USDA

May 9, 2017

Pam Loeb
(703) 470-8382

RE: Freedom of Information Act (FOIA) Request, FOIA Number 2017-NRCS-04119-F

Dear Ms. Loeb:

This is an acknowledgement and final response letter to your FOIA request, dated May 04, 2017. Your request was received by email on May 04, 2017. Your case was assigned FOIA number 2017-NRCS-04119-F. Please reference this number when inquiring about your request.

In your request, you did not state your fee category. You have been assigned a fee category of "as all other". See 5 U.S.C. § 552(a)(4)(A)(ii)(III). You are required to pay for search time, review time, and duplication of records. Search and review time is incurred at the cost of $20.00 for each hour spent by professional personnel in obtaining these records. Duplication fees are assessed at $0.20 per page.

You requested:

> *…Can you send me a copy of the November 1989 Soil Conservation Report. Specifically, I'm looking for the maps of the various designs and locations for flood-control structures*.

A thorough search was conduted by subject matter experts to uncover all responsive documents. At this time, the search time has totaled 15 minutes at a charge of $5.00 and no duplication fees have been incurred. The total fee of $5.00 is less than the Agency's minimum fee of $25.00; therefore, you will not be assessed a fee to process your request. See 7 CFR Part 1, Subpart A, Appendix A § 3(b).

You may contact me at (304) 284-7554, as well as Philip Buchan, FOIA Public Liaison, at (301) 504-1701 for any further assistance and to discuss any aspect of your request. Additionally, you may contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. The contact information for OGIS is as follows:

Office of Government Information Services
National Archives and Records Administration
8601 Adelphi Road-OGIS
College Park, MD 20740-6001
Email: ogis@nara.gov
Telephone: (202) 741-5770; toll free at 1-877-684-6448
Fax: (202) 741-5769

If you are not satisfied with my final response to your request, you may administratively appeal this determination. Your appeal must in writing and be postmarked or electronically transmitted within 90 days of the date of this letter along with your name; date of the initial decision; copy of the final release letter; justification to reverse the decision; and FOIA request number. The appellant authority for adverse decision is made by the National FOIA Officer, Patrick McLoughlin. The appeal letter and envelope must be clearly marked "Freedom of Information Act Appeal."

Mail your appeal to :

Patrick McLoughlin
National FOIA/PA Officer
Natural Resources Conservation Service
U.S. D epartment of Agriculture
375 Jackson Street, Suite 600
St. Paul, Minnesota 55101

Or, email your appeal to Patrick.mcloughlin@wdc.usda.gov.

Please direct any questions pertaining to this action to me via telephone at (304) 284-7554, or via email at Jeremy.Bennett@wv.usda.gov.

Sincerely,

JEREMY BENNETT
Digitally signed by JEREMY BENNETT
Date: 2017.05.09 16:29:55 -04'00'

Jeremy. Bennett
FOIA Officer

Attachment

DRAFT

CHERRY RIVER WATERSHED

Nicholas, Greenbrier, Webster, and Pocahontas Counties

West Virginia

PREAPPLICATION REPORT

Prepared by:

The USDA Soil Conservation Service

and the

Elk Soil Conservation District

City of Richwood

November 1989

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TABLES

INTRODUCTION

Initial water resource studies were conducted by the SCS in the Cherry River Watershed during the mid 1960's as part of the Kanawha River Basin Survey. These studies culminated in the preparation of the Cherry River Watershed Investigation Report in 1967.

Problems identified in the 1967 report were flood damages to urban and commercial properties, roads, bridges, railroads, utilities, and schools. Additionally, excessive erosion and sediment production on watershed lands, undependable water supply, and lack of water related recreation were also concerns.

The initial field investigation study indicated that a feasible project could be formulated based on a preliminary level of study, 1966 price base, and pertinent engineering, economic, and environmental guidelines in effect at that time. However, subsequent studies indicated that project action would not be feasible.

The project, as proposed in 1967, would consist of land treatment, two single purpose flood prevention dams, one multiple-purpose dam providing flood storage and water supply, and one dam for low flow augmentation. Incidental recreation use was planned around two of the dams.

Subsequent to the issuance of the 1967 investigation report, local interest and support waned, due to the apparent economic infeasibility of the project. However, in the fall of 1988, local officials requested that SCS restudy the watershed to determine if project action would be feasible under the current cost base, interest rates, and planning criteria. The renewed interest in the project was stimulated by frequent damaging floods in the Richwood and downstream areas, perceived lack of water based recreation, and the generally depressed economic conditions of the watershed.

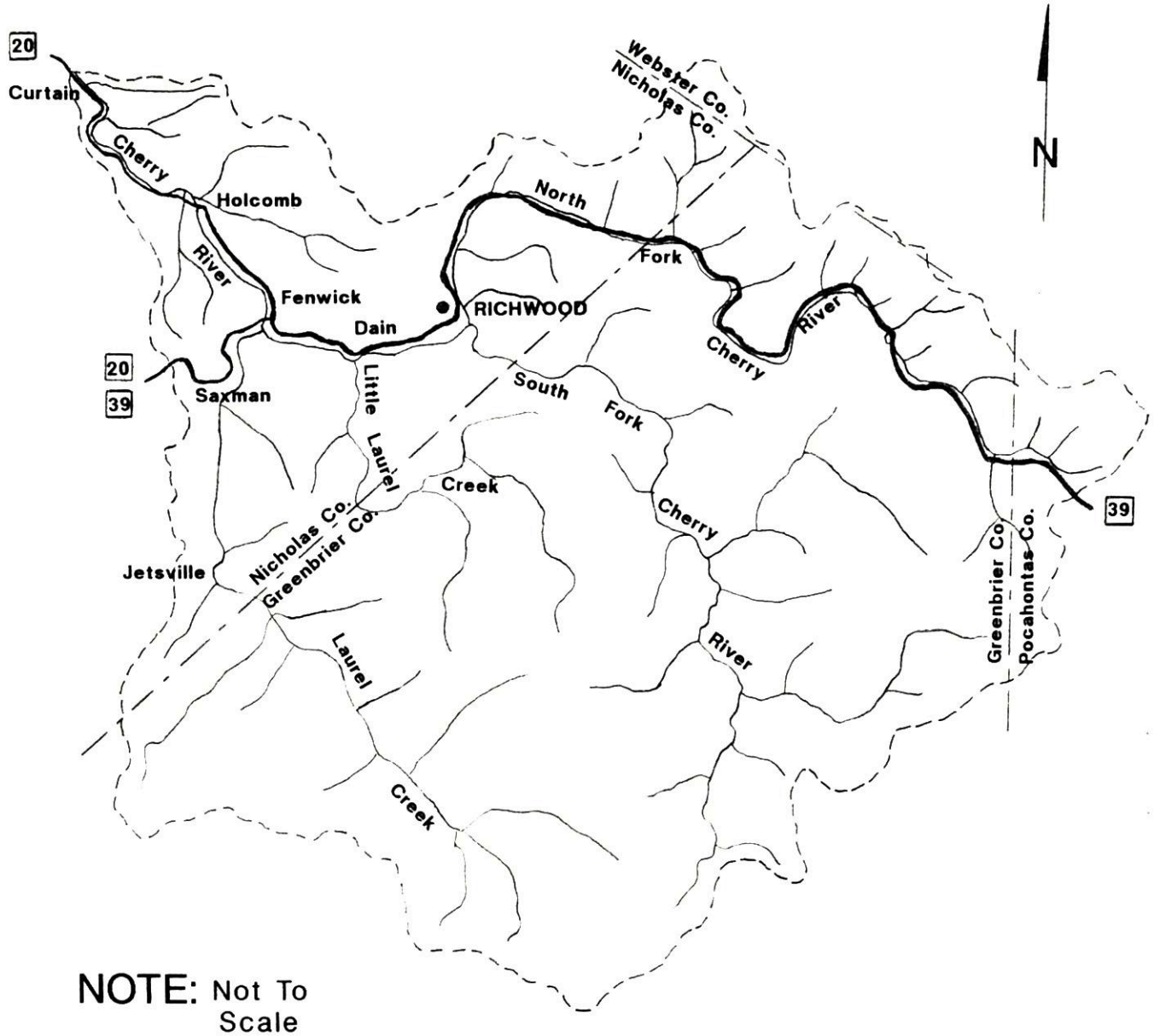
This document is in response to the request for reevaluation of water resource problems in the watershed. Data collected, evaluated, and displayed is of a preliminary nature and detail.

ENVIRONMENTAL SETTING

Cherry River Watershed is located in northern Greenbrier County, eastern Nicholas County, southwestern Pocahontas County, and southeastern Webster County, West Virginia. (See Figure 1 - Location Map.) The watershed contains 104,770 acres and is approximately 17-miles long and 13-miles wide. This is an area of rugged, mountainous topography with narrow flood plains. Maximum topographic relief is 2,650 feet. The region is dominated by forested mountains interspersed with small towns along the flood plains, giving the area a very scenic visual attractiveness.

LAND USE

Land use in the watershed is naturally controlled by the topography. The vast majority of watershed land is forested. Principal forest types are sugar maple-beech-birch, oak-hickory, and occasional scattered patches of red spruce at the higher elevations. A small percentage of the watershed, primarily the narrow valleys and flatter hillsides, is used for agricultural purposes. The dominant agricultural use is for hay and pasture. Urban development has been confined almost entirely to the level flood plains. The city of Richwood, along with the smaller communities of LaFrank, Fenwick, and Holcomb are located on the Cherry River flood plain. Major roads and railroads are also located on the flood plain.



NOTE: Not To Scale

LEGEND

WATERSHED BOUNDARY

COUNTY BOUNDARY

ROAD

Figure 1 - Location Map

Land ownership in the watershed is approximately 25 percent Federal, approximately 30,000 acres of watershed land is in the Monongahela National Forest System, and 75 percent private. Georgia Pacific and WESVACO own large tracts of land in the watershed.

EXISTING RESOURCES

The Cherry River drainage system consists of three main tributaries which produce a fan-shaped boundary. The North Fork and South Fork of the Cherry River join at Richwood to form the main stem. Laurel Creek enters Cherry River about three and one-half miles downstream. All three tributaries and the main stem are classified as high quality streams by the WVDNR, and all are on the State's current trout stream stocking schedule. Mining activities in the North Fork drainage have severely depressed the fishery, and limestone drums have been utilized to counteract the acidity. Two important coal seams, Fire Creek and Sewell, have been extensively mined by both deep mining and surface mining methods. The South Fork is less affected by acidity. Although some upper drainage tributaries are quite acid, the buffering capacity of the lower drainage is sufficient to moderate the acid inputs to a slightly alkaline level suitable for aquatic life.

A fish survey of the South Fork Cherry River conducted by WVDNR biologists in 1968 found seven species of fish, primarily minnows. No game fish were collected, although trout are known inhabitants of the

stream. Fish survey and water quality data, collected by the WVDNR and USGS, respectively, are shown in Appendices 1 and 2 at the back of this report.

No threatened or endangered plant or animal species are known to occur in the watershed. However, according to the WVDNR the long-stalked holly (Ilex collina) is likely to occur along the South Fork Cherry River. This plant is under review of possible listing as threatened/endangered by the USFWS. In addition, two fish species, Phenacobius teretulus and Etheostoma obsburni could be present; both are under Endangered Species Act evaluation.

The South Fork Cherry River is listed in the Nationwide Rivers Inventory as having potential for "Wild and Scenic River" status due to its free flowing, underdeveloped, and outstanding natural characteristics.

WATERSHED PROBLEMS

Major watershed problems identified during this preliminary investigation include flooding in the city of Richwood, inadequate water supply during period of low stream flow, and a lack of water based recreational opportunities.

FLOOD PROBLEMS

Flooding in the Cherry River Watershed occurs primarily along the flood plain in the city of Richwood, and in the small communities of LaFrank and Fenwick. The most severe flood on record was in July 1954, when an estimated $3,000,000 in damages occurred. This flood caused extensive damage to many homes, businesses, roads, and bridges. In August 1969, another less damaging flood hit the area. Other minor floods have also struck the watershed.

In July 1979, flooding to the Johnstown area upstream of the city of Richwood surrounded between 10 and 15 homes and caused some damage. Also the unnamed tributary of Cherry River which flows through the city park filled with silt, overflowed, and caused minor flood damage. One residence suffered first floor damage. The estimates of damage at that time were $10,000.

Once again flooding occurred in November 1985, and resulted in about $58,000 of damage. These damages generally included sedimentation at the water intake and erosion to bridges, streets, sewers, and landfills. Some damage also occurred at the sewage treatment plant.

Following the 1954 flood the US Army Corps of Engineers (COE) modified the channel through the city of Richwood. This flood control project provided substantial damage protection from frequent small floods, and limited protection from larger floods. In 1979 the COE investigated the possibility of extending the channel work further down stream, but determined that it would not be feasible to do so.

While the threat of serious flooding has been reduced there remains a flood problem in the watershed. This is primary from large infrequent floods. A 100-year frequency flood might cause damage in excess of $15,000,000. Approximately 240 homes, 60 businesses, and other buildings would flood from the 100-year flood event. Average annual damages are estimated at $240,000, of which $190,000 is to commercial or other properties, and about $50,000 to residential properties. A flood greater than the 25-year frequency flood must be experienced before significant damage occurs.

WATER SUPPLY PROBLEMS

The city of Richwood draws untreated water from the North Fork of Cherry River. The intake consists of a low head concrete weir located

just upstream from the city. Raw water is piped to the treatment plant, where it is treated, and distributed to municipal water supply customers. This source is generally sufficient except during periods of low stream flow.

Stream flow in 1988, was extremely low and Richwood experienced problems in supplying treated water to all customers. Based on this experience local officials indicated that a need exists to provide additional water storage for municipal use. They estimate their future needs to be 1.6 MGD.

Based upon this amount of usage and stream flow records for Cherry River at Fenwick, hydrologic and hydraulic evaluations indicate that stream flow in Cherry River at Richwood should be supplemented four months of the year during dry times. This would require approximately 400 acre-feet of water supply storage in Site #9 on the North Fork of Cherry River. The water could be released into the stream as needed and withdrawn when it reached the Richwood treatment plant.

RECREATION PROBLEMS

The major water oriented recreation facility in the watershed is Summit Lake. Summit Lake is a 43 acre impoundment located in Greenbrier County, 10 miles east of Richwood, in the Monongahela National Forest. It provides both warmwater and put-and-take trout fishing. Developments around the lake include a boat ramp, two fishing

piers, and a 17-unit campground. Trout fishing opportunities are also available in the North and South Forks of Cherry River upstream of Richwood, although the fishery in the North Fork is severely depressed by acid mine drainage.

Flat water based recreation facilities within a 30-mile radius of the watershed (Local Area of Influence - LAI) include the following impoundments:

Big Ditch	(Webster County)	-	55 acres
Boley	(Fayette County)	-	18 acres
Watoga	(Pocahontas County)	-	11 acres
Handley	(Pocahontas County)	-	5 acres
Summit	(Greenbrier County)	-	43 acres
Summersville	(Nicholas County)	-	2,700 acres

Three of the above impoundments are stocked with trout by the WVDNR, including Boley, Watoga, and Summit Lake.

The major recreation development within the LAI is the 2,700-acre Summersville Reservoir, located in Nicholas County about 15 miles west of the watershed. This Army Corps of Engineers flood control facility provides a multiplicity of recreation opportunities, including fishing (warmwater species above the dam and trout in the tailwaters) power boating, camping, swimming, picnicking, and other outdoor activities. Recreation use is high, amounting to 870,000 visitors in 1986.

Flat water fishing opportunities relative to existing demand is considered a prime indicator of water based recreation needs in terms of the resource base. The LAI facilities as described above are currently providing an estimated 312,000 fisherman activity days annually. The 1980 population census in the LAI is 87,140, providing an estimated demand of 53,590 fisherman days per year. These data indicate that present supply exceeds demand for flat water fishing opportunities and associated water based recreation activities in the 30-mile radius LAI. However, this region of the State is a major tourist attraction for major population centers beyond the local area.

According to the 1988-92 West Virginia Statewide Comprehensive Outdoor Recreation Plan (SCORP), Planning Region IV, of which the watershed is a part, is projected to sustain a 12 percent growth rate in visitation at its State Parks and moderate to high growth is anticipated at the Region's Federal recreation developments. These increases in demand are in part based on the 1988 opening of I-64 and the resultant improved access into the region. High priority activities targeted by SCORP for future development in Region IV include freshwater swimming and fishing.

SOCIAL PROBLEMS

The lumber and coal industries are the major components of the area's economy. Due to the decline of these industries, unemployment in the watershed has been more than double the national rate through the 1980's. Per capita income for Nicholas County is about 65 percent of the USA average. Unemployment rates and per capita income are shown in the following tabulation.

Unemployment and Income Statistics

Year	Unemployment Rate %		Per Capita Income		
	Nicholas County	National	Nicholas County	State	National
1985	18.6	7.2	9,139	9,301	13,910
1986	18.1	7.0	9,228	10,520	14,639
1987	15.8	6.2			
1988	13.3	5.1			
6/89	15.4	5.1			

Source: Labor and Economic Research Section, West Virginia Department of Economic Security, Parkersburg-Marietta Annual Planning Information for FY-1990 and previous years.

Home values in the area are depressed because of the flooding problem and the local economy. Home prices in the flood plain averaged $26,500 in 1989 according to the West Virginia Census Data Center publication titled "1980 Income, Education, and Labor Force Characteristics." The medium home price in the 1980 census in West Virginia was $38,000.

The 1980 median household income for Nicholas County was $13,565 according to the 1980 West Virginia Census Data Center publications. The 1980 median household income for the city of Richwood was $11,334. The city of Richwood and surrounding area would be the benefitted area for water supply. The 1980 West Virginia nonmetropolitan median household income was $13,404.

ALTERNATIVE SOLUTIONS

A multiple-purpose dam was evaluated to determine its potential of satisfying local Sponsors and SCS goals of flood prevention, water supply, and recreation. Generally, a multiple-purpose solution is more cost-effective than a solution involving only one purpose.

The dam site, designated as Site #9, is located about 6.2 miles upstream from Richwood on the South Fork of Cherry River (see Figure 2 - Dam Location Map.) The dam would control a drainage area of 39.2 square miles, and as evaluated, would store additional water to supplement the Richwood water supply system and create a lake that could be used for recreation.

DAM SITE

The dam site is located in some of the most rugged terrain found in the Appalachian Mountains. The topography is very steep with mountain slopes at the site ranging between 35-50 percent, and averaging over 16 percent throughout the controlled drainage area. The tops of the mountains are at an elevation of 3,800 feet above sea level with the valley floor at 2,600, creating 1,200 feet of relief. The gradient of the stream is also steep, averaging between two and three percent at the site. The stream valley is narrow at the dam site, about 300 feet wide, but becoming considerably wider, over 1,000 feet,

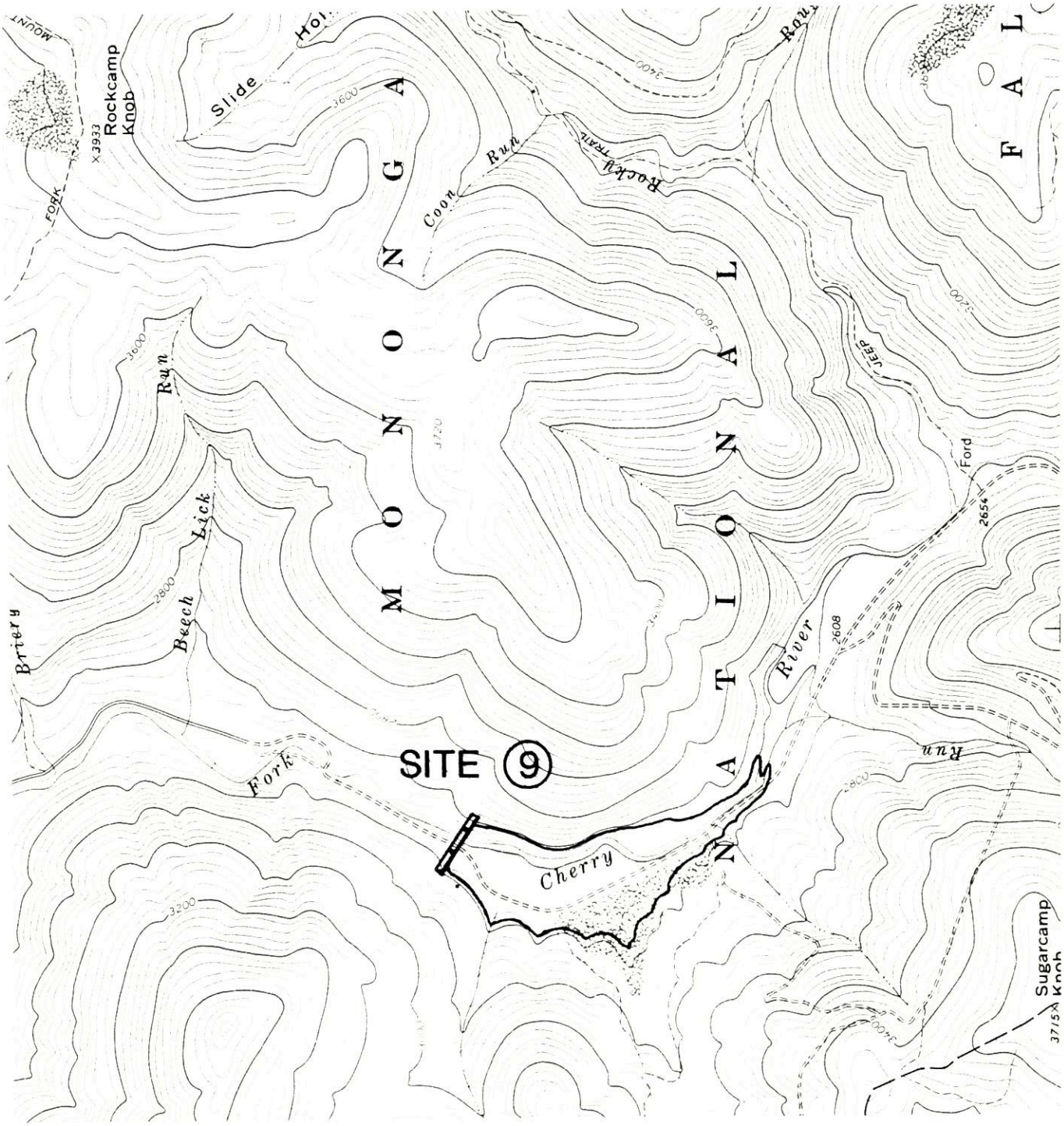


Figure 2 - Dam Location Map

upstream from the site. The combination of steep gradients and narrow valley create poor storage characteristics that result in a high dam.

Geologically, the foundation of the site consists of about 20 feet of flood plain alluvium over horizontal layers of interbedded shale, sandstone, and limestone. The material decreases in depth, averaging about 6 feet deep, on the steep hillsides. Flood plain alluvium consists primarily of large sandstone boulders eroded from the rocky ledges upstream from the dam. The alluvial material ranges from sand size to large boulders over a foot in diameter. Very little fine grain material (clay or silt) is present on the foundation. Although, the coarse alluvial material may be used to construct the outer slopes of an earth and rockfill embankment, fine grained material is needed to construct an impervious core. Fine grained material is not present at the site in sufficient quantities for this purpose. Because of a lack of onsite material, it was decided that a concrete dam at this site would be most cost-effective. The dam was planned using Roller Compacted Concrete (RCC). RCC is fast becoming cost competitive with earth and rock for dam construction in most normal situations, and less expensive in special situations, such as on the South Fork of Cherry River where fine grain material would have to be hauled to the site. A 30-foot limestone ledge was noted at the base of the left abutment at the dam site. This ledge contained small solution channels indicating that it may cause leakage under the dam. To reduce the possible of leakage, the foundation under the dam was planned to be grouted.

Preliminary geologic data indicates the foundation to be firm enough to support a RCC embankment. The height of the RCC embankment would vary depending on the level of development; however, it was planned with a 350-foot wide concrete chute spillway formed over the embankment and emptying into a SAF outlet basin. The principal spillway system was evaluated using a 7-foot diameter concrete pipe. (See Figure 3 - sketch of a panoramic view of a roller compacted concrete dam.)

Four different levels of development at the dam were analyzed. They ranged from a single-purpose floodwater retarding dam to a multiple-purpose floodwater retarding, water supply, and recreation dam with a lake of 370 acres. The level which appears to be most cost-effective consists of a multiple-purpose floodwater retarding, water supply, and recreation dam with a 100 acre lake. This dam would be about 111.3 feet high and contain approximately 157,000 cubic yards of RCC. Aggregate for the concrete would have to be hauled from a quarry near Mill Point, approximately 30 miles from the site. Preliminary evaluations indicate that the dam should provide storage for 3,235 acre feet of floodwater, store 400 acre feet of municipal water to use for supplementing the existing Richwood water supply during periods of low stream flow, and store 1,635 acre feet of recreation storage to create a 100 acre lake. Maximum depth of the lake would be about 61 feet at the dam. Water would be released into the stream to augment low flows and withdrawn at Richwood using a low head concrete dam. Multiple level release gates would be used to insure that only the best quality water was being used for water supply

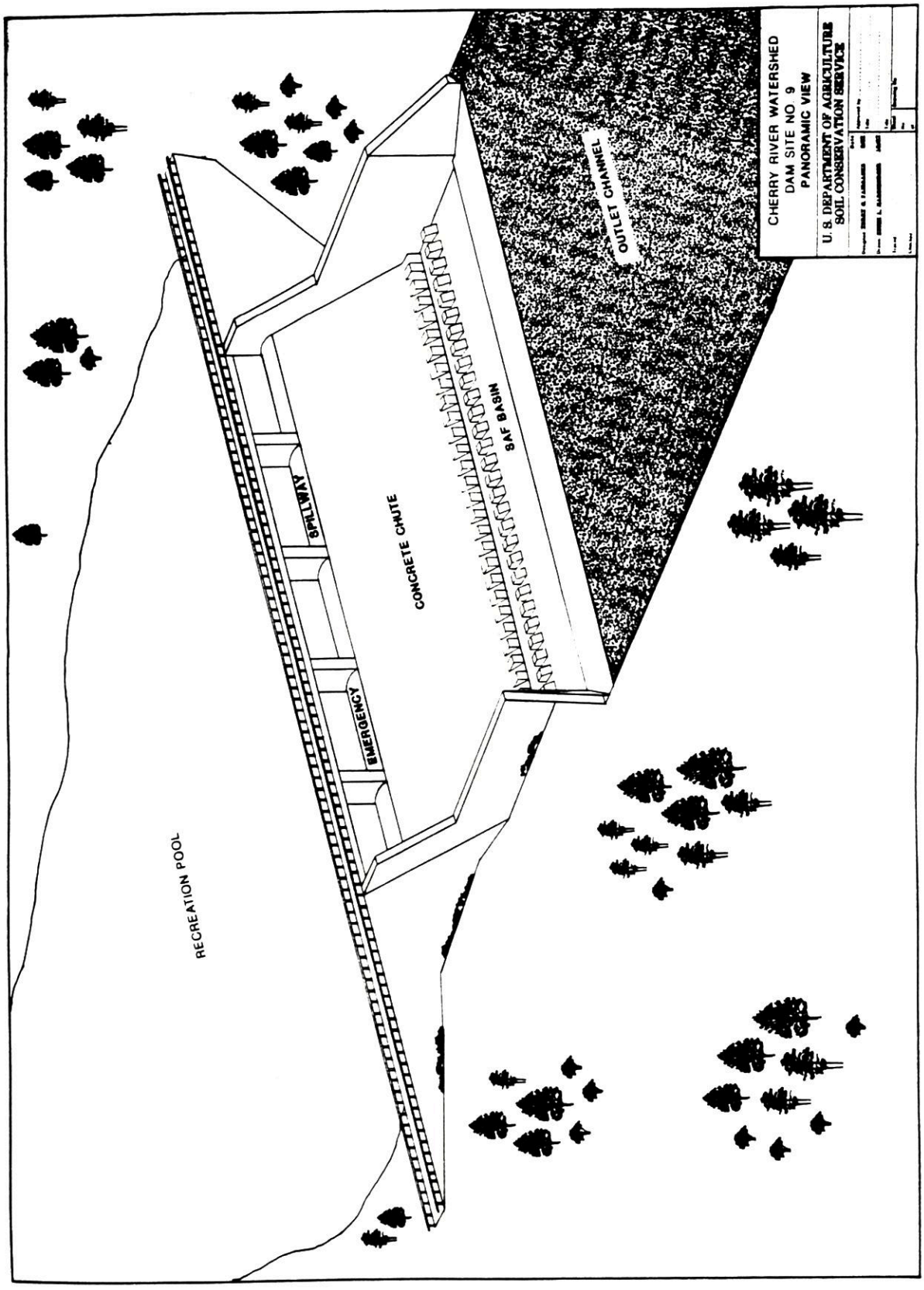


Figure 3 - Roller Compacted Concrete Dam

purposes. Water quality of the South Fork of Cherry River is sufficient for this purpose. No more than 400 acre feet would be released during any dry year to insure a minimum recreation pool of at least 100 acres, except by special agreement of the Sponsors and SCS. Recreation facilities would consist of a 37,500 square foot parking lot, 10 camp sites, 18 picnic sites, boat ramp, 35,000 square foot of sand beach, beach house containing both shower and sanitary facilities, handicapped fishing pier, fishing access trail around the lake, playground equipment, water supply and waste disposal system, maintenance building, and other appurtenances. These facilities would accommodate about 32,200 people per year.

ESTIMATED COSTS

Preliminary estimates were prepared for each level of development. They indicate that the most effective cost of the dam, including water supply and recreation facilities, would be $22,165,200 using 1989 dollars. Of this amount $20,496,400 would be for the dam and $1,668,800 for the recreation facilities. These estimates were made by multiplying volumes of work anticipated to be required in constructing the site by an appropriate unit cost. A contingency factor of 20 percent was allowed to account for unknown or unforeseen conditions that may have been overlooked during preliminary planning. The following table indicates the estimated cost of each level of development analyzed.

TABLE 1

CHERRY RIVER WATERSHED

Estimated Costs and Benefits

(1989 Dollars)

Item	Without Project	Flood Prevention Only	FP & Water Supply	FP, WS, & Recreation 100 Acre	FP, WS, & Recreation 200 Acre	FP, WS, & Recreation 370 Acre
Installation						
Dam						
Construction		10,892,900	11,148,400	14,650,900	25,413,400	61,611,700
Engineering Services		980,400	1,003,400	1,318,600	1,778,900	3,080,600
Project Administration		653,600	668,900	879,100	1,270,700	2,464,500
Landrights		3,020,600	3,531,700	3,647,800	4,027,600	4,467,800
Recreation Facilities		0	0	1,668,800	2,916,200	4,279,900
Total Installation		15,547,500	16,352,400	22,165,200	35,406,800	75,904,500
Interest During Construction		2,069,800	2,176,900	2,950,700	6,284,700	16,841,300
Total Costs		17,617,300	18,529,300	25,115,900	41,691,500	92,745,800
Annual O,M,& R		10,900	11,100	46,900	89,800	180,700
Annual Cost		1,574,800	1,655,900	2,276,400	3,790,700	8,413,600
Flood Damage						
Residential	49,100	2,300	2,300	2,300	2,300	2,300
Commercial	191,700	8,500	8,500	8,500	8,500	8,500
Total Flood Damage	240,800	10,800	10,800	10,800	10,800	10,800
Benefits						
Flood Damage		230,000	230,000	230,000	230,000	230,000
Recreation		0	0	157,900	315,900	584,400
Water Supply		0	353,600	353,600	353,600	353,600
Unemployment		215,600	220,700	290,000	503,100	1,219,600
Total Benefits		445,600	804,300	1,031,500	1,402,600	2,387,600
Net Benefits[1]/		(1,129,200)	(851,600)	(1,244,900)	(2,388,100)	(6,026,000)
Benefit Cost Ratio		0.28	0.49	0.45	0.37	0.28

1/ Parenthesis indicate a negative benefit.

ALTERNATE WATER SUPPLY SOURCES

Four alternative water supply sources were considered during this investigation to supplement the present Richwood municipal water supply system during periods of low flow. They included a single-purpose water supply dam at Site #9, a multiple-purpose flood prevention, water supply, and recreation dam at Site #9, a single-purpose water supply dam on little Laurel Creek, and pumping treated water from the Summersville municipal treatment facility. Costs to develop these sources were estimated to a preliminary degree of planning intensity in an effort to determine the least costly source and the least cost alternative. Based on the estimates, the least costly source is storing additional water in a multiple-purpose dam at Site #9. This incremental cost of water supply at Site #9 is approximately $804,900. The least cost alternative proved to be a single-purpose water supply dam located on Little Laurel Creek. The cost of the single-purpose water supply dam on Little Laurel Creek, including a transmission pipeline to Richwood, is about $3,916,600.

All planning designs and costs were developed to a preliminary degree of planning intensity. This level of planning intensity relied on USGS 7 1/2 minute quadrangle sheets plotted to a scale of 1" = 2,000" with a contour interval of 40 feet. Both the designs and costs are subject to change as more detailed data is developed and as inflation occurs.

COST ALLOCATION

Cost allocation is the process of dividing cost equitably between purposes of the project. There are three purposes in the Cherry River project; flood prevention, water supply, and recreation. The following table shows the allocation of costs for the most cost-effective dam; the development with the 100-acre recreation lake.

TABLE 2
CHERRY RIVER WATERSHED
Cost Allocation
(1989 Dollars)

Item	Cost Allocation 1/			
	Purpose			
	Flood Prevention	Water Supply	Recreation	Total
MULTI-PURPOSE STRUCTURE				
Construction	5,463,600	3,400,200	5,787,100	14,650,900
Engineering Services	491,700	306,000	520,900	1,318,600
Project Administration	327,800	204,000	347,300	879,100
Landrights	1,360,300	846,600	1,440,900	3,647,800
Subtotal	7,643,400	4,756,800	8,096,200	20,496,400
RECREATION FACILITIES				
Construction			1,347,500	1,347,500
Engineering Services			168,400	168,400
Project Administration			141,500	141,500
Landrights			11,400	11,400
Subtotal			1,668,800	1,668,800
TOTAL	7,643,400	4,756,800	9,765,000	22,165,200

1/ Based on the separable cost-remaining benefits method. This cost allocation is based upon the flood prevention, water supply, and recreation benefits for the 100 acre lake.

COST-SHARING

Cost-sharing is the division of costs between the funding agencies. SCS will pay the PL-566 share. The other share is normally provided by the project Sponsors with financial assistance from various sources, including State government and Federal grants and loans.

Costs are shared based on specific criteria developed for PL-566 watershed projects as follows:

1. SCS will pay 100 percent of the construction cost of the dam allocated to flood prevention, up to 50 percent of the construction cost of the dam allocated to both water supply and recreation, and up to 50 percent of the construction cost of the recreation facilities.

2. SCS will pay 100 percent of engineering services costs of the dam and 50 percent of the engineering services cost of the recreation facilities.

3. SCS will pay up to 50 percent of the real property rights cost allocated to recreation and water supply.

4. SCS will pay 100 percent of the project administration cost it incurs.

5. Local Sponsors will be responsible for 50 percent of the construction cost of the dam allocated to both water supply and recreation and 50 percent of the construction cost of the recreation facilities.

6. Local Sponsors will be responsible for 100 percent of the real property rights costs allocated to flood prevention, and 50 percent of the real property rights costs allocated to recreation and water supply.

7. Local Sponsors will be responsible for 50 percent of the engineering services cost of the recreation facilities.

8. Local Sponsors will bear the cost of all project administration they incur.

9. In addition to the above first costs, local Sponsors will be responsible for the annual operation, maintenance, and replacement cost of the dam, and water supply and recreation facilities. This cost is estimated to be $46,900 per year.

The total Federal share of the most cost-effective dam on the South Fork of Cherry River at Site #9 is $14,048,600, while the other share is estimated to be $8,116,600. These costs are shown in the following table.

TABLE 3
CHERRY RIVER WATERSHED
Cost Sharing
(1989 Dollars)

Item	Cost Sharing							
	PL-566				Other			
	Flood Prevention	Water Supply	Recreation	Total	Flood Prevention	Water Supply	Recreation	Total
MULTI-PURPOSE STRUCTURE								
Construction	5,463,600	1,700,100	2,893,500	10,057,200	0	1,700,100	2,893,500	4,593,600
Engineering Services	491,700	306,000	520,800	1,318,500	0	0	0	0
Project Administration	245,900	153,000	260,400	659,300	82,000	51,000	86,800	219,800
Landrights	0	423,300	720,500	1,143,800	1,360,300	423,300	720,500	2,504,100
Subtotal	6,201,200	2,582,400	4,395,200	13,178,800	1,442,300	2,174,400	3,700,800	7,317,500
RECREATION FACILITIES								
Construction			673,800	673,800			673,800	673,800
Engineering Services			84,200	84,200			84,200	84,200
Project Administration			106,100	106,100			35,400	35,400
Landrights			5,700	5,700			5,700	5,700
Subtotal			869,800	869,800			799,100	799,100
Total	6,201,200	2,582,400	5,265,000	14,048,600	1,442,300	2,174,400	4,499,900	8,116,600

CONCLUSIONS AND RECOMMENDATIONS

Economic evaluations indicated that installation of a dam on the South Fork of Cherry River at Site #9 would be infeasible for all levels of development that were investigated. This would indicate that the remaining flood problem in Richwood, although serious during major floods, is insufficient to justify significant project action. This is the major criteria for participating in a Public Law 566 watershed project. Since this criteria has not been met it is concluded that project action under PL-566 is not warranted.

Preliminary investigations indicated that the Corps of Engineer's channel work constructed through Richwood provides significant economic benefits during flood flows up through the 25-year frequency flood. Most flood reduction benefits are generated by these smaller floods. These benefits are attributable to the channel work. They were used to justify that project and are not available for justification of the dam. Remaining benefits, those associated with the more infrequent floods, are not sufficient to justify the dam. Additional benefits from recreation and water supply could not make up the difference needed for project justification (See Table 1).

Local Sponsors may want to consider the possibility of installing a low head concrete weir across Cherry River in Richwood, along with an intake, pump, and transmission line to the treatment plant to provide additional municipal water supply. Local estimates indicate that the weir would cost about $20,000. The intake structure, pump, and transmission line would involve additional cost.