

Challenges to Underground Utilities in Floodplain and Flood Prone Areas



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Challenges to Underground Utilities in Floodplain and Flood Prone Areas



- Utility Right of Way have multiple stream crossings
- Installed Prior to Urbanization
- Farmland and Open space
- Crossed small streams



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Increased Storm Events:

- Hurricanes
- Superstorms
- Flashfloods
- Rain Events



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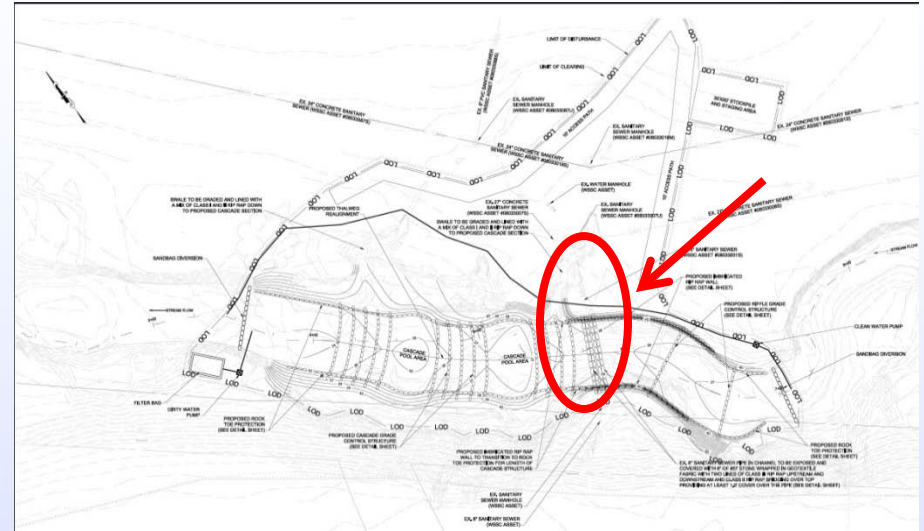
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- Leads to this:



Challenges to Underground Utilities in Floodplain and Flood Prone Areas

- Emergency Repair
 - Letter of Authorization
 - Expedited Permit
 - 1 month start to finish



- Routine Upgrades
- Capital Improvement Project
- Design/Permits to Construction 6 to 9 Months



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Permits/Approvals:

- MD Forest Conservation Act
- County/City Construction Permits
- State Historic Preservation Office
- Threatened and Endangered Species Clearance
- Section 404 Wetlands and Waterways
- Adjacent Property Owners

Stake Holders:



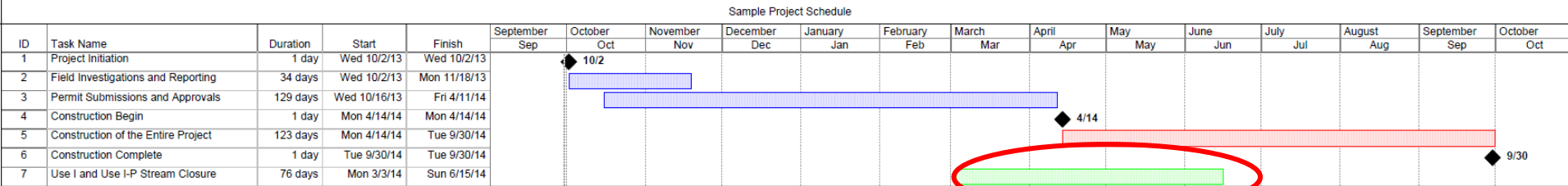
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- Time-frames
 - Construction/ Off-Peak times
 - April – October (Gas)
 - October – May (Electric)
- Stream Closures
 - Use I: March to June 15
 - Use II: June 1 to September 30, December 16 to March 14
 - Use III: October to April 30
 - Use IV: March to May 31



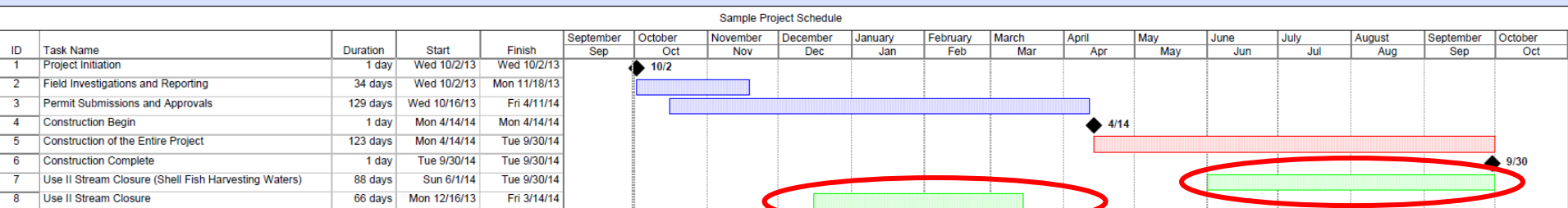
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Use I Stream Construction Schedule



Use I and IP Closure (Recreation and Protection of Aquatic Life)
March 1 - June 15

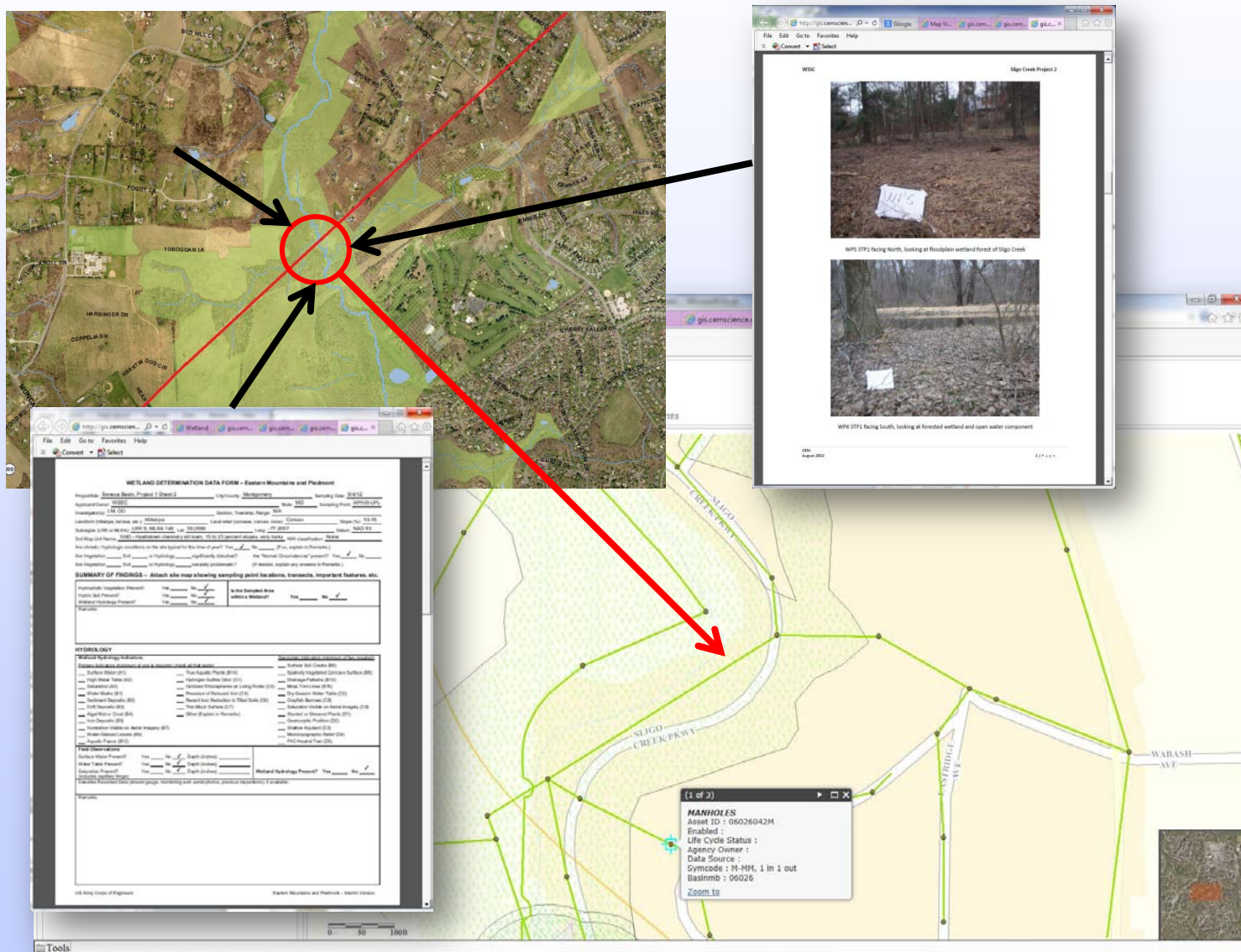
Use II Stream Construction Schedule



Use II Closure (Shell fish Harvesting)
June 1 – September 15
December 16 to March 14



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Things to Remember:

- Monitor your systems
- Know which permits/approvals needed
- Know your construction schedule
- Know stream closure dates

