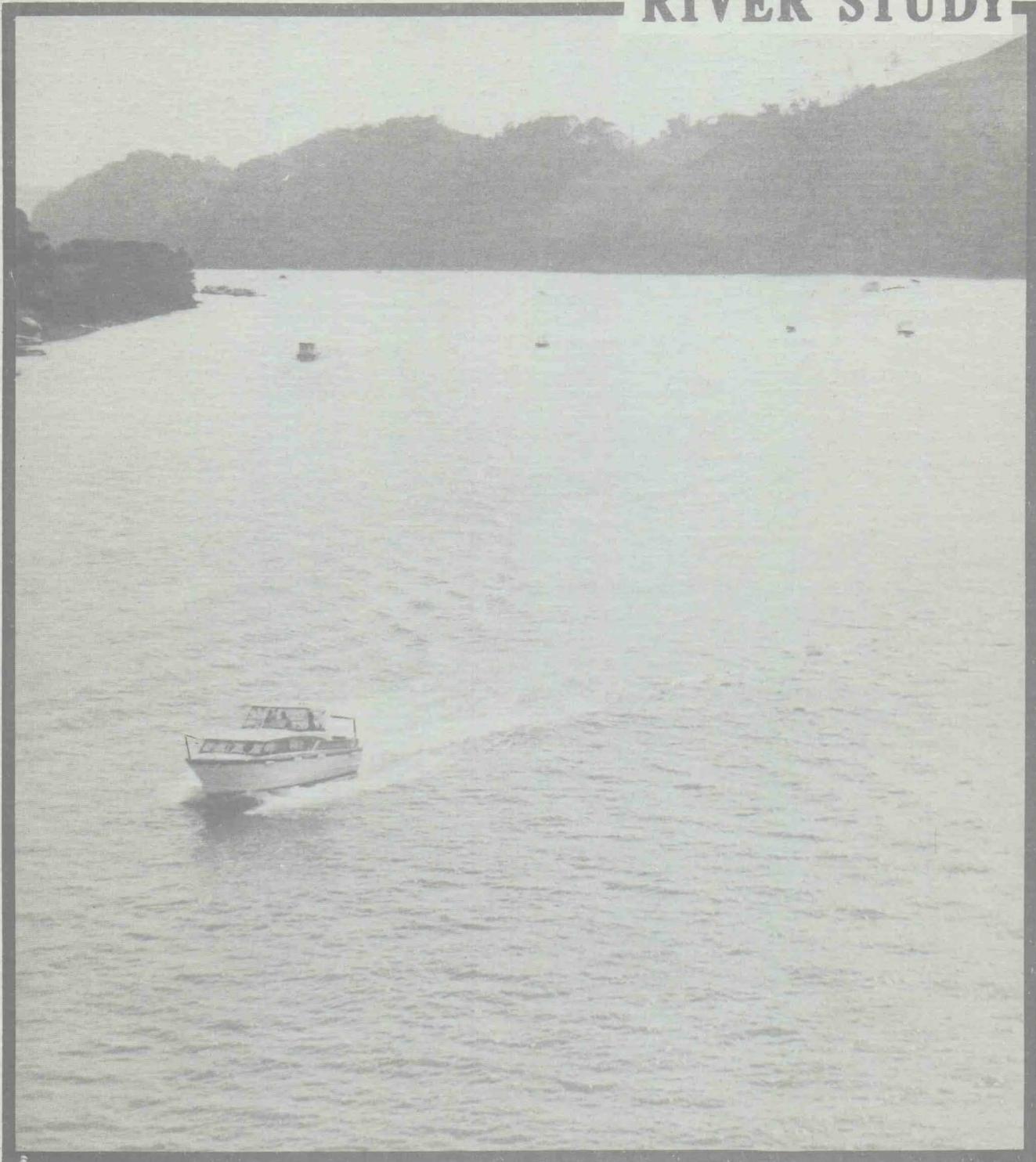


THE LOWER ALLEGHENY RIVER STUDY



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION

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responsibilities for water, fish, wildlife, mineral,
land, park and recreation resources. Indian and
Territorial affairs are other major concerns
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The Department works to assure the wisest
choice in managing all our resources so each
will make its full contribution to a better United
States—now and in the future.*



U.S. DEPARTMENT OF THE INTERIOR
Rogers C. B. Morton, Secretary

Bureau of Outdoor Recreation
James G. Watt, Director

THE LOWER ALLEGHENY RIVER STUDY

Report of the
Interagency Field Task Force

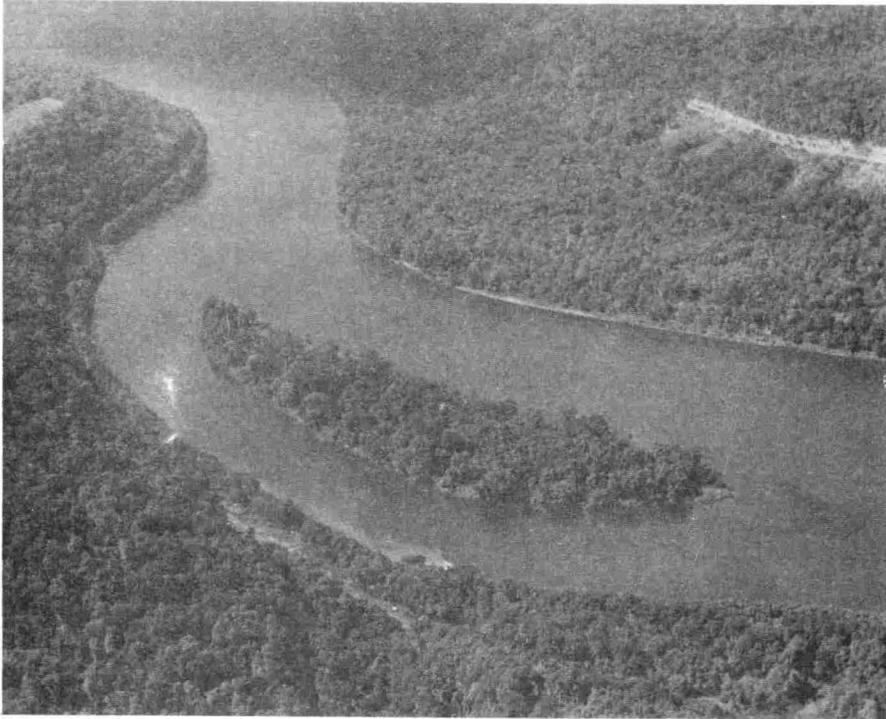
APRIL 1973

THIS REPORT WAS PREPARED PURSUANT TO PUBLIC LAW 90-542, THE WILD AND SCENIC RIVERS ACT. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THIS REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE BUREAU OF OUTDOOR RECREATION, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AGENCIES.

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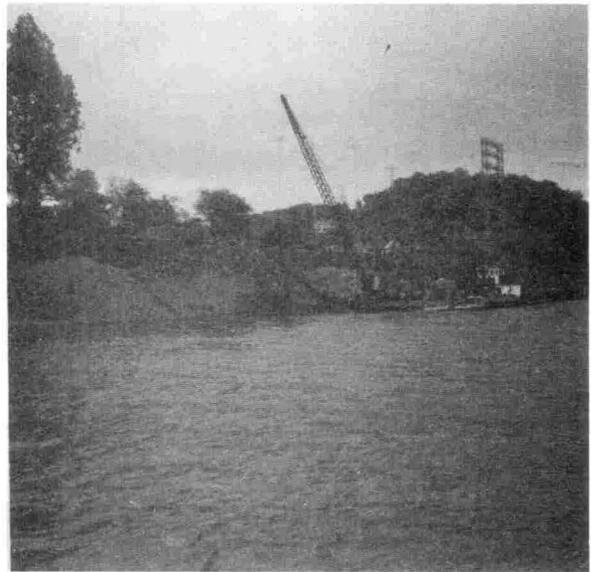
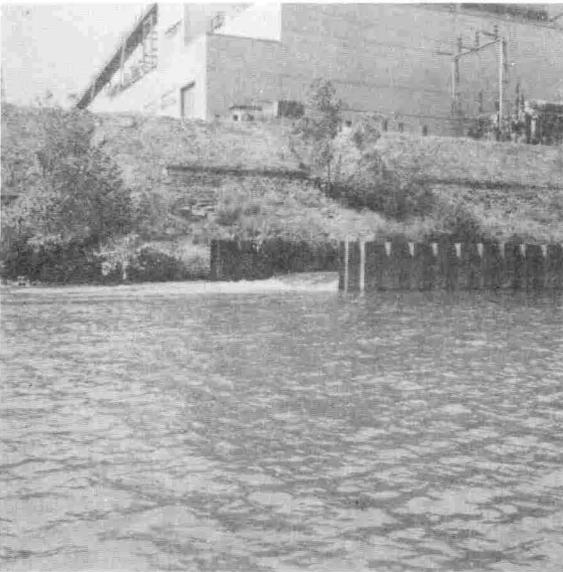
UPSTREAM VIEW



DOWNSTREAM VIEW



LOWER ALLEGHENY RIVER SCENES



INTRODUCTION

I. INTRODUCTION

This report was prepared under authority contained in Public Law 90-542, the Wild and Scenic Rivers Act, which requires study of the Allegheny River from East Brady, Pennsylvania, to its confluence with the Monongahela River at Pittsburgh, Pennsylvania, to determine its suitability for inclusion in the National Wild and Scenic Rivers System.

This segment of the Lower Allegheny River, from river mile 0.0 to 69.5, is within or bounded by Allegheny, Westmoreland, Butler, Armstrong, and Clarion Counties, which comprise the study area.

The Bureau of Outdoor Recreation has led this study on behalf of the Department of the Interior. This report was prepared through the combined efforts of an Interagency Field Task Force made up of the following representation:

U. S. Department of Agriculture	Forest Service
U. S. Department of the Army	Corps of Engineers
U. S. Department of the Interior	Bureau of Mines Bureau of Outdoor Recreation Bureau of Sport Fisheries & Wildlife National Park Service
U. S. Environmental Protection Agency	Wheeling Field Office, Region III
Commonwealth of Pennsylvania	Department of Environmental Resources
Ohio River Basin Commission	

The assistance of other agencies and individuals who contributed to this study is gratefully acknowledged.

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

II. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The 69.5-mile segment of the Lower Allegheny River from East Brady to its confluence with the Monongahela River has been evaluated in accordance with the requirements of the Wild and Scenic Rivers Act (Public Law 90-542) and the general criteria contained in the "Guidelines for Evaluating Wild, Scenic, and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System..." published jointly by the U. S. Department of the Interior and U. S. Department of Agriculture in February 1970.

Findings

Flow Condition -- The entire study segment consists of a series of slack-water pools formed by eight navigation dams. As a result, the free-flowing condition has been eliminated and the flow is extremely sluggish. Falls are produced by the dams but natural white-water is non-existent. Flood control dams elsewhere in the basin also modify extreme flow conditions in the main stem.

Water Quality -- The variety and extent of pollution in the Lower Allegheny, particularly in the lower 30 miles, limits recreation values. The Lower Allegheny does not meet the "Aesthetics—General Criteria" as defined by the National Technical Advisory Committee on Water Quality in the Federal Water Pollution Control Administration's Water Quality Criteria, April 1, 1968, and the water quality of the river does not meet the criteria for fish, other aquatic life, and wildlife contained therein. In addition, the Pennsylvania Water Quality Standards for the Allegheny have been violated. When these standards are met, the Lower Allegheny would probably support the propagation of the forms of life normally adapted to the river. However, the acid mine water problem contributed by Kiskiminetas drainage will be particularly difficult to remedy.

Aesthetic Character -- The river corridor has been modified considerably and contains innumerable man-made intrusions which reduce its scenic and aesthetic values, particularly along downstream stretches. These unsightly intrusions are primarily urban and industrial development, summer homes and trailer camps, mineral exploitation and refuse heaps, pipeline and powerline crossings, and road and railroad scars. Land transportation networks are within sight or sound of the entire study segment. Air and water pollution is sometimes readily visible. Its sluggish waters are discolored or opaque due to the presence of various types of pollutants and sediment from dredging operations. A number of large wooded islands break up the open expanses of the river; two of these islands are scarred and fragmented by gravel operations. "Yellowboy" (iron hydroxide deposits) stain the shoreline downstream from the entrance of the Kiskiminetas River. The river lacks variety of flow because of the controlling structures that have been built along its course. The woodlands exhibit evidence of past timber harvest. Remaining semi-natural stretches are scarce.

Recreation -- Although the canalized Lower Allegheny is popular boating water and can accommodate many types of watercraft, unnatural flow conditions, waters unsafe for primary contact recreation, and offensive sights, sounds and smells, all combine to reduce the value of the available recreation experience. In order for this condition to be adequately improved overall, various large scale changes would have to be implemented. The accomplishment of such an immense task would not be feasible within the foreseeable future.

Fish and Wildlife -- Fishery resources in the Lower Allegheny vary in relation to the water quality. Where the water quality is good, a wide diversity of game species predominate; in polluted waters, both the range and diversity of species present are restricted and pollution-tolerant species predominate.

Wildlife resources within the river corridor are good and a diversified assortment of species are present where conditions permit.

Conclusions

The Lower Allegheny River and its immediate environment, between its mouth and East Brady, should not be recommended for inclusion in the National Wild and Scenic Rivers System. This conclusion was based primarily on the following:

1. The Lower Allegheny and its immediate environment does not possess any of the outstandingly remarkable values as required by Section 1(b) of Public Law 90-542.
2. The Lower Allegheny is not in a free-flowing natural condition nor is it capable of being readily restored to that condition due to a succession of eight navigation dams and accompanying pools.
3. The study segment does not possess high quality water nor does it meet the recommended criteria of the National Technical Advisory Committee on Water Quality. Several parameters of the Pennsylvania Water Quality Standards are being violated. The Allegheny upstream from the entrance of the Kiskiminetas River may be capable of being restored; however, the lower 30 miles of the Allegheny will continue to present a water quality problem.

When viewed in its entirety, and in consideration of the overall unsightly development present, the Lower Allegheny River and its immediate environment does not meet the criteria required for inclusion in the National Wild and Scenic Rivers System.

Nevertheless, it should be recognized that the Lower Allegheny possesses a recreation potential which, although not nationally significant, warrants consideration for protection and development for the benefit and enjoyment of recreators who visit or live and work in the Allegheny River Valley.

Recommendations

Although the natural environment of the river corridor has been modified extensively along most of the Lower Allegheny, there are three short scenic stretches in the upper portion of the study segment. These are between East Brady and Philipston (river mile 68 to 66), the Seven Hills area near Rimer (river mile 60 to 58), and the lower section of Pool 6 (river mile 38 to 36.3) including Nicholson Island. Other islands within the Lower Allegheny which have up to the present time escaped extensive modification include Donleys, the upper segment of Fourteen Mile, Nine Mile, and Six Mile Islands.

The following recommendations are provided as guidelines and are consistent with the need to give recognition to recreation needs and opportunities and the environmental quality values of the area.

1. Local Land Use Controls -- It is recommended that county and local governments as well as individuals and conservation groups participate actively in developing effective programs of wise land-use controls for the above-mentioned islands and riverside areas. The land use and political structure of the river area vary significantly within the study segment; therefore, it is essential that county and local governments work together in an effective manner to safeguard those areas which have, as yet, escaped exploitation.
2. Recreational Development -- It is recommended that programs be established to provide for the protection and enhancement of these areas. Additional public access to the river should be provided to meet the ever increasing demand for water-oriented outdoor recreation.
3. Accelerate Water Pollution Abatement Program -- The Commonwealth of Pennsylvania has a current statewide water pollution abatement program. In addition to the ongoing program, the Commonwealth has initiated a program of comprehensive water quality management planning in response to recently established regulations regarding Federal grants for construction of waste treatment facilities. It is recommended that the current water pollution abatement program be accelerated in those areas where specific recreational enhancement is desired by individual

counties. It is also recommended that the local desires for recreational enhancement and environmental protection be given proper consideration in the Commonwealth's planning program.

4. Archeological Survey -- There is a significant archeological resource base in the Allegheny River Valley; however, many sites have been partially or completely destroyed. Additional sites are being disturbed each year. It is recommend that, if the information to be gained in this area is to be salvaged, properly funded archeological programs should be initiated. Salvage archeology should be conducted at the most familiar sites and a complete survey and research for other reported sites should be made in order to assess their importance.
5. Study of the Upper Allegheny River -- During the course of the Lower Allegheny River study, the Bureau of Outdoor Recreation requested that the field task force conduct a quick feasibility investigation of the Allegheny River upstream from the study segment.

As a result of the feasibility investigation, it is recommended that the Upper Allegheny, between East Brady (river mile 70) and Kinzua Dam (river mile 198), be considered for future, indepth study to determine whether it qualifies for inclusion in the National Wild and Scenic Rivers System. This study should be initiated as soon as possible in order that adverse development patterns can be identified and managed in a manner that does not detract from the significant scenic, recreational, fish and wildlife, and other values present. An amendment to Public Law 90-542 would be required in order to implement this recommendation.

The most scenic stretches lie between Buckaloons Recreation Area and Oil City (50 miles) and between Franklin and Emlenton (35 miles). These segments possess an overall natural-like appearance and the recreationist receives the impression of semi-isolation. The former stretch contains many large wooded islands; the latter stretch, big river bends rimmed with boulders. The river is contained by forested hills with a local relief of 300 to 800 feet. Paralleling roads and railroads are well-screened and portions of these stretches are free of land transportation networks. The volume of flow is adequate to accommodate canoes and flat-bottomed boats the year-around. The water quality is presently sufficient to support a desirable sport fishery, and with present pollution abatement programs, upgrading of the water quality could be achieved within a reasonable time frame. Wildlife is abundant and varied, adding to the aesthetic quality of the river environment.

A 1966 feasibility study of a portion of the Allegheny River Valley conducted by Fahringer, McCarty, Grey and Associates for the Western Pennsylvania Conservancy, proposed among other things, that two parks be developed along the Upper Allegheny. One of the parks would extend from Emlenton (river mile 91) to Franklin (river mile 125); the other park, from Tionesta (river mile 153) to Brokenstraw Creek (river mile 183). The Conservancy has proposed that the U. S. Forest Service acquire the lands west of Allegheny National Forest between Tionesta and Brokenstraw Creek to protect the natural beauty of the river valley. The Forest Service is now in the process of acquiring the islands and parcels of land along the west side of the Allegheny River.

Summary

The Lower Allegheny River, although not of national significance, should receive consideration for the protection and development of local recreational needs. The Upper Allegheny River, however, is deemed worthy of indepth study to determine whether it qualifies for inclusion in the National Wild and Scenic Rivers System.

REGIONAL SETTING

III. REGIONAL SETTING

History and Archeology

The Allegheny River Basin has been occupied by man for more than ten thousand years. There are 37 archeological sites of particular interest along the study segment; information on many other sites in the area is limited. Archeological records reveal that the first Indians were nomadic people who lived by hunting. Later, they became village dwellers who not only hunted but grew crops, made pottery, and worked with a variety of tools.

The Monongahela Indians, who lived along the waterways of the basin, may have descended from the highly developed cultures of the Mississippi Valley. They built dome-shaped huts within stockaded villages often situated in commanding positions on hilltops, and subsisted by farming, hunting, and fishing. The culture's artistry is evidenced by finds of many stone and pottery fragments. During the early 1600's, the Monongahelas unaccountably disappeared from the area.

The fertile and unoccupied hunting ground of the upper Ohio came under the dominance of the Iroquois, who by 1700 held the balance of power between the English and French. When the Iroquois-Susquehannock war ended in 1676, the vacant lands were occupied by bands of other Indians, among them the Shawnees and Delawares who had been pushed out of their homes to the east.

English traders had followed the Delaware and Shawnee from their eastern settlements into the wilderness. Between 1734 and 1745, the Shawnees occupied Chartier's Town on the present-day site of Tarentum and for a time Pennsylvania's Indian trade centered there. Alarmed by the English trade success, France sent a military force under Celeron de Blainville into the basin to dispel the English traders and to reassert French sovereignty over the region.

French forts were established to control navigation and a number of battles of the French and Indian War followed. In 1756 Colonel John Armstrong and 300 Pennsylvania Militiamen destroyed the Leni-Lenapi Indian town of Kit-han-ne (Kittanning). Two years later, a combined force of British and Colonials moved against Fort Duquesne. Out of the ruins arose what was probably the most powerful fortress in Colonial America—Fort Pitt. Nevertheless, conflict with the Indians continued long after the war itself was over. Even though Pontiac and his Indian warriors were defeated at Bushy Run in 1763, sporadic fighting and massacres did not end until the Fort Stanwix Treaty of 1768.

Before 1840, when waterborne traffic dictated settlement patterns, Pittsburgh was a natural trading center and gateway to the West. An early railroad and canal system connected it with Philadelphia. The three rivers (Allegheny, Monongahela, and Ohio) offered an unusually dependable and economic system of transportation which helped to establish industry and commercial trade. Federal authorization started open channel improvements on the Allegheny in 1879 by removing boulders, wrecks, debris, and snags. The construction of low diversion dams and dikes facilitated rafting. After 1917, when the minimum clearance of Pittsburgh's bridges was raised, river traffic doubled. The construction of the existing series of eight navigation dams and locks was completed by 1938.

The proximity of iron ore, limestone, water power, and extensive timber for charcoal encouraged the spread of the iron furnace industry in the area. This early technology was the forerunner of the highly developed iron and steel industry. The remains of some stone furnaces can be found along the tributaries of the Allegheny. These include Redbank Furnace in Clarion County and Bear Creek, Monticello, and Ore Hill furnaces in Armstrong County. One of the most prominent of the western Pennsylvania furnaces was the Great Western Iron Works at Bradys Bend. It contained forges and rolling mills as well as four furnaces and may have been the largest furnace of the 1800's. The first T-rail was reported to have been manufactured here. Two of its furnaces, in ruins but still recognizable, and an enormous pile of slag are all that remain. Many other furnaces, long abandoned to the elements, are not recognizable today. In some cases only slag dumps remain.

By the 1850's the region was supplying important quantities of raw materials to the eastern and southern states, while manufacturing glass, iron, gunpowder, cloth, pottery, and building brick for shipment to the expanding West. Coal mining, which began more than two centuries ago, is still in progress. Several billion tons of bituminous coal, much of it recoverable by strip mining, is still available for removal. Coal in the nearby Connellsville area was excellent metallurgical coking coal for the iron and steel industry and coal by-products were the primary ingredient for the organic chemical industry. Brine deposits gave rise to the chemical industry, while natural gas was available for the glass industry.

The petroleum industry was born near Titusville in 1859, when E. L. Drake drilled the world's first commercial oil well. An oil rush followed and then generally declined to the present time. Many old fields are used today to store gas piped from the Southwest. Oil from the upper basin and timber from the virgin forests were moved down the Allegheny in great quantities. Timberlands were ravaged by fire and exploitation but are now recovering.

During the Civil War period, manufacturing and mining within the region were of tremendous importance to the industrial might of the Union. Between 1880 and 1900 Pittsburgh produced more industrial millionaires than any other city in the world and the Pittsburgh district became an industrial giant. Its production of armaments contributed significantly to the Nation's efforts during the world wars.

Climate

The humid, mid-latitude climate of the area is characterized by frequent changes in weather but is relatively free from violent and extreme atmospheric conditions. Most of the winter period is cold enough to retain a snow cover of varying depths with temperatures in the 20's and 30's. In the summer, daytime temperatures are usually in the 70's and 80's and drop into the 60's and high 50's at night. More than 40 inches of precipitation is fairly evenly distributed throughout the year and provides a dependable and adequate source of moisture. Annually, about one-half of the days are cloudy; one-third, partly cloudy; and the remainder, clear. Winds are westerly and usually moderate.

Topography

The Allegheny River Basin, located within the dissected Appalachian Plateau, is the uppermost portion of the Ohio River drainage basin. The Allegheny River Valley is bordered by wooded, broad-topped hills and terraces from 300 to 600 feet above the river. Most terraces are above high water level. Valleys vary from narrow with steep sides to broad with gentle side slopes. Progressing downstream, hills become less pronounced and clearings for development more numerous. Hills in the area vary from about 700 to 1600 feet above mean sea level but most are between 1000 and 1300 feet m.s.l. Local relief approaches 800 feet in some localities.

Geology and Soils

The area is underlain by great bituminous coal beds of the Pennsylvanian Period. The strata also contains shale, clay, limestone, grey sandstone, and conglomerate. High grade crude oil and natural gas fields occur in the area. The most common fossils are the remains of land plants.

Soils on the valley sides are weathered from interbedded shale and fine-grained sandstone. These soils are mostly steep to very steep and very stoney or rocky. From East Brady to Mosgrove, soils are shallow to moderately deep, medium textured, and well-drained on gently sloping to very steep uplands. The erosion hazard is moderate to severe. From Mosgrove to Pittsburgh, soils are deep and medium textured on stream terraces and flood plains and present only a slight erosion hazard.

Forest Cover

Nearly one-half of the five-county area is in woodland, primarily secondary and tertiary growth hardwoods. Oak-hickory is the predominant type. Other common hardwoods include elm-ash-maple and aspen-birch types. Softwoods are mostly white and pitch pine. Hemlock and rhododendron grow along small tributary streams.

Land and Water Use

Land use is highly diversified, especially in the vicinity of Pittsburgh where numerous types of man-made structures are interspaced with woodland, brush, and fields. Open space is more prevalent farther upstream, however, where there is less development. Farmland and oil and gas fields are more common upstream. Evidence of coal strip mining is widespread. Most of the remaining area is woodland in various stages of growth. Some of this woodland is public recreation land.

There is considerable variation in the uses of the area's water bodies. The three rivers area provides an excellent river-oriented location for the development of the existing urban and industrial complex. These big rivers receive substantial industrial, commercial, and recreational use. Commercial traffic on the Allegheny has been steadily increasing and in 1970 amounted to nearly 6 million tons. About two-thirds of the Allegheny lockages have been for recreational boating. Commercial and recreational lockage progressively decreases in the upstream pools. Sand and gravel are dredged from the river bottoms. Impounded waters provide for public and industrial water supply, flood control, recreation, hydroelectric power generation, mechanical water power, and stream gaging.

Transportation

Long distance access is excellent. Four major east-west and four north-south highways traverse the area. Three of these -- I-80, the Pennsylvania Turnpike, and I-79 -- are high-speed limited-access roads. Many local roads traverse, parallel, or are in close proximity to the river. Heavily travelled Pennsylvania Route 28 parallels the west bank from Pittsburgh to Kittanning. Partially completed Allegheny Valley Expressway will provide quick access within the river corridor. Seventeen highways bridge the study segment and only a few short upstream stretches are not visible from roads.

Long distance bus and railroad passenger service is available at Pittsburgh. Local bus routes parallel the river. Although five railroad bridges traverse the study segment, railroad passenger service does not extend upstream from Pittsburgh.

The canalized Lower Allegheny is accessible from the Nation's interior waterways via the Ohio River. It can also be reached by boat from the canalized Monongahela River. Marinas and private boat docks are numerous in downstream reaches. River excursions are available in the Pittsburgh area during the warmer months. A ferry runs from the right bank to Twelve Mile Island providing access.

The Greater Pittsburgh Airport accommodates regularly scheduled flights. Limited local air service is available at several locations in the area.

Population

One hundred communities are located within one mile of the study segment. Ninety-two of these are within one-half mile of the river, 76 within one-fourth mile, and 51 on the riverfront. The settlements range in size from Pittsburgh—the largest city in Appalachia—to those with a few dwellings. There are more than 816,000 people in the minor civil divisions bordering the river segment.

The five-county study area population exceeded 2.2 million in 1970. It remained relatively unchanged in the 1960-1970 decade but is expected to steadily increase through 2020.

TABLE 1

POPULATION (STUDY AREA COUNTIES)

County	Land Area (Sq.Mi.)	Persons		Population		Projected Population*		
		Per Sq.Mi.	Pct. Urban	1960	1970	1980	2000	2020
Clarion	599	64	16	37,408	38,414			
Armstrong	656	115	19	79,524	75,590			
Butler	794	161	30	114,639	127,941			
Westmoreland	1,023	368	60	352,629	376,935			
Allegheny	730	2,199	95	1,628,587	1,605,016			
Total or Avg.	3,802	584	46	2,212,787	2,223,896	2,381,700	2,780,200	3,318,400

The population within a 125-mile radius is 10 million and within a 250-mile radius, 40 million.

* 1970 estimate published by Water Resources Council in 1968 was 2,234,900. Figures for 1980-2020 are adjusted applying the ratio of 1970 actual/1970 projected (99.51%) to Water Resources Council projections. (Preliminary Report on Economic Projections for Selected Geographic Areas, 1929-2020, Vol I, March 1968). Data furnished by the Bureau of Outdoor Recreation, Division of Statistics and Data Processing.

Economy

That portion of the study area containing the Pittsburgh metropolitan area has long been recognized as one of the most heavily industrialized districts in the world. Evidence of heavy industrialization, based on steel and coal, is clearly visible today in the river valleys. In upstream areas, bituminous coal production, the manufacture of glass and clay products, oil and gas extraction, and crop and dairy products are notable economic activities. Commercial river traffic is largely confined to movement of coal and coke, sand and gravel, iron and steel, and petroleum products.

The manufacturing of primary metals, and to a lesser extent fabricated metals and machinery, is still the backbone of the economy but it is gradually changing. Emphasis is now slowly swinging from blue-collar to white-collar jobs. Universities, hospitals, research laboratories, and office buildings are on the increase. On the decline are mining, agriculture, and certain manufacturing jobs. Median incomes are higher than the national average in the Pittsburgh district but are lower in upstream areas.

The Pittsburgh district is expected to retain its place as the most important center of economic activity in Appalachia. It has a strong, resilient economy but one where new job opportunities grow slowly. Employment and personal income projections, by the Bureau of Outdoor Recreation, indicate continuous increases through 2020.

Public and Private Recreation Areas

The 1965 Bureau of Outdoor Recreation Public Outdoor Recreation Area Inventory identifies 110,106 acres of land and water in Federal, State, county, and local recreation areas within the five-county study area, representing nearly five percent of the study area. Nearly one-fourth of these recreation areas consist of water and wetlands which provide a resource for swimming, boating and fishing. The larger water bodies provide for activities such as sailing, power boating, and water skiing. Of the total recreation areas, 57% is State land, 32% Federal, 8% county, and the remaining 3% is local (Table 2).

Almost all of these lands are either natural environment areas or general recreation areas which are intensively developed for a wider range of recreation activities. These recreation lands receive more than 23 million visits annually, but it is essentially day use visitation with only 84 thousand overnight visits. These lands provide nearly 15 thousand parking spaces. A wide range of recreational facilities are available, including playfields, tent and trail camps, picnic tables, swimming pools and beaches, boat slips, ski areas, golf courses, and hunting and fishing areas. There are 235 miles of foot trails and 69 miles of bridle paths.

TABLE 2

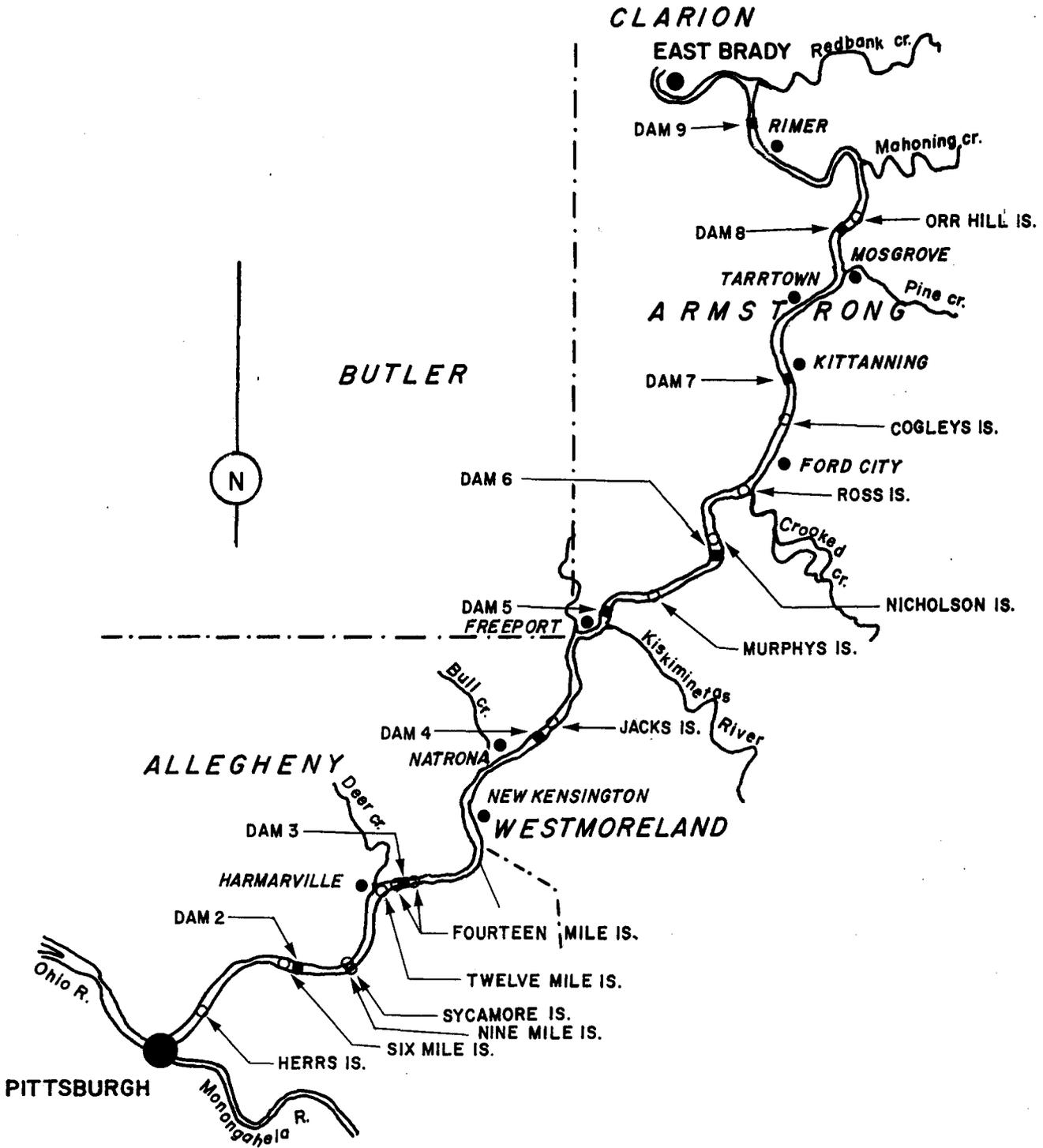
PUBLIC OUTDOOR RECREATION AREAS
(Within or bordering the five-county study area)

County	Recreation Land	Water &		Total
		Land (Acres)	Wetland (Acres)	
Clarion	Cook Forest State Park	7,821	1	7,822
	State Game Land No. 63	2,770	--	2,770
	State Game Land No. 72	2,019	--	2,019
	State Game Land No. 74	6,043	--	6,043
	Total	18,653	1	18,654
Armstrong	Allegheny River	234	9,805	10,039
	Mahoning Creek Lake (Reservoir)	2,700	200	2,900
	Crooked Creek State Park	2,130	350	2,480
	Southwest State Game Farm	190	--	190
	State Game Land No. 105	1,303	--	1,303
	State Game Land No. 137	924	--	924
	State Game Land No. 247	446	6	452
	Local Park & Recreation areas (37)	151	--	151
	Total	8,078	10,361	18,439
	Butler	Moraine State Park	12,577	3,200
Glade Run Lake Recreation Area		85	60	145
State Game Land No. 95		3,519	--	3,195
State Game Land No. 164		399	--	399
Total		16,580	3,260	19,840
Westmoreland	Conemaugh River Lake (Reservoir)	7,400	500	7,900
	Loyalhanna Lake (Reservoir)	3,200	250	3,450
	Keystone State Park	1,109	78	1,187
	Laurel Mountain State Park	493	--	493
	Linn Run State Park	621	--	621
	Loyalhanna Reservoir Management	4,500	--	4,500
	State Game Land No. 42	11,105	10	11,115
	Bushy Run Battlefield	160	--	160
	County park and recreation area	390	14	404
	Local park & recreation areas (10)	130	--	130
Total	29,108	852	29,960	
Allegheny	Mononghalea River	387	10,272	10,659
	Point State Park	36	--	36
	State Game Land No. 177	66	--	66
	State Game Land No. 203	1,246	--	1,246
	County park & recreation areas (9)	8,190	92	8,282
	Local park & recreation areas (236)	2,914	10	2,924
	Total	12,839	10,374	23,213
Grand Total		85,258	24,848	110,106

Source: U. S. Department of the Interior, Bureau of Outdoor Recreation, Public Outdoor Recreation Area Inventory -- Allegheny River Study, March 1971.

THE RIVER CORRIDOR

**LOWER ALLEGHENY RIVER
STUDY SEGMENT**



IV. THE RIVER CORRIDOR

Characteristics

The 69.5-mile study segment of the Lower Allegheny River varies from about 500 to more than 2000 feet in width. Minimum channel depths are 9 feet; maximum depths exceed 30 feet. The normal pool elevation at East Brady is 822 feet; at the confluence, 710. The mean gradient is only 1.6 feet per mile. As illustrated by the river profile on the following page, the study segment consists of a series of eight pools due to navigation dams. Each pool resembles a lake rather than a portion of the river and natural rapids are non-existent in these slow moving, flat waters. Upstream from the entrance of the Kiskiminetas River, the turbid waters of the Lower Allegheny are characteristically brownish in color due to the presence of suspended solids; after the acid-laden, algae-filled waters of the Kiskiminetas mix with those of the main stem, the Allegheny takes on a greenish cast.

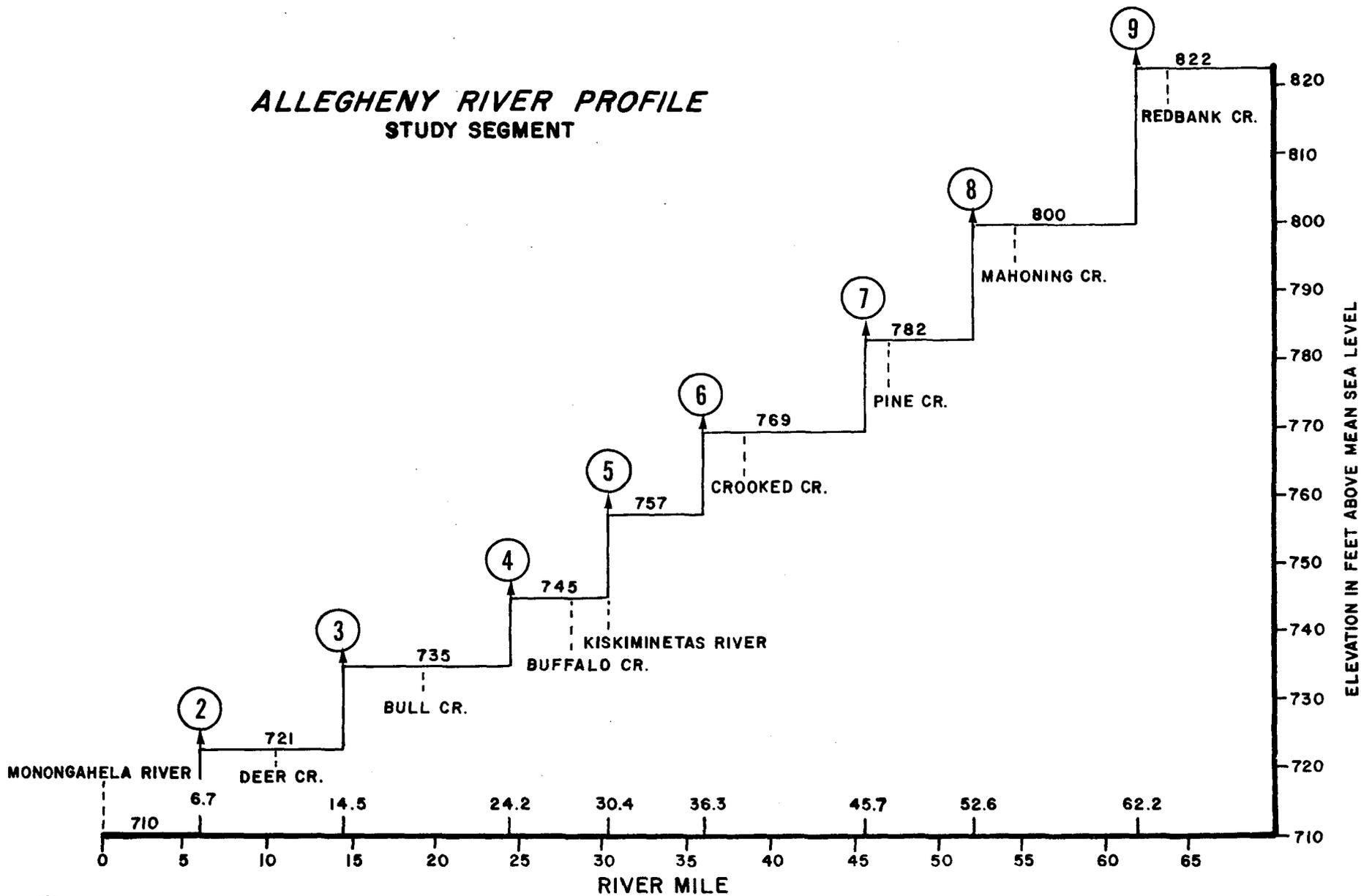
Flood plains are narrow or non-existent. Natural river channels are stable and well-defined. The bed material consists mainly of gravel, rubble, sand and silt. There are a few jutting rocks but a dozen sizeable islands or island groups lie within the reach (Table 3). Two of these islands—Nine Mile and Fourteen Mile—are owned by the Western Pennsylvania Conservancy and leased to the Three Rivers Improvement and Development Corporation (TRIAD) for recreational purposes.

TABLE 3

MAJOR ISLANDS WITHIN THE LOWER ALLEGHENY RIVER STUDY SEGMENT

<u>Name</u>	<u>River Length</u>		<u>Acreage</u>	<u>Description</u>
	<u>Mile</u>	<u>(Mi.)</u>		
Orr Hill Island Bar	53.0	0.2	--	Emerges during low water stage
Cogleys Island	43.0	0.2	9	Many small islands
Ross Island	39.5	<0.7	<50	Dredging operations
Nicholson Island	37.0	0.4	20	Entirely wooded
Donley (Murphys) Island	32.5	0.4	30	Entirely wooded
Jacks Island	24.5	<1.0	<115	Dredging operations
Fourteen Mile Is. (Upper)	14.7	0.3	11	Entirely wooded
Fourteen Mile Is. (Lower)	14.0	0.7	23	Wooded; bridge pier
Twelve Mile Island	13.0	0.9	51	Partially wooded; summer homes
Nine Mile Island	10.0	0.3	5	Partially wooded
Sycamore Island	10.0	0.4	18	Partially wooded
Six Mile Island	6.5	0.3	5	Wooded; motel complex planned
Herrs Island	2.5	0.8	46	Industrial development

ALLEGHENY RIVER PROFILE STUDY SEGMENT



○ LOCK & DAM NO.

The river segment receives 106 tributary streams and carries a large volume of water. Variations in the seasonal flow pattern have been reduced due to flood control impoundments in the upper basin and navigation dams on the main stem.

Water Resources Projects

A series of eight Corps of Engineers navigation dams and locks are spaced throughout the entire study segment, creating slack water in the canalized lower 72 miles of the Allegheny River. The impoundments are spaced at distances ranging between 5.9 and 9.7 miles apart. The dams are all fixed-crest type with lifts between pools varying from 10.5 to 22 feet. The locks are provided with single chambers, 56 feet wide and 360 feet long.

The Corps of Engineers recently constructed a concrete flood wall at Kittanning. It runs along the left bank from the abutment of Dam No. 7 extending 4,220 feet upstream. A rock and gravel bank revetment is riverward of the wall.

Six other similar authorized Corps projects for the construction of concrete flood walls along the Allegheny are either inactive or have been deferred for restudy. Three of the inactive projects are located in Pittsburgh and one each at Natrona and Kittanning. The project at New Kensington (Parnassus) has been deferred for restudy.

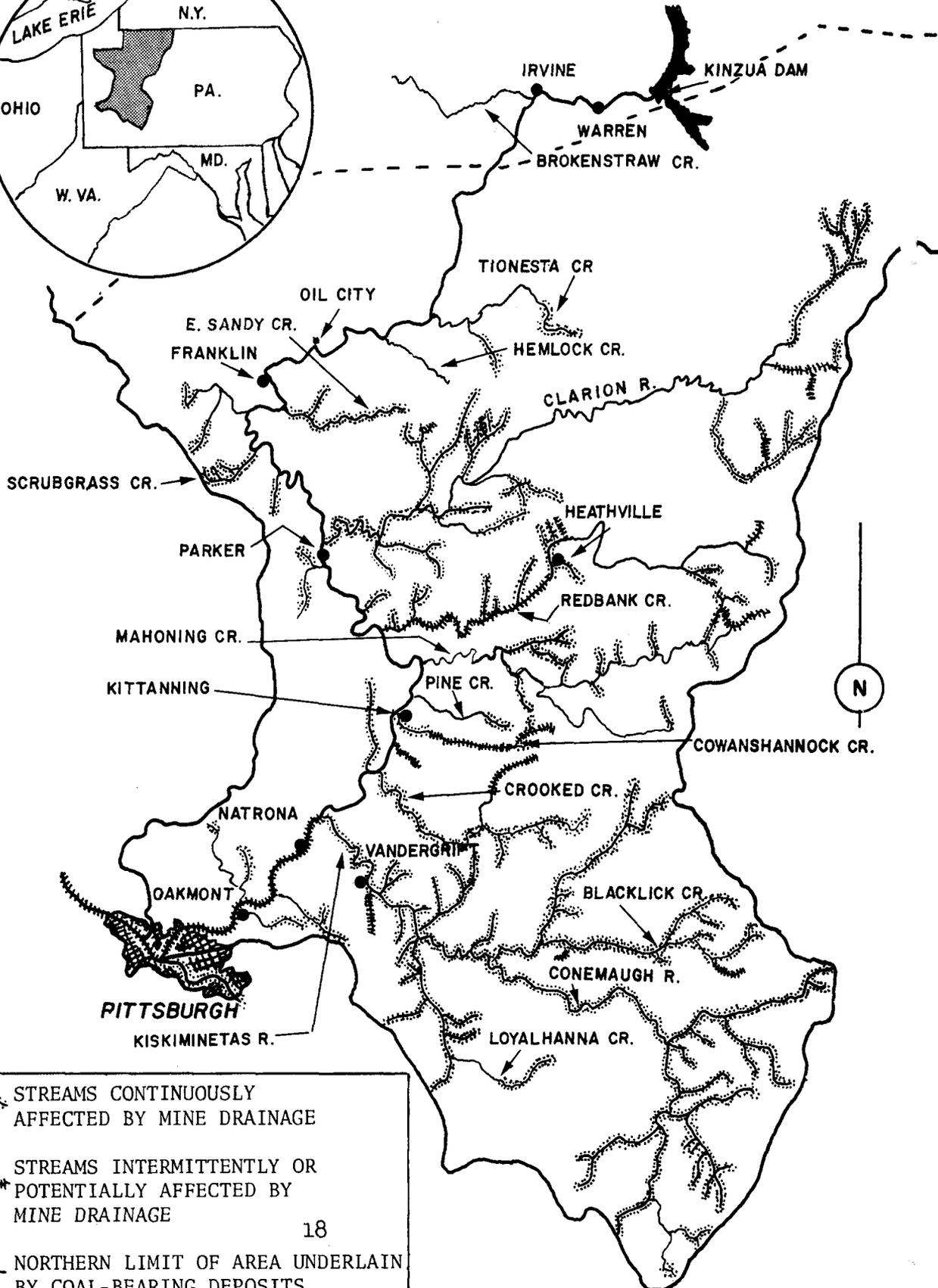
Within the past few years, there have been several permit applications for construction of water resources projects along the Lower Allegheny. These include two ice harbors near Tarrtown (river miles 49.95 and 49.8), a settling basin for wash water at East Franklin Township (river mile 49.2), a harbor at Freeport (river mile 32.5), docking facilities at Arnold (river mile 20.5) and New Kensington (river mile 18.3), realignment of Deer Creek at Harmarville (river mile 12.9), small boat facilities at Blawnox (river mile 10.7), and dredging operations between river miles 5.5 and 7.0, 13.0 and 14.5, 15.6 and 15.8, 17.7 and 17.8, 20.8 and 24.0, 30.0 and 30.4, 39.5 and 41.0, and 44.2 and 45.7.

Water Quality

The Allegheny River receives mine drainage, industrial wastes, and inadequately treated sewage. Water quality varies considerably within the study segment. Pollution concentrations are greatest in the lower 30 miles of the river as indicated by the mine drainage map and Table 4.

The U. S. Environmental Protection Agency (EPA) reports that among the major tributaries of the upper Ohio River Basin, the Allegheny is second only to the Monongahela in the severity and intensity of stream

ALLEGHENY RIVER BASIN
MINE DRAINAGE



 STREAMS CONTINUOUSLY AFFECTED BY MINE DRAINAGE
 STREAMS INTERMITTENTLY OR POTENTIALLY AFFECTED BY MINE DRAINAGE
 NORTHERN LIMIT OF AREA UNDERLAIN BY COAL-BEARING DEPOSITS

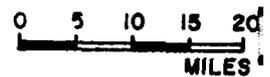


TABLE 4. WATER QUALITY DATA, ALLEGHENY RIVER AND TRIBUTARIES

Location or Stream	pH		Acidity (mg/l)		Alkalinity (mg/l)		Total Iron (mg/l)		Manganese (mg/l)		Chlorides (mg/l)		Dissolved Oxygen (mg/l)		Total Coliform 5/ (Colonies/100 ml)		Fecal Coliform (Colonies/100 ml)		Turbidity (Jackson Units)		Temp. (°F)	Flow 6/ (cfs)
	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.
Main Stem																						
Warren	7.0-7.9	7.2	0-14	7	39-73	56	0.1-1.0	0.5	0.2-0.3	0.3	23-79	54	7-10	9	-	-	510-3,200	1,947	-	-	71-79	3,769
Irvine	7.1-7.4	7.3	0-18	8	46-81	65	0.3-1.4	0.8	0.2-0.5	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Franklin 1/	6.9-7.9	7.4	0-9	5	33-95	60	0.0-0.8	0.4	0.2-0.5	0.2	13-57	26	6-12	9	-	-	-	-	5-25	14	36-70	10,200
Parker 2/	6.4-7.7	7.0	0-13	8	16-54	42	0.3-0.7	0.5	0.1-0.7	0.4	8-42	26	7-9	8	160-41,000	5,480	20-120	57	20-25	24	32-72	-
Kittanning 5/	6.5-7.9	7.3	0-7	2	3-49	25	0.0-2.2	0.6	0.0-1.4	0.5	7-43	20	7-15	10	63-8,000	1,720	20-600	122	-	-	32-84	15,490
Hetrona	4.0-6.8	5.7	2-158	37	0-23	10	0.2-1.1	0.5	1.6-5.2	3.1	14-34	24	7-9	8	-	-	2-90	20	5-5	5	72-79	18,980
Oakmont 4/	3.4-8.8	6.6	-	-	-	-	-	-	-	-	-	-	2-16	11	-	-	-	-	-	-	32-85	-
Pittsburgh 3/ 5/	5.7-7.1	6.4	-	-	-	-	0.0-4.6	1.2	-	-	-	-	7-13	10	80-80,000	14,600	11-60,000	1,710	0-20	-	32-87	19,800
Tributaries																						
Hemlock Crk., mouth	6.8-7.8	7.4	0-13	7	15-40	27	0.1-0.3	0.2	0.0-0.2	0.1	-	-	6-9	8	-	-	-	-	-	-	59-76	18
East Sandy Crk., mouth	7.1-7.7	7.4	0-12	6	24-52	35	0.0-0.5	0.3	0.0-0.3	0.1	-	-	6-9	8	-	-	-	-	-	-	61-76	20
Scrubgrass Crk., mouth	4.8-7.5	6.2	16-49	25	3-16	7	0.3-4.3	2.0	3.6-5.8	4.7	-	-	7-9	8	-	-	-	-	25-25	25	59-74	14
Clarion River, mouth	4.1-5.3	4.7	25-40	33	0-4	2	0.2-1.4	0.7	2.3-4.4	3.0	16-35	26	7-9	8	-	-	2-18	7	-	-	68-76	761
Redbank Crk., Heathville	6.0-7.2	6.8	0-16	7	10-35	26	0.6-3.0	1.7	0.5-1.4	0.9	16-32	25	6-8	8	-	-	10-6,000	1,263	-	-	68-86	60
Mahoning Crk., mouth	6.6-7.0	6.8	1-15	10	11-36	21	0.0-0.7	0.3	0.1-0.7	0.3	14-14	14	7-9	8	-	-	-	-	-	-	72-77	194
Pine Creek, mouth	6.9-7.1	7.0	0-90	21	31-280	78	0.1-1.3	0.6	0.0-0.3	0.2	5-5	5	9-9	9	-	-	-	-	-	-	66-68	12
Owanshannock Crk., mouth	6.4-7.0	6.8	0-20	10	13-30	20	0.0-1.6	1.0	0.7-1.1	0.9	19-30	27	8-9	8	-	-	760-2,500	1,787	-	-	68-70	24
Crooked Crk., mouth	3.7-4.7	4.2	33-120	74	0	0	0.0-0.6	0.4	1.0-4.8	2.8	39-39	39	-	-	-	-	-	-	-	-	72-79	76
Kiskiminetas River, Vandergrift 2/	2.8-4.8	3.7	159-259	222	0	0	5.5-32.6	12.2	9.0-76.9	23.2	17-24	20	7-15	10	2-8,000	253	5-200	26	-	-	32-84	853

Sources: EPA data for field season 1966
 EPA data from August 1964 through November 1965
 EPA data from February 1965 through August 1966
 EPA data from June 1968 through November 1970
 ORSANCO averaged hourly data from 1968 through 1970, except April and November 1968
 University of Pittsburgh data from October 1964 through September 1965
 U. S. Department of the Interior, Geological Water Survey, flow data for 25-year period

pollution by coal mine drainage. The Allegheny drainage area contains the most acid large stream in the Ohio River Basin — the Kiskiminetas River — and has more than a thousand miles of polluted tributary streams. More than 99 percent of the mine acid in the watershed comes from abandoned mines.

Mine Drainage — A 1966 water quality survey by Federal Water Pollution Control Administration, now U. S. Environmental Protection Agency, revealed that although the Allegheny receives small amounts of mine drainage from minor tributaries in Venango County, the first mine drainage of any dimension is received from the Clarion River, discharging an average net acid load of 63 tons per day. A reduction in the acid load of the Clarion may be forthcoming, however, since a mine drainage abatement program has been established for some of its tributaries. When this Corps of Engineers' program is implemented, it, in conjunction with the Commonwealth of Pennsylvania's program in the upper watershed, should effectively eliminate the Clarion sub-basin as a source of mine drainage pollution in the Allegheny.

Within the study segment, both Redbank Creek and Mahoning Creek are slightly acid at times. The condition of Crooked Creek is much more serious with acid conditions prevailing and a net acid load of 17 tons per day. Although its pH fluctuates widely through the year, there are frequent periods when the pH falls below 4.0. Any mine drainage problems in the Allegheny upstream from the Kiskiminetas River are confined to the immediate area of the confluence of Crooked Creek and on rare occasions near the mouth of Redbank Creek. Such effects are quickly diluted by the main stem since the tributary flows make up such a small proportion of the river flow.

After the entry of the Kiskiminetas River, the Allegheny is degraded to varying degrees from the acid water contributed by the Kiskiminetas whose pH has been recorded as low as 2.8 and contributes an average discharge of 329 tons of acid per day into the lower study segment. Experience has shown that serious fish kills can be expected in the Allegheny when roughly 20 to 30 percent of its flow originates from the Kiskiminetas. Storms concentrated over the Kiskiminetas drainage sometimes cause large quantities of acid water to be dumped into the main stem, reducing the pH to below 6.0 at Oakmont, 17 miles downstream. Nearly annual fish kills have been reported in this stretch as the result of periodic incursions of highly acid water from the Kiskiminetas. During normal flows the acid-free Allegheny dilutes the highly acid Kiskiminetas to a level which can support a moderate quantity of aquatic life.

Industrial Wastes — The Pennsylvania Department of Environmental Resources reports that of the 85 industries in the study area, 63 provide adequate control of their waste, 6 are making satisfactory

progress toward control, and 16 are not making satisfactory progress. Most of the industries are steel-making or related industries; although an entire range from nuclear fuel process to mushroom growing is represented.

Although the upper half of the study segment is relatively free of water pollution, some inadequately treated industrial wastes are discharged into the river at several locations. Downstream, industrial wastes substantially degrade the water quality. The major industries along the river front are several steel mills and a plate glass installation. Principal wastes are oily types and suspended solids. Suspended solids increase with high flows, indicating erosion rather than point sources. Excessive iron and manganese concentrations degrade the river near Pittsburgh.

Sanitary Wastes -- The Pennsylvania Department of Environmental Resources also reports that there are 103 sewage cases (permittees) in the area or located on tributaries flowing into it. Of these, 83 provide secondary treatment, 10 provide no treatment, 5 provide intermediate treatment, 4 provide primary and one provides tertiary treatment. All communities have submitted plans for treatment.

West Kittanning and Applewold are the only main stem discharges not being treated. Slight bacterial contamination occurs in and below these communities but occasionally bacteria concentrations become excessive. Most of the discharges not being treated are located within the Kiskiminetas drainage where treatment has only recently been required. Near Pittsburgh bacterial contamination is prevalent and dissolved oxygen depletion problems have been experienced on rare occasions. Combined sewers exist along the lower river segment. These periodically overflow.

Water Quality criteria -- Downstream from the entry of the Kiskiminetas River, pH readings (as shown in Table 4) intermittently fall below the 6-9 range recommended by the National Technical Advisory Committee on Water Quality, FWPCA, Water Quality Criteria, April 1, 1968, for fish, other aquatic life, and wildlife. Alkalinity concentrations at Natrona average less than the required amount and periodically fall below this level at Kittanning. At Oakmont dissolved oxygen levels have fallen below that considered essential for maintaining diversified warm-water biota, including game fish. Suspended solids have been observed throughout the study segment reducing the transparency of its waters. Occasional oil spills produce visible color films on its surface waters.

In addition, water quality data and field task force observations reveal that the Lower Allegheny does not meet the "Aesthetics--General Criteria" of the National Technical Advisory Committee on Water Quality.

Floating debris and oil films are sometimes present. Substances producing objectionable color, odor, taste, and turbidity are not uncommon, especially in downstream waters. The aesthetics requirements, in addition to those already mentioned for fish, other aquatic life and wildlife, are minimum criteria established in "Guidelines for Evaluating Wild, Scenic, and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System" adopted by the Secretary of the Interior and the Secretary of Agriculture in February 1970.

Fecal coliform counts exceed the maximum allowable by both the criteria for primary contact recreation and for recreational uses other than primary contact recreation at Pittsburgh. In downstream waters, the pH periodically falls below the minimum allowable for swimming and other primary contact recreation. Maximum water temperatures at Pittsburgh occasionally exceed that recommended for primary contact recreation.

Several parameters of the Pennsylvania Water Quality Standards for the Allegheny (Table 5) have been violated, including pH, dissolved oxygen, total iron, coliform bacteria, and total manganese present. Most of these violations occur in downstream waters.

Outlook — According to the EPA, the relatively minor industrial and municipal pollution problems of the Allegheny upstream from the Kiskiminetas could be solved with the installation of secondary waste treatment facilities with proper disinfection for all sanitary wastes or its equivalent for industrial wastes. Most of the communities in this reach are relatively small and only a few industrial establishments discharge wastes to the river. There may be some difficulty in completely eliminating the bacterial contamination since many of the summer homes and camps located along the river utilize septic systems which, in many cases, are not adequately maintained. Water pollution problems in the Pittsburgh area may be difficult to solve because of the heavy concentration of residences and industry.

The mine drainage problems on tributary streams may be somewhat more difficult to solve, but is quite likely that their adverse effects on the Allegheny will eventually be eliminated. The Commonwealth of Pennsylvania has a mine drainage abatement program for abandoned mines which is quite active at this time. Detailed feasibility studies have been completed for a major source in the Crooked Creek drainage. Since the problem originates from a relatively small number of sources in the area, an effective abatement program is probably forthcoming. Downstream from the entrance of the Kiskiminetas, acid mine pollution may be more difficult to solve because

TABLE 5

PENNSYLVANIA WATER QUALITY STANDARDS — ALLEGHENY RIVER

<u>Characteristic</u>	<u>Units Permitted</u>
pH	Not less than 6.0; not to exceed 8.5
Dissolved Oxygen	Minimum daily average 5.0 mg/l; no value less than 4.0 mg/l
Total Iron	Not to exceed 1.5 mg/l
Temperature	Not to exceed 5°F rise above ambient temperature or a maximum of 87°F, whichever is less; not to be changed by more than 2°F during any one hour period
Dissolved Solids	Not to exceed 500 mg/l as a monthly average value; not to exceed 750 mg/l at any time
Bacteria (Coliforms/100 ml)	For the period 5/15-9/15 of any year; not to exceed 1,000/100 ml as an arithmetic average value; not to exceed 1,000/100 ml in more than two consecutive samples; not to exceed 2,400/100 ml in more than one sample For the period 9/16-5/14 of any year; not to exceed 5,000/100 ml as a monthly average value; nor to exceed this number in more than 20% of the samples collected during any month; nor to exceed 20,000/100 ml in more than 5% of the samples
Total Manganese <u>1/</u>	Not to exceed 1.0 mg/l
Threshold Odor No. <u>1/3/</u>	Not to exceed 24 to 140°F
MBAS <u>2/</u> (Methylene Blue active substance)	Not to exceed 0.5 mg/l
Chlorides <u>3/</u>	Not to exceed 150 mg/l

Water Uses to be Protected

Warm Water Fishery	Fishing
Domestic Water Supply	Water Contact Sports
Industrial Water Supply	Natural Area
Livestock Water Supply	Power
Wildlife Water Supply	Navigation <u>2/</u>
Irrigation Water Supply	Treated Water Assimilation
Boating	

1/ Allegheny River from mouth (mile 0) to Kiskiminetas River (mile 30)

2/ Allegheny River from mouth to Redbank Creek (mile 64)

3/ Allegheny River from Redbank Creek to Pa.-N.Y. State line

of the complexities of mine drainage abatement. This is especially true for the problems caused by the Kiskiminetas since there are a great number of abandoned mine sources contributing to the problem. The Corps of Engineers is currently reducing fish kills in the main stem, incurred by highly acid discharges from the Kiskiminetas, by coordinating releases from Kinzua, Loyalhanna, and Conemaugh Dams; however, it is doubtful that existing mine drainage abatement programs will alleviate the Kiskiminetas problem in the near future.

Scenic Values

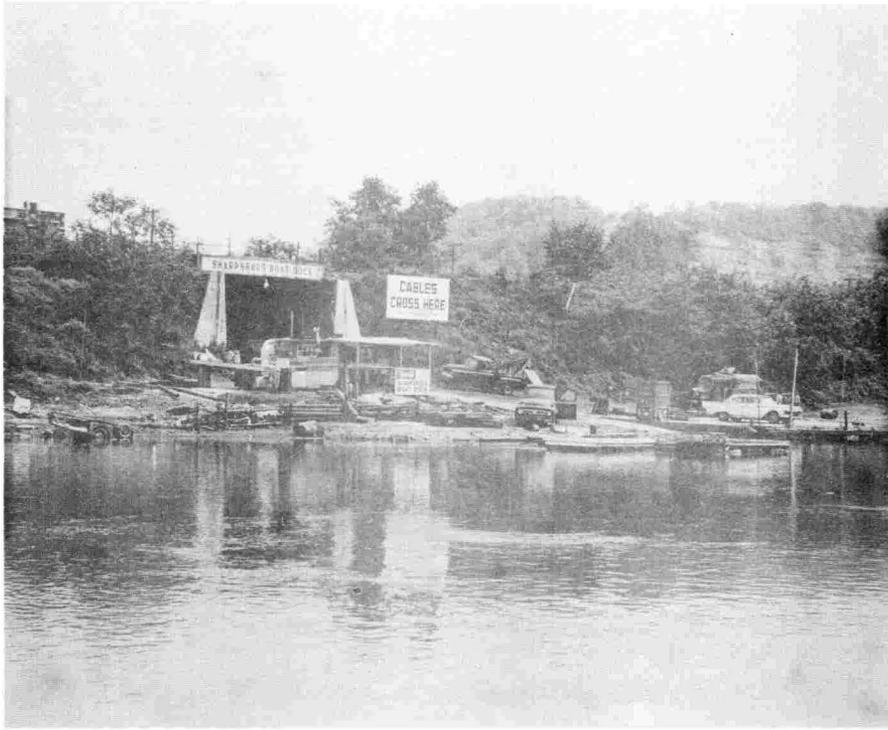
The natural environment of the river corridor has been modified considerably and contains innumerable man-made intrusions. The most conspicuous are urban and industrial development, unsightly summer homes and trailer camps, and transportation networks. Roads or railroads are within sight or sound of the entire study segment. Railroad embankments and road cuts are readily observed. Scars and wastes from strip mining, dredging operations and other resource exploitation are also present and power and pipeline crossings are numerous. The surrounding hills and terraces restrict views at valley level and are mainly wooded with secondary or tertiary growth hardwoods. Short scenic stretches exist between East Brady and Philipston, the Seven Hills area near Rimer, and the lower portion of Pool 6.

The river segment itself gives the overall impression of a succession of flat-water pools with little variety. The flow is extremely sluggish. The only rushing water is the artificially produced falls at the dams. The river lacks the presence of large boulders but low-lying islands occasionally disrupt the open pools. However, two of these islands -- Jacks and Ross -- are presently being removed by dredging operations. Some of the islands are occupied by industry or by summer homes; a few islands are entirely wooded and have a natural appearance.

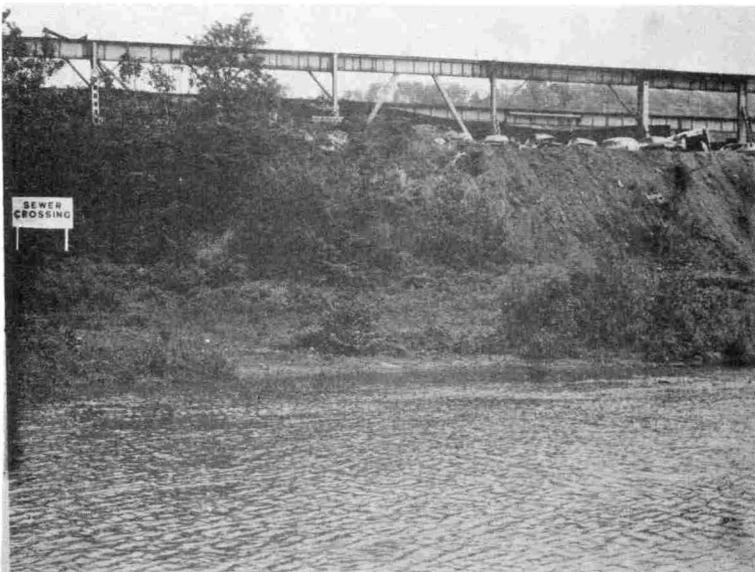
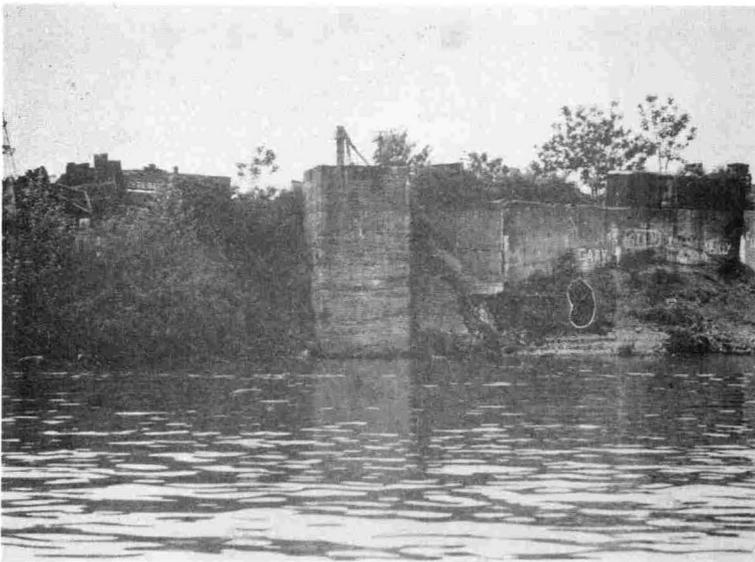
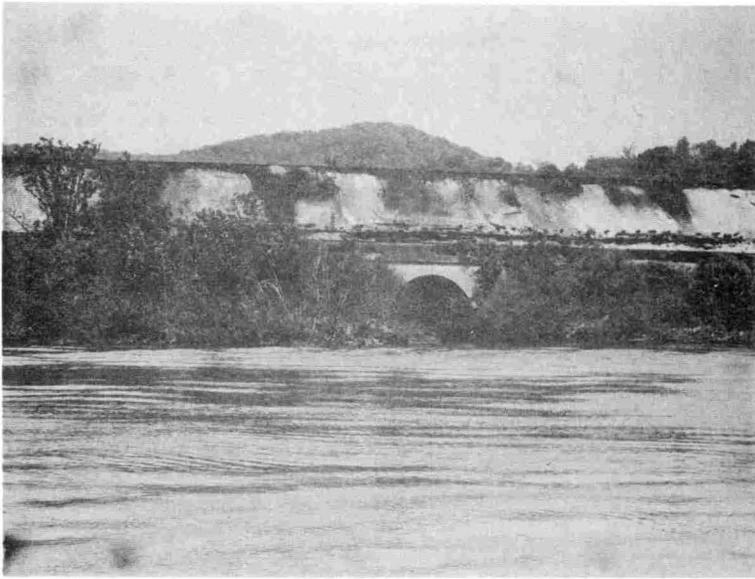
The waters of the upper 40 miles of the study segment is opaque and brownish in color; while the waters of the lower 30 miles takes a greenish cast due to its mixing with the deep green waters of the Kiskiminetas River. "Yellowboy" stains are readily visible along the left shoreline and on bridge piers for several miles after the entrance of the Kiskiminetas. Farther downstream, both shores attain minor discoloration. Oil spills and odorous waters from industrial wastes and sewage are present from time to time.

The presence of commercial barges and dredging operations, coupled with the scarcity of aquatic life, also detract conspicuously from scenic values and aesthetic pleasure normally expected of a river environment.

LOWER ALLEGHENY RIVER VIEWS



SCENIC INTRUSIONS



In summary, the Lower Allegheny River and its immediate environment does not possess outstandingly remarkable scenic values.

Recreational Values

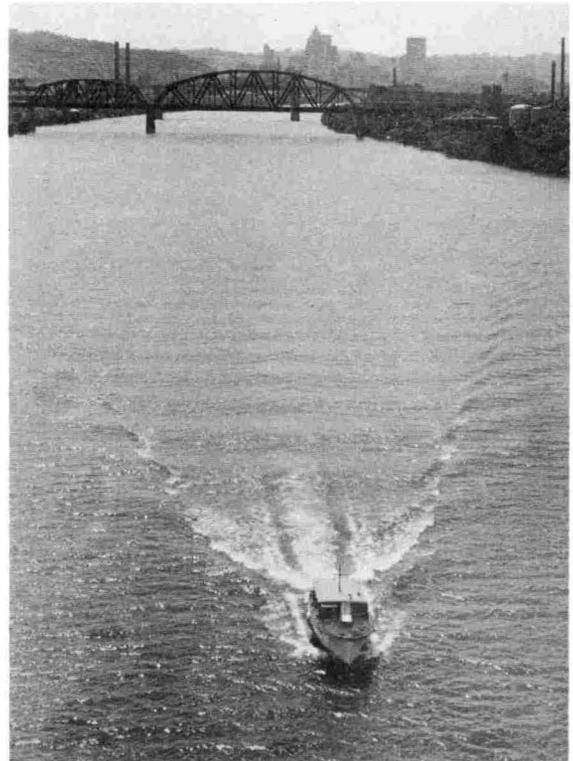
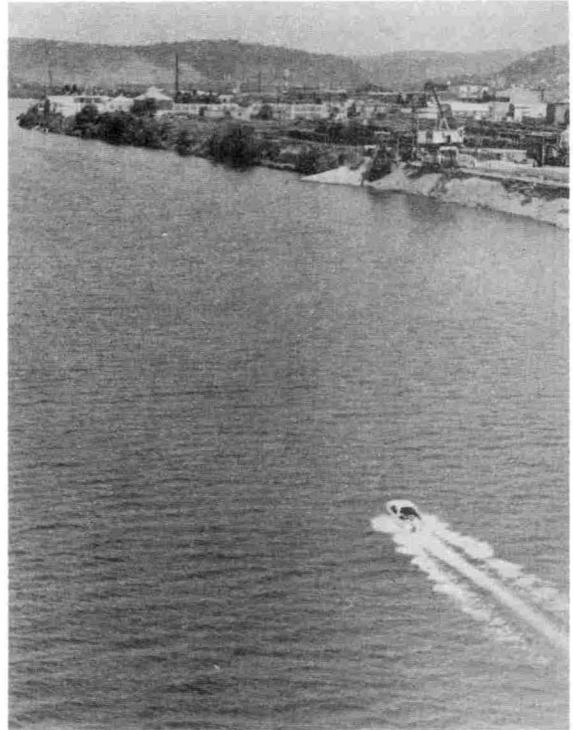
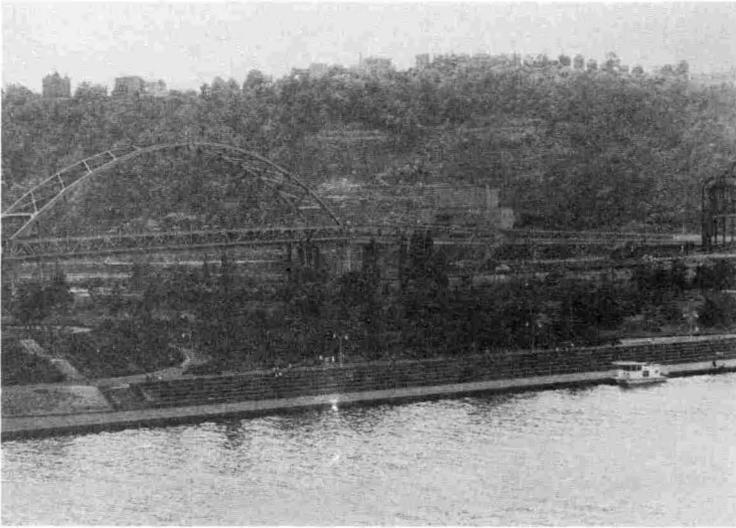
The broad canalized Lower Allegheny is accessible from the navigable portions of the Mississippi drainage basin and can accommodate a wide variety of watercraft, including large pleasure craft such as passenger liners, waterbuses, houseboats or cruisers. It is potentially good cruising and camping water, and except for the wake produced by large craft or powerboats, the lake-like expanses are satisfactory as training courses for beginners in canoeing and fold-boating. The river also accommodates air boats, sailboats, pontoon-boats, johnboats, rowboats, kayaks, and rubber rafts. Although the navigation of large pleasure craft is aided by canalization and extensive pools, any fast water that existed before this modification has been eliminated and seasoned white-water enthusiasts would not be attracted to the Lower Allegheny.

Marinas are located along the river segment but cluster along the shores of Pool 2. This pool is very popular for pleasure boating during the summer and dockage is becoming more scarce as numbers of craft increase. This is partly due to the small number of docking facilities farther upstream and partly because some boatmen seldom use the locks. Due to heavy commercial river traffic in downstream waters, the prolonged waiting periods necessitated at the locks discourage some pleasure boaters from use of the waters beyond the locks.

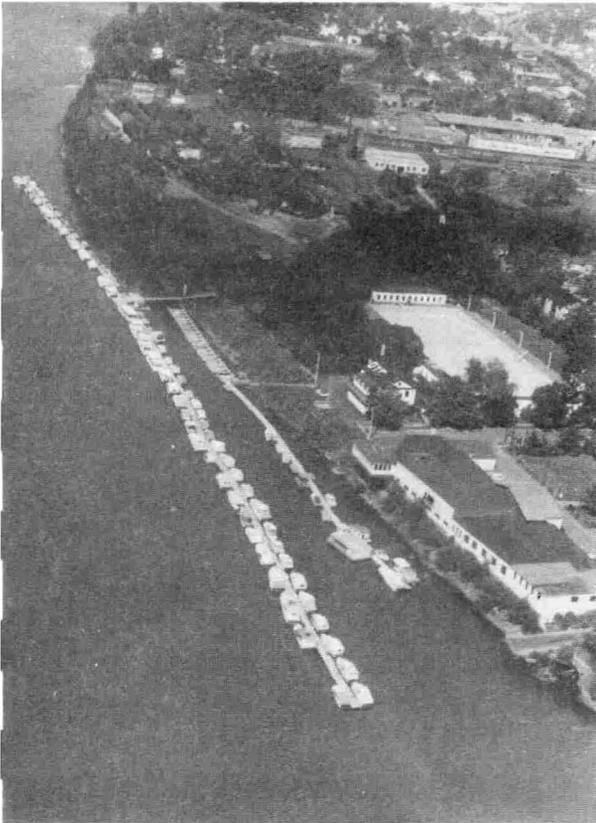
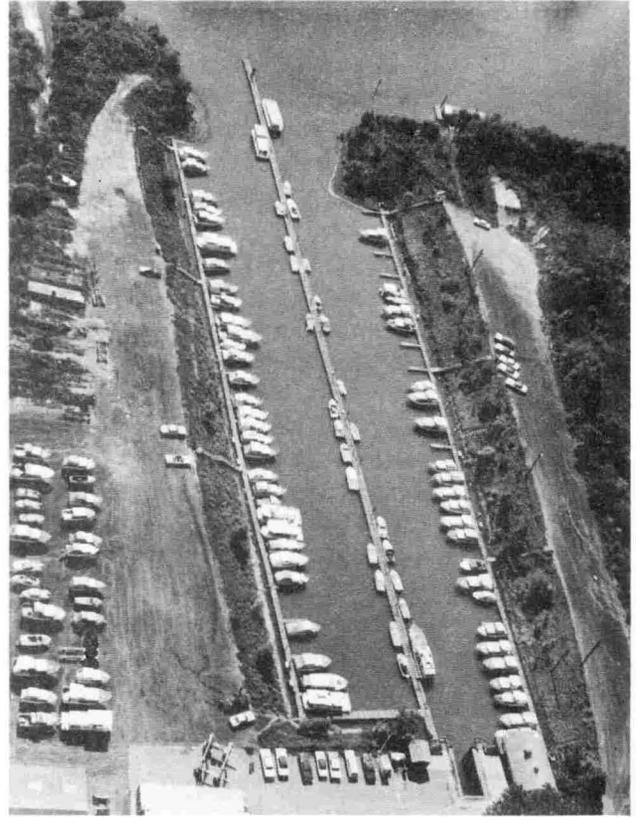
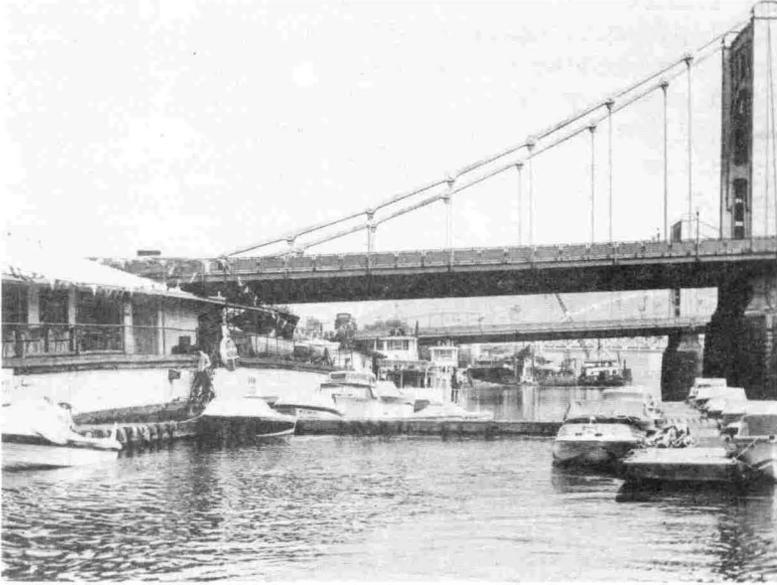
Private docks and summer homes are scattered along the study segment. Many of these summer homes and trailer camps resemble rural slums, and along with industrial, commercial, and other intensive development, modify or prohibit recreational activities. Aesthetically objectionable sights, sounds, and odors caused by man-made intrusions and pollution degrade the value of the available recreational experiences. Even with a reduction in pollution, the remaining unsightly development would still significantly detract from the quality of the recreational activity.

A few islands are used by boatmen for picnics, overnight beaching, and swimming. Summerhomes or camps occupy portions of several large islands. Fourteen Mile and Nine Mile Islands are owned by the Western Pennsylvania Conservancy and leased to Three Rivers Improvement and Development Corporation (TRIAD), which is using the islands to provide picnic and overnight camping trips for youths of the Pittsburgh area. Heavily developed Herrs Island is currently under study by TRIAD as a potential site for recreational development.

RECREATIONAL FACILITIES AND ACTIVITIES



BOATING FACILITIES



Waterskiing is popular on the flat waters of the extensive lower pools. Yet relative to existing standards, the poor water quality of the study segment presents an important limitation to recreation. Water contact recreation is limited by inadequately treated sewage and acid slugs. Potable water and sanitary facilities for recreationists can be expensive because of corrosion and tuberculation, since much of the ground water sources are polluted by mining activity. Past mineral extraction and other resource exploitation has already devastated much of the natural areas which would offer recreation potentials and there is no guarantee that future mineral exploitation would not devastate the few remaining semi-natural river stretches.

Sport fishing is limited but deer and small game hunting are important recreational activities. The canalized waters along with paralleling roads and many connecting bridges in the river corridor adequately provide for sightseeing. Trails for hiking and nature study are available in upstream areas.

In summary, recreation values of the study segment are judged to be marginal.

Fish and Wildlife Values

Fishery Resources — Fishery resources in the Lower Allegheny include largemouth bass, smallmouth bass, northern pike, walleye, yellow perch, crappie, sunfish, channel catfish, bullhead, eel, suckers, and carp. The extent of occurrence of each of the above-named species is related to the water quality. In the stretches where the water quality is good, a wide diversity of game fish species predominates. In highly industrialized stretches, organic, mine acid, and industrial pollutants restrict both the range and diversity of species present. Pollution-tolerant species predominate in these waters, and the pollution causes decreased utilization of the resource.

Past dredging operations have destroyed valuable fish production areas and have created deep, unproductive holes with a scarcity of fish food organisms. Extensive development and other intrusions restrict present and potential fisherman access to the study segment and detract from its scenic value.

Wildlife Resources — Wildlife resources along the Lower Allegheny are good, offering the hunter and non-consumptive user an opportunity to observe a diversified assortment of wildlife species. With the exception of urban and industrialized areas downstream from Natrona, the forest adjacent to the river favors the forest game species — whitetail deer, ruffed grouse, wild turkey, squirrel, and raccoon.

The surrounding lands between Natrona and East Brady are heavily forested and afford excellent whitetail deer and ruffed grouse hunting. The stream bank and adjoining area of this portion also supports a small population of black bear.

The lands adjoining the flood plain downstream from Natrona, generally support a mixture of forest and agricultural crop land and pasture, which offers a diversified habitat for many forest and farm game species. Those species found in harvestable numbers include whitetail deer, squirrel, raccoon, ruffed grouse, wild turkey, mourning dove, ring-neck pheasant, bobwhite quail, woodcock, cottontail rabbit, and woodchuck.

This segment of the Allegheny is an important part of the Atlantic Flyway. It provides a resting area for many species of waterfowl and serves also as a minor propagation area for mallard and wood ducks. Waterfowl are harvested throughout the study segment.

Several species of fur-bearing animals, including mink, muskrat, raccoon, and fox, are harvested. Two State-owned public hunting areas are located on or near the river, in the proximity of East Brady and West Kittanning, offering a total of 1,755 acres of rabbit, pheasant, squirrel, and grouse hunting.

Due to easy highway access and boating on the river, opportunities for wildlife observation, study, and photography are excellent in the study segment, although a need for more boat-launching access exists. No rare and endangered species are known within the river corridor. The bald eagle has been observed but no nesting has been reported.

In summary, the fishery resource of the Lower Allegheny is limited due to polluted waters while wildlife are present in varying numbers.

Other Values

Significant archeological resources were reported in the Allegheny Valley but many sites have been partially or completely destroyed. While the Allegheny Valley is steeped in history, the lower river corridor has been so altered over the past century that there is little resemblance between it and the Lower Allegheny of our forefathers. Outstandingly remarkable geological or other values of significance are not present.

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Source for Mine Drainage Map

U. S. Environmental Protection Agency
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