



PRESENTATION TO:

Nelson County Board of Supervisors

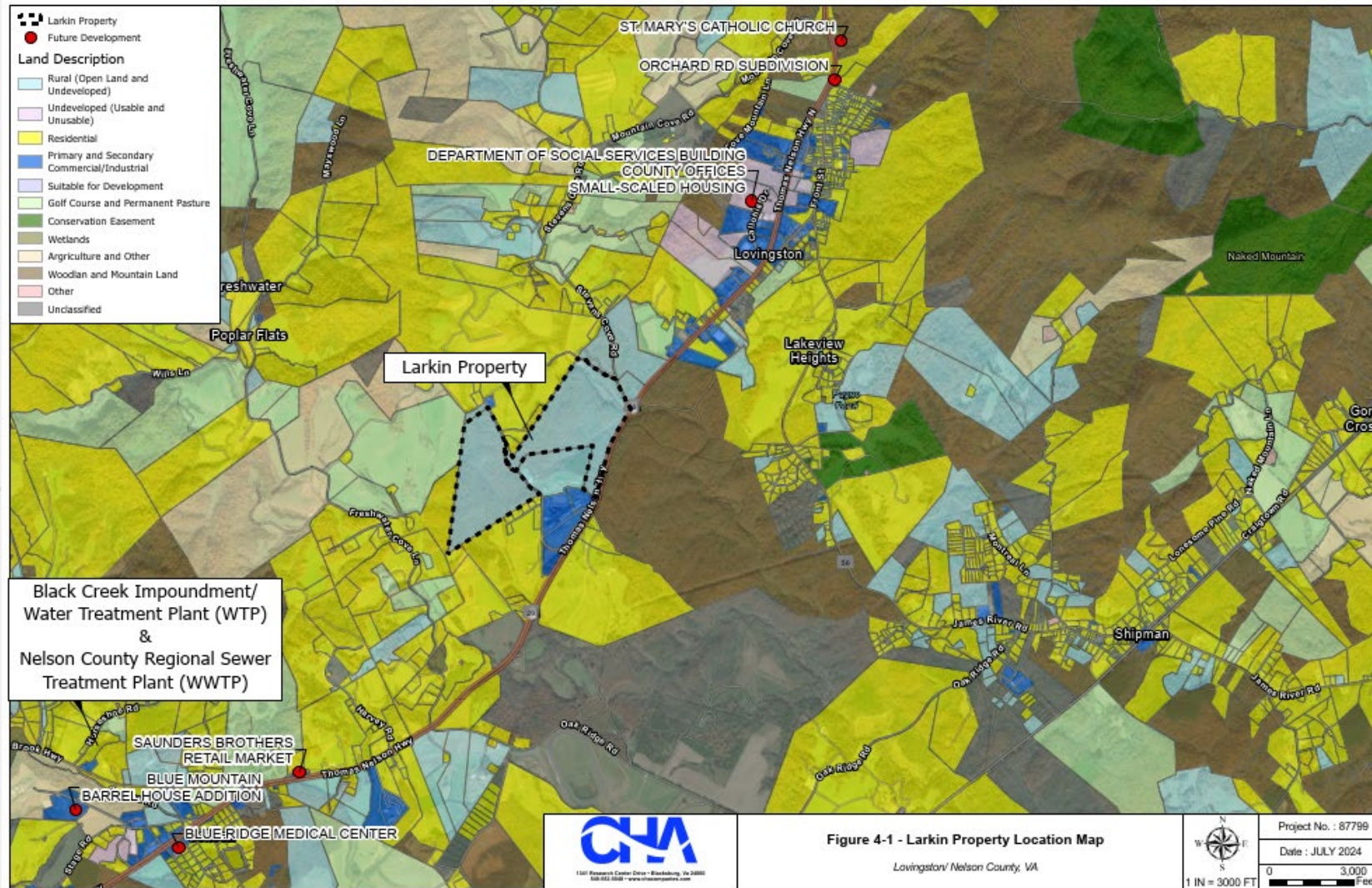
Larkin Property

Water and Sewer Capacity Analysis



Demands

Potential Development Master Plan



- Future Development Parcels
- ✓ 89,480 GPD

Demands

Future Development

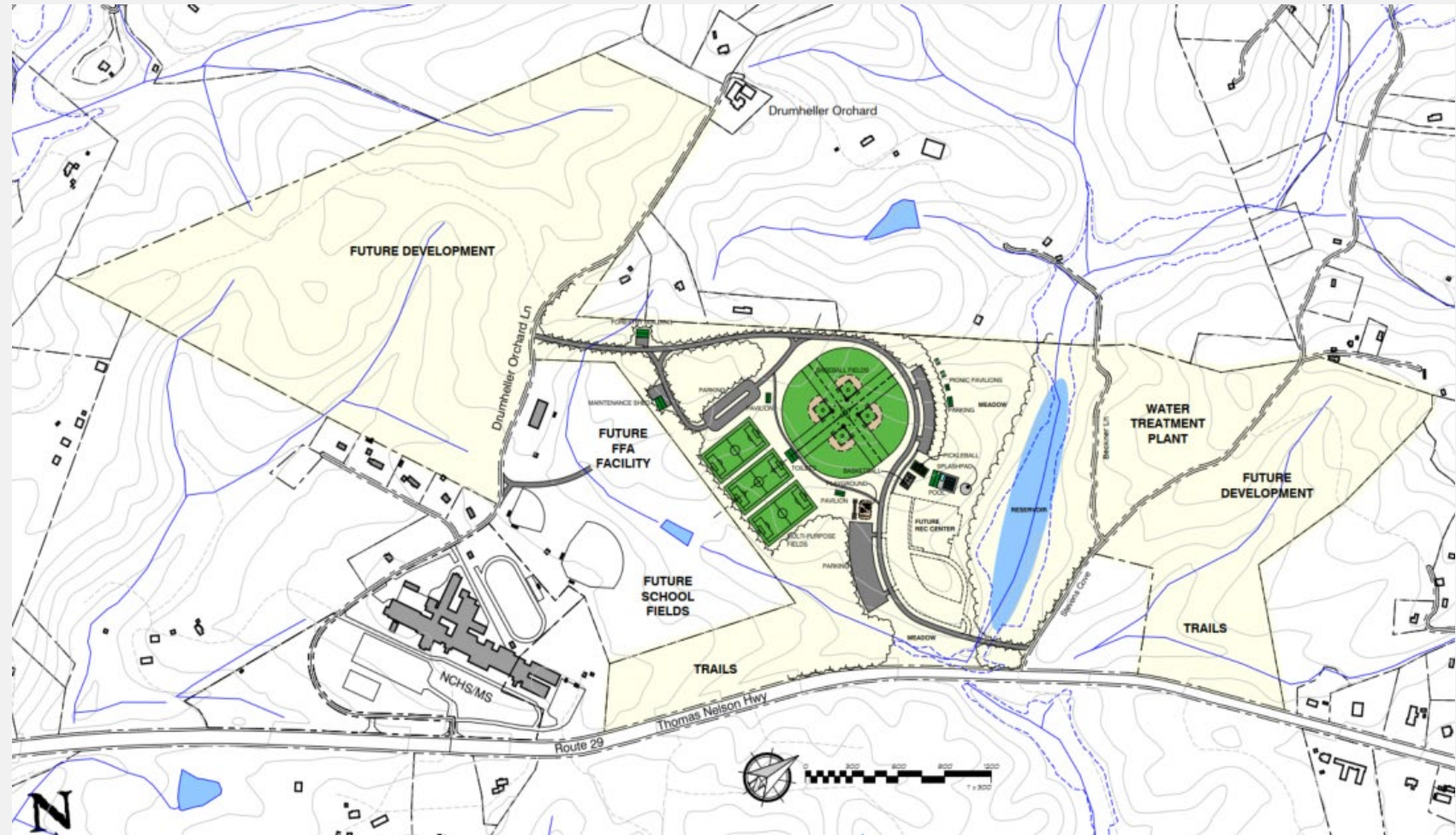
Table 4-7 – Summary of Future Development Facility Type and Total Demand

Land Use Category and Facility Type	Use/ Zoning	Total Water Demand (GPD)	Total Sewer Flow (GPD)
Larkins Properties			
Future Development - West	Residential	32,000	2,000
Future Development - East	Residential	10,100	1,000
Future Recreational Center	Assumed 50/50 Gymnasium/ Office and Exhibit Hall. No Swimming Pools.	42,000	42,000
North End Lovington			
St. Mary's Catholic Church	Commercial	2,800	2,800
Orchard Dr Subdivision	Residential	25,100	12,810
Department of Social Services Building	Commercial	1,600	1,600
County Offices Building	Commercial	800	800
Callohill Rd Housing	Residential	12,600	6,230
Colleen			
Saunders Brothers Retail Market	Commercial	1,000	1,000
Blue Ridge Mountain Barrel Addition	Commercial		
Blue Ridge Medical Center Expansion	Commercial	2,000	2,000
Total Demand		89,480	52,180

Demands

Larkin Property

- Larkin Property
 - ✓ 61,600 GPD
- Future Recreational Center
 - ✓ 42,000 GPD
- Multi-Purpose Field Irrigation
 - ✓ 246,900 GPD
- Baseball Field Irrigation
 - ✓ 481,000 GPD



Demands

Larkin Property

Table 4-1 – Larkin Properties Master Plan Land Use and Total Demand

Land Use Category and Facility Type	Unit Demand	Number	Total Demand (GPD)	Notes
Recreation/ Multipurpose Fields				
Spectator:	5 GPD/ seating, max capacity	1500 seatings	7,500	Assume no assembly
Baseball Field				
Spectator:	5 GPD/ seating, max capacity	1700 seatings	8,500	Assume no assembly
Outdoor Court				
Basketball:	5 GPD/ person, max capacity	1 court	6,000	Assembly/ Standing Spaces
Pickleball:	5 GPD/ person, max capacity	1 court	6,500	Assembly/ Standing Spaces
Outdoor Pool	10 GPD/ swimmer, max capacity	1 pool	2,300	Assembly, Group A-5
Splashpad	Avg. 110 gpm for 4 hours/ day	1 splash pad	26,400	Assume No Circulation w/ UV Treatment
Playground	5 GPD/ person, max capacity	1 playground	1,800	Daycare
Picnic Pavilion	5 GPD/ person, max capacity	4 tables	2,400	Assembly/ Fixed/ Unconcentrated
Maintenance Building (Forestry)	5 GPD/ person, max capacity	1 shed	100	Agricultural Building
Maintenance Shed	5 GPD/ person, max capacity	1 shed	100	Accessory Storage Area/ Mechanical Room
Total Potable Demand			61,600	
Recreation/ Multipurpose Fields				
Irrigation:	1.5 inches of depth	3 fields	246,900	Assume raw water source
Baseball Field				
Irrigation:	1.5 inches of depth	4 fields	481,900	Assume raw water source
Total Non-Potable Demand			728,800	

Existing Water Sources

Surface and Groundwater

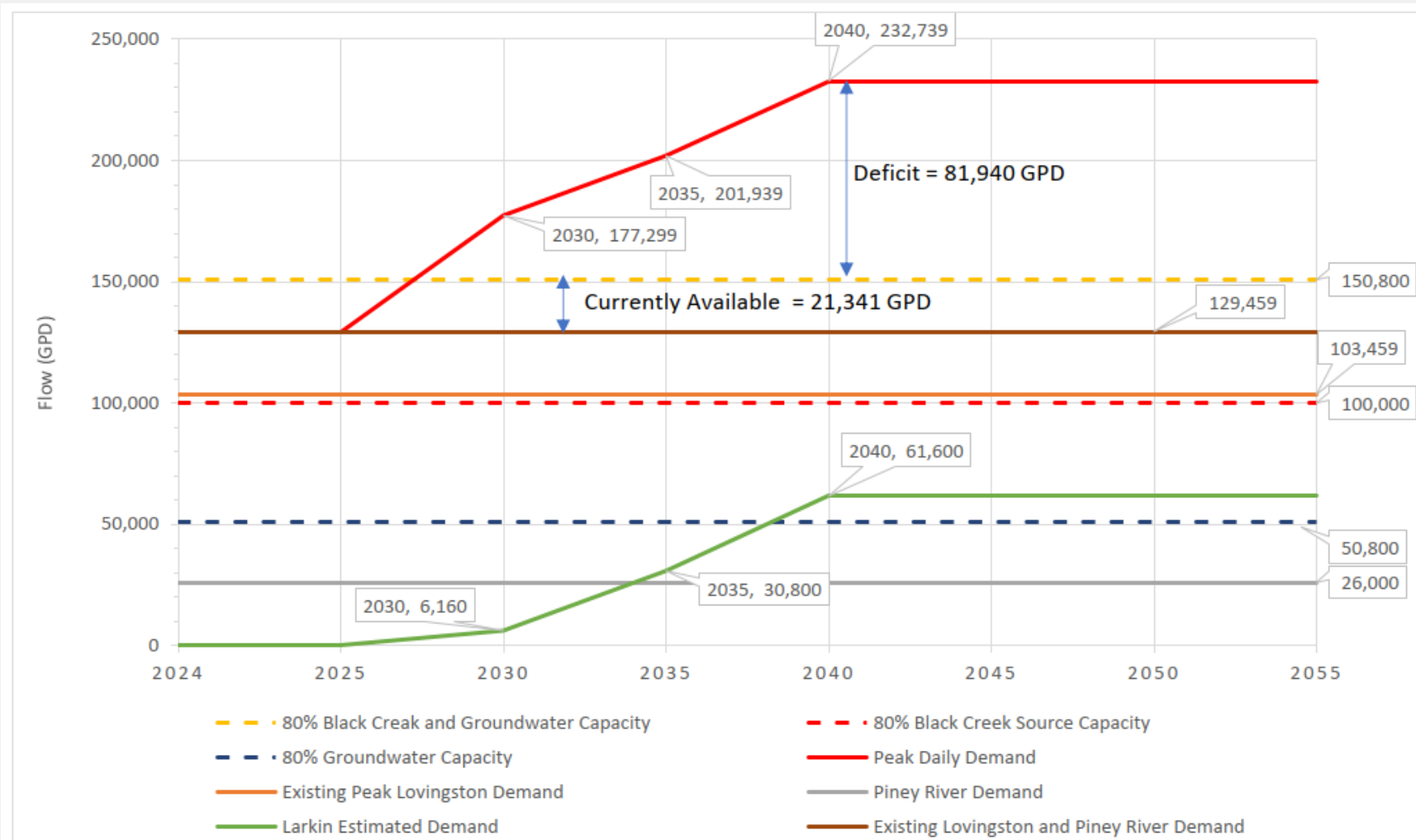


Figure 4-4 – Predicted Buildout Water Demand (2025-2055)

Existing Sewer Capacity

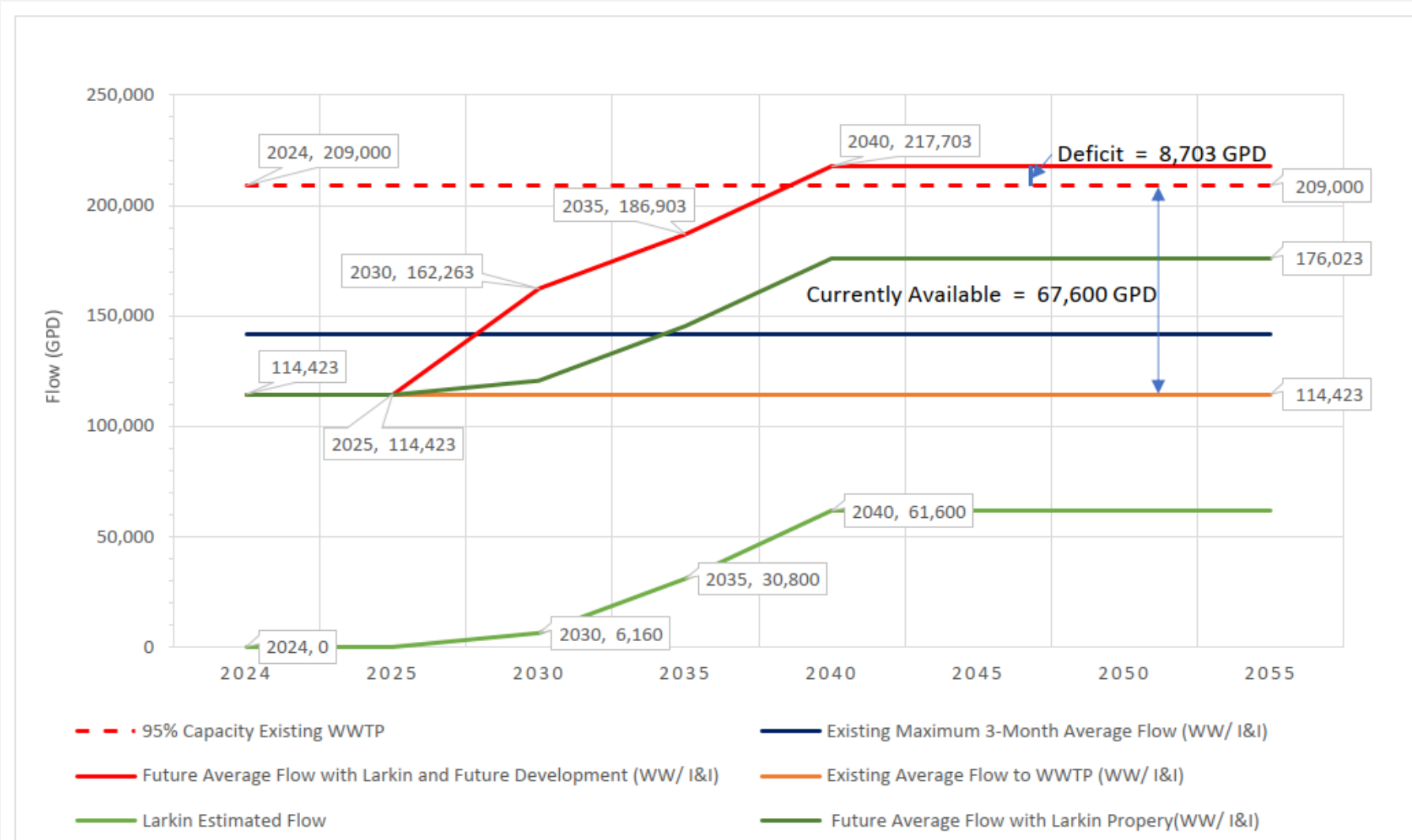
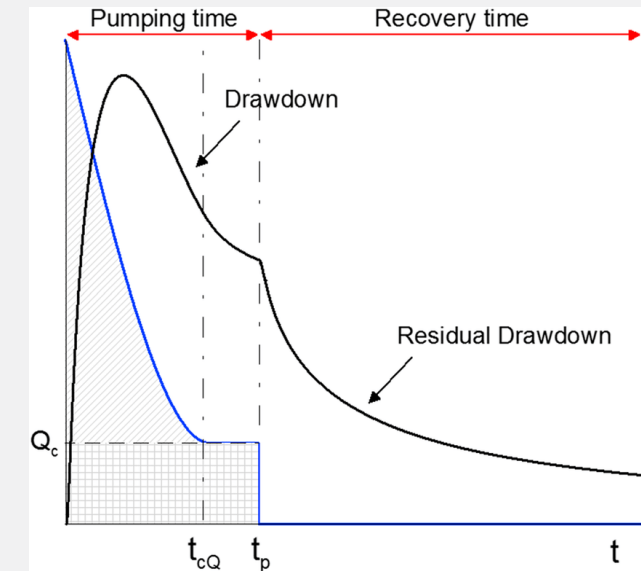
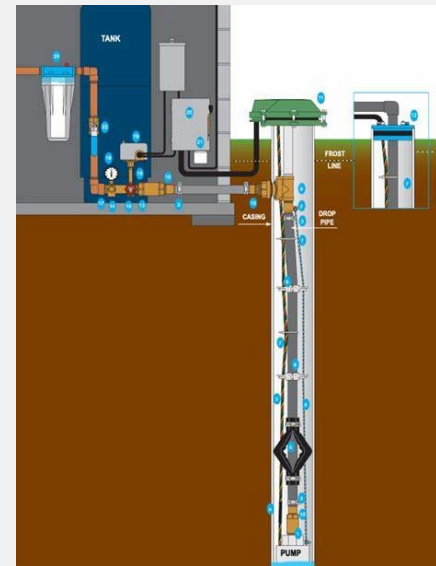
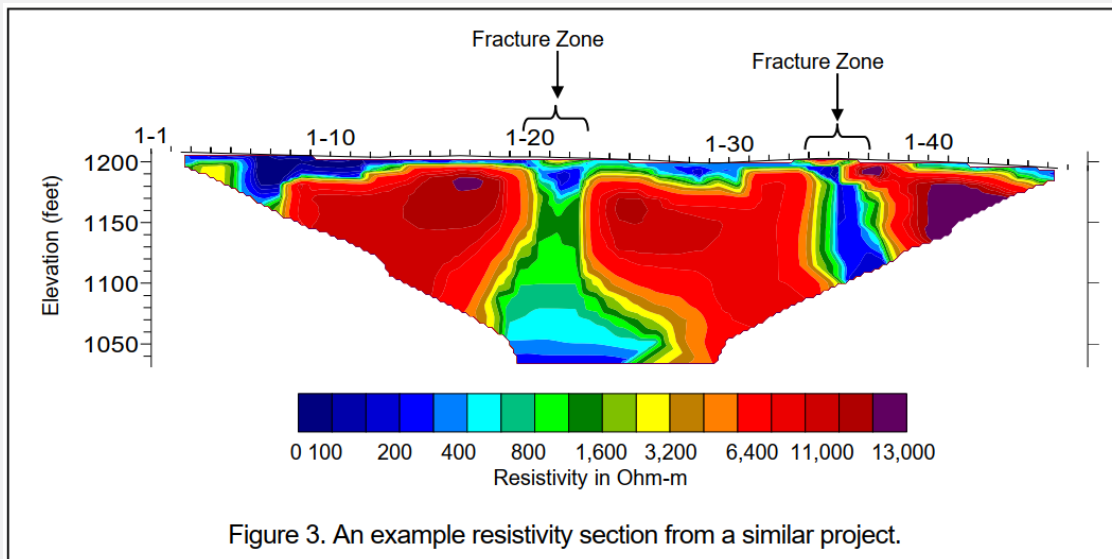


Figure 4-5 – Predicted Buildout Wastewater Flow (2025-2055)

Recommendations On Site Wells

On Site Well Development

- ✓ Resistivity Analysis
- ✓ Well Siting
- ✓ Test Wells
- ✓ Drawdown Test
- ✓ Water Quality Evaluation





Recommendations Reservoir and WTP

- Dillard Creek Impoundment
 - ✓ Permitting
 - ✓ Flow Data Collection
 - ✓ Flow-by Requirement
 - ✓ WTP Technology





QUESTIONS?