

## Chapter 9. Management Recommendations

Management recommendations are projects that have been identified through the development of the “Youghiogheny River Conservation Plan Part 1: Headwaters to Dunbar Creek.” When implemented, these projects will improve conditions in the Youghiogheny River Watershed. Some recommendations are designed to improve water quality while others might improve wildlife habitat or the general quality of life for area residents.

These recommended projects were identified through various forms of community outreach and collaboration. They are broken down by the various subsections or resources within the chapters of this report. Management Recommendations will be listed as basin wide, meaning they can be implemented in any of the management units. Then they will be followed by any management unit specific recommendations. Completing these recommended projects will improve conditions and the quality of life within the watershed.

In the matrix below, along with the recommended projects there are also recommended project partners and potential funding sources. Due to the quantity of states located within the project area instead of listing each potential organization via their acronyms they have been bundled together. Just because a funding source or potential partner is not included does not mean they cannot participate in completing the recommended project. Also, just because a partnership or funding source is listed, they may choose not to participate. Table 9-1 identifies the acronyms or abbreviations for organization used in the management recommendations matrix.



*Volunteers installing a handicapped parking space at one of the trailheads for the Indian Creek Valley Trail.*

**TABLE 9-1. MANAGEMENT RECOMMENDATION ACRONYMS**

<b>Acronym</b>	<b>Definition</b>
ADA	American Disability Act
DOH	Department of Health
FACT	Fayette Area Coordinated Transit
FCCD	Fayette County Conservation District
FPW	Foundation for Pennsylvania Watersheds
ICVWA	Indian Creek Valley Water Authority
IDEXX	Water Testing Company
IIJA	Infrastructure Investment and Jobs Act
LHMG	Laurel Highlands Mini-Grants
MAWC	Municipal Authority of Westmoreland County
MDE	Maryland Department of Environment
MDNR	Maryland Department of Natural Resources
MWA	Mountain Watershed Association
NPS	National Parks Service
NFWF	National Fish and Wildlife Foundation
OSM	Office of Surface Mining
PA DCNR	Pennsylvania Department of Conservation and Natural Resources
PA DEP	Pennsylvania Department of Environmental Protection
PENNVEST	Pennsylvania Infrastructure Investment Authority
PFBC	Pennsylvania Fish and Boat Commission
PGC	Pennsylvania Game Commission
PHMC	Pennsylvania Historic Museum Commission
SLHPMP	Southern Laurel Highlands Plant Management Partnership
STROUD	Stroud Center for Water Research
WCD	Westmoreland Conservation District
WPC	Western Pennsylvania Conservancy
WTA	Westmoreland Transit Authority

WVDEP	West Virginia Department of Environmental Protection
WVDNR	West Virginia Department of Natural Resources

State agencies include, but are not limited to PA DEP, PA DCNR, MDE MDNR, WVDEP, WVDNR, PFBC, PGC, PHMC, PennDOT

Federal agencies include, but are not limited to EPA, OSM, USACE, IJIA

Conservation organizations include, but are not limited to MWA, WPC, Casselman River Watershed Association, Youghiogheny Watershed Association, Friends of Laurel Hill State Park, Friend of Ohiopyle State Park, County Conservation Districts, Cooperative Extension Offices, Trout Unlimited

### YOUGHIOGHENY RIVER WATERSHED

#### PROJECT AREA CHARACTERISTICS

Recommendation	Potential Partners	Potential Funding	Priority
Communication			
Improve cellular service through installation of towers and other devices.	Legislators, Cellular Companies, Visitors Bureaus, Chambers of Commerce	Private Sources, Legislators, Economic Development Departments, Appalachian Region Commission	High
Expand access to high-speed internet, especially in poor, rural and environmental justice communities.	Legislators, Cellular Companies, Visitors Bureaus, Chambers of Commerce	Private Sources, Legislators, Economic Development Departments, Appalachian Region Commission	High
Transportation			
Increase transportation opportunities for senior citizens. Especially in poor, rural, and environmental justice communities.	Area agencies on aging, Redevelopment Authorities, Senior Services, Legislators	Private Sources, Legislators	Medium
Enhance techniques for improving and maintaining local roadways.	Municipal Units, State Highway Departments	State Highway Departments, State and Federal Legislators	Medium

**PROJECT AREA CHARACTERISTICS**

Recommendation	Potential Partners	Potential Funding	Priority
Transportation (continued)			
Increase funding to municipal units for improving and maintaining local roadways.	Municipal Units, State Highway Departments, Conservation Districts	State Highway Departments, State and Federal Legislators	Medium
Maintain and improve dirt and gravel roadways to minimize erosion.	Center for Dirt & Gravel Roads, Conservation Districts, Municipal Units, State Highway Departments	Private Sources, Legislators, State Environmental Agencies, State Highway Departments	High
Sewage			
Conduct source tracking to identify stream impacts caused by bacteria and fecal coliform,	Municipal Units, Businesses, Conservation Organizations, State Agencies	Private Foundations, Private Sources, Economic Development Departments	Medium
Work with landowners to upgrade malfunctioning septic systems or potentially establishing municipal systems.	Municipal Units, Conservation Organizations, State Agencies, Landowners	Private Foundations, Private Sources, Economic Development Departments	High
Update Act 537 or similar plans to determine if municipal sewage treatment systems would be more effective and cost-effective in areas lacking public sewage treatment.	Municipal Units, Businesses, Conservation Organizations, State Agencies	Private Foundations, Private Sources, Economic Development Departments	High
Drinking Water			
Identify and test popular springs where people obtain drinking water to determine if it is safe for consumption and for educational purposes.	Certified Labs, Watershed Organizations, Cooperative Extensions	Private Foundations, Private Sources, State Agencies, Health Department	Medium
Upgrade old water lines to be compliant with new parameters, such as lead.	Water Authorities, State Agencies	Private Foundations, Private Sources, State Agencies	High
Expand public water supplies into communities where aquifers have been impacted by mining or other industrial pollution.	Water Authorities, State Agencies	Private Foundations, Private Sources, State Agencies	High

**PROJECT AREA CHARACTERISTICS**

Recommendation	Potential Partners	Potential Funding	Priority
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Drinking Water (continued)

Establish ordinances restricting land uses in source water protection areas.	Municipal Units, Water Authorities	Private Sources	Medium
Establish a drop-off location where people can have their private water systems tested for drinking water parameters.	Certified Labs, Cooperative Extensions	State Agencies, Private Foundations, Private Sources, DOH	High

Emergency Responders

Install fire hydrants when expanding or installing new water lines.	Fire Departments, Water Authorities, Municipal Units, State Agencies	Private Foundations, Private Sources, State Agencies	Medium
Increase funding to local fire departments to purchase needed equipment.	Fire Departments, Municipal Units, State Agencies	Private Foundations, Private Sources, State Agencies	Medium
Establish a fund to help offset equipment and training for volunteer firemen.	Fire Departments, Municipal Units, State Agencies	Private Foundations, Private Sources, State Agencies	Medium
Develop community incentives to encourage individuals to become volunteer firemen and help breach gender barriers.	Fire Departments, Municipal Units, State Agencies	Private Foundations, Private Sources, State Agencies	Low
Develop a river access map for emergency providers.	First Responders, Municipal Units, State Agencies, Landowners	Private Foundations, Private Sources, State Agencies	High

Fracking

Identify or establish an entity as oversight for fracking and drilling operations in the watershed.	Municipalities, State Agencies, Conservation Organizations	Private Foundations, Private Sources, State and Federal Agencies	Medium
Establish a protocol for monitoring and reporting pollution events caused by drilling and fracking in the watershed.	Municipalities, State Agencies, Conservation Organizations	Private Foundations, Private Sources, State and Federal Agencies	Medium

**LAND RESOURCES**

<b>Recommendation</b>	<b>Potential Partners</b>	<b>Potential Funding</b>	<b>Priority</b>
<b>Illegal Dumping/Recycling</b>			
Identify, document, and clean up dumpsites including orphan dumps.	Municipal Units, Keep PA Beautiful	Private Foundations, Private Sources	Medium
Offer municipal unit cleanup days for hard to get rid of items.	Municipal Units, Community Members, Keep PA Beautiful	Private Foundations, Private Sources, State Funds	High
Establish additional recycling centers or recycling drop-off locations.	Municipal Units, Community Members, Keep PA Beautiful	Private Foundations, Private Sources, State Funds	High
Offer an annual hazardous waste pick up for items that municipal cleanup days cannot accept.	Municipal Units, Community Members, Keep PA Beautiful	Private Foundations, Private Sources, State Funds, Fees	High

**Mining**

Petition additional lands be designated as Unsuitable for mining.	Conservation Organizations, State Agencies, EPA	Private Foundations, Private Sources	Medium
Establish or purchase conservation easements with willing landowners to restrict future mining or other industrial activities that would harm watershed or community.	Conservation Organizations, Land Trusts	Private Foundations, Private Sources, State Agencies	Medium
Advocate against new mining operations.	Conservation Organizations	Private Foundations, Private Sources	High

**Riparian Corridor Preservation**

Conduct a riparian corridor survey and recommend specific riparian corridors for preservation and restoration activities.	Conservation Districts, Conservation Organizations, State and Federal Agencies	Private Foundations, Private Sources, State and Federal Agencies	High
Protect riparian corridors by establishing a minimum 50' buffer on both sides of the stream using native species.	Conservation Districts, Conservation Organizations, State and Federal Agencies	Private Foundations, Private Sources, State and Federal Agencies	High

**LAND RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Riparian Corridor Preservation (continued)			
Conduct educational outreach programs about benefits of riparian corridors and the impacts that mowing has to the streambank.	Conservation Districts, Conservation Organizations, State and Federal Agencies	Private Foundations, Private Sources, State and Federal Agencies	High
Install streambank fencing and provide alternative water supplies to keep livestock out of area streams.	Conservation Districts, Conservation Organizations, State and Federal Agencies	Private Foundations, Private Sources, State and Federal Agencies	High
Conduct inventory of priority Eastern Hemlock stands and direct appropriate chemical and/or biological treatment of invasive Hemlock Woolly Adelgid to hemlock stands providing cooling shade to cold-water streams.	Conservation Districts, Conservation Organizations, Watershed Organizations, State and Federal Agencies	Private Foundations, Private Sources, State and Federal Agencies, NFWF	High
Logging Impacts			
Implement best management practices to minimize erosion and sedimentation impacts.	Conservation Districts, Cooperative Extensions, State Agencies	Private Foundations, Private Sources	High
Host workshops for loggers to educate them about impacts of erosion and sedimentation and best management practices that can minimize these impacts.	Conservation Districts, Cooperative Extensions, State Agencies, Loggers	Private Foundations, Private Sources	Medium
Better system to track properties owned by land trusts and non-profit organizations that should be considered conserved lands.	Conservation Organizations, Land Trusts, Watershed Organizations	Private Foundations, Private Sources	Medium
Increase lands protected through implementation of conservation easements.	Conservation Organizations, Land Trusts, Watershed Organizations	Private Foundations, Private Sources	High
Land Protection			
Conduct an inventory of public and protected lands to identify what parcels maintain their mineral rights and establish a GIS layer.	Conservation Organizations, Land Trusts, Watershed Organizations, Counties, State Agencies	Private Foundations, Private Sources, State Agencies,	High

**WATER RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Abandoned Mine Drainage			
Monitor existing mine drainage treatment systems at least quarterly to ensure systems are functioning properly and document improvements to local streams.	State Agencies, Watershed Organizations	Private Foundations, Private Sources, Legislature	High
Continue exploring new technologies to treat discharges where treatment options have yet to be discovered, including methods to remove aluminum.	State Agencies, Watershed Organizations, Consultants	Private Foundations, Private Sources, Legislature, State Agencies	High
Provide additional funding for operation and maintenance of treatment systems.	Office of Surface Mining, Western PA Coalition for Abandoned Mine Drainage, State Agencies	Private Foundations, Private Sources, Legislature, State Agencies, Office of Surface Mining	High
Enhance or establish emergency response funds to assist with treatment system malfunctions or issues.	Office of Surface Mining, Western PA Coalition for Abandoned Mine Drainage, State Agencies, Fayette County Conservation District	Private Foundations, Private Sources, Legislature, State Agencies, Office of Surface Mining	Medium
Conduct an assessment of mine drainage discharges and develop a comprehensive restoration plan.	State Agencies, Watershed Organizations, Consultants	Private Foundations, Private Sources, State Agencies	High
Evaluate older treatment systems for efficiency and performance. Determine if maintenance or redesign is needed.	Office of Surface Mining, Western PA Coalition for Abandoned Mine Drainage, State Agencies, Watershed Organizations, Consultants	Private Foundations, Private Sources, Legislature, State Agencies, Office of Surface Mining	High
Develop treatment systems for mine drainage discharges that are currently untreated.	Office of Surface Mining, Western PA Coalition for Abandoned Mine Drainage, State Agencies, Watershed Organizations, Consultants	Private Foundations, Private Sources, Legislature, State Agencies, Office of Surface Mining	High



**WATER RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Abandoned Mine Drainage (continued)			
Utilize native plants in mine drainage remediation efforts.	Office of Surface Mining, Western PA Coalition for Abandoned Mine Drainage, State Agencies, Watershed Organizations, Consultants	Private Foundations, Private Sources, Legislature, State Agencies, Office of Surface Mining	Medium
Conduct assessments of area streams receiving discharges of abandoned mine drainage to evaluate the impact of the pollution and how the streams are tolerating it. Develop a restoration plan for impacted streams.	Conservation Organizations, State Agencies, Universities, Municipalities	Private Foundations, Private Sources, State and Federal Agencies, Office of Surface Mining, Universities	High
Streambank Stabilization			
Conduct erosion and sedimentation surveys identifying areas impacted identifying the need and best management practices.	Conservation Organizations, Watershed Organizations, Trout Unlimited, State Agencies, Consultants, Stroud	Private Foundations, Private Sources, State Agencies	High
Install best management practices identified to minimize erosion and sedimentation.	Conservation Organizations, Watershed Organizations, Trout Unlimited, State Agencies, Consultants, Stroud	Private Foundations, Private Sources, State Agencies	High
Flooding			
Conduct wetland delineations to identify and document existing wetlands and develop a management plan to minimize flooding.	Consultants, Watershed and Conservation Organizations, State Agencies, Stroud	Private Foundations, Private Sources, State Agencies	High
Conduct a flood assessment of streams and implement best management practices arising from the assessment.	Consultants, Watershed and Conservation Organizations, State Agencies, Stroud	Private Foundations, Private Sources, State Agencies	High

**WATER RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Impaired Streams			
Set up a monitoring program to monitor streams listed as impaired.	State Agencies, Watershed Organizations	Private Foundations, Private Sources, State Agencies	High
Address impairments through the use of best management practices aimed at removing listed waterbodies.	State Agencies, Watershed Organizations	Private Foundations, Private Sources, State Agencies	High
Water Quality Monitoring			
Conduct watershed assessments of the Youghiogheny River and its tributaries.	State Agencies, Watershed Organizations	Private Foundations, Private Sources, State Agencies	High
Establish bacteria monitoring program throughout the entire Youghiogheny River watershed to monitor safe swimming conditions.	Watershed Organizations, State Agencies	Private Sources, Foundations, State Agencies	Medium
Establish bacteria monitoring program throughout the entire Youghiogheny River watershed to monitor NPDES permits to ensure they are meeting their permit requirements.	Watershed Organizations, State Agencies	Private Sources, Foundations, States	Medium
Conduct fish surveys on unassessed streams using the Pennsylvania Fish and Boat Commission protocol or other state protocols in Maryland and West Virginia	Watershed & Conservation Organizations, Trout Unlimited, State Agencies	Private Foundations, Private Sources, State Agencies, National Fish and Wildlife Foundation, Laurel Highland Mini Grants	Medium
Water Quality Studies			
Establish a water budget for the entire Youghiogheny River Watershed.	Watershed & Conservation Organizations, Consultants, State Agencies	Private Foundations, Private Sources, State Agencies	High
Develop lake management plans for each lake in the watershed for water quality and invasive species living along and in the lake.	Watershed & Conservation Organizations, Consultants, State Agencies	Private Foundations, Private Sources, State Agencies	High

**WATER RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Water Quality Studies (continued)			
Conduct a study to determine how much water is being diverted to out of the Youghiogheny River Basin and determine impacts that causes.	Watershed & Conservation Organizations, Consultants, State Agencies	Private Foundations, Private Sources, State Agencies	High
Stream Classification			
Petition to give unnamed streams, names especially those with additional tributaries flowing into them.	State Agencies, Watershed Organizations	State Agencies, Legislature	Low
Upgrades to stream classification systems, especially in Pennsylvania, to incorporate neighboring stream systems into the designation.	State Agencies, Watershed Organizations	Private Foundations, Private Sources, State Agencies, Legislature	Medium
Explore the options of obtaining a designation in Pennsylvania to protect the Youghiogheny River like the Wild & Scenic designation in Maryland.	State Agencies, Watershed Organizations, Conservation Organizations, Legislators	Private Foundations, Private Sources, State and Federal Agencies	Medium

**BIOLOGICAL RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Invasive Species			
Conduct invasive plant surveys to document the presence of invasive species and to identify best management practices to remove them.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	High
Conduct invasive plant surveys to document the presence of invasive species and to identify best management practices to remove them.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	High

**BIOLOGICAL RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Invasive Species (continued)			
Conduct educational videos on how to identify and properly remove invasive species.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	Medium
Conduct workshops about how to identify and properly remove invasive species.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	Medium
Implement best management practices through the development of any assessments or remediation plans.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	High
Develop educational materials about invasive species and their associated impacts.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	Medium
Host events to remove invasive species.	Conservation & Watershed Organizations, State Agencies, Cooperative Extensions	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	High
Conduct preventative measures like treatments to protect native species from invasives similar to what is used for the woolly adelgid.	Cooperative Extensions, Conservation Districts, Conservation Organizations, State Agencies, SLHPMP	Private Foundations, Private Sources, State and Federal Agencies, National Fish and Wildlife Foundation	High
Biological Surveys			
Conduct surveys to update or verify the presence of species of concern and conduct the means necessary in order to protect these species and their habitats.	Consulting Firms, State Agencies, Watershed & Conservation Organizations, National Fish and Wildlife Foundation	Private Foundations, Private Sources, State Agencies, National Fish and Wildlife Foundation	High

**BIOLOGICAL RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Surveys (continued)			
Conduct macroinvertebrate surveys to document and monitor stream conditions.	Consulting Firms, State Agencies, Watershed & Conservation Organizations, National Fish and Wildlife Foundation	Private Foundations, Private Sources, State Agencies, National Fish and Wildlife Foundation	High
Conduct additional freshwater mussel surveys to document populations and explore reintroduction if conditions are suitable.	Consulting Firms, State Agencies, Watershed & Conservation Organizations, National Fish and Wildlife Foundation	Private Foundations, Private Sources, State Agencies, National Fish and Wildlife Foundation	High
Expand hellbender surveys to document populations.	Consulting Firms, State Agencies, Watershed & Conservation Organizations, National Fish and Wildlife Foundation	Private Foundations, Private Sources, State Agencies, National Fish and Wildlife Foundation	High
Conduct bird surveys in critical habitats.	Conservation Organizations, Audubon, National Fish and Wildlife Foundations, Universities, Bird Clubs	Universities, Private Foundations, Private Sources, National Fish and Wildlife Foundations	High
Habitat Preservation			
Establish pollinator gardens at various open spaces, such as community parks and mine drainage treatment systems.	Cooperative Extensions, Master Stewardship Program, Master Gardner Program, Watershed Organizations	Private Foundations, Private Sources, US Fish and Wildlife Service, Wildlife & Sportfish Restoration Program	Medium
Coordinate planning of new roads, pipelines, powerlines, windmills, etc. to avoid large forest blocks, or use existing corridors.	Permit reviewers, Municipal Units, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	Medium

**BIOLOGICAL RESOURCES**

<b>Recommendation</b>	<b>Potential Partners</b>	<b>Potential Funding</b>	<b>Priority</b>
Habitat Preservation (continued)			
Identify and conserve priority forested wetlands.	Watershed Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	High
Identify the most suitable sites for species of greatest conservation need and implement best management practices to maintain or enhance their habitats.	Watershed Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	High
Encourage utility companies to develop and implement an avian protection plan to minimize avian mortality risks.	Watershed Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	Medium
Work with willing dam-owners to remove dams, provide fishways if dam removal is not possible.	Watershed Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	Medium
Survey culverts to document fish passage capability and recommend best management practices to allow fish passage.	Watershed Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources, National Fish and Wildlife Foundation	Medium
Protect river scour communities.	Watershed & Conservation Organizations, Land Trusts, Trout Unlimited, State Agencies	Private Foundations, Private Sources	High

**CULTURAL RESOURCES**

<b>Recommendation</b>	<b>Potential Partners</b>	<b>Potential Funding</b>	<b>Priority</b>
Historical			
Increase awareness of the local history through the development of brochures, signage, lectures highlighting the regions history	Historical Societies, Universities, State Preservation Office	Private Foundations, Private Sources, Universities, State Preservation Office	Medium
Conduct historical recordings of the local residents talking about the local history.	Historical Societies, Community Members	Private Foundations, Private Sources	Medium

**CULTURAL RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Historical (continued)			
Identify and preserve local historical sites and work with landowners to place them on the National Register of Historical Sites	Historical Societies, Municipal Units, Historical Site Landowners, State Preservation Office	Private Foundations, Private Sources	High
Conduct thorough research or provide support for a master student to conduct a thesis study to research and document the earliest inhabitants of the watershed.	Historical Societies, State Preservation Offices, Universities	Universities, Private Foundations, Private Sources	Medium
Establish a self-guided historical roadmap of historical sites.	Historical Societies, Community Members	Private Foundations, Private Sources	High
Trails			
Increase signage along roadways to direct visitors to access points and trailheads.	State Highway Departments, Landowners, Trail Managers	Private Foundations, Private Sources, State Agencies	High
Add interpretive signage along trails to highlight historical or ecological significant features like the hemlocks	Historical Societies, Conservation Organizations, Trail Managers	Private Foundations, Private Sources, State Agencies	High
Environmental Education			
Work with local school districts to set up annual programs for Conservation Organizations to come into the classrooms with students to teach about local watersheds.	Conservation & Watershed Organizations, Schools, Three Rivers Quest	Private Foundations, Private Sources, State Agencies	High
Establish Trout in the Classroom programs at local school districts	Conservation & Watershed Organizations, Schools, Three Rivers Quest, Trout Unlimited	Private Foundations, Private Sources, State Agencies, Trout Unlimited	High
Host guided walks about local history	Trail Managers, Historical Societies	Private Foundations, Private Sources	Medium

**CULTURAL RESOURCES**

Recommendation	Potential Partners	Potential Funding	Priority
Environmental Education (continued)			
Conduct environmental educational programs geared towards reaching school-aged students	State Parks, State Forests, Conservation & Watershed Organizations, Schools, Three Rivers Quest	Private Foundations, Private Sources, State Agencies,	Medium
Conduct environmental educational programs geared towards reaching adult populations	State Parks, State Forests, Conservation & Watershed Organizations, Schools, Three Rivers Quest	Private Foundations, Private Sources, State Agencies,	Medium
Conduct environmental education programs geared towards reaching families.	State Parks, State Forests, Conservation & Watershed Organizations, Schools, Three Rivers Quest	Private Foundations, Private Sources, State Agencies,	Medium
Conduct programs to educate people about how changes to the climate impact geological conditions and its history	Geologist, Conservation Organizations, State Agencies	Private Foundations, Private Sources, State Agencies	Medium



**YOUGHIOGHENY HEADWATERS**

Recommendation	Potential Partners	Potential Funding	Priority
Land Resources			
Encourage enforcement of existing local mandates and laws already in place to protect riparian corridors, using lawsuits if necessary.	Conservation Organizations, Municipalities, State Agencies, Federal Agencies	Private Sources, Private Foundations, State and Federal Agencies	High
Compile an inventory of available resources that protect riparian corridors and distribute that information to individual landowners and organizations working to conserve riparian corridors.	Conservation Organizations, Municipalities, State Agencies, Federal Agencies, Universities	Private Sources, Private Foundations, State and Federal Agencies, Universities	High
Conduct an assessment on the effectiveness of agricultural best management practices in the Youghiogheny Headwaters, Deep Creek, and Upper Youghiogheny River Management Units.	Conservation Organizations, State Agencies, Farm Bureaus, Cooperative Extensions	Private Sources, Private Foundations, State and Federal Agencies, Universities	High
Water Resources			
Establish a monitoring program for bacteria at swimming locations in the Youghiogheny Headwaters region during the swim season similar to Mountain Watershed Association's program.	MDNR, Conservation Programs	MDNR, Private Foundations, Private Sources,	Medium
Conduct a study to identify sources of sedimentation entering area streams and develop a plan to minimize impacts of sedimentation.	State Agencies, Conservation Organizations, State Forests, Farm Bureaus	Private Foundations, Private Sources, State Agencies	High
Biological Resources			
Conduct biological surveys in Maryland and West Virginia like the County Heritage Inventories conducted in Pennsylvania to document species of concern.	MDNR, WVDNR, Heritage Programs	Private Foundations, Private Sources, State Agencies	Medium

**YOUGHIOGHENY HEADWATERS**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources (continued)			
Establish Important Mammals Area program in Maryland and West Virginia similar to the program in Pennsylvania modeled after the Important Birds Area program.	MDNR, WVDNR, PGC, NFWF, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Conduct botanical surveys in the Upper Youghiogheny and Deep Creek watersheds to identify presence of invasive species and develop a remediation plan.	MDNR, WVDNR, Heritage Programs, Conservation Organizations, Universities	Private Foundations, Private Sources, State Agencies	High
Conduct botanical surveys in the Upper Youghiogheny and Deep Creek Watersheds to identify and document species of greatest conservation need and develop a plan to conserve these species and their habitats.	MDNR, WVDNR, Heritage Programs, Conservation Organizations, Universities	Private Foundations, Private Sources, State Agencies	High

**DEEP CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources			
Conduct County Heritage Inventories in Maryland and West Virginia similar to those conducted in Pennsylvania to document species of concern.	MDNR, WVDNR, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Establish Important Mammals Area program in Maryland and West Virginia similar to the program in Pennsylvania modeled after the Important Birds Area program.	MDNR, WVDNR, PGC, NFWF, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Conduct botanical surveys in the Upper Youghiogheny and Deep Creek watersheds to identify presence of invasive species and develop a remediation plan.	MDNR, WVDNR, Heritage Programs, Conservation Organizations, Universities	Private Foundations, Private Sources, State Agencies	High
Conduct botanical surveys in the Upper Youghiogheny and Deep Creek Watersheds to identify and document species of greatest conservation need and develop a plan to conserve these species and their habitats.	MDNR, WVDNR, Heritage Programs, Conservation Organizations, Universities	Private Foundations, Private Sources, State Agencies	High

Water Resources

Establish a Water Budget for Deep Creek Lake Watershed.	MDE, MDNR, Environmental Organizations, Consultants	Private Foundations, Private Sources, State Agencies	High
Establish a monitoring program for bacteria at swimming locations in Deep Creek Watershed during the swim season similar to Mountain Watershed Association's program.	MDE, MDNR, Environmental Organizations	Private Foundations, Private Sources, State Agencies	Medium
Conduct biological monitoring to compare historic data to determine if water quality is improving	MDE, MDNR, Environmental Organizations	Private Foundations, Private Sources, State Agencies	High

**DEEP CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Water Resources (continued)			
Conduct an assessment on the effectiveness of agricultural best management practices in the Youghiogheny Headwaters, Deep Creek, and Upper Youghiogheny River Management Units.	Conservation Organizations, State Agencies, Farm Bureaus, Cooperative Extensions	Private Sources, Private Foundations, State and Federal Agencies, Universities	High
Conduct a study to determine what impacts might the Deep Creek watershed be experiencing due to the seasonal water withdrawals from WISP resort.	Conservation Organizations, MDE, MDNR, WISP Resort, Universities	Private Foundations, Private Sources, State Agencies, Universities	Medium

**UPPER YOUGHIOGHENY**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources			
Conduct County Heritage Inventories in Maryland and West Virginia similar to those conducted in Pennsylvania to document species of concern.	MDNR, WVDNR, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Establish Important Mammals Area program in Maryland and West Virginia similar to the program in Pennsylvania modeled after the Important Birds Area program.	MDNR, WVDNR, PGC, NFWF, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium

Water Resources

Conduct an assessment of impaired streams including an intensive chemical water quality monitoring to document impairment sources and develop a remediation plan.	MDE, MDNR, WVDEP, WVDNR, Environmental Organizations	Private Foundations, Private Sources, State Agencies	High
Establish a monitoring program in the Deep Creek Watershed for bacteria similar to Mountain Watershed Association’s program	MDNR, WVDEP, WVDNR, IDEXX, Environmental Organizations	Private Foundations, Private Sources, State Agencies	Medium
Conduct an assessment on the effectiveness of agricultural best management practices in the Youghiogheny Headwaters, Deep Creek, and Upper Youghiogheny River Management Units.	Conservation Organizations, State Agencies, Farm Bureaus, Cooperative Extensions	Private Sources, Private Foundations, State and Federal Agencies, Universities	High
Improve the public water supply in Confluence so that residents are not impacted by sulfur and sedimentation in their water.	Municipalities, PA DEP, Water Suppliers	Private Sources, Private Foundations, PENNVEST, Water Supplier, DEP	High
Conduct a study to determine the Yough Dam’s impact of sediment in the Youghiogheny River.	USACE, Conservation Organizations, Conservation Districts, PA DEP, MDE, Universities	Private Sources, Private Foundations, State Agencies, Federal Agencies, Universities	High

**CASSELMAN RIVER**

Recommendation	Potential Partners	Potential Funding	Priority
<b>Biological Resources</b>			
Conduct County Heritage Inventories in Maryland and West Virginia similar to those conducted in Pennsylvania to document species of concern.	MDNR, WVDNR, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Establish Important Mammals Area program in Maryland and West Virginia similar to the program in Pennsylvania modeled after the Important Birds Area program.	MDNR, WVDNR, PGC, NFWF, Heritage Programs	NFWF, Private Foundations, Private Sources	Medium
Conduct Water Shrew surveys in the Casselman River Watershed.	State Agencies, Heritage Programs, Conservation Organizations	Private Sources, Private Foundations, NFWF, State Agencies	High
<b>Water Quality</b>			
Conduct biological monitoring in the Pennsylvania portion of the Casselman River Watershed.	PFBC, MWA, WPC, PA DEP, WVDEP, MDE, MDNR, WVDNR, PA DCNR	PA DEP, NFWF, WVDEP, MDE, Private Foundations, Private Sources	High
Conduct a TMDL or other study to address the impacts that sedimentation has on the Casselman River Watershed.	Somerset Conservation District, MWA, WPC, PA DEP, MDNR, MDE, WVDEP	State Agencies, Private Foundations, Private Sources, FPW	High
Establish bacteria monitoring program for swimming holes in the entire Casselman River, expanding on Mountain Watershed Association's program.	MWA, MDE, MDNR, PA DEP, WVDNR,	PA DEP, MDE, Private Foundations, Private Sources, FPW	Medium
Coordinate Maryland Healthy Beaches monitoring program with Mountain Watershed's Swimmable Waters Program.	MDE, MDNR, MWA, Watershed Associations, Conservation Organizations	Private Foundations, Private Sources, State Agencies	Medium

**CASSELMAN RIVER**

Recommendation	Potential Partners	Potential Funding	Priority
Water Quality (continued)			
Conduct an assessment of abandoned mine drainage in the White’s Creek subwatershed and develop a restoration plan.	Casselman Watershed Association, Somerset Conservation District, MWA, DEP, WPCAMR	Private Foundations, Private Sources, PA DEP, IJJA	High
Conduct an assessment of sewage entering Whites Creek and develop a restoration plan to address issues found.	Watershed Associations, State Agencies, Conservation Districts, Municipal Units	Private Foundations, Private Sources, PA DEP, PENNVEST	Medium
Conduct an assessment of sewage entering the Casselman River and develop a restoration plan to address issues found.	Watershed Associations, State Agencies, Conservation Districts, Municipal Units	Private Foundations, Private Sources, PA DEP, PENNVEST	Medium

Project Area

Conduct infrastructural improvements, including the replacement of water lines, water meters, main line valves, and curb stops within the Addison Area Water Authorities jurisdiction.	Addison Area Water Authority, DEP, Municipalities	Private Foundations, Private Sources, State and Federal Agencies, PENNVEST,	High
Replace the existing Addison Area Water Authority reservoir with a standpipe reservoir.	Addison Area Water Authority, DEP, Municipalities	Private Foundations Private Sources, State and Federal Agencies, PENNVEST	Medium
Work with PennDOT to conduct an assessment of drainage of surface runoff in Addison Borough and develop strategies to remediate the problem sites and identify potential future problem areas.	Addison Borough, PennDOT, DEP, Conservation Organizations, Elected Officials	Private Foundations, Private Sources, State and Federal Agencies, PENNVEST, PennDOT, Legislature	High
Work with the community in Confluence, Pennsylvania to improve the public water supply especially reducing the sulfur and sedimentation issues.	Public Water Supplier, DEP, Elected Officials	Private Foundations, Private Sources, Public Water Supplier, Legislature	High

**CASSELMAN RIVER**

Recommendation	Potential Partners	Potential Funding	Priority
Cultural Resources			
Rehabilitate the small pedestrian bridge (old Auto Bridge) across the Casselman River that connects Confluence to the Great Allegheny Passage.	Elected Officials, Somerset Recreation Authority, GAP <sub>2</sub> ,	Private Foundations, Private Sources, PA DCNR	Medium



**LAUREL HILL CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Water Resources			
Maintain Water Quality Monitoring Program.	PA DCNR, MWA, PA DEP	Private Foundations, Private Sources, PA DEP, PA DCNR	Medium
Expand Mountain Watershed Association's monitoring capabilities to expand outside of the Indian Creek watershed and to expand parameters tested.	MWA, PFBC, DEP	Private Foundations, Private Sources, PA DEP, PA DCNR	High
Expand Mountain Watershed Associations monitoring capacity to monitor agricultural parameters.	MWA, PFBC, DEP	Private Foundations, Private Sources, PA DEP, PA DCNR	High
Purchase ecological significant properties in accordance with Mountain Watershed Association or Western Pennsylvania Conservancy's Land Protection Priority Guide.	MWA, WPC, PA DCNR, PGC, PFBC	Private Foundations, Private Sources, PA DEP	Medium

**MIDDLE YOUGHIOGHENY**

Recommendation	Potential Partners	Potential Funding	Priority
Water Resources			
Re-establish water quality monitoring program.	MWA, WPC, PA DEP, PA DCNR	Private Foundations, Private Sources, PA DEP, PA DCNR, LHMG	High
Conduct biological monitoring.	MWA, WPC, PA DEP, PA DCNR	Private Foundations, Private Sources, PA DEP, PA DCNR, LHMG	High
Conduct a watershed assessment of Dunbar Creek.	Trout Unlimited, MWA, PA DEP, Fayette Conservation District	Private Foundations, Private Sources, PA DEP, PA DCNR	High
Conduct assessment of upper Glade Run Watershed, tributary to Dunbar Creek, to identify remaining untreated mine discharges from abandoned mines.	Chestnut Ridge Trout Unlimited, WPC, MWA, Fayette County Conservation District	Private Foundations, Private Sources, PA DEP	High
Redesign the Potato Ridge Abandoned Mine Drainage Treatment System in order to protect Wild Trout Streams.	Chestnut Ridge Trout Unlimited, WPC, MWA, Fayette County Conservation District, PA DEP, PA DCNR	Private Foundations, Private Sources, PA DEP, IJJA	High
Work with Municipal Authority of Westmoreland County to minimize impacts to streams, such as Dunbar Creek by and quickly repairing damaged pipes and when applicable replace aging infrastructure.	MAWC, Conservation Organizations, PA DEP, Municipalities, Legislature	Private Foundations, Private Sources, PENNVEST	Medium
Cultural Resources			
Enhance access to recreational areas in the Dunbar Creek Watershed for uses other than all-terrain vehicles.	PGC, PFBC, Conservation Organizations	Private Foundations, Private Sources, LHMG	Medium

**MIDDLE YOUGHIOGHENY**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources (continued)			
Control invasive species, specifically Japanese Knotweed, Oriental Bittersweet, Japanese Stiltgrass, Purple Loosestrife and Hemlock Woolly Adelgid, along the river corridor and scour zones for a minimum of 30 feet in Ohiopyle State Park.	DCNR, SLHPPMP, Penn State Extension, FCDD, WPC, MWA	Private Foundations, Private Sources, State and Federal Agencies	High
Promote native regeneration that many wildlife species depend on in Forbes State Forest.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Japanese Stilt Grass throughout Forbes State Forest, especially in recently logged areas in order to promote native grasses and wildflowers for which native pollinators depend upon.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Japanese Barberry and Multiflora Rose throughout Forbes State Forest allowing growing space and sunlight for tree regeneration.	DCNR, SLHPPMP, Penn State Extension, FCDD, WPC, MWA	Private Foundations, Private Sources, State and Federal Agencies	High
Prevent and control any new invasive species that appear in Forbes State Forest such as Mile-A-Minute, which was recently identified and treated in the Wharton Furnace area by monitoring conditions.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Spongy Moth populations in Forbes State Forests to protect oaks/acorn crops which are preferred food sources for many wildlife species.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High

**MIDDLE YOUGHIOGHENY**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources (continued)			
Protect remaining ash trees in the Brethren Summit Road area from the Emerald Ash Borer.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Japanese Stiltgrass infestations at WPC properties through herbicide treatment.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Japanese Stiltgrass infestations at WPC properties through herbicide treatment.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control populations of Japanese Stiltgrass, Autumn Olive, Japanese Barberry, Multiflora Rose, Tree of Heaven and Hemlock Woolly Adelgid on Western Pennsylvania Conservancy’s Bear Run and Fallingwater properties.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Treat scattered populations of Autumn Olive and other invasive shrubs in the High Meadow area and along Tissue Lane.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Treating conifer stands a dense infestation of Japanese barberry covering approximately 1.5 acres.	DCNR, SLHPPMP, Penn State Extension, WPC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High

**MIDDLE YOUGHIOGHENY**

Recommendation	Potential Partners	Potential Funding	Priority
Biological Resources (continued)			
Control woody invasive shrubs in the Great Meadow at Fort Necessity followed by herbaceous and vine species.	DCNR, SLHPPMP, Penn State Extension, NPS MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control populations of Japanese Barberry, Multiflora Rose, Privet, Shrub Honeysuckle, Winged Euyonomous and Tree of Heaven on Fort Necessity National Battlefield.	DCNR, SLHPPMP, Penn State Extension, NPS MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Remove infestations of Princess Tree in the Picnic Loop and Woodcock Fields at Fort Necessity to eradicate and prevent expansion.	DCNR, SLHPPMP, Penn State Extension, NPS MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Control Japanese Knotweed and Tree of Heaven populations in State Game Lands 51.	DCNR, SLHPPMP, Penn State Extension, PGC, MWA, Conservation Districts	Private Foundations, Private Sources, State and Federal Agencies	High
Land Resources			
Conduct a cleanup of the tire piles at Ohiopyle State Park.	PA DCNR, MWA, Keep PA Beautiful, Friends of Ohiopyle	Private Foundations, Private Sources, PA DCNR, Keep PA Beautiful	High

**INDIAN CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Project Area			
Identify and establish a park-n-ride in Melcroft, Indian Head, Normalville, Mill Run, and/or	FACT, WTA, Legislature, Municipalities	Legislature, Private Sources	Low
Update ACT 537 plan and determine if installing a municipal sewage treatment system in Saltlick and/or Springfield Township are feasible.	Municipalities, PA-DEP, Consultants, ICVWA	Private Foundations, Private Sources, PENNVEST	High
Pressure Donegal Township to address the lack of public sewage in the lower Route 31 corridor.	PA-DEP, Municipalities, Conservation organizations, ICVWA	Private Foundations, Private Sources, PENNVEST	Medium
Establish public sewage in community areas of the watershed, such as Donegal, Jones Mills, Champion, Melcroft, Indian Head, Normalville, and Mill Run.	ICVWA, Municipalities, Consultants	Private Foundations, Private Sources, PENNVEST	Medium
Expand public water to residents on the following roads: Mason, Stewart, Turkeyfoot, Mt. Olive, County Line, Rogers Mill-Buck Run, Jim Mountain, Fairview, Fowl Hill, Mt. Zion, Melcroft/Albright, Pine Hill, Charnety, Harris Road, and Pine Slopes.	ICVWA, Municipalities	Private Foundations, Private Sources, PENNVEST, PA-DCED, PA-DEP	High
Install at least 50-60 new fire hydrants throughout the Indian Creek Watershed.	Volunteer Fire Departments, Municipalities, ICVWA	Private Foundations, Private Sources, PA-DCNR, PA-DCED	Medium

Land Resources

Research properties for sale in the watershed and purchase properties that still have mineral rights attached to the deed.	Conservation Organizations, Land Trusts, MWA, WPC	Private Foundations, Private Sources, PA DCNR	Medium
Acquire title to mineral rights in the Indian Creek watershed that are owned by Loyalhanna Watershed.	MWA, LWA	Private Foundations, Private Sources, PA DCNR	Low

**INDIAN CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Water Resources			
Develop and install informational signage at mine drainage treatment systems.	MWA, PA DEP	Private Foundations, Private Sources, PA DEP, IJJA	Medium
Determine the source of the Rogue Discharge and develop a treatment plan for the discharge.	MWA, PA DEP, Consultants	Private Foundations, Private Sources, PA DEP, IJJA	Medium
Work with Bureau of Abandoned Mine Reclamation to install the next phase of treatment at the Marsolino Treatment system.	MWA, PA DEP, Consultants	Private Foundations, Private Sources, PA DEP, IJJA	High
Reapplication of lime within the Poplar Run Watershed to maintain improvements made through the land-liming project.	MWA, PA DEP, Consultants	Private Foundations, Private Sources, PA DEP, OSM	High
Conduct a study to identify and minimize impacts of runoff from the turnpike in the headwaters of the Indian Creek Watershed.	MWA, PA DEP, Consultants, PENNDOT, Turnpike Commission	Private Foundations, Private Sources, PA DEP	Medium

Biological Resources

Conduct a survey in the Indian Creek Gorge and other potential habitat sites to document and update the potential expansion of the River Otter.	MWA, PFBC, PGC, WPC, PA DCNR, Universities	Private Foundations, Private Sources, PA DCNR	Medium
Conduct a survey to document and update the potential expansion of the fisher.	MWA, PFBC, PGC, WPC, PA DCNR, Universities	Private Foundations, Private Sources, PA DCNR	Medium
Conduct a survey to document and update the presence of hellbenders.	MWA, PFBC, PGC, WPC, PA DCNR, Universities	Private Foundations, Private Sources, PA DCNR	High
Conduct a survey to document and update the presence of freshwater mussels.	MWA, PFBC, PGC, WPC, PA DCNR, Universities	Private Foundations, Private Sources, PA DCNR	Medium

**INDIAN CREEK**

Recommendation	Potential Partners	Potential Funding	Priority
Cultural Resources			
Explore the possibilities of placing the Steyer Bridge on the National Register of Historic Places.	MAWC, PHMC	Private Foundations, Private Sources	Medium
Upgrade Mill Run Athletic Fields to become ADA compliant.	Springfield Township, Community Organizations	Private Foundations, Private Sources, PA-DCNR	Medium
Host annual Indian Creek Watershed Festival geared towards providing recreational opportunities as well as environmental outreach programs.	MWA, Community Organizations	Private Foundations, Private Sources, PFBC, Community Members and Businesses	Medium