

APPENDIX A - SANITATION DISTRICT NO. 1 CHURCH STREET CSO REDUCTION PROJECT

This project is located immediately outside the study area between Church Street and Winston Avenue, just north of Banklick Creek, in the City of Taylor Mill. The study area and the proposed project location are both within the Banklick Creek watershed.

The Church Street Priority Area includes three combined sewer overflows along Banklick Creek, near its confluence with the Licking River. Two of the overflows have relatively small annual activation statistics while the third, Church Street is the largest CSO on Banklick Creek.

The drainage area consists approximately 152 acres of mostly residential land use in the Cities of Covington and Taylor Mill. In the areas north of 43rd Street, storm water runoff enters the combined system through catch basins and direct connections of downspouts, sump pumps, and foundation drains. Along the eastern edge of the tributary area, separate storm water lines convey storm runoff to the drainage swale that runs between 43rd Street and Banklick Creek. During heavy rains, the storm water pools in a lowland swale. Over time, holes were created at manhole chimneys and in two (2) parallel combined sewer pipes (36-inch diameter and 48-inch diameter) that run through the drainage swale to provide a means of draining the swale. These connections to the sewer system are one of the reasons why the Church Street CSO is very active. In addition, the drain holes in the existing infrastructure also provide a relief point when the combined sewer surcharges. Over time, this has created a public health concern.

Sanitation District No. 1 (SD1) has several objectives for implementing green infrastructure and gray infrastructure controls within the Church Street basin.

1. Eliminate the public health concern that exists in the Church Street swale;
2. Improve the condition of existing infrastructure in the Priority Area;
3. Comply with the requirement in the Consent Decree to reduce the activation of CSOs;
4. Improve the water quality of Banklick Creek; and
5. Identify opportunities to integrate green and gray controls that address both public health and water quality impacts noted above.

To achieve these objectives, the goal of the project is to remove as much storm water runoff as feasible from the combined sewer system by managing the runoff with green infrastructure controls. To effectively reduce the Church Street combined sewer overflow, the project will include:

1. Replacement of aging combined sewer with new pipe;
2. Construction of a new culvert beneath Church Street to convey storm water runoff to Banklick Creek (storm water runoff currently enters the combined system).
3. Construction of new storm sewers and other street drainage improvements to direct additional storm water runoff away from the combined sewer system and to the open space area that drains to the new culvert.
4. Green infrastructure improvements in the open space area (constructed wetland, riparian buffer improvements), leading to new culvert, to improve water quality before the disconnected storm water flows to Banklick Creek.

Environmental benefits of this project include:

1. Reduction of Church Street CSO;
2. Replacement of aging cracked/broken combined sewer infrastructure through an open area that currently poses a health risk;
3. Improvements to the existing low lying area, where the separate storm water runoff will be directed, to provide water quality benefits to the separated flow before discharging to the Banklick Creek (improvement include green infrastructure such as a constructed wetland, riparian buffer restoration, etc.)

SD1 has developed an innovative approach to reducing the overflow that not only provides a CSO reduction and water quality improvement, but also enhances the neighborhood and provides community amenities. The proposed alternative plan, which includes both traditional gray components and green elements will provide both a public health and water quality improvement and is anticipated to result in cost savings to SD1 as compared to the gray-only solution.

The goal of this community green infrastructure project is to improve and restore natural habitats, reduce the combined sewage entering the Banklick Creek, and improve the quality of storm water flowing to the stream. It is expected that the project will also provide educational opportunities, as well as opportunities for passive recreation.

This project is anticipated to begin in early 2012 with completion expected in mid-year 2013. It should be noted this timeline is tentative and only applies to construction of Phase I of the project. Phase II is still listed as a potential project by SD1.