

**Management Recommendations Matrix**

Management Issue	Management Recommendations	Responsible Entity	Potential Assistance Sources	Implementation Schedule
<b>A. Project Area Characteristics</b>				
<b>1. Sprawl</b> (Refer to Section 8.1.1)	1. Establishment of Environmental Advisory Councils (EACs) would assist making improvements to natural resources by providing needed input to local planning boards.  2. Promote an inter-municipal framework necessary for coordinated or unified comprehensive plans, zoning codes, and subdivision and land development ordinances to assist in curbing sprawl, and to enhance the conservation of resources.	The county planning commission and 19 municipal planning commissions and the local conservation organizations.	Washington County Planning Commission and PADCNr: Keystone Funds.	2003
<b>2. Model Land-use Ordinances</b> (Refer to Section 8.1.2)	Develop example or model ordinances (i.e., zoning ordinances, sub-division and land development ordinances, and Official Map) that are protective of community resources. These resources may include, but are not limited to, agricultural soils, steep slopes, open space, riparian buffers, parks, and floodplain resources. These are especially important in the communities that are developing at a higher rate near the Southern Beltway corridor.	Local municipal officials and conservation organizations.	Pennsylvania Department of Community and Economic Development (DCED) and PADCNr: Keystone Funds. Potential Assistance Sources Section. Appendix 2.	2003
<b>3. Washington County Comprehensive Plan</b> (Refer to Section 8.1.2)	Washington County Planning Commission is currently in the process of developing a countywide comprehensive plan. The development of a county comprehensive plan will assist in having minimally acceptable planning standards for communities throughout the watershed.	Washington County Planning Commission	Pennsylvania Department of Community and Economic Development (DCED) and PADCNr: Keystone Funds. Potential Assistance Sources Section. Appendix 2.	2002-2003
<b>4. Municipal Comprehensive Planning</b> (Refer to Section 8.1.2)	Improve or update ordinances and the completion of municipal comprehensive plans that assist in protecting natural and community resources are necessary for sound land management and development activities at the local level.	Local municipal officials and conservation organizations.	Pennsylvania Department of Community and Economic Development (DCED) and PADCNr: Keystone Funds. Potential Assistance Sources Section. Appendix 2.	2003
<b>5. Transportation Facilities</b> (Refer to Section 8.1.3)	Work with PENNDOT and PTC to assist in protecting and enhancing natural resources of the watershed during project planning phases.	Local municipal officials and conservation organizations.	Pennsylvania Department of Community and Economic Development (DCED), PADCNr, PENNDOT, and PTC: Keystone Funds. Potential Assistance Sources Section. Appendix 2.	2003

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<b>B. Land Resources</b>				
<b>1. Farmland and Prime Farmland Soils Protection</b> (Refer to Section 8.2.1)	Institute zoning and comprehensive plans that are protective of farmland and prime farmland soils by inventorying watershed farmland (active/inactive), prime soils, and farmland of statewide importance. This can include PA Acts 43 (Agricultural Security Areas), 71 (water and sewer assessment exemption), 100 (Agricultural Land Condemnation Approval Board- reviews transportation & solid waste issues related to farmland), and 319 (Clean & Green) properties as it relates to farmland protection.	USDA-Natural Resources Conservation Services, WCCD, local municipalities, and conservation organizations.	US Department of Agriculture (USDA) Public Law 83-566 Program, PADEP, PADCNr (Keystone Funds), and WCDC.	2003
<b>2. Critical Areas (Stream Access and Visibility)</b> (Refer to Section 8.2.2)	Develop stream access points to encourage recreational opportunities. Develop a "Blueway Trail" on Chartiers Creek to link it to other areas of the watershed.  Encourage the reorientation of development around stream corridors to enhance community resources and aesthetics.  Encourage the development of conservation easements to assist in protecting critical areas.	Streamside businesses and landowners, municipalities, Washington County, and local conservation groups.	Property placed into conservation easements, donated space adjacent to the stream, PADCNr: Keystone Funds, NPS - Rivers, Trails, and Conservation Assistance program, and the American Canoe Association.	2004
<b>3. Unregulated Solid Waste Sites</b> (Refer to Section 8.2.3)	Control unregulated waste sites at the local level by implementing proper zoning ordinances that address the optimal placement of such activities. By completing an inventory of unregulated waste sites for potential reclamation and development opportunities (e.g., dump sites). This can be accomplished through an inter-municipal framework.  Participation in the "Ohio River Sweep Program."	PADEP, local municipal officials and conservation organizations.	PADEP, PADCNr: Keystone Funds, and EPA.	2002+
<b>4. Waste Sites: Molycorp, Inc. and Canonsburg Borough Sites</b> (Refer to Section 8.2.4)	Continued monitoring of the two sites by the NRC and PADEP. Monitor the progress of the decommissioning/remediation planning activities for the Molycorp site in Canton Township.	NRC and PADEP for monitoring and decommissioning/remediation activities. Local municipal leaders to be updated of changing circumstances.	NRC and PADEP.	On-going
<b>5. Oil and Gas</b> (Refer to Section 8.2.5)	Complete the closure of the abandoned and orphaned oil and gas wells per the PADEP abandoned and orphaned well program.	PADEP and municipalities.	Pennsylvania Department of Environmental Protection (PADEP)	2002+
<b>6. Mining: Deep Mining</b> (Refer to Section 8.2.6)  <b>Abandoned Mine Land (AML) Sites</b> (Refer to Section 8.2.7)	1. Continued public awareness of the deep mining issue and coordination with municipal officials and PADEP.  2. Complete the remediation of AML sites. This activity could assist with the re-development activities in local communities.	PADEP, local municipal officials, local citizens, and conservation organizations.	PADEP (Abandoned Mine Land [AML] 10% Set Aside, Growing Greener, and WRAP Programs), PADCNr: Keystone Funds, US Environmental Protection Agency (EPA) 104 and 319 Programs, and Western Pennsylvania Coalition for Abandoned Mine Reclamation (WPCAMR) Funds.	2002+  2006

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<b>C. Water Resources</b>				
<b>1A. Groundwater Protection Plan</b> (Refer to Section 8.3.1)	Complete a Groundwater Protection Plan that includes a <b>Groundwater Inventory</b> and a <b>Groundwater Use and Needs Survey</b> . This plan would include i. Private Water, ii. Public Water, and iii. Commercial Water supplies (immediate and future use).	Local and County government, PADEP, EPA, WCWA, and ChCWA.	EPA, PADCNr: Keystone Funds, PADEP (Growing Greener), WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2003-2007
<b>1B. Source Water Assessment Protection Plan</b> (Refer to Section 8.3.1)	Complete a Source Water Assessment Protection Plan that would review all the potential sources of contamination to surface waters and provide recommendations for the protection of surface waters from contaminant sources.	Local and County government, PADEP, EPA, WCWA, and ChCWA.	EPA (319 program), PADCNr: Keystone Funds, PADEP (Growing Greener), WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2003-2007
<b>1C. Wellhead Protection Plan</b> (Refer to Section 8.3.1)	Complete a Wellhead Protection Plan that would identify wellhead protection areas for groundwater supplies. The plan would review all potential sources of contamination to the wellhead protection areas and provide recommendations for the protection of the wellhead protection area from contaminant sources.	Local and County government, PADEP, EPA, WCWA, and ChCWA.	EPA, PADCNr: Keystone Funds, PADEP (Growing Greener), WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2003-2007
<b>1D. Headwater Protection Plan</b> (Refer to Section 8.3.1)	Complete a Headwater Protection Plan that would identify headwater stream resources and the quality of these resources. Headwaters that are in good condition would have recommendations for their conservation and protection, and impaired sources would have recommendations for resource improvement.	Local and County government, PADEP, EPA, WCWA, and ChCWA.	EPA (319 program), PADCNr: Keystone Funds, PADEP (Growing Greener), WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2003-2007
<b>2. Lakes and Ponds</b> (Refer to Section 8.3.2)	Initiation of a <b>Largemouth Bass Tournament</b> at Canonsburg Lake, one of the PFBC's finest largemouth bass fisheries in the region.  Elimination of point and non-point sources of pollution (siltation) from upstream locations of Little Chartiers Creek that are impacting Canonsburg Lake.	Municipal officials and PFBC	PFBC and American Sportfish Association and Foundation.	2003
<b>3. Wetlands</b> (Section 8.3.3 - Refer to Section 8.4.3 in Management Recommendations Matrix [D. Biological Resources])	See Note	See Note	See Note	See Note
<b>4. Floodplains</b> (Refer to Section 8.3.4)	Floodplains have been developed and impacted for years in the watershed. Analysis of the watershed to determine the priority flood prone areas is needed to protect community resources and enhance existing/remaining habitats.	Washington County Planning Commission, PADEP, and municipalities.	PADEP (Growing Greener Program), FEMA	2003
<b>5. Water Quality Strategic Plan (WQSP)</b> (Refer to Section 8.3.5)	As part of the watershed wide volunteer monitoring program, develop a strategic plan that assists in prioritizing restoration, enhancement, and protection activities to make improvement to the watershed which include management units A, B, C, D, E, F, and G.	Chartiers Creek Watershed Conservation Organizations working with PADEP.	EPA (104 & 319 programs), USDA PL 83-566 Program, PADCNr: Keystone Funds, PADEP (Growing Greener), Western Pennsylvania Watershed Protection Program (WPWPP) of the Heinz Endowments, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2004
<b>6. Total Maximum Daily Loads</b> (Refer to Section 8.3.6)	Continue to enforce standing permitting regulations on all discharge locations.  Individuals and organizations that have a need to discharge water into local streams will have to work with regulatory agencies to attain needed permits.	Individual or Organization in need of a permit	PADEP and USACOE	On-going
<b>7. Water Supply</b> (Refer to Section 8.3.7)	Continued coordination between municipal planning officials and PAWC is needed to protect and enhance water supply facilities as continued development occurs. This is especially so in the communities near the Southern Beltway corridor.	Municipal officials and PAWC	Municipal, county, and state sources	2002+

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<b>C. Water Resources (Continued)</b>				
<b>8. Abandoned Mine Drainage (AMD) Plan</b> (Refer to Section 8.3.8)	1. This plan could be a component to the WQSP and would develop a strategic plan that assists in prioritizing restoration activities to make improvement to the watershed that include management units C, D, and E.  2. Remediate AMD site discharges that have been evaluated as part of the AMD Assessment and Management Plan.	Chartiers Creek Watershed Conservation Organizations working with PADEP.	EPA (104 & 319 programs), PADCNR: Keystone Funds, PADEP (Growing Greener, Reclaim PA, Bond Forfeiture Program, etc.), Pennsylvania Department of Transportation (PENNDOT)/ Pennsylvania Turnpike Commission (PTC) mitigation funds, WPCAMR, and WPWPP.	2003  2003+
<b>9. AMD Remediation Activities</b> (Refer to Section 8.3.8)	Complete remediation activities of AMD sites in Management Units C, D, and E.	WCWA, ChCWA, and municipalities.	EPA (104 & 319 programs), PADCNR: Keystone Funds, PADEP (Growing Greener Program, Reclaim PA, Bond Forfeiture Program, etc.), PENNDOT/PTC mitigation funds, WPCAMR, WPWPP, and funding from Foundations.	2003+
<b>10. Sewage Control Plan</b> (Refer to Section 8.3.9)	1. Encourage municipalities and municipal authorities to complete plans to make corrections to faulty sewer systems or to expand systems. This includes sewer (Combine Sewer Overflows [CSOs]) upgrades and septic system correction plans to make improvement to antiquated facilities of the watershed that include management units B and E.  2. Encourage watershed stakeholders to participate in public meetings and forums to educate each other involving sewage issues.	Washington County, municipal governments, local citizens, conservation groups, PADEP, and EPA.	County, State (PA Act 537 program), PADCNR: Keystone Funds, and Federal.	2006  2006
<b>11. Sewage Infrastructure Improvement Projects</b> (Refer to Section 8.3.9)	Encourage municipal and local residents to make improvements to their sewer and septic systems. Especially in watershed management units B and E.	County and municipal governments, and residents.	County, State (PA Act 537 program), PADCNR: Keystone Funds, and Federal.	On-going
<b>12. Nutrient Control Plan</b> (Refer to Section 8.3.10)	Complete development of a nutrient control plan in rural areas of the watershed which include management units B, E, and F.	County government and PADEP.	EPA and PADCNR: Keystone Funds.	2006
<b>Management Planning</b> (Refer to Section 8.3.11)	Complete a PA Act 167 Stormwater Management Plan in Washington and Allegheny Counties. Priority areas in the watershed include management units A, B, D and E.	Municipalities, Washington and Allegheny Counties, and PADEP.	EPA, PADEP (PA Act 167 program), and PADCNR: Keystone Funds.	2003
<b>14. Stormwater Management</b> (Refer to Section 8.3.11)	1. Until a PA Act 167 Plan is completed at the county level, encourage local municipalities to create and/or improve local stormwater management ordinances.  2. PADEP Phase II Stormwater "Permitting" Program – Municipal Separate Storm Sewer Systems (MS4) for urbanized areas is in effect starting December 8, 2002.	Municipal governments.  Developers, consultants, and governmental agencies.	PADEP and PADCNR: Keystone Funds and Local.	On-going
<b>15. Stream Stability Assessment</b> (Refer to Section 8.3.11)	Complete stream stability assessments in sub-basins which basins that are experiencing high development activities. Priority areas in the watershed include management units A, B, D and E.	County government and PADEP.	EPA (319 program), USGS, PADCNR: Keystone Funds, PADEP (Growing Greener and Releaf Programs), PENNDOT/PTC stream/wetland mitigation funds, WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2004
<b>Design, Riparian, and Streambank Stabilization Projects</b> (Refer to Section 8.3.11)	Utilize watershed assessments to assist with project designs for remediation of stormwater impacts to streams and infrastructure utilizing Best Management Practices.	PADEP, county and municipal governments.	EPA (319 program), PADCNR: Keystone Funds, PADEP (Growing Greener and Releaf Programs), PENNDOT/PTC stream/wetland mitigation funds, WPWPP, McKenna Foundation, Pittsburgh Foundation, Mellon Foundation, CVI, etc.	2004
<b>17. Flow Monitoring</b> (Refer to Section 8.3.12)	Re-establishment and construction of stream gauging (flow monitoring) stations in Upper Chartiers Creek Watershed to assist in gathering hydraulic data that can be utilized for a variety of planning activities.	PADEP, USACOE, and USGS.		

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<b>D. Biological Resources</b>				
<b>1. Wildlife Species Management (White-tailed deer and Great Blue Heron)</b> (Refer to Section 8.4.1)	1. Due to the negative interactions with humans and White-tailed deer, continued communication with the Pennsylvania Game Commission (PGC) is needed to protect community resources.  2. Protect the Great Blue Heron rookery from increased development in the watershed by communicating with PGC.	Developers, municipal officials, and PGC.	PGC	On-going
<b>2. Migratory Bird Count</b> (Refer to Section 8.4.1)	Assist in efforts of the Pittsburgh South Audubon Society Bird Circle and in tracking migratory bird populations.	USC-CLS and other local conservation organizations.	Not Applicable	On-going
<b>3. Habitat Enhancement</b> (Refer to Section 8.4.2)	Enhance existing backyard habitats and create conservation or eco-zones in the watershed.	Local residents, businesses, and municipal officials with assistance from local conservation organizations, land trusts, and the Western Pennsylvania Conservancy (WPC).	Property placed into conservation easements, areas designated by owner, and PADCNr: Keystone Funds.  PADEP, USACOE, USGS, USDA Public Law 83-566 Program, USDA and EPA.	On-going
<b>4. Riparian Forest Buffers and Wetlands, Forest, and Natural Heritage Areas</b> (Refer to Section 8.4.3)	1. Complete an inventory/management plan of the watershed's riparian forest buffer and floodplain areas for future streambank stabilization, riparian zone, and floodplain implementation opportunities (Refer to Map 8). Also utilize conservation easements as an option for keeping open/green space from becoming developed land.  2. Promote forestry best management practices and the concept of sustainability are critical to healthy forest stand regeneration.	County and municipal officials with assistance from local conservation organizations, land trusts, and the Western Pennsylvania Conservancy (WPC).		2003  On-going
<b>5. Natural Area Designation</b> (Refer to Section 8.4.4)	Establish Natural and Protected Areas in watershed as delineated in the Natural Heritage Inventories. Adopt land designation uses for parks, green space, and dedicated natural areas (e.g., natural areas, wild flower reserves, wild areas, etc.). Utilize existing land management plans (Refer to Section 8.4.4) to protect and enhance natural resources of the watershed.	Washington County, municipalities, land trusts, and WPC.	National Park Service (NPS) – Rivers, Trails, and Conservation Assistance program, EPA Environmental Education Grants Program, PADCNr – Keystone Funds, The Conservation Fund, Washington County and Municipalities.	2004

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<b>E. Cultural Resources</b>				
<b>1. Recreational Planning</b> (Refer to Section 8.5.1)	<p>1. Require new subdivision plans to incorporate walking paths or sidewalks before permits are granted.</p> <p>2. Complete park/recreational planning that include facilities currently being planned. Utilize the various recreational plans that have been completed or are being completed to enhance the varied recreational opportunities (e.g., linking parks via bikeways or trails).</p>	The yet to be establish a Chartiers Creek Watershed Conservation Organization, WCWA, ChCWA, and other local conservation organizations.	PADCNR: Keystone Funds and NPS - Rivers, Trails, and Conservation Assistance program.	<p>On-going</p> <p>2004</p>
<b>2. Linking Community Facilities</b> (Refer to Section 8.5.2)	Create a watershed trails map that would inventory and map all the trails (rails-to-trails, bikeways, and blueways) thus showing the linkage made by these trails to various communities and attractions.	Local conservation organizations, chamber of commerce, municipal officials, small business/facility operators.	PADCNR: Keystone Funds and NPS - Rivers, Trails, and Conservation Assistance program.	2004+
<b>3. Rails-to-Trails and Bikeways</b> (Refer to Section 8.5.3)	Complete needed feasibility studies and construction activities for Rail-to-Trail opportunities (i.e., the Montour Run (spur), Chartiers Creek, and Chartiers-Houston School District trails).	Montour Trail Council (MTC), Local Conservation Organization, school districts, and local municipalities.	PADCNR: Keystone Funds, PADEP: Growing Greener, PENNDOT TEA-21 funds, and NPS - Rivers, Trails, and Conservation Assistance program.	2004+
<b>4. Eco-tourism</b> (Refer to Section 8.5.4)	Eco-tourism will increase as cultural, recreational, and educational opportunities expand. These opportunities ( <b>Chartiers Creek Triathlon</b> ) will be tied to the rail-to-trail networks that are developing along with the environmental educational facilities that are currently being planned.	Local conservation organizations, chamber of commerce, municipal officials, small business/facility operators.	Local chamber of commerce, municipalities, small business, PADCNR (Keystone Funds), and community and regional foundations.	2003
<b>5. Land Purchase for Conservation</b> (Refer to Section 8.5.5)	Strategically identify areas for the purchase of property (e.g., Important Habitats, Natural Heritage Areas, Critical Areas, and Potential Remediation Sites) for conservation, preservation and/or remediation opportunities. This could assist in developing a greenway corridor in the watershed.	Allegheny Land Trust, WPC, and local conservation groups.	PADCNR: Keystone Funds and NPS - Rivers, Trails, and Conservation Assistance program.	On-going
<b>6. Historical Property Preservation</b> (Refer to Section 8.5.6)	Complete a historical properties inventory to assist in the preservation of these sites, so they are destination points for tourists.	Historic property owner(s), community historical societies, and local chamber of commerce.	PADCNR: Keystone Funds, PENNDOT/PTC cultural resource mitigation funds, and community and regional foundations.	On-going

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<b>F. Educational Resources</b>				
<b>1. Adult and Youth Education</b> (Refer to Section 8.6.1)	Provide life long environmental education opportunities to encourage conservation ethics within the watershed. This would assist in promoting the watershed as a whole with conservation in mind as local citizens grow throughout their lives. Improve local organization's needs by improving and/or expanding environmental outreach programs, staff, equipment, and facilities.	WCWA, ChCWA, other local conservation groups, local school districts (Envirothon Program), and local/regional colleges and universities.	PADCNR: Keystone Funds, PADEP's Citizens' Volunteer Monitoring Program, CVI, Alliance for Aquatic Resource Monitoring, LWV - Citizen Education Fund, SWRC, and EPA Environmental Education Grant program.	2002+
<b>2. Education Facilities</b> (Refer to Section 8.6.1)	Develop watershed wide integrated local school district and adult education programs with the currently planned environmental education facilities in the lower portion of the watershed (e.g., Scrubgrass Run, Settler's Cabin Park, Boyce/Mayview Park, etc.).	Local school districts and conservation groups.	EPA Environmental Education Grant program, PADCNR: Keystone Funds, Pennsylvania Department of Education (PADE), Environmental Education Program, LWV - Citizen Education Fund, and school district funded.	2003
<b>3. Community Education/Public Relations Activities</b> (Refer to Section 8.6.2)	1. Establish a Chartiers Creek Watershed Conservation Organization. This organization is the responsible organization for the whole of the watershed and implementation of the Rivers Conservation Plan. Have this organization be represented by individuals from throughout the watershed in both counties. This will assist by allowing conservation activities to be prioritized in a strategic manner.	Watershed Stakeholders and Conservation Organizations.	Pennsylvania Department of Conservation and Natural Resources (PADCNR) circuit rider for funding Executive Director position and Keystone Funds.	2003
	2. Public relations activities can be completed via local and regional papers, magazines, and regular, cable, and satellite television providers.  3. Provide year round continuing education to watershed stakeholders through the use of various volunteer activities, outreach projects, and increased awareness.	Local school districts, communities, and conservation groups.	GreenWorksChannel.org, Pennsylvania Center for Environmental Education	2002+
<b>4. Conservation Groups/Volunteer Opportunities</b> (Refer to Section 8.6.3)	1. Continued water quality monitoring activities.  2. Participate in the 'Ohio River Sweep'  3. Integrate watershed wide volunteer activities with local school district curriculum via conservation demonstration projects and awareness activities.	Local school districts, communities, and conservation groups.	EPA Environmental Education Grant program, PADCNR: Keystone Funds, Pennsylvania Department of Education (PADE), Environmental Education Program, LWV - Citizen Education Fund, and school district funded.	2002+