

NPS Report to White Clay Creek Watershed Management Steering Committee

8-8-16

Financials

NPS funds tracking log indicate as of June 30, 2016 there was a total of **\$44,962.90** remaining in the White Clay Watershed Association's Cooperative Agreement consisting of 2013 (**\$8.76**); 2014 (**\$1615.06**) and 2015 (**\$43,339.08**) funds. The 2015 funds are being spent, **\$21,038.22** invoiced this quarter.

As of June 30, 2016, NLT has **\$0.00** remaining in its Cooperative Agreement for White Clay Creek, which consisted of 2011, 2012, 2013, and 2014 funds. NLT was successful in their efforts to spend remaining funds in this Cooperative Agreement before they expired June 25, 2016. NLT invoiced **\$100,112.81** to close the account. NLT, along with Brandywine Conservancy completed 5 conservation easements, a conservation plan, analysis and mapping of forest buffer gaps and two reforestation projects this quarter. NLT is in the process of preparing a close out report for the Cooperative Agreement which will highlight and describe all of the completed projects for all of the funding which was granted through this Cooperative Agreement which totaled **\$209,450**

Section 7 Reviews:

1) Culvert Removal & Streambank Stabilization; Jenny's Run; City of Newark, DE - NPS conducted a review of the proposed culvert removal and site restoration plans as depicted and described on construction drawings and streambank stabilization plans prepared by Duffield Associates dated March 23, 2016. No "outstandingly remarkable resource values associated with the White Clay Creek National Wild and Scenic River exist in the immediate area of this project; however, known habitat that would support the federally threatened bog turtle (*Glyptemys muhlenbergii*) exists in two separate locations nearby. Turtles at either of those sites could wander into the proposed work areas or in the existing culverts.

Given the steepness of the existing stream banks that must be matched (45 degree angle; 1 to 1 slope) the use of geo bags; which are planned to be covered by a prepared subgrade, 4 inches of topsoil; then covered by staked erosion control matting and topped off with 1 inch of topsoil and then seeded; is an acceptable stabilization system for this site. Stabilizing the slope with grasses will increase the habitat value and the scenic qualities of the site. The use of approximately 2 feet of R4 rip rap at the toe of slope is necessary given the slopes involved and the potential stream velocities and stresses. The rip rap voids will fill in overtime with stream sediments and should not be a trap for wildlife.

NPS concluded that overall this project will be of a direct benefit to fish, reptiles and amphibians in the area by removing a culvert; which was an impediment to fish and wildlife migration from the mainstem of the White Clay Creek to upstream forest and wetland habitat on Jenny's Run. In general, this project should not significantly or negatively impact White Clay Creek or its resource values, and should not adversely affect the White Clay Creek National Wild and Scenic River if the following measures are taken: a) A State of Delaware approved bog turtle surveyor should monitor the project site for bog turtles during construction.

2) City of Newark, DE Sewer Repair near Pomeroy Trail bridge - NPS believes that this project does not pose any significant impacts to the unnamed tributary or the White Clay Creek National Wild and Scenic River. The project

is located in an area with no identified specific natural, historic or cultural or recreational outstandingly remarkable resource values associated with the White Clay Creek National Wild and Scenic. The unnamed tributary itself is very small, not more than 3 feet wide. The emergency repairs impacted a very limited area, not more than 10 feet long and included a minor amount of small stone being placed in the stream. The placement of this stone should not impede the free flow of the tributary, nor should it become a hindrance to the migration of amphibians, fish or other wildlife. NPS, therefore, has determined that this project should not significantly or negatively impact the White Clay Creek National Wild and Scenic River.

3) Culvert Repair; Bridge 1-239 on N352 Red Mill Road over Tributary to White Clay Creek; East of Newark, DE; New Castle County - NPS conducted a review of the proposed concrete liner repairs for the existing corrugated culverts located at Bridge 1-239 on Red Mill Road on a designated tributary of the White Clay Creek National Wild and Scenic River. U.S. Fish & Wildlife Service review indicates that bog turtle (*Clemmys muhlenbergii*) exist in the area of the project. Bog turtle (*Clemmys muhlenbergii*) is a federally threatened species and is an “outstandingly remarkable” resource value of the White Clay Creek National Wild and Scenic River. The U.S. Fish & Wildlife review of this project also indicates that critical habitat for the bog turtle does not exist at the project site. NPS is concerned that this culvert may be on a potential migration route for the bog turtle, even though there isn’t any bog turtle critical habitat at the project site; potential habitat may exist up stream adjacent to this tributary.

This repair project should not significantly or negatively impact White Clay Creek or its resource values, and should not adversely affect the White Clay Creek National Wild and Scenic River if the following measures are taken: a) Construction of this project is restricted till after June 15, the traditional bog turtle migration season; b) The downstream final in-channel bed elevation after the recessed rip-rap voids are filled in with existing stream bed material shall match the final invert elevation of the concrete liners so that the concrete liners are flush with the new stream bed elevation and are not higher than the new stream bed and therefore an impediment to bog turtle migration upstream within the repaired culvert; c) Necessary precautions have been taken to limit erosion and sedimentation and to restore this project site post construction; however, care should be taken in the selection of erosion control mats for this project. Strict sedimentation and erosion controls are appropriate, but “excelsior mat” or “curlex” type materials should not be used. The plastic netting associated with these materials does not readily decompose over time and may be a long term hazard to wildlife. We recommend the use of no-net products (no nets top or bottom of blanket), burlap, jute matting or blankets made from coconut fibers. We also do not recommend the use of “geosynthetic filter fabrics” for the same reasons. NPS lifted the seasonal restriction on this project a) after further consultation with DNREC and USFWS revealed no bog turtles in the immediate area or within close migrating proximity.

4) Culvert Replacement; Tributary East Branch White Clay Creek; Hilltop Road near Church Hill Road; Franklin Township; Chester County, PA - NPS conducted a review of the proposed culvert replacement, referenced above, as described on construction drawings and plans prepared by LTL Consultants, LTD dated December 22, 2015. No “outstandingly remarkable resource values associated with the White Clay Creek exist in the immediate area of this project. NPS is, however, concerned that this culvert may be on a potential migration route for reptiles and amphibians given critical habitats and wetlands which exist upstream and downstream of the project site.

The proposed plans for this culvert replacement call for the new culvert to be recessed below the existing culvert, which will assist in achieving a natural streambed through the culvert and will aid in reptile and amphibian migration. A natural streambed achieved by recessing culverts in relation to streambeds is a goal of the White Clay Creek Wild and Scenic Watershed Management Plan.

In general, this project should not significantly or negatively impact White Clay Creek or its resource values, and should not adversely affect the White Clay Creek National Wild and Scenic River if the following measures are taken: a) Construction of this project should take place within the USFWS time of year restrictions; b) The downstream, easterly, in-channel rip-rap, should be recessed to match the final invert elevation of the downstream culvert. The in-channel rip rap voids should then be backfilled in with existing on site stockpiled excavated stream bed material; this will prevent migrating reptiles and amphibians from getting stuck in the rip rap voids. The final stream bed elevation should be flush with the invert elevation of the new downstream culvert, this will aid in reptile and amphibian migration through the culvert; c) Necessary precautions have been taken to limit erosion and sedimentation and to restore this project site post construction; however, care should be taken in the selection of erosion control mats for this project. Strict sedimentation and erosion controls are appropriate, but "excelsior mat" or "curlex" type materials should not be used. The plastic netting associated with these materials does not readily decompose over time and may be a long term hazard to wildlife. We recommend the use of no-net products (no nets top or bottom of blanket), burlap, jute matting or blankets made from coconut fibers. We also do not recommend the use of "geosynthetic filter fabrics" for the same reasons.