

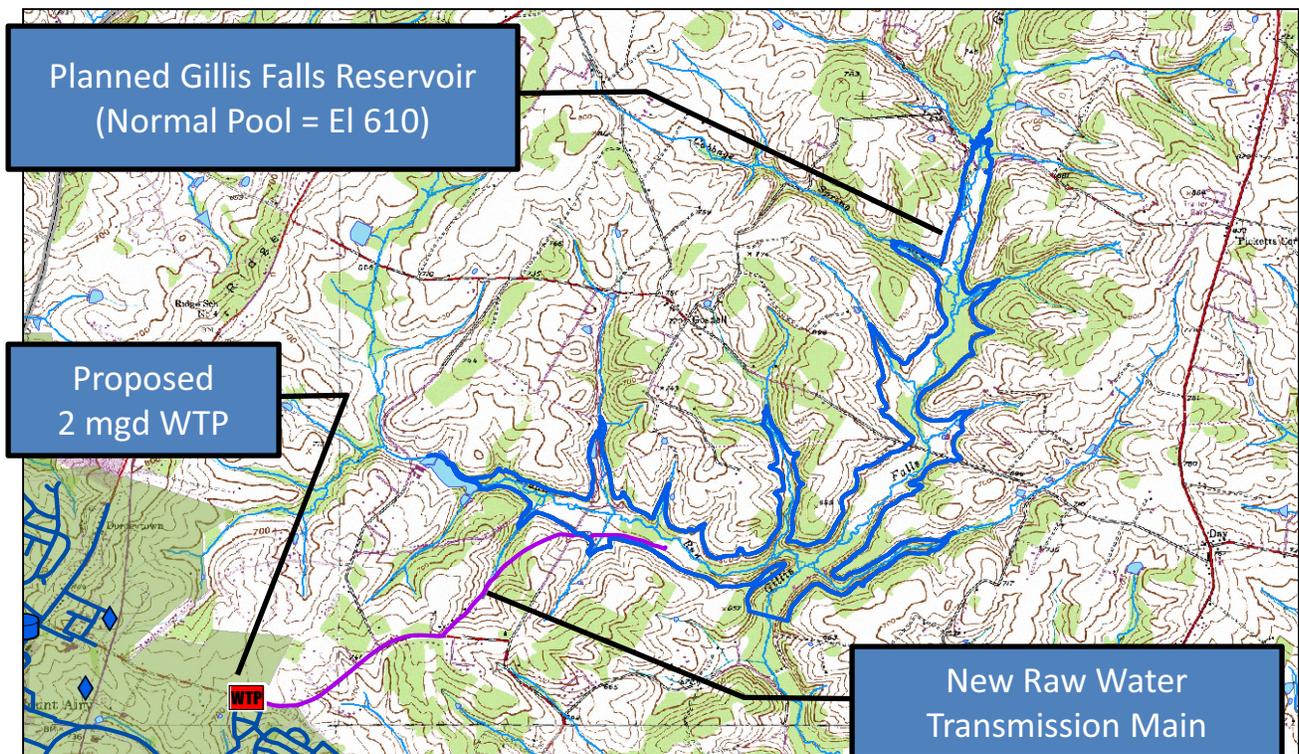
Alternative R-1a: Gillis Falls Reservoir (Proposed – El 610)

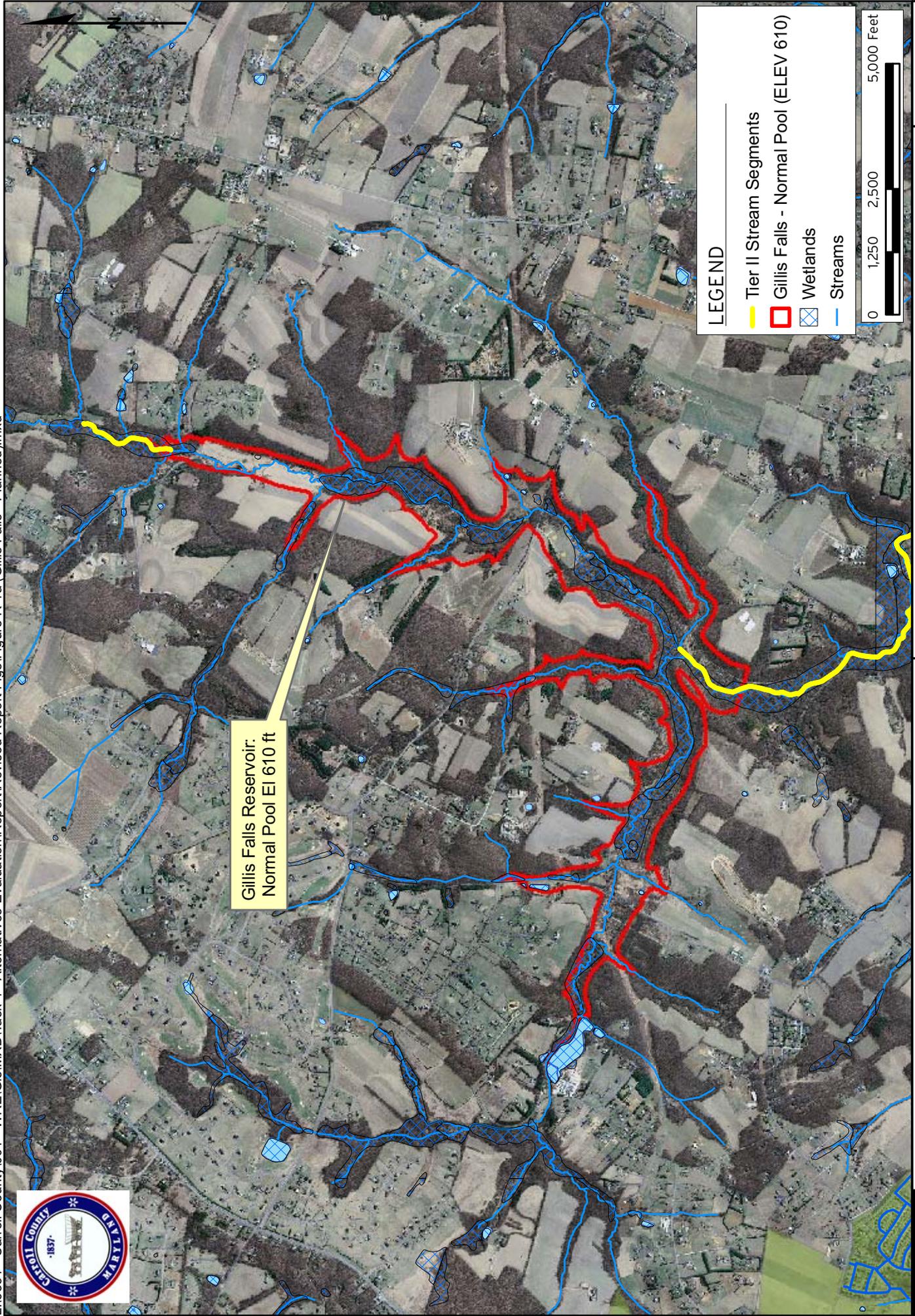
Description of Alternative:

- Reservoir planned as regional water supply for Mount Airy and Freedom/Sykesville Water Service Areas
- Safe Yield = 3.85 mgd; Total Volume = 4.15 BG; dead storage assumed below elevation 580 ft
- Drainage Area = 17.4 square miles
- Surface Area = 452 ac. at Normal Pool El. 610 ft
- Average minimum release of 5.45 mgd
- Raw water to be treated at new 2 mgd WTP in Mt. Airy.
- Requires 2.0 miles of new Raw Water Transmission Main
- One pump station at reservoir

Key Implementation Steps:

- County complete purchase of approximately 587 acres of land, including +/- 5 residences
- Key Permits Required:
 - USACE Section 404 permit
 - Water Appropriation and Use Permit
 - Water and Sewerage Construction Permit
 - Non-tidal Wetland and Waterways Permit
 - Dam Safety Permit
- Renegotiate more realistic reservoir release rates
- Complete surveys for aquatic habitat and cultural resources within the affected project footprint.
- Develop Mitigation Plan:
 - Approx. 10.1 miles of stream impacts
 - Approx. 177 acres of wetland impacts
- Class III natural trout stream would require downgrading to Class IV recreational trout stream
- Address Tier II stream designations extending upstream on north arm from Gillis Road crossing and extending downstream from just upstream of the dam site.





Gillis Falls Reservoir.
Normal Pool El 610 ft

LEGEND

- Tier II Stream Segments
- Gillis Falls - Normal Pool (ELEV 610)
- ▨ Wetlands
- Streams



Alternative R-1b: Gillis Falls Reservoir (Expanded – El 630)

Description of Alternative:

- Reservoir planned as regional water supply for Mount Airy and Freedom/Sykesville Water Service Areas
- Safe Yield = 5.0 mgd; Total Volume = 8.02 BG; dead storage assumed below elevation 580 ft
- Drainage Area = 17.4 square miles
- Surface Area = 744 ac. at Normal Pool El. 630 ft
- Average minimum release of 5.45 mgd
- Raw water to be treated at new 2 mgd WTP in Mt. Airy.
- Requires 2.0 miles of new Raw Water Transmission Main
- One pump station at reservoir

Key Implementation Steps:

- County complete purchase of approximately 1,541 acres of land, including +/- 16 residences
- Key Permits Required:
 - USACE Section 404 permit
 - Water Appropriation and Use Permit
 - Water and Sewerage Construction Permit
 - Non-tidal Wetland and Waterways Permit
 - Dam Safety Permit
- Renegotiate more realistic reservoir release rates
- Complete surveys for aquatic habitat and cultural resources within the affected project footprint.
- Develop Mitigation Plan:
 - Approx. 14.2 miles of stream impacts
 - Approx. 225 acres of wetland impacts
- Class III natural trout stream would require downgrading to Class IV recreational trout stream
- Address Tier II stream designations extending upstream on north arm from Gillis Road crossing and extending downstream from just upstream of the dam site.

