UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
4/4/2007

Ms. Cathy Curran Myers
Deputy Secretary for Water Management
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105

Dear Ms. Myers:

The U.S. Environmental Protection Agency (EPA) is pleased to approve the *Little Deer Creek Watershed TMDL, Allegheny County, For Acid Mine Drainage Affected Segments*, dated August 23, 2006, submitted by the Pennsylvania Department of Environmental Protection (PADEP) and received by EPA for review and approval on August 23, 2006. The TMDLs were established and submitted in accordance with Sections 303(d)(1)(c) and 303(d)(2) of the Clean Water Act. The TMDLs were established to address impairment of water quality as identified in Pennsylvania's 1996 Section 303(d) list of impaired waters requiring TMDLs for metals associated with abandoned mine drainage. A rationale of our approval is enclosed.

As you know, any new or revised National Pollutant Discharge Elimination System permits with applicable effluent limits must be consistent with the TMDL's wasteload allocation pursuant to 40 CFR §122.44(d)(1)(VII)(B).

Any such permit should be submitted to EPA for review consistent with our letter dated October 1, 1998. If you have further questions, please call me or have your staff contact Ms. Mary F. Beck, at (215) 814-3429.

Sincerely,

Signed

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Glenn Rider, DEP
Bill Brown, DEP
Ken Bowman, DEP SWRO
Joel Pontorero, Greensburg DMO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Decision Rationale
Total Maximum Daily Loads
Little Deer Creek Watershed
For Acid Mine Drainage Affected Segments
Allegheny County, Pennsylvania

Signed

Jon M. Capacasa, Director
Water Protection Division

Date: 4/4/2007

Decision Rationale
Total Maximum Daily Loads
Little Deer Creek Watershed
For Acid Mine Drainage Affected Segments

I. Introduction

The Clean Water Act (CWA) requires that Total Maximum Daily Loads (TMDLs) be developed for those waterbodies identified as impaired by the state where technology-based and other controls will not provide for attainment of water quality standards. A TMDL is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, including a margin of safety (MOS), that may be discharged to a waterbody without exceeding water quality standards.

The Pennsylvania Department of Environmental Protection (PADEP) Bureau of Watershed Management electronically submitted the *Little Deer Creek Watershed TMDL, Allegheny County, For Acid Mine Drainage Affected Segments* (TMDL Report), dated August 23, 2006, to the U.S. Environmental Protection Agency (EPA) for final Agency review on August 23, 2006. This report includes the TMDLs for the three primary metals associated with acid mine drainage (AMD) (i.e., iron, manganese, and aluminum) and pH and addresses one segment on Pennsylvania's 1996 Section 303(d) list of impaired waters, which was expanded on the 1998 Section 303(d) list. The TMDLs also address four unnamed tributaries (42290, 42291, 42292 and 42293).

EPA's rationale is based on the TMDL Report and information contained in the attachments to the report. EPA's review determined that the TMDL meets the following eight regulatory requirements pursuant to 40 CFR Part 130:

1. The TMDLs are designed to implement the applicable water quality standards.
2. The TMDLs include a total allowable load as well as individual wasteload allocations (WLAs) and load allocations (LAs).
3. The TMDLs consider the impacts of background pollutant contributions.
4. The TMDLs consider critical environmental conditions.
5. The TMDLs consider seasonal environmental variations.
6. The TMDLs include a MOS.
7. There is reasonable assurance that the proposed TMDLs can be met.
8. The TMDLs have been subject to public participation.

II. Summary

Table 1 presents the 1996, 1998, 2002, and 2004 Section 303(d) listing information for the impaired segment first listed in 1996.[1]

Table 1. 303(d) Sublist for the Little Deer Creek Watershed, Allegheny County, Pennsylvania

State Water Plan (SWP) Subbasin: 18-A Deer Creek								
Year	**Miles**	**Segment ID Assessment ID**	**DEP Stream Code**	**Stream Name**	**Designated Use**	**Data Source**	**Source**	**EPA 305(b) Cause Code**
1996	5.1	NA	42289	Little Deer Creek	TSF	305(b) Report	RE	Metals
1998	7.82	New assessment; new survey ID. 970801-1100-TVP	42289	Little Deer Creek	TSF	UP	Construction	Turbidity Siltation & Flow Alterations
							AMD	Salinity/ TDS/ Chlorides & Metals
							Subsurface Mining	Salinity/ TDS/ Chlorides
2002	No additional assessment							

Resource Extraction = RE
Trout Stocking = TSF
Abandoned Mine Drainage = AMD
Total Dissolved Solids = TDS

See Attachment D of the TMDL Report, *Excerpts Justifying Changes Between the 1996, 1998, 2002, and 2004 Section 303(d) Lists*. The use designations for the stream segments in this TMDL can be found in PA Title 25 Chapter 93.9. Section IV, Table 3, shows the TMDLs for the Little Deer Creek Watershed.

In 1997, PADEP began utilizing the Statewide Surface Waters Assessment Protocol to assess Pennsylvania's waters. This protocol is a modification of EPA's 1989 Rapid Bioassessment Protocol II and provides for a more consistent approach to conducting biological assessments than previously used methods. The biological assessments are used to determine which waters are impaired and should be included on the State's Section 303(d) list.

[1]Pennsylvania's 1996, 1998, 2002, and 2004 Section 303(d) lists were approved by the Environmental Protection Agency (EPA). The 1996 Section 303(d) list provides the basis for measuring progress under the 1997 lawsuit settlement of *American Littoral Society and Public Interest Group of Pennsylvania v. EPA.*

The TMDLs in this report were developed using a statistical procedure to ensure that water quality criteria are met 99% of the time as required by Pennsylvania's water quality standards at Pennsylvania Code Title 25, Chapter 96.3c. Table 3 of the TMDL Report lists the TMDLs for the Little Deer Creek Watershed, addressing metals and pH in the stream segments listed as PADEP stream codes 42289, 42290, 42291, 42292 and 42293. Construction as a source of impairment no longer exists. All construction activities occurring at the time of the assessment have been completed; therefore, a TMDL to address impairments resulting from construction is no longer necessary. For all sampling events, pH values fell within the acceptable criterion range of 6.0-9.0 and the stream was net alkaline at all points. No TMDLs for pH are necessary in the Little Deer Creek Watshershed. The method and rationale for addressing pH is contained in the *Little Deer Creek Watershed TMDL* report, *Attachment B.*

TMDLs are defined as the summation of the point source WLAs plus the summation of the nonpoint source LAs plus a MOS and are often shown as follows:

$$TMDL = \sum WLAs + \sum LAs + MOS$$

The TMDL is a written plan and analysis established to ensure that a waterbody will attain and maintain applicable water quality standards. The TMDL is a scientifically-based strategy which considers current and foreseeable conditions, utilizes the best available data, and accounts for uncertainty with the inclusion of a MOS value. Since conditions, available data, and the understanding of natural processes can change more than anticipated by the MOS, there exists the option of refining the TMDL for resubmittal to EPA.

III. Background

The Little Deer Creek Watershed is located in north-northwest portion of Allegheny County in southwestern Pennsylvania. Most of the watershed is privately owned and is partially forested. Land uses within the 14 square mile watershed include rural residential properties, industrial development, minor agricultural areas, and abandoned mine lands. A portion of the southern watershed area has a moderate population of residences and has become moderately industrialized, due to the expansion of the population from Pittsburgh into the adjacent rural areas. The villages of Harmer Heights, Rural Ridge, and Russelton lie within or adjacent to the watershed boundary. Little Deer Creek drains into Deer Creek, approximately 2.2 miles upstream of the confluence of Deer Creek and the Allegheny River at Harmarville.

The Little Deer Creek Watershed reflects the hydrologic impacts by past surface and deep
mining operations. In addition, field studies show that intermittent logging has been continuous for at least the last century. Deep mining on the Upper Freeport coal seam took place beneath the
entire watershed. Small-scale deep mines and surface mines on the overlying Pittsburgh coal seam lie scattered across much of the watershed area. The Pittsburgh seam acts as a cap seam at

the higher elevations (ridge tops) while the Upper Freeport seam lies 100 to 400 feet below Little Deer Creek. Several abandoned coal refuse piles and several completed coal refuse reprocessing operations lie within the Little Deer Creek Watershed between Rural Ridge and Russelton. All of the deep mining operations have been abandoned for over a decade; much of the abandoned Freeport deep mines are flooded. A small-scale shale and clay surface mining operation lies just west of the confluence of the stream and Deer Creek. There are no National Pollutant Discharge Elimination System (NPDES) discharges from the site to Little Deer Creek. There was one Government Financed Construction Contract (GFCC) mining operation in the watershed, GFCC #02-99-01, ACV Power Corp. Russelton South Site; however, all coal reprocessing is complete and the site has been reclaimed.

All of the discharges in the watershed are from abandoned mines and are treated as nonpoint sources. There are no known large-scale discharges present from the abandoned mining within the watershed, however, there are small-scale discharges. The sources of these discharges are the abandoned deep mines or the existing coal refuse piles. The mine drainage within portions of the receiving stream and its tributaries is related to these discharges in addition to small contributions from the small abandoned cap seam Pittsburgh mines along the tributaries and outer reaches of the watershed. The main stem of Little Deer Creek shows an increase in alkalinity and a decrease in overall metals concentrations when the upstream to downstream monitoring points are compared. Most of the tributaries reveal impacts from mine drainage as shown by variable metals.

PADEP treats each segment on the Section 303(d) list as a separate TMDL and expresses each TMDL as a long-term average loading. (See the *Little Deer Creek Watershed TMDL* Report, Attachment C, for the TMDL calculations.)

The Surface Mining Control and Reclamation Act of 1977 (SMCRA, Public Law 95-87) and its subsequent revisions were enacted to establish a nationwide program to, among other things, protect the beneficial uses of land or water resources, protect public health and safety from the adverse effects of current surface coal mining operations, and promote the reclamation of mined areas left without adequate reclamation prior to August 3, 1977. SMCRA requires a surface mining permit for the development of new, previously mined, or abandoned sites for the purpose of surface mining. Permittees are required to post a performance bond that will be sufficient to ensure the completion of reclamation requirements by the regulatory authority in the event that the applicant forfeits. Mines that ceased operating by the effective date of SMCRA (often called “pre-law” mines) are not subject to the requirements of SMCRA.

Little Deer Creek was on the 1996 Section 303(d) list of impaired waters and counts toward the tenth year (2007) TMDL milestone commitment under the requirements of the 1997 TMDL lawsuit settlement agreement. Tenth year milestones include the development of TMDLs for 20% of the waters listed on Pennsylvania’s 1996 Section 303(d) list of impaired waters by the effects of AMD (80 waters since 2005) and the remaining waters listed as impaired by non-AMD impacts. Delisted waters may count for 20% of the requirement.

Computational Procedure

The TMDLs were developed using a statistical procedure to ensure that water quality criteria are met 99% of the time as required by Pennsylvania's water quality standards. A two-step approach was used for the TMDL analysis of impaired stream segments.

The first step used a statistical method for determining the allowable instream concentration at the point of interest necessary to meet water quality standards. An allowable long-term average instream concentration was determined at each sample point for metals and acidity. The analysis was performed using Monte Carlo simulation to determine the necessary long-term average concentration needed to attain water quality criteria 99% of the time, and the simulation was run assuming the data set was log normally distributed. Using @RISK[2], each pollutant source was evaluated separately by performing 5,000 iterations of the model where each iteration was independent of all other iterations. This procedure was used to determine the required percent reduction that would allow the water quality criteria to be met instream at least 99% of the time. A second simulation that multiplied the percent reduction by the sampled value was run to ensure that criteria were met 99% of the time. The mean value from this data set represents the long-term average concentration that needs to be met to achieve water quality standards.

The second step was a mass balance of the loads as they passed through the watershed. Loads at these points were computed based on average annual flow. Once the allowable concentration and load for each pollutant was determined, mass-balance accounting was performed starting at the top of the watershed and working downstream in sequence. This mass balance or load tracking through the watershed utilized the change in measured loads from sample location to sample location as a guide for expected changes in the allowable loads.

The existing and allowable long-term average loads were computed using the mean concentration from @RISK multiplied by the average flow. The loads were computed based on average annual flow and should not be taken out of the context for which they are intended. They are intended to depict how the pollutants affect the watershed and where the sources and sinks are located spatially in the watershed. A critical flow was not identified, and the reductions specified in this TMDL apply at all flow conditions.

IV. Discussions of Regulatory Requirements

EPA has determined that these TMDLs are consistent with statutory and regulatory requirements and EPA policy and guidance.

1. The TMDLs are designed to implement the applicable water quality standards.

[2]@RISK – Risk Analysis and Simulation Add-in for Microsoft Excel, Palisade Corporation, Newfield, NY.

Water quality standards are state regulations that define the water quality goals of a waterbody. Standards are comprised of three components: (1) designated uses, (2) criteria necessary to protect those uses, and (3) antidegradation provisions that prevent the degradation of water quality. Little Deer Creek has been designated by Pennsylvania as a trout stocked fishery with criteria to protect the aquatic life use, and the designation can be found at Pennsylvania
Title 25 §93.9. To protect the designated use as well as the existing use, the water quality criteria shown in Table 2 apply to all evaluated segments. The table includes the instream numeric criterion for each parameter and any associated specifications.

Table 2. Applicable Water Quality Criteria

Parameter	Criterion Value (mg/l)	Duration	Total Recoverable/ Dissolved
Aluminum (Al)	0.75	Maximum	Total Recoverable
Iron (Fe)	1.50 0.30	30-day Average Maximum	Total Recoverable Dissolved
Manganese (Mn)	1.00	Maximum	Total Recoverable
pH	6.0 - 9.0	Inclusive	N/A
TDS	500	Maximum	Total Recoverable

Pennsylvania Title 25 §96.3c requires that water quality criteria be achieved at least 99% of the time, and TMDLs expressed as long-term average concentrations are expected to meet these requirements. That is, the statistical Monte Carlo simulation used to develop TMDL WLAs and LAs for each parameter resulted in a determination that any required percent pollutant reduction would assure that the water quality criteria would be met instream at least 99% of the time. The Monte Carlo analysis performed 5,000 iterations of the model where each iteration was independent of all other iterations and the data set was assumed to be log normally distributed.

EPA finds that these TMDLs will attain and maintain the applicable narrative and numeric water quality standards.

The pH values shown in Table 2 were used as the endpoints for these TMDLs. In the case of freestone streams with little or no buffering capacity, the allowable TMDL endpoint for pH may be the natural background water quality, and these values can be as low as 5.4 (Pennsylvania Fish and Boat Commission). However, PADEP chose to set the pH standard between 6.0 to 9.0, inclusive, which is presumed to be met when the net alkalinity is maintained above zero. This presumption is based on the relationship between net alkalinity and pH, on which PADEP based its methodology to addressing pH in the watershed (see the *Little Deer Creek Watershed TMDL* Report, Attachment B). A summary of the methodology is presented as follows:

The parameter of pH, a measurement of hydrogen ion acidity presented as a negative logarithm of effective hydrogen ion concentration, is not conducive to standard statistics.

Additionally, pH does not measure latent acidity that can be produced from the hydrolysis of metals. PADEP has been using an alternate approach to address the stream impairments noted on the Section 303(d) list due to pH. Because the concentration of acidity in a stream is partially dependent upon metals, it is extremely difficult to predict the exact pH values which would result from treatment of AMD. Therefore, net alkalinity will be used to evaluate pH in these TMDL calculations. This methodology assures that the standard for pH will be met because net alkalinity is able to measure the reduction of acidity. When acidity in a stream is neutralized or is restored to natural levels, pH will be acceptable ($\geq$6.0). Therefore, the measured instream alkalinity at the point of evaluation in the stream will serve as the goal for reducing total acidity at that point. The methodology that is used to calculate the required alkalinity (and therefore pH) is the same as that used for other parameters such as iron, aluminum, and manganese that have numeric water quality criteria. EPA finds this approach to addressing pH to be reasonable.

The cause of Salinity/TDS/Chlorides as listed on the 1998 PA Section 303(d) list is Total Dissolved Solids (TDS). Due to Title 25 Chapter 96.3(d), which requires the water quality criterion be met at the point of potable water withdrawal, a TMDL to address TDS is not necessary. The nearest potable water withdrawal to Little Deer Creek occurs approximately three
miles downstream of the mouth at the Oakmont Borough Municipal Authority (PWSID #5020036) on the Allegheny River. TDS data from WQN0801, located on the Allegheny River at the Hulton Highway Bridge approximately 3.5 miles downstream of the mouth of Little Deer Creek, shows that the TDS criterion of 500 mg/L is not exceeded. The average TDS concentration calculated from 10 years of WQN TDS data is 182.28 mg/L. In addition, Monte-Carlo simulation determines that the 99th percentile value is 421 mg/L, which ensures the standard is met 99 % of the time. A map of the water supply intake and WQN Station is located in Attachment A and TDS data for the WQN Station is located in the *Little Deer Creek Watershed TMDL* report, Attachment E.

2. The TMDLs include a total allowable load as well as individual WLAs and LAs.

For purposes of these TMDLs only, point sources are identified as permitted discharge points or discharges having responsible parties, and nonpoint sources are identified as any pollution sources that are not point sources. Abandoned mine lands were treated in the allocations as nonpoint sources. As such, the discharges associated with these land uses were assigned LAs (as opposed to WLAs). The decision to assign LAs to abandoned mine lands does not reflect any determination by EPA as to whether there are unpermitted point source discharges within these land uses. In addition, by approving these TMDLs with mine drainage discharges treated as LAs, EPA is not determining that these discharges are exempt from NPDES permitting requirements. There are no permitted dischargers and no WLAs were allocated.

Once PADEP determined the allowable concentration and load for each pollutant, a mass balance accounting was performed starting at the top of the watershed and working downstream in sequence. Load tracking through the watershed utilizes the change in measured loads from sample location to sample location as a guide for expected changes in the allowable loads.

PADEP used two basic rules for the load tracking between two ends of a stream segment: (1) if the measured upstream loads are less than the downstream loads, it is indicative that there is an increase in load between the points being evaluated, and no instream processes are assumed; (2) if the sum of the measured loads from the upstream points is greater than the measured load at the downstream point, it is indicative that there is a loss of instream load between the points, and the ratio of the decrease shall be applied to the allowable load being tracked from the upstream point.

Tracking loads through the watershed provides a picture of how the pollutants are affecting the watershed based on the available information. The analysis is performed to insure that water quality standards will be met at all points in the stream. EPA finds this approach reasonable.

Table 3 presents a summary of the allowable loads, LAs, and WLAs for the Little Deer Creek Watershed.

Table 3. TMDL Component Summary for the Little Deer Creek Watershed

Parameter (lbs/day)	Existing Load (lbs/day)	TMDL Allowable Load (lbs/day)	WLA (lbs/day)	LA (lbs/day)	Load Reduction (lbs/day)	Percent Identified* (%)
LTDR07 - Little Deer Creek, upstream of Unnamed Tributary 42293						
Aluminum	<0.5	NA	NA	NA	0.0	0
Iron	35.4	30.5	0.0	30.5	4.9	14
Manganese	19.6	11.8	0.0	11.8	7.8	40
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR06 - Mouth of Unnamed Tributary 42293						
Aluminum	6.0	3.2	0.0	3.2	2.8	46
Iron	6.9	6.9	NA	NA	0.0	0
Manganese	1.2	1.2	NA	NA	0.0	0
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR05 - Mouth of Unnamed Tributary 42292						
Aluminum	10.9	2.5	0.0	2.5	8.4	77
Iron	15.1	3.5	0.0	3.5	11.6	77
Manganese	6.6	3.6	0.0	3.6	3.0	46
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR04 - Little Deer Creek, upstream of Unnamed Tributary 42291						
Aluminum	23.8	23.8	NA	NA	0.0	0
Iron	21.2	21.2	NA	NA	0.0	0
Manganese	8.8	8.8	NA	NA	0.0	0
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR03 - Mouth of Unnamed Tributary 42291						
Aluminum	<0.5	NA	NA	NA	0.0	0
Iron	<0.3	NA	NA	NA	0.0	0
Manganese	<0.05	NA	NA	NA	0.0	0

Parameter (lbs/day)	Existing Load (lbs/day)	TMDL Allowable Load (lbs/day)	WLA (lbs/day)	LA (lbs/day)	Load Reduction (lbs/day)	Percent Identified* (%)
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR02 - Mouth of Unnamed Tributary 42290						
Aluminum	<0.5	NA	NA	NA	0.0	0
Iron	0.9	0.9	NA	NA	0.0	0
Manganese	0.1	0.1	NA	NA	0.0	0
Acidity	0.0	0.0	NA	NA	0.0	0
LTDR01 - Mouth of Little Deer Creek						
Aluminum	<0.5	NA	NA	NA	0.0	0
Iron	28.6	28.6	NA	NA	0.0	0
Manganese	3.7	3.7	NA	NA	0.0	0
Acidity	0.0	0.0	NA	NA	0.0	0

NA meets WQS. No TMDL necessary.

PADEP allocated only to nonpoint sources as there are no permitted dischargers in the watershed. Where there are active mining operations, Federal regulations require that point source permitted effluent limitations be water quality-based subsequent to TMDL development and approval.[3] In addition, PA Title 25, Chapter 96, Section 96.4d requires that WLAs serve as the basis for determination of permit limits for point source discharges regulated under Chapter 92 (relating to NPDES permitting, monitoring, and compliance). Therefore, no new mining may be permitted within the watershed without reallocation of the TMDL.

3. The TMDLs consider the impacts of background pollutant contributions.

The TMDLs were developed using instream data, which account for existing background conditions.

4. The TMDLs consider critical environmental conditions.

The reductions specified in these TMDLs apply at all flow conditions. A critical flow condition was not identified from the available data.

5. The TMDLs consider seasonal environmental variations.

The data set included data points from all seasons, thereby accounting for seasonal variation implicitly.

6. The TMDLs include a MOS.

[3]It should be noted that technology-based permit limits may be converted to water quality-based limits according to EPA's *Technical Support Document For Water Quality-based Toxics Control,* March 1991, recommendations.

The CWA and Federal regulations require TMDLs to include a MOS to take into account any lack of knowledge concerning the relationship between effluent limitations and water quality. EPA guidance suggests two approaches to satisfy the MOS requirement. First, it can be met implicitly by using conservative model assumptions to develop the allocations. Alternately, it can be met explicitly by allocating a portion of the allowable load to the MOS.

PADEP used an implicit MOS in these TMDLs by assuming that the treated instream concentration variability was the same as the untreated stream's concentration variability. This is a more conservative assumption than the general assumption that a treated discharge has less variability than an untreated discharge. By retaining variability in the treated discharge, a lower average concentration is required to meet water quality criteria 99% of the time than if the variability of the treated discharge is reduced.

Additionally, calculations were performed using a daily average for iron rather than the 30-day average, thereby, incorporating a MOS.

7. There is reasonable assurance that the proposed TMDLs can be met.

The *Recommendations* section of the TMDL Report highlights what can be done in the Little Deer Creek Watershed to eliminate or treat pollutant sources. Aside from PADEP's primary efforts to improve water quality in the Little Deer Creek Watershed through reclamation of abandoned mine lands and through the NPDES permit program, additional opportunities for reasonable assurance exist. PADEP expects that activities such as research conducted by its Bureau of Abandoned Mine Reclamation, funding from EPA's §319 grant program, and Pennsylvania's Growing Greener program will help remedy abandoned mine drainage impacts. PADEP also has in place an initiative that aims to maximize reclamation of Pennsylvania's abandoned mineral extraction lands. Through Reclaim PA, Pennsylvania's goal is to accomplish complete reclamation of abandoned mine lands and plugging of orphaned wells. Pennsylvania strives to achieve this objective through legislative and policy land management efforts and activities described in the TMDL Report.

Small variations in metals, particularly in manganese and iron, appear to be the main sources of pollutants in Little Deer Creek. Remediation or mitigation of the sources of mine drainage pollution could be addressed through a variety of methods. Additional active or passive treatment of known polluting mine discharges in the watershed would remove a moderate portion of the mine drainage impacts there. Daylighting of the existing small-scale deep mine(s) and reclamation of the smaller scale surface mines on the Pittsburgh seam would improve the overall water quality in the receiving streams.

The Deer Creek Watershed Association (DCWA), formed in 2001, is an active group within the Little Deer Creek Watershed. Their mission is to enhance, protect, and develop the fishery and other natural and recreational resources of the Deer Creek and Little Deer Creek Watersheds. The DCWA does not currently have any Growing Greener projects related to AMD remediation within the Little Deer Creek Watershed, but has expressed interest in partnering with the PADEP on AMD related projects. The DCWA was actively involved with the recent LTV Steel Co., Inc. bankruptcy case because they were concerned the mine pool elevation would

rise, causing a breakout of mine water into the Little Deer Creek Watershed. LTV operated facilities associated with the Russelton deep mine operation in the Little Deer Creek Watershed. The PADEP has since taken over the pumping and treatment of the Russelton deep mine pool.

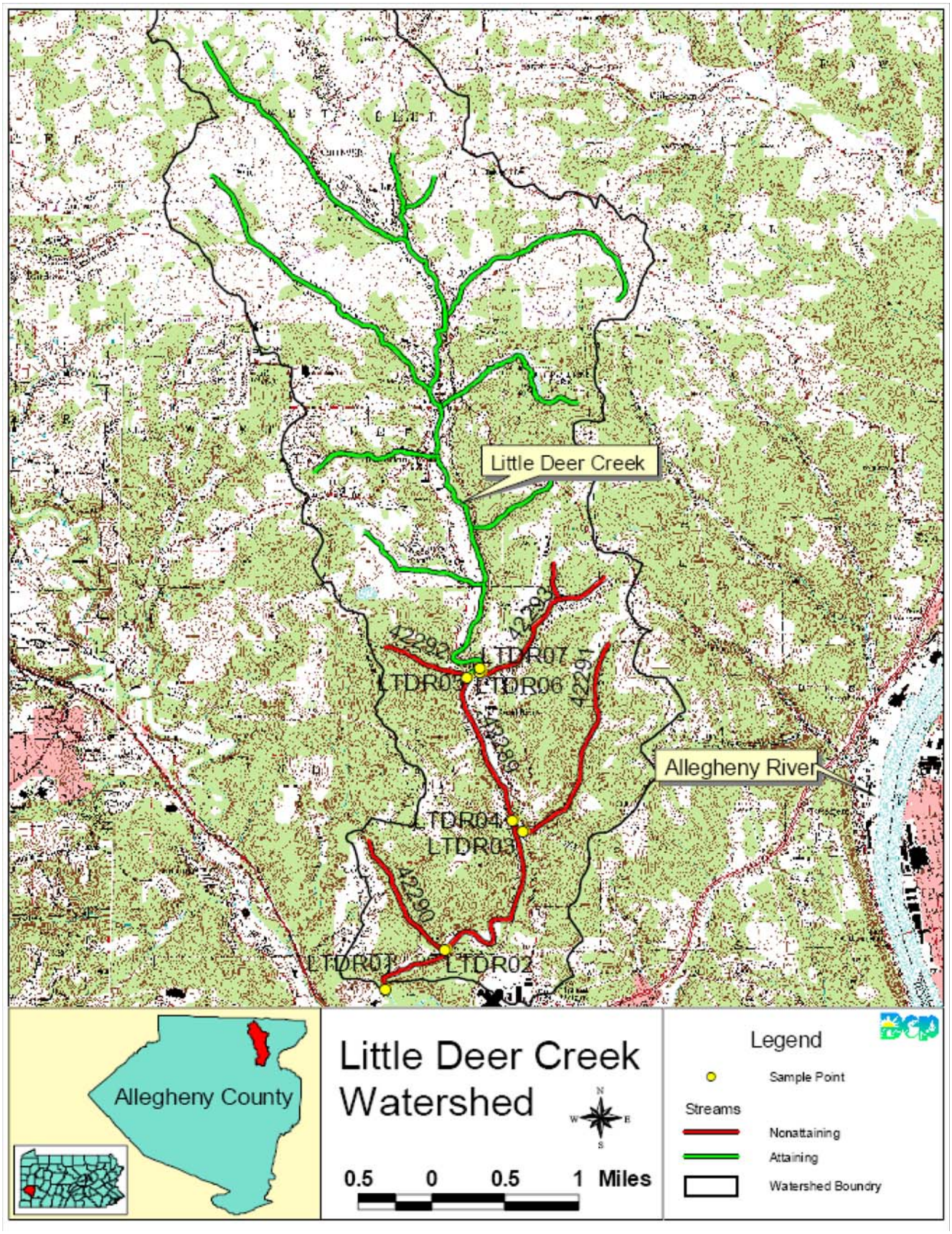
8. The TMDLs have been subject to public participation.

PADEP public noticed the draft TMDLs in the *Pennsylvania Bulletin* on November 6, 2004, and in the *Pittsburgh Post-Gazette* on November 18, 2004. A public meeting was held on December 2, 2004, at the Plum Borough Municipal Building in Plum, PA to discuss the proposed TMDLs. A 60-day public comment period was open on the Little Deer Creek Watershed Draft TMDL from November 6, 2004 until January 5, 2005. During this time, no comments were received.

Although not specifically stated in the TMDL Report, PADEP routinely posts the approved TMDL Reports on their web site: www.dep.state.pa.us/watermanagement_apps/tmdl/.

Attachment A

Little Deer Creek Watershed Map


Little Deer Creek
Allegheny River
LTDR07
LTDR05
LTDR06
LTDR04
LTDR03
LTDR01
LTDR02
42292
42293
42291
42289
42290
Allegheny County
Little Deer Creek Watershed
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