

# Walnut Creek Watershed Protection and Restoration Plan

Annual Report July 2010



*Pennsylvania Department of Environmental Protection*

**Walnut Creek Watershed  
Protection and Restoration Plan  
Annual Report**

**Prepared By:**



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**July 2010**

## **Introduction**

In 2006, the Pennsylvania Department of Environmental Protection (DEP) identified Walnut Creek, tributary to Lake Erie, as a priority watershed within the twelve county Northwest Region based upon criteria that included the environmental, recreational, and economic benefits that the watershed provides to the surrounding communities. As a priority watershed, Walnut Creek is the subject of a pilot program that employs a comprehensive assessment of environmental quality, and facilitating activities that support the protection and restoration of the beneficial uses of the watershed. This effort has resulted in two documents that define and guide DEP activities within the watershed: the *Walnut Creek Watershed Environmental Quality Assessment Report* (Assessment Report) released in 2007, and the *Walnut Creek Watershed Protection and Restoration Plan* (Plan) released in 2009.

The Assessment Report identifies numerous issues threatening the water quality and health of the watershed and includes recommendations for improvement. The recommendations of Assessment Report are being put into action through the Protection and Restoration Plan with specific activities targeted at meeting end goals for the Walnut Creek watershed. These goals include:

1. Reduce *E. coli* bacteria levels from those measured during Creek Sweep<sup>1</sup> and conduct subsequent follow-up monitoring;
2. Proactively work with Community Water Supplies within the watershed to substantially implement Source Water Protection Programs;
3. By 2019, attain all designated stream uses as defined in Pa Code Chapter 93, including: Cold Water Fishes and Migratory Fishes for Walnut Creek, the Bear Run tributary, and Unnamed Tributaries to Walnut Creek; and High Quality-Cold Water Fishes and Migratory Fishes for the Thomas Run tributary;
4. To the maximum extent practicable, restore wetlands and stream riparian areas to predevelopment conditions, and;
5. Reduce the overall rate, volume and pollutant loading of urban stormwater runoff to a level where designated stream uses can be continually sustained.

In June 2009, DEP crafted an annual work schedule delineating specific tasks and target dates to facilitate achieving the goals for the Walnut Creek watershed. This Annual Report provides a summary of the activities that were conducted in support of this initiative, and tangible progress was made in support of all five sections of the Plan during the 2009-2010 fiscal year. Despite significant reductions in DEP budgets, staff and resources, this important project remains a priority to the DEP Northwest Region.

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<sup>1</sup> Surface Water E. coli Assessment of Tributaries to the Western Lake Erie Watershed – December 2007  
Report by DEP

## **Annual Implementation Progress**

The following section briefly outlines the activities conducted in support of the Plan. Detailed activities, partners, and resources devoted to each task are compiled in table format and can be found in the Attachment to this Report.

### ***Section I: Watershed Based Education and Outreach***

- DEP personnel participated in educational opportunities at local institutions such as the Northwest Pennsylvania Collegiate Academy.
- DEP personnel participated in over 100 hours of meetings, conferences, and other forums to provide information and guidance to those working in the field of stormwater management in Erie County.
- Through a DEP Coastal Zone Management grant, the Erie County Conservation District sent over 8,000 direct mailings to riparian property owners within the Walnut Creek watershed to educate and inform them on the importance of riparian buffers and stormwater management.
- Through a DEP Growing Greener grant, the Erie County Conservation District and Pennsylvania Sea Grant dedicated over 350 man-hours towards education and outreach seminars on the proper operation and maintenance of on-lot septic systems for residents within the Walnut Creek watershed.
- DEP personnel provided a workshop in Erie County to municipal officials, developers, and consultants on proper erosion and sedimentation controls and stormwater management.
- DEP personnel conducted listening session for the draft NPDES Municipal Separate Storm Sewer System (MS4) in an effort to gain feedback from municipalities and consultants on new permit obligations.

### ***Section II: Commonwealth Funding for Protection and Restoration Efforts***

- Through grant funding and interagency cooperation between DEP, Pennsylvania Department of Conservation and Natural Resources (DCNR), Pennsylvania Fish & Boat Commission (FBC), and DEP Coastal Zone Management program, and Millcreek Township's Water & Sewer Authorities, over \$700,000 and 300 man-hours have been dedicated to enhancing Walnut Creek water quality, recreational opportunities, and fishing access through the design and eventual development of Millcreek Township's Zimmerly Road Park project.
- DEP coordinated with other state agencies such as DCNR and FBC to create a Northwest Pennsylvania Greenways Implementation block grant program. Millcreek Township's Cassidy Park project received funds from this grant for recreational and fishing enhancements, and riparian buffer and aquatic habitat improvements along the banks of Walnut Creek.

### ***Section III: Commonwealth Permitting and Planning of Activities That Impact the Environment***

- DEP personnel invested over 100 man-hours in the development and implementation of an enhanced regional practice that ensures Chapter 102 Erosion & Sedimentation Control permit applications within the Walnut Creek watershed will not contribute to further water quality impairments and will protect community water supplies.
- DEP personnel developed a regional strategy for implementing the upcoming NPDES MS4 permits that best preserves special protection waters, promotes restoration of impaired waters, protects community water supplies and minimizes potential for localized flooding.
- DEP personnel conducted in-depth reviews and inspections of the three NPDES MS4 permits within the Walnut Creek watershed to ensure compliance with applicable statutes and regulations.
- DEP personnel drafted and proposed a practice that would compel mitigation requirements and eliminate the use of waivers in relation to the issuance of Chapter 105 regulated water obstructions and encroachments.

### ***Section IV: Watershed Monitoring***

- DEP personnel continue to participate and provide input to the Clean Beaches Task Force with a focus on reducing sources of *E. coli* bacteria in surface waters.
- Through a DEP Growing Greener grant, Mercyhurst College received over \$100,000 to conduct a comprehensive investigation and research study into the contamination levels and potential sources of *E. coli* bacteria within the Walnut Creek watershed.
- DEP secured funding and cooperation with landowners to install and operate a Water Quality Network station at the mouth of Walnut Creek and to conduct regularly scheduled water chemistry, *E. coli*, and benthic analyses.

### ***Section V: DEP Enforcement of Environmental Laws and Regulations***

- DEP conducted a comprehensive review of 15 active NPDES Erosion & Sedimentation Control permits in the Walnut Creek watershed to assure compliance with all applicable statutes and regulations and that construction was consistent with Post Construction Stormwater Management plans.
- DEP created and instituted a procedure to ensure final stabilization of earth disturbance related to construction and that stormwater management BMPs are installed as described.

### **2010-2011 Planned Activities**

DEP will create a 2010-2011 annual work schedule for initiatives in the Walnut Creek watershed that accurately and appropriately reflects the current levels of funding, staff, and resources available. DEP will place continued emphasis on coordination with other federal, state, local agencies, and organizations to advance the implementation of projects and initiatives within the watershed. Many projects that are in this report are multi-year initiatives or practices that will continue to receive DEP support. Particular focus will be placed on seeking funding to complete an impervious surface coverage map of individual land parcels within the watershed to determine the parcel-level contribution of stormwater volume, rate, and pollutant loading which is currently impairing the water quality of the stream.

### **\*\*DISCLAIMER\*\***

The procedures outlined in this Report are intended to provide information and supplement existing requirements. Nothing in the Plan or Report shall affect regulatory requirements. The procedures herein are not adjudications or regulations. There is no intent on the part of DEP to give the procedures in the Plan or Report that weight or deference. This Plan and Report establish the framework within which the DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this Plan if circumstances warrant.

# **ATTACHMENT**

## **Walnut Creek Protection and Restoration Plan** *DEP 2009-2010 Work Schedule and Accomplishments*

**Walnut Creek Watershed  
Protection and Restoration Plan**  
DEP 2009-2010 Work Schedule & Accomplishments

**SECTION I: WATERSHED-BASED EDUCATION AND OUTREACH**

**Education: DEP will continue to engage the community in numerous education-based activities including:**

***Bullet 2:** Encouraging media-sponsored watershed education television programs and newspaper articles that increase public knowledge of water quality and environmental issues;*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Organize public media message on the benefits of, and the need for, SW management.	Coordinate with CRC to organize message content and medium	9/09	NC	L. Boughton		Not completed
	Deliver media message	10/09	NC	L. Boughton		Not completed
Ensure that the three permitted MS4s within the watershed are compliant with public education and involvement requirements.	Review MS4 Annual Reports for compliance with MCMs 1 and 2	8/31/09	NC	D. Luttman		Postponed, MS4 permit extension allowed additional year to continue MCM implementation
	Provide compliance reports to MS4s	9/30/09	NC	D. Luttman		Postponed
	Follow-up and enforcement	1/31/10	NC	D. Luttman		Postponed
Publish a Walnut Creek insert in the “News in Education” section of the Erie Times.	Contact Anna McCahiney of Erie Times News	9/09	NC	L. Boughton		Not completed
	Provide information for news article	10/09	NC	L. Boughton w/ T. Bruno		Not completed
Participate in an interview regarding Walnut Creek on Jane Earl’s public access show.	Contact Jane Earl’s assistant to arrange interview	1/10	NC	L. Boughton		Not completed
	Participate in interview	2/10	NC	L. Boughton		Not completed
Provide presentations regarding Walnut Creek and stormwater to local educational institutions.	Participate in Collegiate Academy’s Signs of Change day of environmental presentations.	2/10	2/10	T. Bruno	8	Conducted the presentation Stormwater, Water Quality, and Restoring Walnut Creek to over 20 high school students who live in and around the watershed. Completed.

**Bullet 3:** Disseminating information to those working and operating in the field of stormwater management by participating in meetings, conferences, and other forums;

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Participate in 102/105 preapplication meetings with developers, consultants, ECCD staff, and municipal representatives to relay permit requirements for stormwater rate, volume and water quality control.	Fed Ex Ground Terminal PCSM/Permit	ongoing	4/15/09	D. Luttman	8 hrs	No net change in SW conditions, protect EV wetlands
	WalMart Supercenter PCSM		11/16/09	J. Mongera	8 hrs	No net change in SW conditions
	Forest View PCSM		3/4/09	J. Mongera	8 hrs	No net change in SW conditions
	Perry hi-Way Hose Fire Station PCSM		4/3/09	D. Luttman	8 hrs	No net change in SW conditions
	Erie Federal Credit Union PCSM		6/22/09	D. Luttman	8 hrs	No net change in SW conditions
	Verizon PA PCSM		1/29/10	D. Luttman	8 hrs	No net change in SW conditions
	Whispering Woods Phase V PCSM		1/29/10	D. Luttman	8 hrs	No net change in SW conditions
	Splash Lagoon PCSM		3/26/09	D. Luttman	8 hrs	No net change in SW conditions
	Trinity Riding Stables PCSM/Permit		11/09	D. Luttman	8 hrs	No net change in SW conditions
	Laurel Springs Phase III PCSM		3/15/10	D. Luttman	8 hrs	No net change in SW conditions
	Hidden Springs Closure		1/20/10	D. Luttman	8 hrs	No net change in SW conditions
	Fairview Homes PCSM		2010	D. Luttman	8 hrs	No net change in SW conditions
	Berkmire Trucking PCSM/Permit		2/4/09	D. Luttman	8 hrs	No net change in SW conditions

**Bullet 6:** Supporting the development of a watershed informational kiosk at the PA Fish & Boat Commission's Walnut Creek Access Area;

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Install an informational kiosk at the PAFBC Walnut Creek access area.	CZM Grant Award	-	2008	R. Lybrook w/ PA Sea Grant	20 hrs	Awarded \$80,000 grant from CZM in 2008. \$5,000 directed to ECCD for SW education. Scope of grant was modified providing outreach through 8,039 direct mailings to Walnut Creek
	Provide input on design	8/31/09	12/2009	R. Lybrook	4 hrs	

	Installation	9/30/09	2/2010	R. Lybrook w/ ECCD	2 hrs	riparian landowners in February 2010, rather than info kiosk. <b>Completed.</b>
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**Bullet 8:** *Educating residential on-lot sewage treatment system owners about proper operation and maintenance practice.*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Provide up to 3 residential landowner informational workshops over the next two years through Growing Greener Grant NW080240 “Walnut Creek Watershed Improvements for Septic Systems”.	Grant administration and technical advice	ongoing	ongoing	T. Bruno	15	Grant progress on-track with first public meeting held. Progress reporting and invoicing up to date. <b>Ongoing.</b>
	Obtain results for annual plan review	3/30/10	ongoing	T. Bruno w/ECCD & PA Sea Grant	337	First outreach seminar held for owners and operators of on-lot septic systems. Outreach and grant performance progressing. <b>Ongoing.</b>

**Outreach:** DEP will continue to engage the community in numerous education-based activities including:

**Item 1:** *Provide training for municipal officials and environmental consultants on 102/105/106 and 167.*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Conduct SW management and control workshop in Erie County.	Prepare & organize w/ ECCD	12/08	12/08	R. Lybrook	10 hrs	Workshop held at ECCD. Attendees included municipal officials, developers and consultants. Focus topics included E&S, PCSM requirements in the Walnut Creek watershed, 102 permits, Act 167 and MS4.
	Conduct workshop	12/08	12/08	R. Lybrook	8 hrs	
Initiate requirement for violators to conduct training on SW issues as an obligation of their legal document (CO&A).	Create obligation for CO&A	10/09	NC	R. Neville		<b>Not completed due to lack of staff.</b>
	Implement in new CO&As, list as completed	ongoing	NC	R. Neville		<b>Not completed due to lack of staff.</b>

**Item 2: Meeting with community water suppliers to encourage development of source water protection programs;**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Meet with community water suppliers within the Walnut Creek watershed to encourage source water protection planning.	Provide map and prioritized list of community water supplies to OGL for funding consideration	6/09	NC	J. Mongera		Not completed due to lack of staff.
	Identify eligible/potential candidates and meet re SWP	9/09	NC	J. Mongera		Not completed due to lack of staff.
	Not part of original plan		5/19/10	R. Lybrook	12	WREN Source Water Protection Workshop held at Millcreek Twp Building

**Item 3: Conduct a workshop for Municipal Separate Storm Sewer (MS4) permittees to inform them of new permit conditions, compliance obligations and reporting requirements;**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Hold MS4 draft General Permit Listening Session.	Coordinate Listening Session w/ CO	-	4/09	R. Lybrook	8 hrs	Listening Session on draft PAG13 completed with emphasis on requirements for PCSM and Act 167. <b>Completed.</b>
	Conduct listening session	-	4/09	CO/Region staff	8 hrs	

**SECTION II: COMMONWEALTH FUNDING FOR PROTECTION AND RESTORATION PROJECTS**

***DEP Growing Greener Grants***

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Identify at least one eligible applicant for a watershed improvement project.	Submission of at least one grant application for watershed improvement	7/09	7/09	T. Bruno, Millcreek Twp	160	Millcreek Twp, Zimmerly Road Project. <b>Completed.</b>

Evaluate and fund, in cooperation with other state agencies, a Growing Greener watershed improvement project within Walnut Creek Watershed.	Fund up to one watershed improvement project in Walnut Creek.	3/10	5/10	T. Bruno, Millcreek Twp DCNR, PAF&B, CZM	145	Millcreek Twp, Zimmerly Road Project was funded by DEP, DCNR, PAF&B, and DEP CZM and contracts executed. Total awarded grants for project from all agencies: \$610,000 with projected additional grant of up to \$100,000. <b>Completed.</b>
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**Source Water Protection Technical Assistance Program (SWPTAP)**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Enter into SWPTAP agreement with at least one eligible applicant identified in Section I.2 above.	Scoping Meeting	2/10	NC	J. Mongera		Not completed due to lack of staff.
	SWPTAP agreement	3/10	NC	J. Mongera		Not completed due to lack of staff.
	SWP planning process	ongoing	NC	J. Mongera		Not completed due to lack of staff.

**Other Sources of Grant Funding**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Coordinate with other Commonwealth agencies to identify cooperative funding opportunities.	Combine funding resources for projects within the Walnut Creek watershed	12/09	12/09	T. Bruno	40	DCNR and PAF&BC coordination on Millcreek Twp., Zimmerly Road project. <b>Completed.</b> Submitted GLRI Grant with OGL for stream restoration project on Walnut Creek at Cassidy Park. <b>Ongoing.</b>
				R. Lybrook	20	
	Initiate mini-grant program	12/09	12/09	T. Bruno	10	Program initiated and performing. Funded one project in Walnut Creek Watershed to date. <b>Ongoing.</b>
	Not part of original plan			PAFBC	-	<b>PAFBC awarded \$21,000 in Great Lakes Restoration Initiative funds for Cassidy Park Fish Habitat and Hyporheic Zone improvement project.</b>

**SECTION III: COMMONWEALTH PERMITTING AND PLANNING OF ACTIVITIES THAT IMPACT THE ENVIRONMENT**

***NPDES – Discharges Associated with Construction Activities***

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Develop and implement a regional practice that ensures 102 permits issued in the watershed will not further contribute to the impairment of statewide water uses and will protect sources used for community water supplies.	Draft regional practice	-	7/10/09	R. Lybrook & P. Williams	20 hrs	Completed.
	Legal review	8/10/09	8/10/09	M. Braymer	2 hrs	Completed.
	Adopt practice	9/14/09	9/14/09	J. Holden	4 hrs	Completed.
	Implement practice	8/17/09	9/14/09	D. Luttman w/ECCD	90 hrs	PCSM Review of permit application within the watershed is ongoing. Reviews completed for Millcreek Town Center, Whispering Woods, Verizon, Laurel Springs, Erie Federal Credit Union, Perry Hiway Hose Co., Berkshire Trucking, Fed Ex, Trinity Stables

***NPDES – MS4 Permit***

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Develop and implement a regional strategy to determine the specific permit type (IP, GP, or waiver) for the five MS4s in the watershed that best preserves special protection waters, promotes restoration of impaired waters, protects community water supplies and minimizes potential for localized flooding.	Draft strategy	7/31/09	7/31/09	R. Lybrook	15 hrs	Completed.
	Legal Review	8/31/09	NC	M. Braymer		Pending final MS4 permit.
	Adopt Strategy	9/09	NC	J. Holden		Pending final MS4 permit.
	Implement strategy with MS4 permit renewal, GP will be extended to 3/11	3/11	NC	R. Lybrook		Pending final MS4 permit.
Ensure the three permitted MS4s within the watershed are compliant with NPDES MS4 requirements.	Review annual reports	9/1/09	9/1/09	D. Luttman	15 hrs	Completed
	Inspect MS4 Programs	2/1/10	NC	D. Luttman		Not completed, PAG13 draft
	Ensure compliance action as needed	3/1/10	NC	D. Luttman		Not completed, PAG13 draft

***Dam Safety and Waterway Management –25 PA Code, Chapter 105***

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Develop and implement “No Waiver Practice” and “Compelled Mitigation Requirements” for Chapter 105 applications within headwater streams of the watershed.	Draft Policy	01/10	01/10	R. Neville		Completed.
	Legal Review	02/10	NC	M. Braymer		Not completed.
	Adopt Policy	03/10	NC	J. Holden		Not completed due to lack of staff.
	Implement Policy		NC	R. Neville w/ ECCD		Not completed due to lack of staff.

***Act 167—Integrated Water Resource Management***

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Complete an Integrated Water Resource Management Plan that examines the creation of a central entity for water resource planning and services to municipalities.	Incorporate into Act 167 planning grant scope	-	4/09	T. Bruno w/ ECDP	12	IWRM incorporated into scope of work, executed Act 167 grant contract. Completed.
	Provide grant administration and technical advice	ongoing		T. Bruno	16	Review progress reports and requests for reimbursement. Completed.
	Attend WPAC, MS4 and IWRP meetings	ongoing		T. Bruno W/ ECDP	15	1 WPAC and 2 IWRP meetings. Completed.
	Relay draft materials to the Program for review	ongoing		T. Bruno	0	<b>PROGRAM CANCELLED</b> due to lack of funding.
	<b>PROGRAM CANCELLED</b>			T. Bruno	5	Due to elimination in the Commonwealth budget, IWRP was cancelled for Erie County.

**SECTION IV: WATERSHED MONITORING**

**Item 1:** *Continuing to support, and be an active part of, the Clean Beaches Task Force to find the sources of E. coli bacteria in surface waters and take action to mitigate problems from sewage discharges, malfunctioning on-lot sewer systems, agricultural runoff and stormwater runoff from regulated facilities;*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Participate in Clean Beaches Task Force meetings and related activities.	Spring Task Force meeting	-	5/12/09	E. Stuart	4	Completed.
	Spring Task Force meeting		4/2010	R. Lybrook		Not completed

**Item 2:** *Providing technical support to Mercyhurst College during their activities assessing the origin and extent of E.coli contamination within Walnut Creek and other Lake Erie waterways as defined in the scope of work of their 2007 Growing Greener project “Bacterial Monitoring in Lake Erie Watershed;”*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Advise Mercyhurst College Growing Greener Grant on E. coli study of Walnut Creek.	Grant administration and technical advice.	6/30/10		E. Stuart	20	Ongoing.
	Obtain results for annual plan review	3/30/10		E. Stuart		Grant closes 6/30/10, final report due 30 days after.

**Item 3:** *Identifying actual and potential contribution of stormwater pollution from facilities constructed before stormwater regulations were revised in 1999. This will be accomplished by prioritizing those reaches and tributaries that were determined to be most impaired by the Assessment Report, and conducting an extensive land use evaluation to determine those parcels which are contributing the greatest pollutant loadings to the waterway;*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome

Calculate theoretical TSS pollutant load from parcels identified as potentially significant pollution sources in DEP's study of 2008.	Coordinate with OGL, CO, or contractor to design pollutant loading calculation project.	10/09		J. Mongera	35 hrs	Scope of project changed due to lack of staff. Project proposal submitted for \$50,000 funding under the 2010 WATER RESOURCES DEVELOPMENT ACT. Alternate funding for project submitted under GLRI funding on 1/14/10 to contract work. Funding announcement expected in May 2010. <b>This task and milestones have been delayed due to lack of staff and fiscal resources.</b>
	Create GIS Map of target parcels	2/10		J. Mongera/ R. Lybrook	20 hrs	
	Field verify land uses, BMPs and other relevant conditions at target parcels.	3/10		J. Mongera		
	Calculate theoretical TSS loading from target parcels	3/10		J. Mongera		

**Item 4:** *Establishing a Water Quality Network station near the mouth of Walnut Creek that includes: a stream gage station with continuous measurements for flow, pH, dissolved oxygen, temperature, conductivity and turbidity with a real time data-link and webpage, bimonthly water chemistry sampling, and annual benthic analysis;*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Installation and operation of gage station on Walnut Creek	Initial funding for installation and O&M	-	2008	R. Lybrook w/ partnership	60 hrs	Upper pool gage installed to measure stream flow with continuous water quality monitoring. Lower pool Doppler gage installed to measure discharge to Lake Erie. Wire weight gage installed at Manchester bridge. Data linked to USGS real-time data website at: <a href="#">USGS</a> . <b>Completed.</b>
	Funding for O&M for period of 2008-2009 through CZM Grant	-	2008	R. Lybrook w/Sea Grant	20 hrs	Awarded \$80,000 grant for O&M of gage station through period of 10/08-9/09. <b>Completed.</b>
	Ongoing O&M funding through DEP/USGS contract	9/30/09	9/30/09	R. Lybrook w/ CO	10 hrs	<b>Completed.</b>
Complete bimonthly water chemistry sampling.	Collect water samples using SAC 010 at Manchester Bridge. Analysis by DEP Lab.	ongoing	6/30/10	R. Lybrook L. Boughton w/ ECDOH	40 hrs	<b>Completed.</b>
Collect monthly <i>E. Coli</i> samples	Collect <i>E. Coli</i> samples monthly at Manchester Bridge. Analysis by ECDOH.	ongoing	6/30/10	R. Lybrook L. Boughton w/ ECDOH	16 hrs	<b>Completed.</b>
Conduct annual benthic analysis	Use ICE protocol to collect benthic sample at Manchester Bridge.	10/09		R. Lybrook L. Boughton w/ ECDOH		<b>Not completed</b>

**SECTION V: DEP ENFORCEMENT OF ENVIRONMENTAL LAWS AND REGULATIONS**

**Item 1: Review of NPDES Permits for Stormwater Discharges Associated with Construction Activities within Walnut Creek Watershed**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Evaluate construction projects with NPDES permits that will expire within two-years for consistency with PCSM Plans, and ensure compliance as necessary.	Develop list of Individual and General permits issued	8/09	7/7/09	J. Holden/ R. Lybrook	2 3	15 permits with surface water discharges will expire within the next two years. <b>Completed.</b>
	Compare as-built drawings to PCSM Plan for 15 permits	12/09	12/3/09	T. Bruno/ D. Luttman	15 6	
	Ensure compliance action as necessary	1/10	12/30/10	T. Bruno/ D. Luttman	10	Permits evaluated and sites inspected. No compliance actions necessary on current NPDES permits set to expire. <b>Completed.</b>
Confirm stabilization of earth disturbance related to construction activity and BMPs identified in the PCSM have been properly installed by the permit expiration date, or that the permit is renewed.	Develop "Notice of Termination" reminder process that alerts permittee that the permit will expire within 1 year	9/09	9/09	J. Holden/ R. Lybrook	20 hrs	Process developed, database tracking. <b>Completed.</b>
	For permits expiring within the next year, send letter to permittee requesting a "Notice of Termination" or a permit renewal application	Starting 9/09	9/09	W. Steffey	20 hrs	Tracking system and process in place. <b>Completed.</b>
	Ensure compliance action as necessary	ongoing		R. Lybrook	12 hrs	<b>Completed.</b>
	Whispering Woods Permit Phases I-IV		5/26/10	R. Lybrook D. Luttman	24	Post construction compliance evaluation of BMPs installed, overall decrease in SW volume, rate and TSS loading. <b>Completed.</b>

**Item 2: Addressing stormwater management deficiencies contributing to impairment within Walnut Creek Watershed on sites constructed without or prior to NPDES Permits.**

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome

Develop and initiate a program to identify four parcels within the watershed that are the largest contributors of stormwater pollution, and create an abatement plan that utilizes voluntary compliance options and/or implementation of DEP's Compliance & Enforcement policy.	Using theoretical TSS loading from target parcels (item IV.3 above), develop prioritized list of the most significant contributors of SW pollution.	3/10		TBD		Not completed/lack of staff and fiscal resources.
	Notify property owners that have with the most significant contribution of SW pollution	3/10		J. Holden		Not completed/lack of staff and fiscal resources.
	Hold meetings with property owners to determine a feasible compliance option	4/10		J. Holden/ T. Bruno/ R. Lybrook		Not completed/lack of staff and fiscal resources.
	Initiate compliance option			R. Lybrook		Not completed/lack of staff and fiscal resources.

**ANNUAL REVIEW AND ADJUSTMENT**

*DEP will complete an annual review of this document to evaluate activities conducted during the previous year, and determine where adjustments to the Protection and Restoration Plan are required.*

Measurable Task	Milestone	Target date	Completion Date	Responsible person	Tracking	
					Time	Measurable Outcome
Complete annual review	Evaluate tasks and their effectiveness	3/31/10	5/10	T. Bruno R. Lybrook P. Williams	20	Completed.
	Set task for next year	4/30/10	7/10	T. Bruno R. Lybrook P. Williams	15	Completed.
	Announce press release, website	5/10	7/10	F. Tarbell T. Bruno	15	Completed.
Public announcement of progress and future plans	Announcement	7/10	7/10	F. Tarbell	10	Completed.