



# Thornton Water Project 1041 Application



Supplement 3

Larimer County Board of County Commissioners

December 17, 2018

# Larimer County Commissioners Direction Provided August 1, 2018

- At the conclusion of the hearing on August 1, 2018 the Board of County Commissioners moved:
  - “to allow time to provide the specific additional information as discussed by the Board of County Commissioners at tonight’s hearing and to direct county staff to involve the public in the information gathering process through public meetings or open houses.”

# Thornton Water Project Supplement 3

- Dec 10 – submitted Supplement 3 to Thornton’s 1041 Application
- Dec 17 – presentation of Preferred Alternative, respond to questions
- Jan 28, 2019 – Thornton to provide additional info if needed and respond to staff analysis
- Subsequent meetings if needed to respond to commissioner questions and public comments.

# Larimer County Direction for Outreach Process

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## Northern Water Participates

- Work with the public to better define and evaluate issues and concepts.
  - Mitigate the effects of the project to residents
  - Identify benefits to Larimer County
  - Engage in public outreach
- 
- Northern Water asked by Larimer County to participate in outreach process
  - Determine if co-location of the NISP pipeline could reduce community impacts.

## Agenda Part A

- Thornton's role in community outreach process.
- Identification of community Interests by Working Group and public.
- Discuss needs for this water project.
- Evaluate 5 water conveyance concepts identified by Working Group.
- Benefits for Larimer County.

## Agenda Part B

- Route details for Preferred Alternative.
- Larimer County 1041 Criteria.

## Thornton's participation in Larimer County Water Projects Working Group and outreach process.

- Working Group selected by Larimer County – Thornton had no role in selection.
- Thornton had multiple team members attend all 5 Working Group meetings.
- Thornton came to two public open houses and provided project information upon request.

## Thornton's participation in Larimer County Water Projects Working Group and outreach process.

- Thornton listened – took note of all the issues– discussed the information we heard internally – evaluated concepts presented.
- “maximize community benefit and minimize or mitigate negative impacts of potential water conveyance alternatives for Thornton's and Northern Water's Northern Integrated Supply Project.”



## Thornton's participation in Larimer County Water Projects Working Group and outreach process.

- Thornton provided technical expertise and educational materials to the Working Group upon request.
- Thornton developed a webinar for the Working Group about water quality and water flows for 5 water conveyance concepts.
- Thornton believes public engagement process was useful.
- Supplement 3 reflects feedback and data received from Larimer County, the Working Group, and from the residents of Larimer County.

## What Thornton did during the Working Group and public meeting process

- Thornton listened to Working Group and public at open houses.
- Thornton met with Larimer County staff, facilitator, Northern Water in Coordinating Group meetings.
- Thornton Water Project team evaluated technical questions and concepts discussed at Larimer County meetings.
- Thornton worked to blend Larimer community interests with project needs to find concept with most chance of success.

# Finding Shared Success



# Community Interests

1. Agriculture
2. Conveyance & Alignment Alternatives
3. Construction
4. Environment
5. Quality of Life
6. Water Supply
7. Process
8. Co-location



# Project Needs

1. Public health – water quality
2. Water Yield
3. Water Court Decree
4. 1986 Water Supply and Storage Company Agreement
5. Existing storage
6. 2025 Delivery
7. Fiscally responsible



# Delivery Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
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## Water Project Needs

- Public Health / WQ
- Water Yield
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- WSSC Agreement
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**DELIVERY  
CONCEPT**

# Delivery Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
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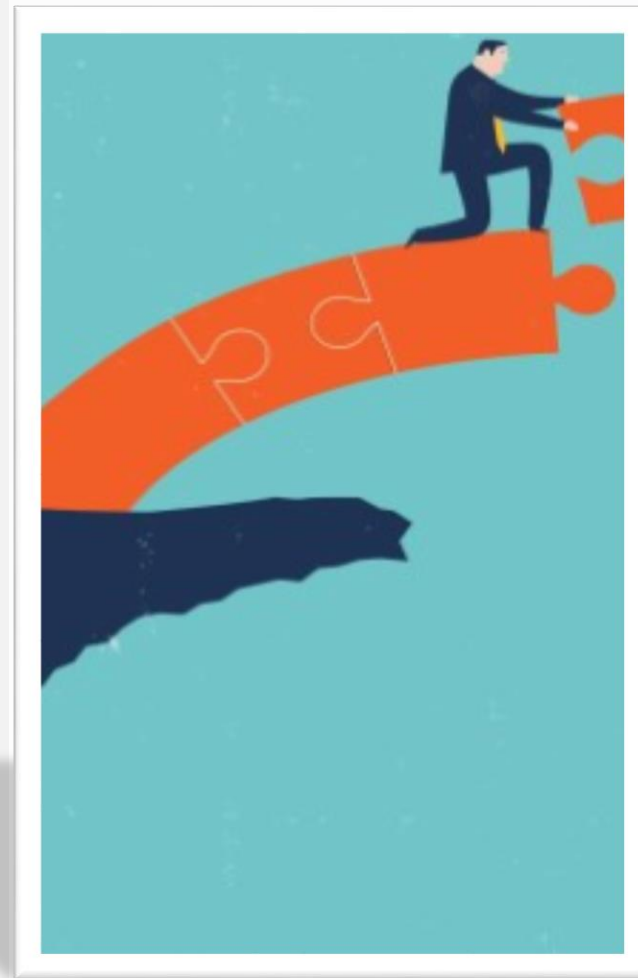
## Water Project Needs

- Public Health / WQ
- Water Yield
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# Project Needs

1. Public health – water quality
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## Project Need #1: Public Health

Protecting public health starts with water supply selection

*The main point is that disease - germs shall not be present in our drinking water. If they can be kept out in the first place at reasonable expense, this is the thing to do. Innocence is better than repentance.*

Hazen, Allen, The Filtration of Public Water-Supplies,  
John Wiley & Sons, 1900

# Project Need #1: Public Health

## Protecting public health starts with water supply selection

- Down stream of wastewater treatment plants, there is a greater concentration of human pathogens (Giardia and Cryptosporidium) and carcinogens.
- If water is delivered through lower parts of Larimer County Canal, it degrades due to inflows from residential and agricultural activities.
  - pollutants include: sediment; oil and grease from motor vehicles; pesticides and nutrients from lawns and gardens; viruses, bacteria, and nutrients from pet waste and septic systems; road salts; heavy metals from roof shingles, motor vehicles, and other sources

# Project Need #1: Public Health

## Protecting public health starts with water supply selection

- Risk of drinking-water contamination increases, even after treatment, since drinking-water treatment systems are based on % removal or % inactivation
  - Additional treatment can equate risk, however, if a single treatment process fails, the severity of a disease occurrence will be greater (e.g., Milwaukee single point failure of coagulation system and > 200,000 cases of Cryptosporidium)

# Project Need #1: Public Health

## Protecting public health starts with water supply selection

Reduced water quality impacts more than customers

- There are meaningful and measurable broader community impacts if treating lower water quality (e.g. downstream in LCC system or downstream on Poudre River)
  - increased truck traffic near treatment facility, increase solids to landfills, increase power usage from grid, and increase greenhouse gases (GHGs) result from these changes

# Project Need #1: Public Health

## Protecting public health starts with water supply selection

- While there are many treatment technologies available to protect public health, and the environment, the first and most important factor is selecting a high-quality water supply.

## Project Need #2: Water yield is not reduced

- Project is designed to deliver an average of 14,000 acre-feet per year
- Sufficient supply for Thornton's water supply needs through 2065
- Water supply needs in 2065 assume continued conservation
- Thornton is one of the most water efficient cities in Colorado

## Project Need #3: Abides by Thornton's Water Court Decree

- “Sticks in the Bundle” of water rights in Colorado include:  
    **Priority date**

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  - Amount



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  - Amount
  - Type and place of use

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  - Type and place of use
  - Location of Point of Diversion

## Project Need #3: Abides by Thornton's Water Court Decree

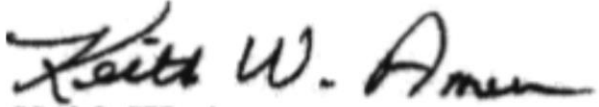
- “Sticks in the Bundle” of water rights in Colorado include:
  - Priority date
  - Amount
  - Type and place of use
  - Location of Point of Diversion
- Thornton's right to divert at the Larimer County Canal – and by extension – its right to the quality of water at that location is protected by law

## Project Need #4: Abides by the terms of the 1986 Water Supply and Storage Company (WSSC) Agreement

- Protective of the agricultural shareholders in the WSSC system
- Delivery of Thornton's water through the Larimer County Canal (LCC) is required by the 1968 Agreement and the decree, because it minimizes the impact to WSSC operations and other shareholders
- Thornton must receive delivery of its WSSC water into WSSC Reservoir No. 4

## Project Need #4: Abides by the terms of the 1986 Water Supply and Storage Company Agreement

The Company balances its operations and water supply deliveries to its municipal shareholders while maintaining historical deliveries to its remaining shareholders. These operations are vital to the continued viability of irrigated lands in Larimer and Weld counties, and deliveries of water to the Company's municipal shareholders, including Thornton, are expressly conditioned upon the Company's ability to maintain operations and deliveries to all of its shareholders. The operations rely on Thornton's compliance with their TNP Decree and the 1986 Agreement.

  
Keith W. Amen  
President  
Water Supply and Storage Company

## Project Need #5: Use existing storage

- WSSC has over 46,000 acre feet of storage in eleven reservoirs
- Thornton owns its pro-rata portion of the storage by virtue of its share ownership
- Thornton purchased the right to use excess storage capacity in the 1986 Agreement

## Project Need #5: Use existing storage

**COLORADO'S**  
**WATER PLAN**

COLLABORATING  
ON COLORADO'S  
WATER FUTURE

*While storage is a critical element for managing Colorado's future water supplies, new storage projects may be contentious and face numerous hurdles, including permitting and funding. In many cases, **it may be more practical and efficient to reallocate or enlarge an existing dam and reservoir than to build a completely new structure.***

## Project Need #6: 2025 Delivery

- Thornton coordinates its land use planning and water supply planning
- Thornton's water system is efficient
  - Clear Creek and South Platte yields have been maximized
  - Reuse program
  - Thornton customers are some of the most water efficient in Colorado
  - Current system can serve a population through 2025



## Project Need #7: Fiscally Responsible

- The project is fiscally constrained
- Residents have incurred double digit rate increases past three years
- Residents will incur rate increases in 2019 and 2020
- Thornton customers pay higher than average water rates
- Developers are paying significantly higher fees
- Double digit increase in tap fees since 2015

## Project Need #7: Fiscally Responsible

- Tap fee and rate structure ensures affordability of this Project
- Capital project cost containment is critical
  - Maximum debt capacity
- On-going treatment cost containment after construction and build out is critical
- Must balance financial sustainability with need to provide a safe, high quality and reliable water supply

# Finding Shared Success



# Shared Community Interests & Project Needs

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location
- Public Health / WQ
- Water Yield
- Water Decree
- WSSC Agreement
- Existing Storage
- 2025 Delivery
- Fiscally responsible

# Five Delivery Concepts Identified by Working Group

- Douglas Road
- Poudre River
- Larimer County Canal
- Shields Street
- County Road 56

# Community Scoring\* of Interests for Each Delivery Concept

	Douglas Road	Poudre River	Larimer County Canal	Shields Street	CR 56
Agriculture	2	5	4	2	3
Conveyance & Alignment Alternatives	1	5	3	1	3
Construction	1	5	4	1	4
Environment	1	5	3	2	3
Process	1	5	3	1.5	4
Quality of Life	1	5	3	1	4
Water Supply	2	5	3	2	3.25
Co-location	maybe	no	no	yes	yes

1 = Does not meet the interests at all  
 2 = Does not meet the interests well  
 3 = Neutral

4 = Meets the interests well  
 5 = Meets the interests very well

# Delivery Concept

## Shared Community Interests

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**DELIVERY  
CONCEPT**

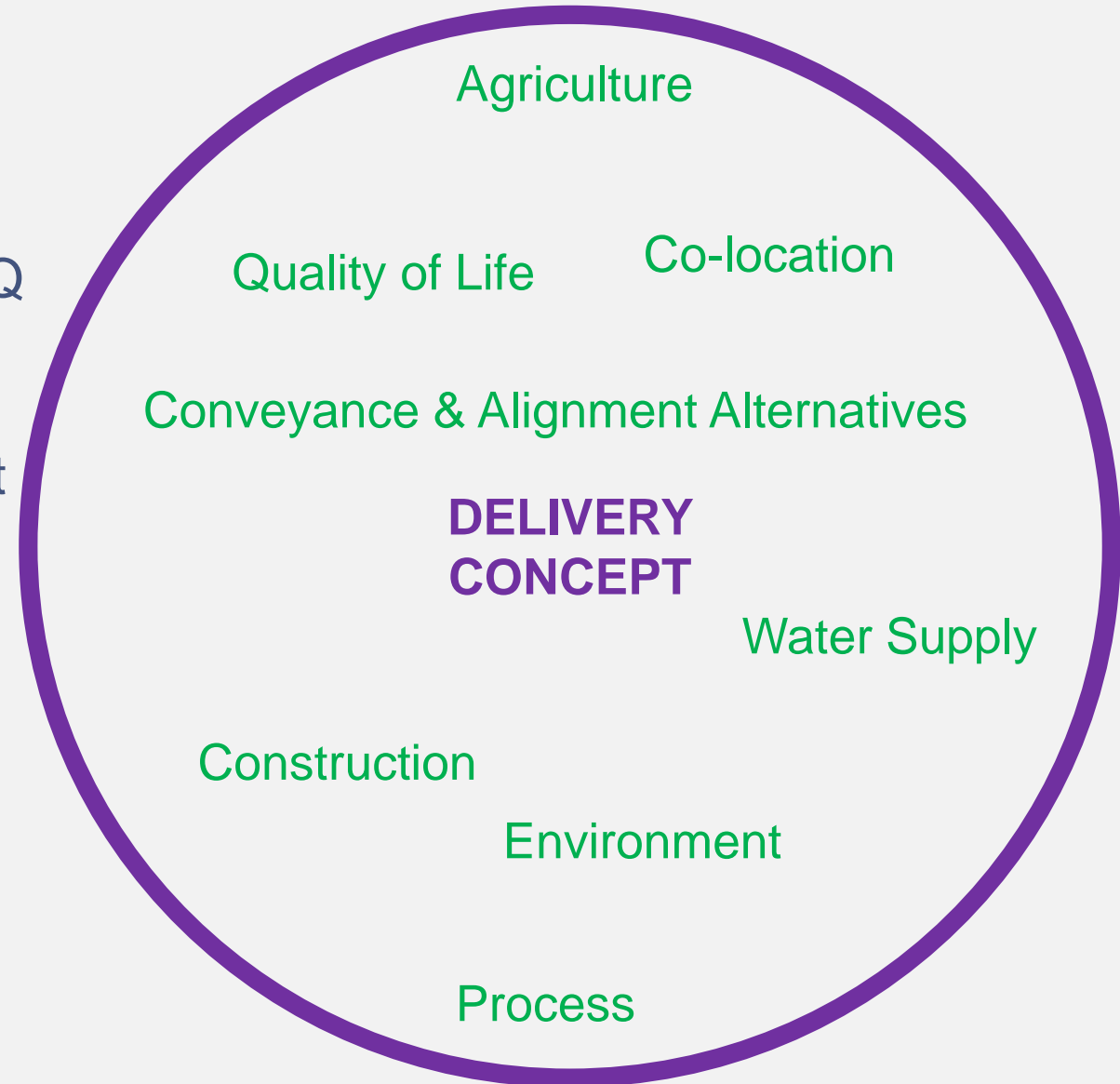
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## Shared Community Interests

- Agriculture
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## Water Project Needs

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# Delivery Concept

## Shared Community Interests

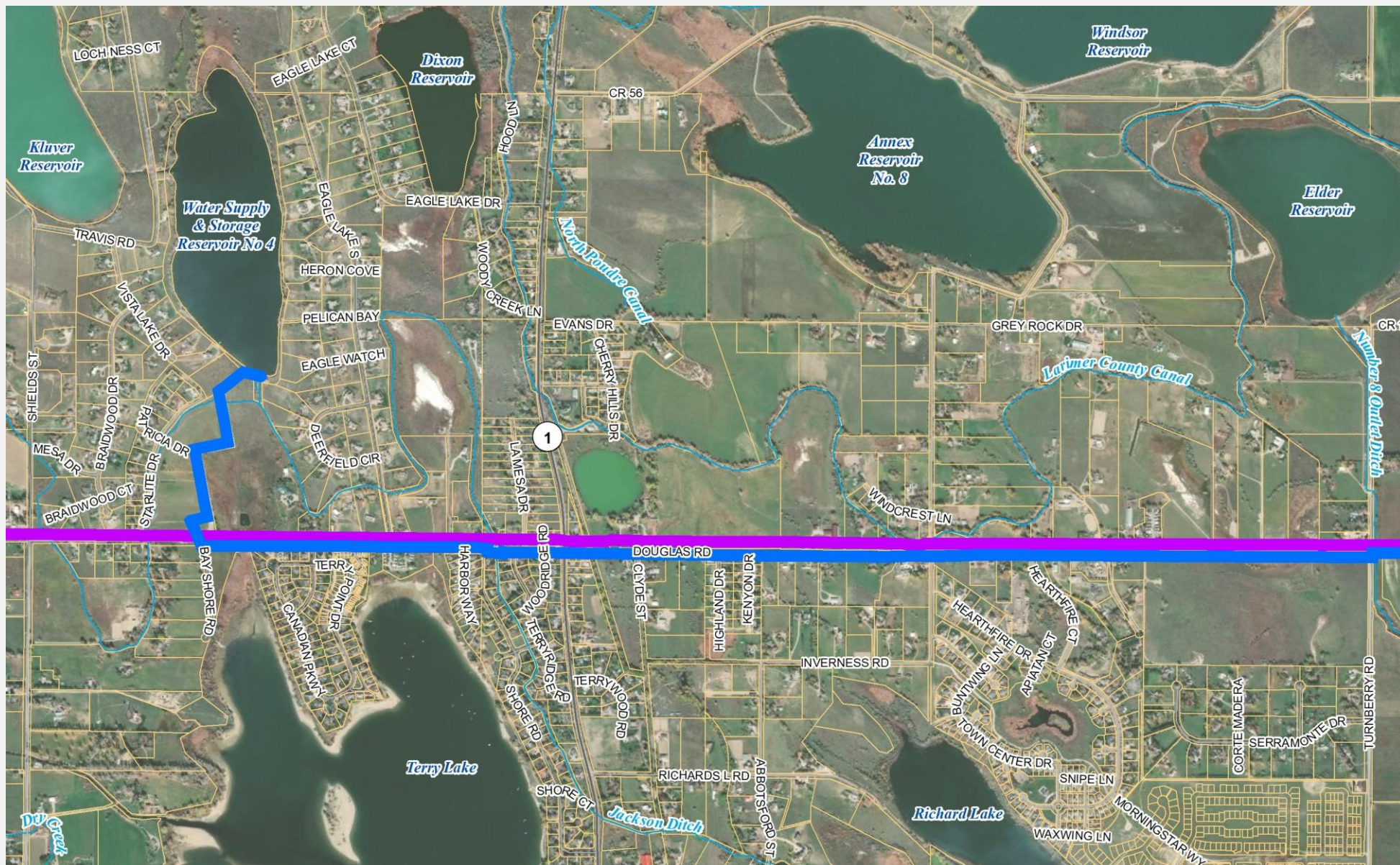
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## Water Project Needs

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# Douglas Road Concept



# Douglas Road Concept

## Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Project Needs

- Public Health / WQ
- Water Yield
- Water Decree
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**DOUGLAS  
ROAD**

# Douglas Road Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

- Public Health / WQ
- Water Yield
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- WSSC Agreement
- Existing Storage
- 2025 Delivery
- Fiscally responsible

Co - location

**DOUGLAS  
ROAD**

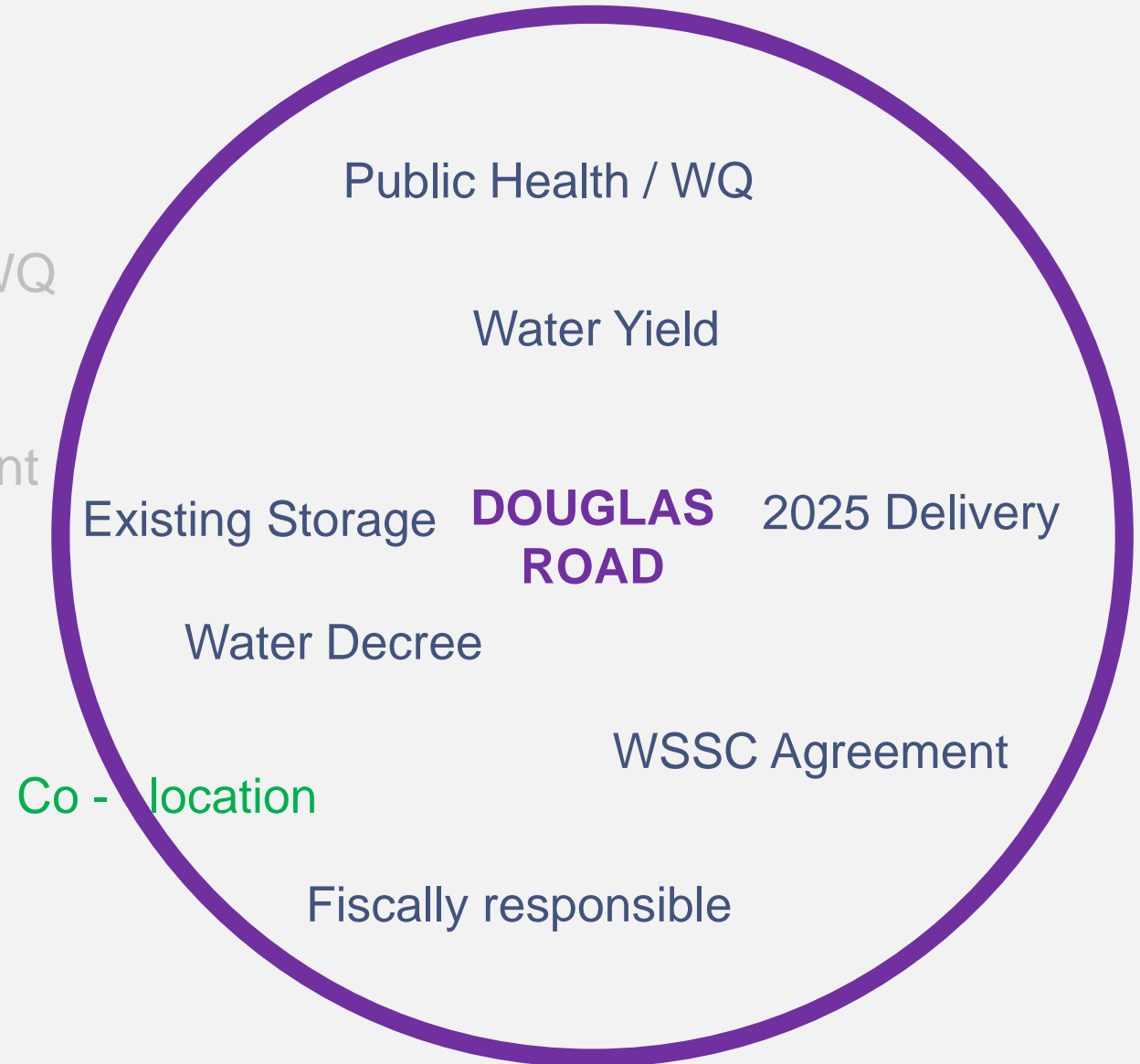
# Douglas Road Concept

## Shared Community Interests

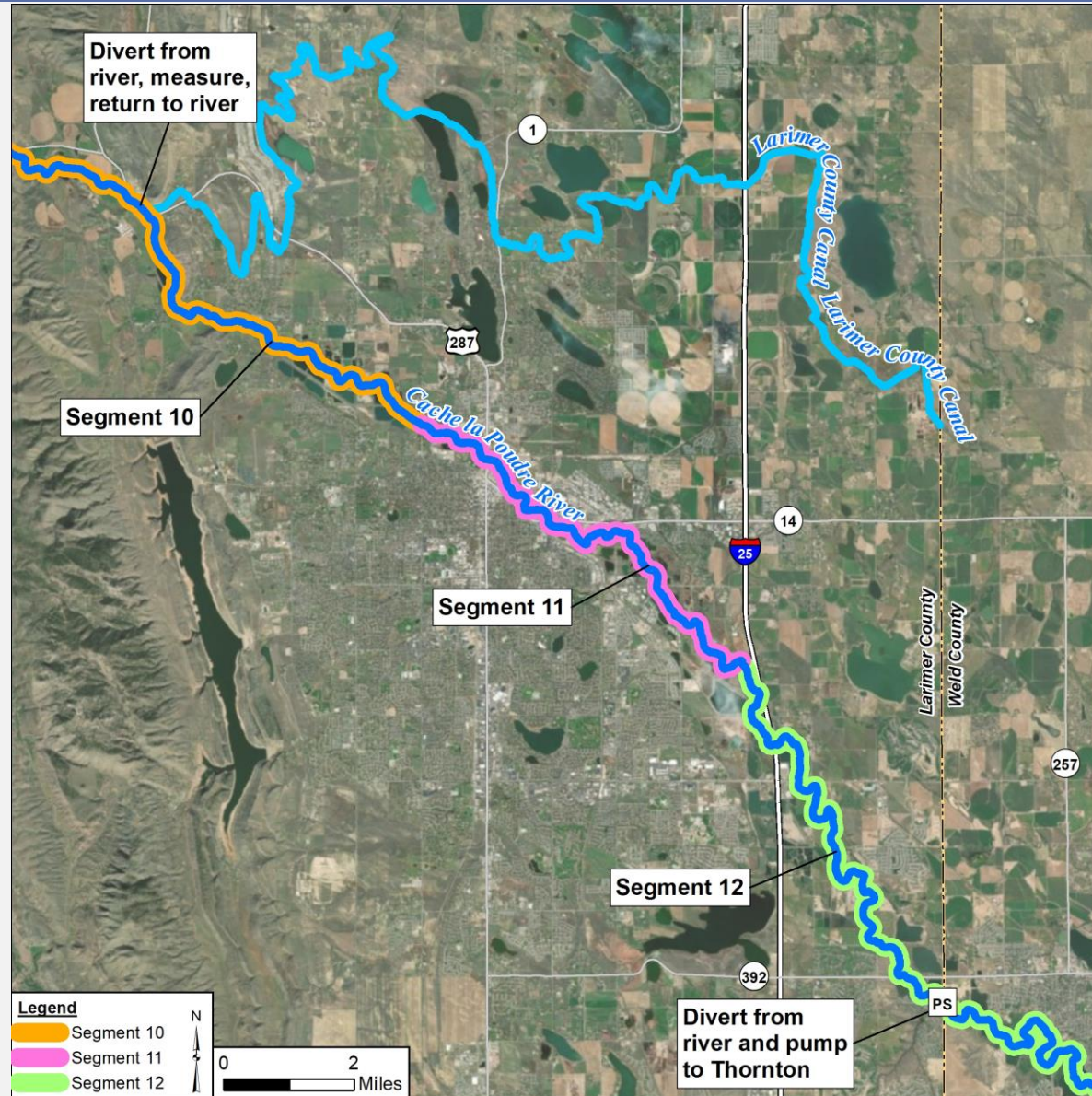
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- Co-location

## Water Project Needs

- Public Health / WQ
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- 2025 Delivery
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# Poudre River Concept



# Poudre River Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

- Public Health / WQ
- Water Yield
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**POUDRE  
RIVER**

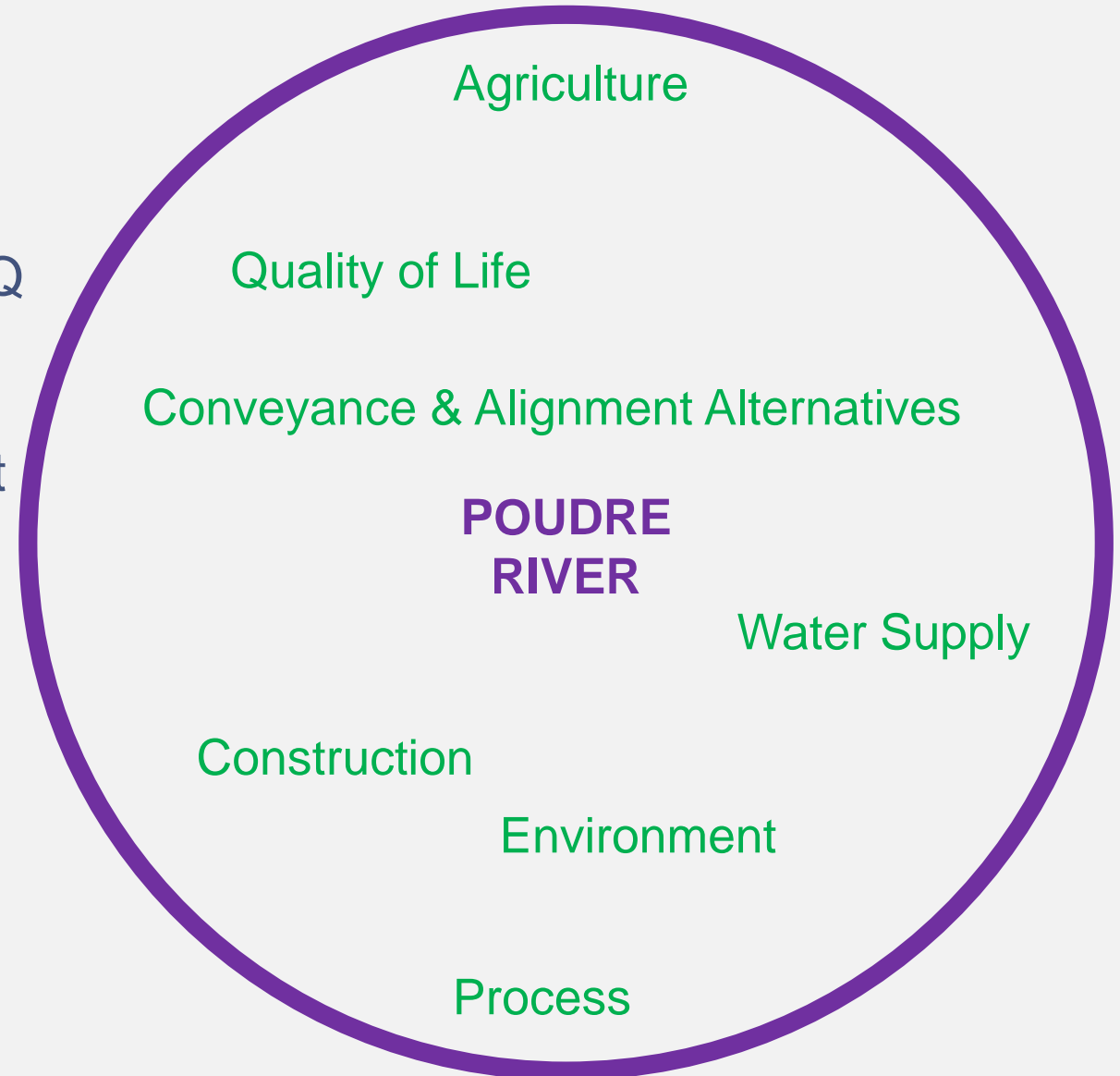
# Poudre River Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
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- Environment
- Process
- Quality of Life
- Water Supply
- **Co-location**

## Water Project Needs

- Public Health / WQ
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- Existing Storage
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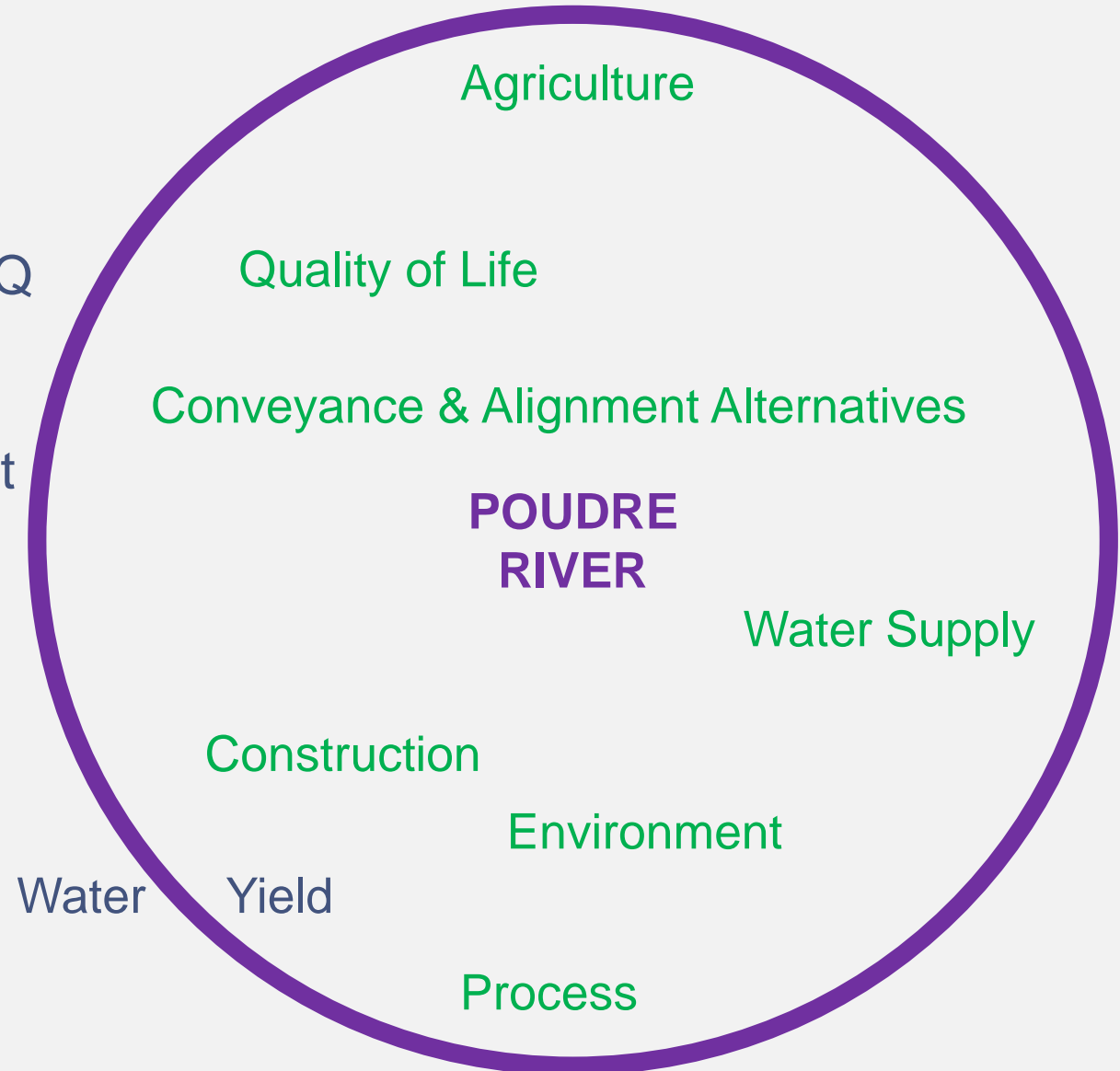
# Poudre River Concept

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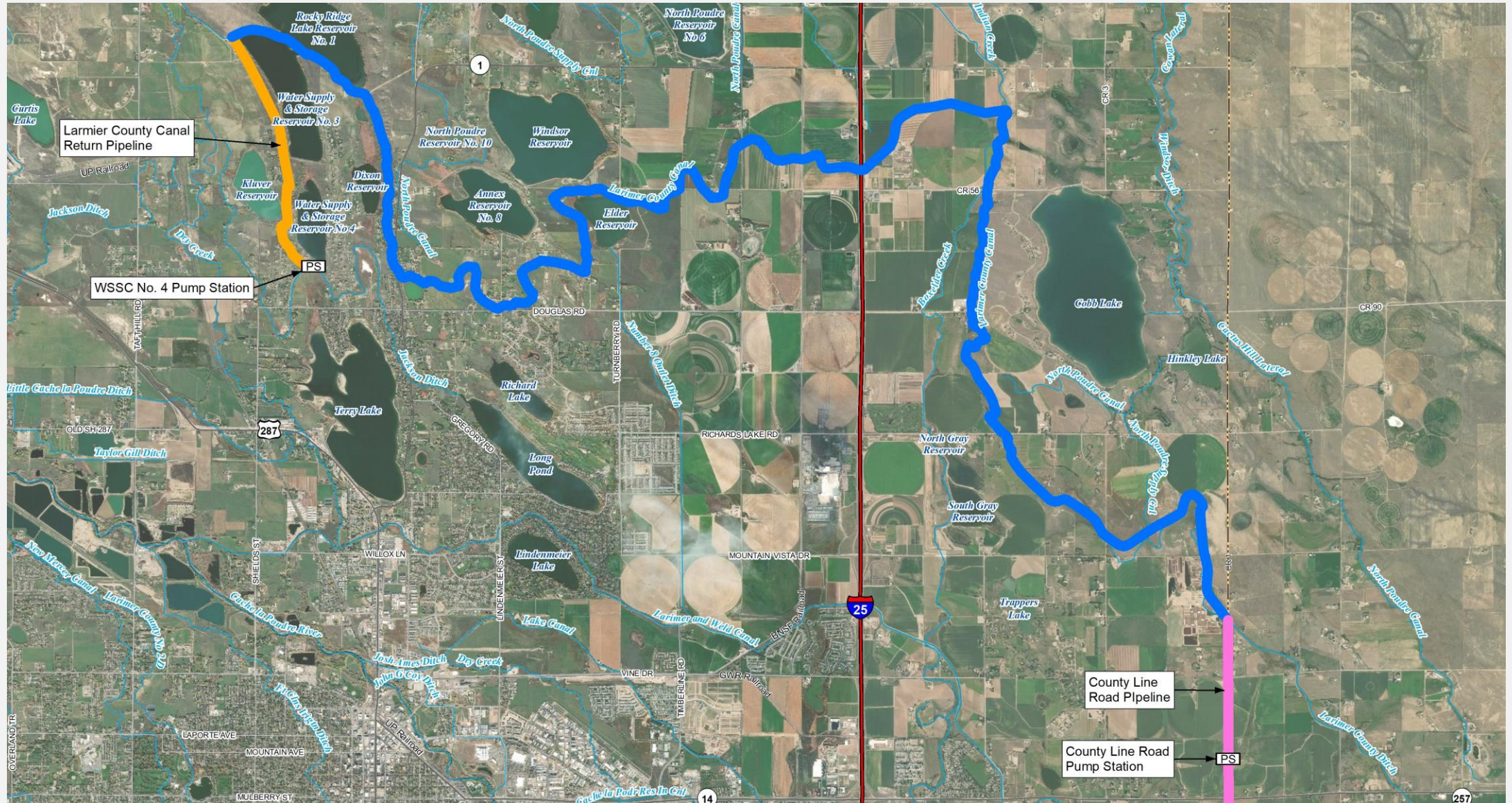
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- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- **Co-location**

## Water Project Needs

- Public Health / WQ
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# Larimer County Canal Concept



# Larimer County Canal Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

- Public Health / WQ
- Water Yield
- Water Decree
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- Existing Storage
- 2025 Delivery
- Fiscally responsible



**LARIMER  
COUNTY  
CANAL**

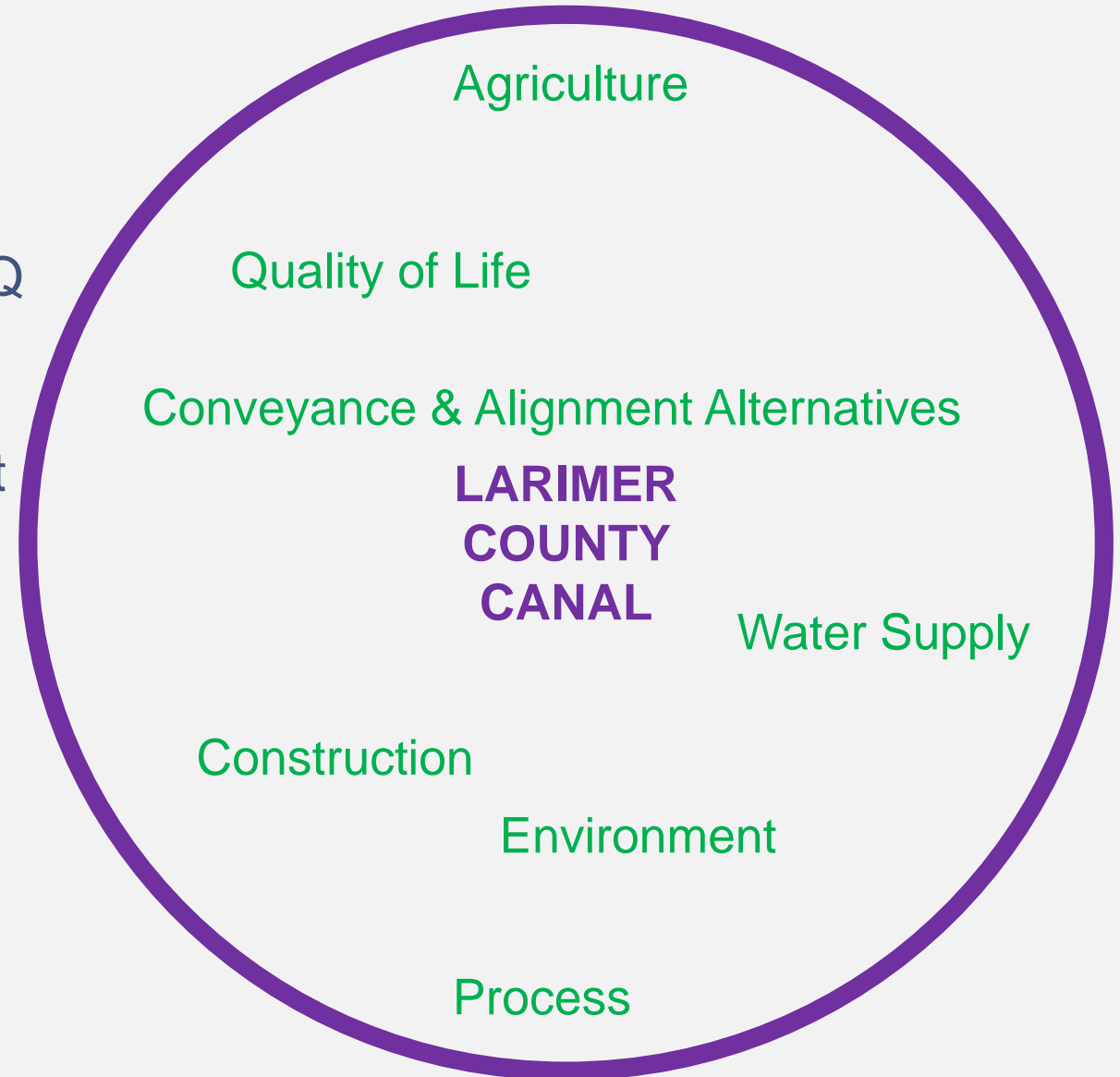
# Larimer County Canal Concept

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- **Co-location**

## Water Project Needs

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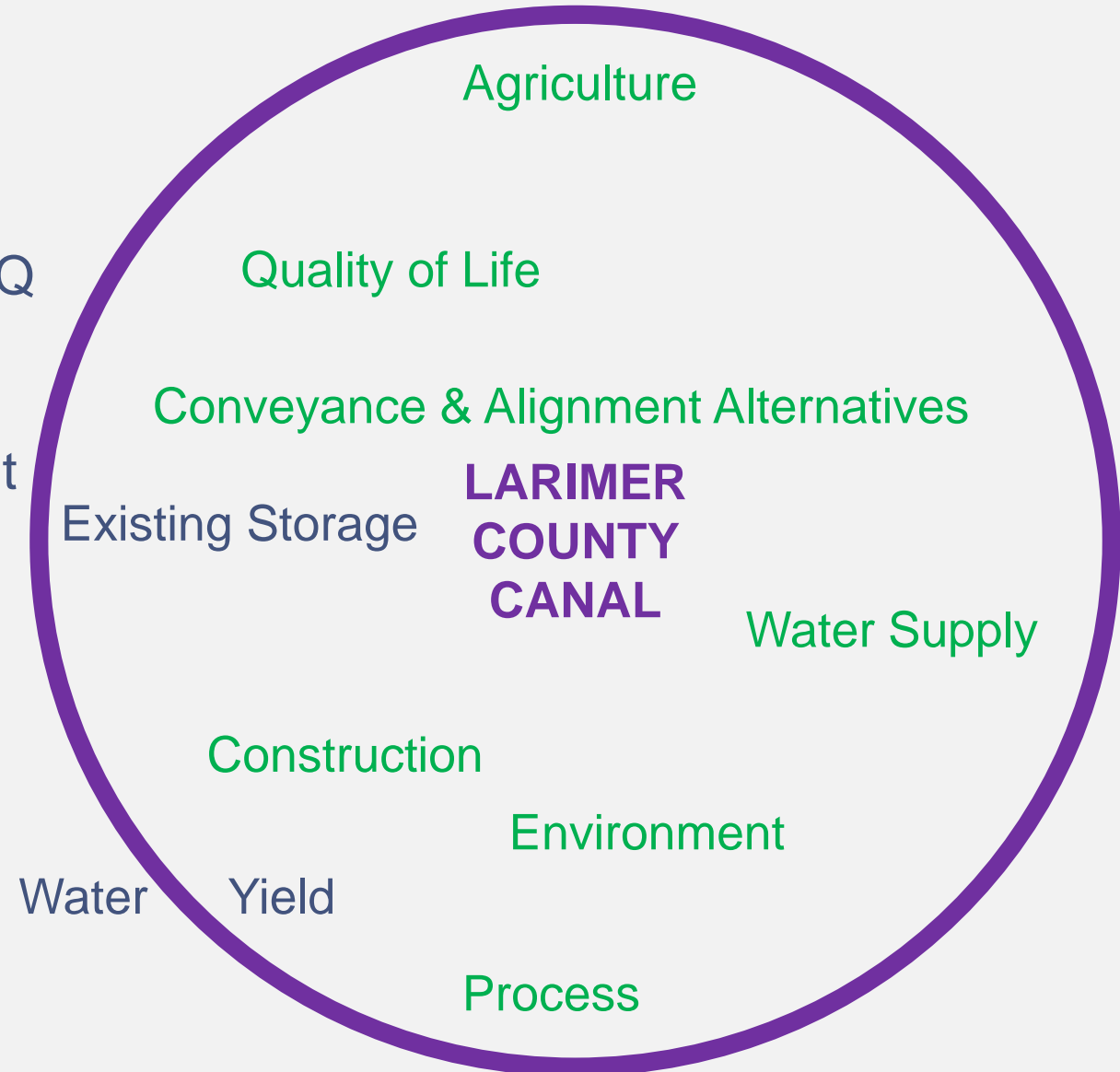
# Larimer County Canal Concept

## Shared Community Interests

- Agriculture
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- **Co-location**

## Water Project Needs

- Public Health / WQ
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# Larimer County Canal Concept

On Nov 28, 2018, at 7:54 AM, Dennis Harmon <[dharmon@wtrsupply.com](mailto:dharmon@wtrsupply.com)> wrote:

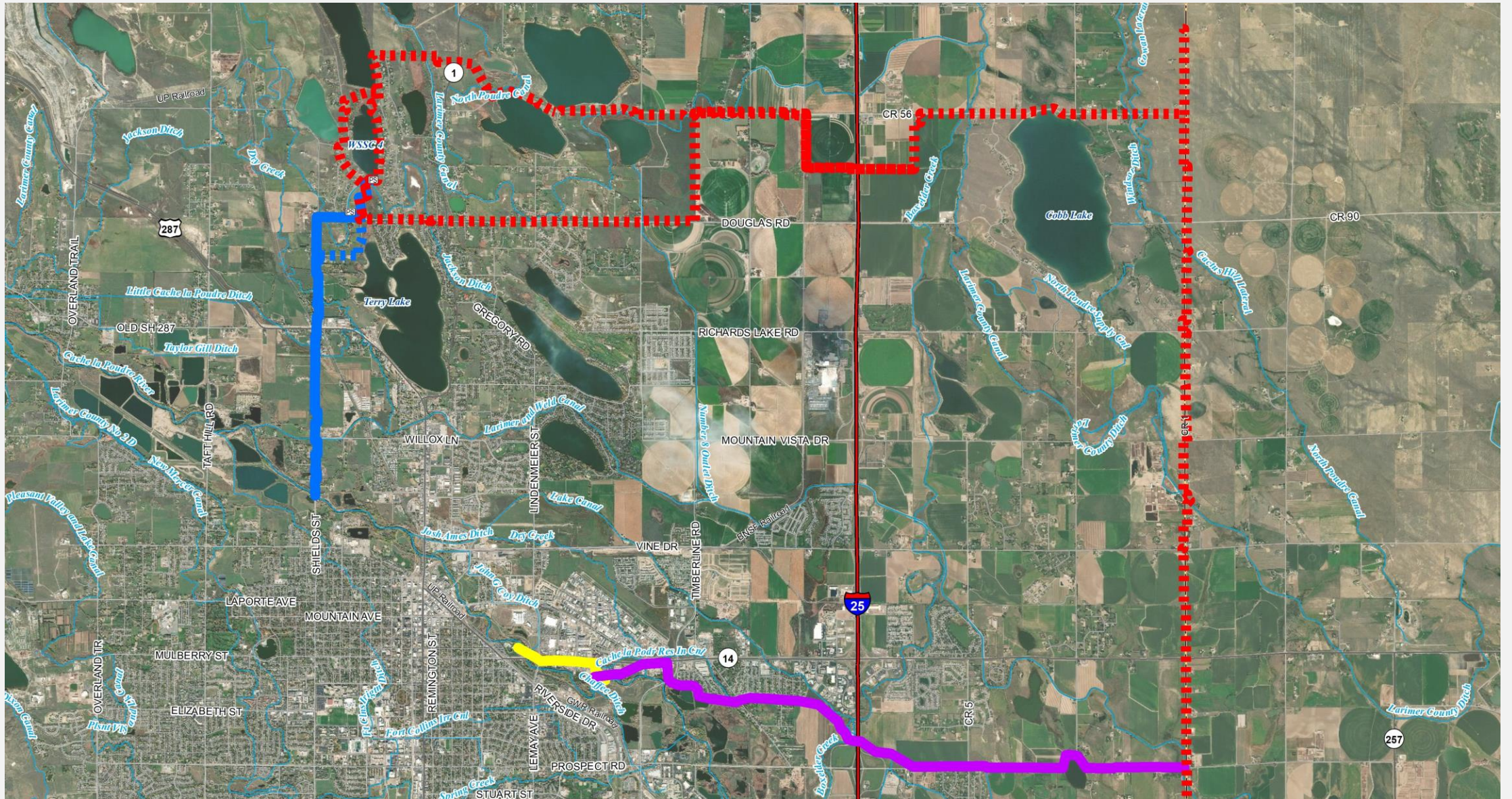
11/28/18

Heather:

At the conclusion of the meeting last evening, you asked for comments on the proceedings. Please pass along the following comments to the Working Group:

**The Working Group should eliminate the Canal Conveyance as an option to be considered further as WSSC's Board would not approve it.** For reasons that may not be obvious to most, operating the ditch outside its historical May through mid-September seasonal pattern would be detrimental to the canal and its appurtenant facilities.

# Shields Street Concept



# Shields Street Concept

## Shared Community Interests

- Agriculture
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- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

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**SHIELDS  
STREET**



# Shields Street Concept

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# Shields Street Concept

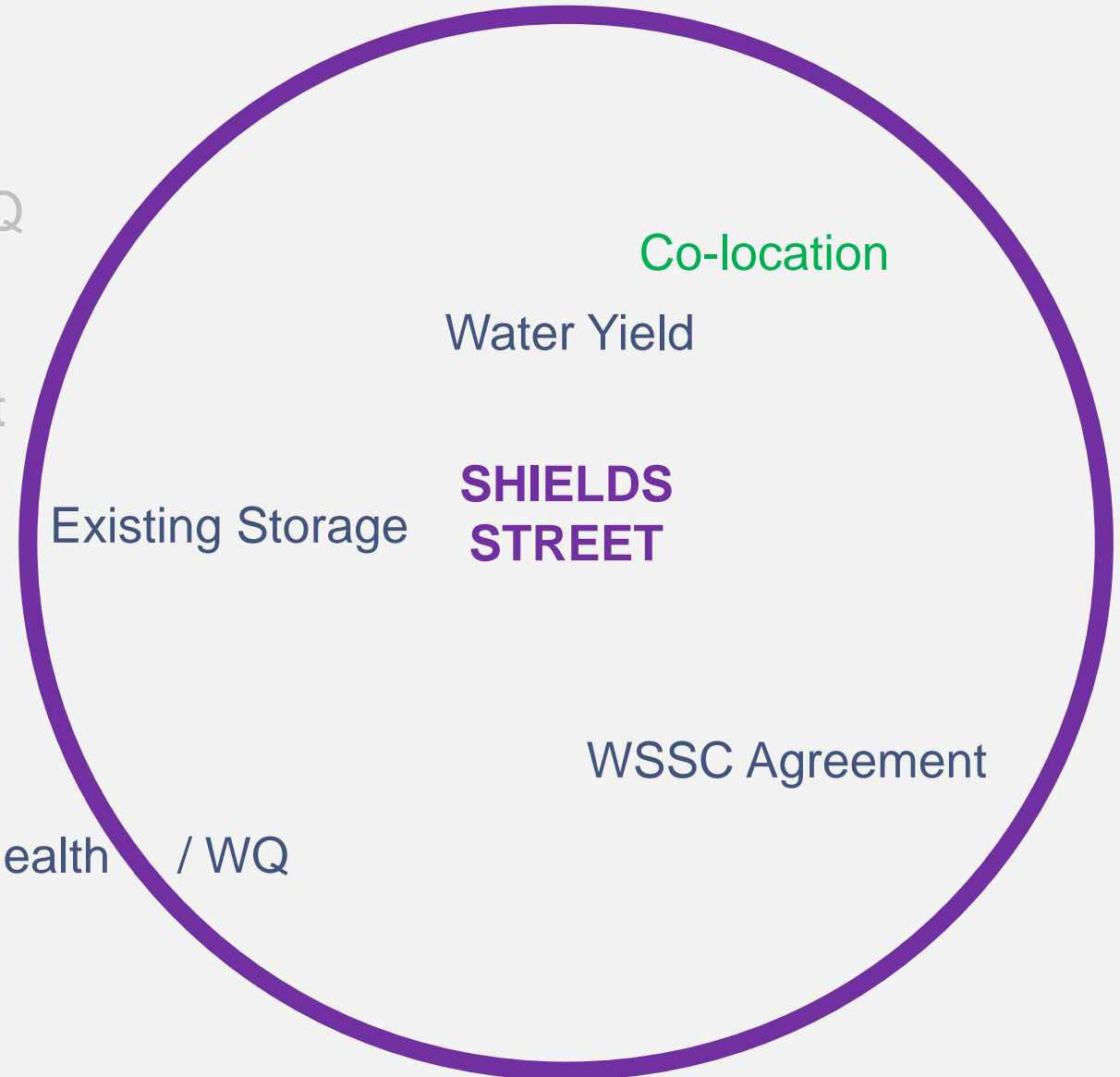
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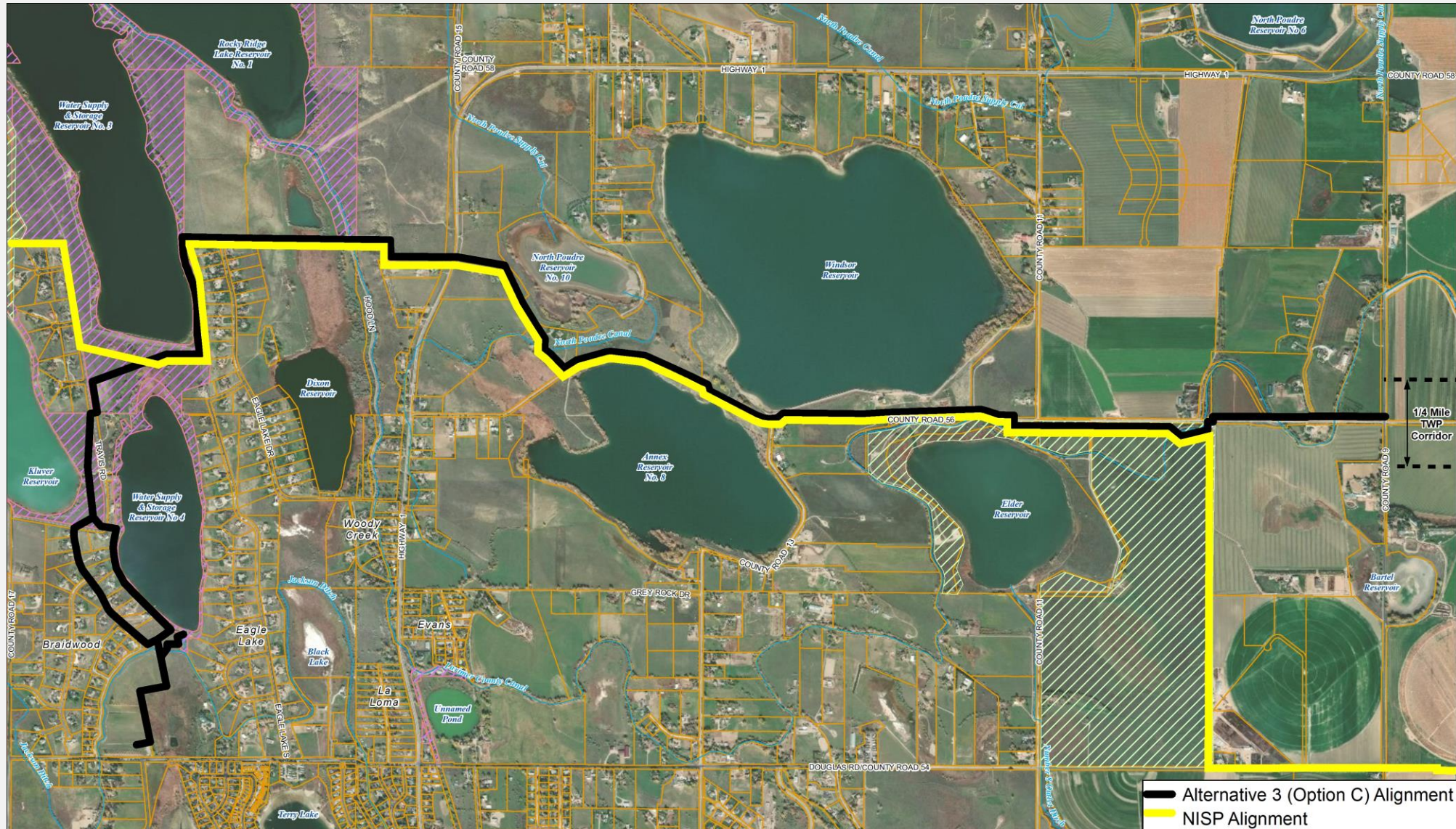
## Project Needs

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- Fiscally responsible

Public Health / WQ



# County Road 56 Concept



# Construction in or under Lakes

## Constructing in lake bottoms

- Corps of Engineers permit required
- Environmentally disruptive
- Not a good engineering practice

# Construction in or under Lakes

- Lake Taps
  - County's consultant – Use lake taps when alternatives aren't available
  - Construction is risky and expensive (10 to 100 times more expensive)
  - Longer construction schedule
  - Disruptive 24-7 boring operation until complete

# County Road 56

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

- Public Health / WQ
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**CR 56**

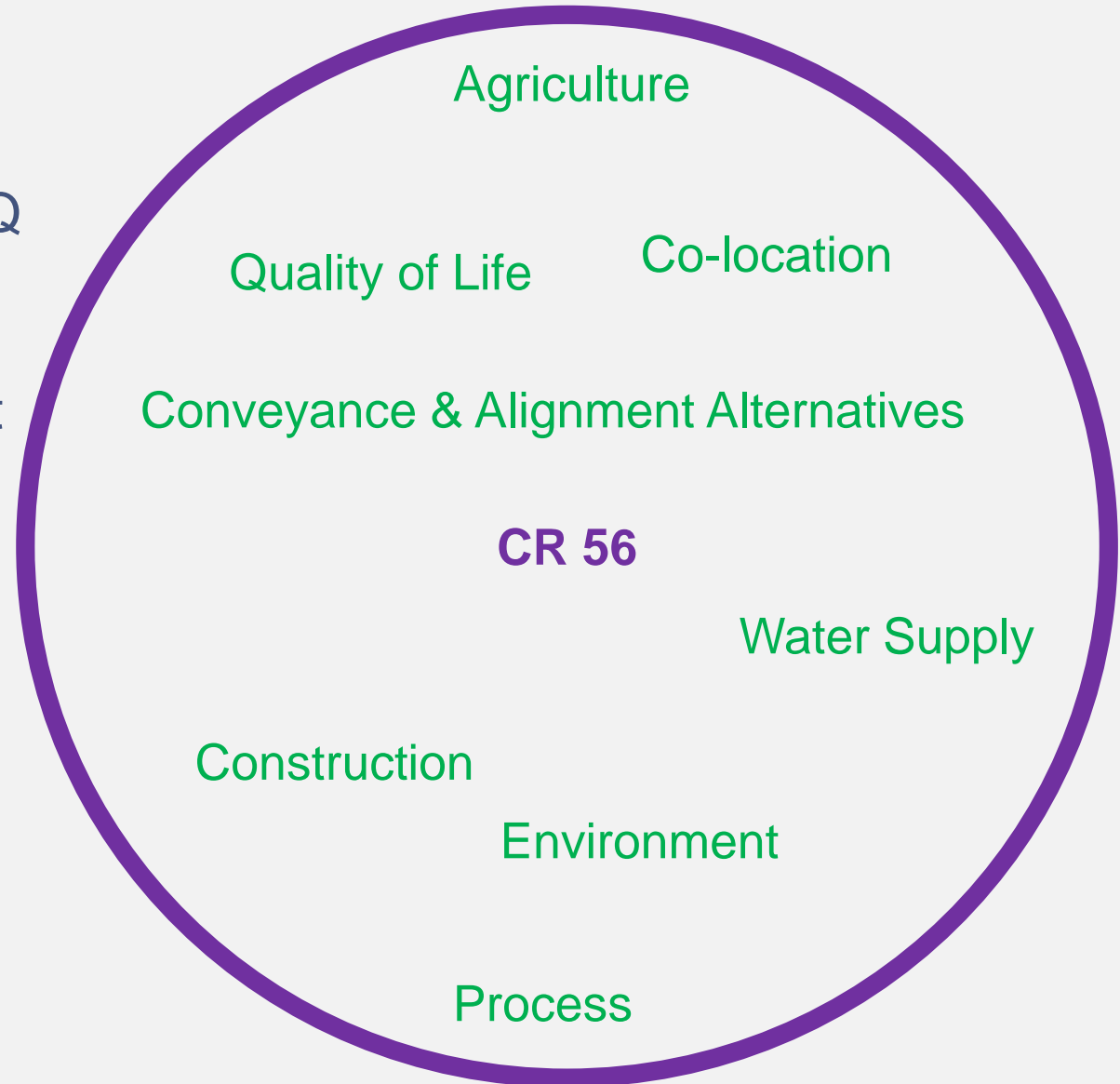
# County Road 56

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- Quality of Life
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## Project Needs

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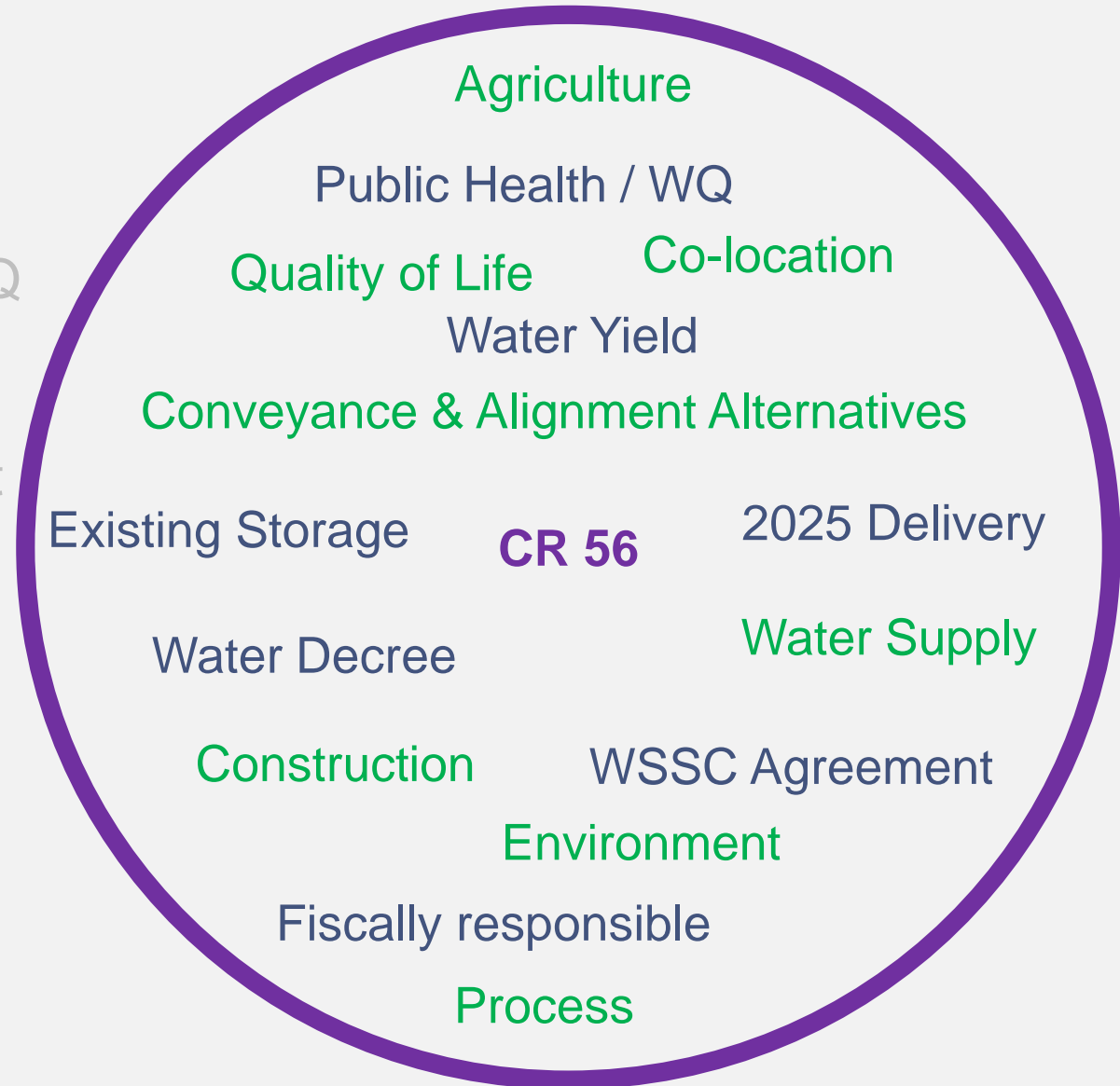
# County Road 56

## Shared Community Interests

- Agriculture
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## Water Project Needs

- Public Health / WQ
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# Proposed Community Benefits Associated with County Road 56 Preferred Alternative

## **Input regarding Community Benefits collected from:**

- Planning Commission hearing and public comments – May 16, 2018
- Board of County Commissioners hearing and public comments – July 6, 23 and August 1, 2018
- Water working group meetings and associated open house meetings
- Discussions with Larimer County staff
- Discussions with project stakeholders

# Proposed Community Benefits Associated with County Road 56 Preferred Alternative

Thornton is proposing additional community benefits valued at over **\$60 million**

- Cache la Poudre River flows and health
- Community Planning and Infrastructure

# Benefits for Cache la Poudre River Health



# Benefits for Cache la Poudre River Health

## How does the river get a seat at the table?

- Colorado Water Conservation Board has the exclusive authority to hold a water right on behalf of people of Colorado for environmental purposes – Instream Flow Rights
- Colorado Parks and Wildlife establishes seasonal and locational flow targets to preserve and enhance the environment
- Instream Flow Rights based on CPW targets
- Instream Flow Rights are protected from diversion

# Benefits for Cache la Poudre River Health

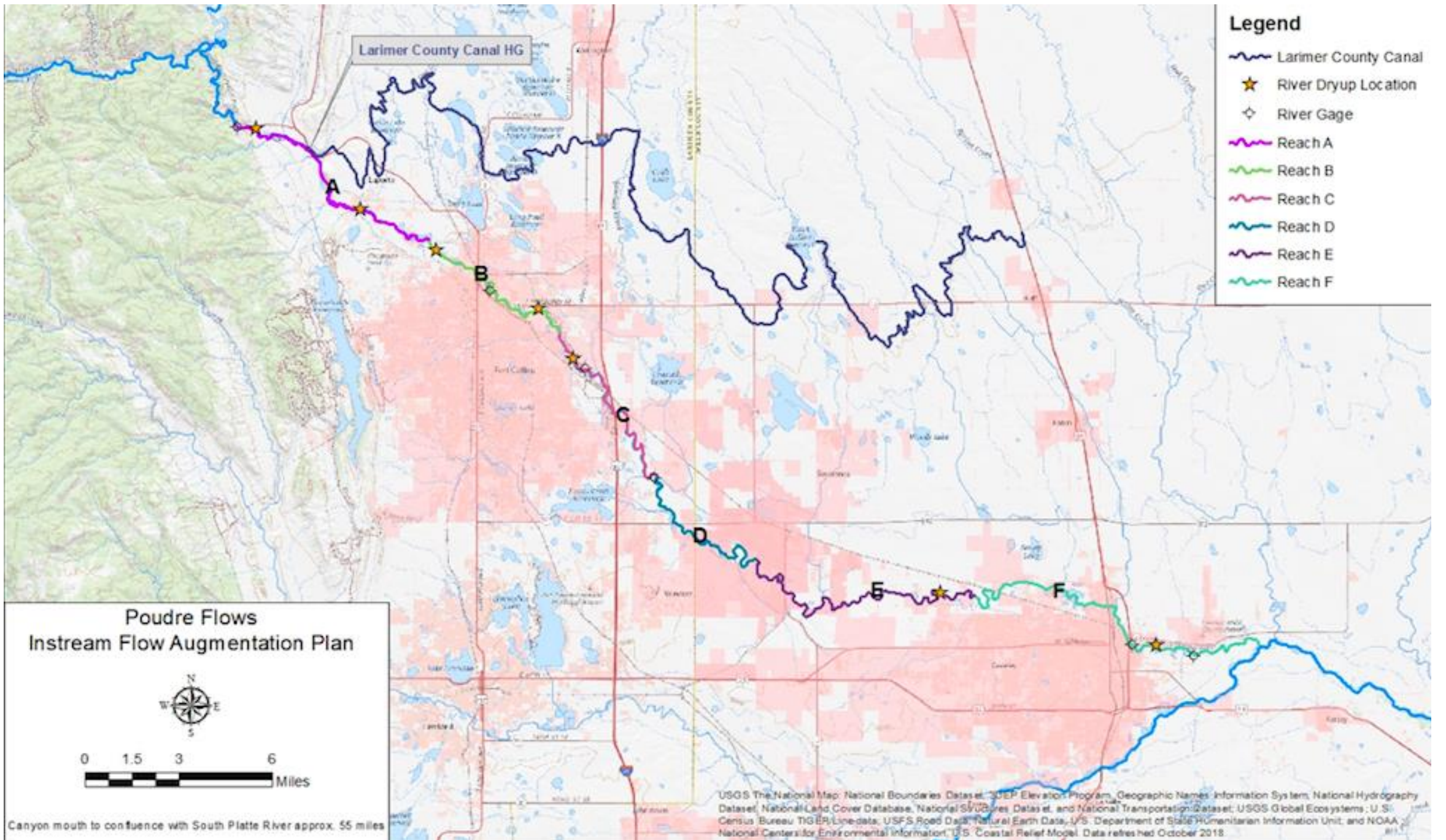
## How does the river get a seat at the table?

- Identify sources of water
- Protect those sources from being diverted

# Benefits for Cache la Poudre River Health

## Poudre Flows Partnership

- City of Fort Collins
- City of Greeley
- City of Thornton
- Northern Water
- Colorado Water Trust
- Cache la Poudre Water Users Association
- Colorado Division of Parks and Wildlife (CPW)
- Colorado Water Conservation Board (CWCB)



## Benefits for Cache la Poudre River Health

### Poudre Flows

- Thornton provides up to 3,000 acre-feet a year to the CWCB to preserve and improve river flows
- \$45,000,000 worth of water
- Other water users will contribute water to meet flow



# Benefits for Cache la Poudre River Health

## Poudre Flows

### Water user approval

- ✓ Northern Water – September 13, 2018
- ✓ Fort Collins – September 18, 2018
- ✓ Greeley – October 2, 2018
- ✓ Thornton October 23, 2018

Cache la Poudre Water Users Association

### Agency approval

### Water Court approval

### Implementation

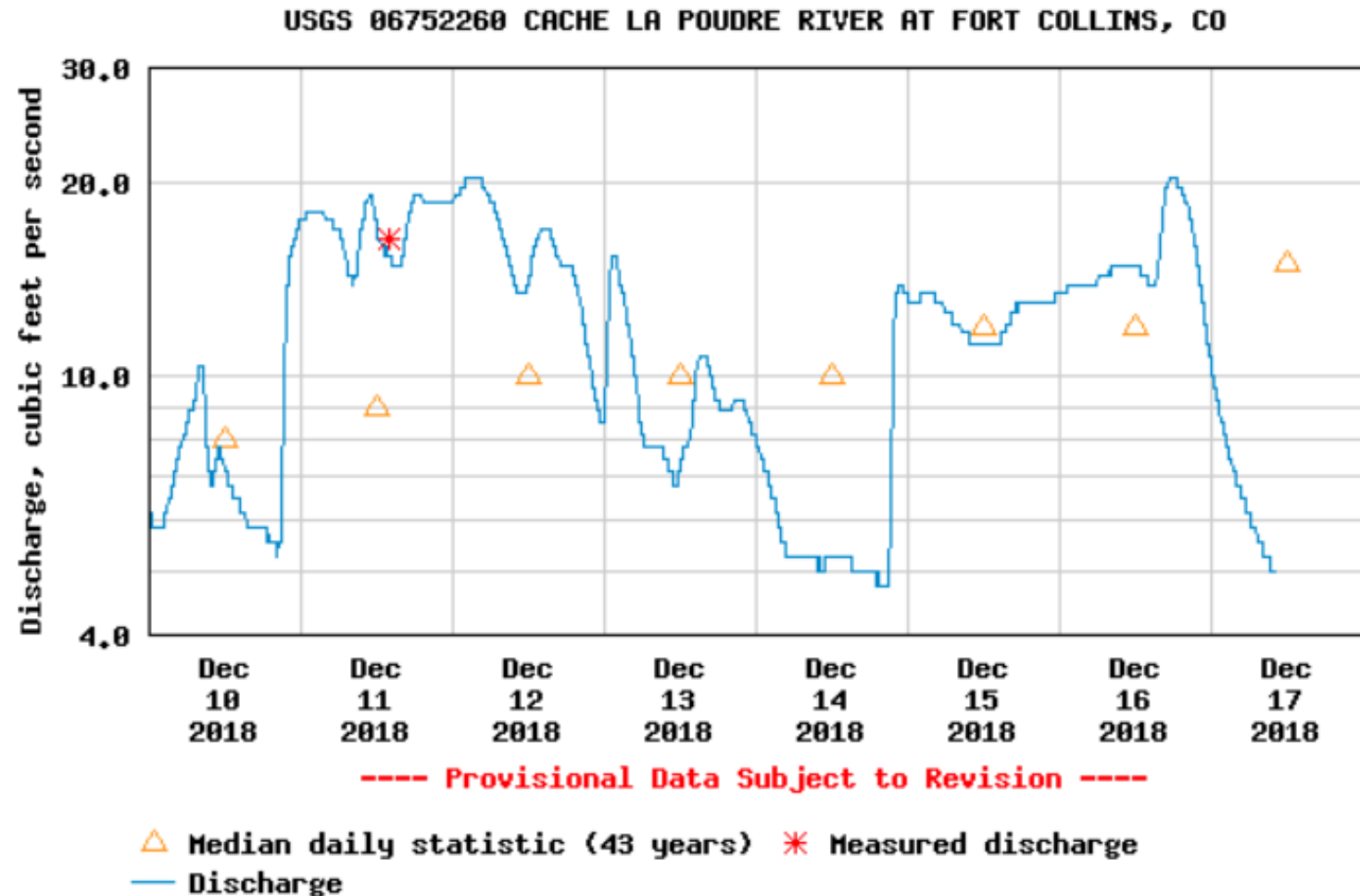
## CPW Flow Target:

80 cfs (preserve)

150 cfs (improve)

## Actual low flow:

~ 5 cfs

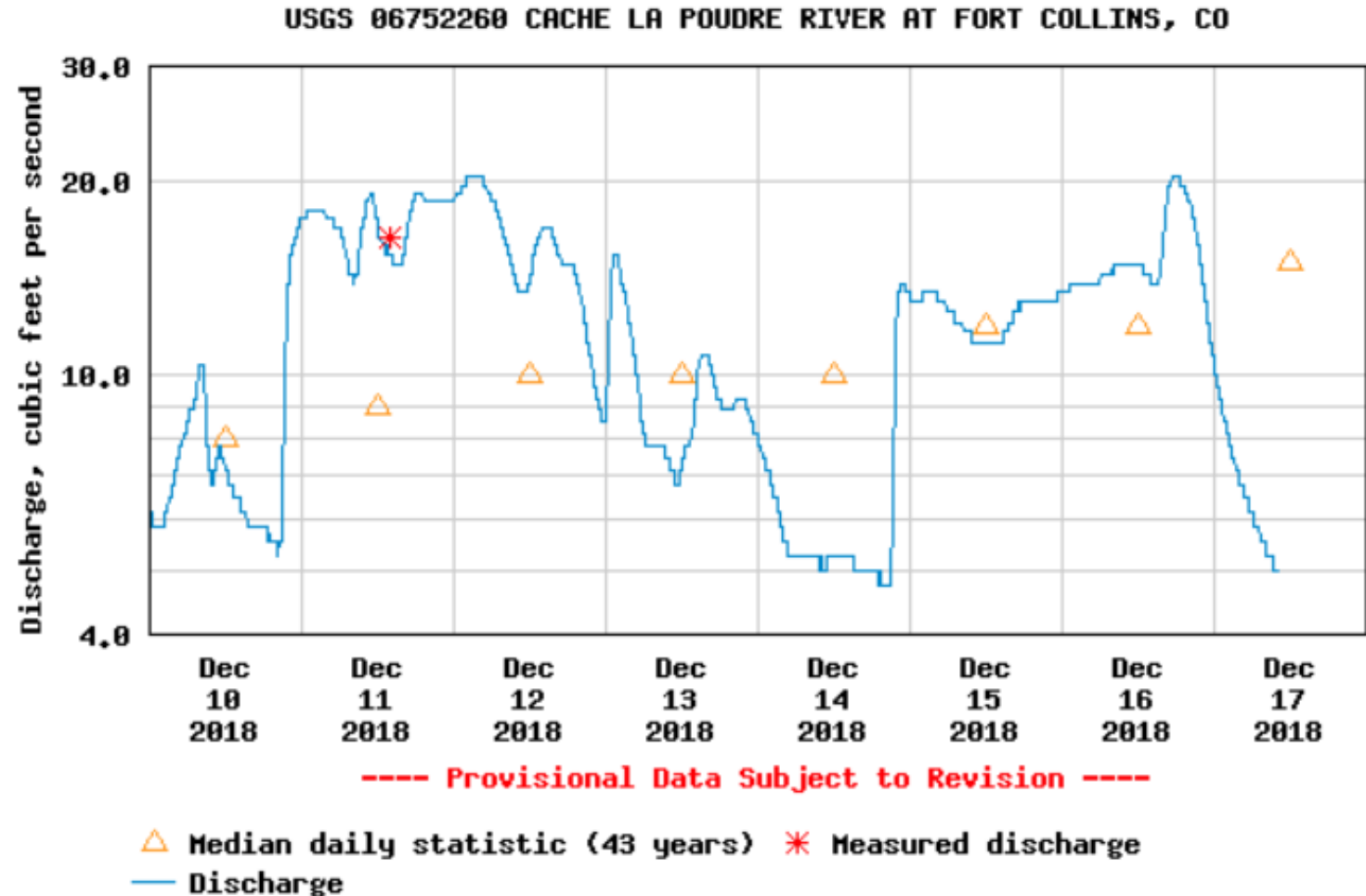


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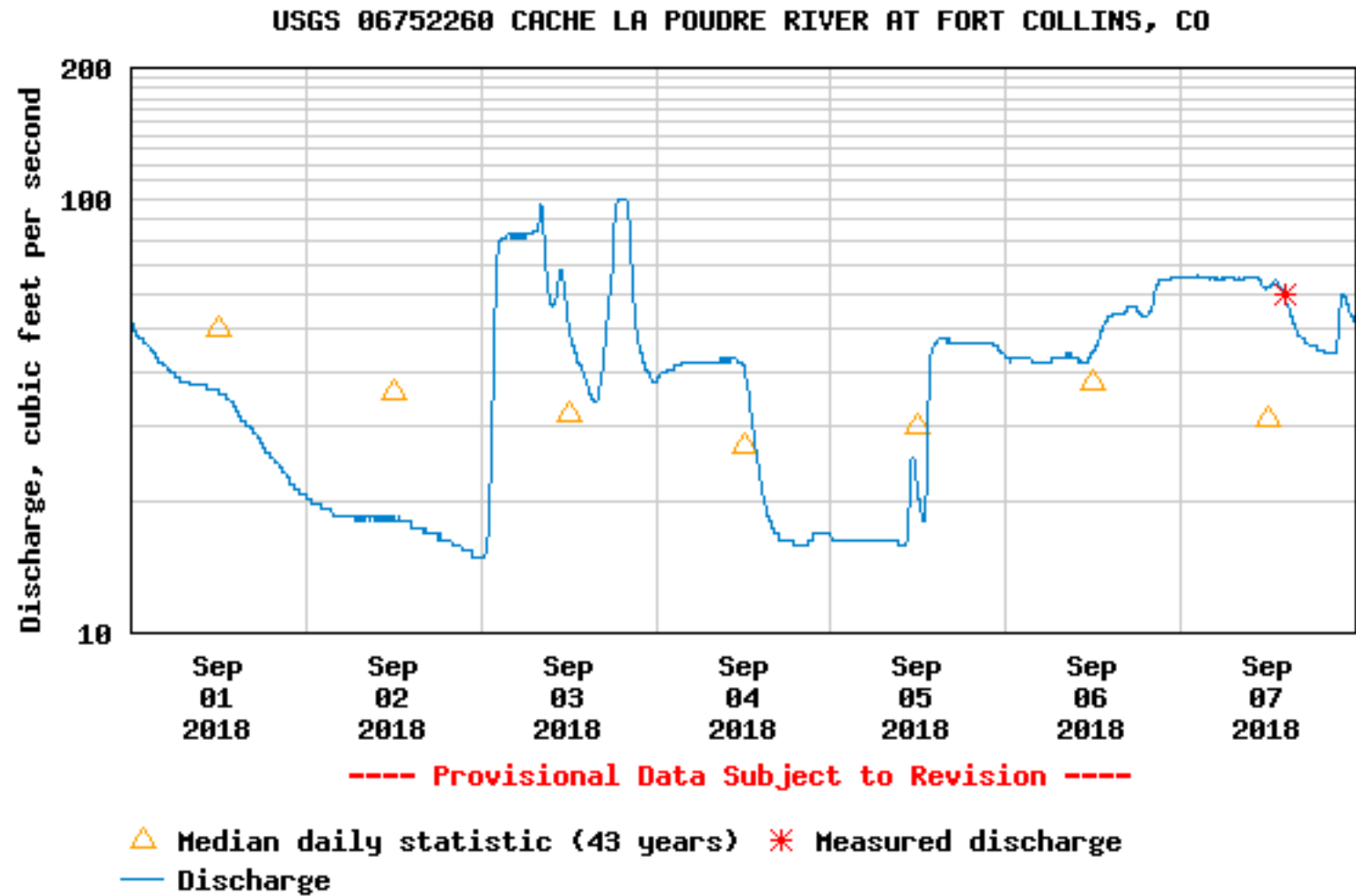
**Possible Thornton  
Contribution of  
5.25 cfs would**

**DOUBLE  
the flow**



**CPW Flow Target:**  
114 cfs (preserve)  
260 cfs (improve)

**Actual low flow:**  
18 cfs

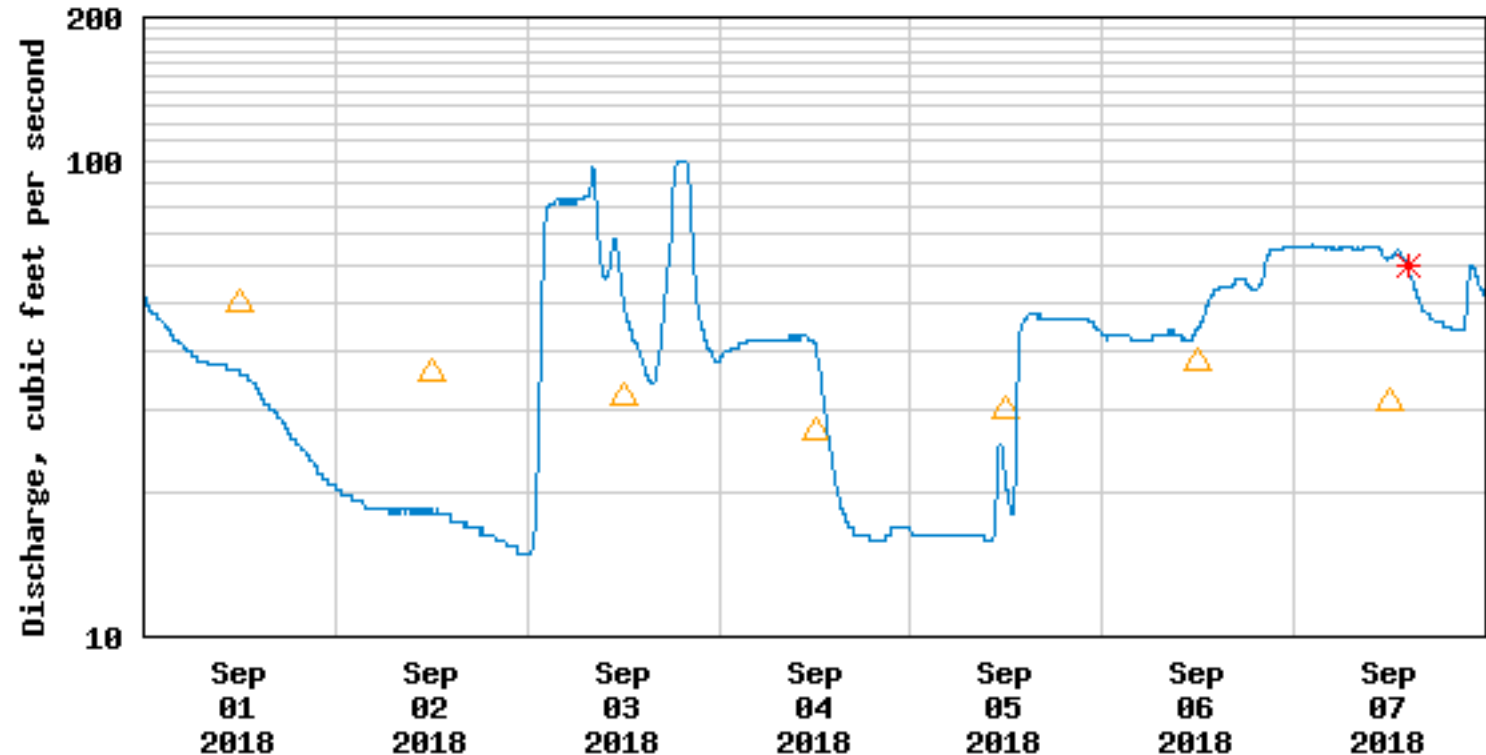


**CPW Flow Target:**  
114 cfs (preserve)  
260 cfs (improve)

**Actual low flow:**  
18 cfs

**Possible Thornton  
Contribution of  
14.25 cfs is a  
79% increase  
in flow**

USGS 06752260 CACHE LA POUDE RIVER AT FORT COLLINS, CO



----- Provisional Data Subject to Revision -----

△ Median daily statistic (43 years) \* Measured discharge  
— Discharge

# Benefits for Cache la Poudre River Health

## \$750,000 Physical Stream Improvements

- To fund diversion dam improvements, channelization, fish passage, measurement facilities
- Coordination with Northern Water, ditch companies, and others



# Benefits for Cache la Poudre River Health

## **\$1,000,000 Water Innovations Fund**

- Thornton proposes to contribute \$1,000,000 toward the establishment of a Water Innovations Fund which could fund efforts such as:
  - Acquisition and development of additional water sources for flow improvement
  - Research regarding innovative approaches to water development, agricultural sustainability, water sharing
  - Programs to improve river health

# Benefits for Community Planning and Infrastructure

## **\$1,000,000 Transportation Improvements**

- Mitigation fund to restore or enhance transportation infrastructure



# Benefits for Community Planning and Infrastructure

## Thornton Farm Properties

- Working with City of Fort Collins to acquire Thornton's property for open space buffer
- Continued coordination with Larimer County on future use of Thornton's properties
- Community-based planning process

# Benefits for Community Planning and Infrastructure

## **Boxelder Creek Trail**

- Thornton proposes to convey at no cost to Larimer County a 1.25 mile trail easement across Thornton-owned property for the construction of this trail
- \$60,000 value

# Benefits for Community Planning and Infrastructure

## Fiber Optic

- Thornton proposes Larimer County access to fiber-optic cable with up to 115 terabits per second of throughput.
- \$12,000,000 value

# Benefits for Community Planning and Infrastructure

## Emergency Raw Water Interconnects

- Thornton is working with local water providers to allow them access to Thornton's pipeline to provide assistance during water supply emergencies

# Benefits for Community Planning and Infrastructure

## Voluntary Payments in Lieu of Taxes

- Thornton has made voluntary payments in lieu of taxes since 1987
- Payments to date in excess of \$800,000
- Thornton to continue to make payments
- Estimated value \$600,000 (assume ~10 years)

# Enhanced Community Benefits Package

<b>Community Benefit</b>	<b>Value</b>
Legal framework for added flows	\$500,000
Flow additions	\$45,000,000
Physical river improvements	\$750,000
Water Innovations Fund	\$1,000,000
Transportation Improvements Fund	\$1,000,000
Coordination on Thornton property plans	--
Boxelder Creek Trail easement	\$60,000
Fiber Optic	\$12,000,000
Emergency Raw Water Interconnects	--
Voluntary Payments in Lieu of Taxes (~ 10 years)	\$600,000
<b>Total Value of Community Benefits</b>	<b>\$60,910,000</b>

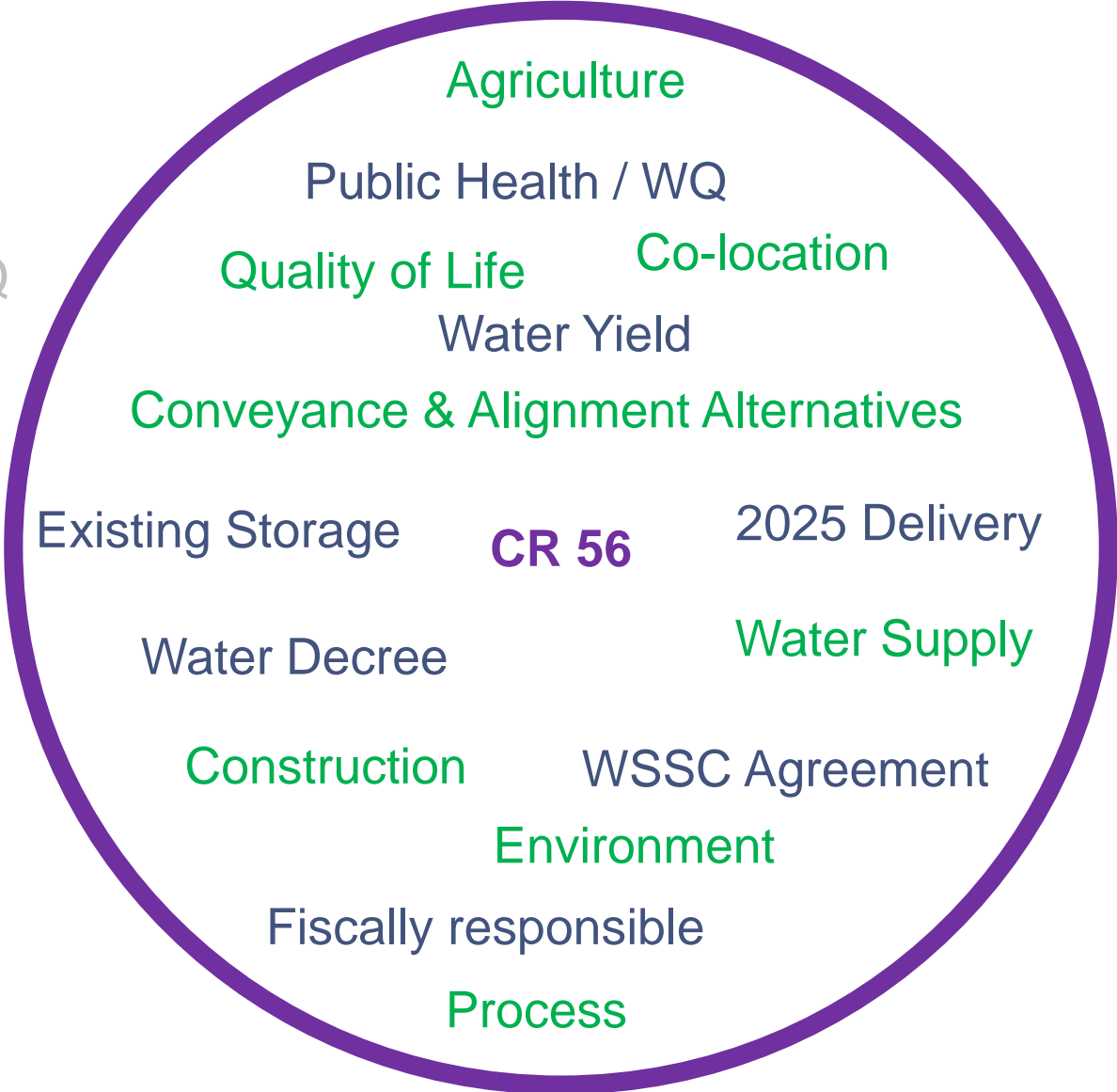
# Preferred Alternative – County Road 56

## Shared Community Interests

- Agriculture
- Conveyance & Alignment Alternatives
- Construction
- Environment
- Process
- Quality of Life
- Water Supply
- Co-location

## Water Project Needs

- Public Health / WQ
- Water Yield
- Water Decree
- WSSC Agreement
- Existing Storage
- 2025 Delivery
- Fiscally responsible



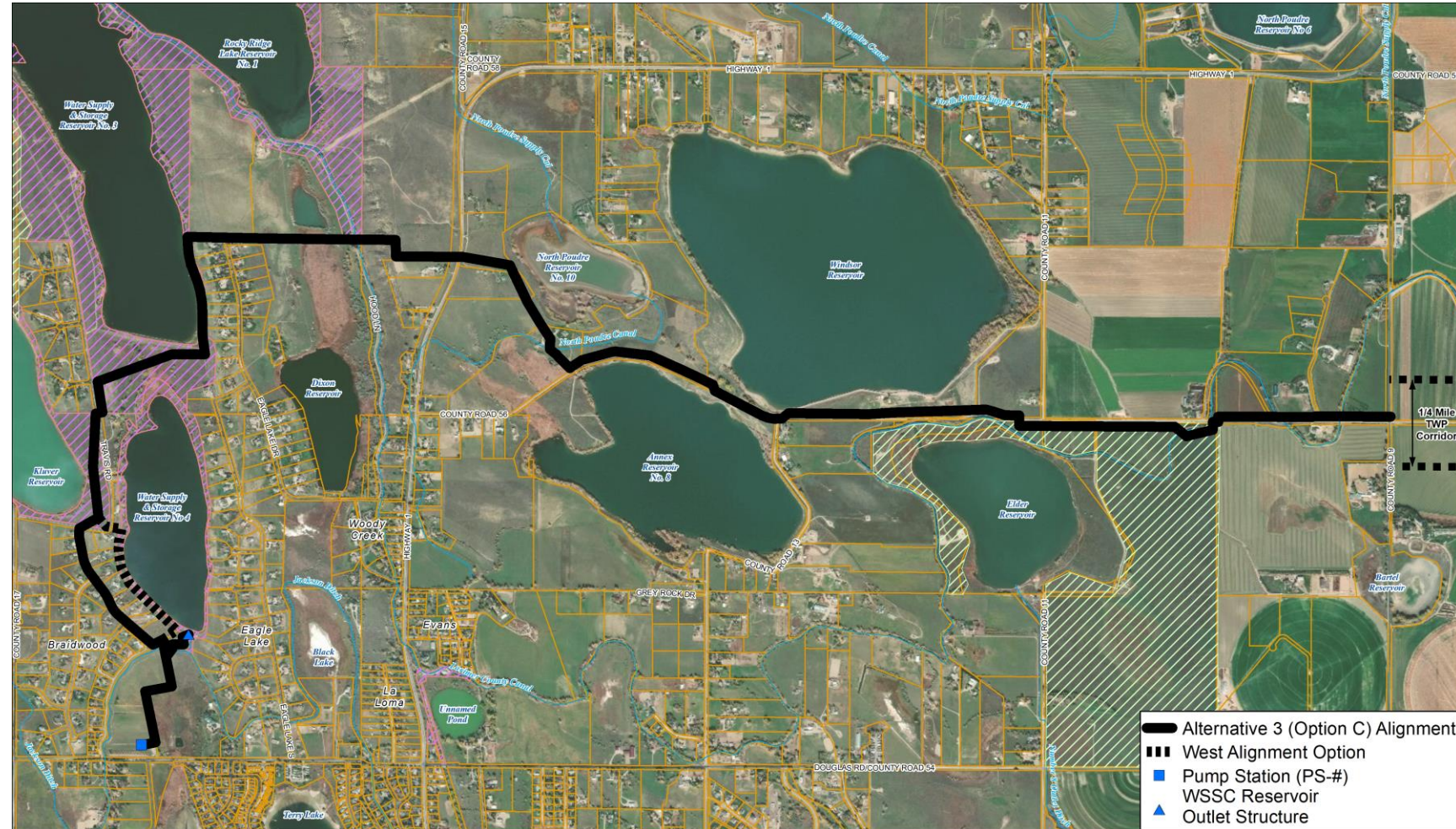
# Larimer County 1041 Permit Criteria

Thornton Water Project Preferred Alternative

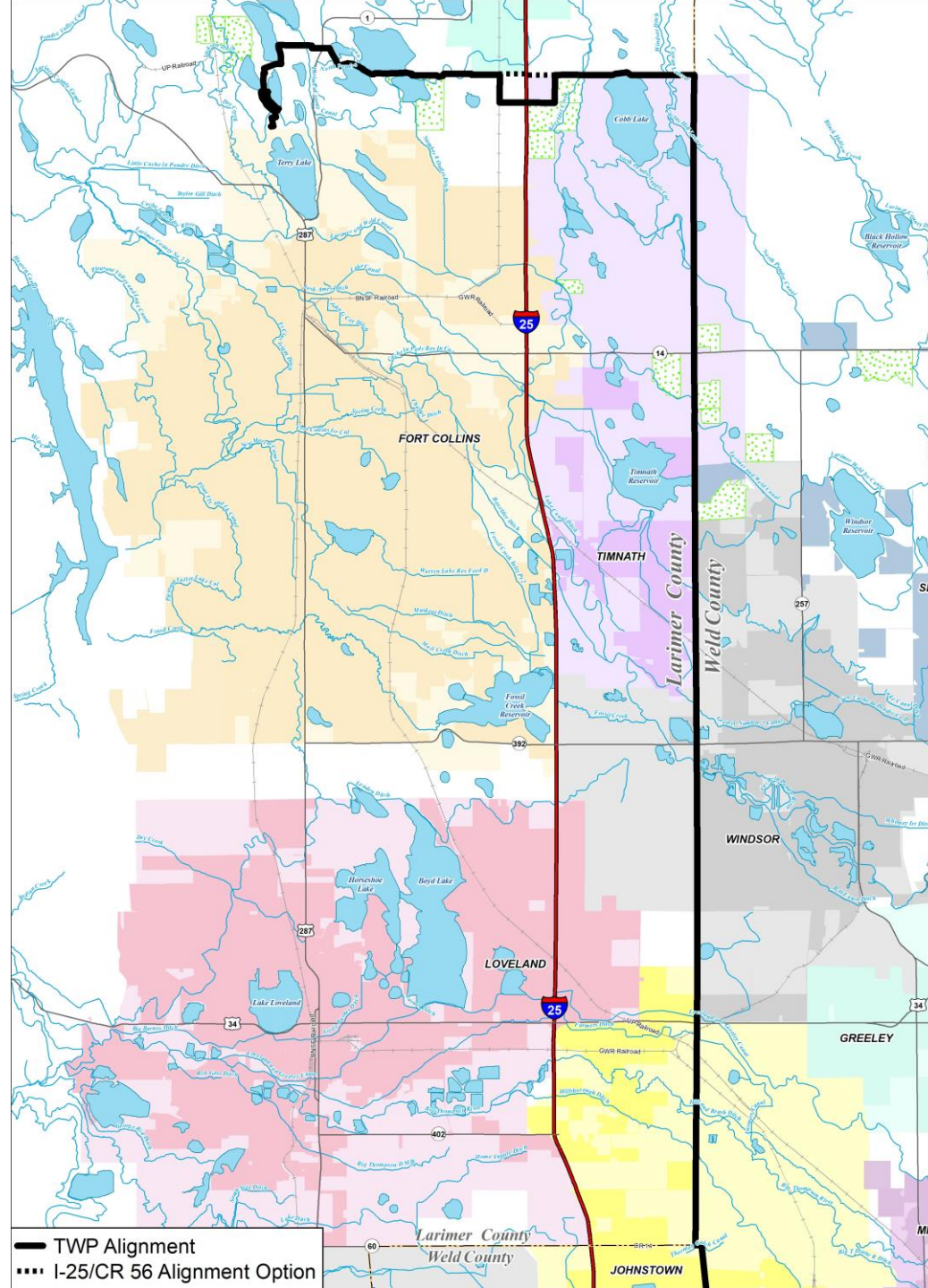


# Preferred Alternative

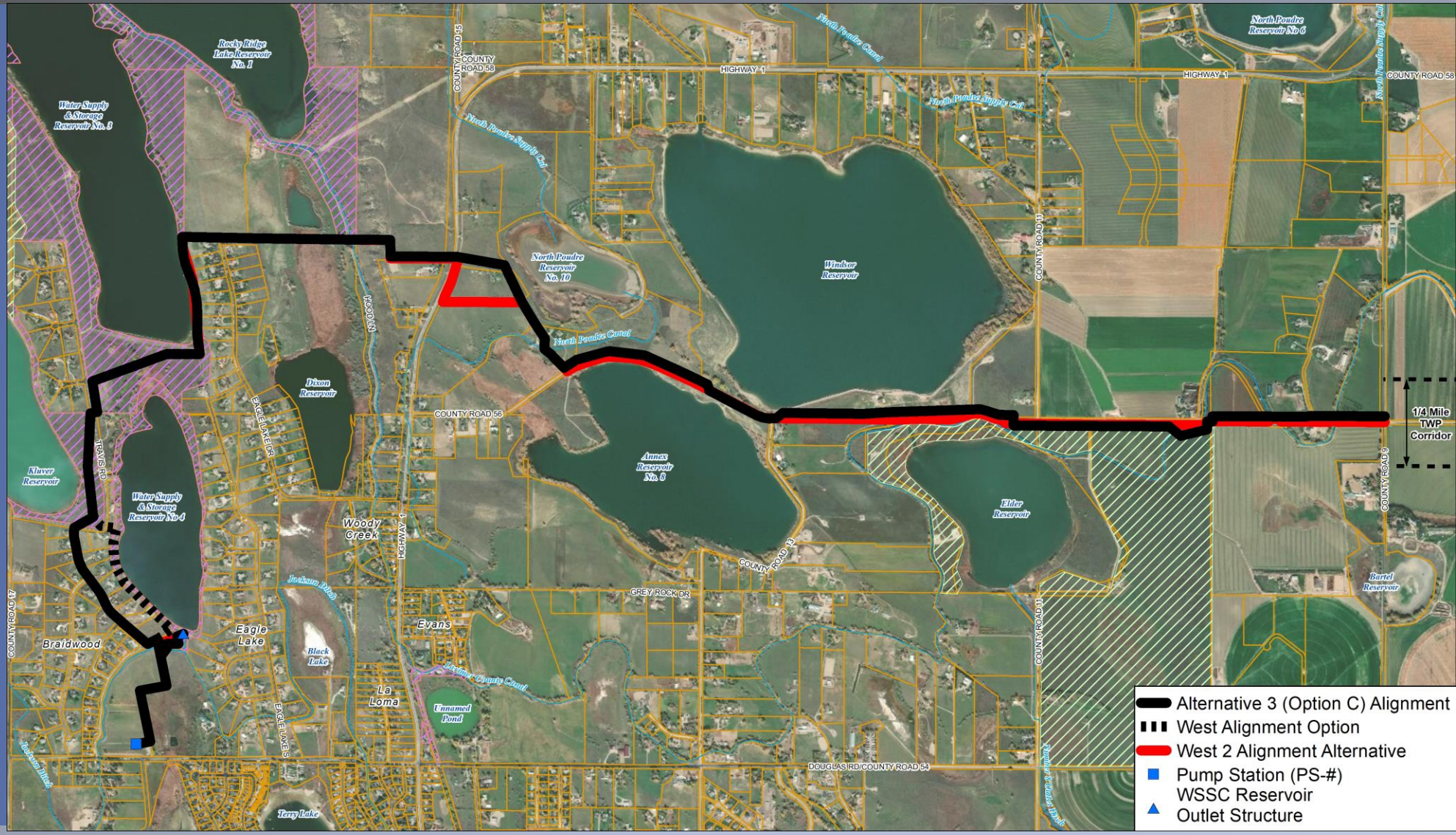
- Presented in initial 1041 Application as West 2.
- Working Group identified this as Option C or “County Road 56” Route.
- Included as **Alternative 3** in Supplement.









# Preferred Alternative



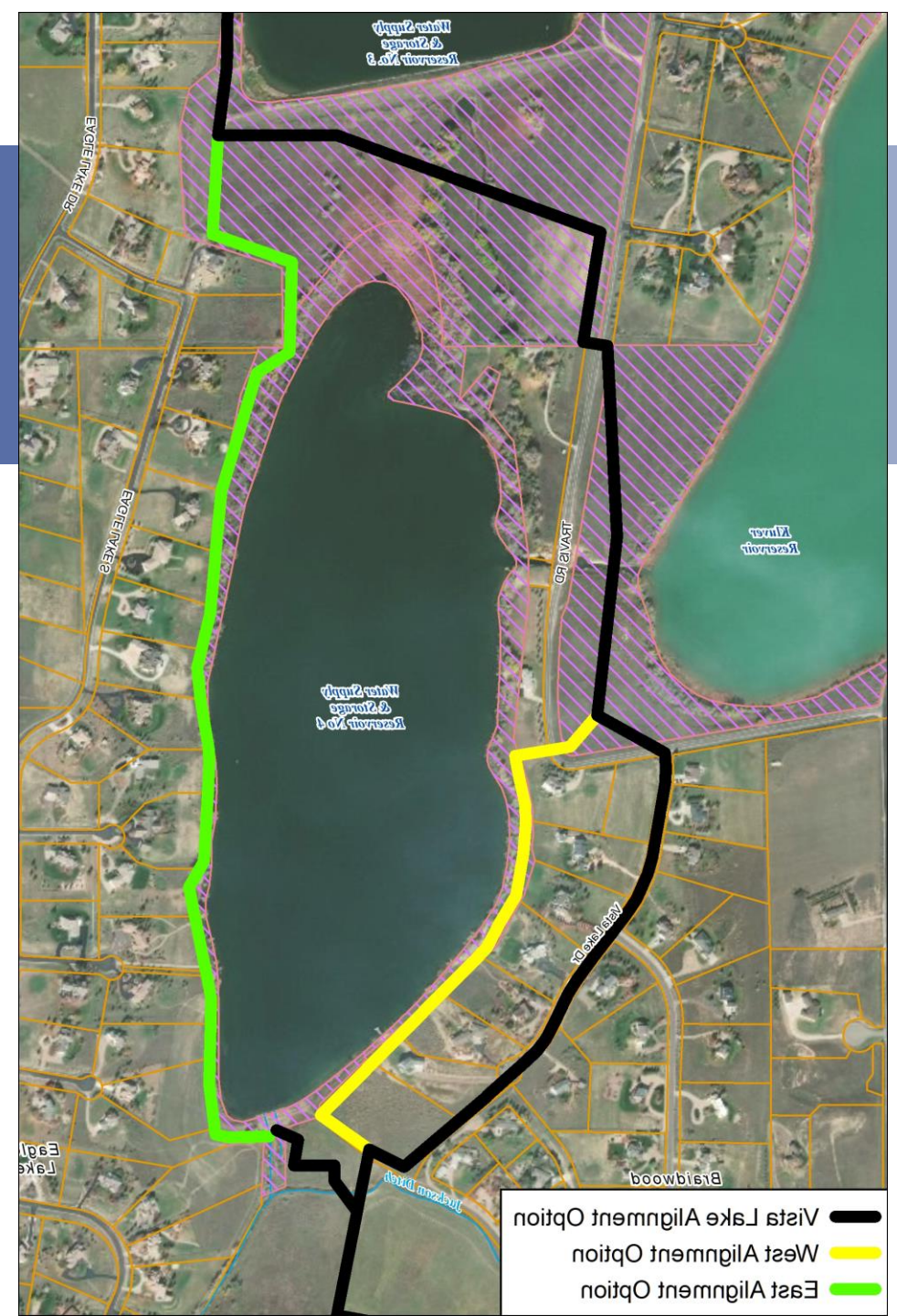
# Alternative 3 vs. West 2



-  Alternative 3 (Option C) Alignment
-  West Alignment Option
-  West 2 Alignment Alternative
-  Pump Station (PS-#)
-  WSSC Reservoir
-  Outlet Structure

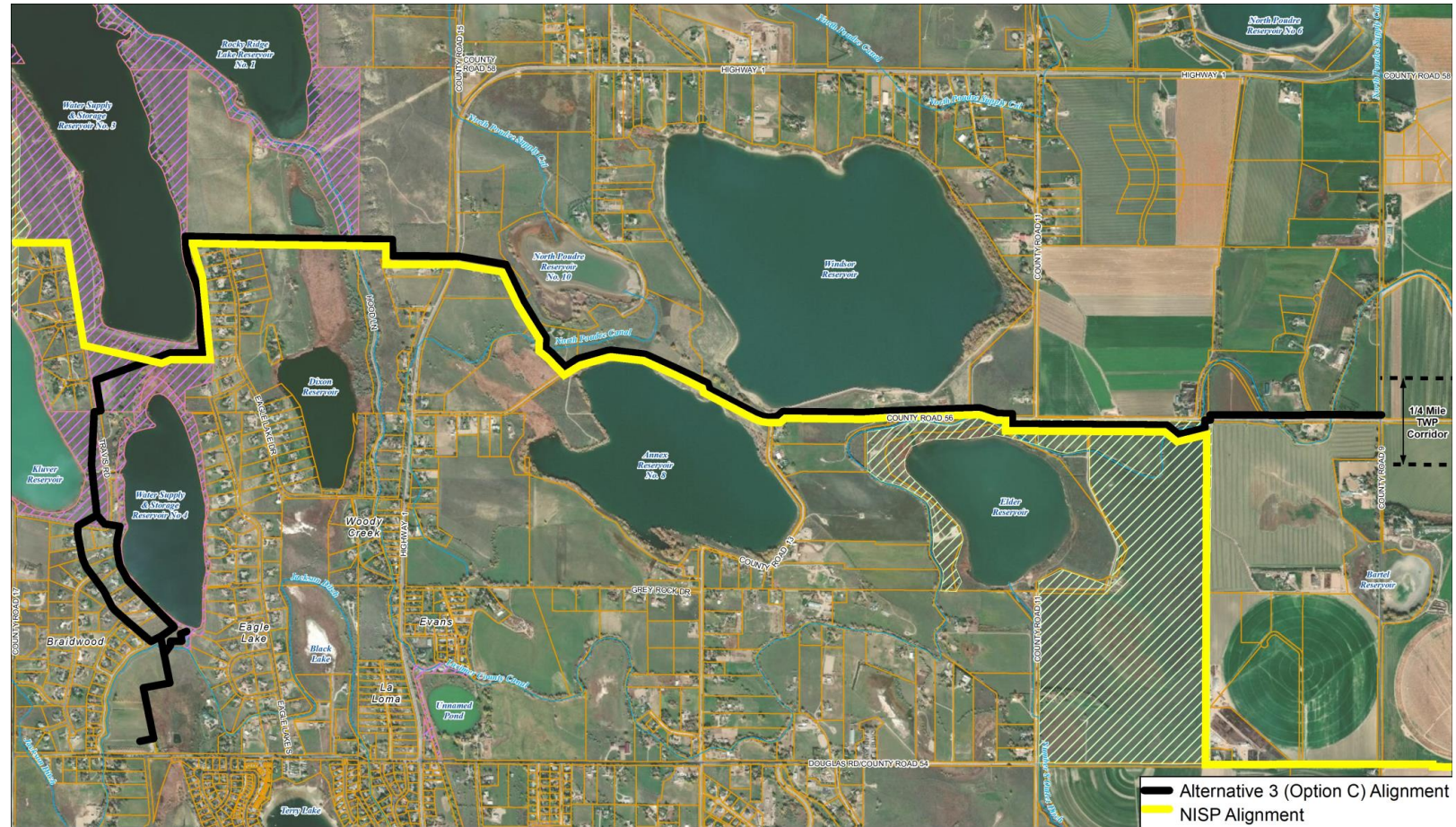
# East or West of WSSC #4?

- West route impacts fewer properties, or can be constructed in County ROW
- Working with residents to determine appropriate route
- Use of WSSC-owned property



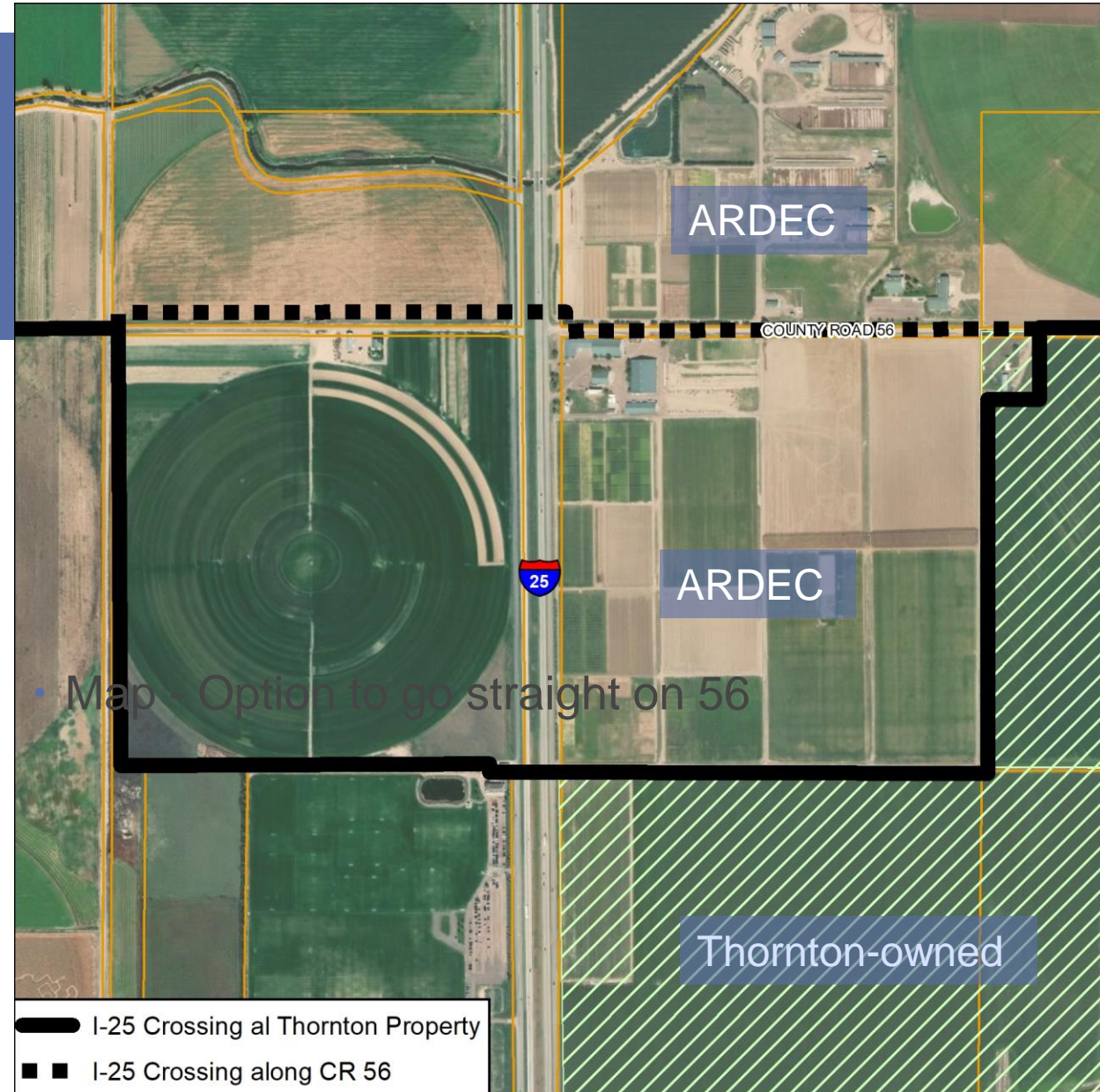
# Co-Location with NISP Pipeline

- Commissioners, Working Group and Public identified co-location as an important factor
- Along County Road 56
  - In pipeline easements where property owner is amenable
  - In ROW where private easements aren't available
- Overlapping easements to minimize impacts



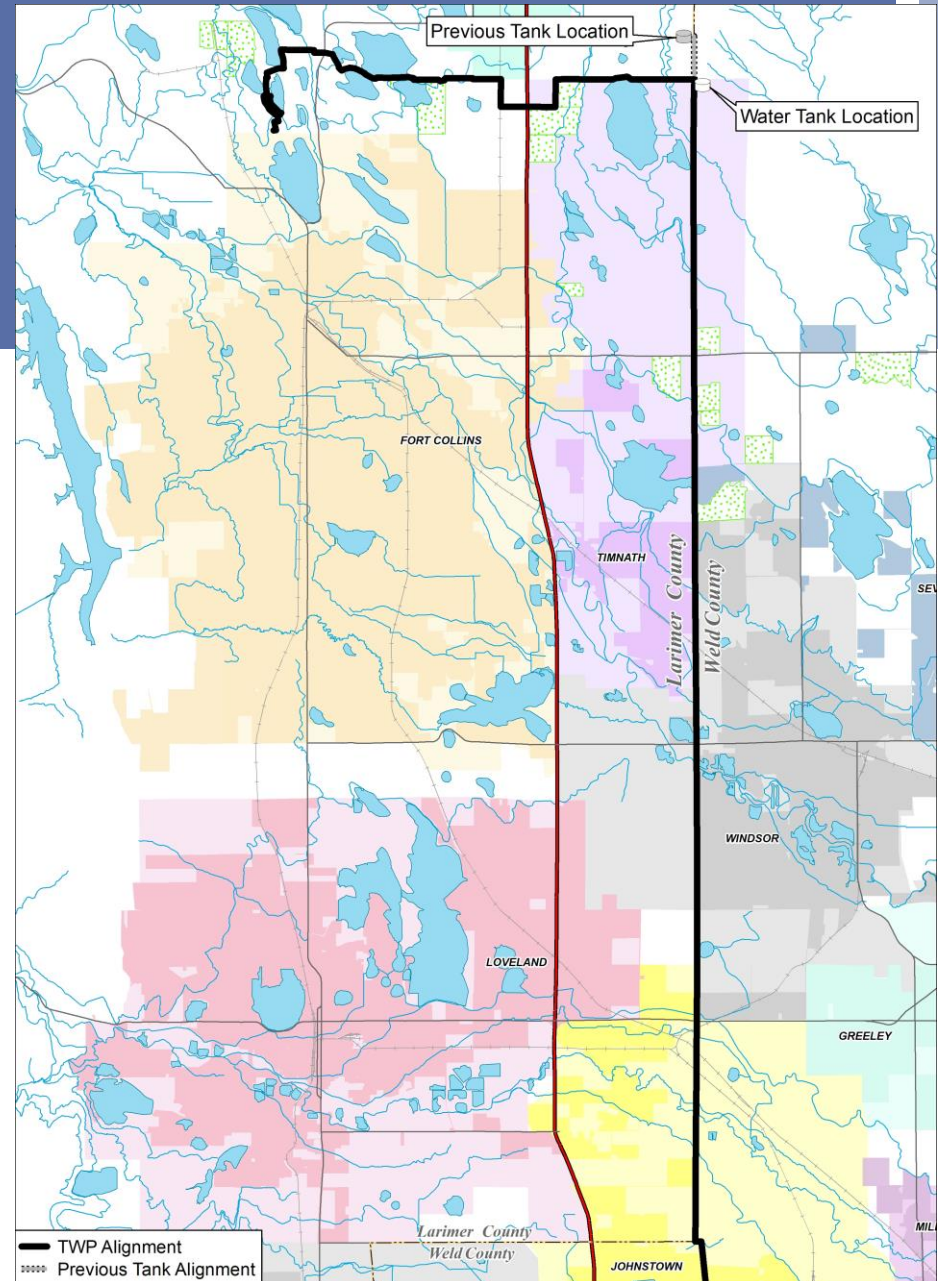
# Crossing I-25

- Current proposal - cross at Thornton-owned property
- Alternate - cross at ARDEC



# County Line Road

- Tank Removed from Application
- In easements where property owner is amenable or otherwise in ROW
- Intergovernmental Agreements with Timnath and Windsor for location of pipe



# 1041 Permit Criteria

- Focus on 1041 Permit Criteria  
Commissioners expressed concerns about at August hearing
- All Criteria are fully addressed in the Supplement



# Twelve Pipeline Review Criteria

- 1) Masterplan consistency
- 2) Siting alternatives provided**
- 3) Conformance with County environmental standards
- 4) Avoid or mitigate significant environmental impacts**
- 5) No adverse effects on listed historic places
- 6) No negative impacts on public health and safety**
- 7) No significant risks from natural hazards
- 8) No significant impact on government services/facilities**
- 9) Impacts to roads and bridges are mitigated**
- 10) Benefits of pipeline outweigh resource impacts**
- 11) Reasonable balance of costs and benefits of mitigation**
- 12) Addressed Staff and Referral Agency comments

## Criteria Two

**The applicant has presented reasonable siting and design alternatives or explained why no reasonable alternatives are available**

- Took into consideration comments from Commissioners, Working Group, Public
- Four Reasonable Alternatives remain:
  - County Road 56 (preferred alternative)
  - Central route
  - Douglas Road – Thornton Water Project only
  - Douglas Road – Co-located with NISP pipeline

## Criteria Four

**The proposal will not have a significant adverse affect on or will adequately mitigate significant adverse affects on the land or its natural resources, on which the proposal is situated and on lands adjacent to the proposal**

- No significant negative impact on natural resources
- Pipeline will be buried and land will be fully restored
- Environmental enhancements from Benefits

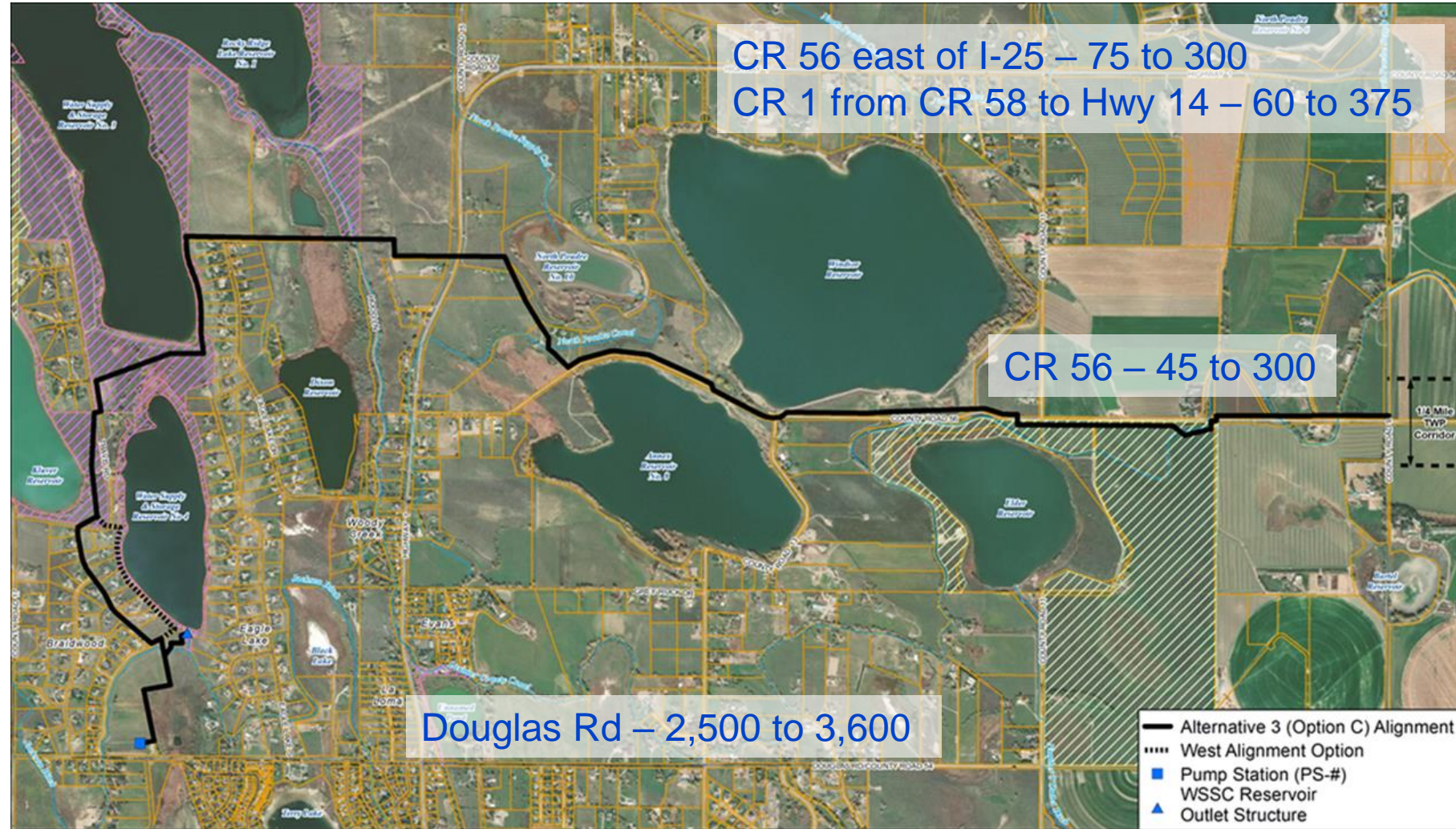
## Criteria Six

### **The proposal will not negatively impact public health and safety**

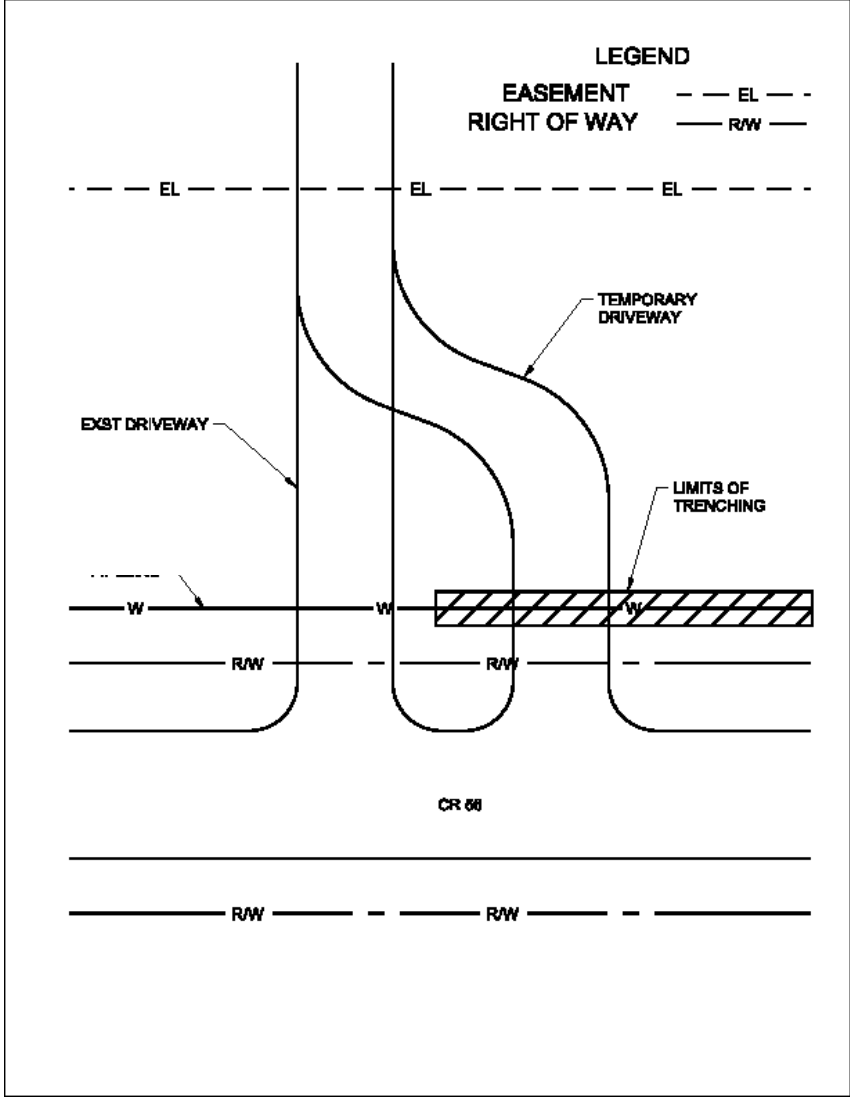
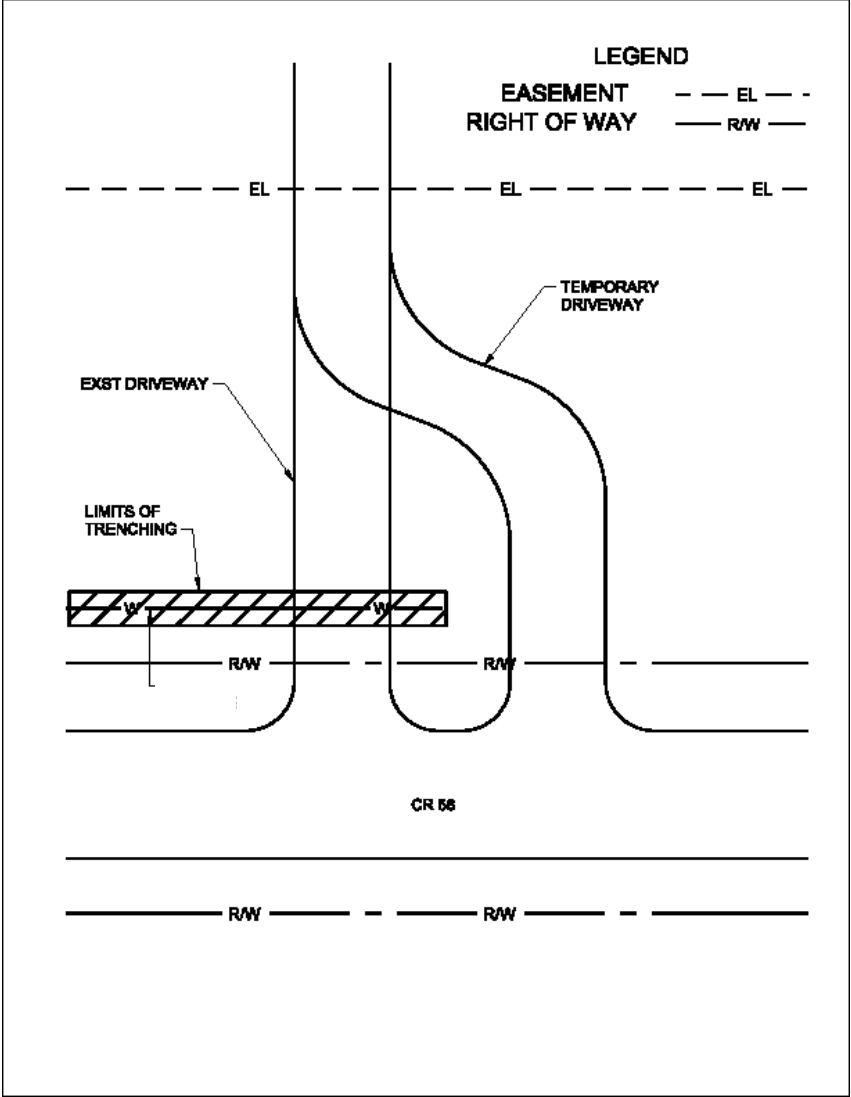
- Local and emergency access maintained
- Traffic and road mitigation
- Traffic Control Plan
- Air, Water, Traffic, Right-of-way Permits

# Traffic Counts

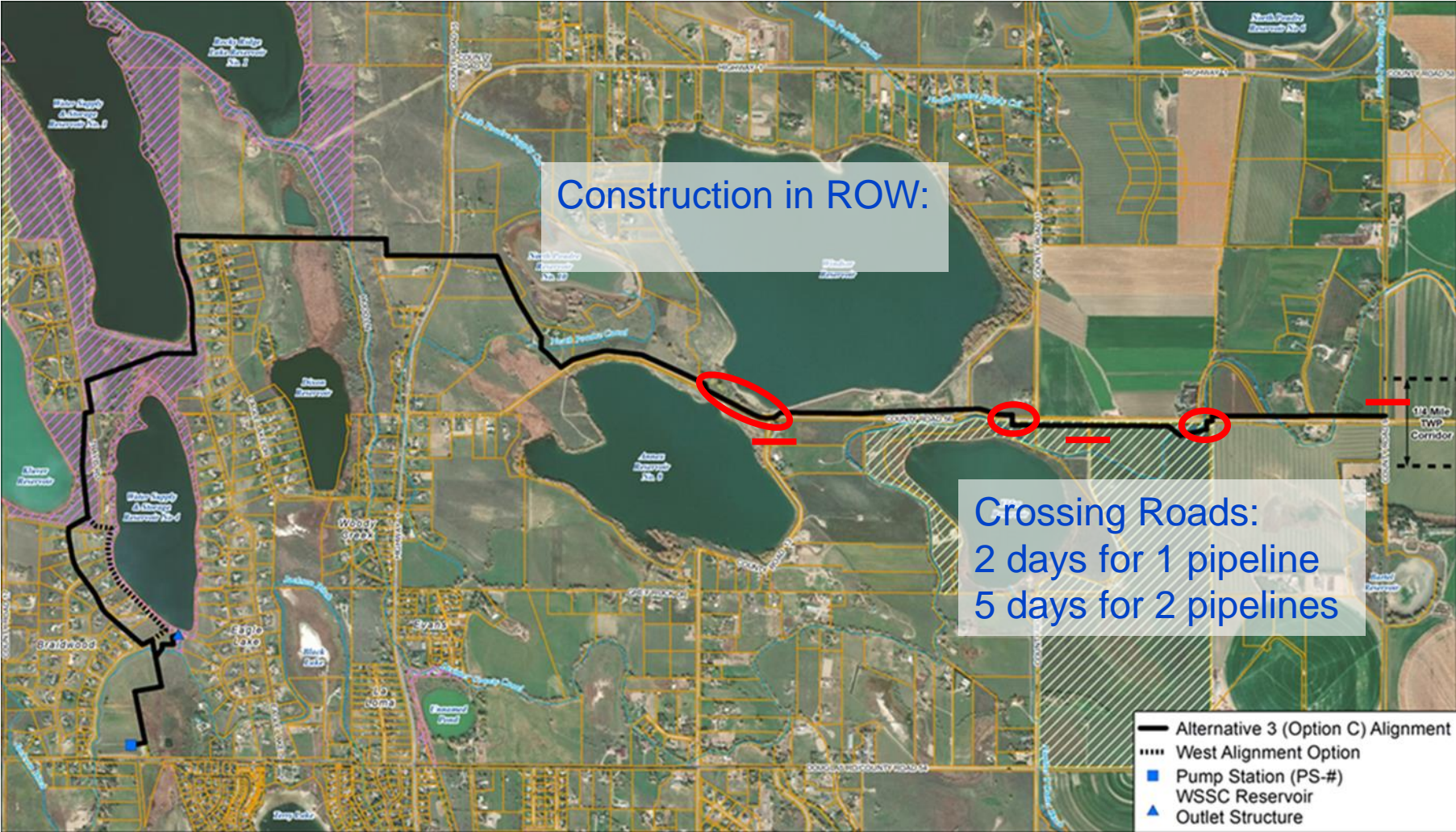
## Average Daily Traffic



# Maintaining Resident Access

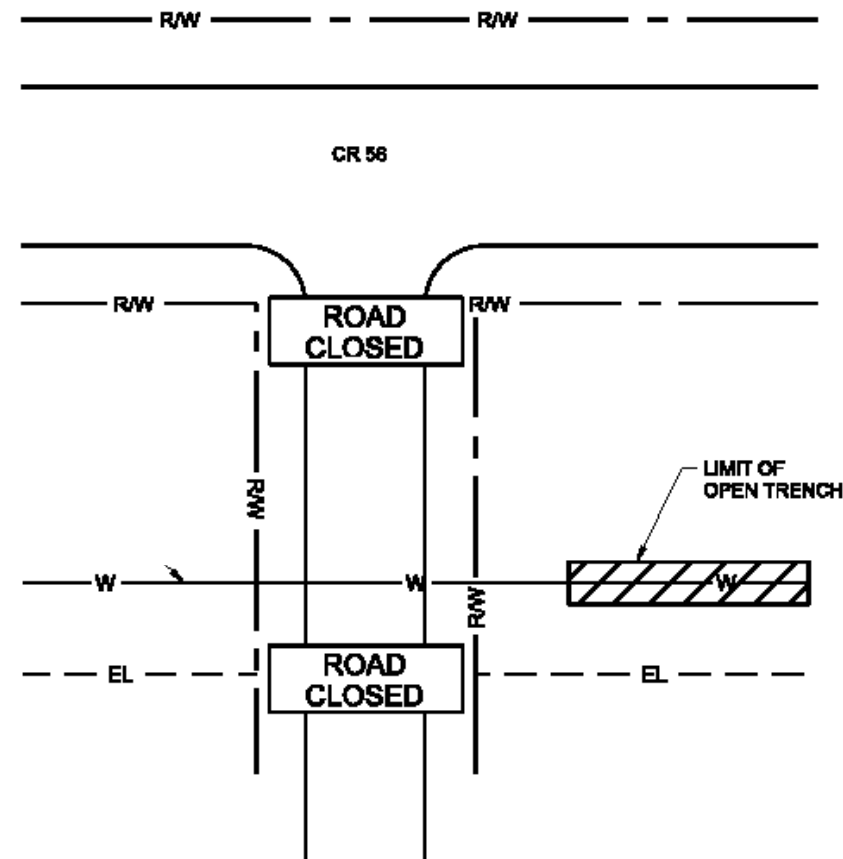


# Road Closures



# Road Closures

- All road closures will be coordinated with local agencies and land owners in advance
- No resident will lose access to their property
- Restored to as good or better condition



**LEGEND**  
EASEMENT     - - - EL - - -  
RIGHT OF WAY     ——— R/W ———



## Criteria Eight

**Adequate public facilities and services are available for the proposal or will be provided by the applicant, and the proposal will not have a significant adverse effect on the capability of local government to provide services or exceed the capacity of service delivery systems.**

- Resident and Emergency access maintained
- Construction coordinated with emergency responders, school bus routes, mail and trash service, etc.
- Additional electrical service for Pump Station

## Criteria Nine

**The applicant will mitigate any construction impacts to county roads, bridges and related facilities. Construction access will be re-graded and re-vegetated to minimize environmental impacts.**

- Roads, bridges, and temporary accesses fully restored to as good or better condition
- \$1,000,000 to ensure unanticipated or off-site impacts are mitigated

# Criteria Ten

**The benefits of the proposed development outweigh the losses of any natural resources or reduction of productivity of agricultural lands as a result of the proposed development**

- Extensive Benefits to mitigate and enhance natural resources
- The water pipeline will be buried and the land use effects on agricultural will be temporary during construction and minimal after construction
- There will be no significant negative impacts to natural resources

## Criteria Eleven

**The proposal demonstrates a reasonable balance between the costs to the applicant to mitigate significant adverse affects and the benefits achieved by such mitigation.**

- Using Thornton property, WSSC property, ROW where possible
- Boring under wetlands or Waters of the US (\$32M)
- Coordinating with NISP to minimize easements
- Mitigating on-route and off-route impacts to transportation infrastructure plus \$1M for unanticipated impacts or enhancements
- Pump Station redundant power feed (\$1.6M)
- 145 other mitigation measures detailed in reports

# Twelve Pipeline Review Criteria

- 1) Masterplan consistency
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- 11) Reasonable balance of costs and benefits of mitigation**
- 12) Addressed Staff and Referral Agency comments

All  
1041  
Permit  
Criteria  
addressed  
in  
Supplement

- ✓ Masterplan consistency
- ✓ Siting alternatives provided
- ✓ Conformance with County environmental standards
- ✓ Avoid or mitigate significant environmental impacts
- ✓ No adverse effects on listed historic places
- ✓ No negative impacts on public health and safety
- ✓ No significant risks from natural hazards
- ✓ No significant impact on government services/facilities
- ✓ Impacts to roads and bridges are mitigated
- ✓ Benefits of pipeline outweigh resource impacts
- ✓ Reasonable balance of costs and benefits of mitigation
- ✓ Addressed Staff and Referral Agency comments

# Wrap-up

- Summary
  - Community process
  - Proposal
    - Minimizes or Mitigates Impacts
    - Provides Benefits
    - Meets criteria
- What we'll talk about on 28<sup>th</sup>.
  - Respond if needed to Staff Report/Referrals
  - Address public comments

# Questions?



Thornton Water Project

Supplement 3

December 17, 2018