

# PHOTOGRAPHIC RECORD

## National Capital Region Wetland Restoration Action Plan Catoctin Mountain Park Spring 2016



Open Water Pond #2 on the northern portion of CATO-1.



Open Water Pond #1 on the southern portion of CATO-1.



Stream channel located at CATO-1.



Culvert at existing driveway crossing located at CATO-1.



Pond berm located along southern pond at CATO-1, dominated by multiflora rose.



Spotted salamander found at CATO-1.

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### National Capital Region Wetland Restoration Action Plan Catoctin Mountain Park Spring 2016



Stable stream bank located at the downstream portion of CATO-2.



Eroded bank located at CATO-2.



Bridge crossing and culverts located downstream of CATO-3.



Stable stream channel located downstream of CATO-3.



Bank erosion downstream of the culvert at CATO-3.



Roadside drainage swale collecting gravel runoff at CATO-3.



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### National Capital Region Wetland Restoration Action Plan Catoctin Mountain Park Spring 2016



Stream channel located upstream of the culvert at CATO-3.



Downstream end of the historic culvert located at CATO-17.



Eroded stream channel on downstream portion of CATO-17.



Severely eroded stream banks at CATO-17.



High quality headwater wetland area at CATO-6. Example of dropped site.



Stable stream channel located at CATO-6. Example of dropped CATO stream site.

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### National Capital Region Wetland Restoration Action Plan Catoctin Mountain Park Spring 2016



Historic spring house remains at CATO-7.



Wetland seep below spring house at Stream channel at CATO-7.



Pond outfall and berm of large open water pond at CATO-7.



Open water pond located at CATO-7.



Stream channel located at CATO-8.



Historic culvert with fish passage concerns at CATO-9.



## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Catoctin Mountain Park Spring 2016



Severely eroded stream bank located along the railroad tracks at CATO-13.



Road crossing and culvert at CATO-14.



Area upstream of existing culvert at CATO-14.



Stream channel downstream of existing culvert at CATO-14.



Existing head-cut within the stream channel at CATO-15.



Undercut bank and erosion at CATO-15.

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Undercut bank and erosion at CATO-15.



Stable stream at the downstream end of CATO-15.



Erosion on the right bank of CATO-16.

## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Monocacy National Battlefield Spring 2016



Highly eroded stream bank along WUS-1 at MONO-1.



Upstream portion of WUS-1 at MONO-1.



Highly eroded stream bank along the upstream portion of WUS-1 at MONO-1.



Lack of riparian stream buffer along the stream channels at MONO-1



Eroded stream bank along WUS-2 at MONO-1.



Eroded stream bank and lack of riparian buffer along WUS-2 at MONO-1.



## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Monocacy National Battlefield Spring 2016



Lack of riparian buffer along WUS-2 at MONO-1.



Visible sediment load from WUS-2 into WUS-1 at MONO-1.



Wetland 1 located at MONO-1.



Channelized drainage within Wetland 1 at MONO-1.



Eroded streambank located at MONO-4.



Emergent wetland located at MONO-4.



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### National Capital Region Wetland Restoration Action Plan Monocacy National Battlefield Spring 2016



Prior converted wetland area at MONO-5.



Standing water within agricultural field located at MONO-5.



Edge of prior converted wetland along the tree-line at MONO-5.



Erosion along the stream bank at MONO-6.



Emergent wetland located at MONO-6.



Native tree planting located at MONO-6.

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### National Capital Region Wetland Restoration Action Plan Monocacy National Battlefield Spring 2016



Reed canary grass dominating the emergent wetland at MONO-7.



Stream channel located downstream of Wetland 1 at MONO-7.



Channel erosion and incision at MONO-10.



Channel erosion at MONO-10.



# PHOTOGRAPHIC RECORD

## National Capital Region Wetland Restoration Action Plan Harpers Ferry National Historical Park Spring 2016



Channelized drainage located at HAFE-2.



Overview of emergent wetland located at HAFE-2.



Open water pond identified at HAFE-4.



Overview of project site HAFE-4.



Emergent wetland located at HAFE-4.



Spring house identified at HAFE-4.

# PHOTOGRAPHIC RECORD

## National Capital Region Wetland Restoration Action Plan Harpers Ferry National Historical Park Spring 2016



Wetland draining into pond at HAFE-4.



Small emergent wetland at HAFE-6.



Grassland surrounding wetland at HAFE-6.



Road crossing with culvert located at HAFE-7.



Severely eroded bank and incision at HAFE-7.



Bank erosion at HAFE-7.



## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Harpers Ferry National Historical Park Spring 2016



Filled in wetland/historical structure located at HAFE-8.



Filled in wetland/historical structure located at HAFE-8.



Wetland area at HAFE-8 prior to being filled in with gravel.



Woody debris and eroded stream bank at HAFE-9.



Stream bank erosion located at HAFE-9.



Stream bank erosion near footpath located at HAFE-9.

## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Chesapeake & Ohio Canal National Historical Park Spring 2016



Stormwater management pond located upstream of CHOH-1.



Gabbion baskets located at the head of WUS-1 at site CHOH-1.



Existing wetland located adjacent to WUS-1 at CHOH-1.



Drainage ditch located within the agricultural field at CHOH-5.



Channelized drainage located at CHOH-5 with rock check dams.



Wetland vegetation within the agricultural field at CHOH-5.



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### National Capital Region Wetland Restoration Action Plan Chesapeake & Ohio Canal National Historical Park Spring 2016



Wetland vegetation located at CHOH-6.



Wetland hydrology indicators observed at CHOH-6.



Hydric soil samples collected at CHOH-6.



Stream channel at CHOH-12.



Invasive species along the stream bank at CHOH-12.



Outfall structure located at the upstream portion of CHOH-12.

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### National Capital Region Wetland Restoration Action Plan Chesapeake & Ohio Canal National Historical Park Spring 2016



Reed canary grass located within the forested wetland at CHOH-13.



Forested wetland located at CHOH-13.



Forested wetland area at CHOH-13.



Stream channel located at CHOH-17.



Eroded stream bank located at CHOH-17.



Lack of riparian area along the stream channel at CHOH-17.



## PHOTOGRAPHIC RECORD

### National Capital Region Wetland Restoration Action Plan Chesapeake & Ohio Canal National Historical Park Spring 2016



Overview of Multiflora Rose wetland at CHOH-18.



Surface water and soft rush located within the wetland at CHOH-18.



Overview of the wetland located at CHOH-19.



Buttonbush and reed canary grass identified within the wetland located at CHOH-19.



Emergent wetland swale located within the agricultural field at CHOH-23.



Transition area from emergent wetland to forested wetland at CHOH-23.

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### National Capital Region Wetland Restoration Action Plan Chesapeake & Ohio Canal National Historical Park Spring 2016



Emergent wetland located at CHOH-23.



Wetland located at CHOH-24.



Straightened stream channel at CHOH-25.



Drainage patterns within the forested wetland at CHOH-25.



Reed canary grass identified within the forested wetland at CHOH-25.



Emergent wetland along the edge of the agricultural field at CHOH-25.



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Forested wetland located at CHOH-27.



Multiflora rose observed along the edge of the forested wetland at CHOH-27.



Emergent wetland dominated by soft rush at CHOH-27.



Emergent wetland dominated by soft rush at CHOH-27.



Drainage pattern within the forested wetland at CHOH-27.



Stream channel located at CHOH-29.

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Unstable culvert and highly eroded stream banks located at CHOH-29.



Forested wetland located at CHOH-30.



Concrete slabs identified within the forested wetland at CHOH-30.



Concrete pillars located within the forested wetland at CHOH-30.



Multiflora rose within the forested wetland at CHOH-30.



Outfall structure and adjacent roadway located at CHOH-31.



## PHOTOGRAPHIC RECORD

National Capital Region Wetland Restoration Action Plan  
Chesapeake & Ohio Canal National Historical Park  
Spring 2016



Severe stream bank erosion identified at CHOH-31.



Lack of mature and dense riparian buffer along the stream channel at CHOH-31.