

Allegheny River Study

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U.S. Department of the Interior  
Heritage Conservation and  
Recreation Service  
Northeast Regional Office  
Philadelphia, PA

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September 5, 1980

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## Introduction

During the spring of 1980, the U.S. Forest Service was designated by the Secretary of Agriculture to act as the lead agency in a multi-disciplinary, Congressionally mandated study of the Allegheny River. At this time, the Forest Service issued an invitation to the Northeast Regional Office of the Heritage Conservation and Recreation Service (HCRS) to join the study team as a principal participant. The purpose of the study was to ascertain the suitability of the river's middle section, Kinzua Dam to East Brady, for potential inclusion in the National Wild and Scenic Rivers System.

At the present time, there are twenty-nine rivers within this national system, and as such, all have met the criteria of the National Wild and Scenic Rivers Act. In order to do so, a river or stream must meet the following minimum criteria:

1. be five miles or more in length
2. be a free-flowing river or stream (rivers may have undergone impoundment or diversion in the past)
3. be relatively undeveloped
  - . may be developed for the full range of agricultural uses and can include small communities as well as dispersed or clustered residential developments
  - . may be readily accessible by road or railroad
4. be adjacent to or within a related land area that possesses an outstandingly remarkable geologic, ecologic, cultural, historic, scenic, botanical, recreation or other similar value (interpreted to mean an area of multi-state or national significance)

The Allegheny has been the focus of previous study efforts. A similar Congressionally mandated study conducted in 1973, of the river's lowermost section, East Brady to the river's confluence with the Monongahela River in Pittsburgh, concluded that the section did not warrant inclusion into the national system. The section did not meet the Act's specifications. There was excessive development, numerous impoundments and alterations to the natural flow, and a marked lack of nationally significant resource values. At that time, however, a preliminary investigation recommended that the middle section be considered for future, in-depth study.

#### HCRS Involvement

For the past four years, HCRS has been conducting inventories and evaluations of rivers and streams throughout the nation. The purpose of these studies has been to prepare an inventory, or list, of the nation's rivers and streams which meet the Act's minimum criteria and are eligible for further study, and/or potential inclusion within the national system. In this case, the Allegheny River Study also offered this agency with an excellent opportunity to better coordinate its Inventory procedures, methodology, and input with that of the Congressionally authorized Wild and Scenic Rivers Studies. The evaluative study process used by HCRS maintains the ability to identify river corridor areas of both future potential and concern, and in a relatively efficient, expedient, and cost effective manner.

Study Findings. Part I - General Conclusions

After an in-depth review, evaluation and site inspection of the river corridor from Kinzua Dam in Warren County, to East Brady in Armstrong County, a total distance of 128 miles, no segments of the Allegheny River were found to meet the minimum criteria of the Wild and Scenic Rivers Act.

The Allegheny River from Kinzua Dam to East Brady has been found to be generally too developed to meet the parameters established by the Act. The specifications of the Act are fairly specific and the river segment exhibits excessive levels of non-permissible land development uses. This suggests that consideration of river conservation alternatives and strategies shall be a major component of the ongoing examination of the Allegheny River.

Study Findings. Part II - Methodological Review:

All free-flowing rivers in the United States have been or are undergoing assessment and review as mandated by the National Wild and Scenic Rivers Act. The purpose of this Nationwide Rivers Inventory is to delineate, by physiographic section, the basic scope of the National Rivers System by inventorying and evaluating all of the free-flowing natural rivers in the nation. Due to the magnitude and diversity involved in such an endeavor, a standardized resource inventory and evaluation process has been developed by HCRS. This process has been used in reviewing the Allegheny River segment(s) from Kinzua Dam to East Brady, Pennsylvania.

The inventory process is researched through a review of USGS quadrangle sheets for the specified river segment, and on-site surveys using aerial reconnaissance and video-taped records of the corridor. Upon compilation of the quadrangle maps, a river corridor of  $\frac{1}{4}$  mile from each bank is mapped. This is generally done with the aid of drafting dividers in order to insure accuracy. After the study corridor width is mapped, the river segment is reviewed for land uses which have been determined to be inappropriate for wild and scenic rivers (i.e., active strip mines, major airports, industrial complexes, major dumps or landfills, major gas or oil fields, major railroad yards, four-lane highways parallel, power plants, villages, etc.). Any section of a river or stream possessing one or more of these land uses within the quarter mile corridor was dropped from consideration or disqualified.

For those remaining segments, a detailed analysis of corridor development is then conducted. This analysis evaluates the river corridor, its resources and development, on a mile-by-mile basis. Points are awarded within a development hierarchy which places the least penalty on the lowest levels of human intrusion. An example of this evaluative level is evidenced in the relatively low point awards for primitive or unpaved roads and trails. On the opposite end of the spectrum, paved road bridges of four lanes, sewage plants, apartment complexes, hospitals and villages are given the highest point total. They are evaluated as exhibiting the most development, the most visible evidence of human intrusion.

It is important to remember that the intent of the Act is to protect and preserve natural or relatively undeveloped river resources. As such, a low level degree of settlement and land use development is one filter through which rivers must pass to be eligible for the National System.

As a final stage, the mile-by-mile point awards are totaled and averaged on a continuous segment-by-segment basis. From a wealth of Congressionally authorized river resource reviews and study comparisons compiled during a twelve year period (1968-1980), a segment average of approximately 100 points has been determined as the uppermost threshold for the most developed rivers. Rivers and river segments in excess of the 100 point per mile average are necessarily disqualified from the Inventory due to excessive development. Rivers within this development parameter that also possess resource values of national significance are eligible for further study and/or inclusion into the National System of Wild and Scenic Rivers.

Study Findings. Part III - Discussion of Findings

The inventory and evaluation of the Allegheny River from Kinzua Dam to East Brady indicated that neither the entire section, nor any segments, successfully meets the minimum criteria as specified by the National Wild and Scenic Rivers Act. Four segments were identified and subsequently reviewed.

They are as follows:

- . Kinzua Dam to Knight Island . . . 6 miles
- . Buckaloons Recreation Area to the Town of Tidioute . . . 11 miles
- . Tidioute Island to Alcorn Island . . . 28 miles
- . Town of Venango to the Town of Emlenton . . . 27 miles

An additional segment from below the Town of Emlenton to the Town of East Brady was dropped from evaluation during the early stages of the review process. This was due to the presence of disqualifying elements and a resultant insufficient amount of mileage within the segment (no continuous five mile segments). The most warranted disqualifying element was the persistent presence of strip mining activity within the corridor.

The remaining discussion of the study findings will concentrate on the four segments that were reviewed. A comprehensive review of their land use development conditions will be discussed and presented as four major findings.

Finding #1. River Corridor Land Use Development

The Allegheny and its segments were found to be ineligible due to levels of river corridor land use development in excess of those levels normally permitted under the National Wild and Scenic Rivers Act.

These results were obtained through a detailed river corridor development review (on a mile-by-mile basis). All surface elements were cataloged and an average level of development was defined for each segment. The following table lists these averaged values.

Table #1: Average River Corridor Land Use Development Index

Kinzua Dam to Knight Island	299 points
Buckaloons Recreation Area to Tidioute	290 points
Tidioute Island to Alcorn Island	246 points
Venango to Emlenton	208 points



It is important to note that all averaged values are in excess of the permissible threshold mark for land use development. The levels of development found on the Allegheny are too high for a river or stream to be suggested for further study and/or inclusion in the National System of Wild and Scenic Rivers. More importantly, no Congressionally authorized study river within the northeastern region with a comparable level of development has been designated, or proposed, to be in the system. Rivers of comparable size and representation that have met the Act's prerequisites are the Delaware River from Callicoon to south of Hancock (98 points), the Shepaug River from the Housatonic River to the Shepaug Reservoir (65 points), the Housatonic River from North Kent to the Massachusetts state line (92 points).

Finding #2. Distribution of Residential Structures

The Allegheny and its segments were found to be ineligible due to excessive numbers and distribution of residential structures throughout the corridor's segments.

In a very general sense, the Allegheny River and its segments were found to be ineligible due to excessive levels of development. Of primary importance was the number of residential structures within the segment corridors.

A breakdown of this pattern is as follows:

Table #2: Total number of residences (unincorporated by municipal boundaries)

1. Kinzua Dam to Knight Island	210
2. Buckaloons Recreation Area to Tidioute	524
3. Tidioute Island to Alcorn Island	767
4. Venango to Emlenton	587

On an averaged per mile basis, each segment contained more residential units per mile than is affordable under the 100 point threshold provision. Residential dwelling units are rated on a point designation of 5 points per unit. A total of more than 20 units and no other intrusions per mile, which is highly unlikely given the nature of development, presents a threshold situation of 100 points. Such a situation, therefore, produces high levels of development and eventual disqualifications. As such, the following table serves to reinforce Finding #2 by listing the average number of units per mile:

Table #3. Average number of residential units per mile

1. Kinzua Dam to Knight Island	35 residences/mile
2. Buckaloons Recreation Area to Tidioute	48 residences/mile
3. Tidioute Island to Alcorn Island	29 residences/mile
4. Venango to Emlenton	21 residences/mile

Finding #3. Corridor Shoreline Development

The Allegheny and its segments were found to be ineligible due to excessive levels of shoreline disturbance in the form of parallel roads, railroads, and utility rights-of-way.

Although the corridor is approximately three-quarters forested and in a natural-like state, the four segments are punctuated by a total of twenty-six cities, towns and villages. As part of the support network for these municipal units and their associated industries, a major percentage of the corridor's shoreline is disturbed by parallel roads, railroads and utility rights-of-way. In the upper two segments, Kinzua Dam to Knight Island and Buckaloons Recreation Area to Tidioute, this represents a 100%

level of intrusion. Both segments are paralleled by road and/or railroad their entire length. The lower two segments, Tidioute Island to Alcorn Island and Venango to Emlenton, are not continuously paralleled by transportation lines, but areas free from intrusion are the exception, not the rule.

**Finding #4. Natural Resource Development**

The Allegheny and its segments were found to be ineligible due to the intrusion of resource extraction related industries within the corridor.

A further condition of intrusion, one of current and future significance, is the existence of mining and resource extraction related industries.

As specified in the Act, both strip mining operations and oil and gas fields have been defined to be disqualifying elements. Within the HCRS review process, individual gas well heads were awarded the lowest pointages, oil well heads, a middle ground value, and sand and gravel operations, the most significant. There were few oil and gas sites within the upper two sections, but an increasing level of development within the lower two sections. The following table lists these findings in a comparative matrix:

Table #4: <u>Extractive Industries</u>	<u>gas well heads</u>	<u>oil well heads</u>	<u>sand/gravel operations</u>	<u>small strip mines</u>
Kinzua Dam to Knight Island	31			
Buckaloons Recreation Area to Tidioute	4	1		
Tidioute Island to Alcorn Island	7	230	1	1
Venango to Emlenton		80	9	1

Study Findings. Summation

In summation, it is the finding of the Heritage Conservation and Recreation Service's review of the Allegheny River from Kinzua Dam to East Brady, Pennsylvania that no segment of the river appears to meet the minimum criteria for further study or inclusion into the National System of Wild and Scenic Rivers. The entire river exhibits excessive levels of development and in short, does not meet the provisions of the National Wild and Scenic Rivers Act as detailed in the Nationwide Inventory process, the System as it is now established, and by the criteria of the Act.

In conjunction with this position, research for the "Outstandingly remarkable" provision was not completed. A tentative review revealed several areas of significance, but most had little to do with the river corridor environment. This stipulation is a specific requirement of the Act, and in association with the finding of non-eligibility, a more in-depth review for outstandingly remarkable information was deemed unnecessary.

Study Findings. Part IV - Options

The Appalachian Plateau Province-Kanawha Section under review for this Congressionally mandated study is one borne out of contrast and conflict. In earlier days, settlement patterns clashed between indigenous populations and westward moving colonists. As the new inhabitants settled and prospered, new transportation, communication, and commercial patterns emerged. The area's natural resource base of timeber, oil, bas and coal, presented a growing nation with a tremendous amount of wealth which was viewed as something to develop and spend. As such, vast areas of the natural environment were randomly exploited.

Many of these scarred areas are now evidencing signs of a healthy recovery. Much of the initiative is due to strengthened environmental statutes and concerns. The natural environment is now seen as a more complete, holistic resource, but the conflicts still persist. Those of today are no less intense, and although quite different in some very obvious ways, quite difficult to manage and forecast in some very subtle ways.

The plateau and river valley are under competition for the continuing need for the mineral and petro-chemical resources found within the basin and a growing awareness of the recreational attractions inherent to the basin. These two fundamentally different activities need not be mutually exclusive. The possible coexistence of diverse activities such as these affords a relative amount of flexibility for both natural resource and recreation planning at other levels.

Within this framework, there are several planning options that the Heritage Conservation and Recreation Service feel may be applicable, and of greater pertinence, to the Allegheny River. These actions will be subdivided into categories (Federal, State, local actions) and discussed in brief. This section of the paper is not meant to be either definitive or policy/issue-oriented. It is offered as possible suggestions and alternative courses of action due to the agency's finding regarding the Allegheny's inclusion into the National Wild and Scenic Rivers System.

. Federal action

Although the Allegheny has been found to not qualify for inclusion into the national system, other Federal actions may be possible. One such action to be investigated is the National Recreation Area program. These areas are designed to establish outdoor recreation opportunities in those areas where other programs (Federal and non-Federal) will not fulfill high priority recreation needs. National Recreation Areas have to be established by an Act of Congress and similar to wild and scenic river designation, have to meet defined program criteria.

. State action

The Commonwealth of Pennsylvania presently maintains a successful State rivers program. One alternative action, at the State level, would be to investigate the potential to designate the Allegheny as a State Scenic River. In conjunction with such an action, although not dependent upon it, the State has received several proposals for State administered parks within this section of the river. Earlier proposals to the State have suggested the creation of State river-oriented parks in the vicinity of Emlenton to Franklin and Oil Creek. Similar State-initiated proposals, in association with State wild and scenic river designation, offer both a viable and traditional alternative to Federal action.

. Local action

A very sound and plausible option would be to capitalize on the support the Allegheny has generated at the local level. Various conservation and resource management actions might include such programs as the development of local

zoning districts, the institution of conservation easements, or an expanded local role for organizations like the Western Pennsylvania Conservancy. In any case, there would be a need to further involve the valley's inhabitants, especially the increasing number of recreational users, and organize effective citizen coalitions. Similar initiatives have proven to be quite effective in other localities throughout the region (i.e., Farmington River Watershed Association, Connecticut; Passaic River Coalition, New Jersey; Save the River, New York).