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# ***AML Water Project Review Manual***

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*Prepared By*



**Division of Mined Land Reclamation  
Abandoned Mined Land Section**

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## INTRODUCTION

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This manual is the result of a joint collaboration between the Cumberland Plateau Planning District Commission and the LENOWISCO Planning District Commission. This activity was completed under a contract with the Virginia Department of Mines, Minerals, and Energy (DMME). This manual is intended to be used as a guide for water project applications to DMME's Division of Mined Land Reclamation, Abandoned Mined Land Program. The Virginia Abandoned Mined Land (AML) Program is a program with a variety of priorities to address needs created by pre-law mining activities.

The Virginia Department of Mines, Minerals and Energy (DMME), Division of Mined Land Reclamation (DMLR) located in Big Stone Gap, has been designated to assume administrative responsibilities for the AML funds in Virginia that are made available by the U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSMRE). Congress makes an annual appropriation from the fund to OSMRE, who then awards these funds to eligible states and tribes by grants.

This review manual incorporates the many years of experience gained by DMME in AML program administration.

The AML fund was established pursuant to Public Law 95-87, enacted on August 3, 1977. Funds are obtained from reclamation fees collected from coal mine operators on a per ton basis of coal mined. The fees are collected by the U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement. Through the first 12 years of the program, emphasis was placed primarily on high priority land reclamation projects.

In 1990, Congress amended the Surface Mining Control and Reclamation Act (SMCRA) to recognize the severe public health hazards associated with water supplies contaminated by abandoned coal mines. Legislation was enacted to authorize states with eligible coal problems to expend up to 30 percent of the funds granted annually for protecting, repairing, replacing, constructing or enhancing facilities relating to water supply, including water distribution facilities, treatment plants, and water sources adversely affected by past coal mining practices.

The purpose of this manual is to provide guidance to water project applicants in order to structure the best application possible. Information in this manual concerning application procedures and evaluation criteria will enhance the applicant's chances for successfully obtaining project funding. The only eligible applicants for these AML funds

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are counties, cities and towns in the Commonwealth of Virginia.

Copies of this manual are available from the LENOWISCO Planning District Commission, the Cumberland Plateau Planning District Commission, or the Virginia Department of Mines, Minerals and Energy, Division of Mined Land Reclamation.

LENOWISCO P.D.C.  
P.O. Box 366  
Duffield, VA 24244  
(276) 431-2206

Cumberland Plateau P.D.C.  
P.O. Box 548  
Lebanon, VA 24266  
(276) 889-1778

or

Department of Mines, Minerals and Energy  
Division of Mined Land Reclamation  
P.O. Drawer 900  
Big Stone Gap, VA 24219  
(276) 523-8100

## **AML PROGRAM OBJECTIVES**

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The objective of the AML program, as stated in the Surface Mining Control and Reclamation Act of 1977, is to "promote the reclamation of mined areas left without adequate reclamation prior to enactment of this Act and which continue, in this unreclaimed condition, to substantially degrade the quality of the environment, prevent or damage the beneficial use of land or water resources, or endanger the health or safety of the public."

The reclamation priorities of the Act are set forth in Section 403 (a). They are, in order of priority, as follows:

- (1) The protection of public health, safety, general welfare, and property from extreme danger of adverse effects of coal mining practices;
- (2) The protection of public health, safety and general welfare from adverse effects of coal mining practices;
- (3) The restoration of land and water resources and the environment previously degraded by adverse effects of coal mining including measures for the conservation and development of soil, water (excluding channelization), woodland, fish, wildlife, recreation resources, and agricultural productivity;

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- (4) The protection, repair, replacement, construction, or enhancement of public facilities such as utilities, roads, recreation, and conservation facilities adversely affected by coal mining practices; and
- (5) The development of publicly owned land adversely affected by coal mining practices including and acquired as provided in this title for recreation and historic purposes, conservation, and reclamation purposes and open space benefits.

The Act requires AML resources be directed at the highest priority problems. OSMRE only allows lower priority projects (priority 3 and below) to be undertaken if all higher priority projects have been addressed or are in the process of being addressed. In 1990, the Act was amended. At that time, Congress recognized the severe public health hazards associated with water supplies adversely affected by abandoned coal mine workings. The Committee Report on the Act amendment stated the Committee's belief "that when abandoned mines have degraded groundwater quality or depleted groundwater quantity to such an extent that citizens no longer have an acceptable supply, an adverse impact on health, safety, and the general welfare is self-evident."

The 1990 amendment allows for possible AML funding of water projects, including the protection, repair, replacement, construction, or enhancement of facilities relating to water treatment, supply or distribution to qualify for possible funding.

Proposed water projects are prioritized by DMLR in accordance with the Act. Several factors are considered in determining the priority of projects.

Factors utilized in evaluation of applications include:

- evidence that demonstrates the quantity and quality of the water supply impacts the public health, safety, and general welfare;
- the extent to which the problems with the water supply source are predominately the result of eligible AML problems. A connection between mining practices and damage done to a water supply system is not always clear. Such other factors as public use, weather, materials used, method of construction, or other pollution sources may also have contributed to the degree of damage (e.g. a water supply system may be affected by industrial, agricultural or public waste, agricultural sedimentation, or active mining);
- reclamation or abatement of the AML problems compared to construction of a water supply system is not cost effective or will not solve the problem;
- the construction of the water supply system will eliminate or greatly minimize

- the existing danger to the public;
- the extent to which the problems resulted from deterioration through aging of facilities due to lack of normal or routine maintenance or replacement; and
  - the extent to which the AML project is limited to the restoration of water service to the same number of persons originally served or adversely affected. An enhanced water supply project for a new population or service district not adversely affected by past coal mining problems would not qualify for funding. Costs associated for extending water services to communities not affected by AML problems would have to be paid from non-AML sources.

## **FUND DISTRIBUTION STATEMENT**

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The Department's requirements for funding water projects, including the protection, repair, replacement, construction or enhancement of facilities relating to water treatment, supply or distribution are set forth in accordance to 30 CFR, Section 874.14.

Although amounts are subject to change annually, DMME may expend up to 30 percent of its annually granted AML funds for construction or repair (includes costs for engineering designs) of water supply systems that were adversely affected by past coal mining practices. The amount of funding available for water projects changes from year to year, depending on several factors, including the AML fees collected, number of emergencies which may occur for any given year, and the number and cost of other critical non-water projects. Due to limited funds available, DMLR must make difficult choices on project selection.

## **WATER PROJECT POLICIES**

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This section describes eligible AML project sites, allowable activities, funding policies, and the selection system for awarding AML Water Projects.

AML may fund projects where the adverse effects are due predominantly to the effects of mining processes undertaken and abandoned prior to December 15, 1981.

Sites mined and abandoned between August 3, 1977 and November 5, 1990 where the surety of the mining operator became insolvent and funds immediately available from other sources are not sufficient to provide adequate reclamation may also be eligible for funding.

### **ALLOWABLE ACTIVITIES**

Section 874.14 of 30 CFR sets forth the requirements for funding water projects, including the protection, repair, replacement, construction, or enhancement of facilities relating to water treatment, supply, or distribution. These requirements are set forth in the Statement of AML Program Objectives of this manual.

The following activities are allowable for AML funding:

- (1) Basic Engineering Services, including design, bidding and contracting, and construction management
- (2) Financial records keeping, reporting and related administrative costs required under the AML agreement
- (3) Pre-approved additional engineering services, such as surveying, geo-technical and soils analysis
- (4) Source development, construction of water lines and appurtenances, tanks and pumping stations to serve AML impacted areas

Activities not allowed:

- (1) Permit Fees
- (2) Land Acquisition, including easements
- (3) Purchase and installation of water meters and service lines beyond the customer's meter

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- (4) Legal costs
- (5) Preliminary Engineering Reports and Water Project Application Residential Surveys
- (6) Construction of water line extensions to areas not impacted by the AML problem
- (7) Contingencies

### **FUNDING POLICIES**

Funding policies for water projects are as follows:

- Units of local government are the only recipients of AML funds. However, local governments may contract with public service authorities, water authorities, non-profit organizations, or other organizations to undertake project activities.
- All applications should be sent to the Planning District Commissions after an annual solicitation. The Planning District Commissions will be responsible for submitting all project applications to DMLR for review and evaluation. The Planning District Commissions will review applications for completeness and assist in obtaining all necessary information required by DMME for project review and evaluation.
- Local governments may submit only one application per year. The project ranking system included in this manual will be used by DMLR to determine which projects, if any, will be funded with the allocation for that year.
- Applications for water projects shall identify the total cost and scope of work for the entire water system. If DMLR determines that AML funding cannot be provided for a potential project with a single grant, DMLR will consider funding the project in phases. The phased project will be considered as a single project application.
- Local governments who have received AML funding for water projects in previous years may not apply for new project funding until the existing contract is 75 percent complete, and the entire project must be 100 percent complete prior to DMME signing a new contract. A project will not be considered to be 75 percent complete unless 75 percent of the project's funds have been drawn down and expended by the application deadline,

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which shall be established annually prior to project solicitation.

- The applicant is required to contact its local PDC when seeking water project funding from the AML fund. The PDC should use its knowledge of funding programs and contacts with other state and federal funding agencies, such as the Virginia Community Development Block Grant Program, Rural Development Water and Waste Disposal Loans and Grants, Appalachian Regional Commission, Virginia Water Project, Inc., Virginia Resources Authority, and others, to determine the availability of other project funding.
- Applicants must demonstrate that a water supply system was significantly affected or damaged by impacts associated with abandoned mine lands and that such predominate AML impacts generated health and safety problems to the users of the water supply system. Furthermore, applicants must show that reclamation of the AML problems either will not solve the water problem, or be cost effective compared with construction of a new system. Finally, applicants must prove that construction of the proposed water supply system will eliminate or greatly reduce the danger to the public health and safety.
- All applicants must provide citizens an adequate opportunity to participate in the development of the proposals by holding one public hearing to notify citizens of the proposed project and the level of funding requested.
- A Preliminary Engineering Report (PER) prepared by the applicant and which addresses items in the section titled, Project Ranking System, will be required as part of the AML application.
- The level of user charges will be considered in evaluating a project to determine reasonableness of water rates.
- Applicants must comply with the Planning District Commission's review as required by Title 15.1-1410 of the *Code of Virginia*.
- The applicant's ability to obtain funding from other sources or provide local funds will be considered when evaluating a project. Documentation of efforts to secure other funding is required. However, an applicant's inability to qualify for other funding, or provide local funding and maintain reasonable rates, will not, in itself, prevent that local government from receiving AML funding for an AML eligible project.
- It is DMME's intent that AML dollars will not be substituted for other financing already committed to a project.

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- Review and ranking of the proposals should be completed within 90 days of submission deadline.
- DMME may enter into preliminary funding negotiations with those applicants that receive funding offers to determine the final funding amounts and conditions. Following these negotiations, DMME will submit its annual AML grant request containing the selected water project applications to the OSMRE. Upon receipt of the Authorization to Proceed from OSMRE, DMME will enter into final contract negotiations with the selected applicants. It is anticipated that contracts for funding will be completed within 90 days of the contract negotiation session. If a contract has not been executed between DMME and the locality within 120 days of the contract negotiation session, DMME may withdraw the funding offer.
- Funding recipients must complete project activities within 24 months of executing a contract with DMME, except in the case of unforeseen delays due to factors beyond the control of the funding recipient (i.e., regulatory agency approvals, such as, Virginia Department of Health, Marine Resources Commission, U.S. Army Corps of Engineers, weather, etc.) In such instances, DMME will consider time extension requests from the funding recipient.

## **PROJECT RANKING SYSTEM**

This section assists prospective applicants in understanding the ranking criteria for project selection and helps them to plan projects appropriately. Only proposed projects in which a relationship is demonstrated between abandoned mining and water problems will be evaluated.

Ranking criteria comprise five areas of evaluation: public health and safety impacts, the number of households to benefit from the project, appropriateness of project cost and affordability, the level of commitment of non-AML resources, and application data provided. Ranking criteria are explained below:

### **1. Public Health and Safety Impacts**

Each proposed project will be evaluated on impacts, objectives and priorities of the AML program as discussed in this manual. The level of the adverse impact on the health and safety of the public will be evaluated as minor, moderate, or major using the evidence and information supplied in the application. These terms are defined as follows:

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Major = extreme adverse impacts  
Moderate = readily apparent, but not extreme  
Minor = detectable, but slight

2. Number of Households to Benefit

It is the intent of the AML program to award funding to those projects that provide water service to the maximum number of households. For purposes of this scoring criterion, only those households that have been determined to be in the eligible AML project area will be considered as a "benefited household." AML water projects will be evaluated on the type and extent of service provided.

AML water projects will be evaluated on the number of households to benefit from the service to be provided relative to the need identified for such service in the project area.

3. Appropriate Project Costs / Affordability

The project budget will be reviewed to insure that project costs are reasonable and realistic for the types and level of activities proposed. Water projects, which characteristically produce revenues, will be reviewed to determine if AML funding would result in an unusually low user charge. The intent of this rating criterion is to favor those projects that cannot succeed without AML funds over those which can. Project cost structures will be reviewed to determine if the service to be provided will be affordable to proposed beneficiaries.

4. Level of Commitment

Consideration will be given to the degree of commitment to a project demonstrated through the use of non-AML funds, i.e., other federal, state or local funds. Examples of local funds would include appropriations from local revenues or funds borrowed by local government. Applications that include such other funds will receive greater consideration than those totally funded by AML. The intent of this rating criteria is to award points to projects which will have the ability to "share" in the cost of the project utilizing other resources.

5. Application Data Provided

It is the intent to award points to applicants who have thoroughly and concisely responded to each question in the AML Water Project Instructions and Requirements.

## RELATIVE VALUE AMONG RANKING CRITERIA

Not all the criteria involved in project selection are of equal importance. Consequently, differences in emphasis must be established. Each criterion will be assigned a number representing a measure of emphasis, or a weight factor. Weights for the entire system total 100 percent. Following is a list of the program rating criteria and their relative weights:

<i>Criteria</i>	<i>Percent Weight</i>
1. Public Health and Safety Impacts	30
2. Number of Households to Benefit	25
3. Appropriate Project Costs / Affordability	15
4. Level of Commitment	15
5. Application Data Provided	15
Total Project Impact	100

If an error occurs in computing a project's score, the error will be corrected and the score adjusted. If the adjusted score would have made the project eligible for a funding offer, the project will be offered funds remaining from the current year. If funds from the current year are not sufficient, the project will be the next water project funded from an AML award.

## AML BONUS CRITERIA (0-5 POINTS)

Bonus points may be awarded for projects that demonstrate a “regional approach” toward provision of water service for project beneficiaries.

Regional projects will be considered as such if any of the following are addressed:

- Interconnections with other authorities, municipal water providers or other water districts;
- Consolidation of management operations including billing or operation and maintenance of treatment facilities or distribution systems. This may include elimination of “layers”, such as smaller water authorities or providers being absorbed into larger entities;
- Evidence of significant local funding from more than one service provider in a regional (multi-jurisdictional) project.

It is the intent of the AML program to assist in keeping long-term *operating costs* for all coalfield water systems as low as possible. The degree to which an applicant

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meets the “spirit” of this intent by working cooperatively with other jurisdictions will be reflected in the amount of points awarded under this criteria.

For instance, projects with a regional scope will be awarded a greater number of points if executed contracts for purchase/sale of water are included with the application versus those projects where there has been merely a discussion of a regional project but no specific activities completed which demonstrate progress toward regionalization.

## AML WATER PROJECT EVALUATION

Project Name: \_\_\_\_\_

County: \_\_\_\_\_ Planning District \_\_\_\_\_ Date: \_\_\_\_\_

<b>Criteria</b>		<b>Points</b>
<b>I. Public Health &amp; Safety Impacts (30 points)</b>		
Major	= 30 points	_____
Moderate	= 20 points	_____
Minor	= 10 points	_____
<b>II. Number of Households to Benefit (25 points)</b>		
76 or more	= 25 points	_____
51 - 75	= 18 points	_____
26 - 50	= 12 points	_____
25 or less	= 6 points	_____
<b>III. Appropriate Project Cost / Affordability (15 points)</b>		
A. Appropriate Project Costs (10 points)		
Costs per residential connection:		
\$0 - \$9,999	= 10 points	_____
\$10,000 - \$14,999	= 6 points	_____
\$15,000 - \$19,999	= 3 points	_____
\$20,000 or more	= 0 points	_____
B. Affordability (5 points)		
Costs for 4,500 gal. of treated water:		
\$0 - \$19.99/mo.	= 5 points	_____
\$20.00/mo.-\$24.99/mo.	= 3 points	_____
\$25.00/mo.-\$29.99/mo.	= 2 points	_____
\$30.00/mo or more	= 1 point	_____
<b>IV. Level of Commitment of Non-AML Funds (15 points)</b>		
51% or more of total project cost	= 15 points	_____
26% - 50% of total project cost	= 13 points	_____
11% - 25% of total project cost	= 10 points	_____
6-10% of total project cost	= 5 points	_____
1-5% of total project cost	= 1 point	_____
<b>V. Application Data Provided (15 points)</b>		
Excellent	= 15 points	_____
Good	= 10 points	_____
Fair	= 5 points	_____
<b>VI. AML Bonus Award (0-5 points)</b>		
<b>TOTAL</b> (maximum points = 105)		_____

# ***AML Water Project Application***

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*Prepared By*



**Division of Mined Land Reclamation  
Abandoned Mined Land Section**

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COMMONWEALTH OF VIRGINIA
DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF MINED LAND RECLAMATION
DRAWER 900, BIG STONE GAP, VA 24219
TELEPHONE: (276) 523-8206

AML WATER PROJECT APPLICATION COVER SHEET

Project Title: \_\_\_\_\_ Locality/County: \_\_\_\_\_
Project Location: \_\_\_\_\_ Proposed Water Source: \_\_\_\_\_
Applicant: \_\_\_\_\_ Application Date: \_\_\_\_\_
Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_
Address: \_\_\_\_\_ Phone No.: \_\_\_\_\_

Project size: \_\_\_\_\_ (linear feet)

No. of households to benefit:

Phased project: ( ) Yes ( ) No ( ) Undecided

Projected Total Cost (all phases): \$ \_\_\_\_\_

Amount requested this application: \$ \_\_\_\_\_

Non-AML funding provided: \$ \_\_\_\_\_

Previous AML project(s) funded: ( ) Yes ( ) No

If yes, give name(s): 1. \_\_\_\_\_

2. \_\_\_\_\_

Projects Cost(s): 1. \_\_\_\_\_

2. \_\_\_\_\_

Funds expended as of: 1. \_\_\_\_\_ (Date) \$ \_\_\_\_\_

2. \_\_\_\_\_ (Date) \$ \_\_\_\_\_

Public hearing held at: \_\_\_\_\_ on \_\_\_\_\_ (Date)

PER prepared by: \_\_\_\_\_

I DO HEREBY CERTIFY THAT AML WATER PROJECT FUNDS WILL NOT SUPPLANT ANY EXISTING FUNDS FOR THE PROJECT. I ALSO CERTIFY THAT THE PROJECT MEETS THE REQUIRED CRITERIA AS SET FORTH IN THE DMME WATER PROJECT REVIEW MANUAL.

\_\_\_\_\_  
(Signature of Authorized Official)

\_\_\_\_\_  
(Date)

## AML WATER PROJECT APPLICATION INSTRUCTIONS & REQUIREMENTS

The Department of Mines, Minerals and Energy (DMME), Division of Mined Land Reclamation's (DMLR) Abandoned Mine Land Section in conjunction with the LENOWISCO and Cumberland Plateau Planning District Commissions (PDC) has devised a format and guidelines for water project funding applications. It is critically important that all guidelines are followed and requirements are met when completing this application. Careful adherence will allow DMME to review, in a timely manner, each proposal's stated needs, objectives and common variables while maintaining consistency in the evaluation. While each problem or project area may be unique, a standard procedure for submittal is necessary to eliminate any inconsistency in the decision-making process. With this in mind, please carefully read and comply with all the following instructions/requirements.

### I. General Instructions

1. Respond to each question thoroughly and concisely. Do not include any information that is not applicable or clearly referenced to a question. An application may be disqualified for insufficient data, incompleteness, failure to follow the stated format, or excessive, irrelevant information.
2. The complete application shall be bound with all narratives assembled in the following order.
  1. AML Water Project Application Cover Sheet
  2. Project Need Description
  3. Eligibility Description
  4. Project Description
  5. Results and Benefits Description
  6. Budget Descriptions
  7. Maps
  8. Section A AML Water Project Budget Summary
  9. Section B & C Source of Funds/ Forecasted Cash
  10. Water Project Application Residential Surveys

Each application shall include a table of contents that references the specific sections to page numbers. All parts of the application must be included in the bound package. No attachments or addendum shall be accepted following initial submittal or beyond the submittal deadline. Maps shall be enclosed in pockets within the bound package and referenced in the table of contents.

**The Preliminary Engineering Report (PER) is considered a separate supporting document and may be bound separately but must be submitted with the application. The absence of a PER at the time of submittal shall eliminate the application from consideration in this application round. Regulatory approval of the PER is required from the Virginia Department of Health prior to application submission.**

The Applicant shall utilize the Water Project Application Residential Survey form to interview all residents who are to be serviced by the water project. Responses to the survey questions should be as concise as possible. All questions must be addressed.

3. Submit two copies each of the application and PER to the appropriate planning district commission. The planning district commissions will forward all applications to DMME for project ranking.

The Planning District Commissions are:

LENOWISCO PDC  
PO Box 366  
Duffield, VA 24244  
(276) 431-2206

Cumberland Plateau PDC  
PO Box 548  
Lebanon, VA 24266  
(276) 889-1778

## II. Application Format

### 1. Project Need Description

Describe the need for the project, specifying the problem(s) and how the project will correct the problem(s). Summarize the existing danger to public, health, and safety. Describe how this will be minimized or eliminated. Include any relevant data based on plans, studies, statistics, engineering reports, etc. Discuss only those problems that would be addressed by the proposed project. Include in the discussion any information on the background conditions of the quantity and quality of the water supply and mine related problems with the water supply source. Discuss present water condition relative to current safe drinking water standards.

### 2. Eligibility Description

- A. Describe the degree to which the AML problems affected the current water supply. Water quality problems shall be compared to safe drinking water standards. Refer to mapping and water information provided under item 6 of this section. Current water sources are to be sampled and analyzed at a minimum for conductivity, pH, temperature, total iron, manganese, total suspended and total dissolved solids, hardness, chloride, sulfate, alkalinity, acidity and total or fecal choliform. A minimum of twenty five percent of the households to be serviced by the project is to be analyzed. Location of sample sites are to be identified on a map as instructed in Section 6, Maps.

*Note: A connection between mining practices and damage done to a water supply system is not always clear. Such other factors as public use, weather, materials used, method of construction, lack of normal or routine maintenance, and other pollution sources may*

*also have contributed to the damage. Account for these factors in the description and describe their degree of influence.*

- B. Applicant must provide available mine history data such as company names, start and completion dates of mining, permit numbers, mine index numbers, coal seam names, type of mining, etc. Include dates of water loss and/or impacts in relation to mining dates.
- C. Identify the portion of the project eligible for AML funding and any areas not eligible for AML funding.

### 3. Project Description

List the objective(s) of the project and describe the work to be accomplished as it relates to each objective. Provide descriptions in concise layman's terms and list project activities in quantifiable terms whenever possible. (Example: Installation of 4,800 linear feet of 10-inch water line to the community of *Bad water*.) Designate and describe work that will be done with AML funds. Give the projected start and completion dates and indicate the timetable for major project components.

### 4. Results and Benefits Description

- A. Briefly describe the results/benefits of the project in terms of public health and welfare, environmental quality, social impacts, educational impacts, etc. Describe any negative results as well as positive ones. In addition, list the following quantitative information.
  - Number of water customers served
  - Cost affordability to beneficiaries (Monthly rates based on average monthly water usage of 4,500 gallons)
  - Increased system capacity
  - Present and projected plant capacity
  - Other applicable quantitative information
- B. Provide a projected annual operation and maintenance cost comparison to projected revenue over a five (5) year period following construction.

### 5. Budget Description

- A. Complete the budget form provided and include it in this section.
- B. Describe the status of all non-AML funds to be used on the project. Information about non-AML matching dollars should be specific, firm and well documented. Include a narrative description of the provider, its normal function and the person contacted. Give appropriate dates such as dates contacts were made, dates funds were formally requested or expected dates of application

submittal(s), and approval date(s). Include in this section local government resolutions and/or letters of commitment for all non-AML and in-kind resources. Provide separate information about each source of funds.

6. Maps

Submit the following maps:

- A. A location map with a minimum of 10 mile radius, clearly showing roads and appropriate service areas.
- B. A composite map showing the extent of both underground and surface mining. Cross-reference this date with the mining history data, proposed water project service areas, and affected residences. The mining areas eligible for AML funding must be delineated from the total mining areas shown.
- C. A project map showing total proposed activities. A clear delineation of AML and non-AML funded areas must be provided.
- D. A map showing locations of Residential Surveys, water samples, and all known water sources (well, springs, cisterns) in the area. Water survey and sample reports shall be indexed to map locations. Provide cross sections showing depths of wells in reference to coal seams mined.

**SECTION A - AML WATER PROJECT BUDGET SUMMARY**  
**(See Back for Instructions)**

ACTIVITY:

1. Applicant: \_\_\_\_\_

A. \_\_\_\_\_

2. Project Name: \_\_\_\_\_

B. \_\_\_\_\_

3. Total Project Cost: \_\_\_\_\_ 4. Date: \_\_\_\_\_

C. \_\_\_\_\_

Cost Elements	A. Activity A	B. Activity B	C. Activity C	D. Total AML\$	E. Total Non-AML\$	F. Combined Cost
1. Construction						
2. Basic Engineering						
3. Additional Engineer- ing						
4. Project Inspection						
5. Legal				N/A		
6. Acquisition				N/A		
7. Contingency				N/A		
8. Administrative						
9. Other						
10. Total Activity Cost						
11. Amount of Column AML\$						
12. Amount of Column AML\$						
<b>13. TOTAL PROJECT COST</b>						

## INSTRUCTIONS FOR SECTION A - BUDGET SUMMARY

1. Applicant - Legal name of single unit of local government that is assuming the role of applicant. This must correspond to the applicant from page 1.
2. Project Name - Project name that corresponds with the project name from page 1.
3. Total Project Cost - This figure must represent the total of all cost funds involved in the project. In addition, this will be the same figure represented in line 13, column F.
4. Date - Date of this project application.

**Columns A, B, and C** are for different project activities. Outline the specific activity in the upper right corner of the Section A - AML Water Project Budget Summary sheet. i.e. water distribution line, water pump station, water source development, etc.

**Column D** shows the subtotal cost for each element on the budget sheet that will be charged to the AML program.

**Column E** shows the subtotal cost for each element on the budget sheet that will be charged to non-AML resources.

**Column F** shows the total cost of each cost element on the budget sheet across all activities.

**Cost Element 1-9** shows the costs as outlined in the project's Preliminary Engineering Report. **Cost Element 10** shows the sum of cost elements 1 through 9.

**Cost Element 11** shows the subtotal cost for each project activity that will be charged to the AML program.

**Cost Element 12** shows the subtotal cost for each project activity that will be charged to non-AML resources.

The following definitions are used for completion of this section:

**Construction:** This includes the cost of construction, reconstruction, rehabilitation, or installation of physical improvements and facilities associated with the implementation of project activities.

**Basic Engineering:** This includes engineering design, construction management, and basic fees for the project.

**Additional Engineering:** This includes those fees not included in the above category. Please itemize these costs individually under item 4, *Project Description* in the project narrative.

**Project Inspection:** This includes the fee for inspection of construction projects.

**Legal:** This includes all legal costs associated with the project including bond council, title opinions, etc. Legal services performed by the chief legal officer of a local government or his staff solely for the purpose of discharging his general responsibilities as a legal officer are unallowable. Legal expenses for the prosecution of claims against the Federal Government of State Government are unallowable. AML funds may not be used for legal costs.

**Administrative:** This includes all financial records keeping, reporting and related administrative costs required under the AML agreement.

**Acquisition:** This includes the costs of acquiring real property (i.e., air rights, water rights, and other interests therein). These properties should be used for the provision of public improvements and facilities that are eligible under the grant. AML funds may not be used for acquisition costs.

**Contingency:** This includes an amount or contribution to a contingency reserve for unforeseen events related to project construction. AML funds may not be used for contingency costs.

**Other:** This includes items not specifically spelled out above. Please list the specific item in the blank.

**SECTION B - SOURCE OF FUNDS**

	Amount	%	Source / Program/Commitment Date
A. AML	\$ _____	_____	_____
B. State	\$ _____	_____	_____
C. Local	\$ _____	_____	_____
D. Federal	\$ _____	_____	_____
E. Private	\$ _____	_____	_____
Total	\$ _____	100.0	_____

**SECTION C - FORECASTED CASH NEEDS**

Source	1st Qtr. 20__	2nd Qtr 20__	3rd Qtr. 20__	4th Qtr. 20__	Total for Year 1	5th Qtr. 20__	6th Qtr. 20__	7th Qtr. 20__	8th Qtr. 20__	Total for Project
AML										
State										
Local										
Federal										
Private										
<b>Total</b>										

## INSTRUCTIONS FOR SECTION B - SOURCE OF FUNDS

This section requires a breakout of all funds involved in the project by amount, percentage of total project cost that the amount represents, and source or program.

**Line A:** List the amount of AML funds requested (this figure should correspond to Item D-11 of Section A - AML Water Project Budget Summary).

**Line B:** List the total amount of state funds (grants) included in the project cost; state the percentage of the total project cost which the amount represents; list the state agency and program which is providing the funds. If the amount is from more than one source or program, list each separately.

**Line C:** List the total amount of local contributions to the project cost; state the percentage of the total project cost that the amount represents. If this is a regional proposal, identify the local share by each participating locality. Specify the source (general revenue, bond, loan) of the local money. Note: Loan funds are considered to be local money and should be included here.

**Line D:** List the total amount of federal funds (grants) included in the project cost; state the percentage of the total project cost which the federal funds represent; list the federal agency and program which is providing the funds. If the funds are from more than one source or program, list each separately.

**Line E:** List the total amount of private funds included in the project cost; state the percentage of the total project cost which the total private funds represents; list the source of these funds under Source/Program. If the funds are from more than one source or program, list each separately.

## INSTRUCTIONS FOR SECTION C - FORECASTED CASH NEEDS

This section requires a breakout of all funds involved in the project by the anticipated date the funds will be needed for the project. Be as specific as possible including filling in the year in the Quarter column. Note: Quarters are not necessarily calendar quarters, but three month periods commencing with the project start date. The **Total for Project** column should equal the totals included for Section B - Source of Funds.

Map House Number \_\_\_\_\_

**AML WATER PROJECT RESIDENTIAL SURVEY**

Name: \_\_\_\_\_ Number in Household: \_\_\_\_\_  
Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Own or Rent: \_\_\_\_\_ Years in Residence: \_\_\_\_\_  
Prior Owner or Renter (if applicable): \_\_\_\_\_

**Water Source(s): (Circle appropriate source.)**

Well, Cistern, Spring, Surface Impoundment, Auger Hole, Adit, Other: \_\_\_\_\_

Relationship of source to coal seam(s); probable aquifer: \_\_\_\_\_

Relationship of source to gas/oil well: \_\_\_\_\_

**Description of Well: (If applicable)**

Elevation: \_\_\_\_\_ Depth: \_\_\_\_\_ Depth of Casing: \_\_\_\_\_

Diameter: \_\_\_\_\_ Date Drilled: \_\_\_\_\_ Static Water Level: \_\_\_\_\_

Does owner have well log? \_\_\_\_\_

Did you drill well(s) currently not in use: \_\_\_\_\_

Reason for not using: \_\_\_\_\_

**Uses: (check all that apply)**

Drinking \_\_\_\_\_ Bathing \_\_\_\_\_ Cooking \_\_\_\_\_ Pool \_\_\_\_\_

Washing \_\_\_\_\_ Stock \_\_\_\_\_ Irrigation \_\_\_\_\_ Other \_\_\_\_\_

**(if not used for drinking, where do you get drinking water?)**

Has water been tested before? \_\_\_\_\_ By Whom? \_\_\_\_\_

**Quality:**

**Description:** "Color, Odor, Hardness, Soft Crust, Foam, etc.?" (In resident's own words.)

Has there been a change in water quality over the years? \_\_\_\_\_

If yes, worse or better: \_\_\_\_\_ When did change begin? \_\_\_\_\_

Does water quality change during wet weather? \_\_\_\_\_

Does water quality change during dry weather? \_\_\_\_\_

Is water suspected of causing any illnesses, skin rashes, or other health problems? \_\_\_\_\_

**Treatment: (if applicable)** Type: \_\_\_\_\_ Cost/Month: \_\_\_\_\_

Effectiveness: \_\_\_\_\_

Comments: \_\_\_\_\_

**Quantity:**

Is supply sufficient for daily needs? \_\_\_\_\_

Has source ever gone dry (or been severely depleted)? \_\_\_\_\_

Has there been a change in water quantity over the years? \_\_\_\_\_ When? \_\_\_\_\_

**Sampling:**

Would owner allow samples for test results? \_\_\_\_\_ Yes \_\_\_\_\_ No

# AML WATER PROJECT PRELIMINARY ENGINEERING REPORT

## OUTLINE

**Introduction** - A Preliminary Engineering Report should clearly describe the owner's present situation, analyze alternatives, and propose a specific course of action, from an engineering perspective. The level of effort required to prepare the report and the depth of analysis within the report are proportional to the size and complexity of the proposed project. Abandoned Mined Land projects must be modest in design, size and cost, and be constructed and operated in an environmentally responsible manner. The following should be used as a guide for the preparation of Preliminary Engineering Reports for AML financed water systems.

- I. **PROJECT PLANNING AREA.** Describe the area under consideration. The project planning area may be larger than the service area determined to be economically feasible. The description should include information on the following:
  - A. **Location.** Maps, photographs, and sketches. These materials should indicate legal and natural boundaries, major obstacles, elevations, etc.
  - B. **Environmental Resources Present.** Maps, photographs, studies, and narrative. These materials should provide information on the location and significance of important land resources (farmland, rangeland, forestland, wetlands and 100/500 year floodplains, including stream crossings), historic sites, endangered species/critical habitats, etc., that must be considered in project planning.
  - C. **Growth Areas and Population Trends.** Specific areas of concentrated growth should be identified. Population projections for the project planning area and concentrated growth areas should be provided for the project design period. These projections should be based on historical records with justification from recognized sources.
- II. **EXISTING FACILITIES.** Describe the existing facilities including at least the following information:
  - A. **Location Map.** Provide a schematic layout and general service area map (may be identified on project planning area maps).
  - B. **History.** Elaborate regarding the history of the mining in the area as it relates to the location of the community. Be as specific as possible regarding dates.
  - C. **Condition of Facilities.** Describe present condition; suitability for continued use; adequacy of water supply; and, if any existing central facilities, the treatment, storage, and distribution capabilities. Also, describe compliance with Safe Drinking Water Act and applicable State requirements.
  - D. **Financial Status of any Operating Central Facilities.** Provide information regarding rate schedules, annual operating and maintenance (O&M) cost,

tabulation of users by monthly usage categories and revenue received for last three fiscal years. Give status of existing debts.

- III. **NEED FOR PROJECT.** Describe the needs in the following order of priority:
- A. **Health and Safety.** Describe concerns and include relevant regulations and correspondence from/to Federal, and State regulatory agencies.
  - B. **System O&M.** Describe the concerns and indicate those with the greatest impact. Investigate water loss, management adequacy, inefficient designs, and problem elimination prior to adding additional capacity.
  - C. **Growth.** Describe the reasonable growth capacity that is necessary to meet needs during the planning period. Facilities proposed to be constructed to meet future growth needs should generally be supported by additional revenues. Consideration should be given to designing for phased capacity increases. Provide number of new customers committed to this project. Be prepared to provide separate cost estimates including cost to correct problems versus provision for future growth.
- IV. **ALTERNATIVES CONSIDERED.** This section should contain a description of the reasonable alternatives that were considered in planning a solution to meet the identified need. The description should include the following information on each alternative:
- A. **Description.** Describe the facilities associated with the alternative. Describe all feasible water supply sources and provide comparison of such sources. Also, describe treatment, storage and distribution facilities.
  - B. **Design Criteria.** State the design parameters used for evaluation purposes. These parameters must follow the criteria established in AML Water Project Review Manual.
  - C. **Map.** Schematic layout.
  - D. **Environmental Impacts.** Describe direct and indirect impacts on floodplains, wetlands, other important land resources, endangered species, historical and archaeological properties, etc., as they relate to a specific alternative. The engineer must conduct an environmental assessment prior to project approval.
  - E. **Land Requirements.** Identify sites and easements required. Further specify whether these properties are currently owned, to be acquired, or leased.
  - F. **Construction Problems.** Discuss concerns such as subsurface rock, high water table, limited access, or other conditions that may affect cost of construction or operation of facility.
  - G. **Cost Estimates.**

Identify cost for the following:

1. Construction
2. Non-Construction
3. Annual Operation and Maintenance

H. **Advantages/Disadvantages.** Describe the specific alternative's ability to meet the owner's needs within its financial and operational resources, to comply with regulatory requirements, its compatibility with existing comprehensive area-wide development plans, and to satisfy public and environmental concerns. A matrix rating system could be useful in displaying the information.

V. **PROPOSED PROJECT (RECOMMENDED ALTERNATIVE).** This section should contain a fully developed description of the proposed project based on the preliminary description under the evaluation of alternatives. At least the following information should be included:

A. **Project Design.**

1. **Water Supply.** Include requirements for quality and quantity. Describe recommended source, including site.
2. **Treatment.** Describe process in detail and identify location of plant and site of any process discharges.
3. **Storage.** Identify size, type and site location.
4. **Pumping Stations.** Identify size, type, size location and any special power requirements.
5. **Distribution Layout.** Identify general location of line improvements: lengths, sizes and key components.
6. **Hydraulic Calculations.** This information should provide sufficient detail in a tabular format to determine compliance with design requirements. The engineer may use automation tools. The submittal should include a map with a list of nodes and pipes and the associated characteristics, such as elevation of node, pipe diameter, pipe segment length, reservoir elevation, domestic and industrial water demands, fire flow, etc.

B. **Cost Estimate.** Provide an itemized estimate of the project cost based on the anticipated period of construction. Include development and construction, land and rights, legal, engineering, interest, equipment, contingencies, and other costs associated with the proposed project.

C. **Annual Operating Budget.**

1. **Income.** Provide a rate schedule. Project income, realistically based on user billings, water treatment contracts, and other sources of incomes. In the absence of other reliable information, for budget purposes, base water use on 150 gallons per residential-sized

connection per day, or 4,500 gallons per residential-sized connection per month. When large agricultural or commercial users are projected, the report should include facts to substantiate such projections and evaluate the impact of such users on the economic viability of the project. The number of users should be based on equivalent dwelling units, which is the level of service provided to a typical rural residential dwelling.

2. **Operations and Maintenance Costs.** Project costs realistically. In the absence of other reliable data, base on actual costs of other existing facilities of similar size and complexity. Include facts in the report to substantiate operation and maintenance cost estimates. Include salaries, wages, taxes, accounting and auditing fees, legal fees, interest, utilities, gasoline, oil and fuel, insurance, repairs and maintenance, supplies, chemicals, office supplies and printing, and miscellaneous. If purchase or treatment of water is being treated from another utility, these costs should be included in the operating and maintenance budget.
3. **Debt Repayments.** Describe existing and proposed project financing from all sources.
4. **Project Viability.** Provide projected annual operation/maintenance cost comparison to projected revenue over a five (5) year period.

VI. **CONCLUSIONS AND RECOMMENDATIONS.** Provide any additional findings and recommendations that should be considered in development of the project. This may include recommendations for specific studies, the need for special coordination, and a recommended plan of action to expedite project development, etc.