

NORTHEAST REGIONAL CONSERVATION NEEDS GRANT

2015 PROGRESS REPORT

Quarter: (circle one)

2015 1st

2015 2nd

2015 3rd

2015 4th

Grant Program, Number and Title: Regional Conservation Needs Grant 2013-01. Developing a coordinated research approach for hellbender conservation in the northeast region

Organization: Smithsonian Institution (primary organization)

Participating organizations: Western Pennsylvania Conservancy, Maryland Department of Natural Resources, Virginia Department of Game and Inland Fisheries, Buffalo State University, The Wilds

Project Leader: Kimberly Terrell, Ph.D.

Abstract: Please provide a short (1-2 paragraphs) abstract that addresses EACH of the following: the objectives of your project, accomplishments to date, future plans and timelines with an estimate for when the project will be completed.

Were planned goals/objectives achieved last quarter?

Yes. This past quarter we focused on planning and conducting the second (and final) round of environmental DNA (eDNA) surveys. Our survey season is planned for Aug 15 – Oct 15, to coincide with increased eDNA concentrations due to hellbender breeding activity. Although our survey season is not yet complete, we are pleased to report that we already have met the target number of sites (n = 130) planned for this study. Additionally, each partner state has met or exceeded its individual target (NY = 30, PA = 45, WV = 15, MD = 10, VA = 30). Each partner has secured additional funding for hellbender eDNA research from various sources, thus we expect to sample an additional 50 sites, for a total of 180.

Progress Achieved: (For each Goal/Objective, list Planned and Actual Accomplishments)
Objectives

1) Fill major data gaps in hellbender distribution throughout the northeast

As described above, we have conducted extensive eDNA surveys to better understand the distribution of the hellbender in the northeast. Our current field season will end Oct 15. Total site numbers will exceed our targets, and will be reported at the end of the next quarter. We are excited to report that we expanded the Virginia citizen science program this year to include two additional universities (Radford University and Southwest Virginia Community College), a local high school (Cornerstone Christian Academy), and several new master naturalists. In August, we conducted four eDNA training/refreshers workshops for our new and returning citizen science partners. In each state, eDNA sampling has resulted in the discovery of hellbender populations at sites where the species was previously not known to occur. This quarter, we validated these findings by conducting conventional rock-turning surveys at a subset of sites. Site locations, eDNA results, and conventional survey results will be included in the final report.

2) Develop efficient, standardized protocols for hellbender research and monitoring

This quarter we focused primarily on preparing for and conducting eDNA surveys. We spent a significant amount of time validating and refining our protocols in previous quarters, so these were not modified during the current quarter. However, we continue to have monthly phone calls to

ensure consistency in our sampling and to address any challenges that may arise.

Difficulties Encountered:

There are no difficulties to report for this quarter.

Activities Anticipated Next Quarter:

We plan to complete sampling by Oct 15 and begin DNA extractions shortly thereafter. We requested a no-cost extension for this project until 1 May 2016, because sample analysis is taking somewhat longer than we had originally anticipated, and because we are collecting a greater number of samples than originally planned.

Expected End Date: 1 May 2016

Costs:

Total life to date expenses (include this quarter): \$63,554.41

Total Approved Budgeted Funds: \$99,886.00

Are you within the approved budget plan and categories? Yes

Signature: 

Date: 15 Nov 2015