WELCOME!

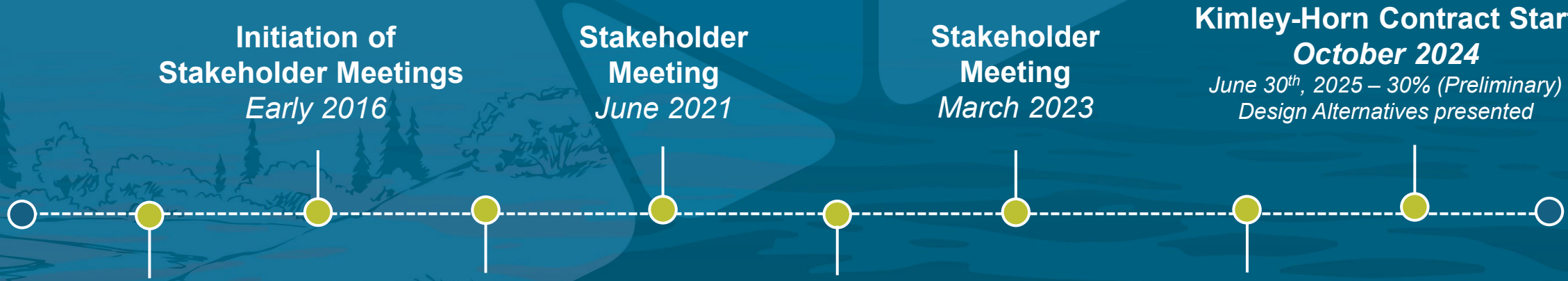
Little Rock Creek

Resolving Water Use Conflict

Stakeholder Engagement Meeting

November 19th, 2024 3:00 PM

PROJECT HISTORY TIMELINE



MPCA Little Rock Creek Watershed Study
Indicated Creek Impairment
Dec 2015

Initiation of Stakeholder Meetings
Early 2016

DNR Sustainable Use Plan
Sept 2018

Stakeholder Meeting
June 2021

Stakeholder Meeting
March 2022

Stakeholder Meeting
March 2023

DNR Commissioner's Order
April 2024

Kimley-Horn Contract Start
October 2024
June 30th, 2025 – 30% (Preliminary) Design Alternatives presented

PERMIT STATUS

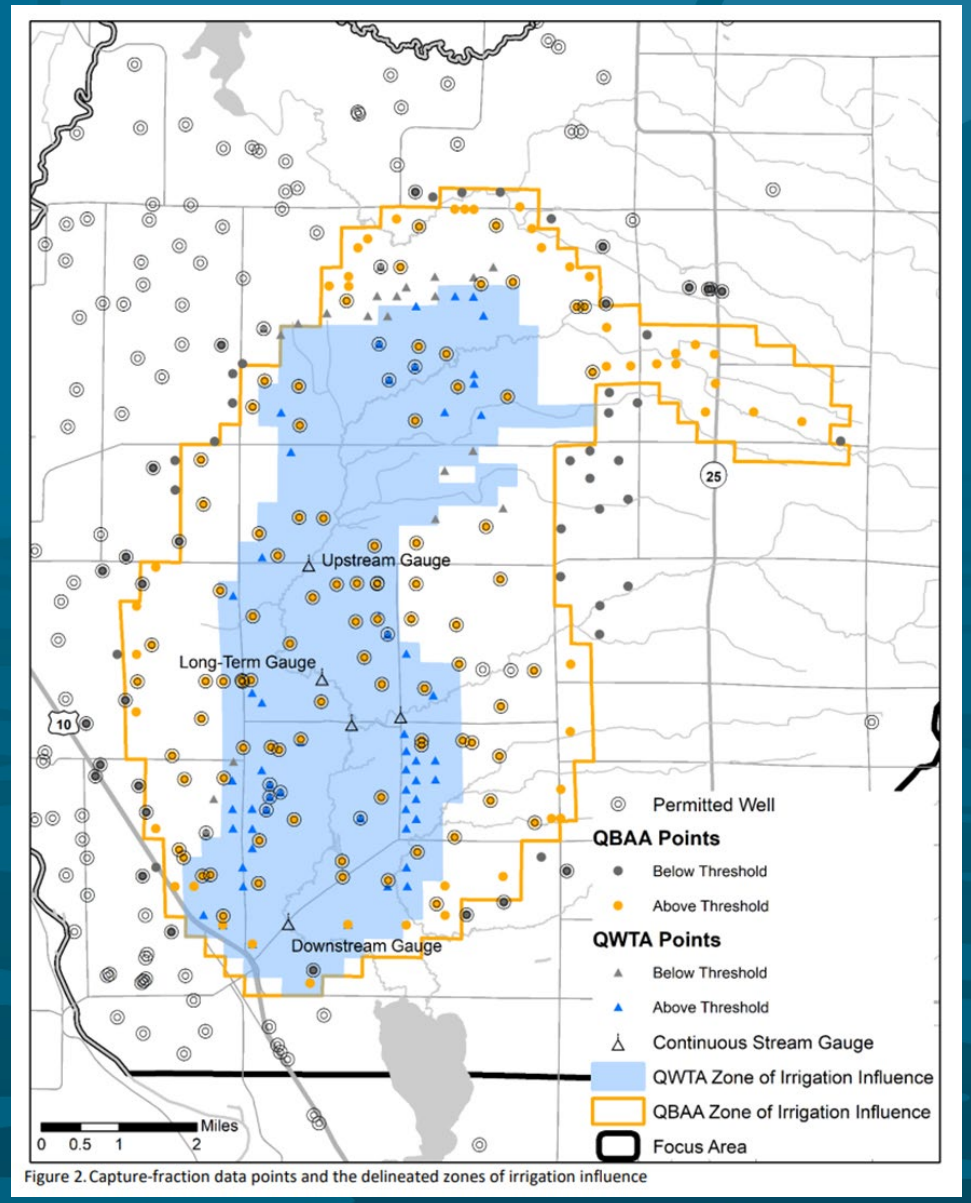


Figure 2. Capture-fraction data points and the delineated zones of irrigation influence

Theme for the Evening

Lifeline of Our Communities

Confronting Our Challenges

Uniting for a Sustainable Future

Introduction to Engineering Team

Kimley»Horn

LimnoTech

cbs²

Your Project Partners and Specialists

Uma Vempati, PE, PMP, ENV-SP
Project Manager

Ron Leaf, PE
Water Resources/ Agricultural Engineer

Hans Holmberg, PE (LimnoTech)
Senior Hydrologist

Jessica Laabs, AICP
Environmental Planner, Senior Engagement Specialist

Claire Connelly, EIT, QSD
Project Engineer

Kimley»Horn

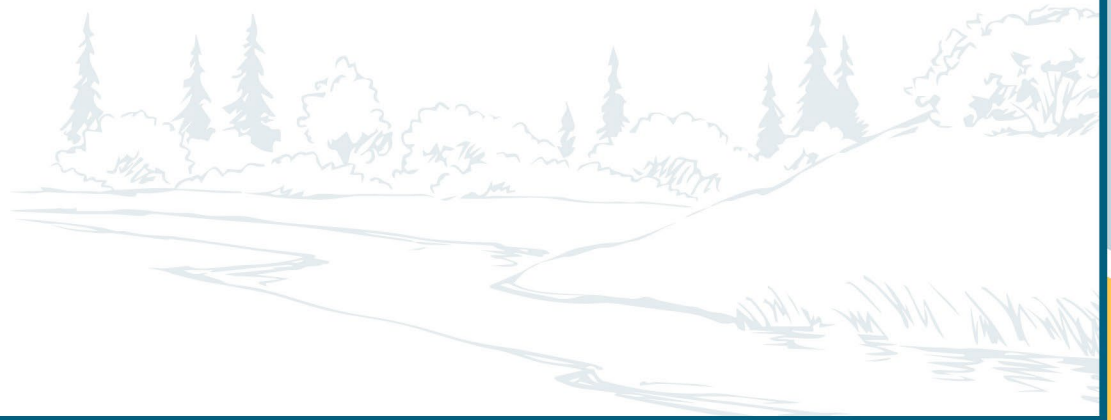
Kimley Horn Project Role

- Unbiased Approach Focused on Stakeholder Interests
- Commitment to Progress Toward Practical Solutions
- Delivering 30% Design with Capital and O&M Cost Estimates

Meeting Agenda & Structure

15 Minutes	*Team's Demonstrated Experience*
5 Minutes	*Project Overview and Objectives*
15 Minutes	*Interactive Session # 1 – Hearing From You*
25 Minutes	*Discussion of Water Management Options and Rough Cost Estimates*
35 Minutes	*Interactive Session #2 – Data Sharing/Activity*
10 Minutes	*Project Timeline*
20 Minutes	*Q&A and Open Discussion*
5 Minutes	*Closing Remarks*

Demonstrated Expertise on Similar Projects



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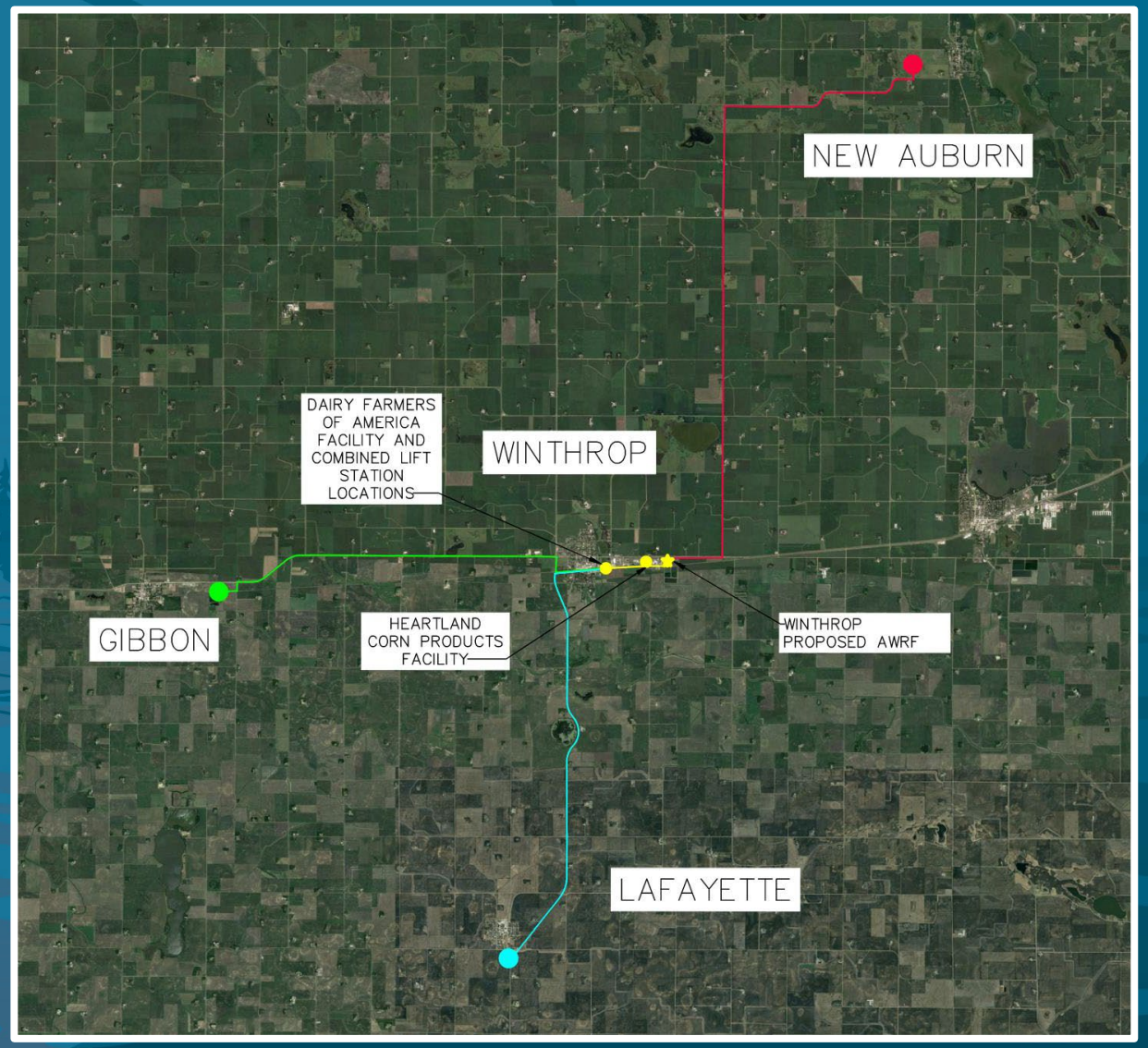
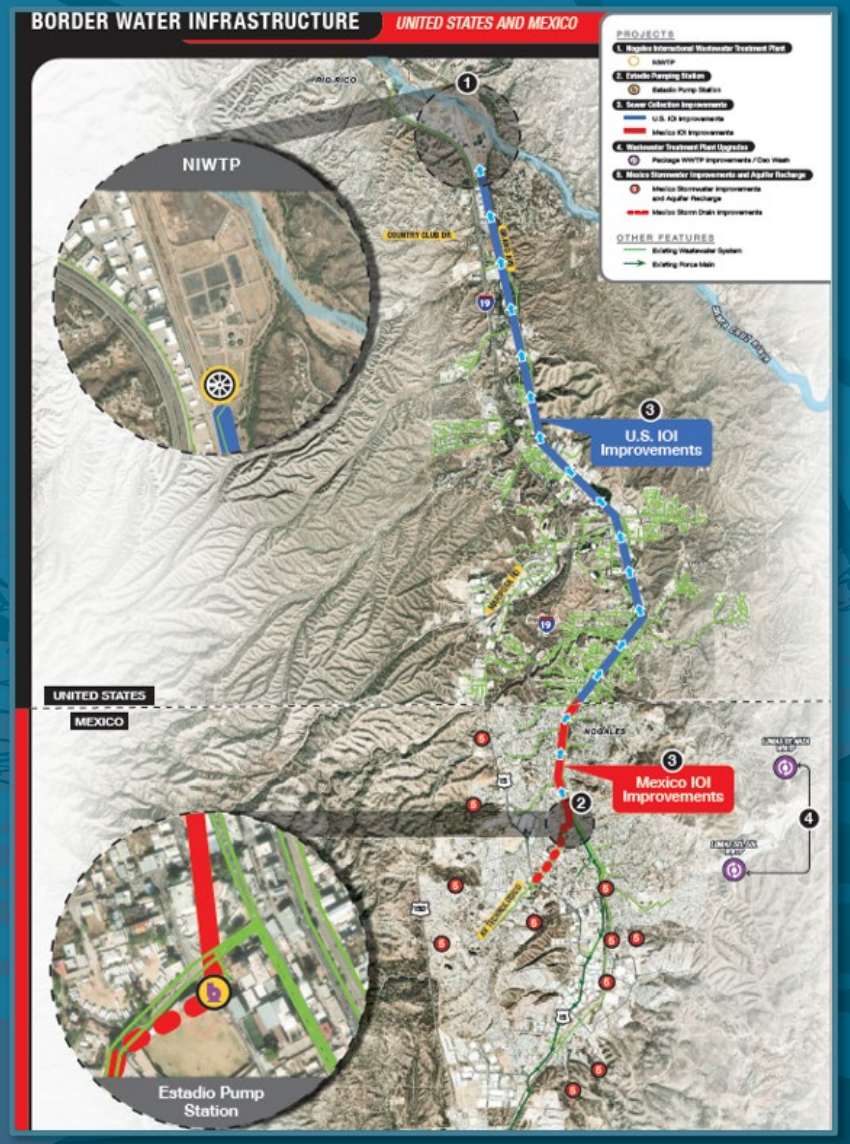


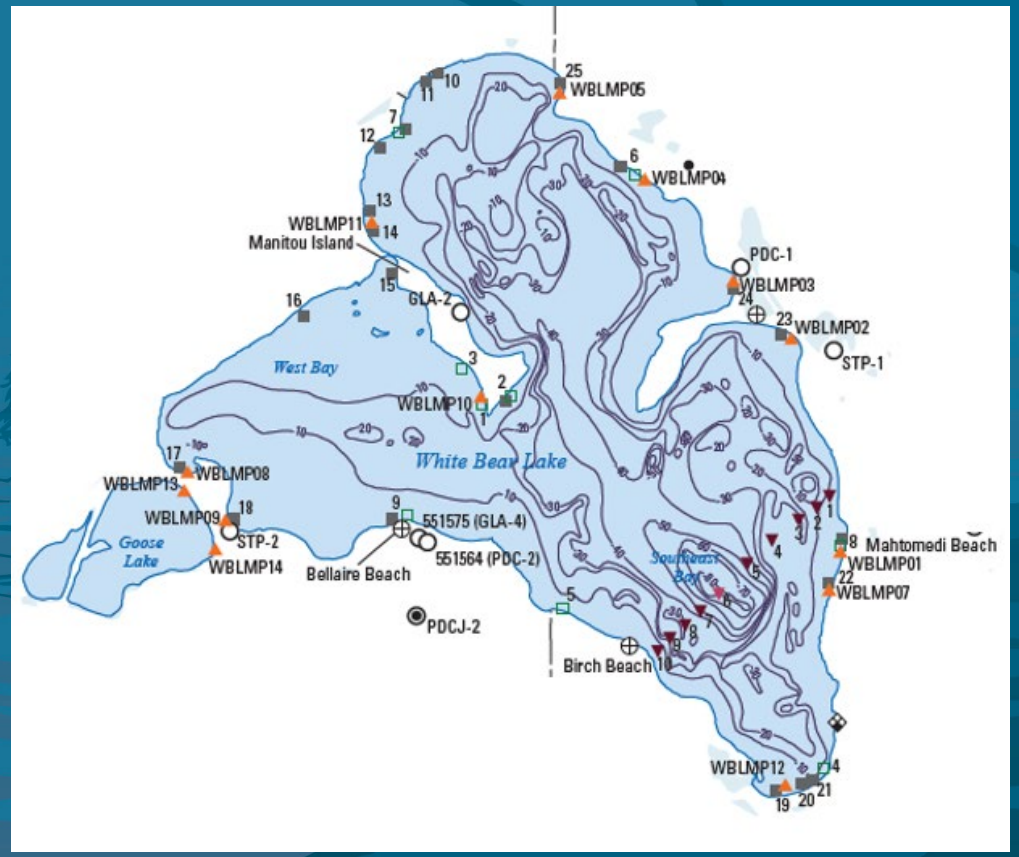
STREAMS

- Integrating treatment, water scarcity, and industrial growth



Border Water Infrastructure, AZ

- Mexico wants to send more Wastewater
- Mining Company Approached ADEQ for More Groundwater and was Denied
- Mining Company Approached IWBC and ADEQ - Pay for Expansion from 15 to 35 MGD In Anticipation of Water Rights



White Bear Lake

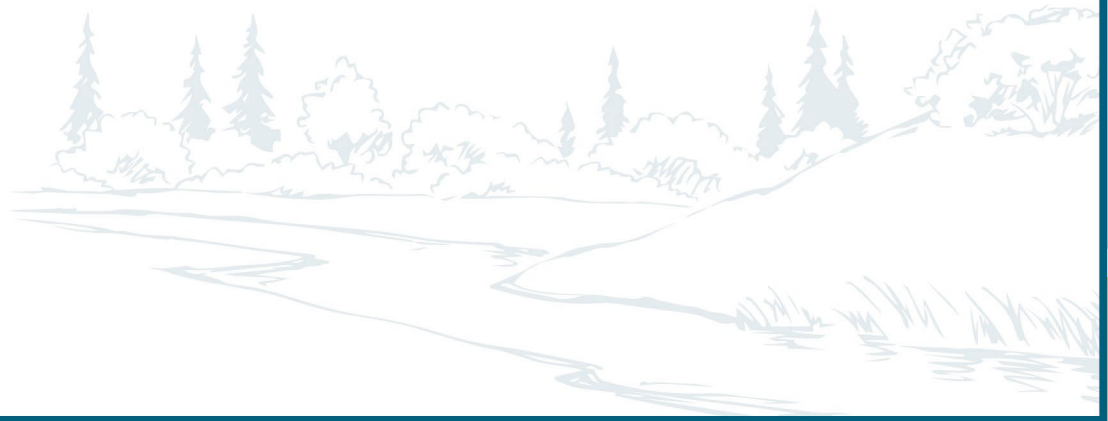
- Water level fluctuations
- Increased groundwater use
- MCES Future evaluations

Woodbury, MN

- Increased groundwater use
- Concern related to baseflow impact on local trout stream
- Monitoring and assessments

Project Overview and Objectives

- Address Water Use Conflict in Little Rock Creek Area
- Develop Sustainable Solutions of Water Management Options
- Engage Stakeholders to Align Project Goals with Local Interests
- 30% Design
- Provide Cost Estimates
- Assist in Path Forward



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Interactive Session #1 – About You

- Scan the QR code with your phone's camera
- Click the link and it will take you to Mentimeter
- **Enter code 7343 2529**

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How long have you lived/farmed in this area?

https://www.mentimeter.com/app/presentation/n/alehz95qff63aq799xca2pkv6pf6715f/edit?question=sr9bqfe6f43d

What concerns you most about this project?

https://www.mentimeter.com/app/presentation/n/alehz95qff63aq799xca2pkv6pf6715f/edit?question=sr9bqfe6f43d

Water Management Approaches

- Streamflow Augmentation
- New Wells and Conveyance Systems
- Enhancing Groundwater Recharge
- Water Conservation
- Modifying Appropriations

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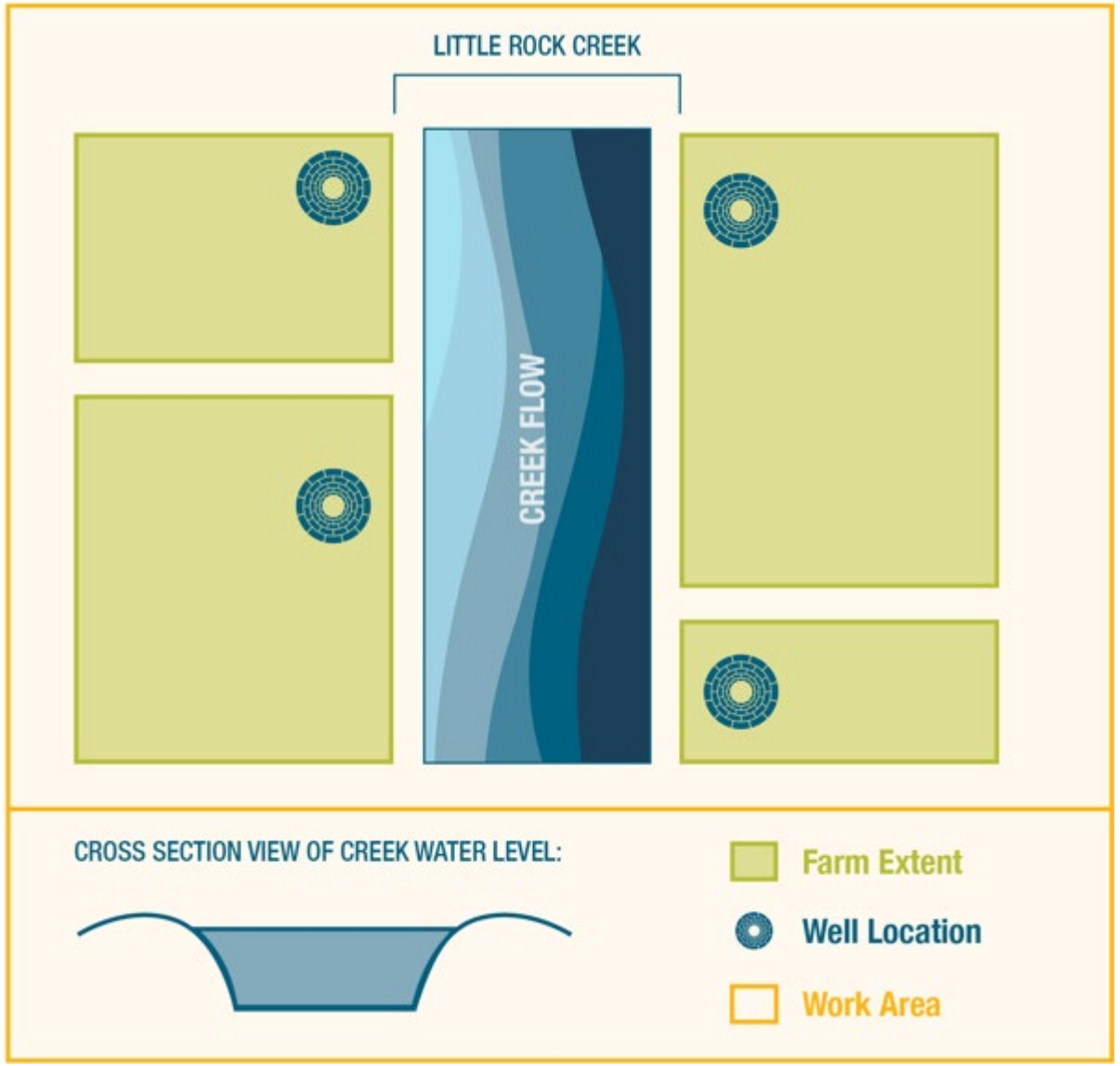
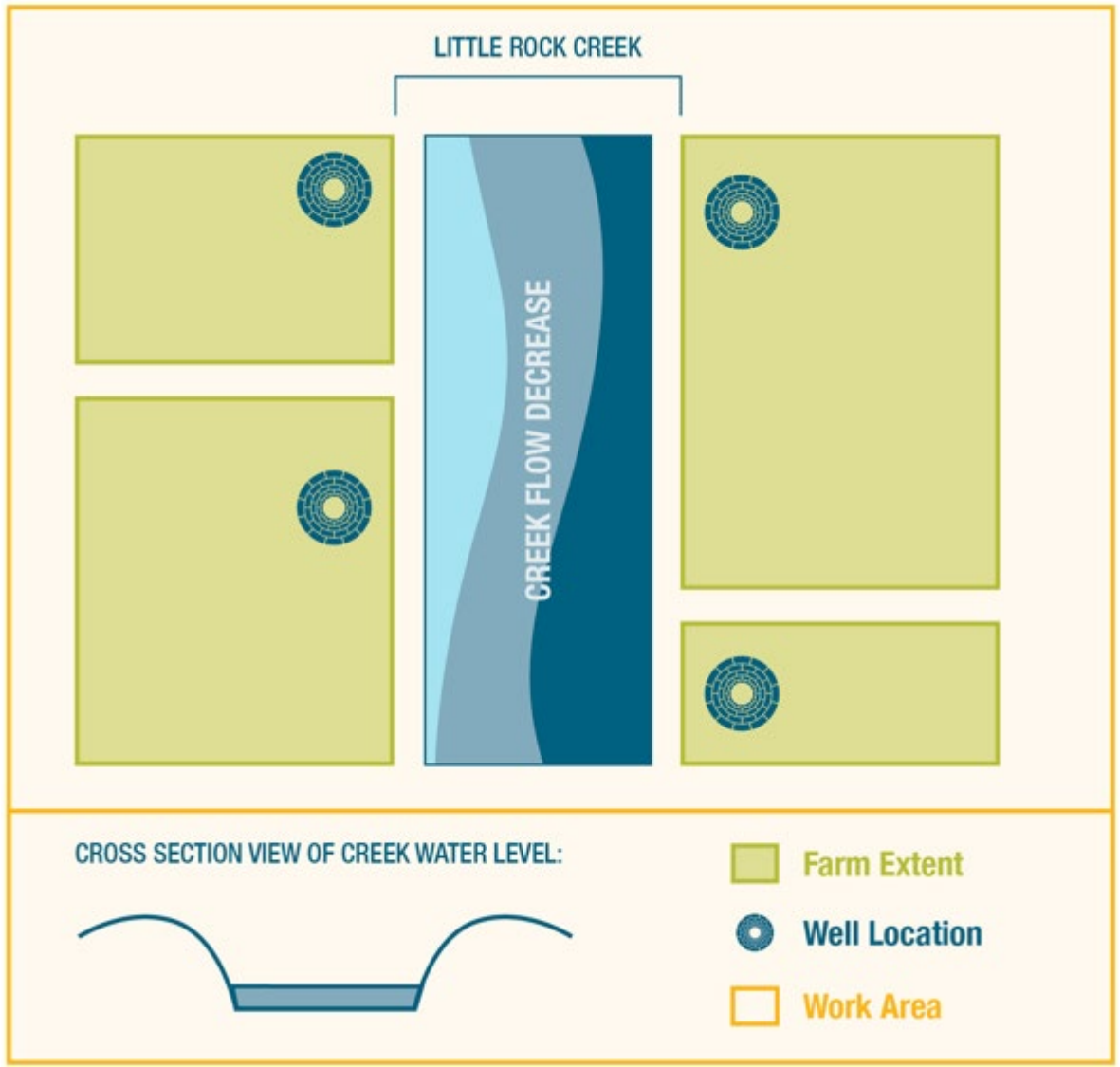
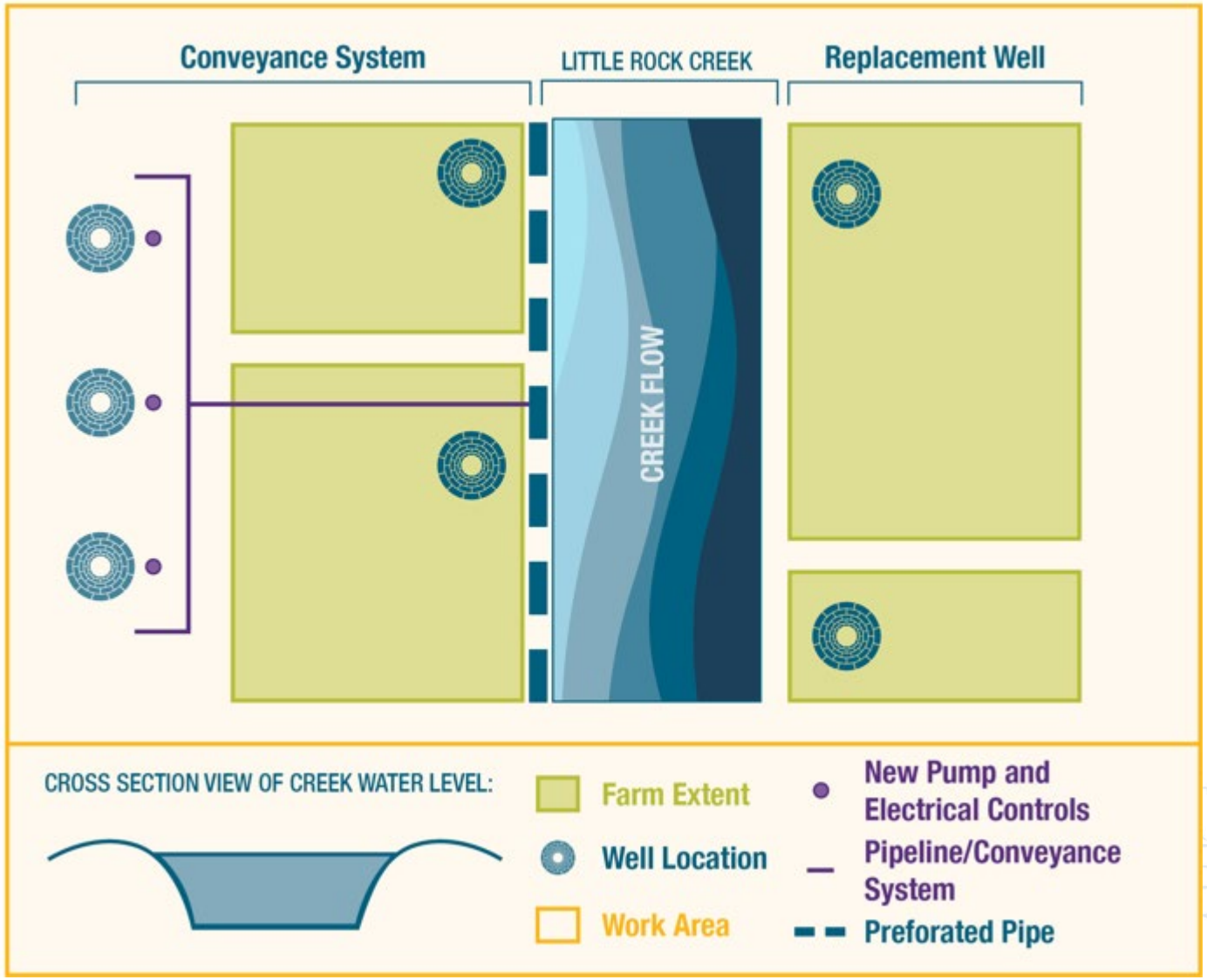


Little Rock Creek – Without Impact



Little Rock Creek – With Impact



Approach:

Streamflow Augmentation

Approach: Streamflow Augmentation

FEATURES:

- Supplement creek baseflow to meet sustainable diversion limit

CHALLENGES:

- Replacing baseflow without irrigation
  - Distributed along creek
  - Water quality
- Permitting water transfers from groundwater to surface water
- Operations and maintenance cost

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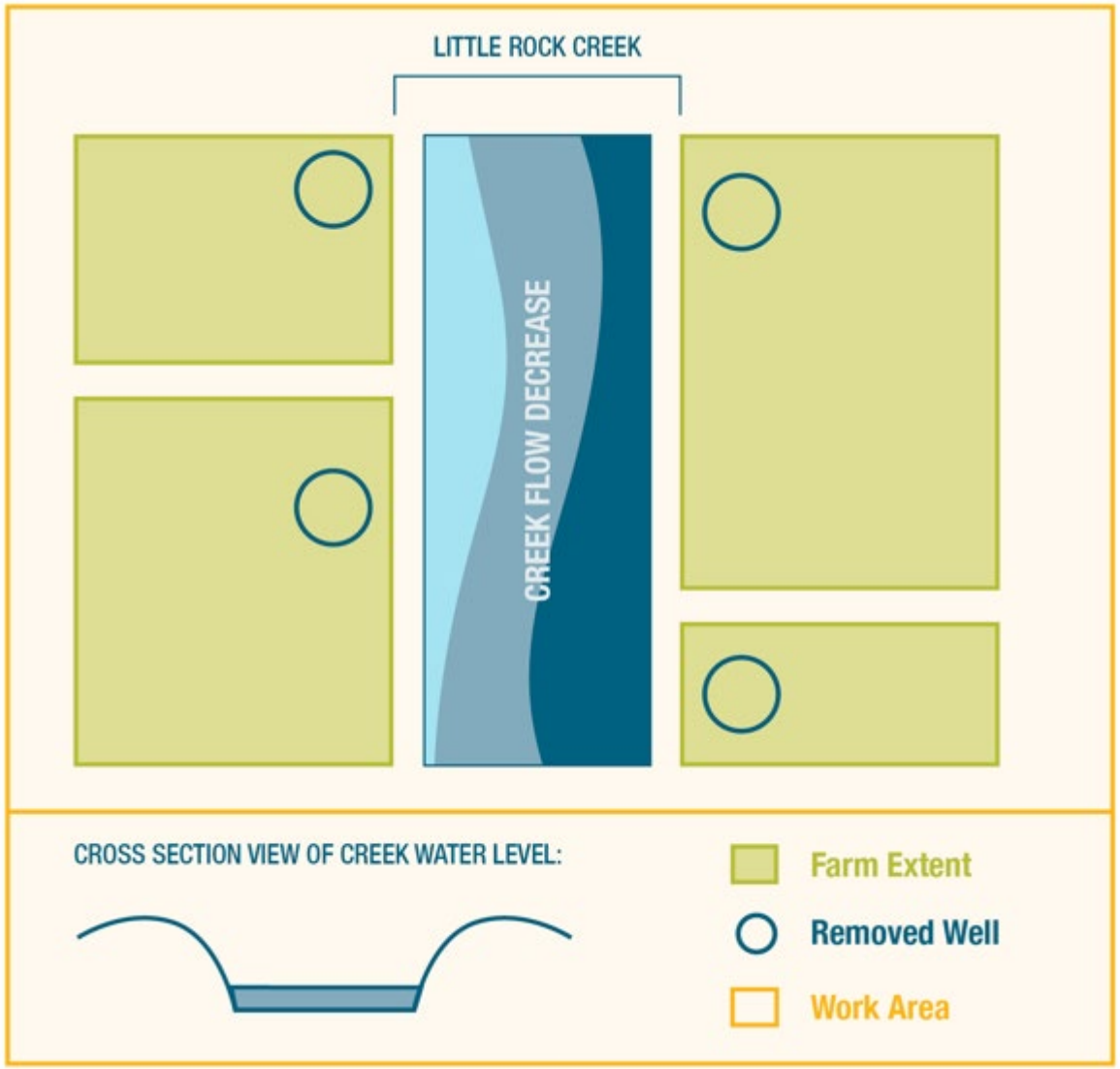
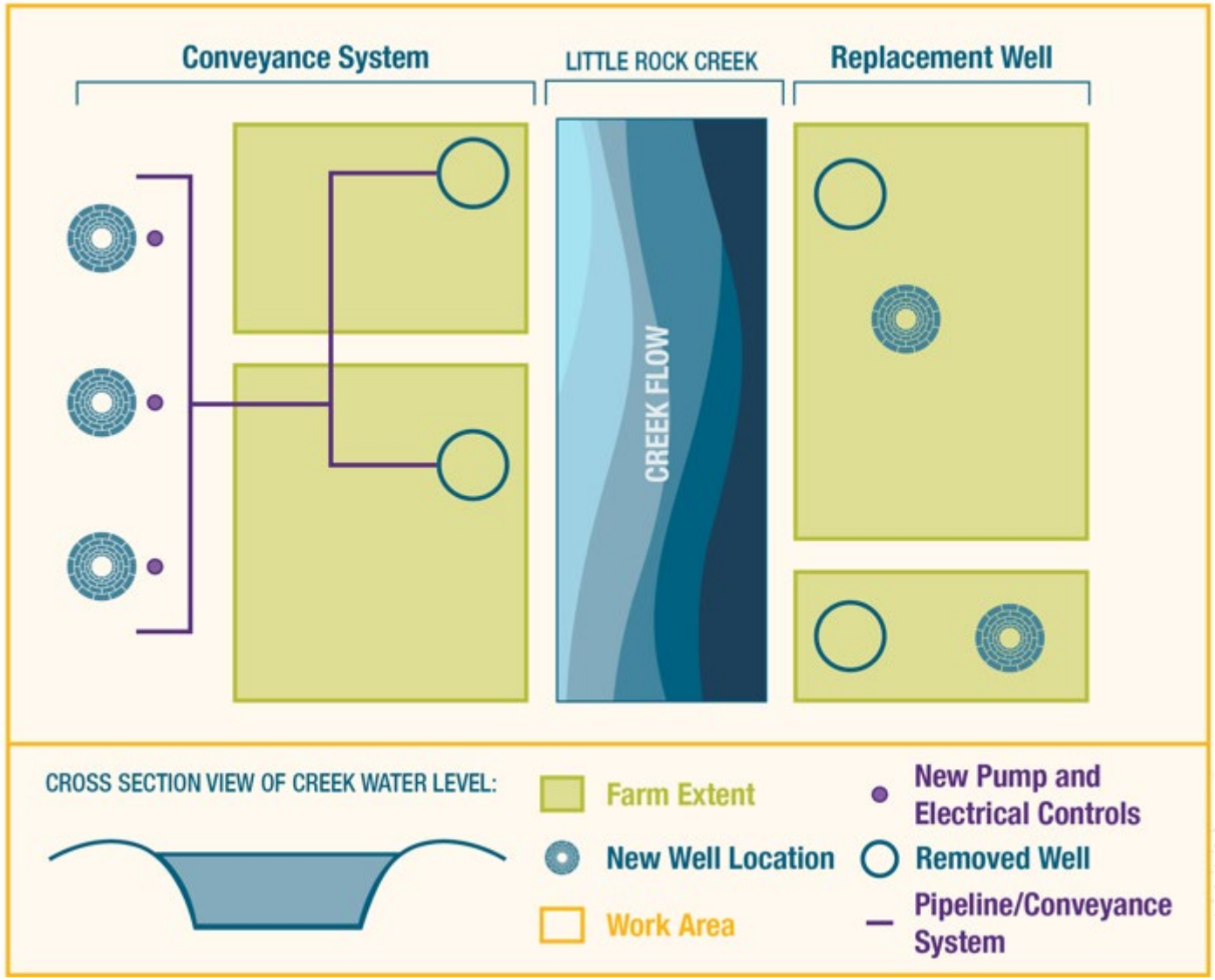


Approach:

New Wells and Conveyance Systems



Approach:

New Wells and Conveyance Systems

Approach: New Wells and Conveyance Systems

FEATURES:

- Reduced/Replaced Irrigation Wells
- Baseflow restored in Creek.

CHALLENGES:

- Joint Powers Agreement initiated – O&M cost
- Taking water from another watershed
- Some specific permitholders will be impacted

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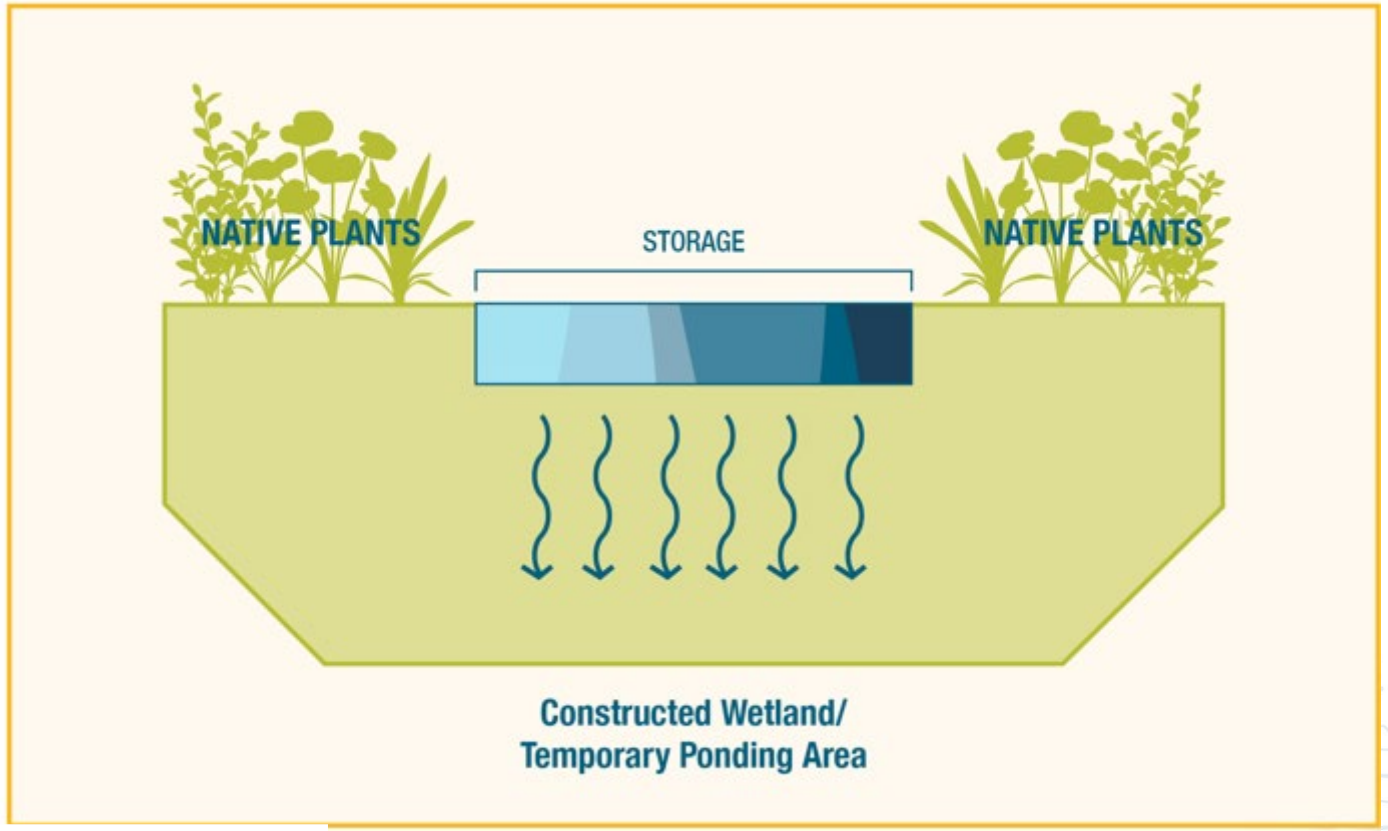
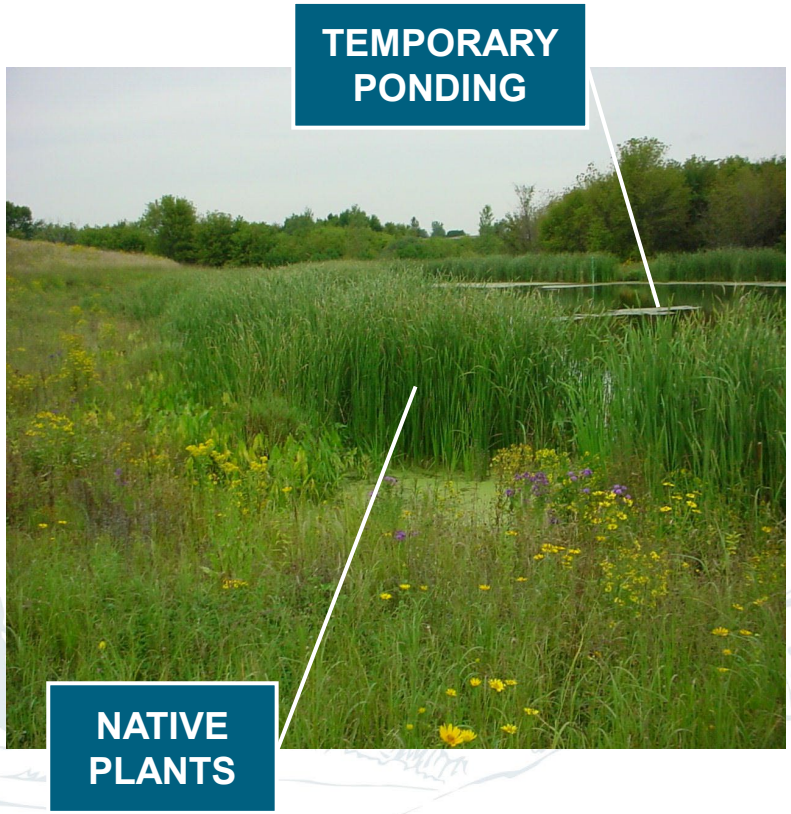
Approach: Enhancing Groundwater Recharge





Approach: Enhancing Groundwater Recharge

FEATURES:

- On-line creek storage area
- Off-line wetland areas
- Land acquisition

CHALLENGES:

- Potential additional adverse impacts – temperature increases
- Cost intensive

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Approach: Water Conservation

SOIL AMENDMENT

VARIABLE RATE SPRAYERS

SLOPING TECHNIQUES

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Approach : Water Conversation

FEATURES:

- Update equipment with more efficient measures
  - Work with NCRS to provide more funding

CHALLENGES:

- May not provide enough change in creek flow as the only approach

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Approach: Modifying Appropriations

FEATURES:

- Reducing permitted water usage up to 50% will return creek flow

CHALLENGES:

- Solutions from other option and combinations of the options will be considered before this option
  - Land value reduction
  - Loss of cash crop

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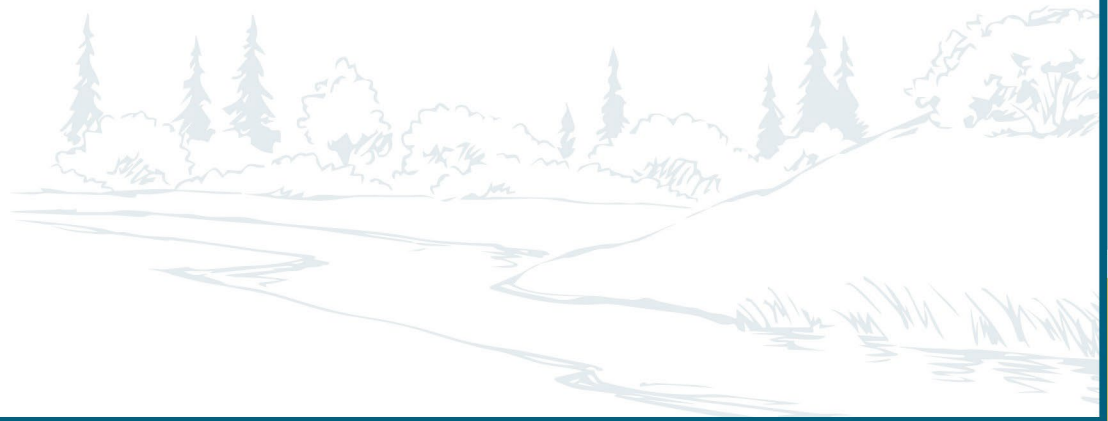
Preliminary Cost Estimate

Capital Cost	Annual Operations and Maintenance Cost
$20-100 Million	$1.0-3.5 Million

Interactive Session #2 – Your Thoughts

- Create 4 breakout groups
- Facilitator has list of questions regarding your thoughts on the options
- 30 minutes



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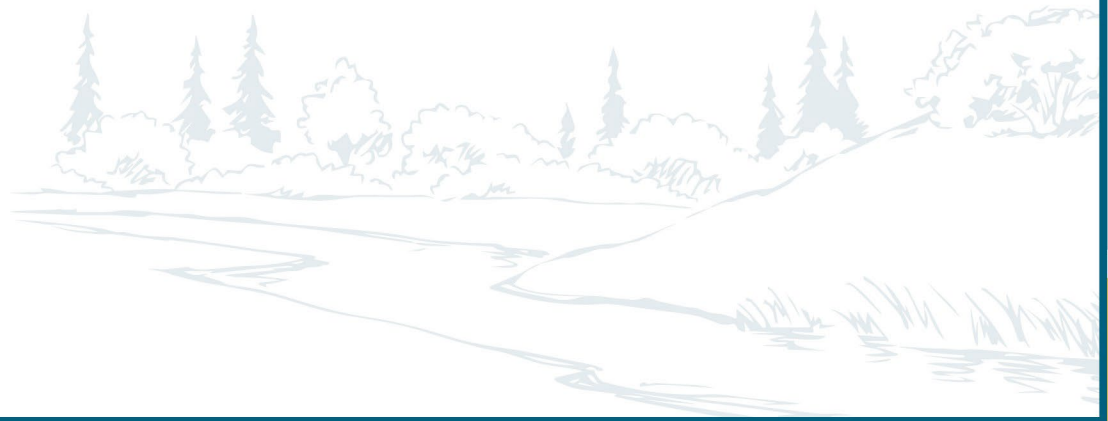
Breakout Group Wrap-Up

- Group notes will be compiled and shared
- Other opportunities for input are available:
  - Schedule individual conversations
  - Comment form



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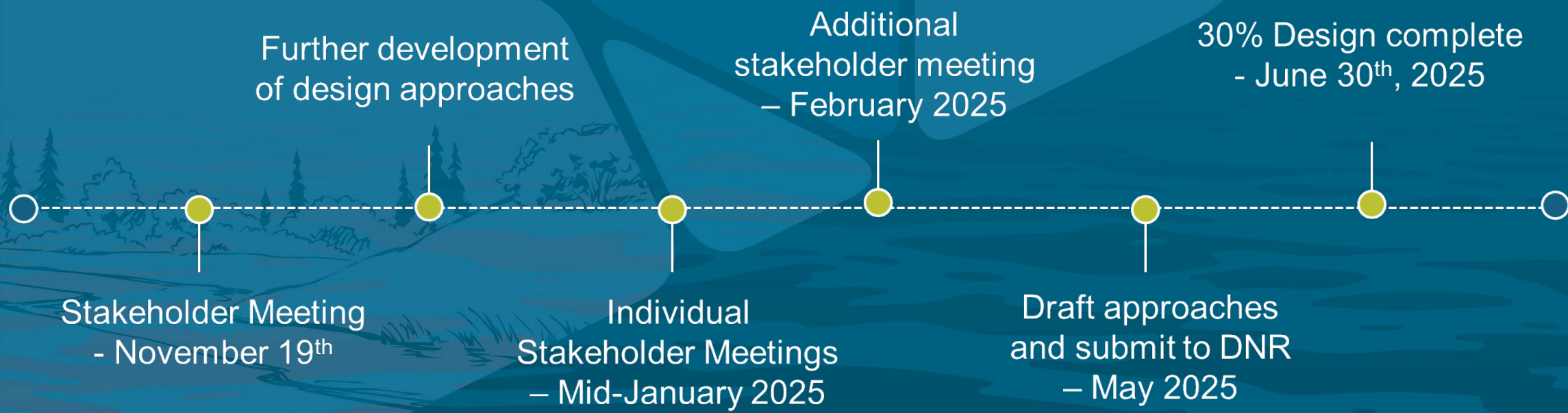
PROJECT TIMELINE



Thank you!

Q&A