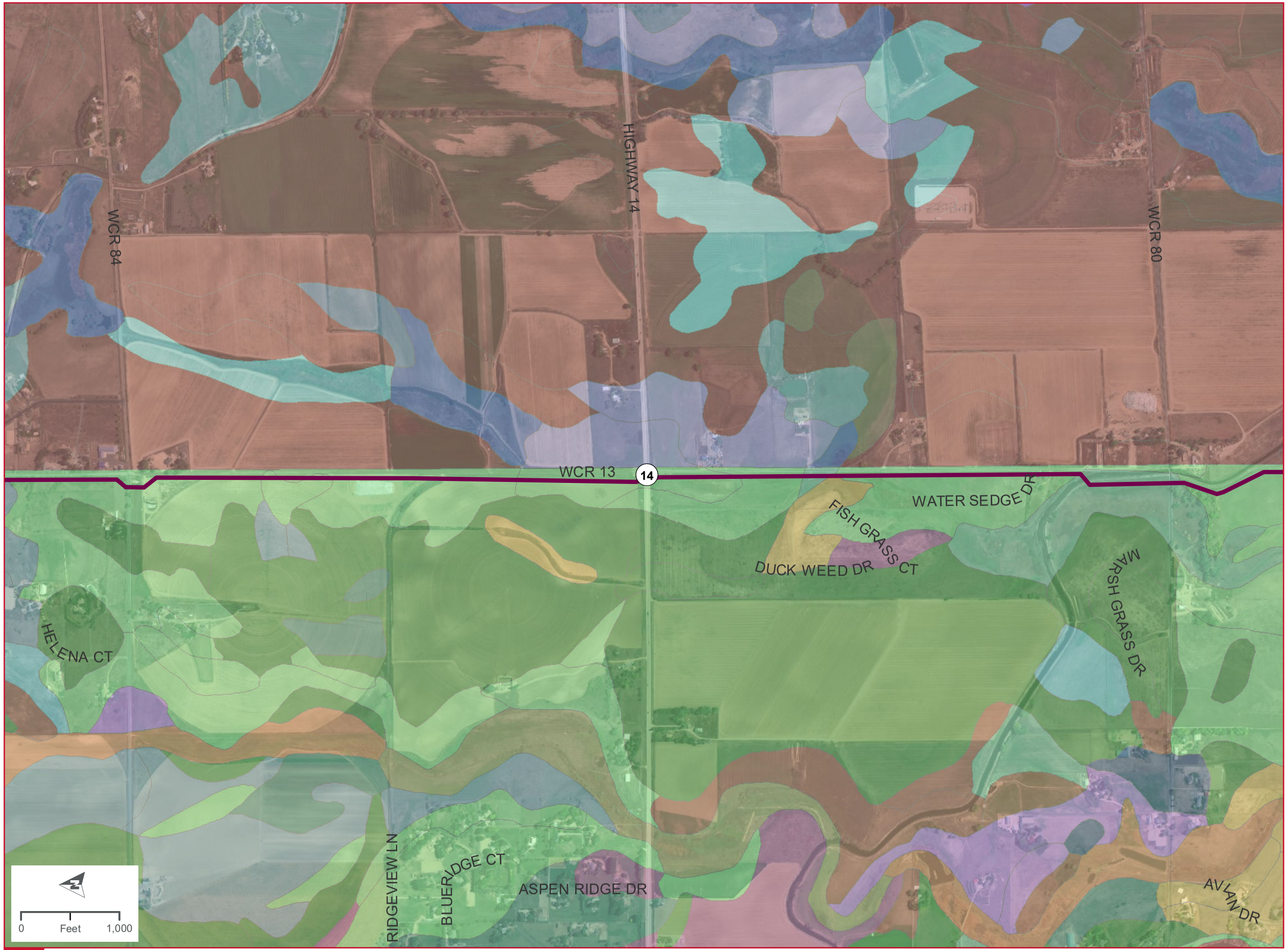
Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

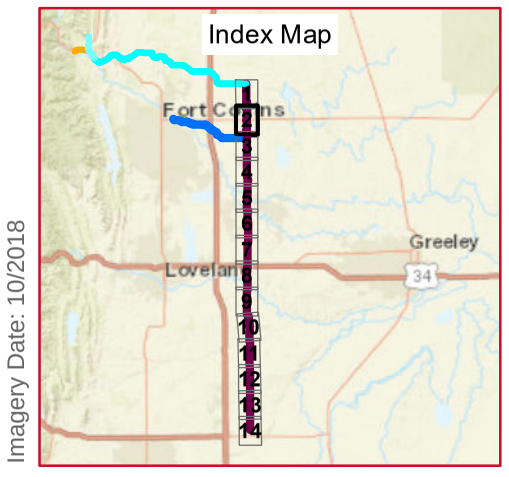


COUNTY LINE PIPELINE
SHEET 2 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

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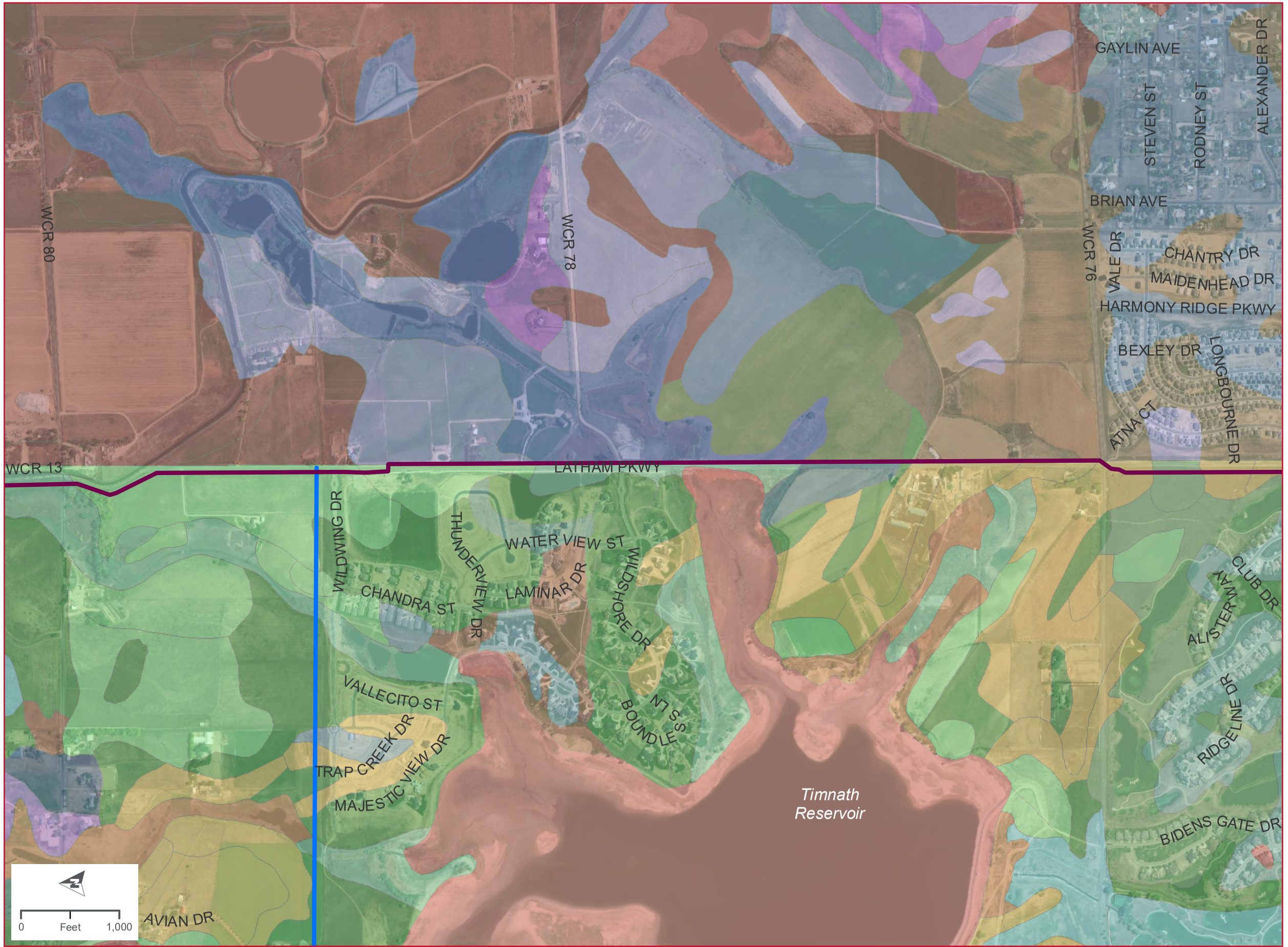
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

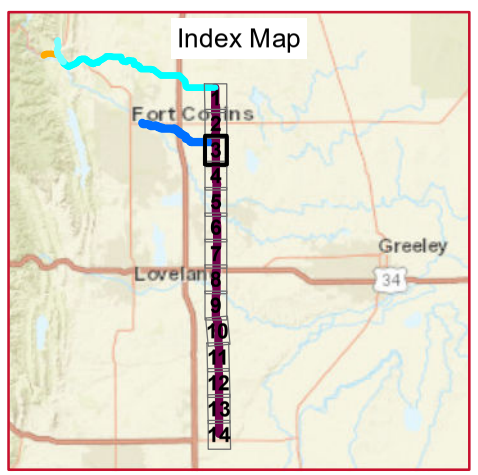


COUNTY LINE PIPELINE
SHEET 3 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

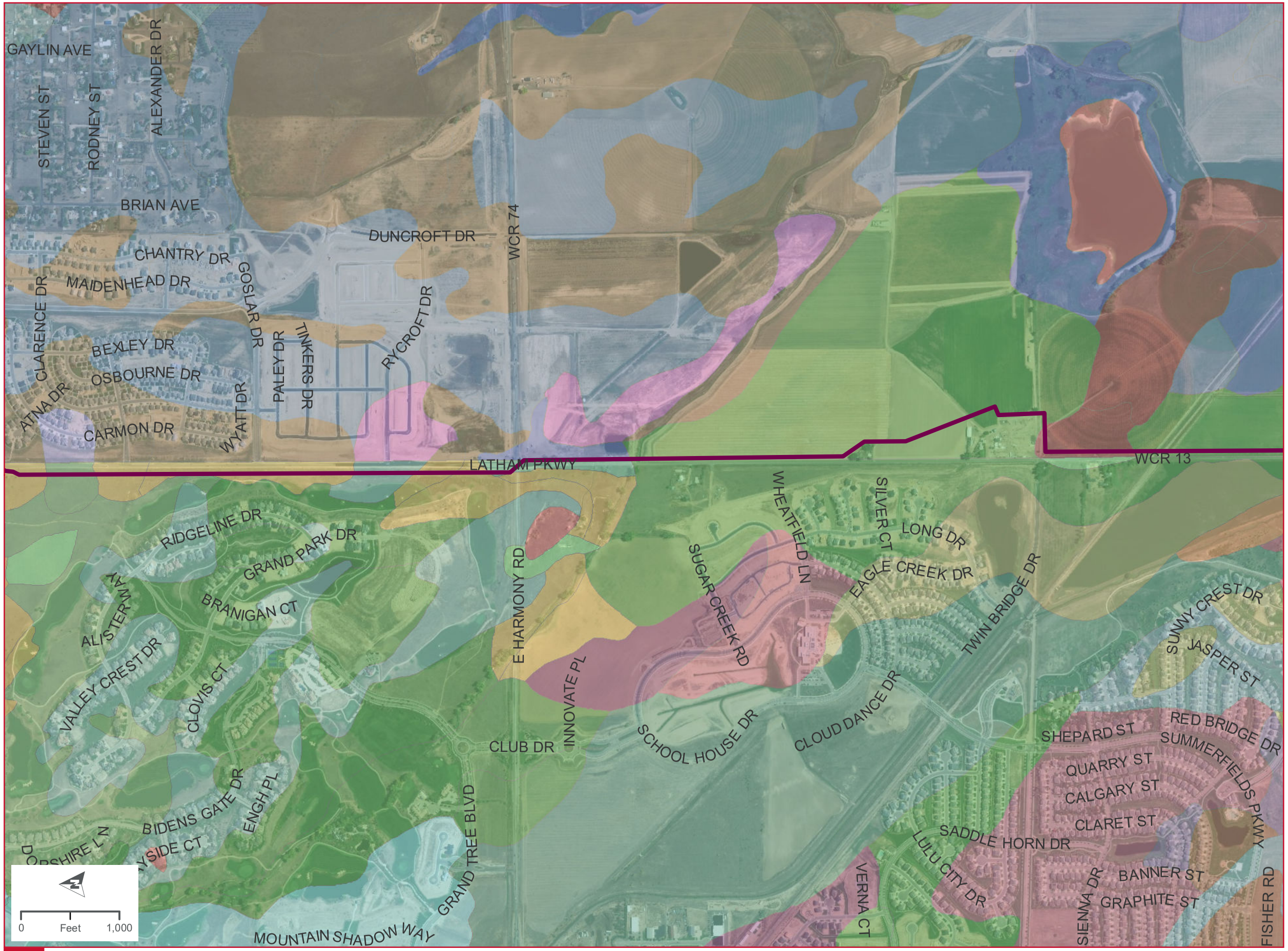
Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

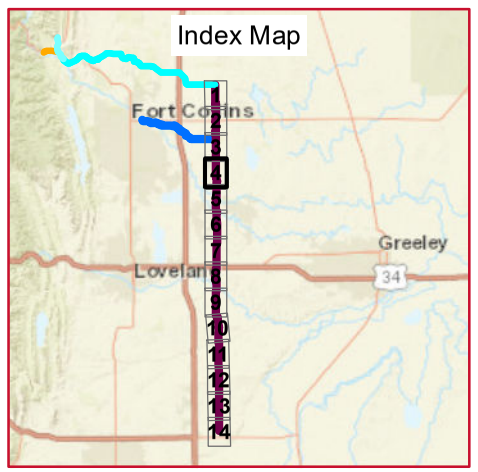


COUNTY LINE PIPELINE
SHEET 4 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

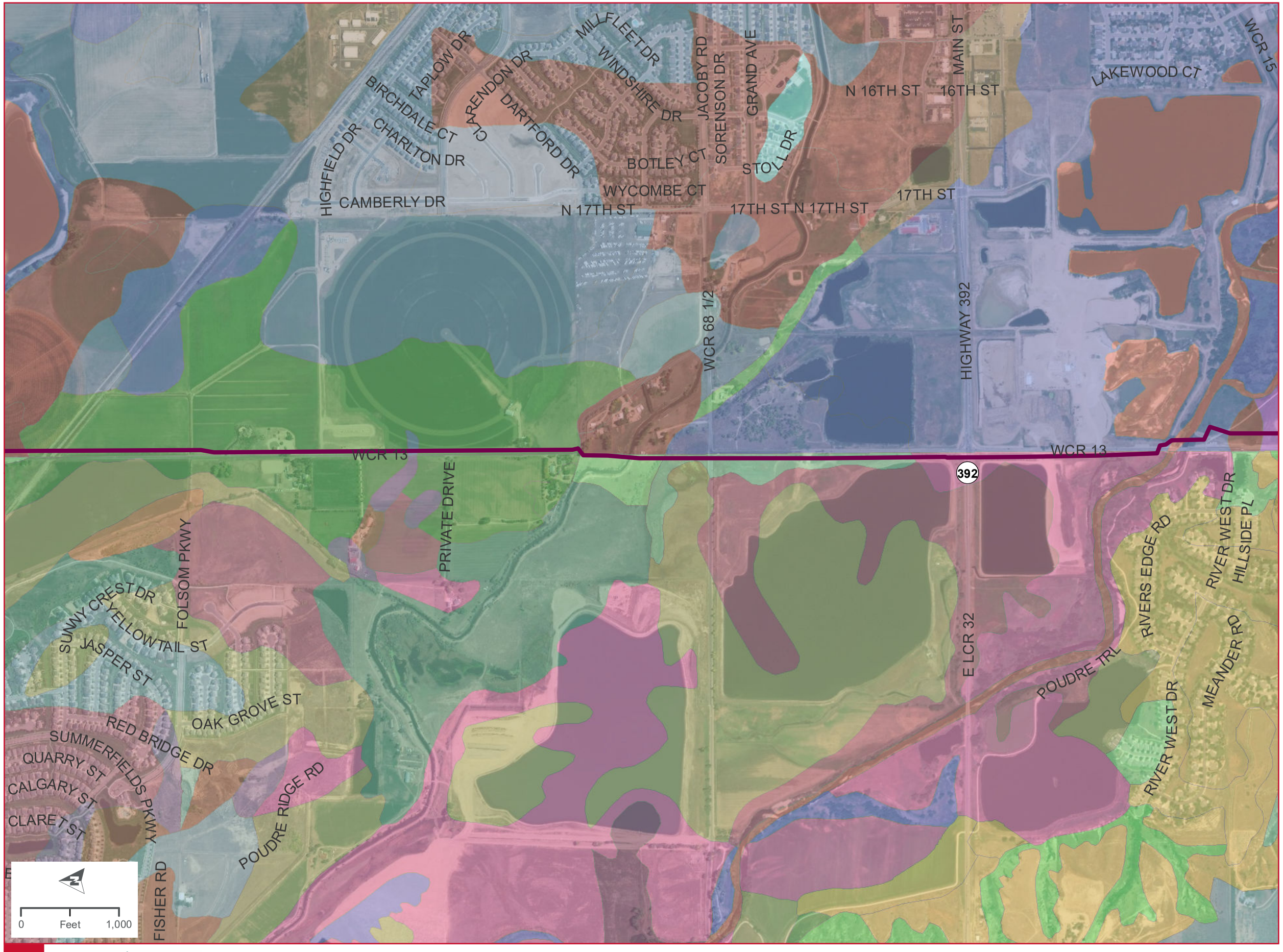
Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

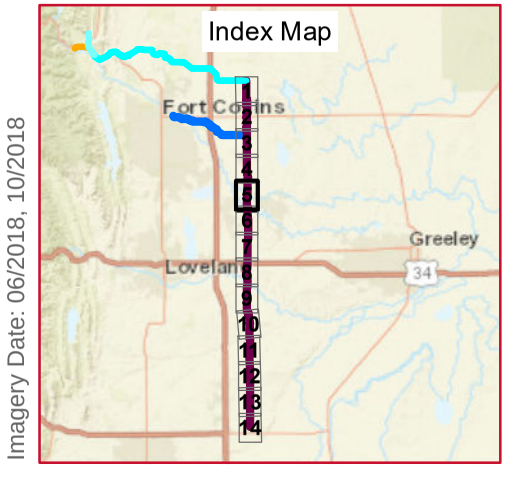


COUNTY LINE PIPELINE
SHEET 5 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 06/2018, 10/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Soil Data Source: Natural Resouces Conservation Service- USDA

NISP Northern Water Northern Integrated Supply Project

NORTHERN INTEGRATED SUPPLY PROJECT

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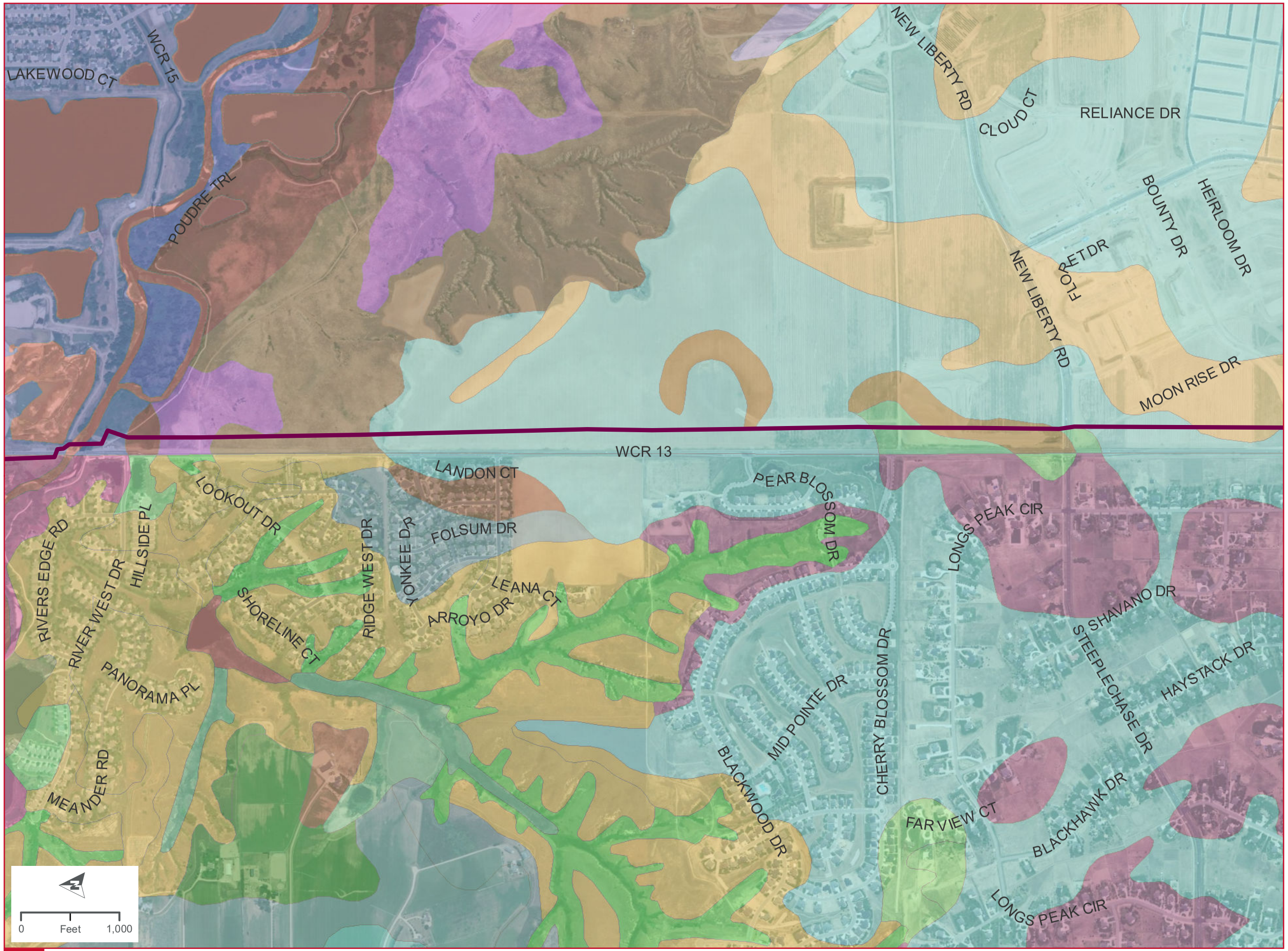
BCC 08/17/20

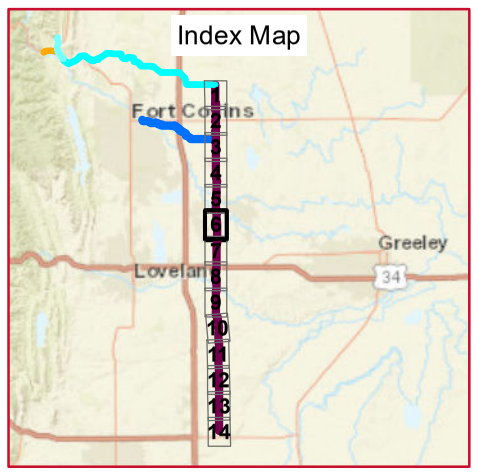


COUNTY LINE PIPELINE
SHEET 6 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 06/2018, 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

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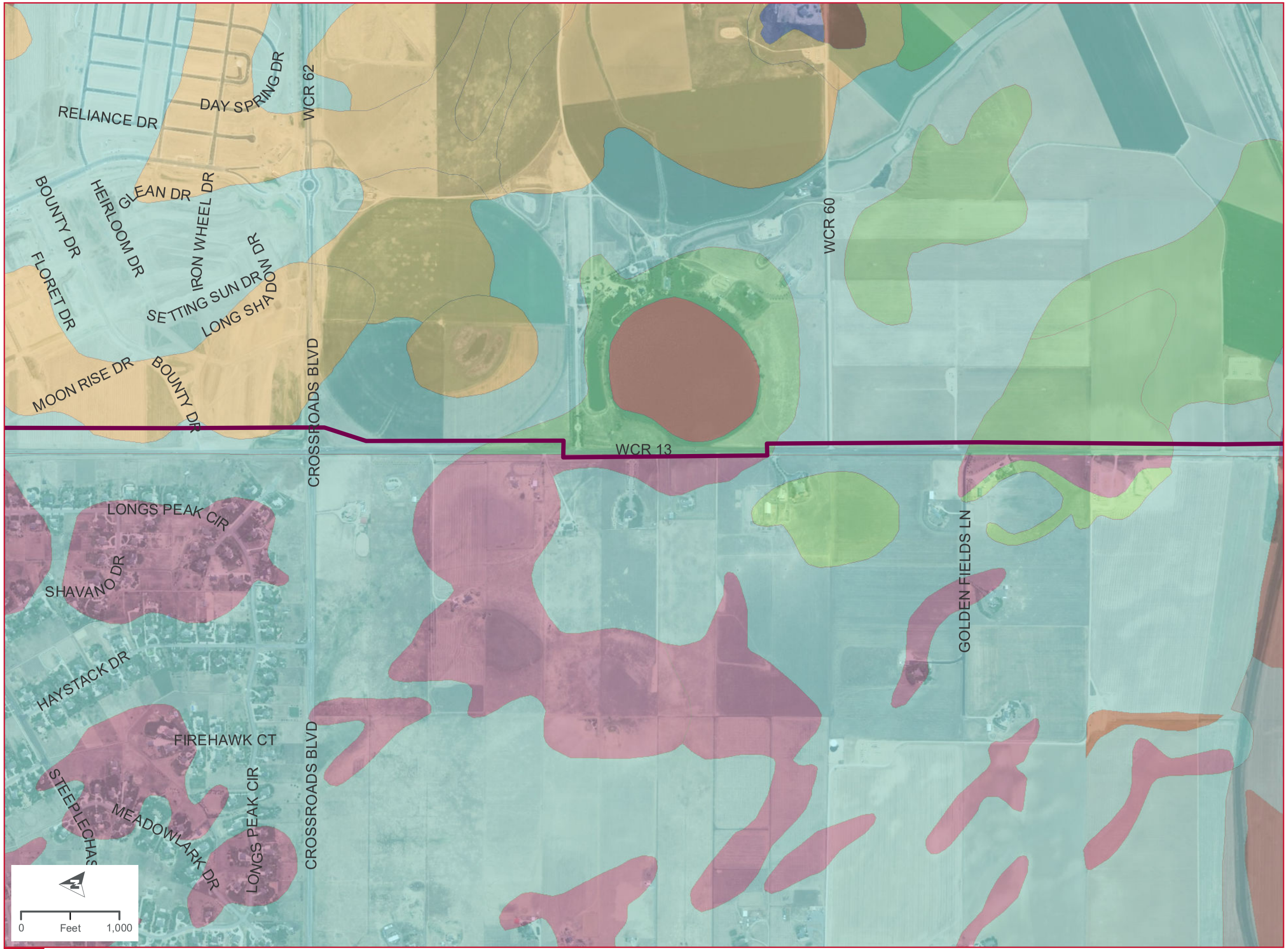
NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

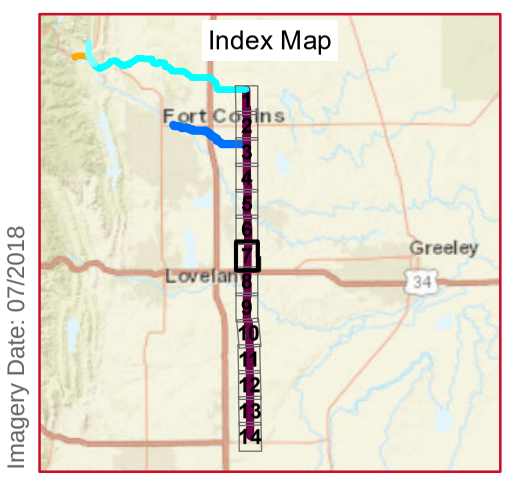


COUNTY LINE PIPELINE
SHEET 7 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

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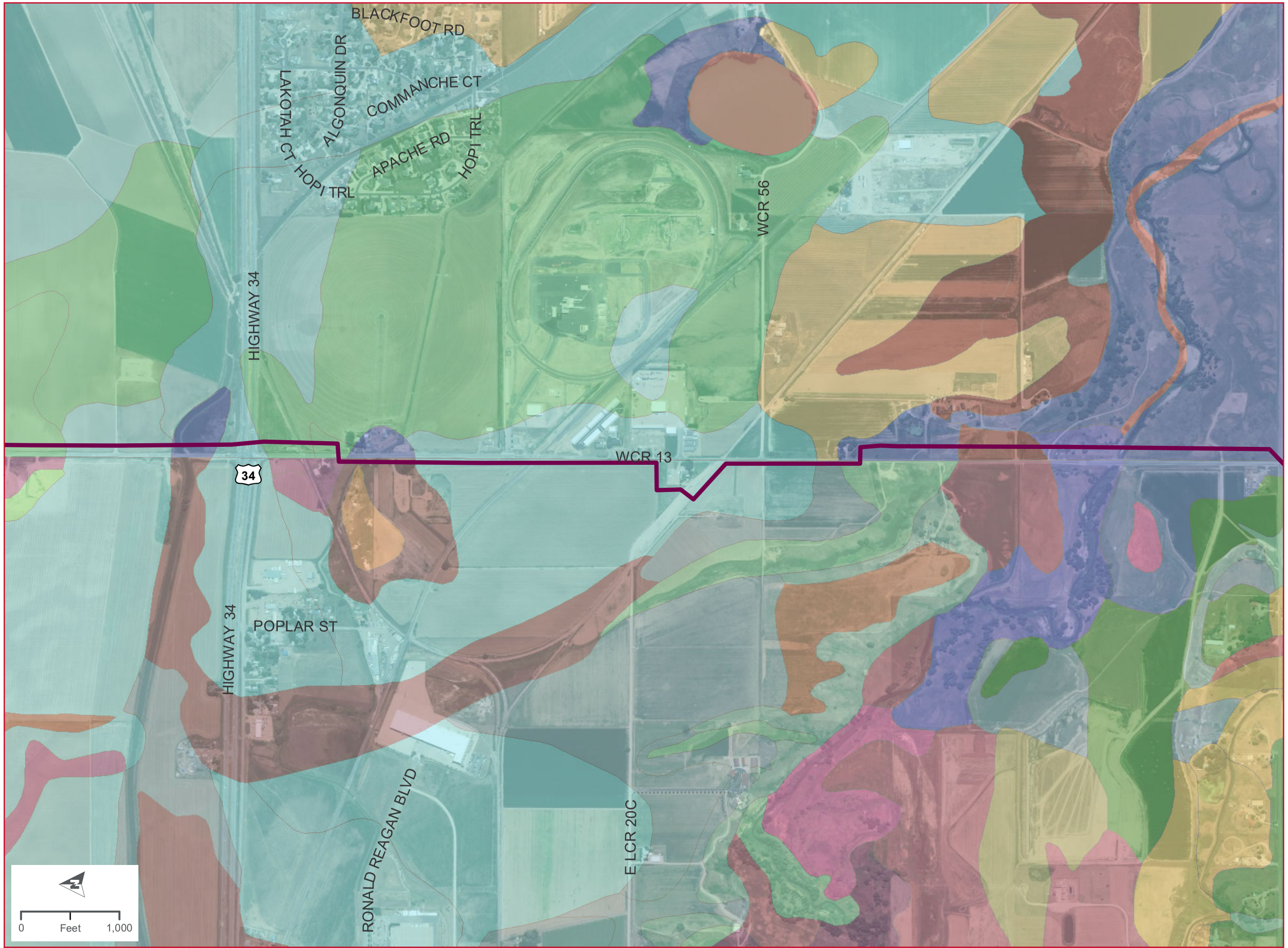
PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

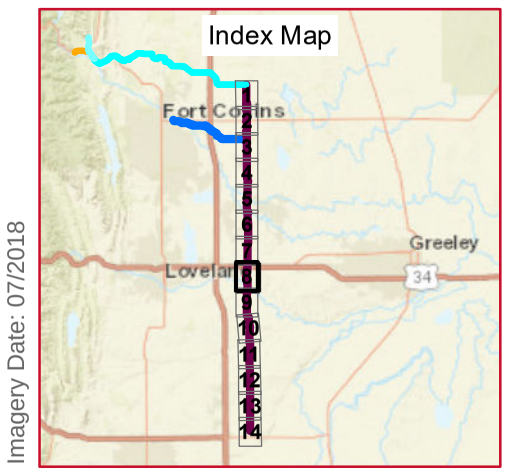


COUNTY LINE PIPELINE
SHEET 8 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

NISP Northern Water Northern Integrated Supply Project

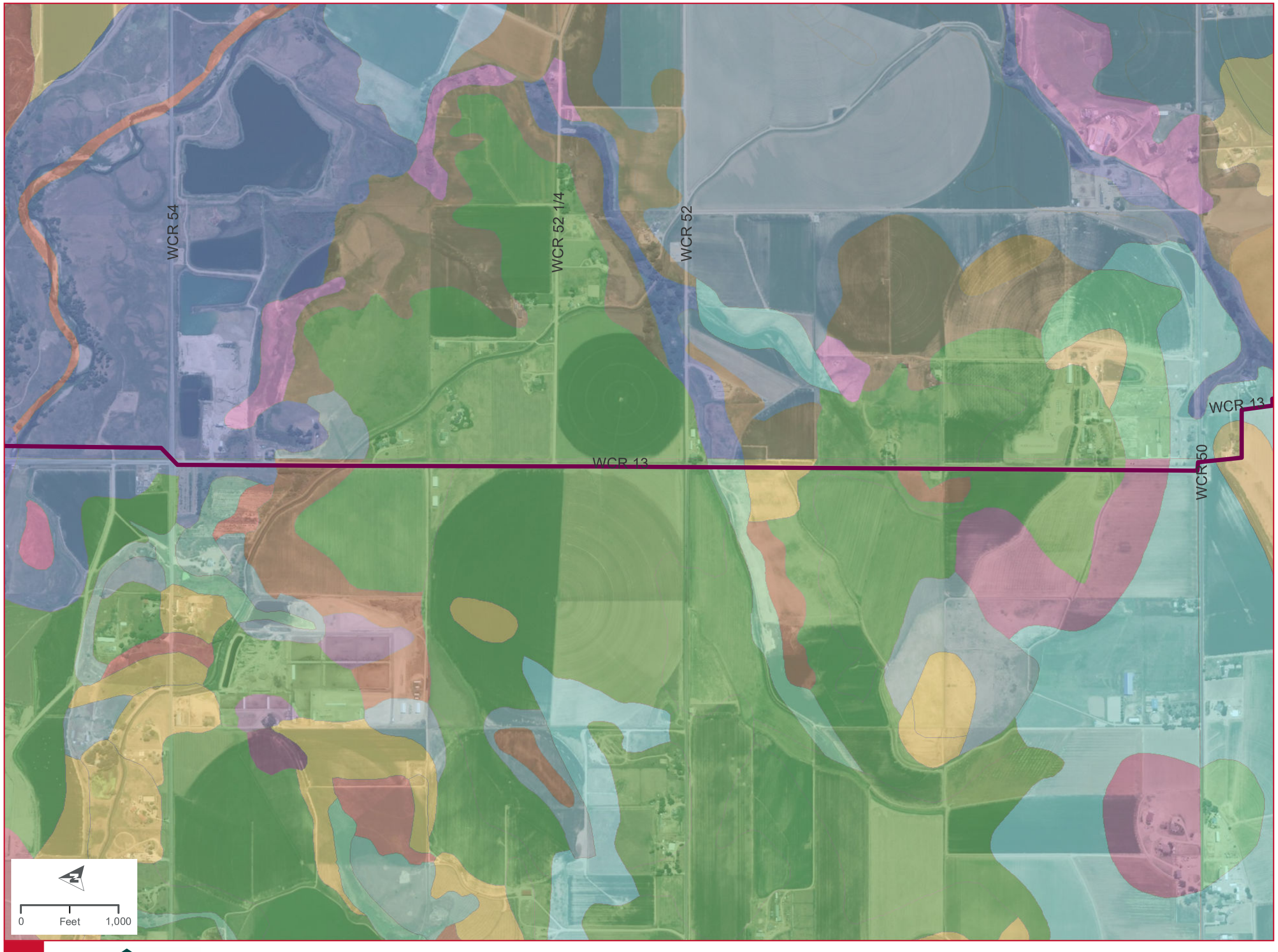
Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

143

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020

BCC 08/17/20

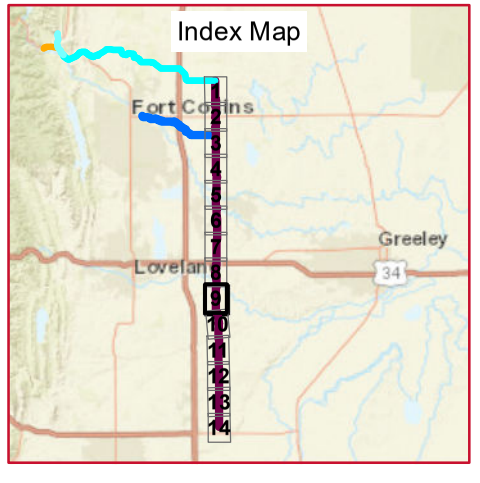


COUNTY LINE PIPELINE
SHEET 9 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Soil Data Source: Natural Resouces Conservation Service- USDA

NISP Northern Water Northern Integrated Supply Project

HDR Dewberry

NORTHERN INTEGRATED SUPPLY PROJECT

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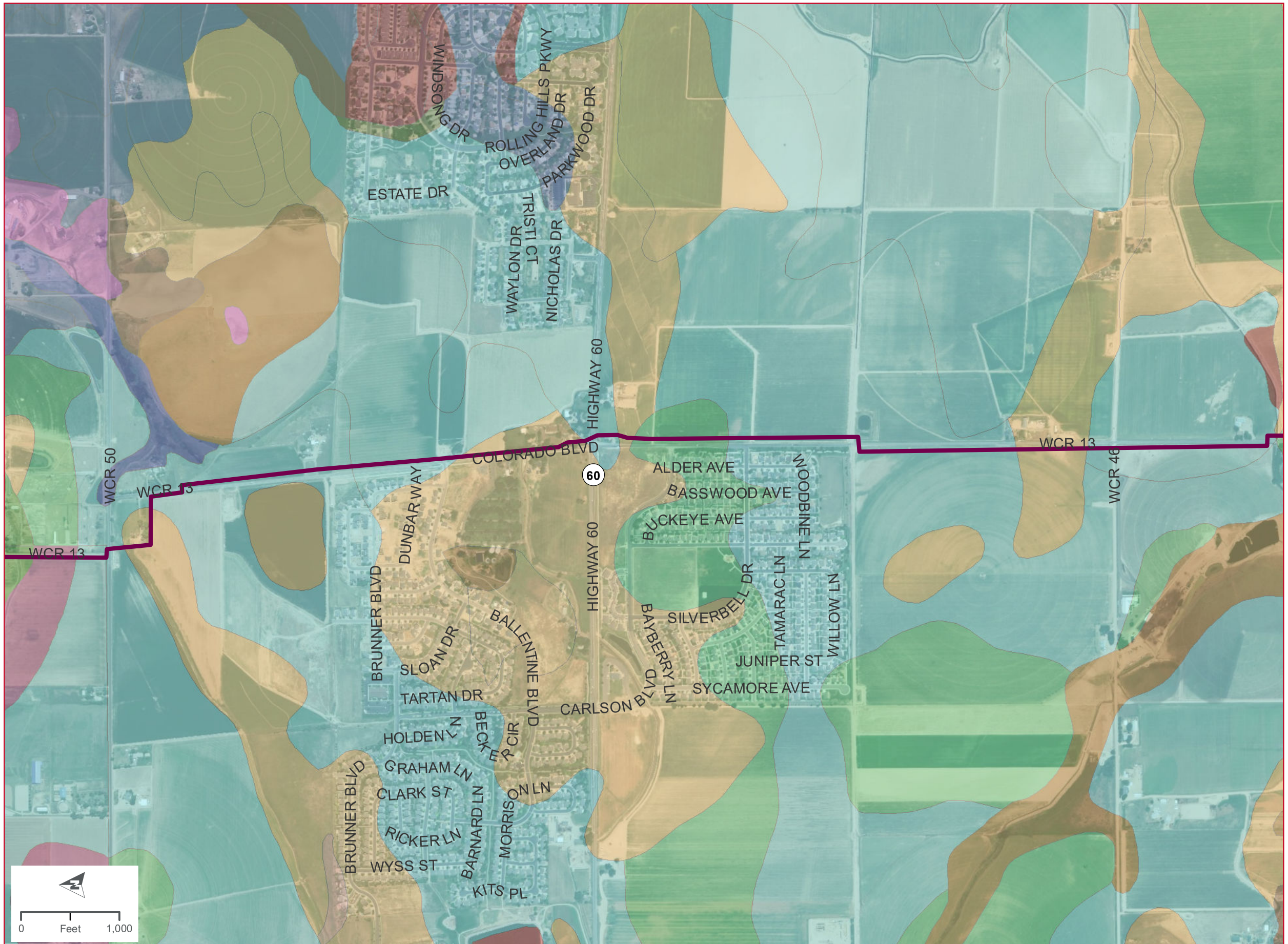
BCC 08/17/20

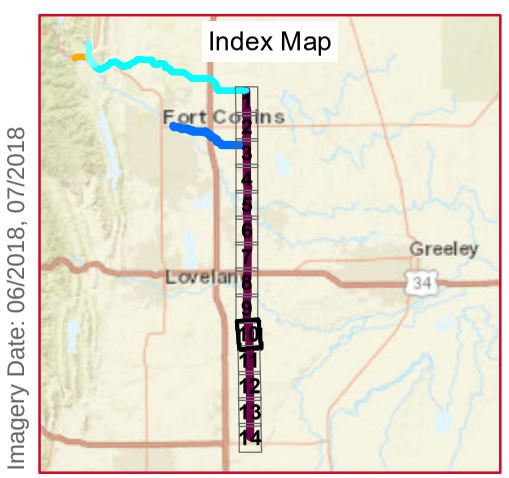


COUNTY LINE PIPELINE
SHEET 10 OF 14
MAP SERIES 2: SOIL TYPES

Legend

- Poudre Intake Pipeline
- Northern Tier Pipeline
- County Line Pipeline

See complete legend at the beginning of this map series



Imagery Date: 06/2018, 07/2018

DATA SOURCES: Northern Water, Larimer County, HDR

Soil Data Source: Natural Resouces Conservation Service- USDA

NORTHERN INTEGRATED SUPPLY PROJECT

NISP

PATH: \\DEN-GISSRV1\GISDATA\PROJECTS\10151633_NORTHERN_WATER_NISP\MAP_DOCS\LARIMER COUNTY 1041 PERMIT COUNTY LINE\NISP_MAPBOOK_COUNTY_LINE_MAP2_SOILTYPES.MXD - USER: MHARRIS - DATE: 2/5/2020