Alternative R-2: Piney Run Reservoir – Use as Water Resource

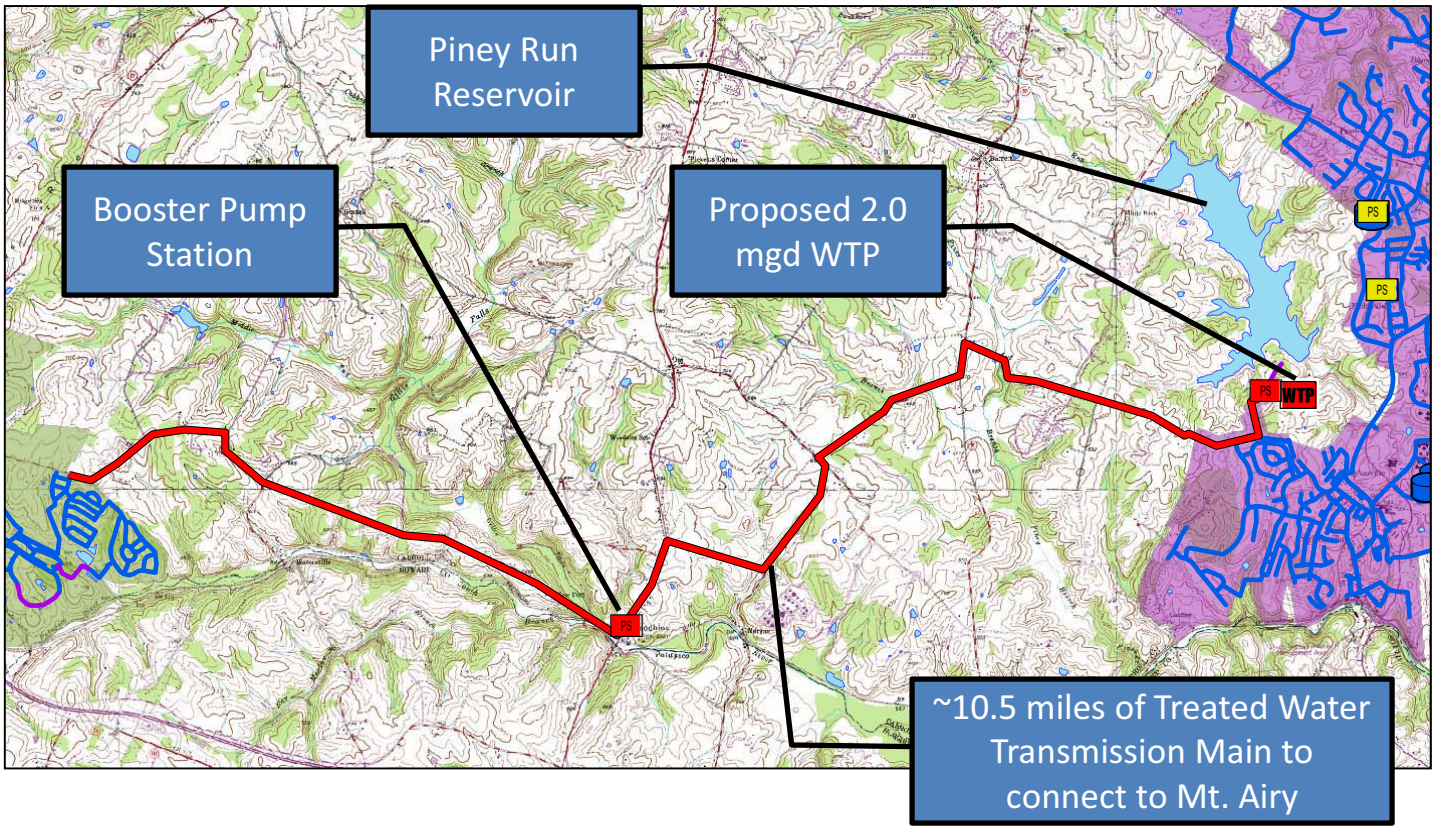
MALCOLM PIRNIE

Description of Alternative:

- Convert existing reservoir (completed in 1975) to water supply source for Mt. Airy and possibly Sykesville/Freedom Water Service Area
- Safe Yield = 3.65 mgd; Total Volume = 1.97 BG
- Drainage Area = 10.43 square miles
- Surface Area = 298 ac. at Normal Pool El. 524 ft
- Average minimum release = 1.0 mgd
- Construct new 2.0 mgd WTP on Hollenberry Road and 1.0 MG storage facility
- Approximately 1,000 feet of 16" raw water transmission main
- Approximately 10.5 miles of 16-inch treated water transmission main to connect to Mt. Airy service area.
- Two pump stations (one at WTP, one booster pump station near Woodbine).
- 2.0 MG Storage Tank (located near Woodbine)

Key Implementation Steps:

- Potential community opposition for project.
- Key Permit Required:
  - Water and Sewerage Construction Permit
- Land Easement/Acquisition for WTP and pipeline
- Pipeline, storage, and pump station engineering



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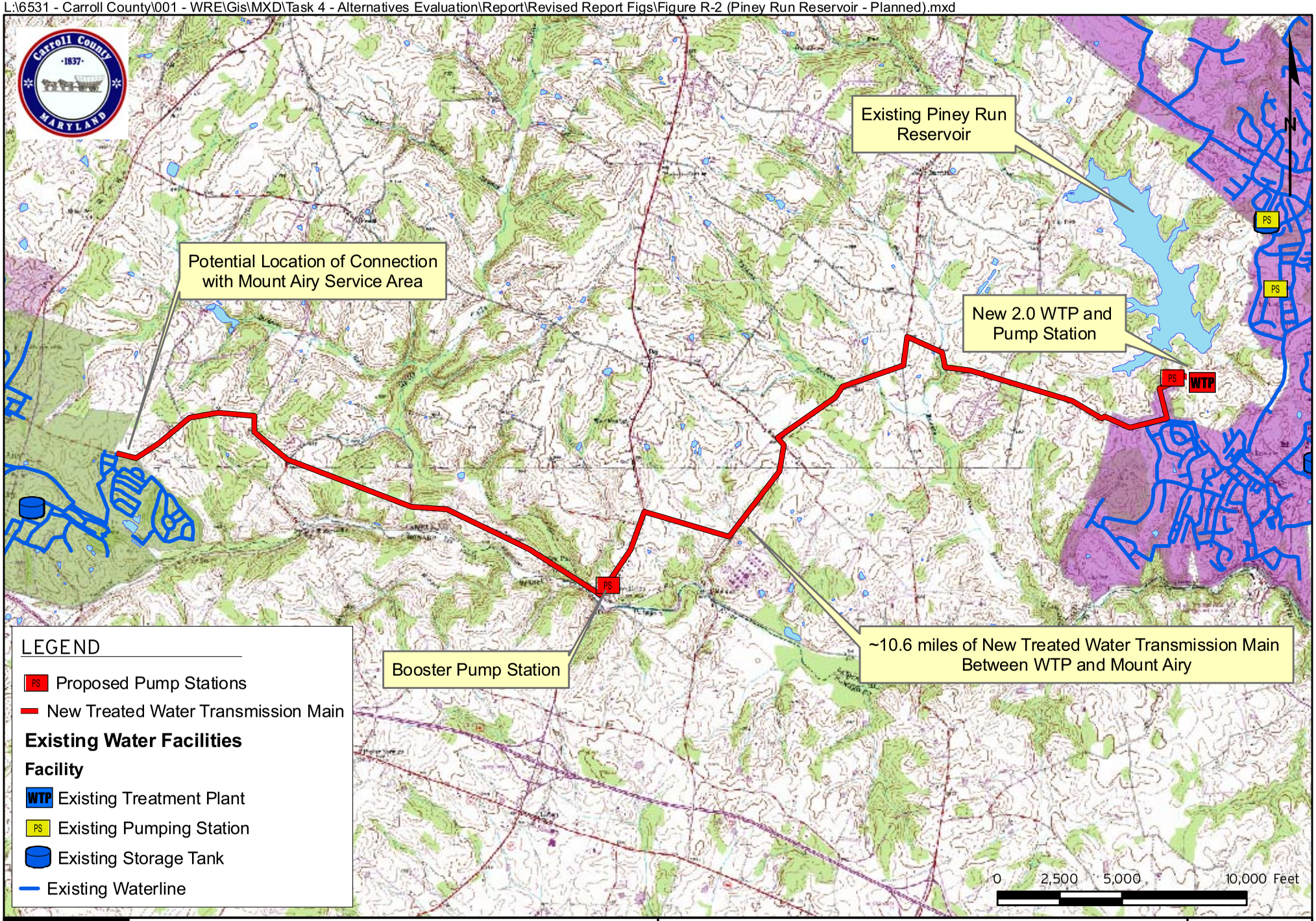


MALCOLM PIRNIE

CARROLL COUNTY, MD
ALTERNATIVES EVALUATION

Alternative R-2:
Piney Run Reservoir - Use as Water Source

Aug 2009

Figure R-2

Alternative R-3: Expansion of Piney Run Reservoir

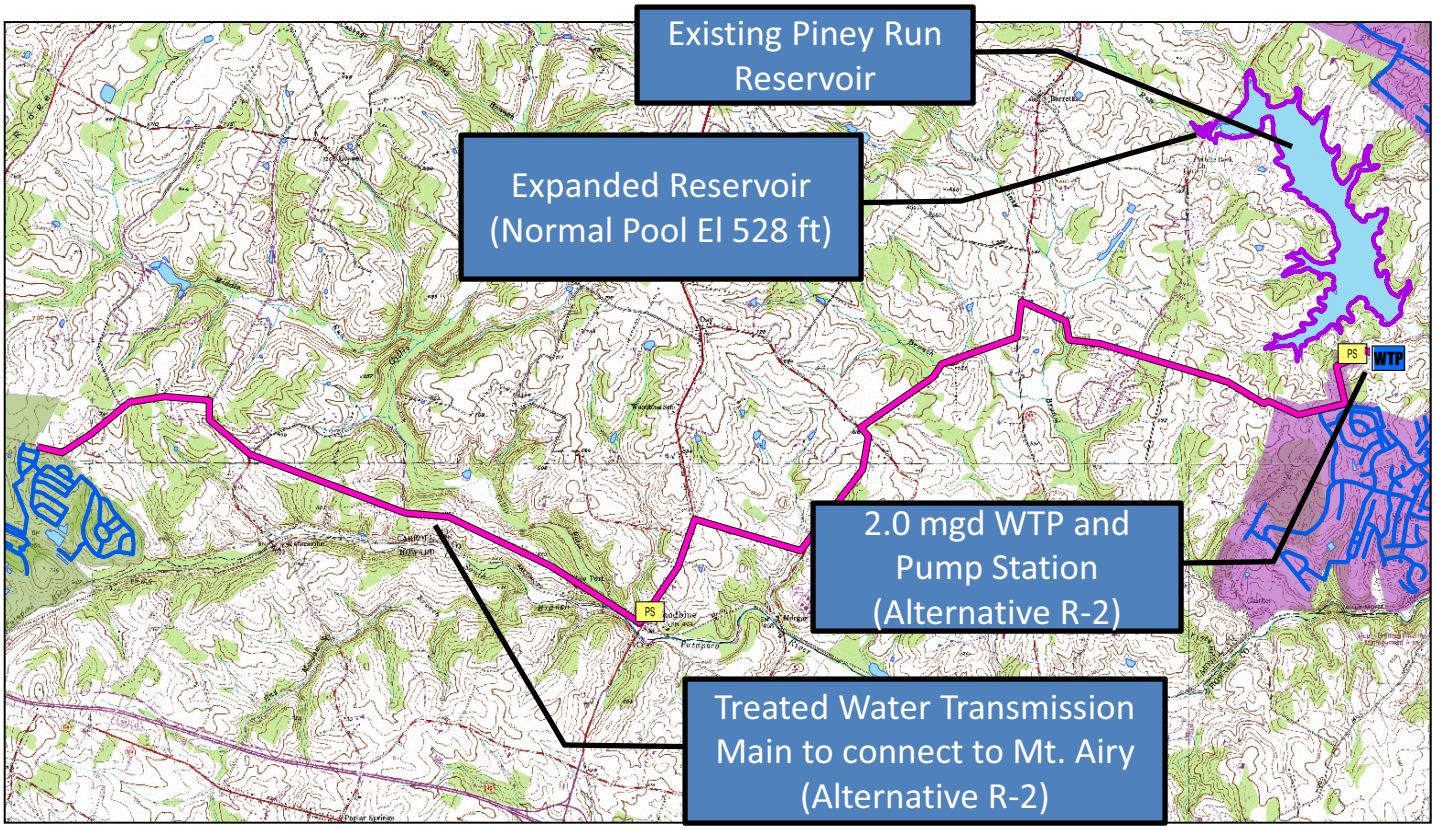
MALCOLM PIRNIE

Description of Alternative:

- Increase capacity of existing Piney Run Reservoir by raising the spillway riser and emergency spillway.
- Raise normal pool elevation by 4 feet
  - Safe Yield: 4.11 mgd (incremental increase of 0.46 mgd from existing Piney Run Reservoir, Alternative R-2)
  - Surface Area: 336 acres
  - Normal Pool: 528 ft
  - Volume: 2.40 BG
  - Average Min. Release = 1.0 mgd
- All components of Alternative R-2 would already be in place prior to expansion of Piney Run Reservoir.

Key Implementation Steps:

- Receive approval from MDE Dam Safety to raise normal pool elevation and change dam classification from current "high hazard" designation.
- Key Permits Required:
  - Water Appropriation and Use Permit
  - Non-tidal Wetlands and Waterways Permit
  - Dam Safety Permit
- Land Easement/Acquisition for reservoir expansion.
- Complete surveys for aquatic habitat and cultural resources within the affected project footprint.
- Develop Mitigation Plan:
  - Wetland Impacts: 12.6 acres
  - Stream Impacts: 1.05 miles
- Confirm that any impacts to Waters Edge Farm and County park/marina can be addressed.



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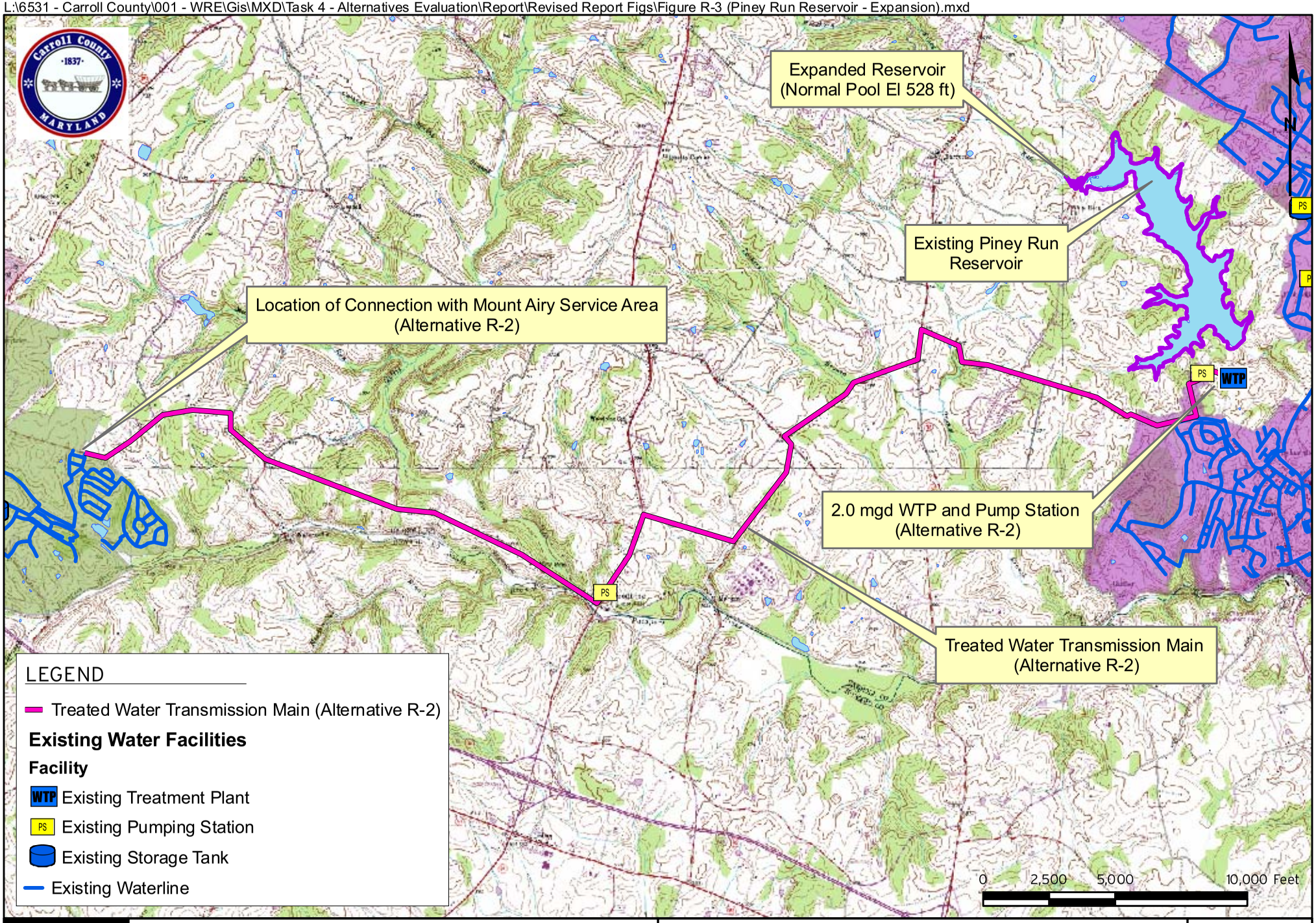

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CARROLL COUNTY, MD
ALTERNATIVES EVALUATION

Alternative R-3:
Expansion of Piney Run Reservoir

Aug 2009

Figure R-3