

## **Beck Creek 6 - Stream and Floodplain Restoration Project**

The Beck Creek 6 - Stream and Floodplain Restoration Project is located in the West Cornwall Township. It is one of seventeen restoration projects identified along Beck Creek in the Quittapahilla Watershed Implementation Plan. Although it is sixth of the seventeen priority projects identified for the Beck Creek subwatershed, it has been directly impacted by the Mariner East 2 Pipeline Project. This project represents an important first step in our effort to implement those projects identified in our WIP for the Beck Creek subwatershed. It will significantly reduce nutrient and sediment loadings to the Beck Creek and Quittapahilla Watershed, and will ultimately help us meet the TMDL goals for both watersheds.

The stream reaches through this project area have been significantly impacted by historic straightening, unlimited livestock grazing, and removal of riparian vegetation. Runoff from cultivated fields along the adjacent western slopes has also contributed significant loadings of sediment and nutrients to the creek. Stability problems include high width to depth ratio, streambank erosion, heavy sedimentation and aggradation (mid-channel bars) and debris jams. The increased sedimentation has significantly degraded in-stream habitat resulting in few, shallow pools and riffles that are highly embedded with fine sediments. During summer months overwide sections are choked with fine sediment and aquatic vegetation.

The funding obtained from this grant was utilized to develop final design plans and obtain local, state and federal permits for the project. More specifically, it involved:

1. Conducting a field-run topographic survey and preparing base maps to be utilized in developing the design plans;
2. Conducting hydrologic and hydraulic analyses of existing and proposed conditions;
3. Conducting geomorphic assessments and developing channel design criteria;
4. Conduct environmental assessments required for permitting including wetland delineations, archeological, historical, and PENDING investigations;
5. Preparing preliminary design plans;
6. Preparing final design plans, a final design report and construction documents;
7. Conducting a pre-application field meeting with the local, state and federal permitting agencies to present the preliminary design plans, discuss overall project goals and objectives and site specific constraints;
8. Preparing Erosion and Sediment Control Package for submission to the Lebanon County Conservation District;
9. Preparing Joint Permit Application Package for submission to PADEP and USACOE.

Problems encountered included: Groundwater contamination and insufficient funding for permit fees and a bog turtle survey. Coordination with Energy Transfer and Evergreen Management lead to development of a contingency plan for contaminated soils and avoidance of construction work over the pipeline easement. Incorporation of specific design elements will avoid further impacts and minimize groundwater contamination in the project area. Contributions from Doc Fritchey Trout Unlimited, Lebanon Valley Conservancy and Gardell Weaver resolved the budget shortfalls.

Additional Efforts Planned include completion of a Pre-Bid Site Walk with pre-qualified construction contractors to orient them to the project and introduce them to the design plans and construction specifications. Bids are due to DFTU no later than June 18, 2021. After DFTU selects the winning bidder, we will utilize their construction budget to complete the Task and Deliverable Budget Worksheet required for the construction grant application we plan to submit on June 25, 2021.