

1

2

3

4


5

Lake Wales System Withdrawal Limits	
Total Annual Daily Average	3.9 mgd
Maximum Month Daily Average	4.68 mgd

6

Key Driving Issues

- Dramatic Increase in Proposed Development Accelerating Need for More Water Supply
- Future Water Supply will Come from AWS (Alternative Water Supply)
 - Upper Floridan Aquifer (UFA) Oversubscribed
 - Lake Wales AWS Essentially Means the Lower Floridan Aquifer



City of Lake Wales - Alternative Water Supply Assessment | Trusted Experts | Innovative Results


7


Current Pending Residential Projects

- WH Corporation
 - 6,100 Single-family & Multi-family Homes & Townhouses
 - Commercial & Office Space Included
 - Expected Construction Over Next 10 Years
- 16 Other Proposals
 - Total = 2,247 New Housing Units
 - Expected Construction Over Next 5-6 Years
- **Total of 8,347 New Housing Units planned**

90%

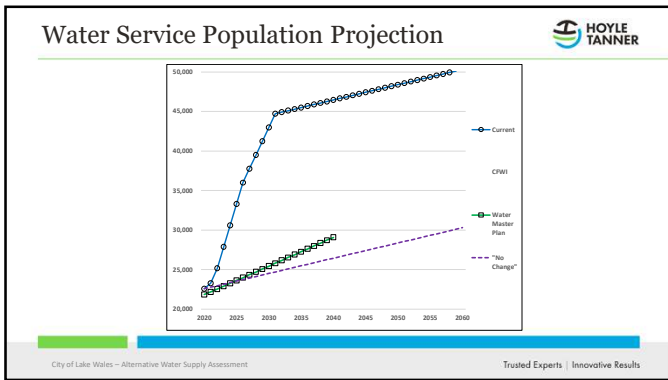
Increase to
Housing Units
Currently Served



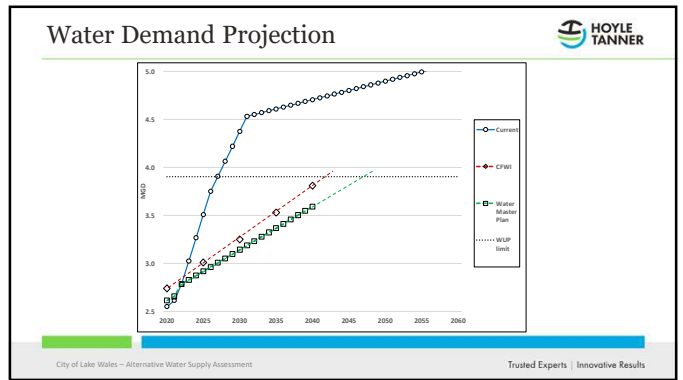


City of Lake Wales - Alternative Water Supply Assessment | Trusted Experts | Innovative Results

8




9



10

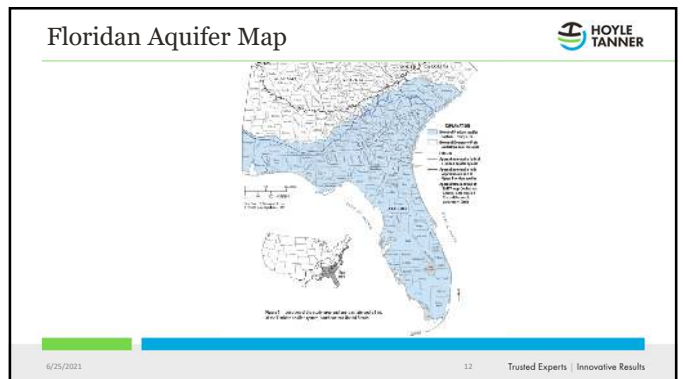
Alternatives for Meeting Future Demands

- ALT-1: Join Regional Lower Floridan Aquifer (LFA) Water Supply System being Developed by Polk Regional Water Cooperative
- ALT-2: City Development of LFA Well Supply
- "Demand Management" Approaches
 - Expansion of Water Conservation Programs
 - Expansion of Wastewater Reuse for Irrigation



City of Lake Wales - Alternative Water Supply Assessment | Trusted Experts | Innovative Results

11



12

Floridan Aquifer at Lake Wales

- Main Water-bearing Zones
 - Upper Floridan Aquifer (UFA)
 - Depth: 700' – 1,350'
 - High Quality, Highly Productive
 - Lower Floridan Aquifer (LFA)
 - Depth: 1,500' – 2,000' and 2,200' – 2,800'
 - Lower Quality, Possible Lower Productivity
- UFA Historic Source of Supply for Polk County Systems
- UFA Oversubscribed
- Future Sources will be AWS (Alternative Water Supplies) Possibly the LFA

City of Lake Wales – Alternative Water Supply Assessment | Trusted Experts | Innovative Results

13

ALT-1: Polk Regional Water Cooperative

- Public Agency Created in 2016 to Develop a Regional Water Supply
- Comprised of 15 Municipalities in Polk County & the County Government
- Regional Concept
 - 2 Major LFA Wellfields & Treatment Plants
 - Network of Transmission Pipelines & Pumping Facilities to Participating Municipalities
 - “Work-in-progress”, Very Conceptual to date
 - First Defined “Component” Under Development is Southeast Wellfield
- Not Enough Information Yet for Long-term Commitment by City
- Potential Loss of Local Control

City of Lake Wales – Alternative Water Supply Assessment | Trusted Experts | Innovative Results

14

ALT-2: City Development of LFA Supply

- Current Concept
 - 1,100 gpm LFA Well to Produce 800 gpm Finished Drinking Water
 - Reverse Osmosis (RO) Treatment System Creates 300 gpm Concentrate Waste Stream to WWTP
- Development Steps
 - Obtain Agency Buy-in to Plan
 - Conduct Test Well Program
 - Design & Permitting of Well & Treatment Systems
 - Bidding & Construction

City of Lake Wales – Alternative Water Supply Assessment | 15 | Trusted Experts | Innovative Results

15

Financial Picture

Cost of Water Production (not including distribution pumping)

- Current (UFA) = \$0.40 / kgal (per thousand gallons)
- Estimated (LFA) = \$2.80/ kgal with No Outside Funding Assistance
- Early Estimates for PRWC = >\$3 / kgal

Outside Funding Sources

- SWFWMD Cooperative Funding Initiative (CFI) Program
- Federal Water Infrastructure Financing and Innovation Act (WIFIA)
- Florida State Drinking Water Revolving Fund (DWSRF)

Increased Revenue from Water Sales

- \$350,000 per year additional by 2027
- \$2.2 million per year additional by 2040

City of Lake Wales – Alternative Water Supply Assessment | Trusted Experts | Innovative Results

16

Next Steps

City of Lake Wales – Alternative Water Supply Assessment | Trusted Experts | Innovative Results

17