

SECTION 14

BATESVILLE WASTEWATER TREATMENT PLANT BANK STABILIZATION

Independence County, AR

**DRAFT
ENVIRONMENTAL ASSESSMENT**

November 2006



**U.S. ARMY CORPS OF ENGINEERS
LITTLE ROCK ENGINEER DISTRICT
LITTLE ROCK, AR**

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1.0 INTRODUCTION

1.1 Purpose and Need of the Proposed Action.

The purpose for this project is to design a method of erosion protection in the toe zone and bank zone of the proposed project location that satisfies both the objectives laid out by Batesville Water Utilities, as listed below, and the rules and regulations that govern the U.S. Army Corps of Engineers.

Batesville Water Utilities has requested that certain objectives be heavily considered during the design phase of the project. They would like to maintain a healthy tree line adjacent to the aeration ponds, keeping as many trees as possible along the bank. The types of trees to be saved include walnut, hickory, oak, and pecan. Also, they have asked that aesthetics be kept in mind when considering various alternatives.

The bank of the White River adjacent to the Batesville Wastewater Treatment Plant is slowly eroding away. The erosion is accelerated when the banks of the river are exposed to high water for long durations as it was during the spring of 2002. If the bank stability problem is not rectified, then the structure of existing wastewater aeration ponds will be compromised. If the bank should fail, the contents of the aeration ponds will drain into the White River. An environmental assessment is necessary to determine any potential impacts associated with the bank stabilization of this area.

This environmental assessment is being conducted by the Little Rock District, U.S. Army Corps of Engineers (USACE) in accordance with the Council on Environmental Quality (CEQ) guidelines pursuant to the National Environmental Policy Act (NEPA) of 1969.

1.2 Project Location

The proposed project is located from approximately river mile (RM) 299.5 to RM 298.5 and spans an estimated 5,000-ft of the left-descending bank along the White River adjacent to the Batesville Wastewater Treatment Plant. Figure 1 shows the location of the project area.

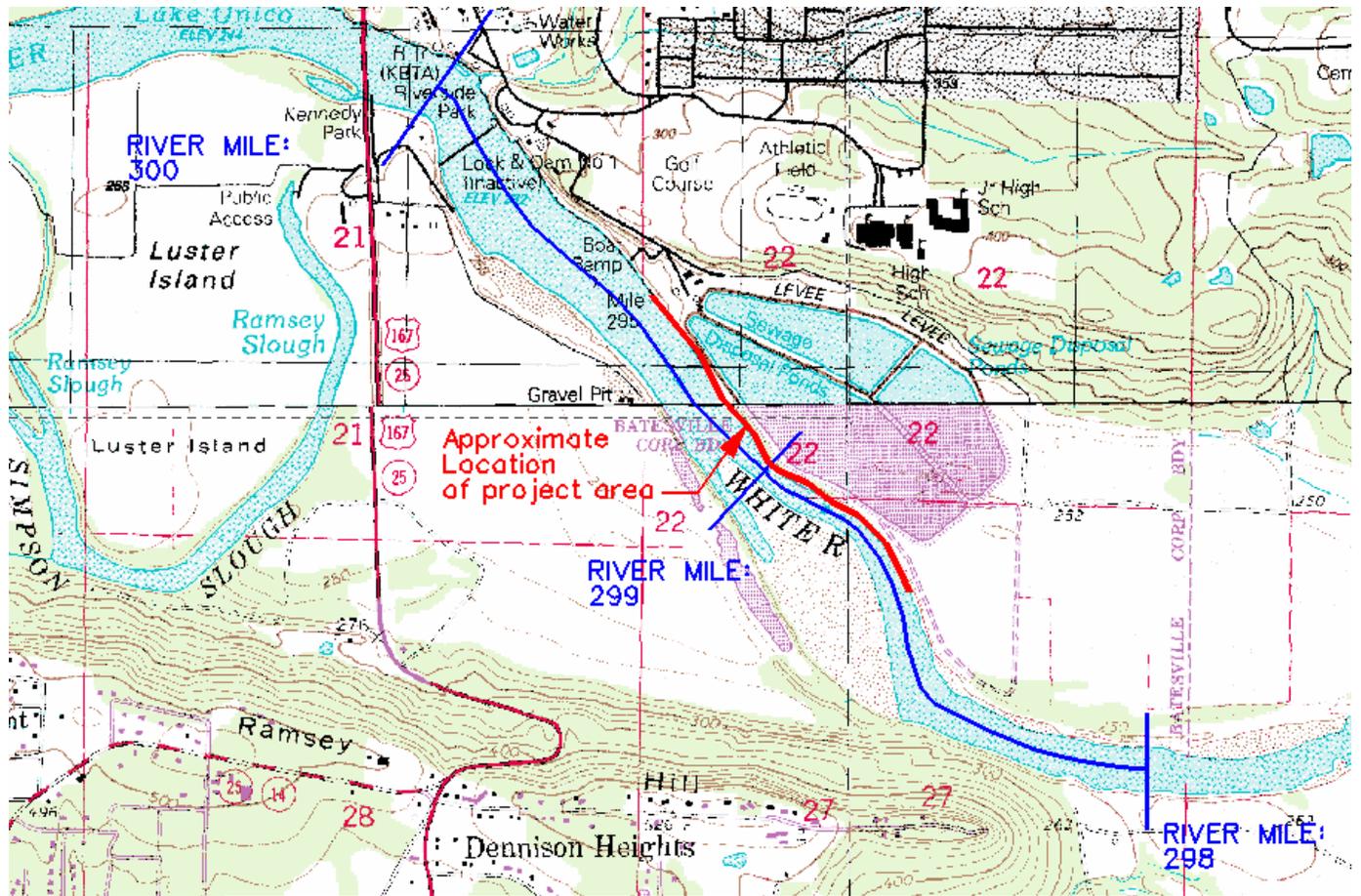


Figure 1 Vicinity Map

1.3 Environmental Compliance

Status of Project with Applicable Laws and Statutes

Item	Compliance
FEDERAL STATUTES	
Archaeological and Historic Preservation Act, as amended, 16 U.S.C. 469, et. Seq.	Full
Clean Air Act of 1977, as amended, 42 U.S.C. 7609, et. seq.	Full
Clean Water Act, as amended, (Federal Water Pollution Control Act) 33 U.S.C. 1251, et. seq.	Full
Coastal Zone Management Act, 16 U.S.C. 1451, et. seq.	N/A
Endangered Species Act, 16 U.S.C. 1531, et. seq.	Full
Estuary Protection Act, 16 U.S.C. 1221, et. seq.	N/A
Federal Water Project Recreation Act, 16 U.S.C. 460-12, et. seq.	Full
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et. seq.	Full
Land and Water Conservation Fund Act, 16 U.S.C. 460/-460/-11, et. seq.	N/A
Marine Protection, Research and Sanctuary Act, 33 U.S.C. 1401, et. seq.	N/A
National Environmental Policy Act, 42 U.S.C. 4321, et. seq.	Full
National Historic Preservation Act, 16 U.S.C. 470a, et. seq.	Full
Rivers and Harbor Act, 33 U.S.C. 401, et. seq.	N/A
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et. seq.	N/A
Wild and Scenic Rivers Act, 16 U.S.C. 1271, et. seq.	Full
<u>Executive Orders, Memorandums, etc.</u>	
Executive Order 11988, Floodplain Management, May 24, 1977 (42 CFR 26951; May 25, 1977)	Full
Executive Order 11990, Protection of Wetlands, May 24, 1977 (42 CFR 26961; May 25, 1977)	Full
Council on Environmental Quality Memorandum of August 11, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act.	Full
Executive Order 12114, Environmental Effects Abroad of Major Federal Actions.	N/A
STATE AND LOCAL POLICIES	
Arkansas Water Quality Standards	Full

Note: The compliance categories used in this table were assigned based on the following definitions:

- a. Full Compliance – All requirements of the statute, executive order, or other policy and related regulations have been met for this stage of planning.
- b. Partial Compliance – Some requirements of the statute, executive order, or other policy and regulations remain to be met but if applicable will be met before construction commences (i.e. 404 permits).
- c. Noncompliance – None of the requirements have been met for this stage of planning.
- d. Not Applicable – Statute, executive order, or other policy not applicable.

1.4 Project Authority and Regulatory Requirements

The U.S. Army Corps of Engineers, Little Rock District is conducting this project under the authority of Section 14 of the Flood Control Act of 1946 as amended. This authority provides for the construction or repair of stream bank and shoreline protection works to prevent flood or erosion damage to endangered public and private non-profit hospitals and schools, and other non-profit public facilities.

The proposed action will require the excavation (1,813 cu-yd) and disposal of fill material (6,928 cu-yd) below the ordinary high water mark (OHW) of elevation 233.0 NGVD at RM 299.5 to 298.5 on the White River. This work below the OHW will require a Clean Water Act section 404 permit. In addition, since the White River is a navigable stream, a Section 10 permit from the River and Harbors Act of 1899 will also be needed. Both permits will be obtained prior to construction of the proposed action. **A completed section 404(b)(1) guidelines short-form can be found in appendix B.**

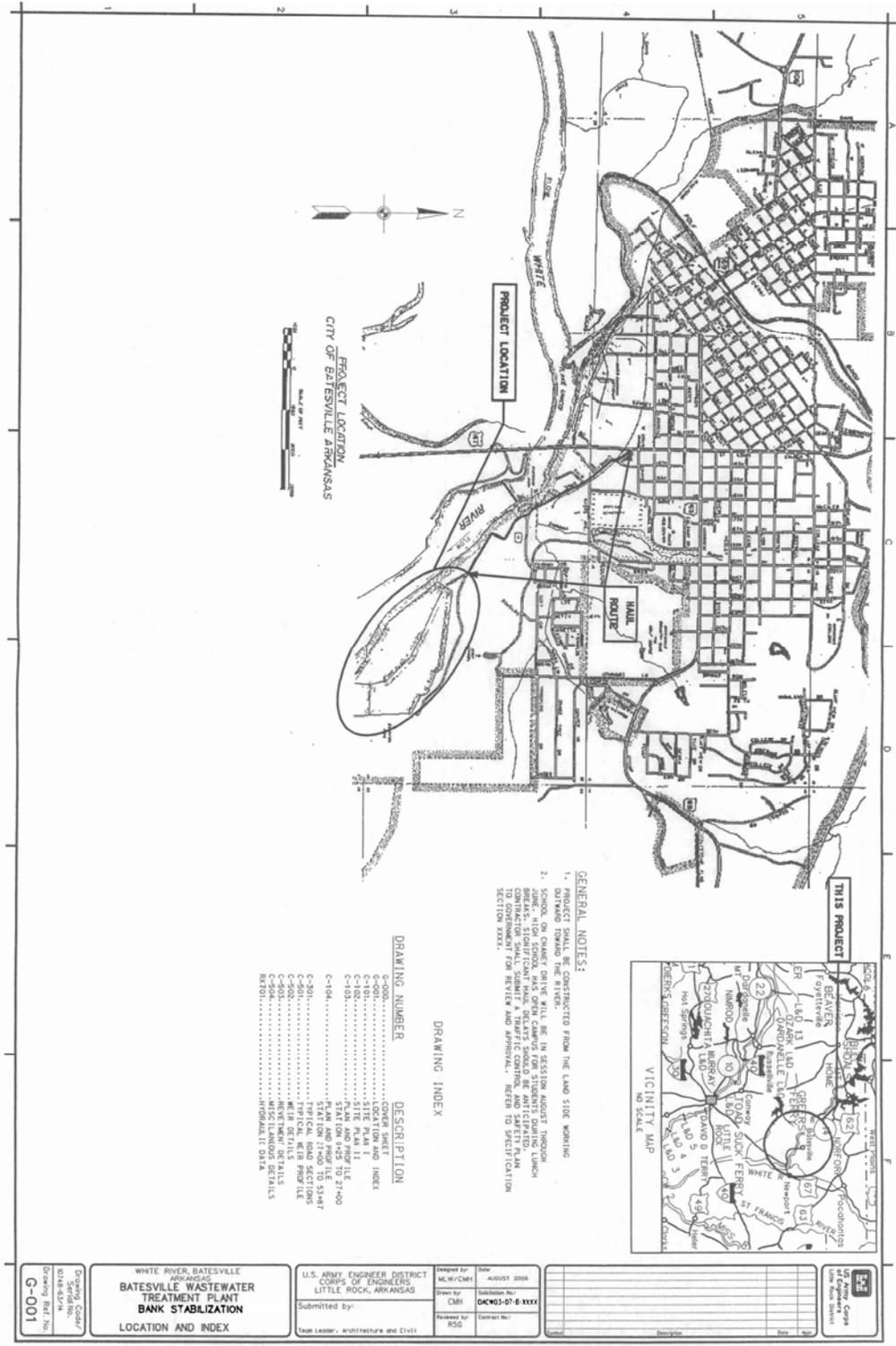
2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

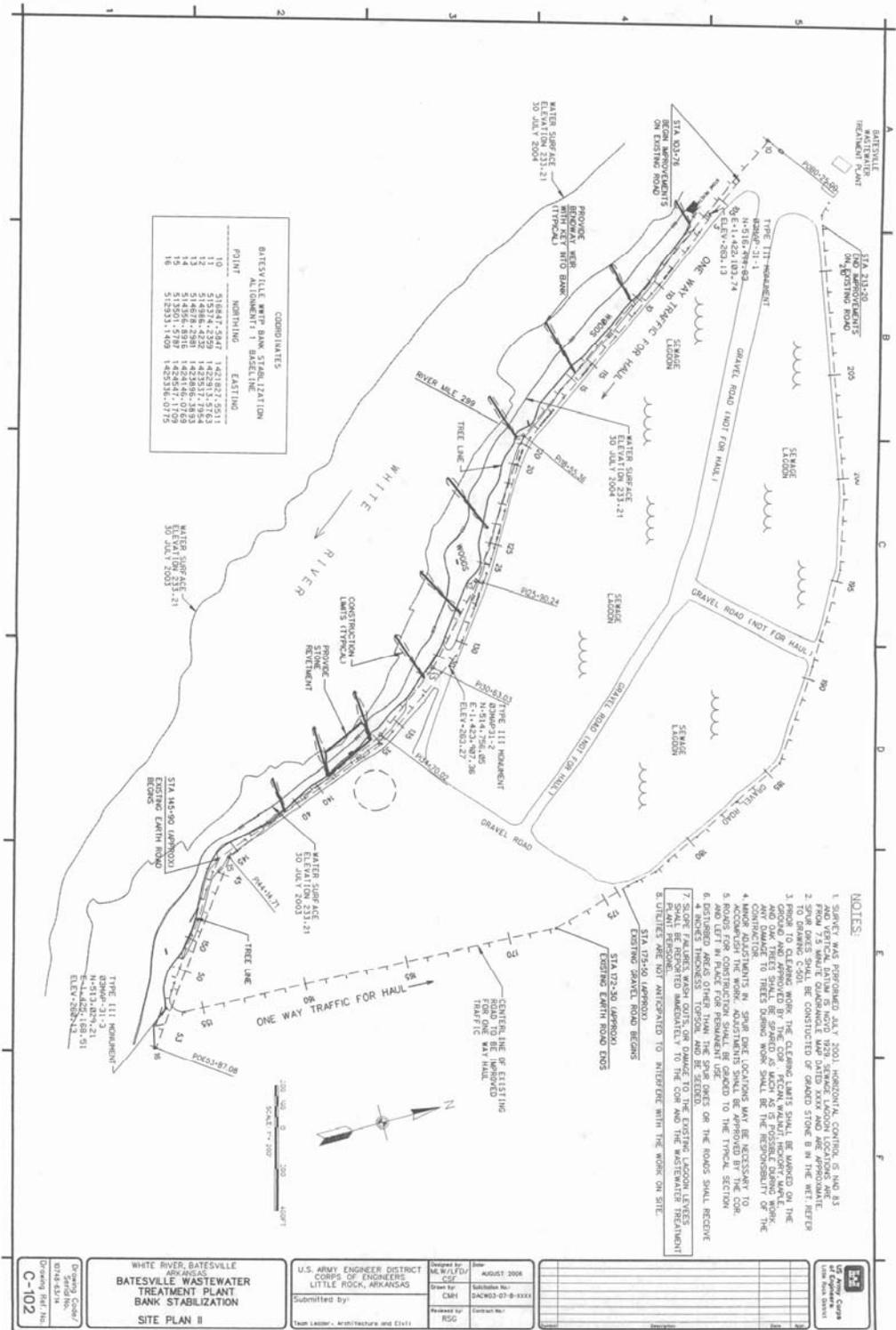
2.1 Description of the Proposed Action

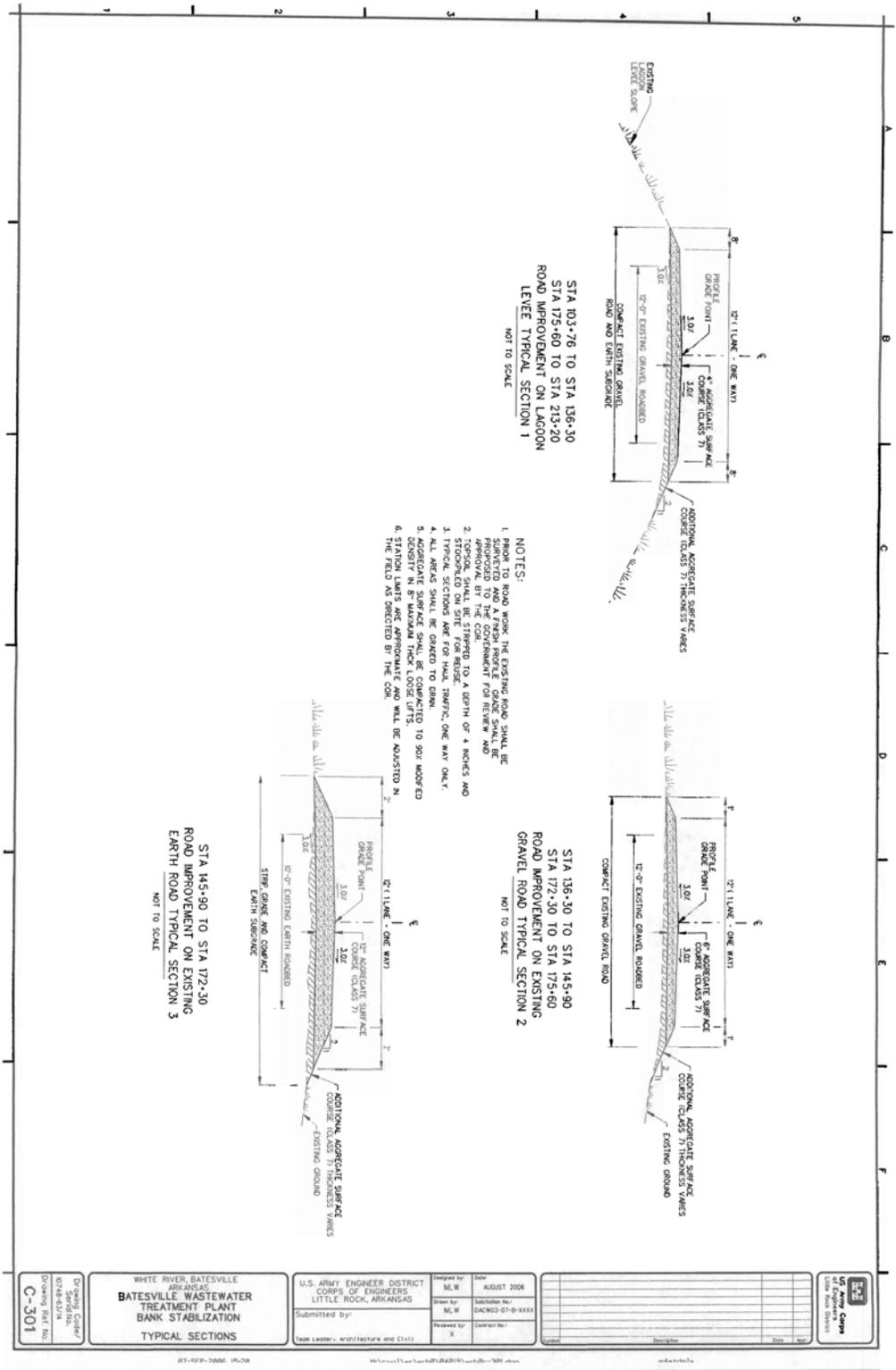
The recommended alternative for solving the erosion problem adjacent to the aeration ponds is to use bendway weirs constructed from the river. Bendway weirs push the attack from the river's flows and the existing thalweg away from the bank and allow for aggradation to occur over time between adjacent structures due to the development of slack water areas. Additionally, they will also help support aquatic life by providing habitat. Furthermore, the use of bendway weirs will allow for most of the existing tree line to remain, will require only minimal removal of trees at each bendway weir location, and is the most economical alternative. Compared to construction from land, bendway weirs constructed from the river will result in smaller amounts of trees needing to be cleared and significantly smaller quantities of rock. However, due to the fluctuation of water surface elevations, construction by land will maintain a more reliable construction schedule. Overall, selection of this alternative will meet most of Batesville Water Utilities' objectives.

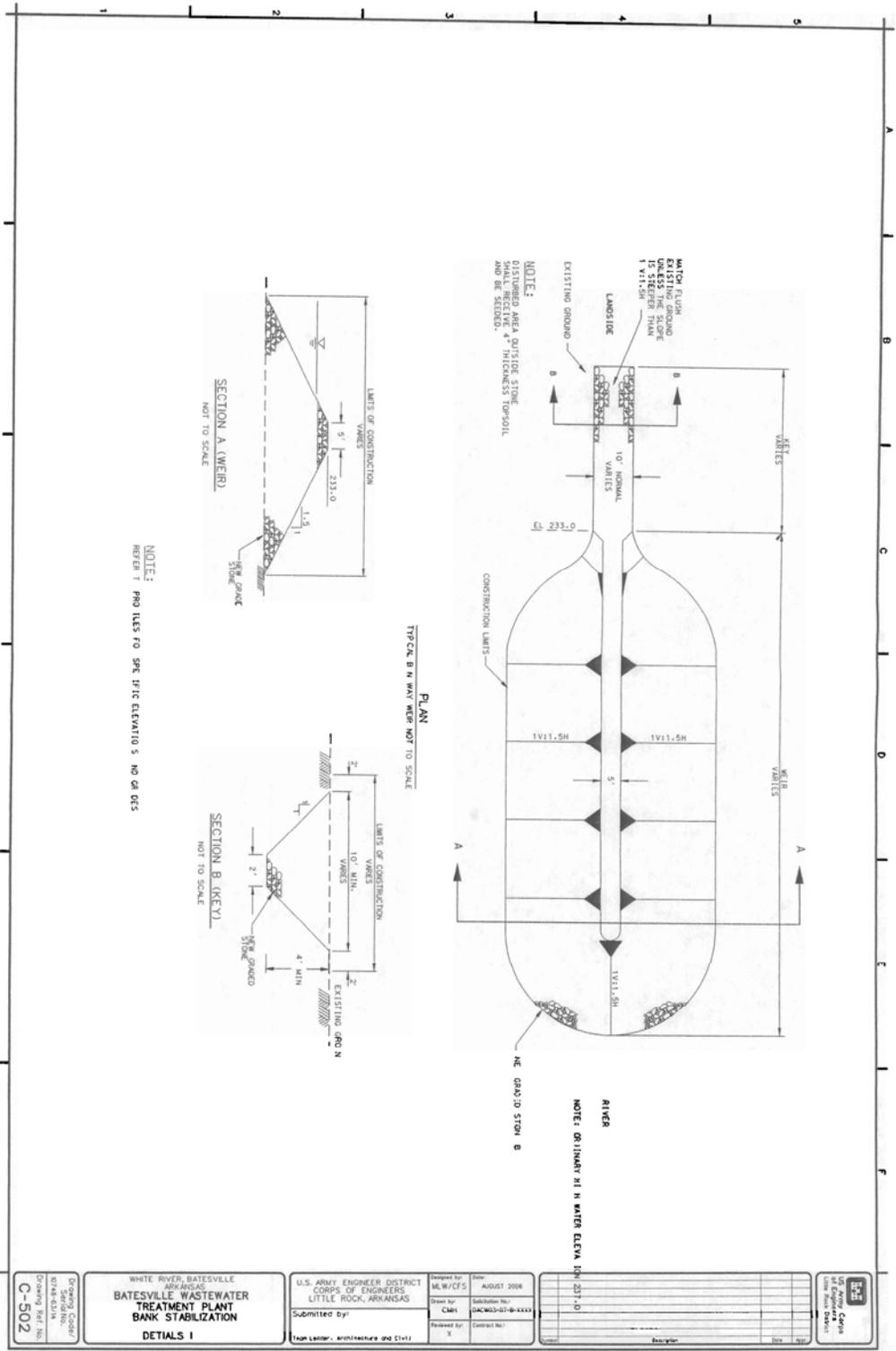
The bendway weirs shall begin immediately downstream of the existing longitudinal riprap revetment. Each bendway shall consist of a weir into the river and a key that is buried landward from the bank. Bendway weir length is dependent on location of proposed thalweg. They shall have a 5-foot crest width at an elevation of 233.0 NAVD88. Side slopes will be at 1V: 1.5 H. See Appendix B and D for locations of bendway weirs. Appendix D shows details for a typical bendway weir. The key height for the bendway weirs will crest at Elevation 259, which will, coincides with a 20-year flood event. Increasing the key crest elevation to the 100-year will only provide a small increase in protection and a large increase in costs due to the increase in the quantity of stone.

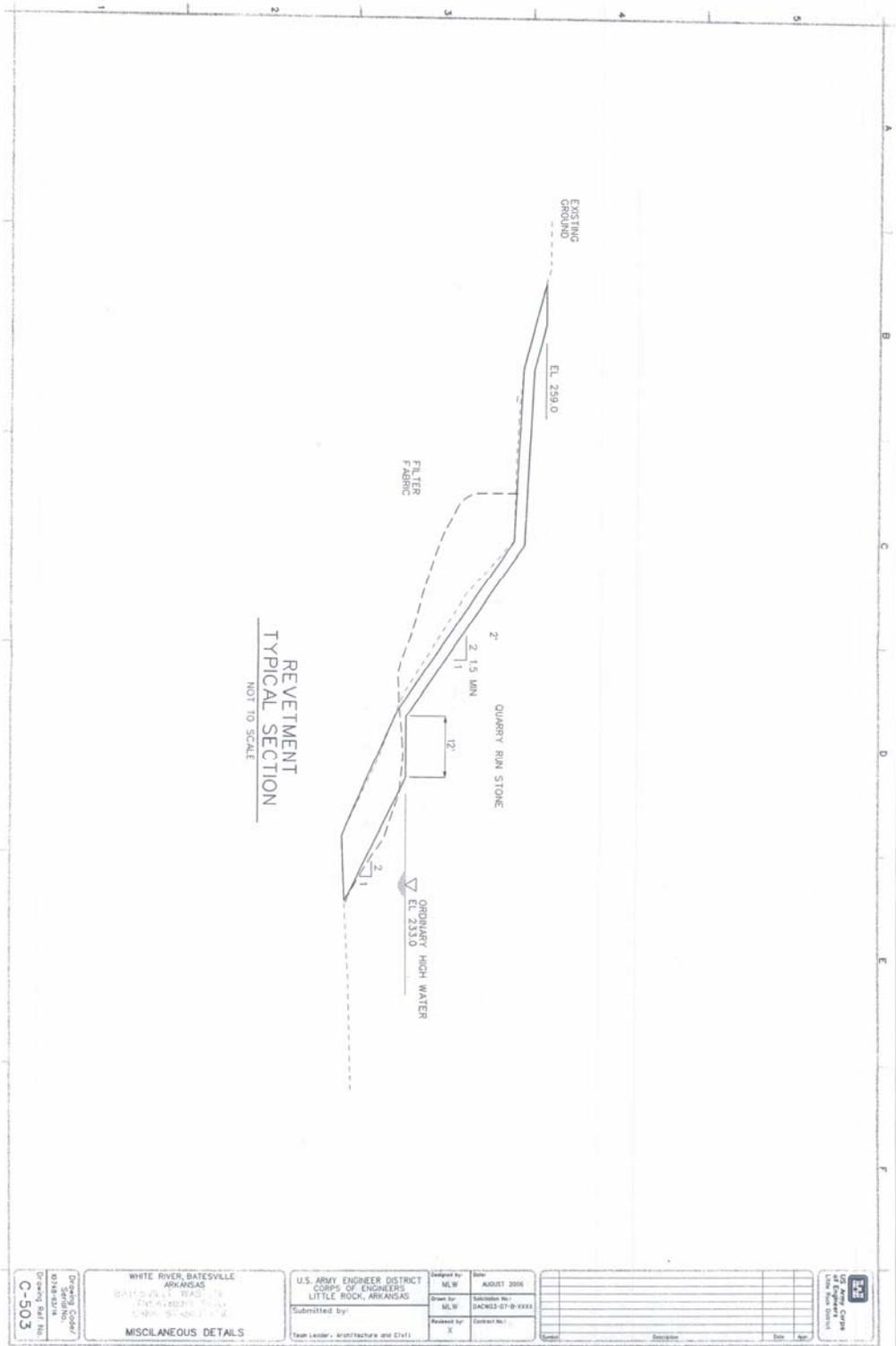
The recommended stone to be used is Grade Stone A. Use of this grade of stone eliminates the need for a filter between existing ground and stone. Moreover, this grade has been used on rivers of similar magnitude and resulted in success.



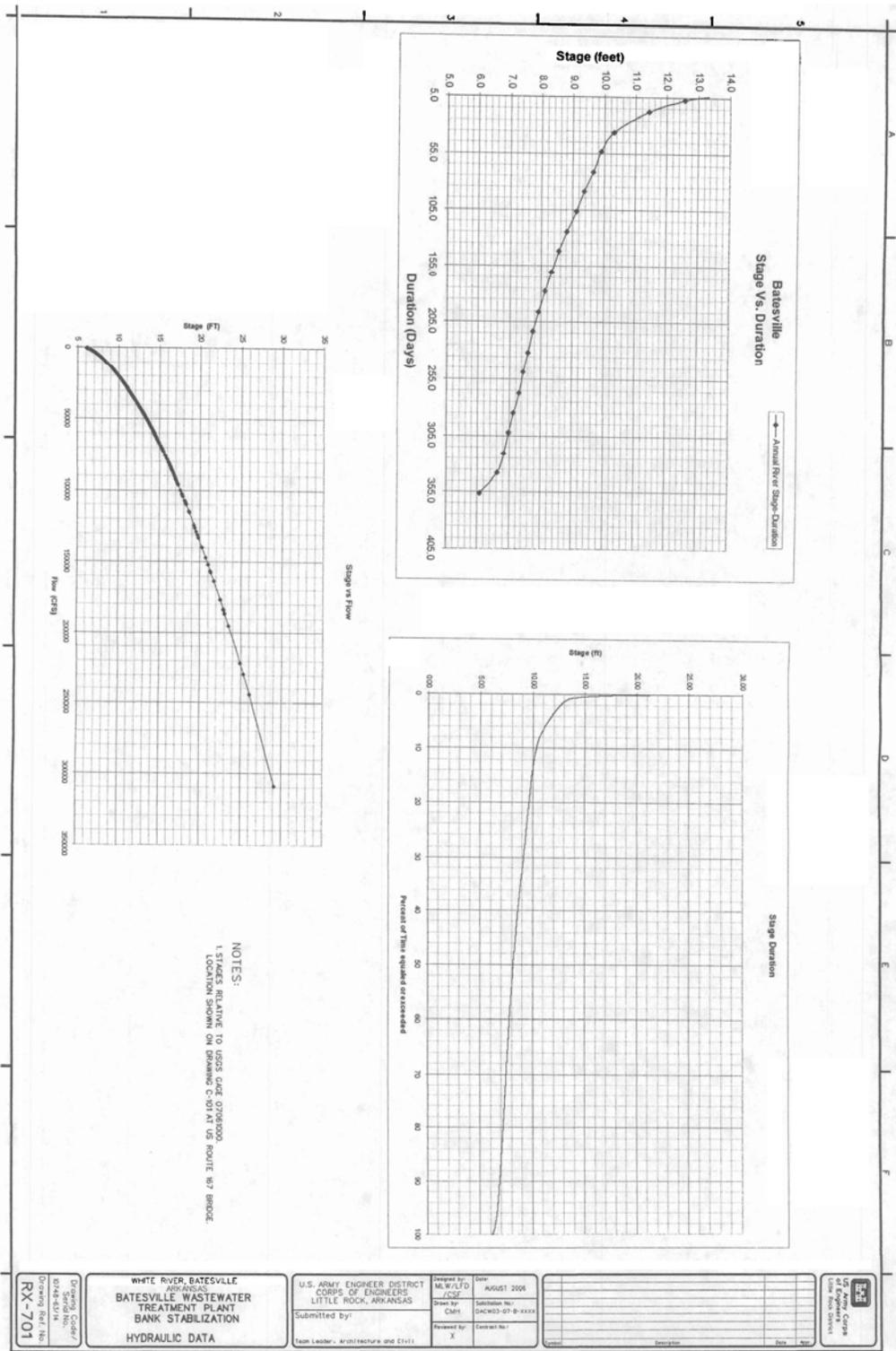








Drawing Code / Revision No. C-503	WHITE RIVER, BATESVILLE ARKANSAS BATESVILLE TRADING COMPANY 1200 S. MAIN ST. MISCELLANEOUS DETAILS	U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS LITTLE ROCK, ARKANSAS Submitted by: Team Leader - Architecture and Civil	Designed by: MLE Drawn by: MLE Reviewed by: X	Date: AUGUST 2006 Submission No.: DACW33-07-B-XXXX Contract No.:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Revised</th> <th>Description</th> <th>Date</th> <th>Appr.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Revised	Description	Date	Appr.																
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2.2 Alternatives to the Proposed Action

Four different alternatives to the proposed action have been considered to prevent and rectify erosion of the bank: (1) a longitudinal revetment; (2) longitudinal peak stone toe protection; (3) hard points; and (4) no action.

A longitudinal revetment - if constructed from the river, will allow for a fairly thin tree line to remain adjacent to the aeration ponds and will provide protection from further erosion along the bank. On the contrary, a longitudinal revetment will result in removal of a majority of the trees along the bank, will not be aesthetically pleasing, and only portions of the tree line shall remain if the revetment is constructed from the land.

Longitudinal peak stone toe protection (LPSTP) - if constructed from the river, will allow for a thicker tree line to remain adjacent to the aeration ponds than will a longitudinal revetment, will require only a minimal amount of tree removal in the toe zone, and will somewhat prevent and rectify erosion along the toe and an insufficient distance into the bank zone. However, LPSTP will not be aesthetically pleasing when the water surface elevation is below the peak of the LPSTP, which is a majority of the time. The LPSTP, constructed from land, is more intrusive leaving only portions of the tree line.

Hard points - whether constructed from river or land, will allow for a majority of the existing tree line to remain adjacent to the aeration ponds and will require only localized tree removal at each hard point location. In addition, slack water areas will develop between the structures, which will both rectify and prevent erosion of the bank though initial scalloping may occur. These areas could promote aquatic habitat development. Although hard points may not be aesthetically pleasing initially, vegetation will eventually grow on top of the hard points and become more aesthetically pleasing.

The no action alternative - will satisfy a majority of the objectives laid out by Batesville Water Utilities; however, it will not prevent erosion from occurring along the bank. Degradation will continue to occur and may possibly result in breach of the aeration ponds. Either condition would increase the cost of fixing the problem greatly.

2.3 No Action Alternative.

Acceptance of a “no-action” plan would result in the continued erosion of the left descending bank of the White River between approximately RM 299.5 and RM 298.5. The end result being the eventual compromise of the Batesville Wastewater Treatment Plant aeration ponds and the “dumping” of their contents into the White River. This of course is an unacceptable alternative due to the environmental impacts that would occur to the river and human health and safety.

Table 2 Summary of the Potential Effects of the Proposed Action and Alternatives

Resource	Proposed Action	No Action
Land Use	Land use would remain the same. The project area would be stabilized and no longer endanger the Batesville Wastewater Treatment Facility	Continued erosion of the bank will eventually cause damage to the aeration ponds at the Batesville Wastewater Treatment Facility.
Water Resources	Temporary construction related increase in turbidity will occur. Stabilization of the riverbank will decrease current scouring, which is currently causing higher levels of turbidity in the river.	Continued scouring will increase turbidity in this portion of the White River.
Cultural Resources	No known historic properties will be affected by this undertaking	Continued scouring could potentially impact previously unknown cultural resources.
Biological Resources	Construction of the proposed action will provide a stable riverbank in the project area that could be used by aquatic species in the river and provide habitat for terrestrial species inhabiting this riparian section of the river.	Continued scouring will prevent vegetation growth along the riverbank and destroy riparian habitat along the river in the project area.
HTRW	No impact to HTRW resources will occur. Construction related best management practices will insure that no oils or fuels are spilled in the project area.	Damage to the aeration ponds could cause spillage of their contents thus releasing biological contaminants into the White River
Air Quality	Temporary construction related increase in emissions will occur. These emissions will be within EPA requirements and will be related to construction vehicles and equipment. No impairment to the project area air quality will occur.	No impact to the air quality of the project area will occur.
Noise	Temporary construction related increase in noise would occur due to construction vehicles and equipment.	No change in current noise levels will occur.
Socioeconomic	The proposed project will provide temporary job opportunities during the construction phase of the project.	The loss of the wastewater facility could potentially result in expenditures for the city of Batesville and high taxes for its residents.
Recreation	The proposed project will stabilize the shoreline aquatic habitat and the "bendway weirs" could provide additional fish habitat.	Continued scouring will destroy shoreline aquatic habitat thereby decreasing angler success in the area.
Cumulative Affects	The proposed action will have no cumulative affect when combined with any reasonably foreseeable past, present of future projects in the area.	None

3.0 AFFECTED ENVIRONMENT

3.1 Land Use

The project area is located in an area primarily devoted to urban development. The primary importance of the stabilization of this stretch of land is to protect the structural integrity of the Batesville Wastewater Treatment Plant.

No prime or unique farmlands (Council in Environmental Quality Memorandum of Full Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act: August 11, 1980) or wild and scenic rivers (Wild and Scenic Rivers Act, 16 U.S.C. 1271, et. seq.) occur within the area of the proposed action.

3.2 Climate

Independence County is hot in the summer and moderately cool in winter. In winter the average temperature is 40 degrees Fahrenheit (F^o), and the average daily minimum temperature is 29 degrees F^o. In the summer the average daily temperature is 78 degrees F^o, and the average daily maximum is 92 degrees F^o.

The total annual precipitation is about 50 inches. One-half or 25 inches usually falls between April and September. The prevailing wind is from the southwest. Average wind speed is highest in the springtime at about 9 miles per hour.

3.3 Topography, Physiography and Soils

Physiographically, Batesville is situated in the transition zone between the Interior Highlands and the Gulf Coastal Plain. Bedrock consists of interbedded shale, sandstone, and limestone.

The project area contains soils of Arrington silt loam and Enders stony fine sandy loam. Ender soils are not identified as Prime Farmland/Statewide Importance. Arrington silt loam is Prime Farmland, however due to the location of the White River, this area is not protected from flooding. Therefore, this unit would not be considered as Prime Farmland for this location.

3.4 Water Resources

The primary water resource in the project area is of course the White River which originates in the Ozark Mountains of Northwest Arkansas and empties into the Mississippi River in southeastern Arkansas. Other streams in the area include Stillhouse Creek located immediately downstream of the project area, and Plum Bayou, which enters the White River upstream of the project area. There are no streams in the project vicinity that are listed as a "wild or scenic" river.

3.5 Cultural Resources

A site visit by Corps archeological personnel resulted in no cultural resources being identified in this area. The area has experienced extensive soil disturbance in the past from prior development. The Arkansas State Historic Preservation Officer was consulted by letter to determine if any known cultural resources existed in this area.

3.6 Biological Resources

The biological resources of the White River basin are extensive as a whole. The resources specifically listed in this EA include vegetation, fish and wildlife, threatened and endangered species, and wetlands.

3.6.1 Vegetation

The original vegetation in this area was a mix of hardwood trees. Due to urbanization, the majority of remaining vegetation includes cultivated grasses to the top of the riverbank, with scattered woody vegetation with red cedar, sycamore, green ash, red maple and elm being the dominant tree species.

3.6.2 Fish and Wildlife

Wildlife species present in the project area are limited to small game animals due to the scarcity of adequate habitat due to urbanization. Small animals such as rabbit, opossum, squirrels and possibly some furbearers such as river otter or beaver could occur in the vicinity of the proposed action.

Fishes of the White River include game species such as largemouth bass, crappie, bream, and catfish, and various species of rough and commercial fish such as gar, carp, and suckers. The White River is home to an assortment of fresh water mussels. However, there are none of significance in the vicinity of the proposed project. A survey of freshwater mussels in the vicinity of Lock and Dams 1-3 on the White River was conducted by Crist Engineers, Inc. in May of 2002. The study concluded that in the vicinity of the proposed action, which was designated sites WR44 and WR45 the only live specimens found were the Asian clam (*Corbicula fluminea*) and two specimens of the plain pocketbook (*Lampsilis cardium*). Dead “relict” shells, all in low numbers, were collected for the following species: mucket (*Actinonaias ligamentina*), three ridge (*Amblema plicata*), purple wartyback (*Cyclonaias tuberculata*), butterfly (*Ellipsaria lineolata*), spike (*Elliptio dilatata*), ebonyshell (*Fusconaia ebena*), pink mucket (*Lampsilis abrupta*), black sand shell (*Ligumia recta*), bank climber (*Plectomerus dombeyanus*), pond pigtoe (*Pleurobema sintoxia*), bleufer (*Potamilus purpuratus*), rabbits foot (*Quadrula cylindrical*), pimpleback (*Quadrula pustulosa*), mapleleaf (*Quadrula quadrula*).

3.6.3 Threatened and Endangered Species

The Arkansas Natural Heritage Commission lists the Ozark hellbender (*Cryptobranchus alleganiensis bishopi*) as a candidate for listing as threatened or endangered by the U.S. Fish and Wildlife Service that could exist in the vicinity of the project area. The Commission also lists as state species of concern; the western sand darter (*Ammocrypta clara*) and the slenderhead darter (*Percina phoxocephala*).

3.6.4 Wetlands

There are no jurisdictional wetlands located in the project area. The placement of fill material (quarry run stone) below the high water mark of the White River will necessitate the procurement of a section 404 permit (CWA) and since the White River is a navigable stream, a Section 10 permit of the River and harbors Act will also be needed.

3.7 Hazardous, Toxic, and Radioactive Wastes (HTRW)

There is no known hazardous, toxic or radioactive waste located in the project area

3.8 Air Quality

The Clean Air Act of 1977, as amended requires Federal facilities to comply with all Federal, state, interstate, and local requirements regarding the control and abatement of air pollution in the same manner as any nongovernmental entity, including any requirement for permits. No particular Federal requirements are involved that are not already incorporated into Arkansas State law. According to the Arkansas Department of Environmental Quality (ADEQ), the entire state of Arkansas is in compliance with all EPA ambient air quality standards. Only ozone concentrations occasionally approach the limit of the standard. The "Conformity Rule" of the Clean Air Act of 1977, as amended (CAA) states that all Federal actions must conform to appropriate State Implementation Plans (SIPs). This rule took effect on January 31, 1994, and at present applies only to Federal actions in nonattainment areas (those not meeting the National Ambient Air Quality Standards for the criteria pollutants in the CAA). The state of Arkansas including the Beaver Lake area is considered an "attainment area" and is therefore exempt from the "Conformity Rule" of the CAA.

3.9 Noise

Noise levels in the project area are mild to moderate. Sources of noise include local traffic and businesses located in Batesville and farming equipment from nearby farms.

3.10 Socioeconomics

Batesville is the county seat and largest city in Independence County, Arkansas. Independence County is located in the north-central part of the state in an area that is largely agricultural. During the 1980 decade, the population of the county increased by just over 5 percent, slightly less than the statewide increase of 5.7 percent. Batesville had a growth rate for the same period of 3.9 percent. In 1990, 17.1 percent of persons in the county had incomes below the poverty level, compared with a statewide rate of 19.1 percent. Over 98 percent of the population is white; the black population constitutes less than 2 percent of the total population. The median age of the population statewide is 33.9 years, compared with a county median age of 34.7 and 36.7 for the city of Batesville.

The median family income for the county is \$24,699 in comparison with the Batesville median family income of only \$22,285. On a per capita basis, however, the Batesville figure exceeds the county per capita figure by \$13,636 versus only \$10,493 for the county as a whole. This anomaly no doubt is a result of differences in the family between the two areas; the median age figures suggest that more families with underage children reside in the county than within the city. Statewide, the median family income is \$25,395, and the per capita income is \$10,520. All of these income data are from the 1990 Census of Population reports. The primary sources of employment in both Batesville and Independence County are (1) professional services (the leading source) and secondly, (2) manufacturing. In the city of Batesville, 22.9 percent of employment is in manufacturing, compared with 12.2 percent for the county.

3.11 Recreational Resources

Recreational resources in the project area consist of recreational pursuits provided by the White River such as boating and fishing opportunities. A public boat ramp exists in upstream of the project area but will not be adversely impacted by the bank stabilization of the project area.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Land Use

The “No Action” alternative will result in the continued degradation of the shoreline. Under the “Proposed Action”, land use will remain basically the same. The river bank will be armored and portions of the White River will be converted to “bendway weirs” that extend into the river from the shoreline.

4.2 Water Resources

Water resources (White River) will continue to have increased turbidity levels if no action to prevent bank scouring is implemented. The “Proposed Action” will result in only temporary construction related increases in turbidity that should be localized. Water quality in the immediate area will benefit from long term decreased turbidity due to bank stabilization.

4.3 Cultural Resources

A site visit by Corps archeological personnel resulted in no cultural resources being identified in this area. The area has experienced extensive soil disturbance in the past from prior development. The Arkansas State Historic Preservation Officer was consulted by letter to determine if any known cultural resources existed in this area. The SHPO’s finding was that no known historic properties would be affected by the proposed action.

4.4 Biological Resources

Biological resources will be impacted by loss of riparian habitat if no action is implemented. The “Proposed Action” will protect riparian habitat from further degradation and also prevent the loss of terrestrial habitat used by wildlife. The “bendway weirs” will also potentially provide habitat for aquatic species in the river and provide areas for fish congregation that could benefit anglers on the river..

4.4.1 Vegetation

Vegetation will continue to be lost as long as the shoreline continues to erode. The “proposed Action” will ensure the protection of the shoreline which will revegetate with native grasses and other vegetation supplying wildlife with food and habitat resources.

4.4.2 Fish and Wildlife

Fish and wildlife resources will continue to suffer from loss of habitat as long as the shoreline is being degraded. The “Proposed Action” will benefit wildlife by protecting their habitat.

4.4.3 Threatened and Endangered Species

The proposed action presented in this EA would not have any adverse impacts to the Ozark hellbender (*Cryptobranchus alleganiensis bishopi*), a candidate for listing as threatened or endangered by the U.S. Fish and Wildlife Service that could exist in the vicinity of the project area or state listed species of concern such as the western sand darter (*Ammocrypta clara*) and the slenderhead darter (*Percina phoxocephala*).

4.4.4 Wetlands

There are no jurisdictional wetlands located in the project area. The placement of fill material (quarry run stone) below the high water mark of the White River will necessitate the procurement of a section 404 permit (CWA) and since the White River is a navigable stream, a section 10 permit of the River and harbors Act will also be needed.

4.5 Hazardous, Toxic, and Radioactive Waste

No action presented in this EA would have any significant impacts on any hazardous, toxic, or radioactive waste in the project area since none occur.

4.6 Air Quality

The proposed action may result in a short-term impact to air quality as a result of emissions from construction equipment. This impact will be limited to the construction phase of the project.

4.7 Noise

Short-term noise impacts from heavy equipment are expected during the construction phase of the project.

4.8 Socioeconomics

The “No Action” alternative could impact the socioeconomics of the immediate area by resulting in the loss of the nearby wastewater treatment facilities. Relocation of the facilities would require expenditures by the city and would likely result in tax increases on residents.

4.9 Recreation Impacts

The “No-Action” alternative could impact fishing in the area by causing increase turbidity and habitat destruction. The proposed action would stabilize shoreline aquatic habitat and the “bendway weirs” should provide additional fishery habitat for some species and therefore could improve angling opportunity in the area.

4.9 Cumulative Impacts

This section considers the cumulative effects resulting from implementation of the proposed action and any reasonably foreseeable future actions. Cumulative effects on the environment result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

Due to erosive nature of the White River and the soil characteristics of the riverbank scouring and sediment deposition is and will always be a common occurrence on the river. Activities such as the proposed action have and will continue to be implemented to protect the riverbank where scouring threatens public structures and facilities. In general, these types of actions have only minor construction related impacts on the environment and quite often provide good habitat for some aquatic species. Unlike other structures that are intended to train or control the river course, bank protection structures such as the proposed action normally only maintain the status quo of the river in regards to flow while eliminating erosion.

For this reason, the proposed action presented in this EA when considered with any additional projects on the White River is not expected to result in any cumulative impacts.

5.0 FINDINGS

In order to protect the shoreline in this portion of the White River and ultimately ensure that the Batesville Wastewater facility is not damaged due to the degradation of the shoreline some form of bank protection is required. The results of this environmental assessment (EA) indicate that the “Proposed Action” as presented in this EA would result in minimal affects to the human environment, none of which are considered to be significant, and therefore dictate the preparation of an environmental impact statement (EIS) as required by NEPA.

6.0 COORDINATION.

The following agencies were coordinated with in the plan formulation of this project:

Allan Mueller, Arkansas Field Supervisor, U.S. Fish and Wildlife Service, Arkansas Field Office, 1500 Museum Road, Suite 105, Conway, AR 72032

Michael P. Jansky, Regional Environmental Review Coordinator, U.S. Environmental Protection Agency, Region VI, 6EN-XP, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202-2733

Ken Gruenwald, Director, Arkansas Historic Preservation Program, 1500 Tower Building, 323 Center Street, Little Rock, AR 72201

George Rheinhardt, Arkansas Forestry Commission, 3821 W. Roosevelt Road, Little Rock, AR 72204-6396

Marcus C. Devine, Director, Arkansas Dept of Environmental Quality, Water Division, 8001 National Drive, P.O. Box 8913, Little Rock, AR 72219-8913

Scott Henderson, Director, Arkansas Game and Fish Commission, 2 Natural Resources Drive, Little Rock, AR 72205

Karen Smith, Director, Arkansas Natural Heritage Commission, 1500 Tower Building, 323 Center Street, Little Rock, AR 72201

John E. Terry, District Chief, U.S. Geological Survey, 401 Hardin Road, Little Rock, AR 72211

Mike Nedd, State Director, Bureau of Land Management, 7450 Boston Boulevard, Springfield, VA 22153

Michael Deihl, Administrator, Southwestern Power Administration, One West Third Street, Room 1400, Tulsa, OK 74103-3519

Ted Coombes, Executive Director, Southwestern Power Resources Association, P.O. Box 71827, Tulsa, OK 74147

Ron Castleman, AR Regional Director, FEMA, Region VI, Federal Regional Center, 800 North Loop 288, Denton, TX 76210

Earl Smith, Chief, Arkansas Soil and Water Conservation Commission, Water Resource Management Division, 101 E. Capitol, Suite 350, Little Rock, AR 72201

Richard W. Davies, Executive Director, Department of Parks and Tourism, #1 Capitol Mall, Rm 4A-900, Little Rock, AR 72201

Faye Boozman, Director, Department of Health, 4815 West Markham, Little Rock, AR 72205

Kalven L. Trice, State Conservationist, U.S. Department of Agriculture, Natural Resources Conservation Service, 700 West Capitol Ave., Room 3416, Federal Building, Little Rock, AR 72201

Earnest Quintana, Regional Director, National Park Service, Midwest Regional Office, 1709 Jackson St, Omaha, NE 68102

7.0 LIST OF PREPARERS

1. Jim Ellis, NEPA Specialist, Planning and Environmental Office, U. S. Army Corps of Engineers, Little Rock District
2. Chris Davies, District Archeologist, Planning and Environmental Office, U.S. Army Corps of Engineers, Little Rock District

Appendix A. Correspondence

Ellis, Jim D SWL

From: Jim Northum [jim.northum@mail.state.ar.us]
Sent: Wednesday, March 03, 2004 8:50 AM
To: Ellis, Jim D
Subject: Bank Stabilization, White River mile 299, Batesville Wastewater Treatment Plant, Independence County, Arkansas

Dear Mr. Ellis:

The proposed project should have no long term adverse impacts on the forest resources of the area.

If we can be of assistance in any way, please contact us.

Jim Northum
Arkansas Forestry Commission
Staff Forester, Forest Health
jim.northum@mail.state.ar.us
501-296-1863



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS

POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

February 25, 2004

U.S. Environmental Protection Agency Region 6 Office of Planning & Coordination (EN-XP) 1445 Ross Avenue Dallas, Texas 75202-2733	
EPA has reviewed this document and has no comments.	
Reviewer: <i>JM Jansky</i>	Date: 03/09/04

Planning, Environmental and Regulatory Division
Planning Branch
Environmental Section

Michael P. Jansky
Regional Environmental Review Coordinator
U.S. Environmental Protection Agency
Region VI, 6EN-XP
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Jansky:

U.S. Environmental Protection Agency Region 6 Office of Planning & Coordination (EN-XP) 1445 Ross Avenue Dallas, Texas 75202-2733	
EPA has reviewed this document and has no comments.	
Date:	Reviewer:

The Little Rock District, U.S. Army Corps of Engineers has initiated the preparation of an Environmental Assessment (EA) to evaluate the possible impacts of bank stabilization along the left-descending bank along the White River adjacent to the Batesville Wastewater Treatment Plant in Independence County, Arkansas. The Batesville Wastewater Treatment Plant's aeration ponds are currently being threatened by erosion of the river bank. This erosion is accelerated when the banks of the river are exposed to high water for long durations as it was in the spring of 2002. In an effort to prevent eventual damage to the structural integrity of these aeration ponds and the resulting spillage of wastewater into the White River, the EA will assess the positive and negative impacts associated with implementation of the proposed bank stabilization. Enclosed is a map depicting the area of concern.

In the past, the area immediately upstream from the area of concern was fortified with rip-rap during a previous project. Alternatives currently being considered include armoring the bank with rip-rap or constructing "dikes" out from the river bank that will divert high-flow water away from the eroded bank and cause sedimentation to occur along the shoreline thus armoring the bank.

We request that you provide any input or information your agency may have by April 1, 2004. If comments are not received by this date, we will assume your agency has no preliminary comments on the proposed action. If you have any additional questions, please contact Mr. Jim Ellis at (501) 324-5629 or email at Jim.D.Ellis@usace.army.mil.

Sincerely,



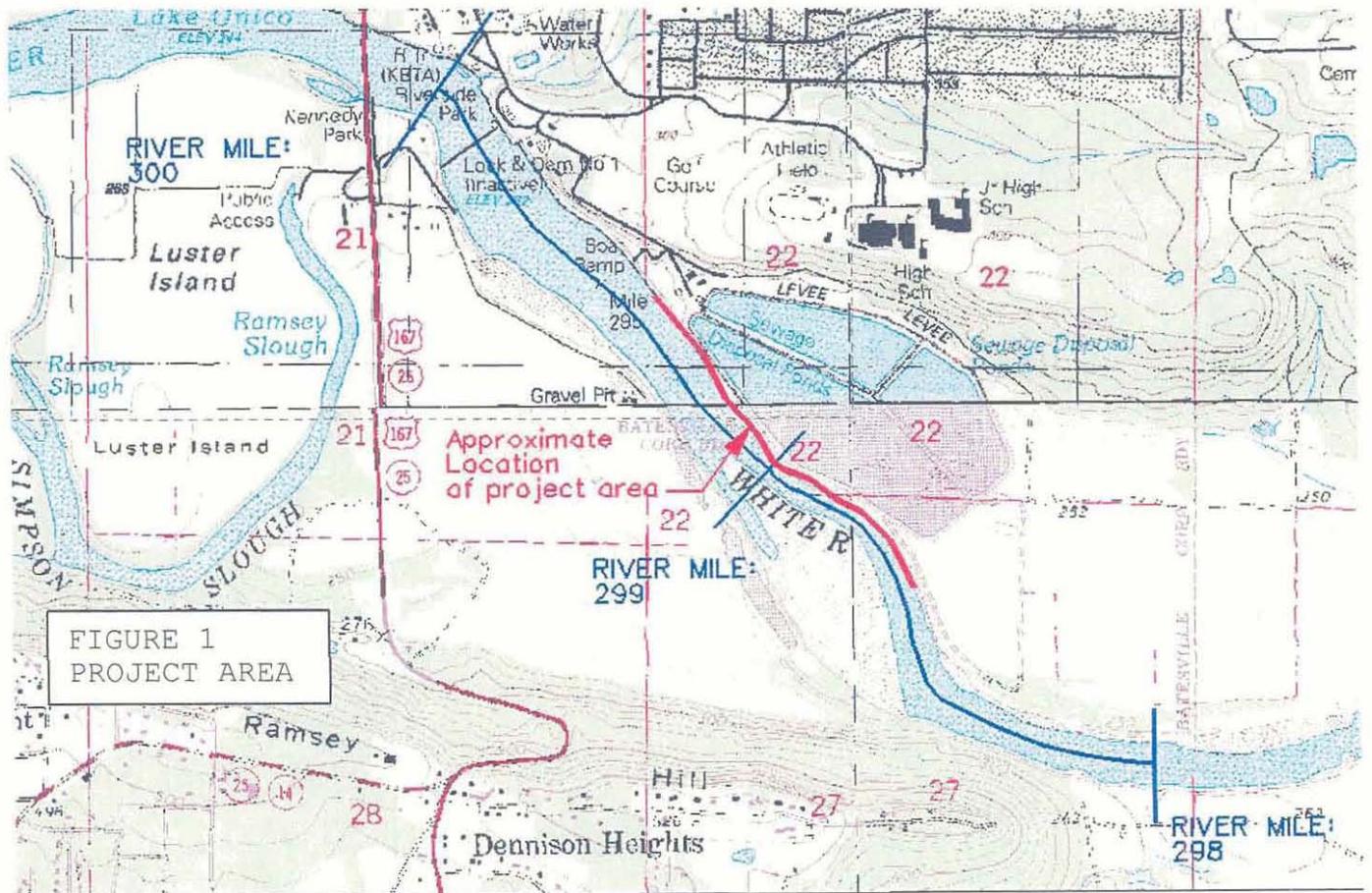
for Tony Hill
Acting Chief, Environmental Section

Enclosure

**Field Reconnaissance to Batesville, Arkansas
31 October 2002**

Information:

The Batesville Water Utilities has aerial photographs of the wastewater treatment plant that they have offered for our use.





IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 Museum Road, Suite 105
Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

March 9, 2004

Mr. Tony Hill
Acting Chief, Environmental Section
U.S. Army Corps of Engineers
Little Rock District
P.O. Box 867
Little Rock, AR 72203-0867

Dear Mr. Hill:

This letter is in response to your district's request for preliminary comments on the proposal to address streambank erosion adjacent to the sewage treatment settling ponds for the city of Batesville, Arkansas. Representatives of the U.S. Fish and Wildlife Service (Service) attended a meeting on February 18 to discuss alternatives and possible interactions of this project with other proposed alterations to the White River in the general vicinity. The Corps personnel at this meeting indicated that the most likely solution to the bank erosion problems would be the installation of up to eleven spur dikes ranging in length from thirty to one hundred feet. Another alternative under consideration is installation of a rip rap revetment along the length of the affected bank. Representatives from the Batesville wastewater plant are not in favor of the revetment because of the need to reshape the bank and remove the narrow band of trees that currently grow along the river. We also recommend against installation of a rock revetment. However, we recognize the need to address the potential for bank failure and sewage contamination at this site. We recommend that you continue to study the possibility of using short spur dikes to divert high velocity flows away from this sensitive area.

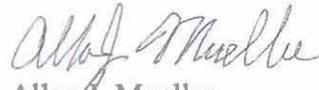
At the recent meeting, how the multiple projects in this river reach may affect one another was discussed. The site of the proposed spur dikes is located immediately downstream of the non-operational Lock and Dam Number One. Independence County officials are planning to open the closed lock and install a hydroelectric generator which, when operational, will divert a portion of the flow that currently travels over the spillway over to the left descending bank. Depending on the volume and velocity of this water, it may exacerbate the erosion problems along the sewage lagoons or upstream of the lagoons where the main pressurized sewage pipe enters. We recommend that you study how the hydroelectric generator may affect erosion along this bank and incorporate appropriate design considerations into the proposed flow diversion dikes.

A private sand and gravel company is currently in the process of receiving a Section 404 permit to remove sand and gravel from a bar across the river and somewhat downstream from the site of the proposed spur dikes. The bar is mostly covered during normal or high flows but becomes exposed during low flow summer periods. We recommend that you investigate how the diversion of water away from the left descending bank (with spur dikes) and concurrent removal of the existing gravel bar may affect the stability of banks downstream. In geomorphically unstable rivers, the armoring of one eroded bank often simply transfers the excess energy to the

next bendway downstream. We encourage you to design the spur dikes in a way that diverts sufficient energy from the left descending bank without transferring the energy to the right descending bank of the next bendway. The removal of gravel from the bar along this bank may affect your spur dike design considerations.

If you have any questions regarding these recommendations please contact Jason Phillips at (870) 347-1617. Also, we request that you please keep our agency informed of any progress or changes with the design of the project.

Sincerely,


Allan J. Mueller
Field Supervisor

cc: Arkansas Game and Fish Commission, Craig Uyeda
Arkansas Game and Fish Commission, Steve Filapeck
U.S. Fish and Wildlife Service, Lindsey Lewis



Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000
Fay W. Boozman, MD, MPH, Director
Mike Huckabee, Governor

March 11, 2004

Mr. Tony Hill
Department of the Army
Little Rock District, Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

RE: Batesville Wastewater Treatment Plant-Independence County

Dear Mr. Hill,

A staff review has been made of the information received on the referenced project. The Division of Engineering has no comments on the submittal.

If you have any questions or comments, please coordinate them through Kristine Spears at 501-661-2623.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bob Makin'.

Bob Makin, P.E.
Assistant Director
Division of Engineering

BM:LG:AF:LJ:RA:GC:KS:ks



March 16, 2004

Mr. Jim Ellis
Environmental Section
USACE – Little Rock District
P.O. Box 867
Little Rock, AR 72203-0867

RE: Preparation for an Environmental Assessment for Stream Bank Stabilization of the White River near the Batesville Wastewater Treatment Plant

Dear Mr. Ellis:

The Arkansas Department of Environmental Quality (ADEQ) has reviewed the information submitted on the referenced project.

We have no comments at this time.

If you have any questions, please contact Audree Miller at 501-682-0015.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sandi Formica".

Sandi Formica
Chief, Environmental Preservation Division

SF:MVE:AM:am

cc: Mary Leath, Chief Deputy Director
Martin Maner, Chief, Water Division

U.S. Department of Homeland Security
FEMA Region 6
800 North loop 288
Denton, TX 76209-3698



FEMA

March 19, 2004

Mr. Tony Hill
Little Rock District, Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

Re: Review Environmental Assessment for the Bank stabilization along White River

Dear Mr. Hill:

We received your letters March 1, 2004. Thank you for the opportunity to comment on the Environmental Assessment for the Bank stabilization along White River.

The concerns of the Federal Emergency Management Agency (FEMA) are directed toward the National Flood Insurance Program (NFIP) and the possible negative impact upon identified flood hazard areas and wetlands within the outlined project boundaries. Our comment on this project is that you contact the local Floodplain Administrators for the communities and counties that share the same watercourse to ensure floodplain compliance.

If you have any questions, you may contact me at (940) 898-5279.

Sincerely,

A handwritten signature in cursive script that reads "Linda Delamare".

Linda Delamare
Natural Hazards
Program Specialist

Arkansas Game & Fish Commission

2 Natural Resources Drive Little Rock, Arkansas 72205



David Goad
Deputy Director

Loren Hitchcock
Deputy Director

Scott Henderson
Director
March 24, 2004

Mr. Jim Ellis.
USCE- Little Rock District
P. O. Box 867
Little Rock, AR 762203-0867

Dear Ms. Ellis

Biologists from our agency have evaluated the bank erosion problem located along the left-descending bank of the White River adjacent to the Batesville Water Treatment Plant in Independence County, Arkansas.

Our agency has recommended putting in Bendway Weirs to correct this problem and minimize fish and wildlife impacts.

Our agency appreciates the opportunity to comment on this project and look forward to working with your agency in the future.

Sincerely,

Robert K. Leonard, Biologist
River Basins Division

Cc: U. S. Fish & Wildlife
Mike Gibson
Stephen R. O'Neal

**DEPARTMENT OF
PARKS & TOURISM**

One Capitol Mall
Little Rock, AR 72201
Phone: 501-682-7777
FAX: 501-682-1364
History Commission
501-682-6900 (V/T)
Keep Arkansas
Beautiful Division
501-682-3507
Personnel Section
501-682-7742 (V/T)
State Parks Division
501-682-1191 (V/T)
Tourism Division
501-682-7777 (V/T)

arkansas.com
ArkansasStateParks.com

**Mike Huckabee
GOVERNOR**

Richard W. Davies
EXECUTIVE DIRECTOR

**STATE PARKS,
RECREATION
& TRAVEL
COMMISSION**

Billy Lindsey
CHAIRMAN
Bill Barnes
VICE-CHAIRMAN
Steve Arison
Jane Christenson
Polly Wood Crews
Danny Ford
Jim Gaston
Debra Haak
Loretta House
Montine McNulty
Mike Mills
Ness Sechrest
Jim Shamburger
Wade Williams

DIVISION DIRECTORS

Larry Cargile
ADMINISTRATION
Greg Bulfs
STATE PARKS
Joe David Rice
TOURISM
Nancy Clark
GREAT RIVER ROAD
John L. Ferguson
HISTORY COMMISSION
Robert Phelps
KEEP ARKANSAS
BEAUTIFUL

**AN EQUAL
OPPORTUNITY/
AFFIRMATIVE ACTION /
AMERICANS WITH
DISABILITIES ACT**

Arkansas

THE NATURAL STATE

March 30, 2004

Mr. Tony Hill, Acting Chief
Environmental Section
Department of the Army
Post office Box 867
little Rock, Arkansas 72203-0867

RE: Bank Stabilization along the White River
adj. to Batesville Wastewater Treatment Plant
Independence County, Arkansas
ORGP 4-58

Dear Mr. Hill:

Thank you for this opportunity to comment regarding the proposed bank stabilization project along the White River adjacent to the Batesville Wastewater Treatment Plant. Based on the information you have provided, our records do not indicate a conflict with this project.

If you have any questions or require additional assistance, please feel free to contact me at 501-682-6946.

Sincerely,

Anita Chouinard, Environmental Planner
Outdoor Recreation Grants Program



Department of Energy
Southwestern Power Administration
One West Third Street
Tulsa, Oklahoma 74103-3519

March 24, 2004

Mr. Tony Hill
Acting Chief, Environmental Section
Little Rock District, Corps of Engineers
Planning, Environmental and Regulatory Division
P. O. Box 867
Little Rock, Arkansas 72203-0867

Dear Mr. Hill:

Thank you for the opportunity to comment on the impacts that Southwestern Power Administration (Southwestern) may experience as a result of the Batesville Wastewater Treatment Plant bank stabilization project.

Southwestern requests that construction of the bank stabilization project be timed as such to minimize the impacts to daily hydropower operations, and if any special hydropower operations are required, please constrain those special hydropower operations to the weekends. Southwestern also requests that the Corps of Engineers schedule any special hydropower operations related to the Batesville Wastewater Treatment Plant bank stabilization project at least 21 days in advance.

If you have any questions or comments, please contact Mr. Marshall Boyken at (918)-595-6646 or email at marshall.boyken@swpa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Darlene W. Low".

Darlene W. Low, Program Manager
Office of Corporate Facilities Services
Aviation, Environmental, Safety and Health

United States Department of Agriculture



Natural Resources Conservation Service
Room 3416, Federal Building
700 West Capitol Avenue
Little Rock, Arkansas 72201-3225

MAR 31 2004

Mr. Tony Hill
Environmental Section
Little Rock District, Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203

Dear Mr. Hill:

This letter is in response to your request for the proposed White River Bank Stabilization Project, in Independence County, Arkansas. Based on the project locations stated in your letter, the soils are Arrington silt loam and Enders stony fine sandy loam. Enders soils are not identified as Prime Farmland/Statewide Importance. Arrington silt loam is Prime Farmland, however due to the location on the White River, this area is not protected from flooding. Therefore, this unit would not be considered as Prime Farmland at this location only. The proposed sites will not impact any Prime Farmland/Statewide Importance areas.

Should you have any questions or need additional information, please call me at (501) 301-3178.

Sincerely,

A handwritten signature in cursive script that reads "Jeanette J. Bradley".

JEANETTE J. BRADLEY
Assistant State Soil Scientist



The Department of Arkansas Heritage

Mike Huckabee, Governor
Cathie Matthews, Director

Arkansas Arts Council

Arkansas Natural Heritage
Commission

Historic Arkansas Museum

Delta Cultural Center

Old State House Museum



Arkansas Historic Preservation Program

1500 Tower Building
323 Center Street
Little Rock, AR 72201
(501)324-9880
fax: (501)324-9184
tdd: (501)324-9811

e-mail:
info@arkansaspreservation.org
website:
www.arkansaspreservation.org

March 31, 2004

Mr. Tony Hill
Acting Chief, Environmental Section
Little Rock District Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203-0867

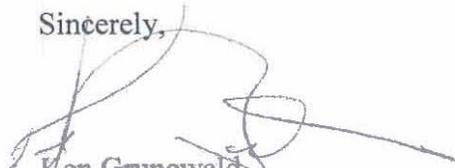
RE: Independence County - Batesville
Section 106 Review - COE
Bank stabilization of the left-descending bank of the White River
adjacent to the Batesville Wastewater Treatment Plant
AHPP Tracking No: 52770

Dear Mr. Hill:

My staff has reviewed the information submitted regarding the above-referenced undertaking. Our records show that two archeological sites (3IN39 and 3IN157) and two historic structures (IN0441 - White River Lock and Dam and IN0620 - Lock Keeper's House/ Lock #1) in the vicinity of the proposed work. The eligibility of the two archeological sites and IN0441 for inclusion in the National Register of Historic Places has not been determined, while IN0620 is ineligible.

We look forward to reviewing the Environmental Assessment at a future date. Thank you for your interest and concern for the cultural heritage of Arkansas. If you have any questions, please contact Steve Imhoff of my staff at (501) 324-9880.

Sincerely,



Ken Grunewald

Deputy State Historic Preservation Officer

cc: Dr. Ann M. Early, Arkansas Archeological Survey
Mr. James L. Edwards, Absentee Shawnee Tribe
Mr. Charles O. Enyart, Eastern Shawnee Tribe of Oklahoma
Mr. Ron Sparkman, Shawnee Tribe
Mr. Anthony Whitehorn, Osage Nation
Ms. Carrie V. Wilson, Quapaw Tribe of Oklahoma





The Department of
**Arkansas
Heritage**

Mike Huckabee, Governor
Cathie Matthews, Director

Arkansas Arts Council

Arkansas Historic
Preservation Program

Historic Arkansas Museum

Delta Cultural Center

Old State House Museum



**Arkansas Natural
Heritage Commission**

1500 Tower Building
323 Center Street
Little Rock, AR 72201
(501) 324-9619
fax: (501) 324-9618
tdd: (501) 324-9811

e-mail: info@arkansasheritage.org

website:

<http://naturalheritage.com>

An Equal Opportunity Employer



Date: April 1, 2004

Subject: Environmental Assessment
Bank Stabilization

Batesville Wastewater Treatment Plant, Independence County
ANHC No.: F-COEL-04-005

Mr. Jim Ellis
Little Rock District, Corps of Engineers
Post Office Box 867
Little Rock, AR 72203-0867

Dear Mr. Ellis:

Staff members of the Arkansas Natural Heritage Commission have reviewed the proposal to stabilize the left descending bank of the White River adjacent to the Batesville Wastewater Treatment Plant in Independence County, Arkansas. The Batesville Wastewater Treatment Plant's aeration ponds are currently being threatened by erosion of the river bank. Alternatives under consideration include armoring the bank with rip-rap or constructing "dikes" out from the river bank that will divert high-flow water away from the eroded bank.

Our records indicate the occurrence of three species of special concern in the White River in this vicinity: Ozark hellbender (*Cryptobranchus alleganiensis bishopi*), western sand darter (*Ammocrypta clara*), and slenderhead darter (*Percina phoxocephala*). Ozark hellbender is a candidate for listing as endangered or threatened by the U.S. Fish and Wildlife Service. The darters are species of state concern. If done properly, with consideration given to controlling turbidity during construction, the project should not adversely impact these species. Hellbender may actually benefit from the use of rock for the riprap or dike construction. However, little is known about the occurrence of hellbender from this location. The only known record was collected by a fisherman in 2003. A survey of the project area for hellbender may be appropriate to fully assess potential impacts and appropriately design in-stream structures.

The opportunity to comment is appreciated.

Sincerely,

Cindy Osborne
Data Manager

CC: Kelly Irwin, Herpetologist, Arkansas Game and Fish Commission



Absentee Shawnee Tribe of Oklahoma

2025 S. Gordon Cooper

Shawnee, Oklahoma 74801-9381

(405) 275-4030

Fax: 405-878-4533

Cultural/Historic
Preservation Department

May 3, 2004

Mr. Tony Hill
Acting Chief, Environmental Section
Little Rock District Corps of Engineers
Post Office Box 867
Little Rock, Arkansas 72203-0867

**Re: Independent County – Batesville
Section 106 Review – COE
Bank stabilization of the left-descending bank of the White River
Adjacent to the Batesville Wastewater Treatment Plant
AHPP Tracking No: 52770**

Dear Mr. Hill:

I would like to thank you for this letter and for submitting information regarding the above referenced undertaking. Our resources show that the Shawnee's once occupied Arkansas around the upper middle northwest part of the state. We would be very interested in consulting with you on the basis of the National Historic Preservation Act (NPHA) Section 106 in the near future.

Once again thank you for letter and concerns for Native American Culture.

If you have any questions please contact the Cultural Preservation Department or myself at 405-275-4030 at Ext: 168.

Sincerely,

Ted Watson Jr.
Tribal Historic Preservation Officer (THPO)
Absentee Shawnee Tribe of Oklahoma

ccjm



REPLY TO
ATTENTION OF
CESWL-PE

DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

5277d
COE

September 20, 2006

AHPP
SEP 26 2006

Mr. Ken Grunewald
Deputy State Historic Preservation Officer
Arkansas Historic Preservation Program
1500 Tower Building
323 Center Street
Little Rock, AR 72201

Dear Mr. Grunewald:

The Little Rock District of the US Army Corps of Engineers (Corps) is currently studying a proposed bank line stabilization project in Batesville, Independence County, Arkansas. Your office has requested additional information concerning the project (AHPP tracking No. 52770). A field visit was made to the proposed construction area on September 13, 2006. It was determined by both the Corps District Archeologist that no cultural resources would be impacted. A cultural resources Project Identification Form is enclosed. In the highly unlikely event that cultural materials are discovered during construction, all activities will cease and your office contacted for a consultation. Should you have any questions, please feel free to contact me at 1 (501) 324-5752. Thank you for your time.

Date: 9/27/06
No known historic properties will be affected by this undertaking. This effect determination could change should new information come to light.
Ken Grunewald
Deputy State Historic Preservation Officer

Sincerely,

Christopher G. Davies, RPA
District Archeologist

Appendix B. Section 404 (b) 1 Analysis

SHORT FORM
Evaluation of Section 404(b)(1) Guidelines

Formal Review Should Follow Close of Public Notice Comment Period.

APPLICANT: USACOE, LRD - Batesville Wastewater Section 14

APPLICATION NUMBER:

1. Review of Compliance (Section 230.10(a)-(d).

Preliminary 1/

Final 2/

A review of the permit application indicates that:

a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);YES [X] NO []* YES [X] NO[]

b. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);YES [X] NO []* YES [X] NO[]

c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2); YES [X] NO []* YES [X] NO[]

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5) YES [X] NO []* YES [X] NO[]
*1/, 2/ see page 3.

2. Technical Evaluation Factors (Subparts C-F)

N/A

Not Significant

Significant

a. Physical and chemical characteristics of the Aquatic Ecosystem (Subpart C-F).

1) Substrate impacts		X	
2) Suspended particulate/turbidity impacts.		X	
3) Water column impacts.		X	
4) Alteration of current patterns and water circulation		X	
5) Alteration of normal water fluctuations/hydroperiod.		X	
6) Alteration of salinity gradients.	X		

b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).

1) Effect on threatened/endangered species and their habitat.		X	
2) Effect on aquatic food web.		X	
3) Effect on other wildlife (mammals, birds, reptiles, amphibians).		X	

c. Special Aquatic Sites (Subpart E).

1) sanctuaries and refuges.	X		
2) wetlands.	X		
3) mudflats.	X		
4) vegetated shallows.	X		
5) coral reefs.	X		
6) riffle and pool complexes	X		

d. Human Use Characteristics (Subpart F).	N/A	Not Significant	Significant
1) Effects on Municipal and Private Water Supplies.	X		
2) Recreational and Commercial Fisheries Impacts.		X	
3) Effects on Water-Related Recreation.		X	
4) Aesthetic Impacts.		X	
5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, similar preserves.	X		
REMARKS: Where a check is placed under the significant category, preparer should add explanation below.			
3. <u>Evaluation of Dredged or Fill Material (Subpart G) 3/</u> a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (Check only those appropriate.)			
1) Physical characteristics			X
2) Hydrography in relation to known or anticipated sources of contaminants.			X
3) Results from previous testing of the material or similar material in the vicinity of the project.			
4) Known, significant, sources of persistent pesticides from land runoff or percolation .			
5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances.			
6) Other public records of significant introduction of contaminants from industries, cities or other sources.			
7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the			X
8) Other sources (Specify).			
List appropriate references (attach sheet if necessary).			
b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and that the dredged material will be constrained and not allowed to flow beyond the boundaries of the disposal site. The material meets the testing exclusion criteriaYES [X] NO []			
4. <u>Disposal Site Delineation (Section 230.11(f).</u> a. The following factors as appropriate, have been considered in evaluating the disposal site.			
1) Depth of water at disposal site.			X
2) Current velocity, direction, and variability at disposal site.			X
3) Degree of turbulence.			X
4) Water column stratification.			X
5) Discharge vessel speed and direction.			
6) Rate of discharge.			
7) Dredged material characteristics (constituents, amount, and type of material, settling velocities).			X
8) Number of discharges per unit of time.			
9) Other factors affecting rates and patterns of mixing (Specify).			
List appropriate references (attach sheet if necessary).			
PROJECT DOCUMENTS			
b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable YES [X] NO []			

5. Actions to minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. YES [X] NO []
List action taken. (attach sheet if necessary)

REFERENCE CE1300, JUNE 1973, GUIDE SPECS.
CIVIL WORKS CONSTRUCTION-ENGINEERING PROTECTION

N.B. Return to section 1 for final stage of compliance review. See also note 3/, page 3.

6. Factual Determination (Section 230.11)

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge as related to:

- a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5 above) YES [X] NO []
- b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5) YES [X] NO []
- c. Suspended particulate/turbidity (review sections 2a, 3, 4, and 5) YES [X] NO []
- d. Contaminant availability (review sections 2a, 3, and 4) YES [X] NO []
- e. Aquatic ecosystem structure and function (review sections 2b and c, 3, and 5) YES [X] NO []
- f. Disposal site (review sections 2, 4, and 5) YES [X] NO []
- g. Cumulative impact on the aquatic ecosystem YES [X] NO []
- h. Secondary impacts on the aquatic ecosystem YES [X] NO []

7. Evaluation Responsibility (*See page 3)

a. This evaluation was prepared by:

b. This evaluation was reviewed by:

Jim Ellis
Position: Biologist, Planning & Env. Office

Joyce Perser
Position: Regulatory Office

Date: 29 August 2006.

Date: 17 October 2006

8. Findings

a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines. [X]

b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following condition: (attach sheet if necessary)..... []

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

- 1) There is a less damaging practicable alternative []
- 2) The proposed discharge will result in significant degradation of the aquatic ecosystem []
- 3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem []

SIGNATURE _____
Wally Z. Walters
Colonel, Corps of Engineers
District Engineer

* A negative, significant, or unknown response indicates that the permit application may not be in compliance with the Section 404(b)(1) Guidelines.

1/ Negative responses to three or more of the compliance criteria at this stage indicates the proposed projects may not be evaluated using this “short term procedure”. Care should be used in assessing pertinent portions of the technical information of items 2a through d above before completing the final review of compliance.

2/ Negative responses to one of the compliance criteria at this stage indicates that the proposed project does not comply with guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the “short form evaluation process” is inappropriate.

3/ If the dredged or fill material cannot be excluded from the individual testing, the “short form evaluation process” is inappropriate.

Appendix C. 30 Day Public Review Period Comments

Pursuant to 40 CFR 1501.4(e)(2) and ER 200-2-2 Procedures for Implementing NEPA the draft EA and draft FONSI will be circulated to interested agencies and the public for a minimum 30 calendar day public review period. This period began December 7, 2006 . Comments received from the public are presented in this appendix to the EA.

**THIS SECTION WILL BE EDITED FOLLOWING THE 30-DAY
PUBLIC REVIEW OF THE DRAFT EA AND FONSI.**