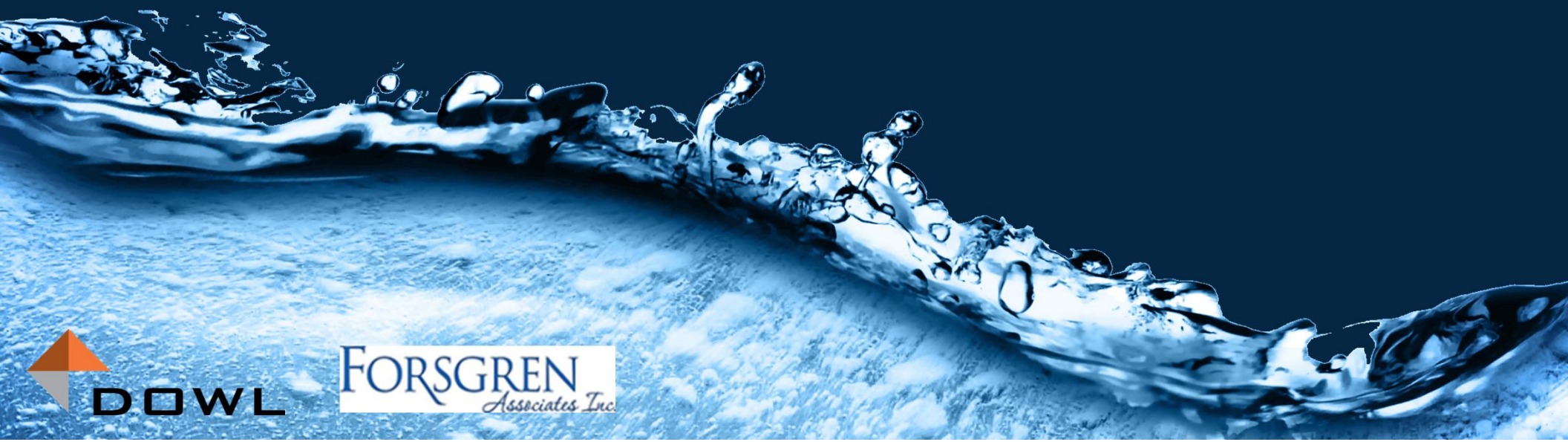
WWDC Study - Hot Springs County Supply Evaluation

Level II Study

PUBLIC HEARING

February 13, 2025



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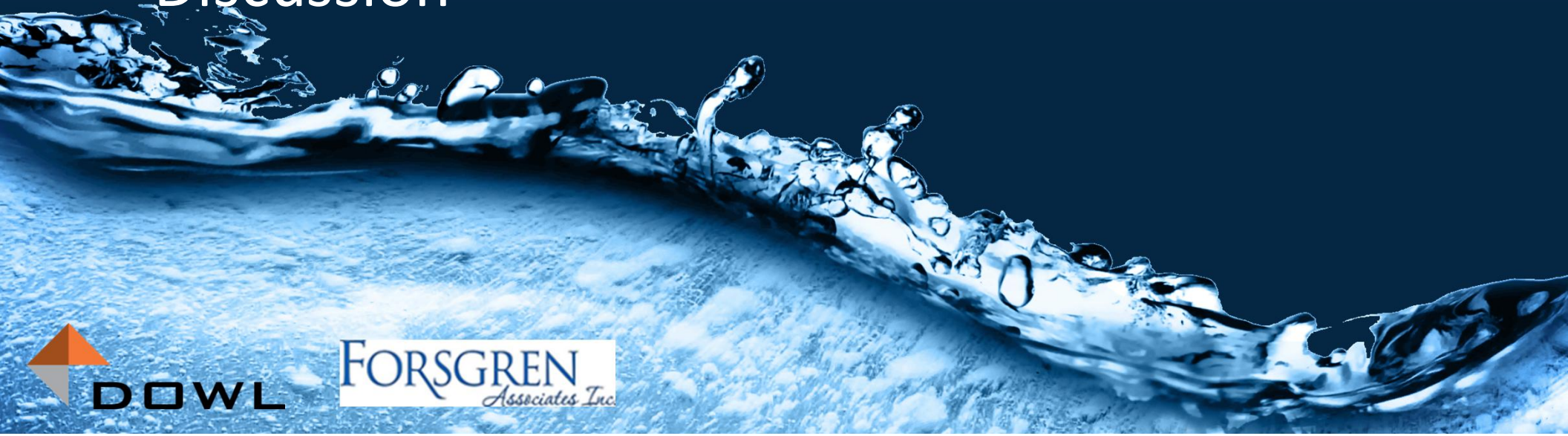
Presentation Agenda

- Introductions
- Review Project Approach/Scope
- Review Study findings to date
- Next Steps
- Discussion



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Project History and Goals

- Water Development Background
- Application Process
- Water Development and Select Water Committee Discussion
- Overall Project Goals
- Project Team

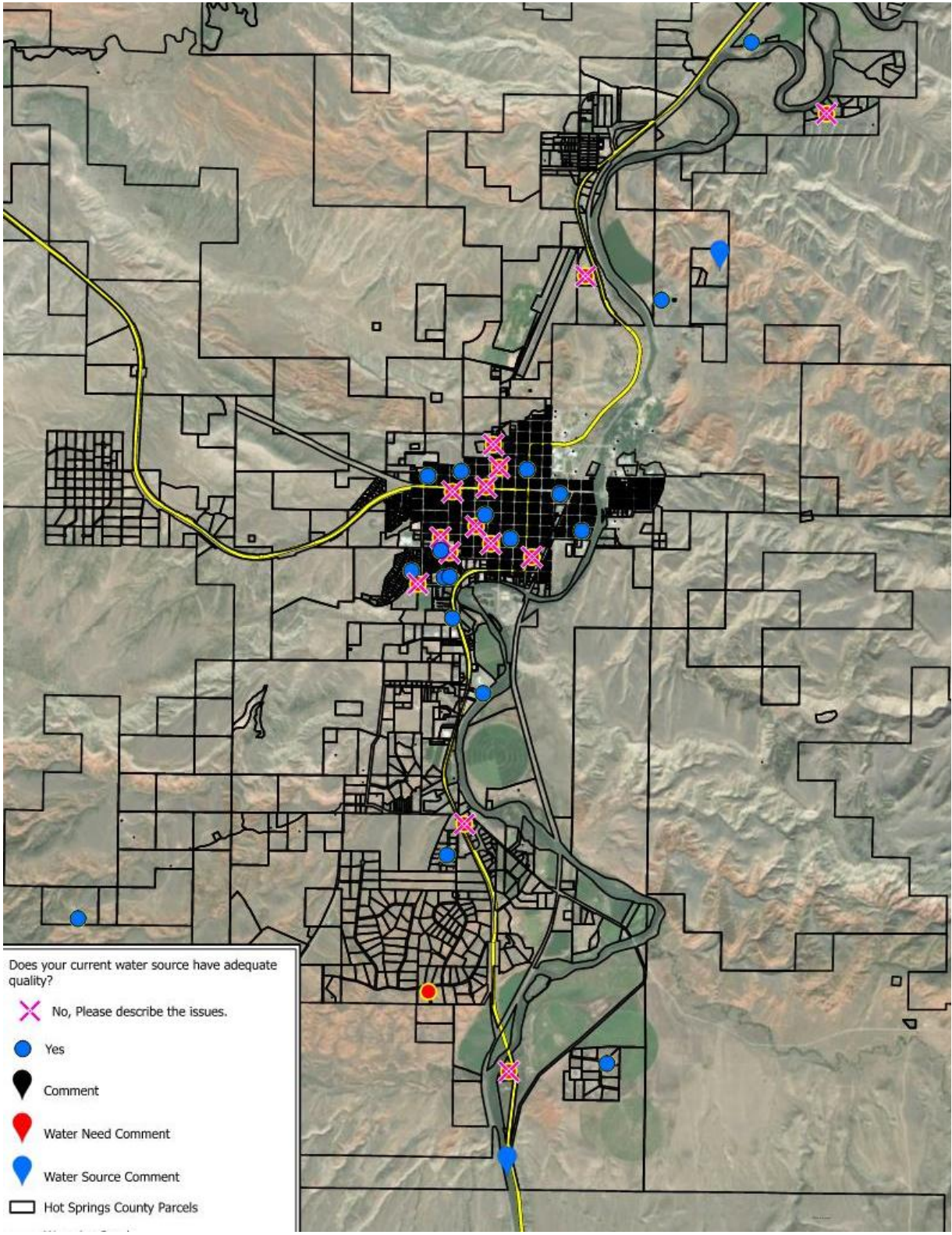
Project Scope

- Gather info and identify stakeholders
- Review existing information
- Develop Population Growth Projections
- Inventory and evaluate water resources
- Identify reasonable alternatives
- Prepare conceptual designs and costs
- Evaluate funding and resulting water rates
- Seek public input
- Prioritize and evaluate recommendations
- Obtain access
- Compile report

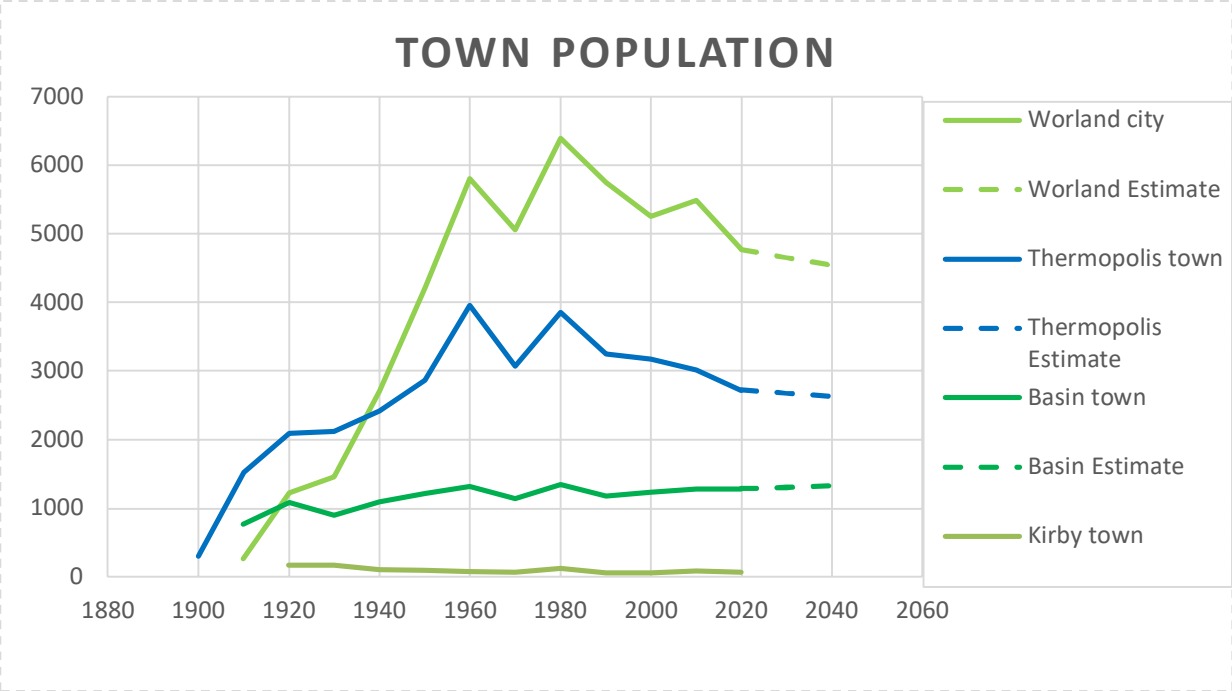
Summary of Input Gathered

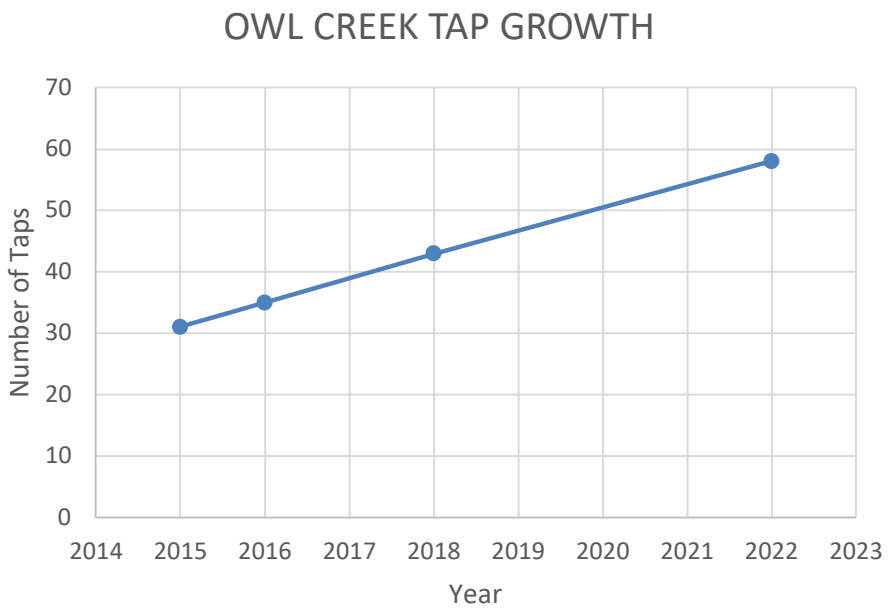
- Website, Mailing
- Initial scoping meeting May 22, 2024
- Project Update October 9, 2024
- Stakeholder List – 80+ emails
- 87 surveys completed online

Survey feedback



Growth and Demand Projections





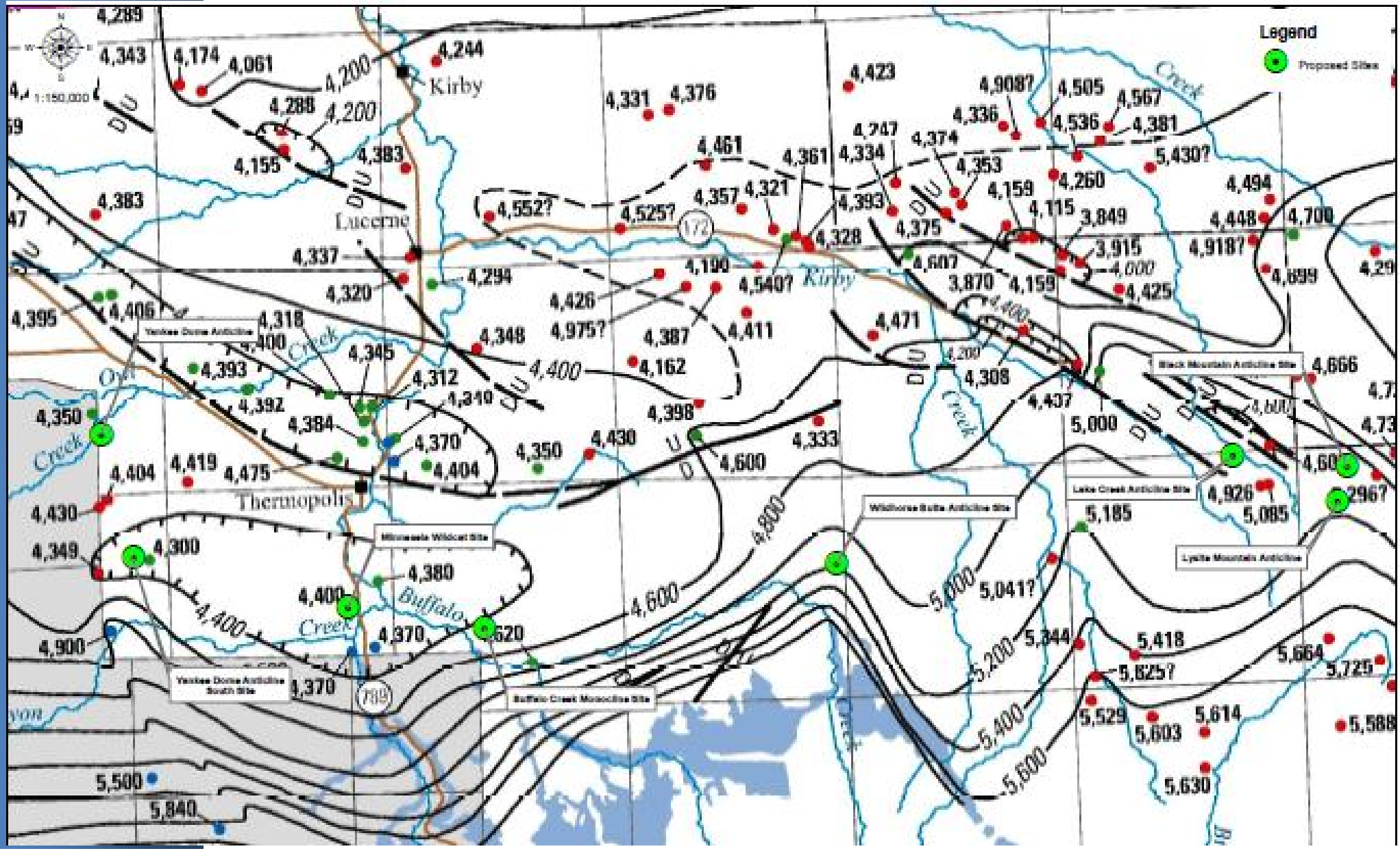
Entity	Growth Rate Applied
Thermopolis	0.64%
South Thermopolis	2.0%
Owl Creek	2.0%
East Thermopolis	1.0%
Red Lane	1.0%
Kirby	1.0%
Lucerne	1.0%
Black Willow	1.0%
Black Mountain	1.0%

Growth and Demand Summary

- Current taps – 1862
- Current MDD - 2.3 MGD (1580 gpm)
- Future taps – 2924
- Future MDD – 3.5 MGD (2385 gpm)

Well siting criteria

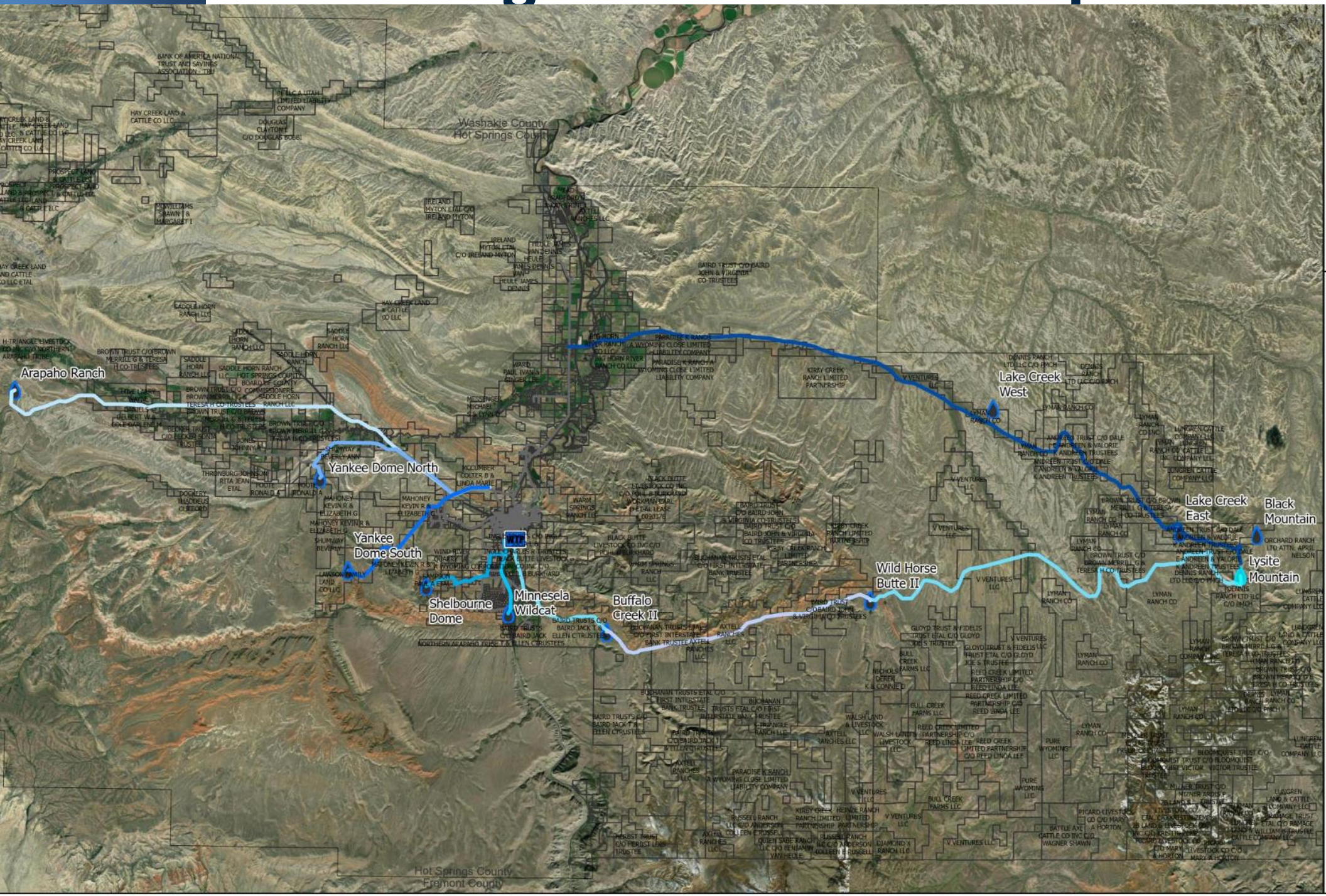
- Target deep aquifers on geologic structures



Well siting evaluation and options

- Western Sites
- Yankee Dome Anticline
- Shelbourne Dome Anticline
- Minnesela Wildcat
- Buffalo Creek Monocline
- Wildhorse Butte Anticline
- Lysite Mountain Anticline

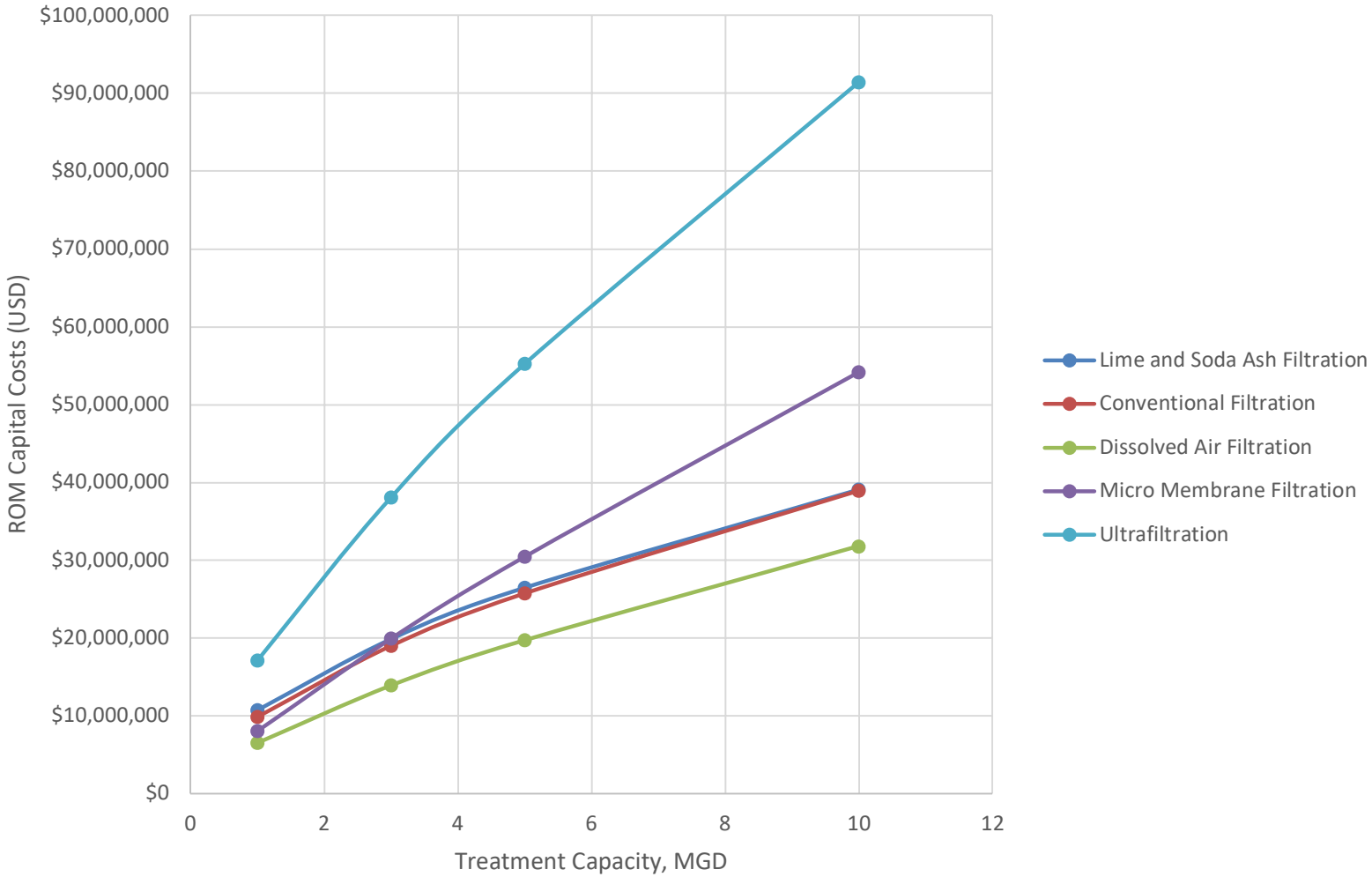
Well siting evaluation and options



Water Treatment Plant Evaluation and Options

- Upgrade Existing WTP
- Upgrade Existing WTP and relocate intake
- Construct new WTP and relocate intake
- Construct new WTP upstream
- Maintain WTP as Emergency supply only

Water Treatment Plant Evaluation and Options



Alternative Analysis

Table 6.2 Well Sites and Estimated Yields

Well Site Name	Estimated Maximum Well Yield (gpm)
Yankee Dome North I	750
Yankee Dome North II	750
Yankee Dome South	750
Shelbourne Dome	750
Minnesela Wildcat	1,100
Buffalo Creek I	850
Buffalo Creek II	1,100
Wild Horse Butte II	500
Lysite Mountain	1,500

Project Capital Cost $/gal

Table 6.3 Capital Cost per Gallon

Improvement Name	Total Cost	Est. Flow (gpm)	Capital Cost ($/gal)
Yankee Dome North I	$ 10,953,911	750	$ 14,605
Yankee Dome North I and II	$ 13,512,668	1500	$ 9,008
Yankee Dome South	$ 7,119,611	750	$ 9,493
Shelbourne Dome	$ 5,482,567	750	$ 7,310
Minnesela Wildcat	$ 4,815,538	1100	$ 4,378
Buffalo Creek II & III	$ 11,401,743	1400	$ 8,144
Wild Horse Butte II	$ 11,619,579	500	$ 23,239
Lysite Mountain S. to Wildhorse	$ 29,826,263	1500	$ 19,884
Lysite Mountain N. to Thermopolis	$ 48,862,849	1500	$ 32,575
WTP Option 1 – Retrofit Existing Lime Softening WTP	$ 18,430,000	2100	$ 8,586
WTP Option 2 – New Intake and Lime Softening WTP	$ 25,020,000	2100	$ 11,904
WTP Option 3 – New Intake and Conventional WTP	$ 27,600,000	2100	$ 13,143
WTP Option 4 – New Intake and Conventional WTP with UF	$ 38,830,000	2100	$ 18,490

Project Alternatives – Debt Cost

Based on 75% Grant and 25% Loan

Project	Loan Size	Grant Size	Project Size	Payment
Yankee Dome N and S	$ 5,079,817	$15,239,451	$ 20,319,268	($242,701.67)
Minnesela, Shelbourne Dome and Yankee Dome S.	$ 4,276,176	$12,828,529	$ 17,104,705	($204,305.61)
Buffalo Creek II and III	$ 2,850,436	$8,551,307	$ 11,401,743	($136,187.09)
Lysite Mtn and Yankee Dome N.	$ 15,593,879	$46,781,638	$ 62,375,517	($745,038.76)
New WTP at Existing location with new intake	$ 6,255,000	$18,765,000	$25,020,000	($298,849.14)

O&M Cost Comparison

- New WTP – $716,300/year - $32/tap/month
- Groundwater System - $438,500 - $20/tap/month

Financing – Funding Sources

- Funding assistance available through:
  - WWDC for “eligible” project component
  - USDA RD/RUS
  - Wyoming Drinking Water State Revolving Fund (DWSRF)
  - Mineral Royalty Grant Program (MRG)

Financing – Eligible vs Ineligible

- WWDC grants and loans only cover "eligible" components
- "Ineligible" components include treatment and distribution

Example Alternatives	Anticipated Eligible Components	Anticipated Eligible Costs	Anticipated Ineligible Components	Anticipated Ineligible Costs
Yankee Dome N & S	All Improvements	$20,319,268	None	$0
New WTP at Existing Location	• Raw water intake • Raw water piping • Raw water pumps • Raw water pumping structures	$1,310,000	• New water treatment plant • Distribution piping	$23,710,000

Financing – Anticipated Funding Option

- 75% grant and 25% low-interest loan

Project Alternatives – Monthly Cost

Table 11.3 Monthly Wholesale Cost per EDU

Alternative	O&M costs/EDU	Debt Cost/EDU	Minimum Base Rate Needed
Yankee Dome N and S	$20	$11	$31
Minnesela, Shelbourne Dome and Yankee Dome S.	$20	$9	$29
Buffalo Creek II and III	$20	$6	$26
Lysite Mtn and Yankee Dome N.	$20	$33	$53
New WTP at existing location with new intake	$32	$13	$45

Project Alternatives Matrix

Alternative	Criteria (scored from 1-5 with 1 being least favorable and 5 most)						Total Score (out of 30)
	Environmental Factors	Public Perception	Construction Unknowns	Timeframe Issues	Access Constraints	Regional System Benefits	
Yankee Dome N and S	3	4	2	2	3	3	17
Minnesela, Shelbourne Dome and Yankee Dome S.	2	2	2	1	1	3	11
Buffalo Creek II and III	2	3	2	2	2	3	14
Lysite Mtn and Yankee Dome N.	2	4	2	1	1	3	13
New WTP at new location	3	3	3	3	2	3	17
New WTP at existing site	4	3	5	5	5	3	25

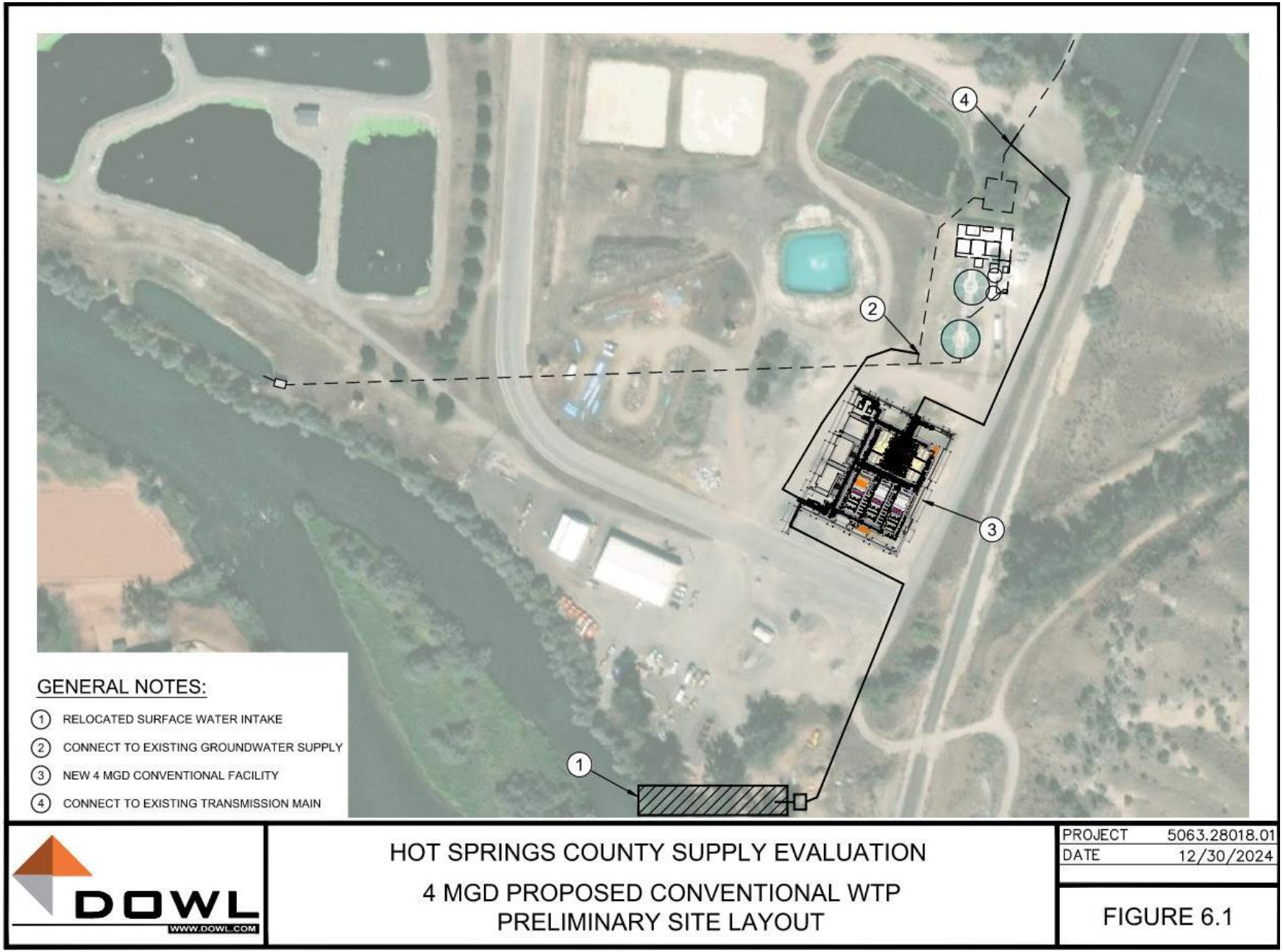
Study Recommendations

- Build new WTP on existing site with new intake.
- If access was available, a groundwater source could be developed on the Yankee Dome N. I and II and Yankee Dome South alternative.

System Governance Recommendation

- Recommend JPB provide regional service
- JPB option
  - Board made of a member from each entity
  - JPB provide wholesale water service to each entity
  - JPB own, manage and operate water supply facilities/system.

New WTP on Existing Site



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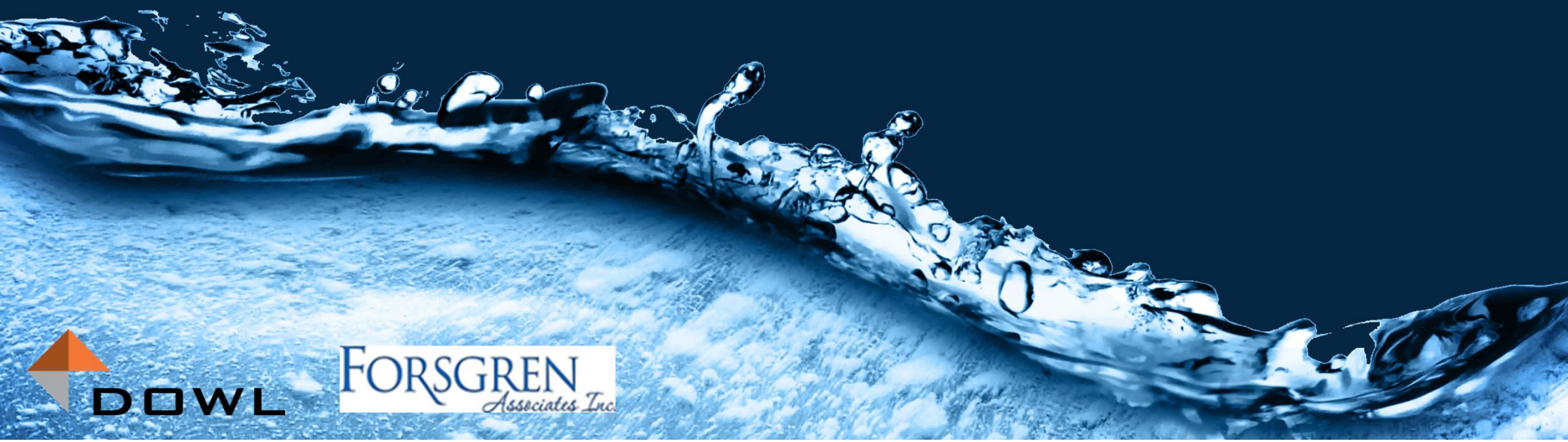

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