



Natural Resource Quarterly | Summer 2020

Newsletter of Natural Resources in the National Capital Area



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Stream Restoration Dreams: Stage Zero

by NCA Hydrologist Matthew Schley

Slow it down and spread it out. It's practically a mantra of modern stream restoration. When trying to prevent or repair erosion and channelization, the energy of a stream needs to be dissipated. Due to the limits of infrastructure and property in the National Capital Area (NCA), that energy dissipation often takes the form of boulders and step-pools in the channel that drop water over and around large obstacles. Only larger storm events then fill the adjacent floodplain, preventing increases in flooding to nearby property.



Milk House Ford and Broad Branch in Rock Creek Park, Spring House Run at the National Arboretum, and Alger Park in Washington, DC are just a few regional examples of such ex-stream (pun intended!) makeovers. But as transformative and highly effective as they are, these restorations would be considered Stage 1 restorations where there is still a single stream channel conveying most of the flow. There is an even more radical restoration concept that in urban areas could be considered entirely idealistic: stage zero stream restoration. [Read More](#)

[Photo: Stage 0 restoration at the downstream end of Bacon Ridge Branch at Elks Camp Barrett in Annapolis, MD. Construction completed by Biohabitats. Credit: Schley/NPS]

Stiltgrass, Deer, and Tree Seedlings

Eastern forests have many stressors. Two of the biggest are overabundant deer populations and non-native invasive plants. But how do these stressors interact? If deer populations go down, do invasive plants explode and hamper forest recovery?

A recent analysis of data from Catoclin Mountain Park, where extensive

monitoring has tracked forest changes before and during deer population management, looked at one of the most concerning invasive species: Japanese stiltgrass (*Microstegium vimineum*). [Read More](#)

[Photo: A blanket of Japanese stiltgrass along a forest road in Catoctin Mountain Park. Credit: Paradis/NPS]



I&M Data Management During COVID-19

With the Inventory & Monitoring program's typical spring field work disrupted, [the National Capital Region Network](#) is taking this opportunity to do an in-depth review and update to data workflows and the annual data management cycle. This technical and detailed process includes rigorously documenting quality control procedures and adding transparent, standardized descriptive comments to communicate important contextual information to the users of I&M datasets. For example, NCRN (and other long-term monitoring programs) will need to document the effects of COVID-19 field season disruptions to future data users (e.g., as an explanation for why certain data are missing from the 2020 dataset).

Monitoring data going back 15 years for vital signs such as [forest health](#), [water quality](#), and [breeding birds](#) add up to a lot of information, and this work will assure that these long-term data sets are the authoritative source for information on park natural resources.

Trail Camera Image: Coyotes



[Photo: Coyotes photographed at Turkey Run Park during the recent fisher survey. Credit: NPS]

These three coyotes in the Turkey Run Park area of George Washington Memorial Parkway, are just a sample of the wildlife images captured during a recent project searching for fisher (*Pekania pennanti*) in National Capital Area parks. The project, carried out by UERLA intern Nick Kilby, did not detect any fisher, but did capture: red fox, field

mouse, white-tailed deer, raccoon, gray squirrel, coyote, wild turkey, Virginia opossum, pileated woodpecker, chipmunk, groundhog, and American robin. Less commonly, cameras caught images of otter at Manassas, and striped skunk at Monocacy and Great Falls.

New Forest Regeneration Brief

A look at the latest forest regeneration rates using 2019 I&M forest monitoring data shows that seedlings and small saplings remain in short supply in National Capital Area parks. [Read full resource brief](#)

[Photo: Wood thrush, a species vulnerable to loss and degradation of forest habitat. Credit: Gabriel Mapel/NPS]



RAMS: A Resource Assessment

Natural Resources and Science staff in the National Capital Area (NCA) have been working on a region-wide resource assessment effort called the “Resource Assessments for Management Strategies” project (RAMS). It combines assessment of natural and cultural resource conditions within and across NCA parks and is intended to be used to help parks identify shared opportunities for management and to determine management priorities for environmentally, culturally, and historically significant resources.

RAMS has so far updated four categories of Natural Resource Condition Assessments (NRCAs) using Inventory & Monitoring data (browse [previously completed NRCAs for NCA parks](#)). The Cultural Resource Stewardship Assessments (CRSAs) were not complete for all NCA parks, but three categories with potential data were identified and used: structures and landscapes, personal connection, and contemporary communities. The RAMS project will pinpoint geographic areas where resource management is successful and areas where additional management efforts will achieve maximum success.

During a March meeting with parks, we looked at the climate change resilience of park forest ecosystems and a related NCA project on ecological integrity assessments (EIA). An outgrowth of both the RAMS and EIA projects is a planned web tool that summarizes status and condition of the park forest blocks and resource indicator data regionwide (view [RAMS draft prototype](#)). Future steps include efforts to engage priority park partners in shared conservation actions.

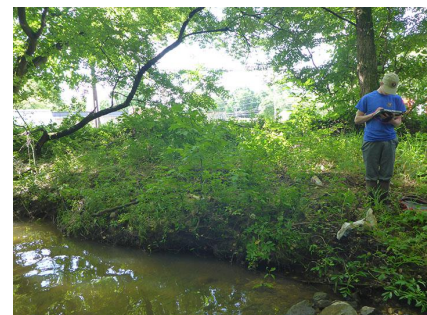
This project is facilitated by the [Chesapeake Watershed Cooperative Ecosystem Studies Unit](#) (CW CESU). The CW CESU promotes stewardship and integrated ecosystem management of natural and cultural resources in the Chesapeake Watershed through collaborative research, technical assistance, and education. To do research with CW CESU, please contact Danny Filer at 301-689-7108.

NRS Field Work in Your Park

During summer (June - August), programs from the office of Natural Resources and Science (NRS) are typically in parks doing field work.

Currently most field activities are on hold. Both bird and stream macroinvertebrate monitoring from the Inventory & Monitoring program are cancelled for 2020.

I&M [Amphibian Monitoring](#) runs through June,



conditional on availability of habitat at Catoctin, C&O Canal, GW Parkway, Manassas, Monocacy, National Capital Parks - East, Prince William, and Rock Creek.

[Photo: Water monitoring at Henson Creek. Credit: NPS]

Calendar

2020

SEPTEMBER

23-24. NCA Grasslands Workshop. Stephen T. Mather Training Center, Harpers Ferry, WV.

OCTOBER

7. 2020 Spotlight on National Park Resources in the National Capital Region. National Conservation Training Center (NCTC). TBD Livestream or in-person

TBD October/November. Chesapeake Watershed Cooperative Ecosystem Studies Unit (CW CESU) Annual Meeting. DC metro area location TBD.

Submit your ideas for the next Natural Resource Quarterly newsletter.

The Natural Resource Quarterly provides updates on the status of natural resources and science in the parks of Region 1 - National Capital Area.

[NCA Natural Resources](#) | [Previous Issues](#) | [NCR Inventory & Monitoring](#)

