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# Remington Water District Facility Planning Public Information Meeting

December 16, 2020

# Introductions

- District
  - Shawn Mosqueda, Chairman
  - Charlie Richmond
  - Jess Mosqueda
  - Bill Hennig
  - Robin Pugh
- District Staff
  - John Austin and Jessie Roe, Accountants
  - Bob Kuchenski and Ian Kuchenski, Operators
- Welch Comer Engineers
  - Ashley Williams, PE, Project Manager
  - Mindy Patterson, Administrator
- Idaho Dept. of Environmental Quality
  - Katy Baker-Casile, PE
- Consultant
  - Mike Galante
- LID/Bond Counsel
  - Danielle Quade, Hawley Troxell

# Virtual Meeting “Rules of Conduct”

- Please identify yourself to Mindy for the comment period
- **All** participants will be **muted** until the comment period
- Please consider turning off your camera to help with connectivity
- GoTo Meeting Application
  - Please submit any questions or comments through the chat bar on the GoTo Meeting Application
- By Phone:
  - The presentation is located online to download, and we’ll follow along with the numbered slides
  - We will give you an opportunity to speak; please identify yourself (and your address) first
- Each participant will be “unmuted” to provide an opportunity for question or comment (3 minutes per participant)

# District History and Why are we Here?

- Formed in 1999 as a Recreational Water and Sewer District
  - 1 large well and 2 small wells (1 small well was abandoned later)
  - Funds saved: \$30,000
- System was designed (originally) to support 467 connections, currently the system has 387 approved connections
  - Current Idaho Rules (IDAPA 58.01.08) require redundancy and fire flow capacity; therefore, the system can currently only support 115 connections
- Set aside money for over 20 years to improve system
  - Backup generators: to supply water for 1-week average usage during power outage
  - Saving to add third large well
  - Funds saved: \$600,000

# Objective

- Understand the ability of the Remington system to meet regulatory requirements from a capacity standpoint
- Review current connection capacity and future growth (how does growth impact the system?)
- Review deficiencies and potential improvements and obtain customer feedback

# Agenda

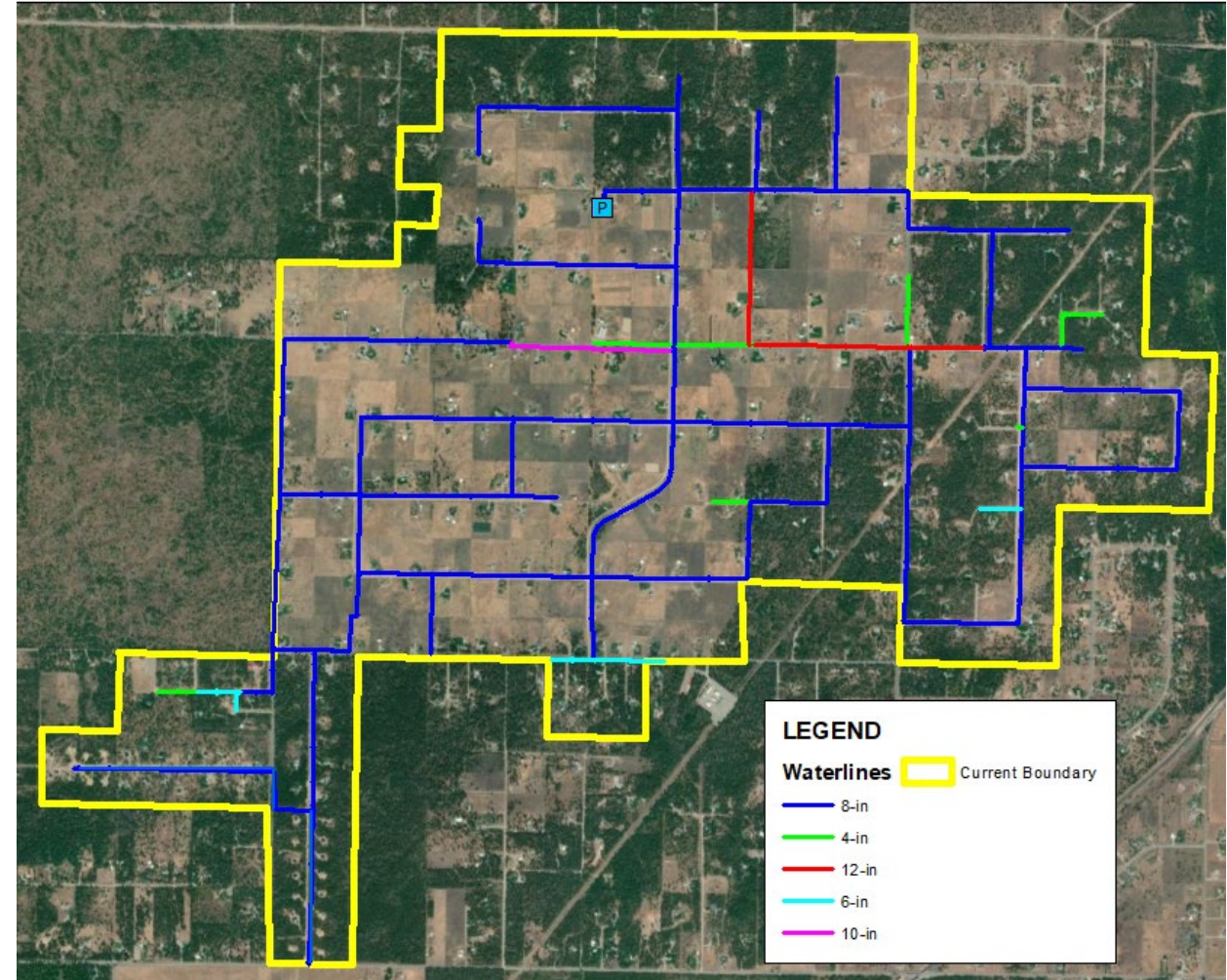
- Define Idaho DEQ Public Water System Requirements
- Discuss Current Water System Capacity
- Discuss Potential System Improvements
- Financing Options
- Next Steps





# Existing System Overview

- Total Connections
  - Facility Plan (Summer 2019): 387
  - Current (Fall 2020): 396
    - Includes 9 new connections that had pending Will Serve letters
- System Information
  - Original System – 1970's
  - System Components
    - 2 groundwater wells (draw from Rathdrum Prairie Aquifer)
    - 4 booster pumps
    - 100,000-gallon storage
  - Approximately 24 miles of water main: PVC, Steel



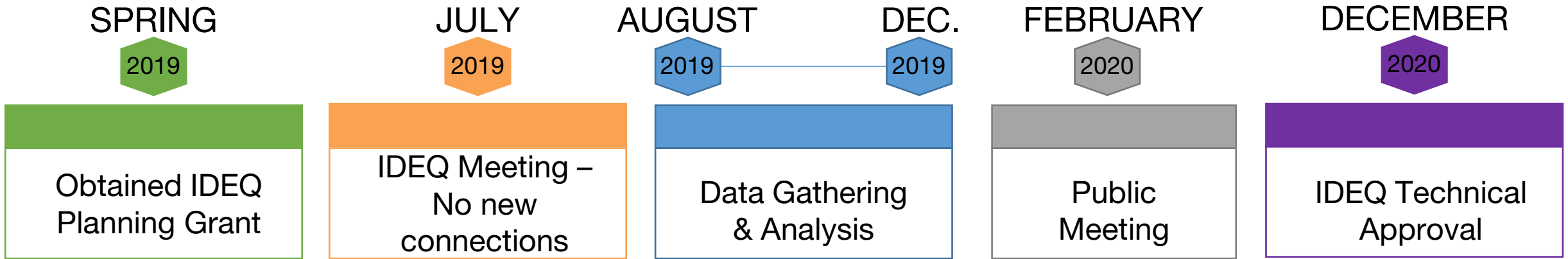
# Recent Sanitary Survey by IDEQ

- Idaho public water systems are evaluated periodically (~3 years) by IDEQ with respect to IDAPA 58.01.08
- Completed in April 2017
  - Remington Water District was found to be in substantial compliance with IDAPA relative to system condition and ability to provide safe, clean drinking water
  - No significant deficiencies were identified
  - Modifications (including system capacity upgrades) to the system require Facility Plan and Preliminary Engineering Report





# Facility Plan Background



- District Staff and Board:
  - Negotiating with adjacent development
  - Refining options and funding mechanism

# Definitions

- Demand
  - Average Day Production (ADP): average volume of water calculated over the year
  - Maximum Day Production (MDP): maximum gallons of water used in one day (reviewing one year of data)
  - Peak Hourly Production (PHP): maximum gallons of water used in one hour (reviewing one year of data)
  - System Loss: Difference between well production and customer metered usage
- Fire Flow
  - Set by the Timberlake Fire Protection District as the minimum recommended available water flow to fight a structure fire
  - Current Requirement: 1,000 gpm for 2 hours
- Equivalent Dwelling Unit
  - EDU is a unit of measure that standardizes all land use types (housing, retail, office, etc.) to a level of demand created by a single-family detached housing unit within a water system
  - Remington serves only single-family housing



# Overview of Pertinent Rules IDAPA 58.01.08



## Source

Supply PHP with largest source offline or **MDP plus equalization storage with largest source offline**

## Booster Facilities

- Supply MDP plus Fire Flow (if pumped) with any pump out of service
- Supply PHP with any pump out of service

## Storage

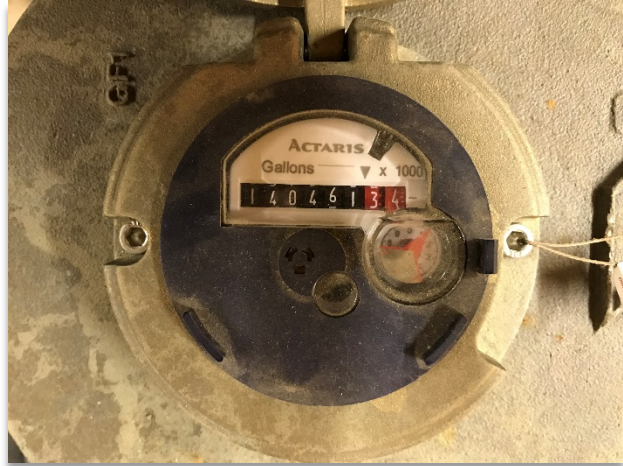
- Operational Storage: volume allocated to pump control
- Equalization Storage: volume to supply PHP over 150 min.
- Standby Storage: volume to supply 8 hours of average day demand (**not required with generators**)
- Fire Suppression: volume specified by local fire authority
  - 1,000 gpm for 2 hours (120,000 gallons)

## Distribution

- Water mains with Fire Hydrants shall not be less than 6-inch diameter
- Water mains without Fire Hydrants shall not be less than 3-inch diameter
- Maintain 40 psi minimum pressure throughout system during PHP
- Maintain 20 psi minimum pressure throughout system during MDP plus Fire Flow

# System Demand

- Facility Plan Connections: 387
- Current System Demand
  - Current ADP: 794 gpd/EDU
  - Current MDP: 2,629 gpd/EDU



	Demand <sup>1</sup>
Average Daily Production	213 gpm
Max Daily Production	707 gpm
Peak Hour Production	1,518 gpm <sup>2</sup>

1. Based on user data from July 16, 2018 to July 15, 2019 plus system loss (~15%)
2. District installed new meter to accurately monitor PHP in summer 2021

# Current Water System Capacity

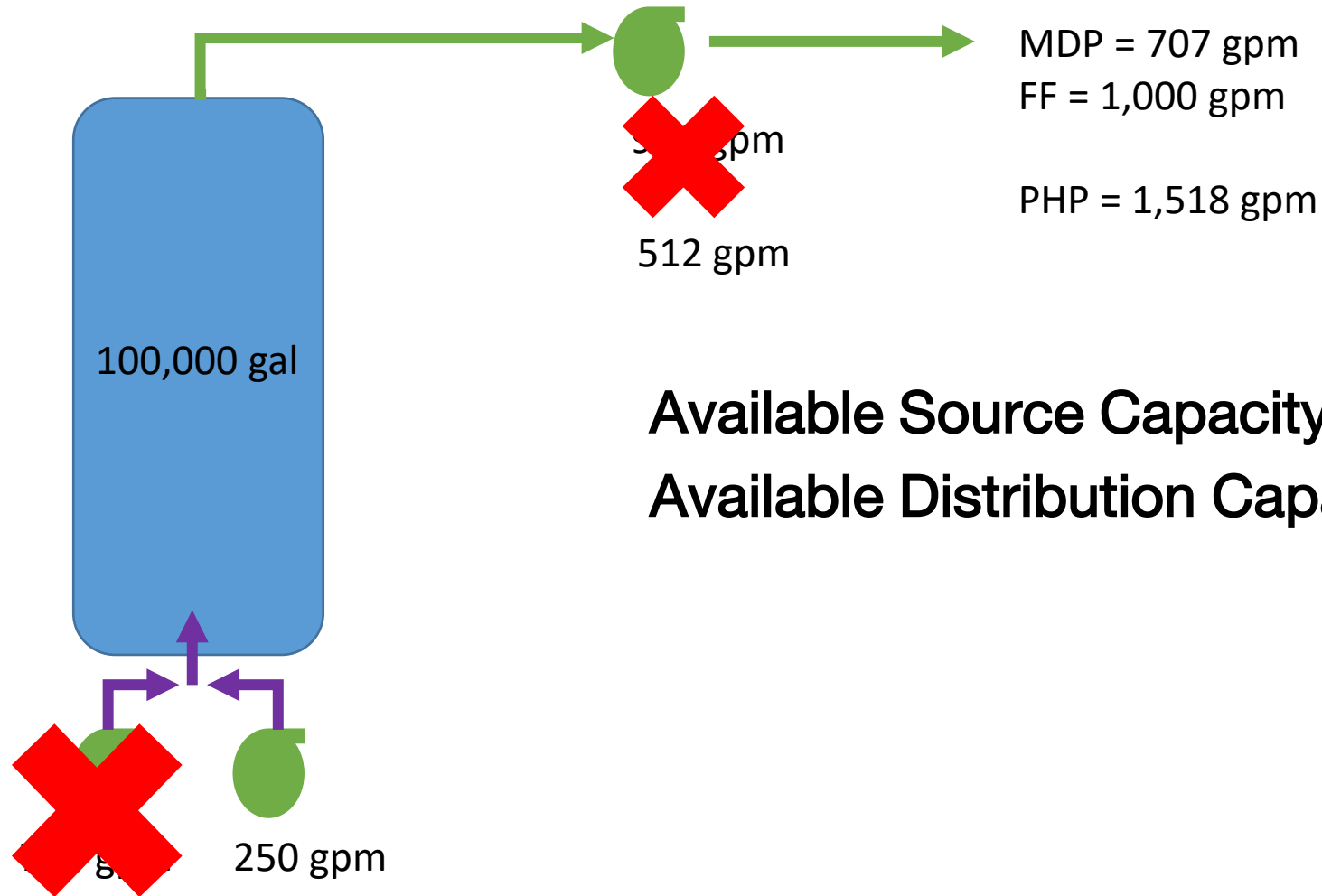
- System is deficient in all IDAPA capacity categories
- IDEQ will not approve additional connections until system is fully compliant (this includes individual lot splits)

	Current Capacity (w/ Largest Pump Down)	Current IDAPA Capacity Requirement	Current Deficit with regard to IDAPA Requirements
Source	250 gpm	839 gpm <sup>1</sup>	-589 gpm
Booster	512 gpm	1,707 gpm <sup>2</sup>	-1,195 gpm
Storage	100,000 gal	350,217 gal	-250,217 gal

1. Source deficit is based on MDP plus equalization storage with largest pump offline
2. Booster deficit is based on MDP plus Fire Flow with the largest pump offline

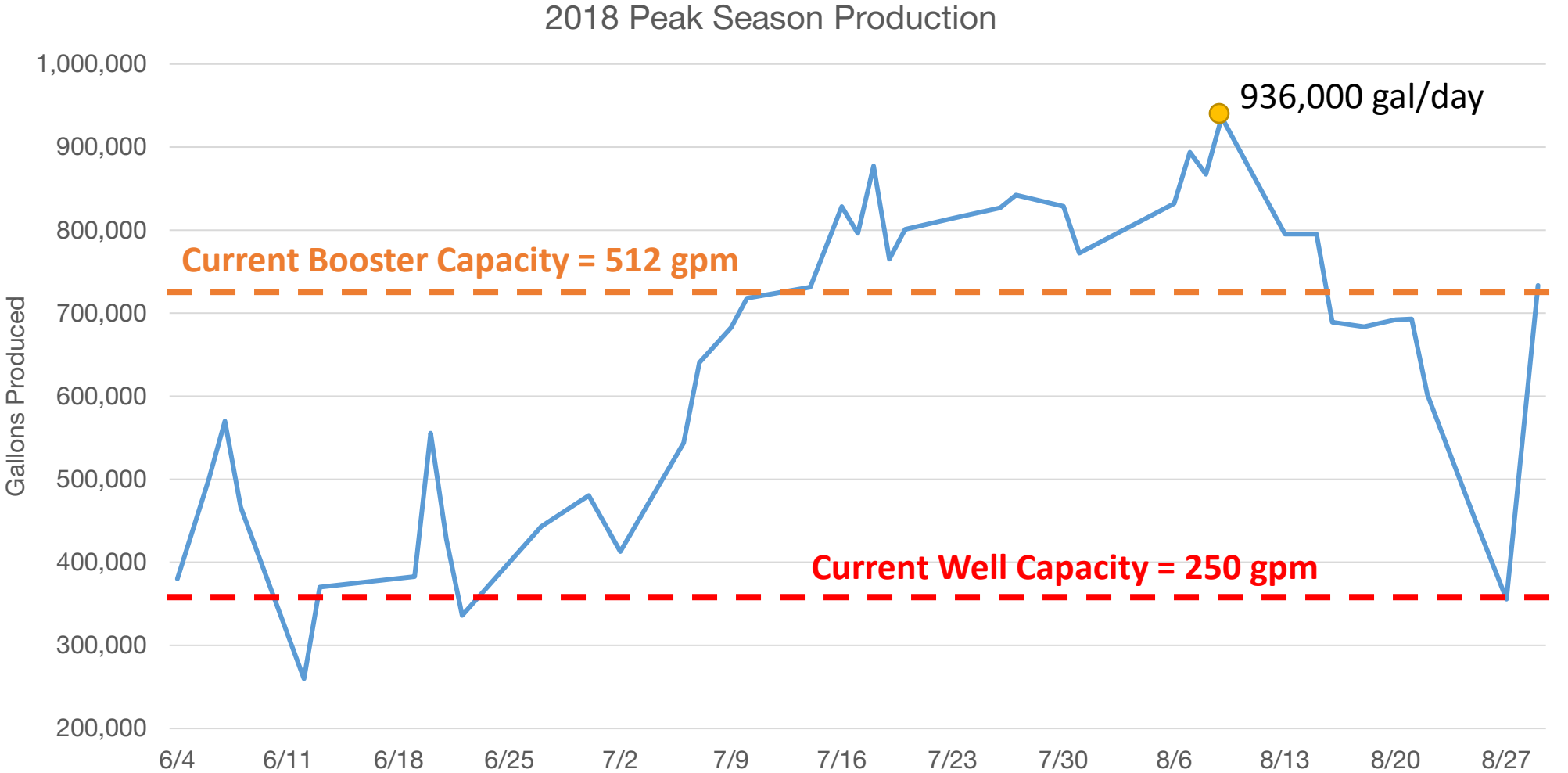


# Current System Capacity Overview



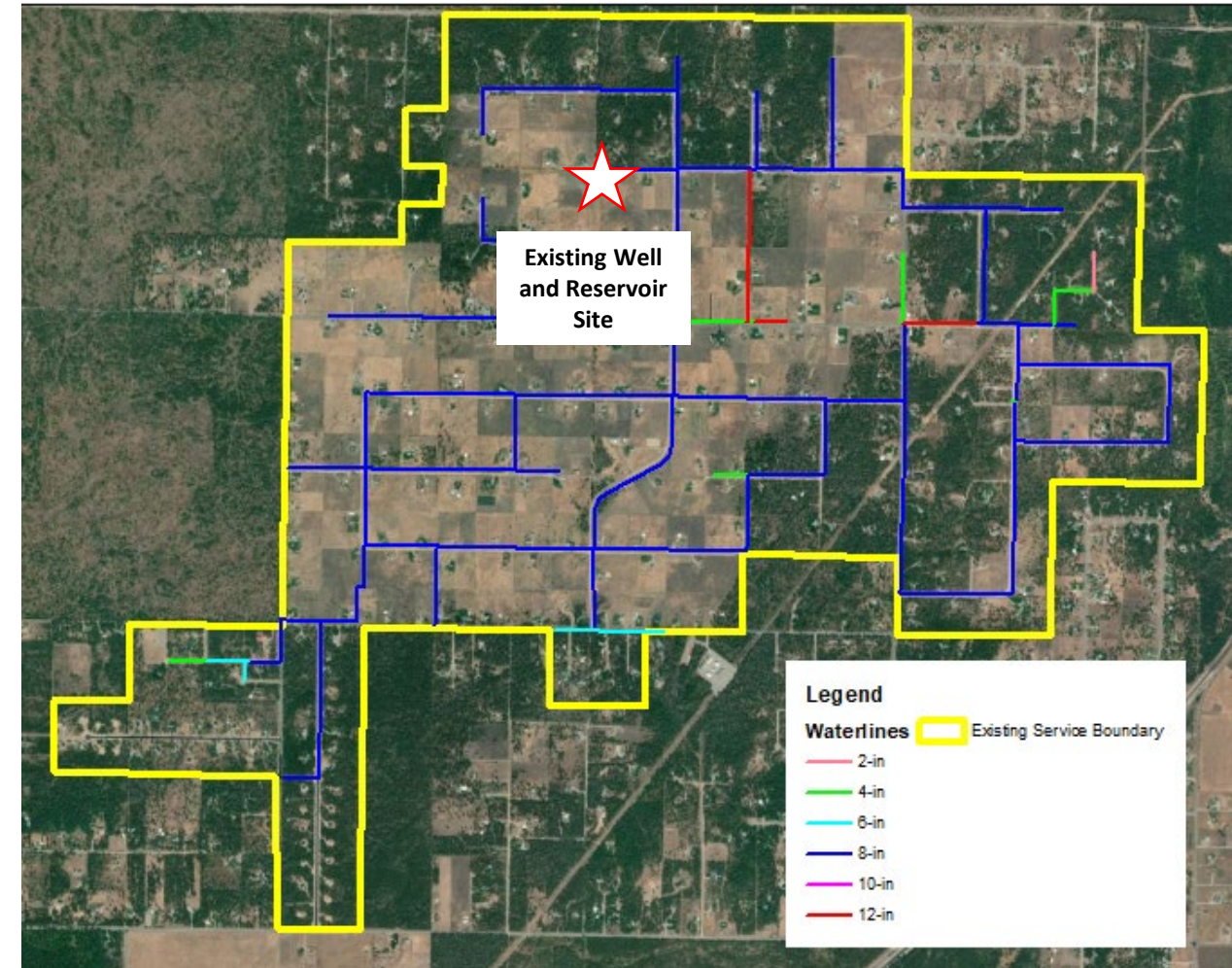
**Available Source Capacity per IDAPA = 250 gpm**  
**Available Distribution Capacity per IDAPA = 512 gpm**

# Peak Season Production



# Minimum System Improvements

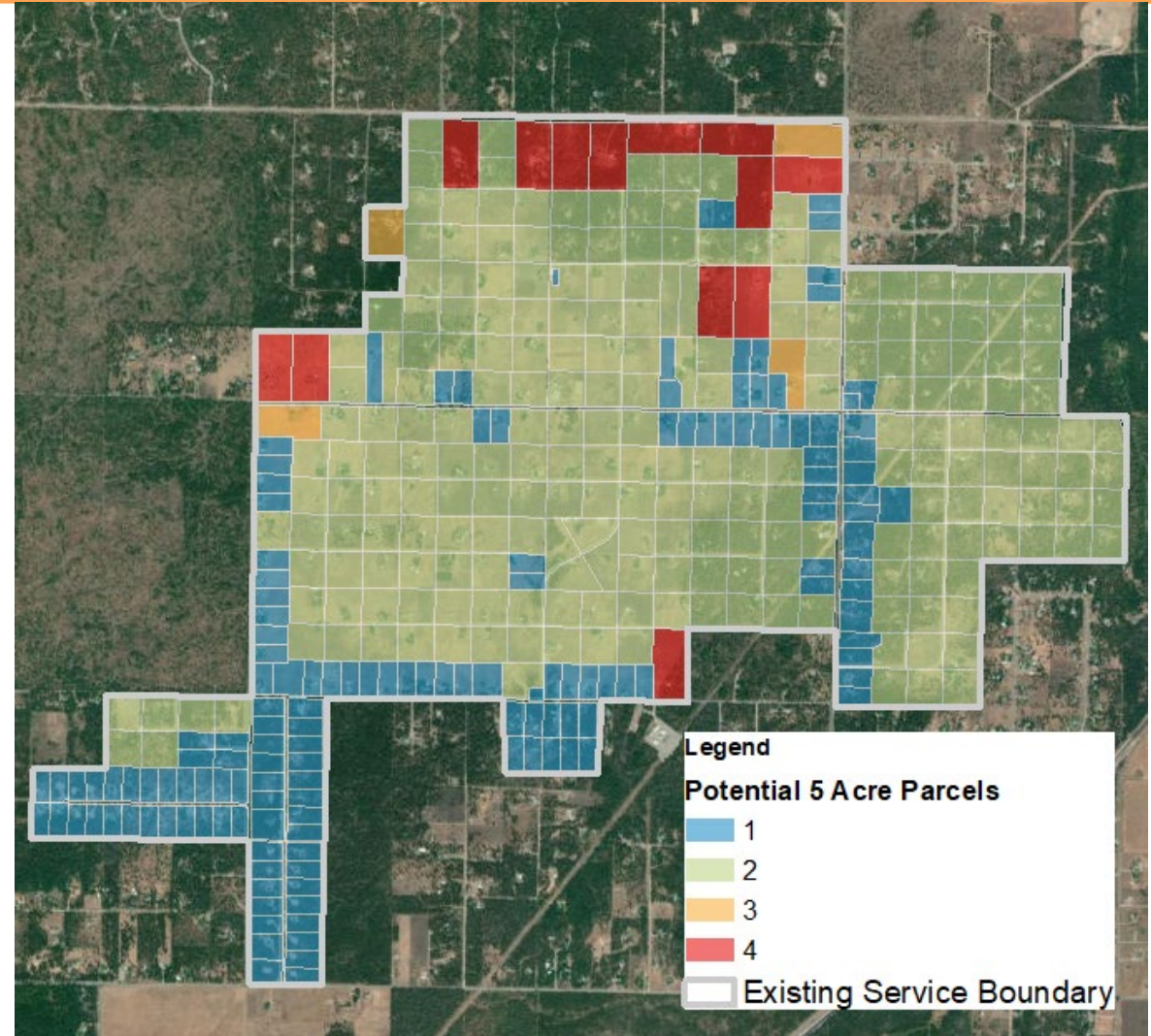
- Required Improvements
  - Add two 800 gpm sources pumping directly to distribution
    - Includes one new well and upsize of existing 750 gpm well
  - Add 100,000 gallons of storage
  - Add 800 gpm booster capacity
  - ~3,200 LF Transmission
- Estimated project cost: \$1.6 million
- Eliminates all current deficits (source, storage and booster)
- No capacity for new connections created





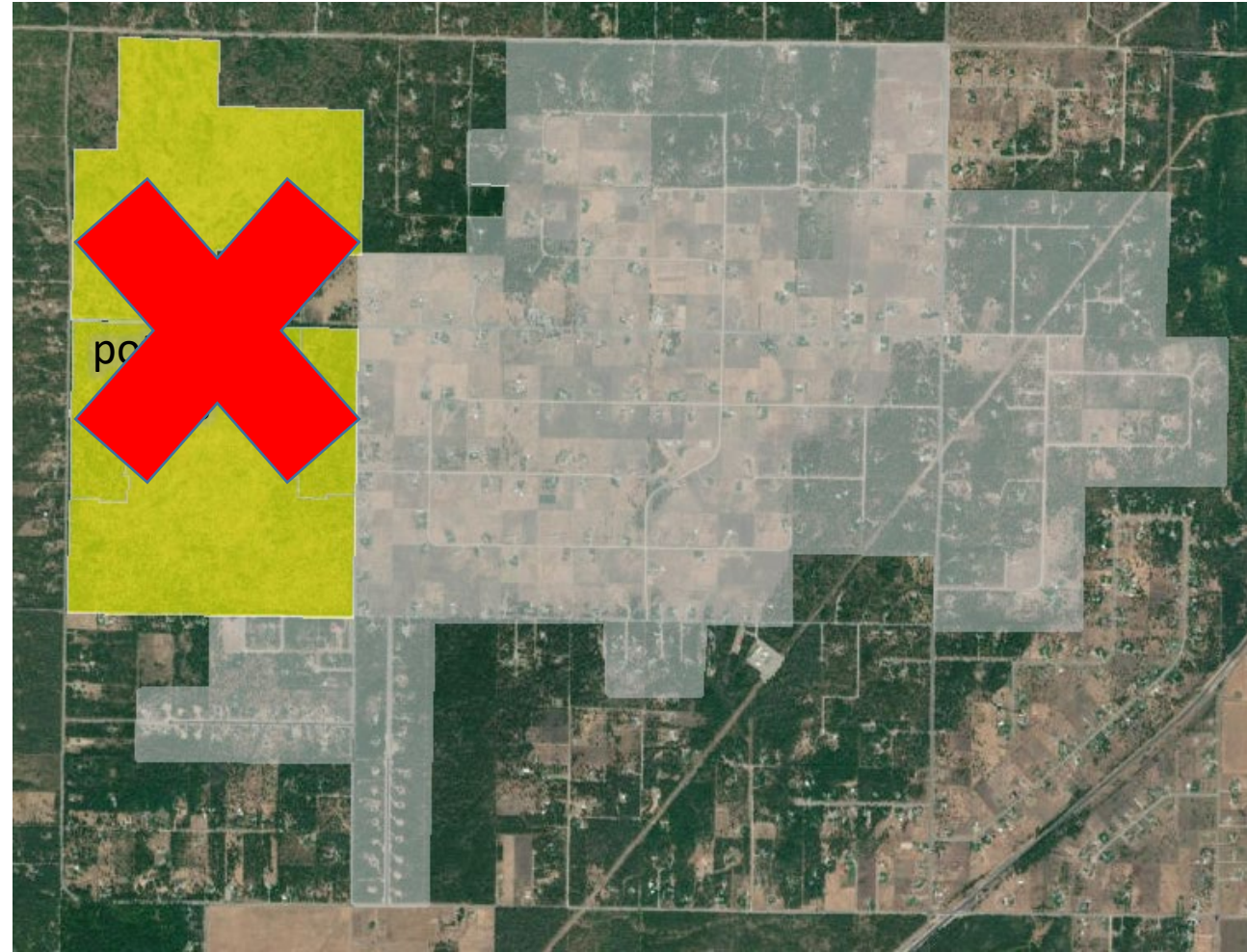
# Projected Growth

- Growth A
  - Near-Term Growth
  - 50-75 New Connections
    - Minor subdivisions within existing boundary
- Growth B
  - Long-Term Growth
  - Buildout of Existing Boundary
  - Additional 200+ potential splits within system
- Total System Buildout: 661 EDUs



# Projected Growth Cont'd.

- Potential Development Annexation:
  - No agreement between District and Developer has been reached
  - Improvement planning revised to exclude this growth area
  - Developer could annex at later date
    - Will be required to provide capacity if none is available



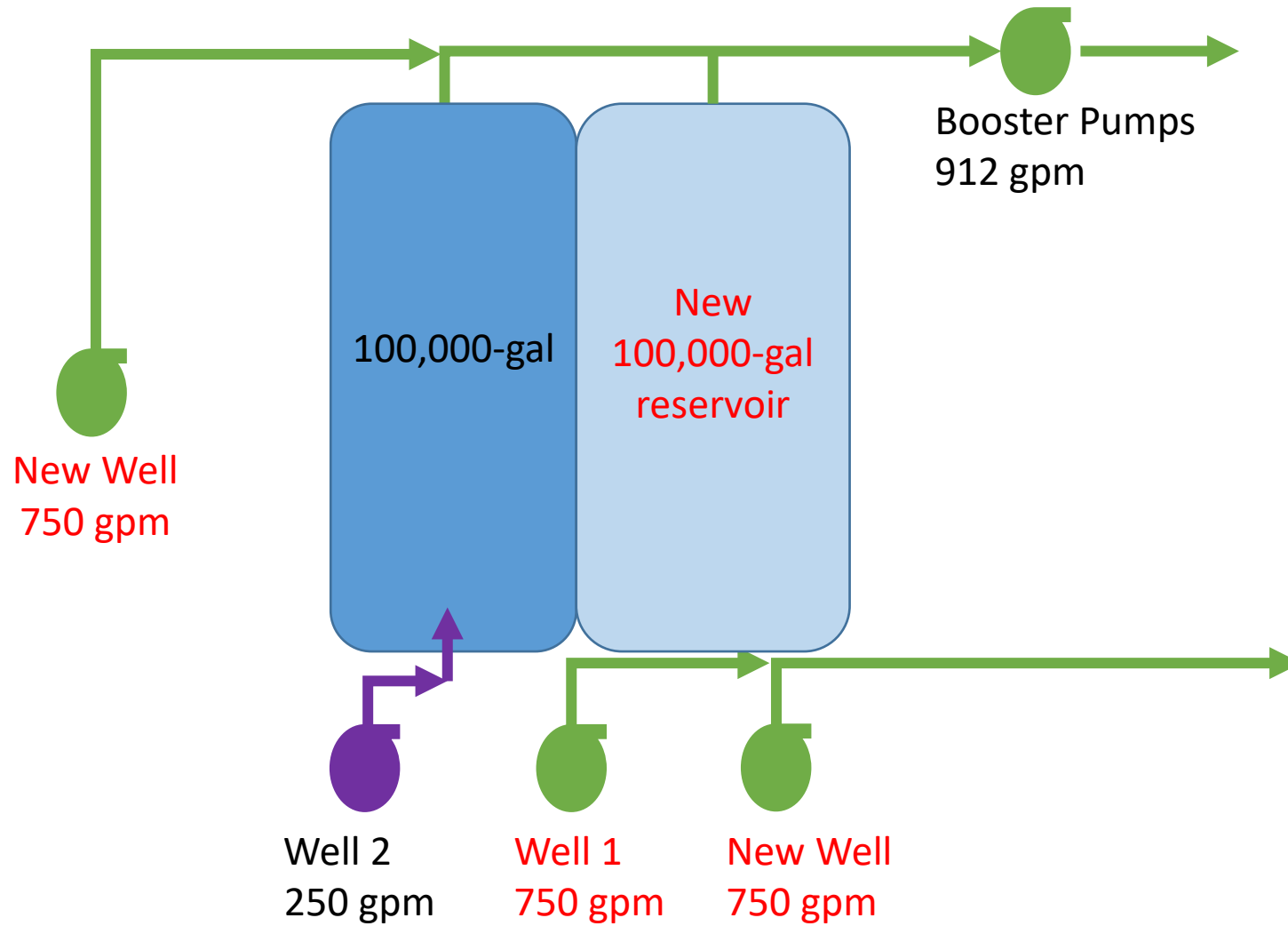


# Proposed Improvement Options

DESCRIPTION	ESTIMATED PROJECT COST
<i>Option 1 – Source (3 Small Wells)</i>	
Develop 3 Wells (750 gpm each) Add 100,000 gallon Underground Reservoir New Transmission	\$2,982,000
<i>Option 2 – Source (2 Large Wells)</i>	
Develop 2 Wells (1,600 gpm each) Add 100,000 gallon Underground Reservoir New Transmission	\$2,971,000
<i>Option 3– Standpipe (Water Tower) Storage</i>	
Develop 2 Wells (1,000 gpm each) Add 525,000 gallon Standpipe (Water Tower) Reservoir Add 300 gpm to Booster Station Transmission Upgrade	\$3,299,000
<i>Option 4 – Current System Configuration – RECOMMENDED</i>	
Develop 2 Wells (1,000 gpm each) Add 200,000 gallon Underground Reservoir Add 1,500 gpm to Booster Station New Transmission	\$2,345,000

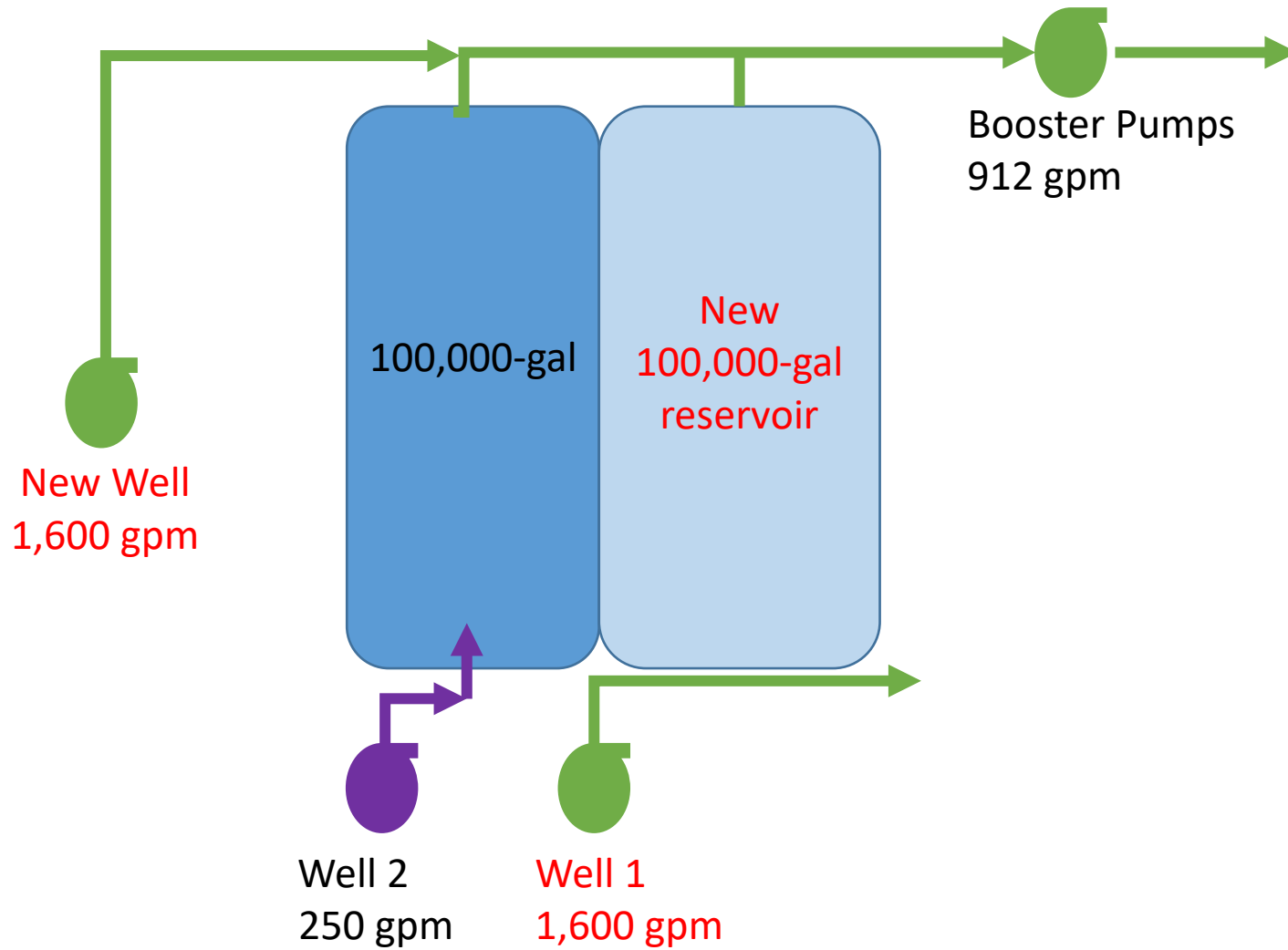
Recommended

# Updated Improvement Option 1



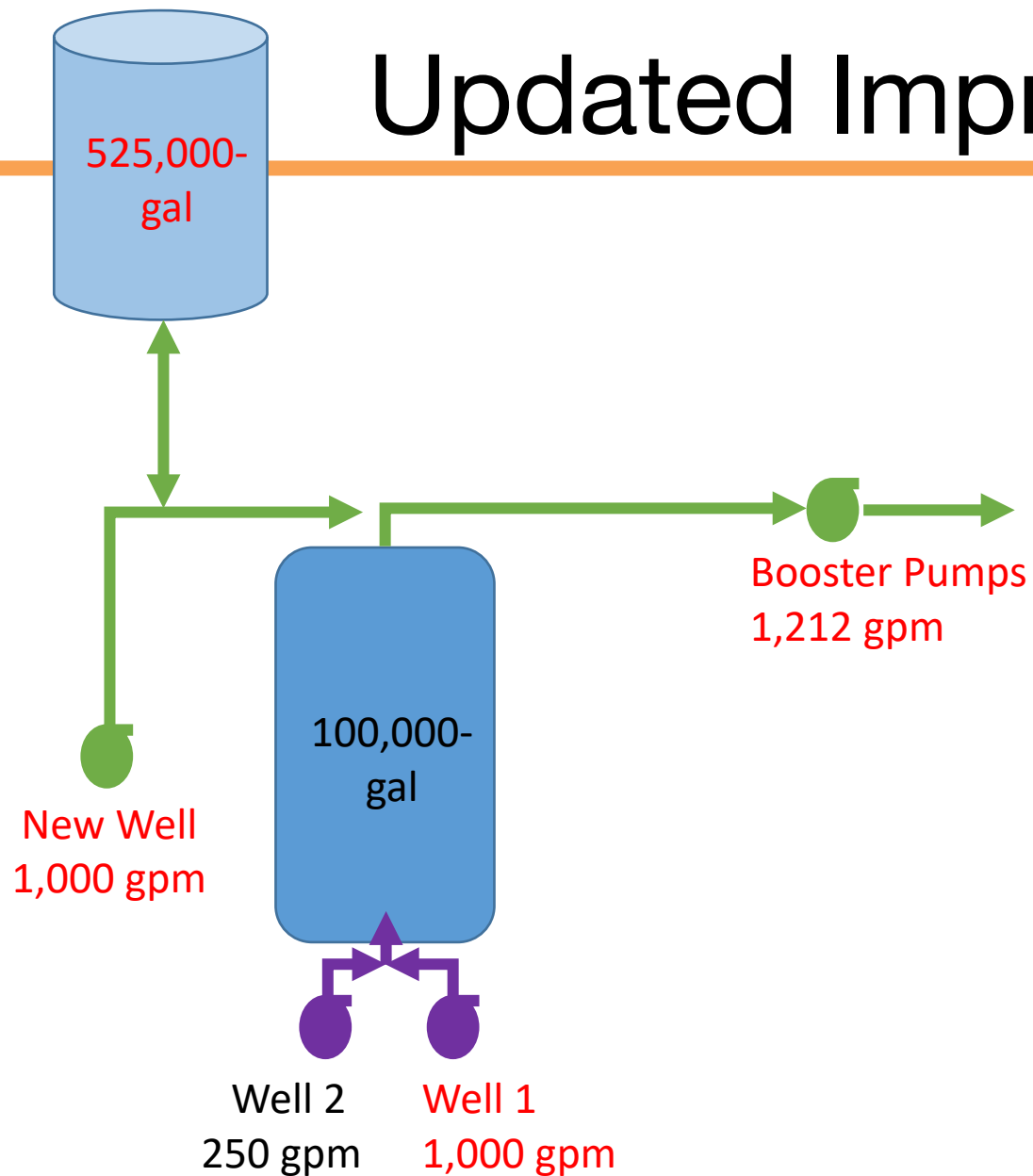
- 3 Small Wells
- Required Improvements
  - New Well- 750 gpm
  - Well 1 Reconfiguration- 750 gpm to system
  - New Well- 750 gpm
  - Addition of 100,000-gal reservoir
  - 3,250 LF Transmission
- Estimated Cost: \$2.98 million
- Timeline: 32 months

# Updated Improvement Option 2



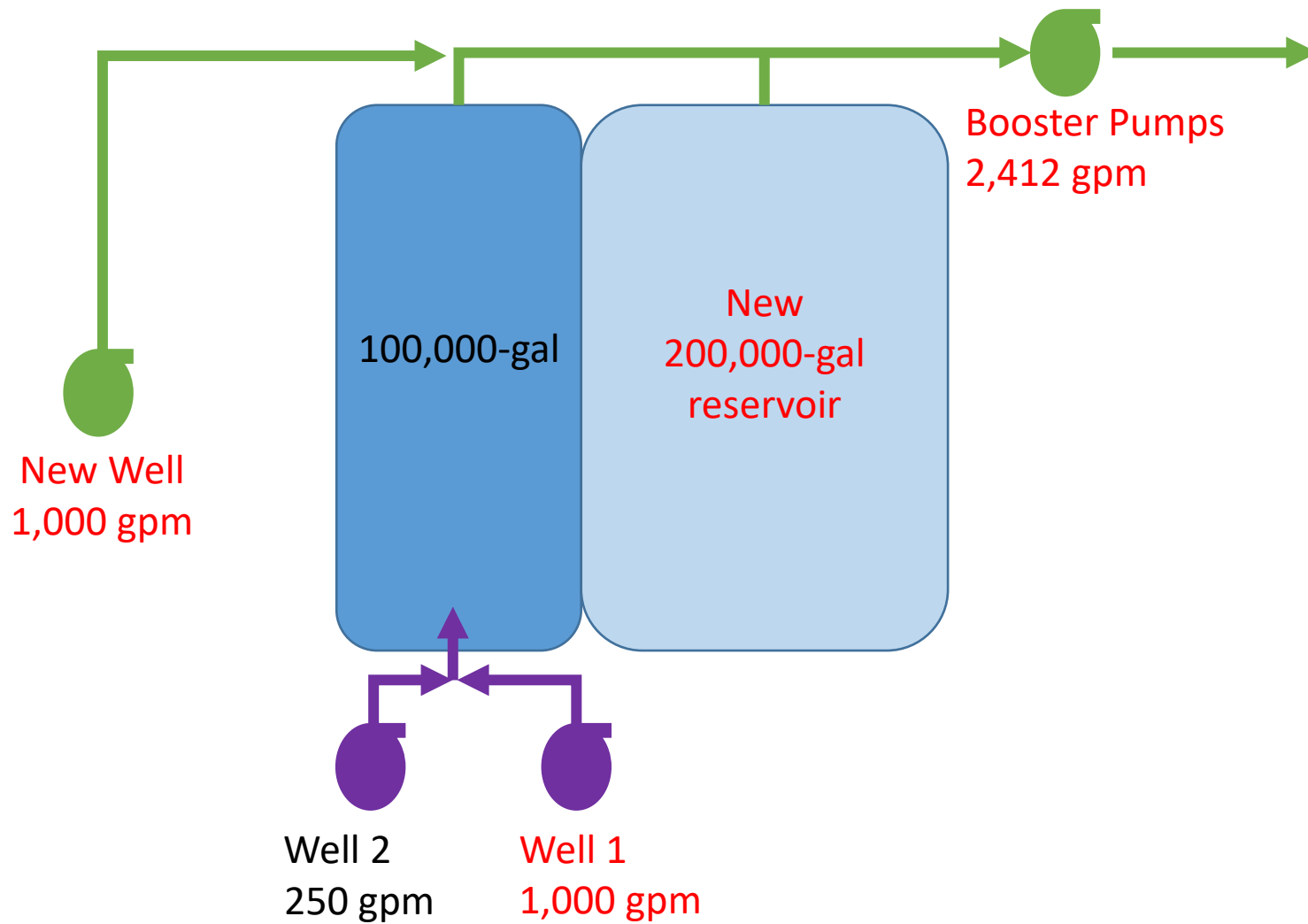
- 2 Large Wells
- Required Improvements
  - New Well- 1,600 gpm
  - Well 1 Reconfiguration- 1,600 gpm to system
  - Addition of 100,000-gal reservoir
  - 3,250 LF Transmission
- Estimated Cost: \$2.97 million
- Timeline: 21 months

# Updated Improvement Option 3



- Standpipe (90-ft tall)
- Required Improvements
  - New Well- 1,000 gpm
  - Well 1 Upsize- 1,000 gpm to reservoir
  - Addition of 525,000-gal reservoir
  - Add 300 gpm Booster Capacity
  - 3,250 LF Transmission
- Estimated Cost: \$3.30 million
- Timeline: 24 months

# Updated Improvement Option 4



- Current Configuration
- Required Improvements
  - New Well- 1,000 gpm
  - Well 1 Upsize- 1,000 gpm
  - Addition of 200,000-gal reservoir
  - Upsize Booster Station by 1,500 gpm
  - 3,250 LF Transmission
- Estimated Cost: \$2.35 million
- Timeline: 21 Months



# New Well vs. McCormick

## New Well on Existing Site

- Drilling costs expected to be lower than estimated in 2019 (up to 30% cheaper)
- No new building required
- Sufficient space at existing well site
- 3-phase power available
- Keeps all facilities at one site
- **Estimated to be \$200k-\$300k cheaper than McCormick Well**

## McCormick Well

- 18-inch Well already drilled
- Requires extension of 3-phase power
- Requires new well house
- Require installation of new generator
- Requires ~550 feet of additional transmission to connect to system

# Improvement Cost Comparison

	Option 1 – Source (3 Small Wells)	Option 2 – Source (2 Large Wells)	Option 3 – Standpipe (Water Tower) Storage	Option 4 – Current System Configuration
Source	<i>Well 1 Upsize McCormick New Well</i>	<i>Well 1 Upsize McCormick</i>	<i>Well 1 Upsize New Well</i>	<i>Well 1 Upsize New Well</i>
	\$2,401,000	\$2,390,000	\$1,163,000	\$1,163,000
Storage	\$254,000	\$254,000	\$1,649,000	\$509,000
Booster	\$0	\$0	\$52,000	\$346,000
Transmission	\$327,000	\$327,000	\$435,000	\$327,000
<b>Total</b>	<b>\$2,982,000</b>	<b>\$2,971,000</b>	<b>\$3,299,000</b>	<b>\$2,345,000</b>

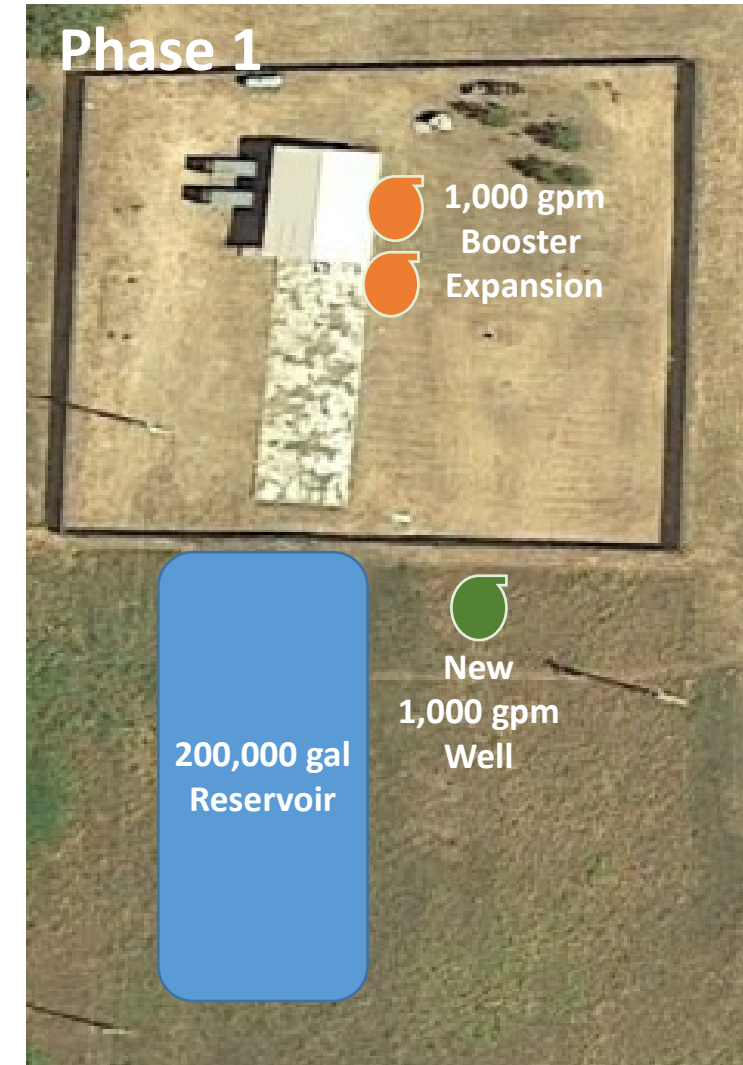
- Engineer’s Preliminary Opinion of Project Costs, based on last 20 years of public bidding projects for similar projects
- Costs are budgetary and include contingencies and engineering expenses
- All work must conform to public bidding laws and be completed by public works licensed contractors

# Environmental Comparison

Environmental Criteria	No Action	Option 1	Option 2	Option 3	Option 4
Climate and Physical Aspects (Topography, Geology, and Soils)	No Impact	Excavation for Facilities (Minor Long-Term Impact, Short-Term Impact)	Excavation for Facilities (Minor Long-Term Impact, Short-Term Impact)	Excavation for Facilities (Minor Long-Term Impact, Short-Term Impact)	Excavation for Facilities (Minor Long-Term Impact, Short-Term Impact)
Population, Economic, and Social Profile	No Potential for Growth or Expansion	Increased Cost to Users, Allow for Growth, Improved Service	Increased Cost to Users, Allow for Growth, Improved Service	Increased Cost to Users, Allow for Growth, Improved Service	Increased Cost to Users, Allow for Growth, Improved Service
Land Use	No Impact	No Impact	No Impact	No Impact	No Impact
Floodplain Development	No Impact	No Impact	No Impact	No Impact	No Impact
Wetlands and Water Quality	No Impact	No Impact	No Impact	No Impact	No Impact
Wild and Scenic Rivers	No Impact	No Impact	No Impact	No Impact	No Impact
Cultural Resources	No Impact	Potential Impact (Excavation in New Area)	Potential Impact (Excavation in New Area)	Potential Impact (Excavation in New Area)	Potential Impact (Excavation in New Area)
Flora and Fauna	No Impact	Site Disturbance (Short-Term Impact)	Site Disturbance (Short-Term Impact)	Site Disturbance (Short-Term Impact)	Site Disturbance (Short-Term Impact)
Recreation and Open Space	No Impact	No Impact	No Impact	No Impact	No Impact
Agricultural Lands	No Impact	No Impact	No Impact	No Impact	No Impact
Air Quality	No Impact	Construction Emissions (Short-Term Impact)	Construction Emissions (Short-Term Impact)	Construction Emissions (Short-Term Impact)	Construction Emissions (Short-Term Impact)
Energy	No Impact	Improved Overall System Efficiency	Improved Overall System Efficiency	Improved Overall System Efficiency	Improved Overall System Efficiency
Public Health	Continue Deficiencies in Service and Reliability	Improved Service and Reliability	Improved Service and Reliability	Improved Service and Reliability	Improved Service and Reliability
Option Cost	\$0	\$2.982 million	\$2.971 million	\$3.299 million	\$2.345 million

# Recommended Improvement Option 4

- Benefits
  - Eliminates all current deficits
  - Improves system reliability
  - Adds capacity for 274 new connections
  - Least expensive option
- Improvement Phasing
  - Phase 1 (495 connections)- New Well, Underground Reservoir, Booster Pump Upgrade (1,000 gpm)
  - Phase 2 (661 connections)- Well 1 upsize, Booster Pump Upgrade (500



gpm)

# Funding Options

- Pay as you Go
  - District Funds: Raise Rates to Fund Improvements
  - Downside: Improvements needed now cannot be completed until funds are raised
- Grants and Loans:
  - IDEQ: Low interest (2-3%) over 20-30 years; principal forgiveness or lower interest available
    - Offered in Spring 2020: \$2.835 million, 2.75% for 30 years
  - USDA: Low interest (3-4%) over 20-40 years; may not be grant eligible; interim financing required for projects over \$500,000
    - Open Application period
  - Bank Loan: Low interest (2.5-3%) over 20 years; less “red tape”

# Financing Authorization

February Feedback

- Local Improvement District
  - State Statute process where District customers can provide protest
    - If more than 60% protest received, decision to form LID goes to County Commissioners
  - Decision to form LID is made by District Board after receiving comments and reviewing protests from hearing
  - LID is assessment can be paid up-front or in annual installments (lien on property)
- Revenue Bond
  - Election in May, voted by District customers and approved by majority
  - Bond would be repaid by monthly rates

# Proposed Funding

- Funding:
  - Phase 1 (\$2.6 million): LID
  - Phase 2 (\$110,000): Future Reserves

- LID Assessment:

$$\frac{\textit{Project Cost}}{\textit{Total Connections Supported}} = \frac{\$2.6 \textit{ million}}{495 \textit{ connections}}$$

- Estimated Upfront Assessment: \$4,000-\$6,500
- Estimated Annual Assessment: \$200-\$300 per year (\$18-\$25 per month)
- All current, connected parcels will be assessed by LID
- If subdividing: “opt in” for LID assessment(s) for additional connection(s) by **January 15, 2021**



# Proposed Funding with Growth

- Phase 1 - \$2.6 million supporting 495 connections
- Existing Customers – 396 connections
- District uses cash to pay for remaining 99
  - Estimated \$517,000
- District cash obligation reduces if customers participate as growth
  - 10 growth customers – reduces to \$464,800
  - 30 growth customers – reduces to \$360,400

# Capitalization Fee

- System buy-in fee for new connections
- Hook-up fee (cost of physical connection) separate
- Current Fee: \$6,000 per connection
- Fee for customers paying standby fee (\$18 per month): \$6,000 per connection
- Fee for customers participating in LID (as growth): \$6,000
- Anticipated Fee with Improvements: \$12,500 per connection

# Growth Participants

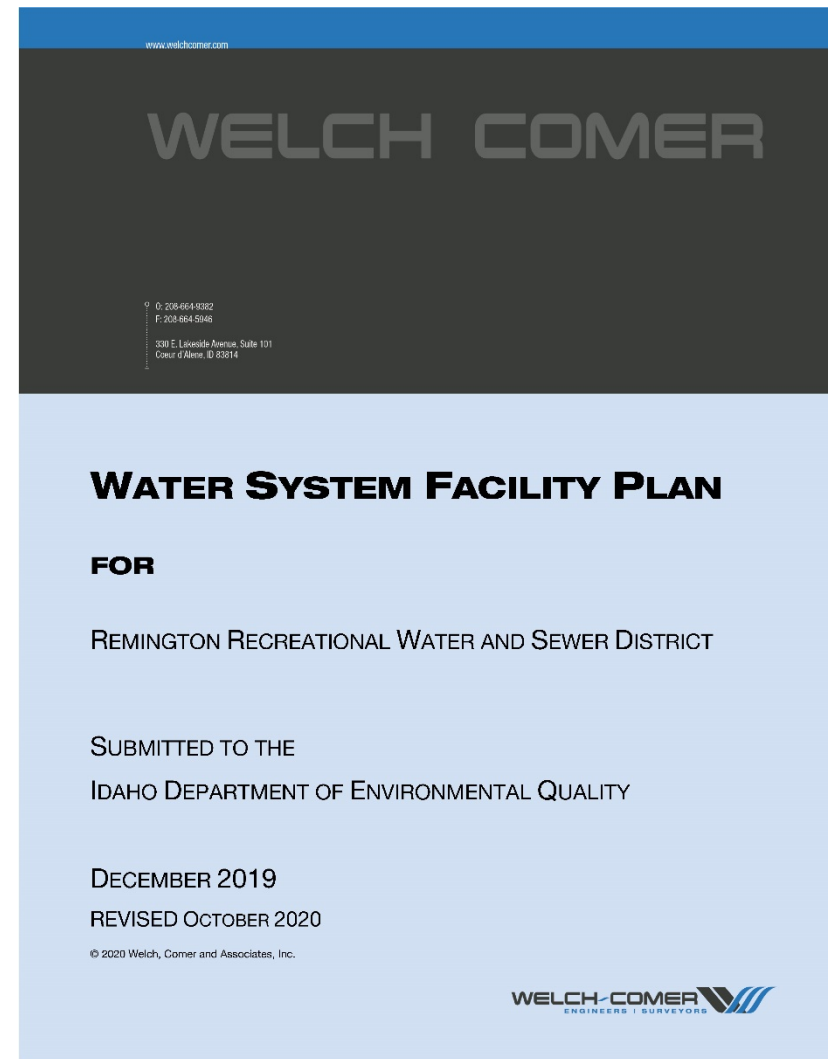
- Participate in LID as Growth Customer:
  - Estimated LID Assessment = \$4,000-\$6,500 per connection
    - Amortized over 30 years or paid upfront
  - Capitalization Fee = \$6,000 per connection
    - Paid upfront (on project completion) or over 5 years
- Connect Later:
  - Estimated Capitalization Fee = \$12,500 per connection (or more)
    - No amortization available
  - Capacity available first come, first served

# Projects District has Started

- Projects:
  - Well No. 3 Drilling Design and Construction – Spring 2021
  - Transmission Design – Early Spring 2021
- Why?
  - Projects are common to all options
  - Projects were included in 2007 Water Facility Plan
  - District using cash reserves to complete
  - Allows District to advance schedule to finish sooner

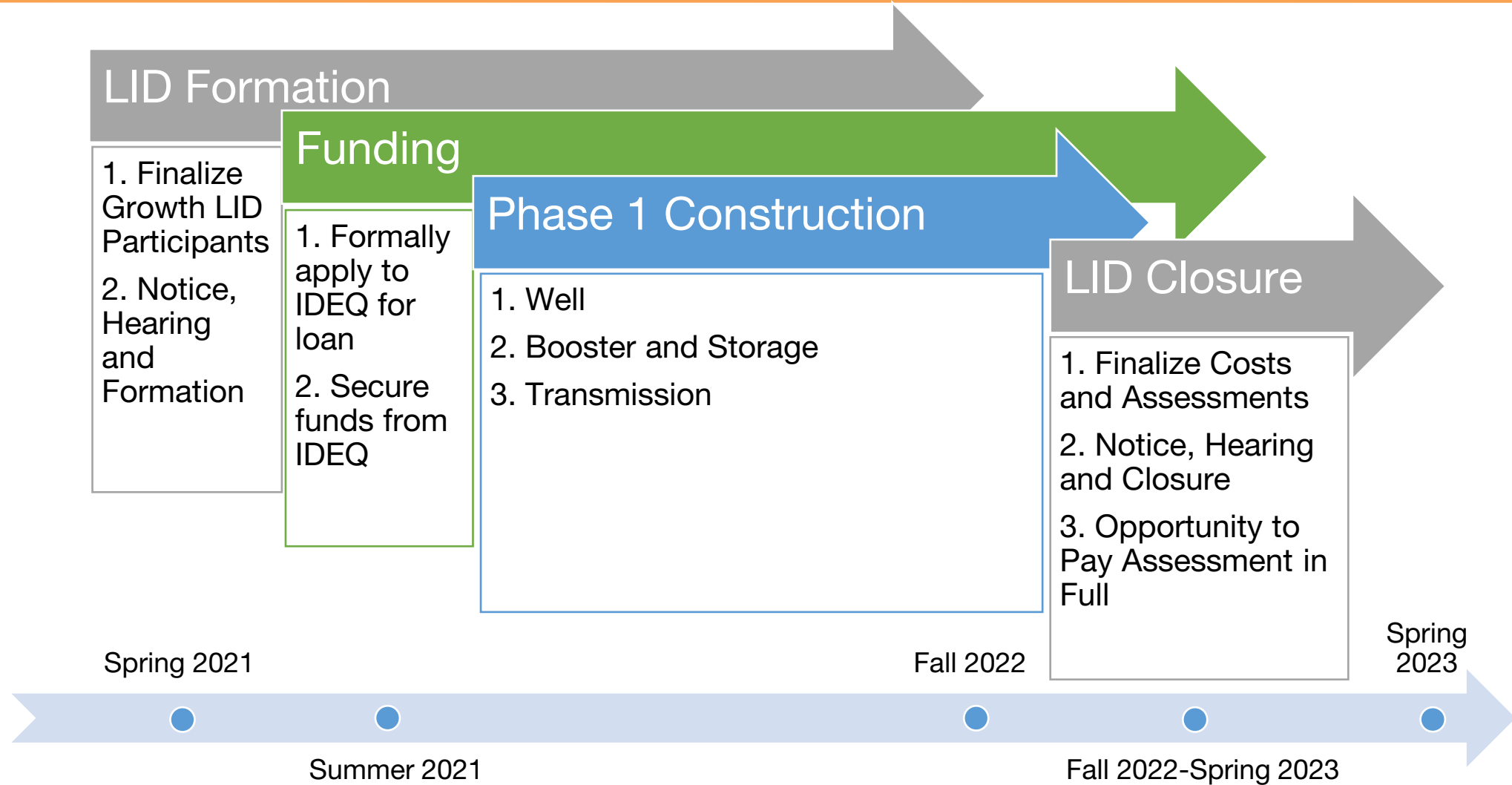
# Public Comment Period

- Board will accept written comments from today through January 15, 2021
- Water Facility Plan can be viewed at:
  - Welch Comer Engineers Office during normal business hours
    - 330 E Lakeside Ave, Suite 101 in Coeur d'Alene
  - District website
    - [rwdonline.org](http://rwdonline.org)
- Board will select improvements at Board Meeting on January 20, 2021 at 6:30pm





# Next Steps



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# Thank you

Questions and Comments?