



K STREET TANK IMPROVEMENTS

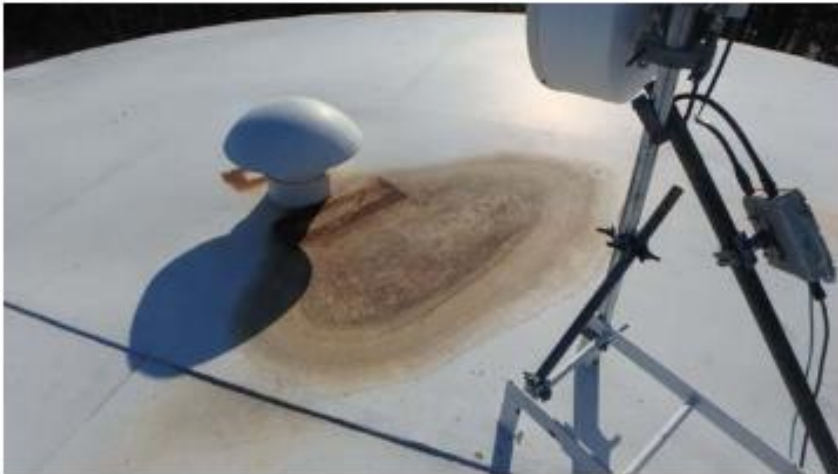
Dracut, MA– April 20, 2022

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EXISTING K-STREET TANK

- **2019 Inspection recommends tank rehab:**
 - Recoating of tank interior & exterior
 - Repair damaged roof & replace vent
 - Replace ladder, install roof handrail, repair access hatch, relocate antennas mounted on ladder



Damage to roof dome



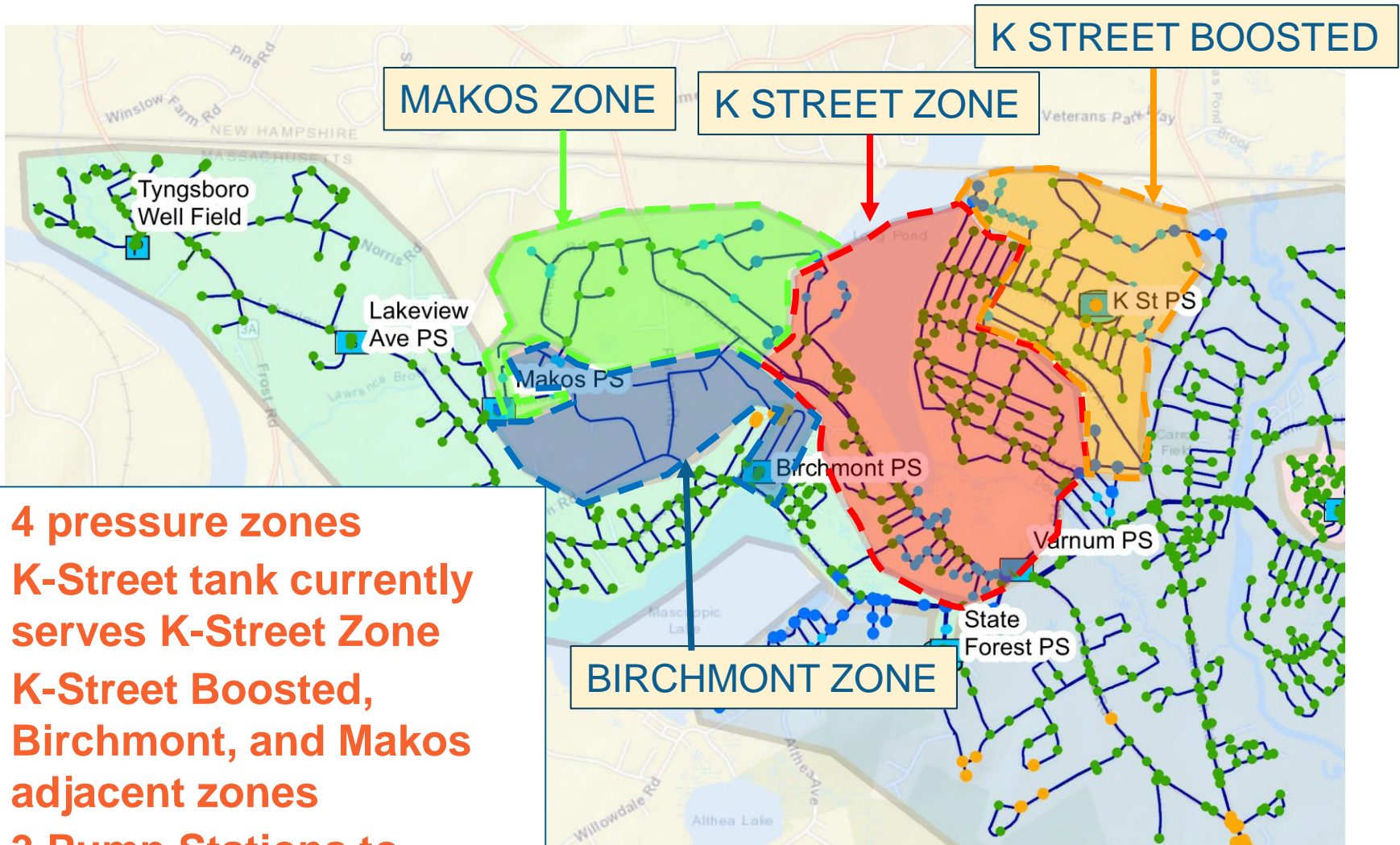
Coating degradation led to corrosion

EXISTING K-STREET TANK

- **DEP indicates tank should be rehabilitated or replaced**
- **Tank is needed in this location**
- **Existing Tank is oversized – much of tank is unused**
- **Tank replacement could improve system hydraulics**



EXISTING K- STREET TANK & ZONES



- 4 pressure zones
- K-Street tank currently serves K-Street Zone
- K-Street Boosted, Birchmont, and Makos adjacent zones
- 3 Pump Stations to maintain

ALTERNATIVES EVALUATED

- **Alternative 1: Rehabilitate Existing Tank**

- Maintain existing tank (~70 feet)
- Drain, clean & recoat
- Address structural & safety deficiencies

- **Alternative 2: New Elevated Tank**

- Increase tank height by 55 feet (~125 feet)
- Eliminate K Street Booster Station
- Allow for potential elimination of Makos & Birchmont Pump Stations

REHAB EXISTING TANK FROM K-STREET



REHAB EXISTING TANK FROM PASSACONAWAY



ALTERNATIVES EVALUATED

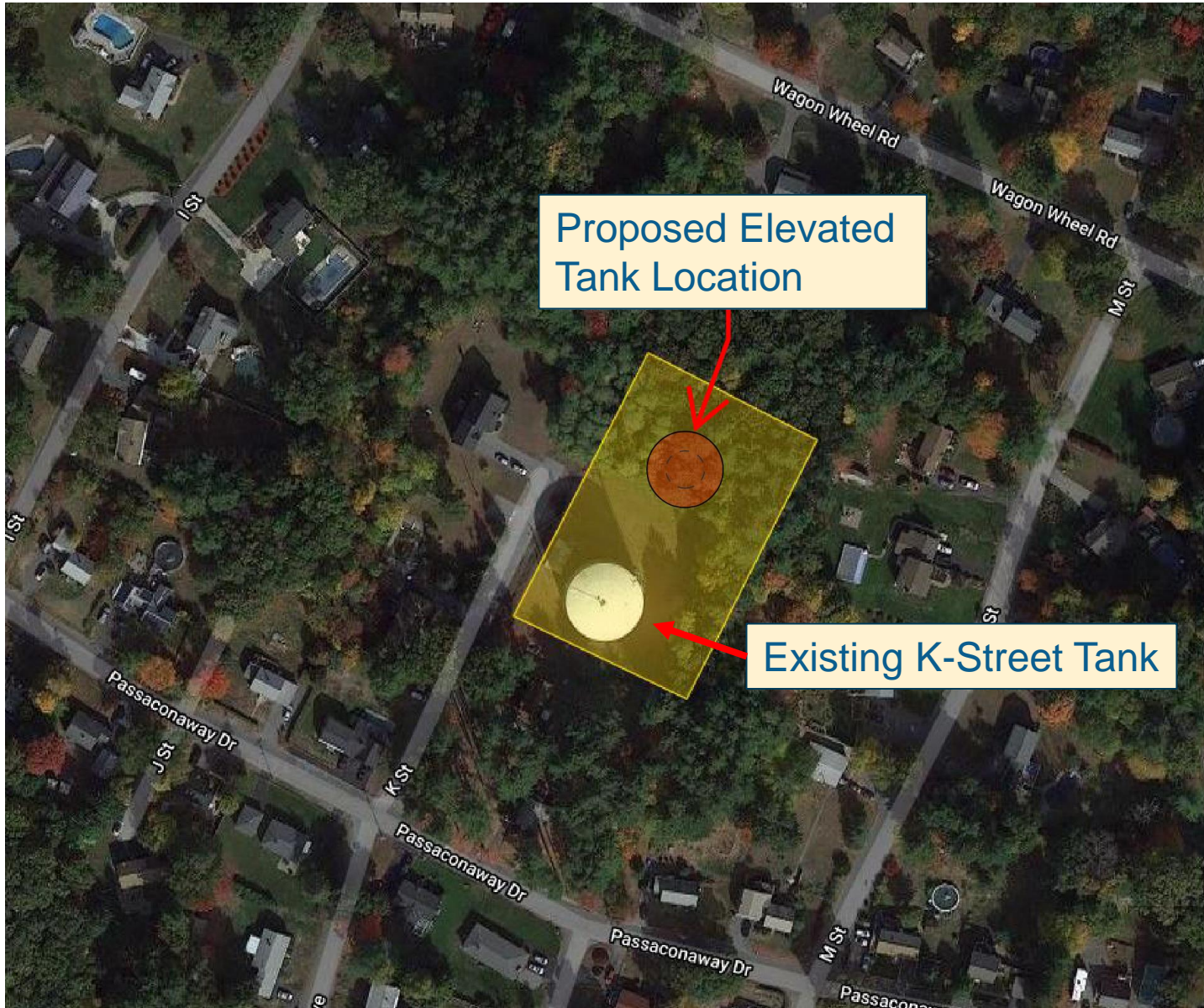
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K STREET TANK LOCATION



NEW ELEVATED TANK FROM K STREET



NEW ELEVATED TANK FROM K STREET



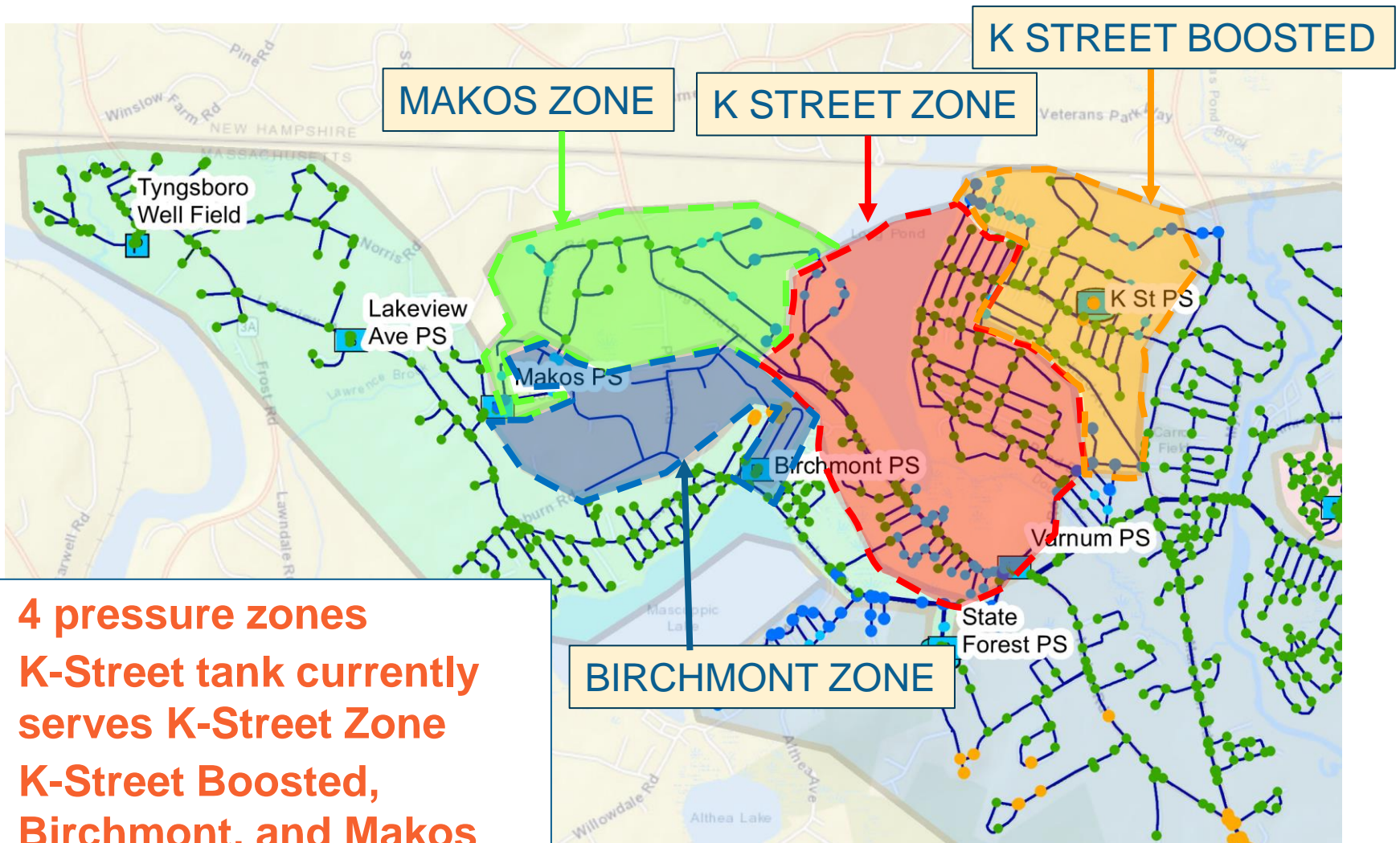
NEW ELEVATED TANK FROM PASSACONAWAY



NEW ELEVATED TANK FROM PASSACONAWAY

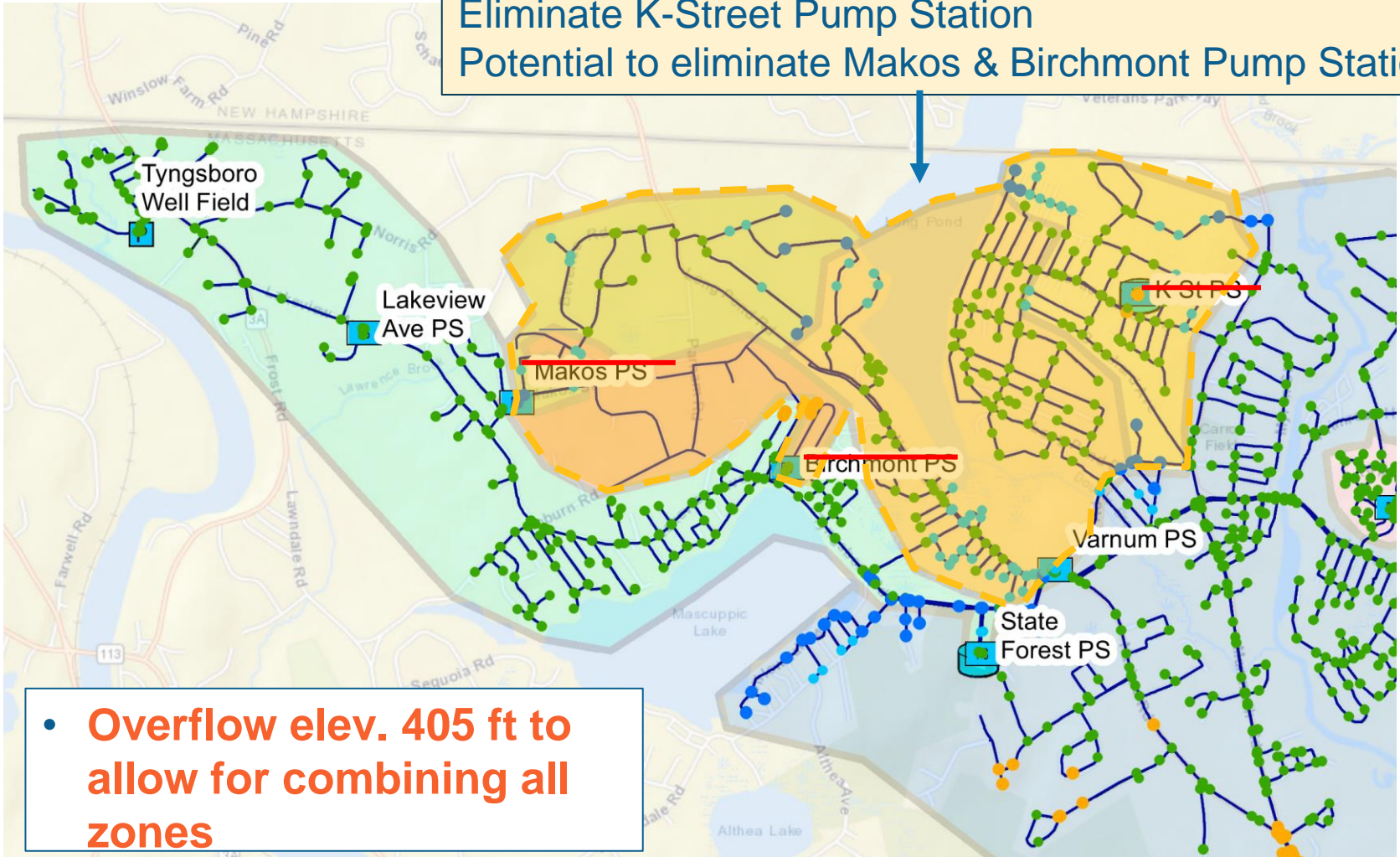


ALT 1 - EXISTING K- STREET TANK & ZONES



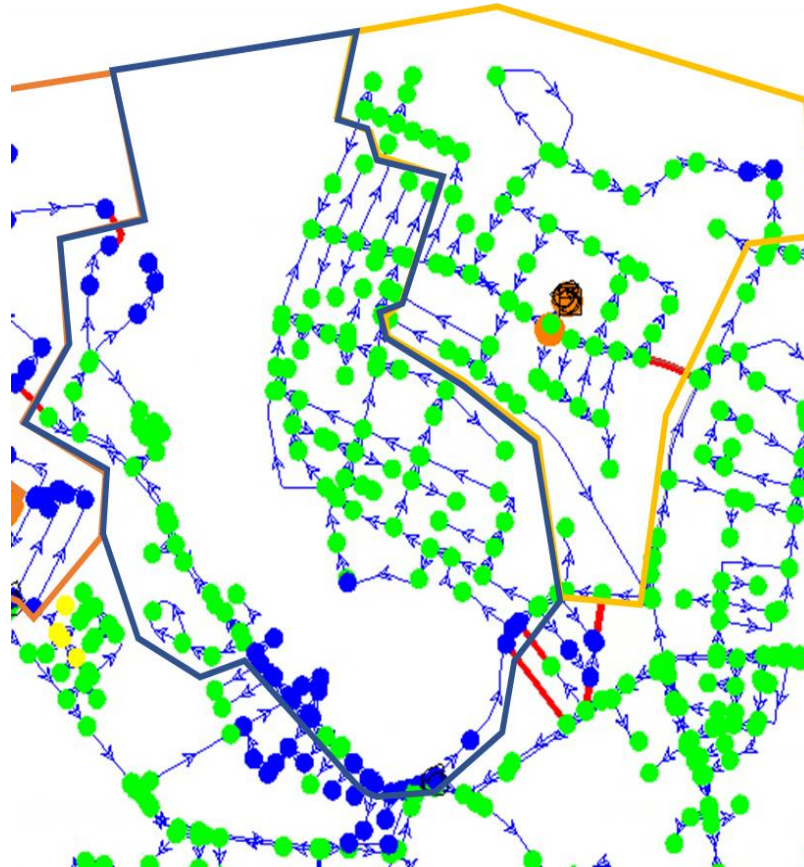
ALT 2 – NEW ELEVATED TANK

K Street Combined Zone
Eliminate K-Street Pump Station
Potential to eliminate Makos & Birchmont Pump Stations



- **Overflow elev. 405 ft to allow for combining all zones**

ALT 1 - REHAB EXISTING TANK (350 FT ELEV.)

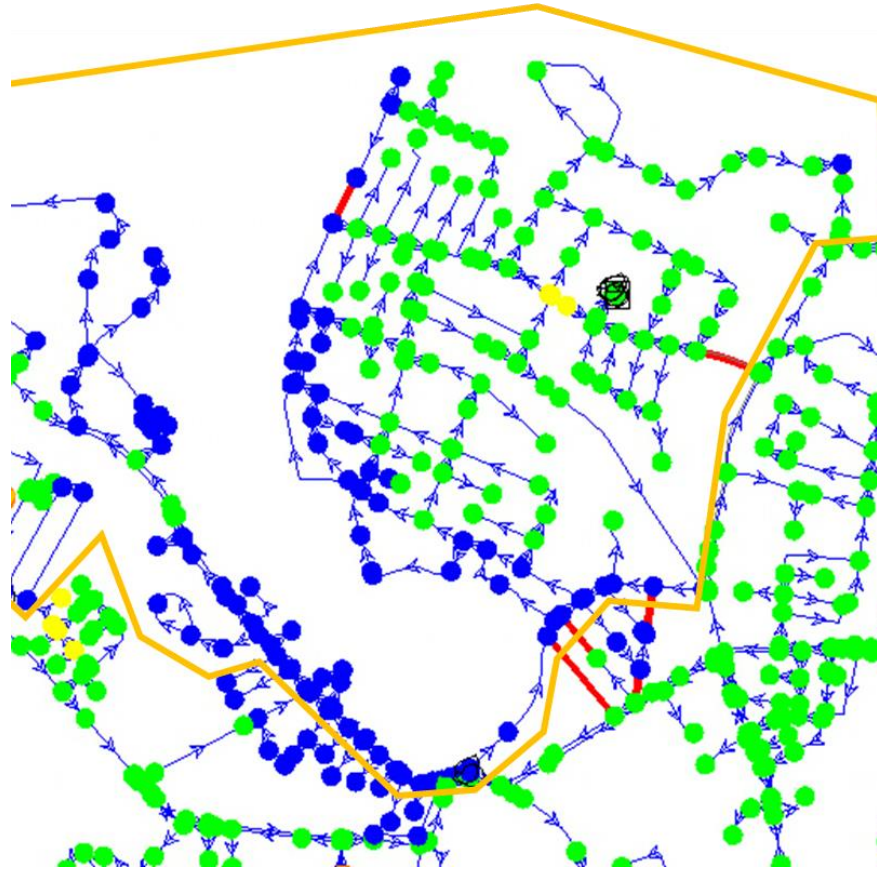


- Typical residential pressure 35 psi to 85 psi

LEGEND:

- < 20 psi
- 20 – 35 psi
- 35-50 psi
- 50-100 psi
- >100 psi

ALT 2 – NEW ELEVATED TANK (405 FT ELEV.)



- Typical residential pressure 35 psi to 85 psi

LEGEND:

- < 20 psi
- 20 – 35 psi
- 35-50 psi
- 50-100 psi
- >100 psi

SUMMARY OF ALTERNATIVES

	Alt 1: Rehab Existing	Alt 2: New Elevated Tank
Construction Period	~4 months <ul style="list-style-type: none"> tank offline, pumped system, no service interruptions 	~1 year <ul style="list-style-type: none"> No service interruptions
Water Age	No changes	Lower water age/Improved tank turnover
Fire Protection	<ul style="list-style-type: none"> Minimal fire flow in some areas Pumped flow relies on power and generators 	<ul style="list-style-type: none"> Improved fire flows Atmospheric storage is more reliable than pumped
Aesthetics	<ul style="list-style-type: none"> Tank recoating Antenna cables visible along tank exterior Pump station and generator remain 	<ul style="list-style-type: none"> Elevated tank 55 ft taller Antenna cables run up tank interior Pump station and associated generator



Questions & Discussion