PUBLIC NOTICE

PERMIT APPLICATION: NRS07.339

APPLICANT: City of Maryville
Engineering Department
416 West Broadway
Maryville, TN 37801
(865) 273-3500

LOCATION: The project covers two locations on Pistol Creek Mile (PCM) segments:

Project Area 1 – Greenbelt Lake Area, PCM 8.8 (35.7569°N, 83.9755°W) to PCM 9.5 (35.7592°N, 83.9687°W), USGS Maryville (TN) Topo.

Project Area 2 – Pearson Springs Park Area, PCM 11.4 (35.7361°N, 83.9804°W) to PCM 12.0 (35.7318°N, 83.9826°W), USGS Blockhouse (TN) Topo.

WATERSHED DESCRIPTION: The proposed project is in the Upper Tennessee River Watershed, Hydrologic Unit Code (HUC) 06010201 on Pistol Creek that enters the Little River at mile 8.2, which flows into the Tennessee River at mile 635.6 (Watts Bar Lake). The designated uses for Pistol Creek are Fish and Aquatic Life, Recreation, Livestock Watering and Wildlife, and Irrigation. According to the Tennessee Department of Environment and Conservation, Division of Water Pollution Control's document: Final Version, Year 2006 303(d) List, August, 2006, Pistol Creek is impaired because of loss of biological integrity and habitat due to siltation and alteration in stream-side or littoral vegetative cover, and Escherichia coli contamination. The surrounding land use is industrial, urban, residential, and city parks. See location map on Figure 1. This notice may be viewed on the internet at: http://www.state.tn.us/environment/wpc/ppo/arap.

PROJECT DESCRIPTION: The applicant proposes ecosystem restoration activities in two areas on the mainstem of Pistol Creek. Proposed work in Project Area 1 – Greenbelt Lake Area, consists of streambank stabilization below the dam, sediment excavation from Greenbelt Lake, creation of a sediment forebay and weir at the island, and riparian restoration surrounding the Greenbelt Lake. This restoration effort would require draining the lake and temporary diversion of flows from Pistol and Browns Creeks through approximately 0.5 miles of pipes around the lake during excavation. Temporary cofferdams would be constructed at the Pistol and Browns Creeks inflows into Greenbelt Lake as a detainment area for sediment settling and filtering prior to discharge into the diversion pipes. Lake water would be decanted or piped from the cofferdams into the diversion pipes to minimize turbidity released downstream of Greenbelt Dam. Nearly 40,000 cubic yards of lake sediment would be excavated with standard earth moving equipment and dewatered at sites around, and upstream of the lake. The dewatered sediment would be hauled to a non-hazardous local landfill. The sediment forebay would be used to contain accumulating sediment to protect the lower two-thirds of the lake from sedimentation. The weir at the island would allow lowering the water in the sediment forebay for future sediment excavation while maintaining the water level in the downstream portion of the lake. Bank stabilization would incorporate a combination of bioengineering and riprap.

Bioengineering would use native vegetation. Nuisance wildlife (Canada geese and various duck species) would be removed from the lake area. See Figures 2-7.

Project Area 2 – Pearson Springs Park, consists of bank stabilization, wetland creation, wetland restoration, creation of a rain garden, construction of a stormwater bioretention area, and removal of exotic invasive vegetation species. See Figure 8.

In accordance with the Tennessee Antidegradation Statement (Rule 1200-4-3-.06), the division has determined that the proposed activity will not result in degradation to water quality.

PERMIT COORDINATOR: Robert Baker

PURPOSE AND EXISTING CONDITIONS: The purpose of the study was to identify the sources resulting in ecosystem degradation in Pistol Creek which contributed to ecosystem degradation in the Little River, and attempt to implement reasonable remediation actions. Reducing sediment load would improve water clarity, streambed habitat, and ultimately water quality to the Little River. The Pistol Creek watershed has been subjected to many land use changes resulting in eroding streambanks, sediment transport problems, turbidity, reduced water quality, introduced exotic invasive species, and a reduction in habitat and native species diversity. In Project Area 1, Greenbelt Lake is filled with sediment and no longer supports lake species and habitat. The lake has suffered detrimental impacts due to severe sedimentation and a large population of nuisance wildlife (Canada geese and various duck species). These waterfowl add large quantities of nutrients and bacteria to the lake that impairs the aquatic environment. Streambank failure downstream of Greenbelt Dam resulted in excess sedimentation into Pistol Creek. In Project Area 2, severe streambank erosion induced by human activities was observed in Pearson Springs Park resulting in degradation to aquatic habitats. Bank failure was occurring on Pistol Creek. An Existing wetland was overgrown with exotic invasive plant species. Stormwater detention was limited at the site. Pistol Creek was not connected to its floodplain so flood waters could not spread out over the bank. The concentrated flood flows increased velocity in Pistol Creek that accelerated bank caving and failure resulting in excess sedimentation into Pistol Creek.

ALTERNATIVES CONSIDERED: Several alternatives to the proposed plan were considered and eliminated from further consideration. Dredging Greenbelt Lake was rejected due to concerns of resuspending sediment into the water column and lack of a large containment area to confine the wet sediment. Filling geotubes with lake sediment and placing the tubes around the lake perimeter was rejected because the sediment was not suitable for re-use in areas that would expose it to human contact. The use of concrete mattresses was rejected because this technique would have required excessive bank excavation and it was not economically feasible. Using only bioengineering throughout the project was rejected because it was no practical in areas with limited riparian width and areas of high velocity flows. Construction of a sediment trap in Pistol Creek in the Pearson Springs Park was rejected because the structure would raise water temperature, lower dissolved oxygen, and eliminate stream habitat.

OTHER CONSIDERATIONS: Permits are required on a Federal, state and local level. The project must meet requirements of Section 404 of the Clean Water Act, including criteria of a 404(b)(1) evaluation regulating discharge of dredged or fill materials. A Section 401 Water

Quality Certification or an Aquatic Resources Alteration Permit, and a Stormwater permit for construction would be required from the Tennessee Department of Environment and Conservation. The project must also meet requirements for the TVA 26a permit.

The Federal Emergency Management Agency (FEMA) may require that Conditional Letters of Map Revision (CLOMR)/Letters of Map Revision (LOMR) be performed on these channels if modifications to the floodplain or floodway would result from the project.

Section 106 of the National Historic Preservation Act requires Federal agencies having direct or indirect jurisdiction over a proposed Federal, or federally assisted undertaking, to take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The State Historic Preservation Officer (SHPO) of Tennessee was consulted and concluded that that there are no National Register of Historic Places listed or eligible properties affected by the undertaking, and has no objections to proceeding with the project.

In accordance with Section 7 of the Endangered Species Act, the U.S. Fish and Wildlife Service was consulted. Their records indicated that no threatened or endangered species were located in the project area. This project would have no effect on any listed species. A Fish and Wildlife Coordination Report was completed for this project and incorporate in its design.

Sediment samples were analyzed for contamination. The sediment is not considered a hazardous waste, however exposure to the sediment was considered a potential risk to human health, therefore, de-watered sediment would be hauled to a local landfill.

No decision has been made whether to issue or deny this permit. The purpose of this notice is to inform interested parties of this permit application and to ask for comments and information necessary to determine possible impacts to water quality. Persons wishing to comment on the proposal are invited to submit written comments to the department. Written comments must be received within thirty days of the date that this notice is posted. Comments will become part of the record and will be considered in the final decision. The applicant's name and permit number should be referenced.

Interested persons may also request in writing that the department hold a public hearing on this application. The request must be filed within the comment period, indicate the interest of the person requesting it, the reasons that the hearing is warranted, and the water quality issues being raised. When there is sufficient public interest in water quality issues, the department will hold a public hearing.

The permit application, supporting documentation including detailed plans and maps, and related comments are available at the department's address for review and/or copying. The department's address is:

Tennessee Department of Environment & Conservation
Division of Water Pollution Control, Natural Resources Section
7th Floor L & C Annex

401 Church Street
Nashville, TN 37243

In deciding whether to issue or deny a permit, the department will consider all comments of record and the requirements of applicable federal and state laws. In making this decision, a determination will be made regarding the lost value of the resource compared to the value of any proposed mitigation. The department shall consider practicable alternatives to the alteration. The department shall also consider loss of waters or habitat, diminishment in biological diversity, cumulative or secondary impacts to the water resource, and adverse impact to unique, high quality, or impaired waters.

Figure 1. Vicinity Maps for Pistol Creek 206 Restoration Project, Maryville, TN.

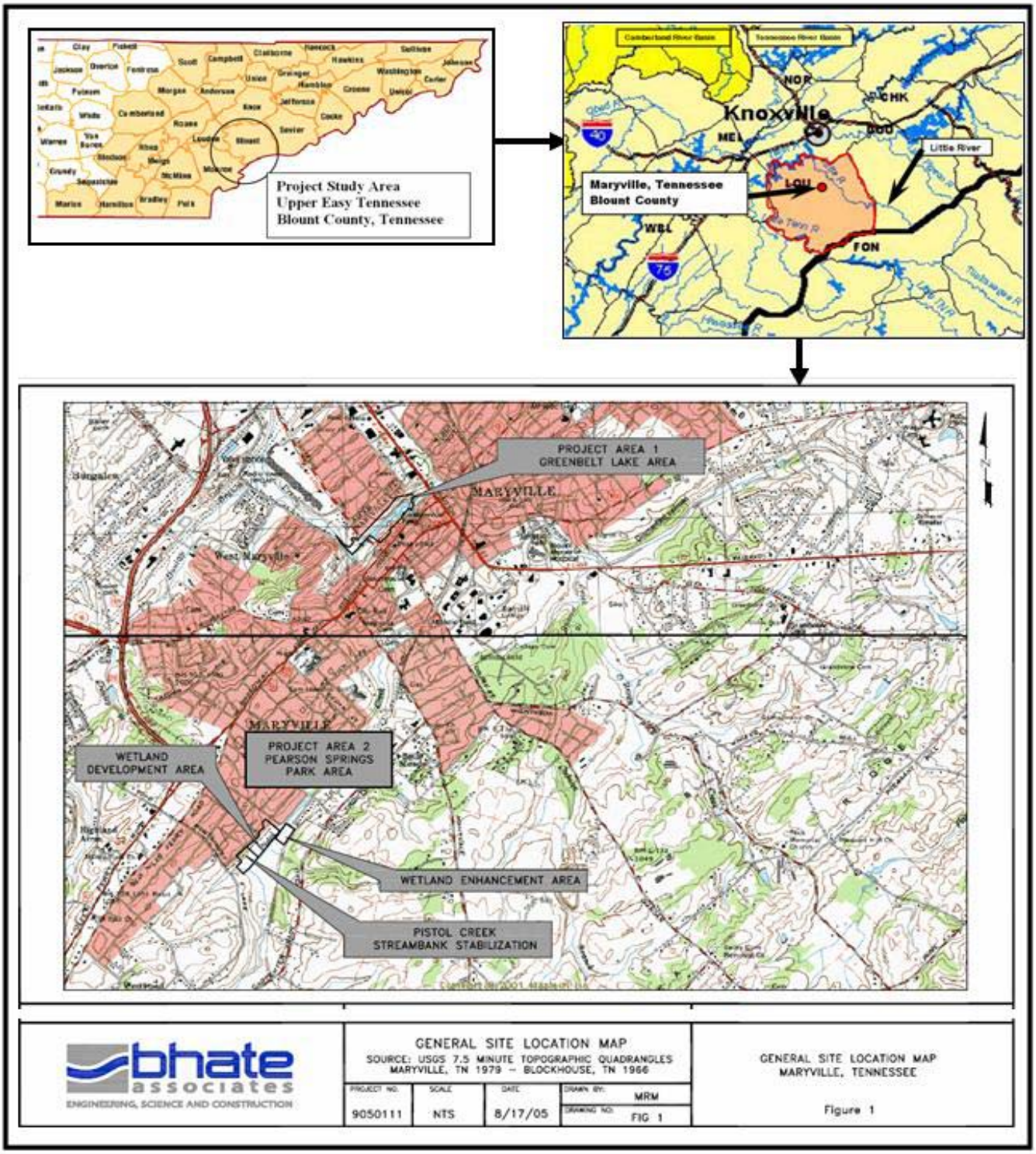


Figure 2. Aerial View of Project Area 1 – Greenbelt Lake Area, Maryville, TN. Map shows areas of proposed bank stabilization downstream of the dam, sediment excavation from Greenbelt Lake impoundment, weir construction at the island, forebay sediment collection area, sediment dewatering site adjacent Browns Creek, and Greenway Trail location surrounding the lake.

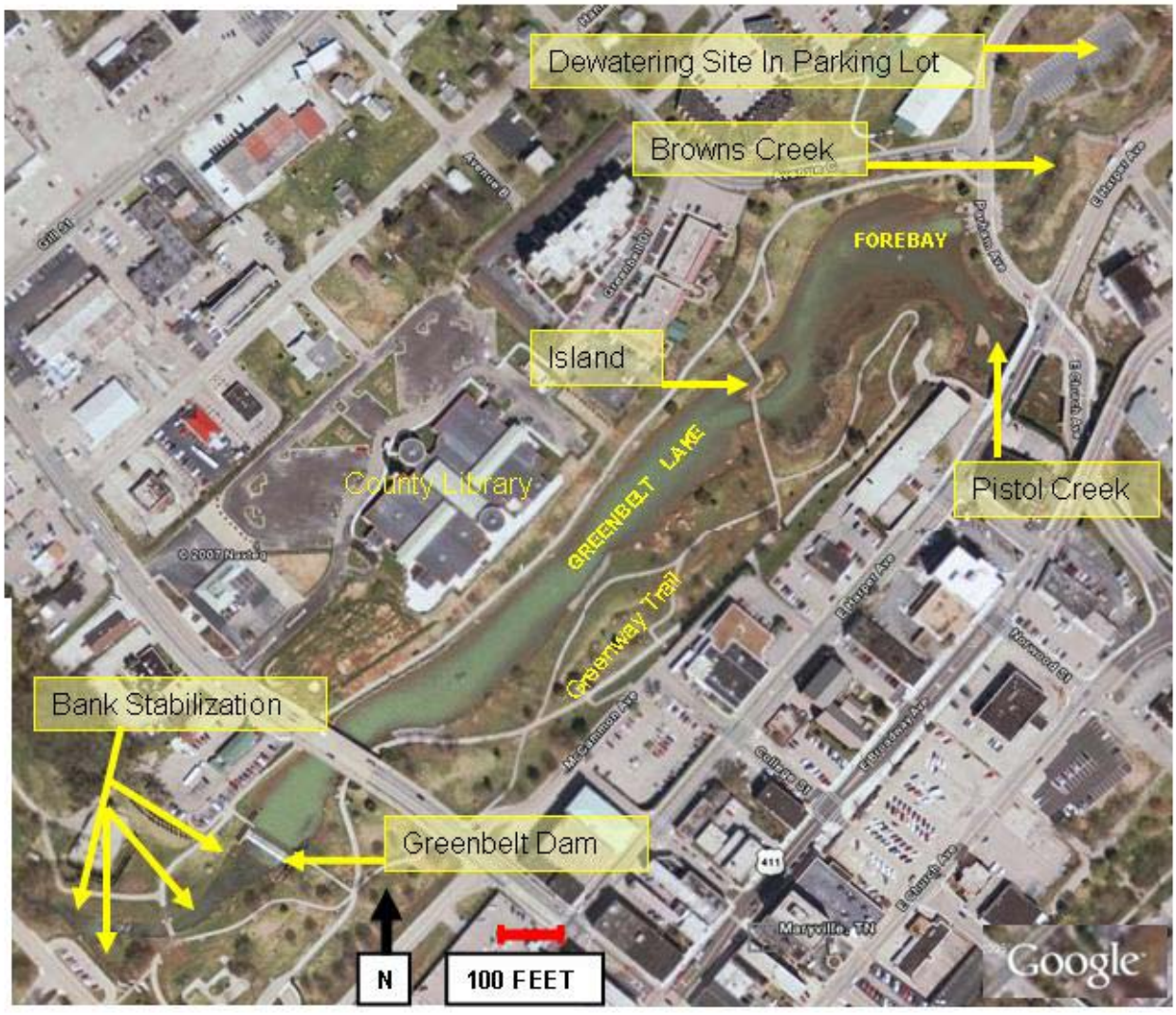


Figure 3. Aerial View of Project Area 1 – Greenbelt Lake Area, Maryville, TN. Location of proposed bank stabilization downstream of the dam including plan and cross-section view.

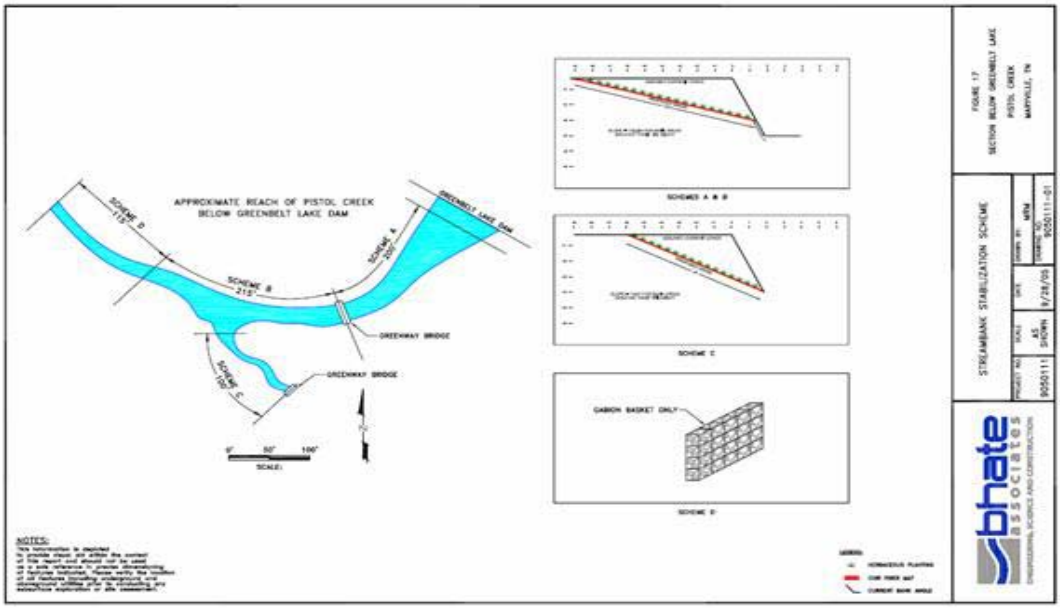


Figure 4. Aerial View of Project Area 1 – Greenbelt Lake Area, Maryville, TN. Proposed sediment excavation from the Greenbelt lake impoundment, flow diversion piping, and examples of bioenginerring surrounding the lake. Note Island Area location.

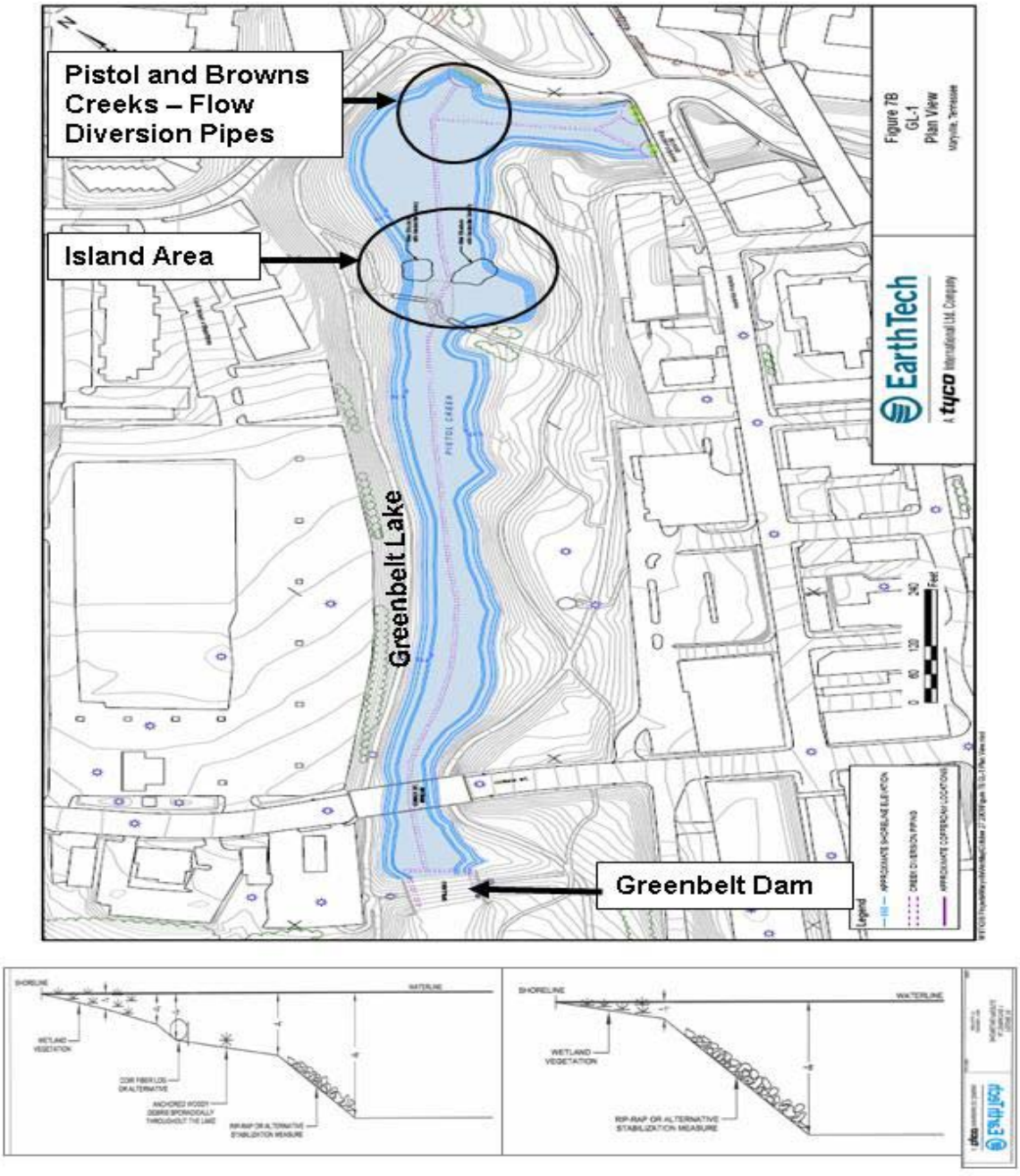


Figure 5. Sediment Dewatering locations, future forebay sediment storage and removal area, and island weir location in Greenbelt Lake.

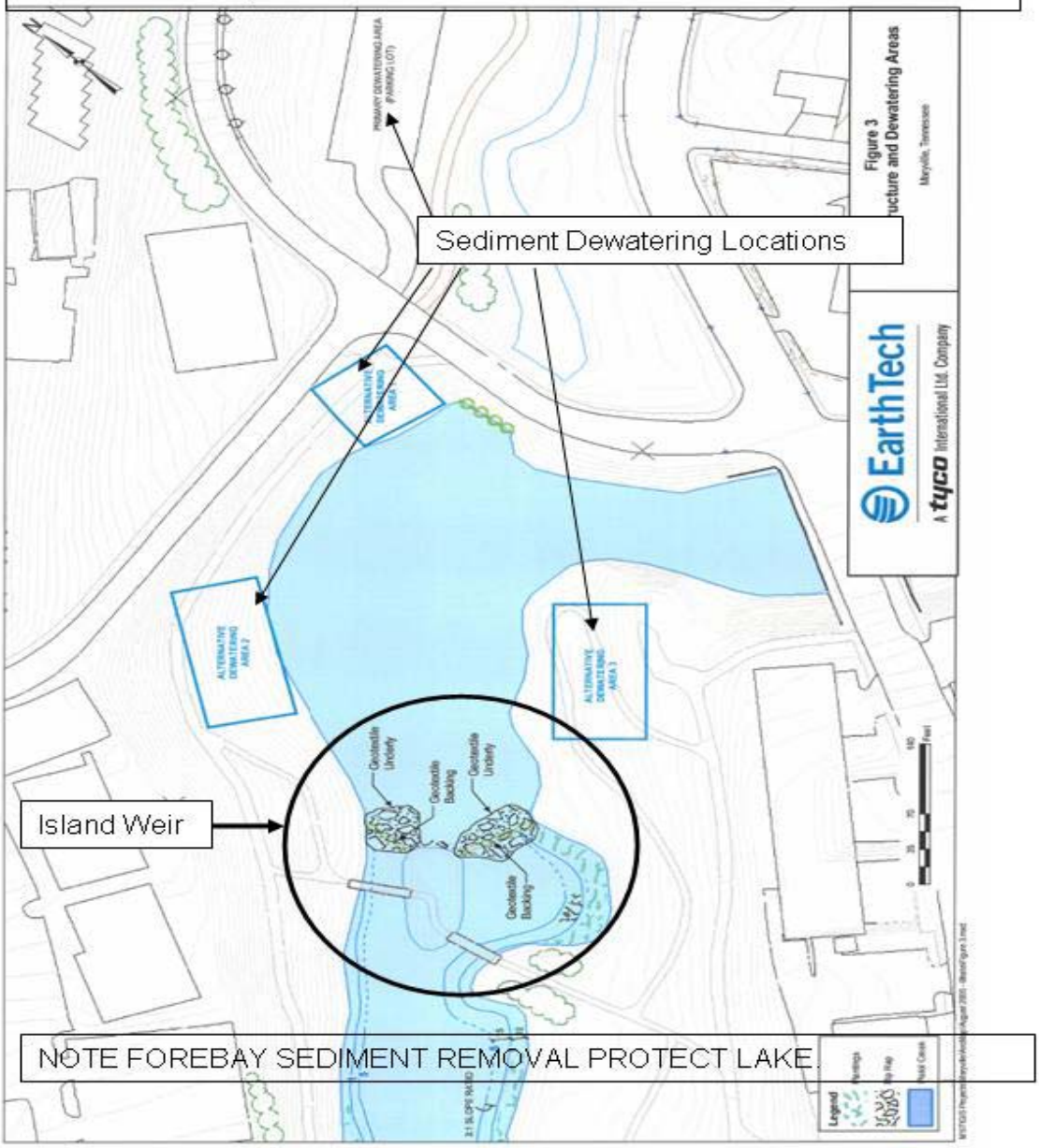
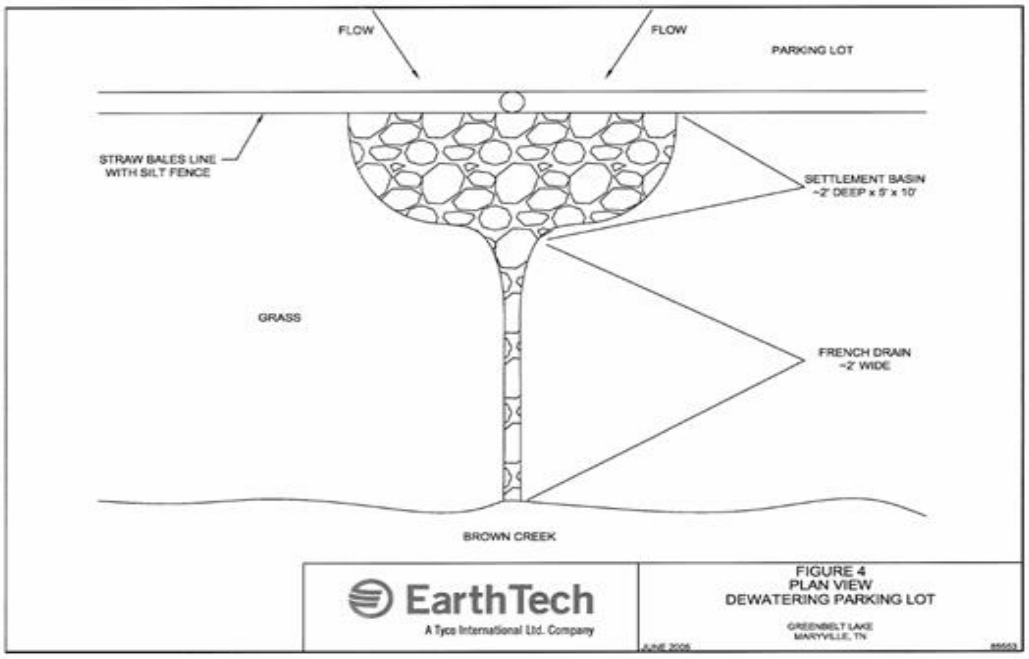


Figure 6. Dewatering in parking lot at Browns creek (top drawing) and detwatering at locations around Greenbelt Lake (bottom drawing)..



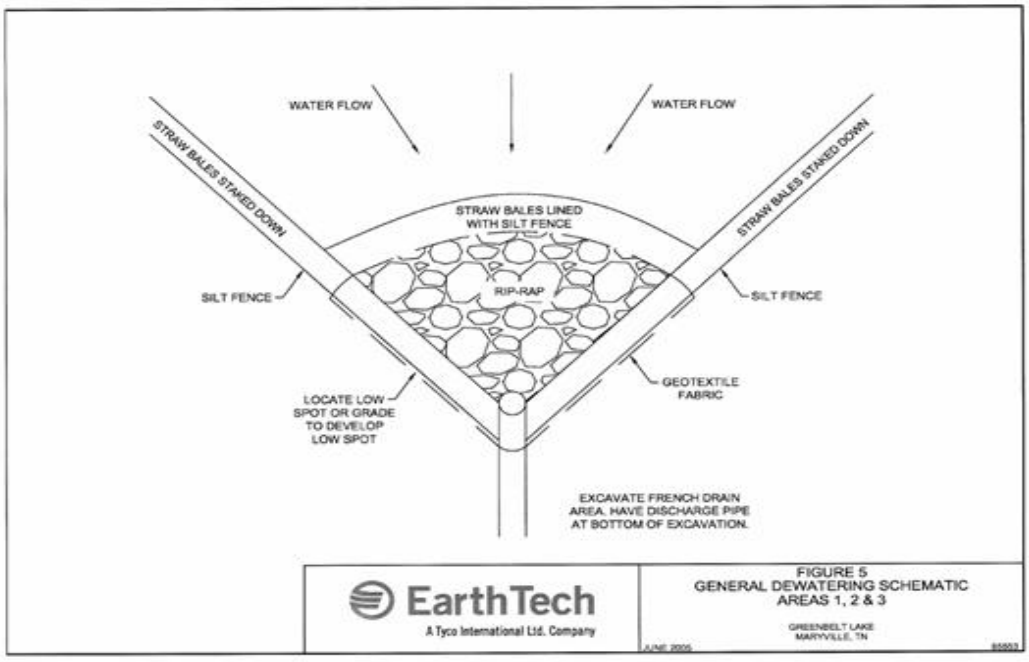
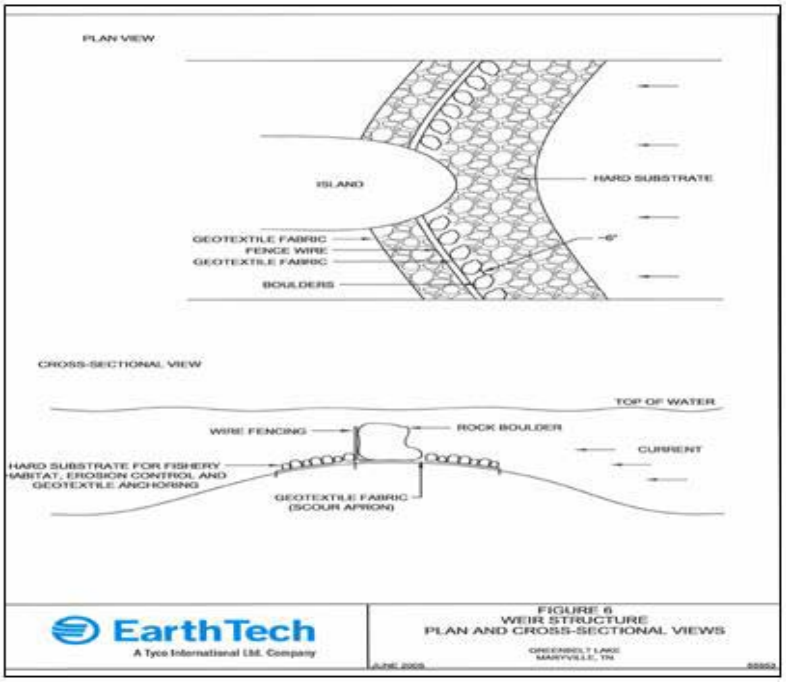
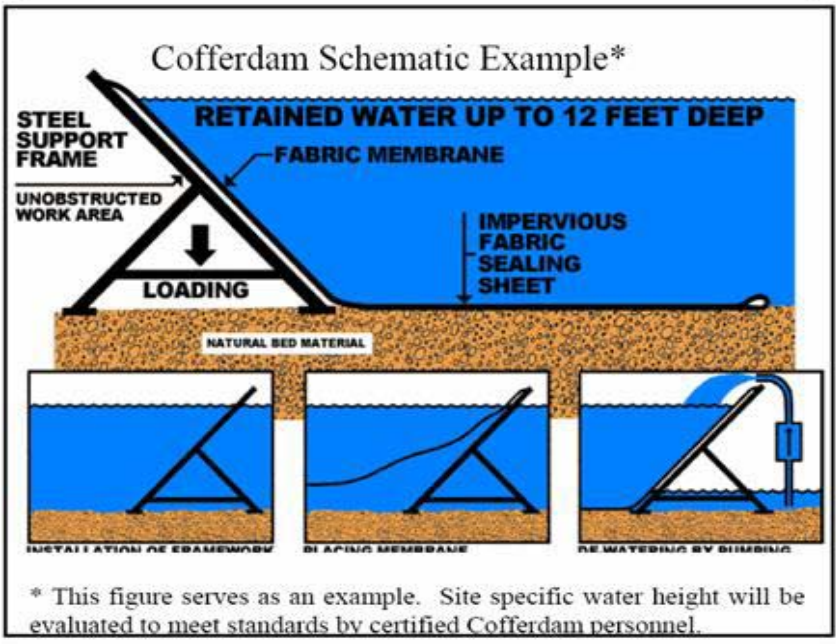


Figure 7. Island weir plan and cross-section views in Greenbelt Lake, and the Cofferdam at the Greenbelt Dam.





* This figure serves as an example. Site specific water height will be evaluated to meet standards by certified Cofferdam personnel.

Figure 8. Project Area 2 – Pearson Springs Park. Proposed bank stabilization techniques. NEED PLANS FOR WETLAND CREATION RAINGARDEN MAYBE STORMWATER RETENTSION AREA.