Watershed Investigation Report

MOFFETT CREEK

SISKIYOU COUNTY, CALIFORNIA

SEPTEMBER 1971

UNITED STATES DEPARTMENT OF AGRICULTURE
RIVER BASIN PLANNING STAFF
BERKELEY, CALIFORNIA 94704

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WATERSHED INVESTIGATION REPORT

on

MOFFETT CREEK WATERSHED

SISKIYOU COUNTY, CALIFORNIA

September 1971

Prepared under Authority of Section 6, Public Law 83-566 (as amended) by the Soil Conservation Service and Forest Service representatives on the U.S. Department of Agriculture, River Basin Planning Staff, Berkeley, California.

MOFFETT CREEK WATERSHED
POTENTIAL PUBLIC LAW 566 STUDY

THE WATERSHED IN BRIEF

The Moffett Creek Watershed is located in southwestern Siskiyou County, California, approximately 12 miles southwest of Yreka. The principal stream of the watershed is Moffett Creek which flows northwesterly and outlets into the Scott River approximately 1 mile west of the City of Fort Jones. Elevations in the watershed range from 2,700 to 5,900 feet.

The City of Fort Jones, which had a population of 483 in 1960, is the only community in the watershed. The watershed is bordered on the east by Soap Creek Ridge, Antelope Mountain and Scarface Ridge; on the north by Scott Bar Mountains; and on the west by Scott River. State Highway 13 runs north through the service area and intersects Interstate Highway 5 near Yreka.

The economy of Moffett Creek Watershed is based primarily on lumbering and cattle operations. This general area is also important for salmon and steelhead fisheries and the popular game species are deer and quail.

The drainage area of the watershed is approximately 105,805 acres and the irrigable area of Moffett Creek Watershed totals about 6,500 acres. Present land use in the watershed is estimated as follows: 63 percent forest, brush and woodland; 28 percent range; 8 percent cropland; and 1 percent urban, channels, roads, and miscellaneous uses.

The 1964 U.S. Census of Agriculture indicates that the average farm size in Siskiyou County decreased slightly (0.8 percent) from 1,401 acres to 1,390 acres since the previous agriculture census in 1959. The 1964 value of land and buildings for the average farm was $132,105 or $95 per acre. This represents an increase in value of 58 percent over a five-year period. Specific data for the Moffett Creek Watershed was not available.

Soils in the irrigable area of the Moffett Creek Watershed are represented by the Stoner soil series. Stoner soils are over 60 inches deep with a moderate erosion hazard. Stoner soils have gravelly loam surface textures and gravelly clay loam subsoils. These soils occur on 0 to 9 percent slopes, have good drainage and moderately slow permeability.

Dominant soil series of the uplands are Kinkel, Boomer, and Duzel with soil depths ranging from 20 to **60** inches over bedrock. Drainage is good and permeability moderately slow. Slopes vary from 2 to **50** percent and the erosion hazard is moderate to high.

More detailed soils information is available at the Soil Conservation Service office in Yreka.

WATERSHED PROBLEMS AND NEEDS

FLOODWATER DAMAGES

It is estimated that 24,482 acres would flood in the Scott River Valley at the one percent chance event, including 14,715 acres due to the Scott River. Flooding in the Moffett Creek Watershed alone totals about 1,895 acres, with 423 acres occurring on the Moffett Creek floodplain and 1,472 acres occurring on the Scott River floodplain for this event.

To reduce Scott River flooding, it is necessary to control major tributaries such as Moffett Creek. The average annual damage on the Moffett Creek floodplain alone is $16,200, and consists primarily of crop and pasture, urban, road, bridge and existing channel improvement damages. Downstream damages on the Scott River, which are affected by Moffett Creek flood flows, are primarily to crops and pasture. See TABLE I for detailed information.

EROSION AND SEDIMENT

Localized areas of sheet and gully erosion, resulting from lack of protective vegetative cover (due to improper timber management, over grazing and wildfires) occur in the upland portionsof the watershed. Streambank erosion occurs in isolated areas of the watershed and along a 2-mile portion of the Moffett Creek service area. This erosion causes a loss of irrigable land and the sediment contributes pollution to Moffett Creek and Scott River. The annual cost of this damage is included in the $16,200 annual damage mentioned previously.

It is estimated the average sediment yield would be **0.3** acre-feet per year for each square mile of drainage area or a total for the watershed of 49.6 acre-feet per year.

AGRICULTURAL WATER MANAGEMENT

To fully realize the agricultural potential of the watershed additional irrigation water is needed. The potentially irrigable land in the Moffett Creek Watershed totals approximately 6,500 acres. Approximately 4,200 acres are partially irrigated and 2,300 acres will require a full

supply of irrigation water. The existing supply from local creeks is inadequate and usually dries up by the end of June.

Preliminary estimates for improved pasture, alfalfa and potatoes show a seasonal consumptive use of 28, 27 and 22 inches respectively. Of this amount, seasonal precipitation supplies 1 to 7 inches, leaving a net irrigation water requirement of 21 inches for alfalfa, improved pasture, and potatoes. Assuming a field efficiency of 70 percent and an overall canal evaporation and conveyance loss of 15 percent, the gross irrigation demand is 2.8 acre-feet per acre.

Soils information for the area indicates that drainage is generally not a problem, but under conditions of full irrigation, some drainage may be needed in isolated areas of the service area. It is anticipated that present USDA programs will be adequate to solve any drainage problems that might occur under full irrigation. Better drainage realized by installing flood control and land treatment measures should also reduce the mosquito problem.

NON-AGRICULTURAL WATER MANAGEMENT

Present municipal and industrial water supplies in the proposed service area are adequate, and the estimated probable ultimate mean seasonal demand is 100 acre-feet.[1]

RECREATION

Between 1958 and 1980, the recreational needs of Siskiyou County are expected to increase more than 200 percent to an estimated use of over 3 million activity-days.2/ There is a need for recreation facilities for such activities as fishing, swimming, camping, hiking, horseback riding, and picnicking.

FISH AND WILDLIFE

According to the California Department of Fish and Game, the 800 square miles of Scott River system, which includes Moffett Creek, supports an annual run of approximately 10,000 king salmon, 2,000 silver salmon and

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1/ California Department of Water Resources, Bulletin No. 83, Klamath River Basin Investigation, July 1964.

2/ California Outdoor Recreation Plan Committee, California Outdoor Recreation Plan, Parts I and II, 1960.

20,000 to 40,000 steelhead.[1/] The majority of king salmon spawn in the Scott River from the upper end of Scott Valley downstream to its confluence with the Klamath River. Deterioration of spawning areas by silt and sand from past mining operations in the streambed gravels appears to be a problem. Several miles of Scott River and many tributaries utilized by salmon and steelhead become dry both from natural causes and from irrigation diversions in the summer.

Present wildlife populations are limited, but the situation can be improved through better watershed management. The valley area and the lower slopes around the valley are important winter ranges for migratory deer and the deer population is generally greater than the available forage can support. Deer populations should be kept at a level commensurate with the carrying capacity of the range. This will maintain a healthier herd, protect the soil resource, and probably sustain a greater animal harvest and more hunting days per year.

PHYSICAL POTENTIAL FOR MEETING NEEDS

The Moffett Creek Watershed has an average annual rainfall that ranges from 20 inches at the valley floor to about 40 inches at the mountain tops. Runoff from the watershed averages about 9 inches per year and it appears that this would be adequate to supply the future foreseeable needs, if the entire runoff could be utilized. Since interception and storage of the entire runoff is not feasible, irrigation water must be developed from additional sources.

A preliminary geologic reconnaissance survey indicated a favorable dam and reservoir site exists on Moffett Creek, approximately 3.8 miles upstream from its confluence with Soap Creek. The drainage area at the site is 60.3 square miles with an average annual precipitation of 25 inches. The mean annual runoff is approximately 12,300 acre-feet with a firm yield (80 percent chance) of 9,000 acre-feet.

A flood prevention structure on Moffett Creek would control runoff from 60.3 square miles or about one-half of the Moffett Creek drainage area. This structure would protect the agricultural area immediately downstream and provide complete protection for the 10 percent chance event on 112 acres in the Moffett Creek and Scott River floodplains.

1/ California Department of Water Resources, Bulletin No. 136, North Coastal Area Investigation, Appendix C, Fish and Wildlife, April 1965 by Department of Fish and Game, Water Products Branch, Contracts Services Section.

Developing the underground water supply is also a means of meeting future demands for water. The estimated groundwater storage capacity of the entire Scott Valley is 400,000 acre-feet._1/ Some existing wells in Scott Valley produce from 1,200 to 2,500 gallons per minute at depths of 75 to 120 feet. Assuming an average saturated thickness of 100 feet and an average specific yield of 15 percent, a 1,225-acre area could supply the total irrigation need of 18,400 acre-feet.

Opportunities for satisfying some of the recreational needs of the county with the proposed reservoir are good. The sides would be easily accessible and on gentle slopes ideal for camping, swimming, fishing, hiking, horseback riding and picnicking facilities.

Water quality of both ground and surface water is excellent for most beneficial purposes.

To mitigate loss of fish habitat from constructing the dam, adult salmon and/or steelhead would be trapped below the dam and released above the dam to spawn. Traps will also be placed above the reservoir to catch the young fingerlings, so they can be released downstream of the dam. An alternative would be to trap the adult fish below the dam for transportation to a nearby hatchery to spawn, and subsequent release of fingerlings below the dam. Also, the irrigation releases would provide excellent fish habitat in the natural channel below the dam. To insure success of the mitigation measures, a plan of operation must be implemented before construction, for scheduling sufficient release rates to provide fish passage.

Present fire protection facilities are considered adequate; however, temporary improvements and precautionary measures will be necessary during construction. Fire breaks and other fire protection facilities will be needed as recreation facilities expand. Storage assigned to recreation and irrigation could safely be used for fire fighting in case of emergency.

LOCAL INTEREST IN PROJECT DEVELOPMENT

This project is in the Siskiyou County Soil Conservation District. The soil conservation district and Siskiyou County Board of Supervisors

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1/ United States Department of the Interior, Geological Survey, Water-Supply Paper 1462, Geology and Groundwater Features of Scott Valley, Siskiyou County, California, 1958.

are interested in sponsoring watershed projects. The soil conservation district is willing and able to accelerate the needed land treatment that would be required in a watershed project. At present, local interest in a watershed project appears to be moderate pending more detailed planning information.

STUDIES OF OTHER AGENCIES

The California Department of Water Resources investigated the Scott Valley for both groundwater and surface water developments. Their projects are described in Bulletin No. 83, Klamath River Basin Investigation, July 1964. Their Highland Dam and Reservoir (referred to as "Moffett Creek Dam" in this report) would provide 9,800 acre-feet of irrigation storage. Capital cost of the Highland Dam and Reservoir was estimated at $4,092,000 with an annual cost of $195,000 based on prices prevailing in spring of 1956. Groundwater would also be developed for the Scott Valley service area. Figures for the amount of water and costs for the Moffett Creek service area portion of Scott Valley are not available.

Report on Comprehensive Planning Study, March 1964, by McCreary-Koretsky Engineers was prepared for Scott Valley and contains information on the valley area, problems of interest in comprehensive planning, a program for development, and recommendations for its implementation.

The San Francisco District of the Corps of Engineers has also completed a preliminary study on a large dam and reservoir site near Callahan.

WORKS OF IMPROVEMENTFOR POTENTIAL DEVELOPMENT

LAND TREATMENT MEASURES

Land treatment measures will be necessary to minimize upstream erosion and fully realize the benefits from the structural works of improvement. Some streambank protection at critical locations will be needed to minimize bank erosion and protect irrigable cropland. The installation of irrigation systems and some land leveling will be necessary to prepare the land for proper irrigation. Some on-farm irrigation systems will need rehabilitation and a follow-up practice of irrigation water management will be needed to insure efficient use of water and fertilizer, minimum crop production problems, and reduce the need for supplemental drainage practices. Sub-surface drainage may be necessary in some areas. Proper pasture use will be needed for improved forage production and mosquito abatement with the impending intensive, irrigated land use. Costs for these measures have been subtracted from the gross benefits as associated costs necessary for land improvement.

Fencing of gulllied and eroded areas with sound timber and grazing management would help to control erosion and the resulting improvement in vegetative cover would enhance wildlife habitat. A planned program of brush manipulation (including browse propagation and regeneration), reforestation , proper grazing and wildlife management, timber stand improvement, on suitable soils would improve wildlife habitat, range forage, and timber production as well as reduce the fire hazard.

The danger of wildfires in the area requires that the present level of fire protection be maintained to protect the proposed land treatment measures.

STRUCTURAL MEASURES

A multipurpose flood prevention-irrigation-recreation storage structure is proposed on Moffett Creek approximately 3.8 miles upstream from its confluence with Soap Creek. An earthfill dam approximately 126 feet high would provide 10,000 acre-feet of beneficial use storage allocated to the following: irrigation storage - 9,000 acre-feet (including 1,500 acre-feet used jointly for flood prevention), and recreation storage - 1,000 acre-feet. An additional 1,800 acre-feet of storage is required for the 100-year sediment accumulation. The earthfill volume required for the dam would be approximately 750,000 cubic yards.

For the 10 percent chance event, this dam would eliminate flooding on an estimated 49 acres of the Moffett Creek floodplain and 63 acres of the Scott River floodplain.

Irrigation water released from the reservoir would be conveyed in the natural channel of Moffett Creek for approximately 3.5 miles where the water would be diverted, by a concrete diversion dam with flashboards and fish screen: into 8 miles of pipeline for distribution. Any surplus flows would continue down Moffett Creek. Turnouts would be provided for an estimated 14 farms comprising 2,100 acres of the service area.

The permanent recreation pool will have 100 acres of surface area and a depth of 12 feet above the sediment pool. This recreation pool will extend about 1.1 miles along Moffett Creek and will provide approximately 2.8 miles of shoreline.

To utilize the full recreational potential of the reservoir, several basic facilities are proposed. These basic facilities would include 8 developed camp sites, 6 developed picnic sites, a swimming beach, and one boat launching ramp and dock, necessary sanitation, adequate access roads, and parking.

For irrigating an additional 4,400 acres of the service area, water would be pumped from wells. Based on existing wells in the area, the average well capacity would be approximately 1,000 gallons per minute and have a depth of 100 feet. Each pump would have a maximum capacity of 1,000 gallons per minute and the water would be pumped into approximately 5.5 miles of existing canals that will be concrete-lined and provided with turnouts to serve an estimated 31 farms.

Due to the erosion of Moffett Creek on a two-mile reach upstream from Fort Jones, it is proposed that the existing channel be cleared of snags in that area and one mile of the channel banks be lined with rock. This will reduce erosion and provide better flow characteristics in the channel for that reach.

See TABLES II, III and IV for detailed information.

NATURE AND ESTIMATES OF COSTS OF IMPROVEMENT

Cost estimates for the multipurpose storage reservoir were based upon data developed from USGS quadrangle maps and from recent Public Law 566 Work Plans in California. Stage, storage, surface area, and dam center-line profile data were taken from the California Department of Water Resources Bulletin No. 83, Klamath River Basin Investigation, July 1964. From the recent Public Law 566 Work Plans, unit costs were developed and include all construction costs for placing the fill and providing the necessary outlet works.

The sediment storage requirements were based upon information gathered during the North Coastal River Basin Survey (Type IV) in the Klamath River Basin. Flood prevention storage requirements were determined by using procedures outlined in SCS Technical Release No. 10 and a regional stream study for the Klamath River Basin. The affects of the proposed structure on the main stem Scott River floodplain was determined by a computer study. The computer programs (water surface profiles and hydrology TR-20) were used to evaluate the effects of several dams including Moffett Creek Dam within the Scott River drainage. Procedures outlined in SCS Technical Release No. 21 were used to estimate the net irrigation requirements.

Construction costs for the irrigation distribution were based upon costs estimates of a pipeline and canal distribution system developed for the Kidder Creek Watershed, A unit cost per acre was derived and then applied to the Moffett Creek Watershed.

Cost for engineering services were estimated to be 23 percent of the total construction cost.

Land rights were based on estimates secured from local SCS personnel. Costs for relocation of utilities were developed from existing PL 566 Work Plans and are based on a percentage of the construction cost of the distribution system. Unit prices for road relocation are based upon a recent cost study by the SCS State Office Design Unit.

Operation and maintenance costs for the Moffett Creek Dam and distribution system are based on factors developed in California and used in PL 566 watershed planning. An annual lump sum was included to cover maintenance personnel and equipment and necessary secretarial help.

See TABLES V, VI and VII for detailed information.

EFFECTS AND ECONOMIC FEASIBILITY OF POTENTIAL DEVELOPMENT

Under present conditions, Moffett Creek will inundate 423 acres along its own floodplain (above the Scott River floodplain) from a one percent chance event and 358 acres from a 10 percent chance event. With the project installed, flood protection is provided at the ten percent chance event for 49 acres. The effect of this project on the Scott River will be to reduce flooding by 10 acres for the one percent chance event and 63 acres for the 10 percent chance event.

Average annual flood damage reduction benefits occurring primarily to agricultural crops, roads, bridges and sediment in the floodplain total $11,800 annually. In addition, $16,700 of more intensive agricultural land use benefits were allocated to flood prevention and included in Table VII.

The availability of irrigation water and protection from flooding will enable farm operators to increase their net income on 6,500 acres of farmland. The difference in net income with and without the project, less the associated costs of irrigation, allowing for a five-year, straight-line lag in accrual, equals $318,000 annually.

Recreation benefits accruing to the 100-acre recreation pool at the multiple-purpose reservoir will amount to $42,900 annually, assuming a five-year, straight-line delay in accrual and a recreation-day value of $1.50. An annual total of 31,525 visitor days was the estimated full use at this site. There would be additional benefits accruing to the improved fish habitat in the 3.5 miles of Moffitt Creek located below the dam. These benefits have not been included.

Secondary benefits were estimated to be ten percent of primary flood prevention, recreation and irrigation benefits. These secondary benefits total $38,900 annually and were local in nature. Secondary benefits from a national viewpoint were not considered.

The benefit-cost ratio is 1.5:1.0 for the overall project. A summary of benefits and cost is given in Table VII.

ALTERNATE OR ADDITIONAL POSSIBILITIES

A flood control plan for the entire Scott Valley area should be investigated in greater detail. At the present time, there are four other watersheds in Scott Valley--Etna, Kidder and French Creeks and East Fork Scott River--that are under preliminary investigation as potential PL 566 projects. Channel improvement on the main stem Scott River was investigated briefly with the assumption that five multipurpose dams, controlling 30 percent of the drainage area and having a combined flood control storage of 17,500 acre-feet, would be installed. Complete flood protection could be provided at the 10 percent chance event with a reduction in flooding of 9,600 acres on the main stem Scott River because of channel improvements alone. (Flooding from Scott River in the Moffett Creek Watershed would be reduced by 1,722 acres for the 10 percent chance event.) Five dams, including Moffett Creek Dam, would reduce flooding by 5,300 acres on the tributaries and 2,000 acres on the main stem Scott River. Capital cost of channel improvement on Scott River was estimated at $2,102,000 with an annual cost of $138,100. Channel improvement appears economically justified.

If the valley is planned as one unit, additional storage and releases should be considered at all potential reservoirs for fisheries enhancement.

A second alternative is to include in the East Fork Scott River service area that portion of Moffett Creek service area that is served by wells. This alternative appears economically justified but needs further investigation.

TABLE I · ESTIMATED ANNUAL FLOOD DAMAGE
Moffett Creek Watershed, Klamath River Basin

Item	Damage (Dollars) 1/		
Floodwater	Moffett Creek	Scott River 2/	Totals
Crop and Pasture	1,400	12,000	13,400
Other Agricultural	400	3,300	3,700
Sediment	400	3,900	4,300
Road, Bridge and Channel	8,500	2,200	10,700
Urban	2,500		2,500
Indirect	3,000	2,400	5,400
TOTAL	16,200	23,800	40,000

1/ Price Base · Adjusted Normalized Prices

2/ Does not include damages to Scott River floodplain from drainage areas other than Moffett Creek.

TABLE II - STRUCTURE DATA

Moffett Creek Watershed, Klamath River Basin

Dam Site	Drainage Area Sq. Mi.	Est. Height of Dam Ft.	Est. Vol. of Fill Cu. Yd.	Emergency Spillway Type	Maximum Surface Area @ Em. Spill. Level Acres
1	60.3	126	750,000	Concrete	290

Item	Amount
Multipurpose Dam	1 ea.
Diversion Str.	1 ea.
Fish Traps	2 ea.
Irrigation Pumping Plants	24 ea.
(Discharge 1,∞ ○ gpm)	
(Horsepower 20)	
Irrigation Wells	24 ea.
Pipelines	8 miles
Concrete Lining	5.5 miles
Turnouts	45 each

TABLE III - RESERVOIR STORAGE CAPACITY
Moffett Creek Watershed, Klamath River Basin

Reservoir Site	Drainage Area Sq.Mi.	STORAGE CAPACITY PLANNED (Acre-Feet)				
		Sediment	Irrigation	Recreation	Flood 1/ Prevention	Total
1	60.3	1,800	9,000	1,000	1,500	11,800

1/ Joint use storage with irrigation

TABLE IV · ESTIMATED STRUCTURAL COST
Moffett Creek Watershed, Klamath River Basin

Item	Amount Planned	Estimated Total Cost (Dollars)1/
STRUCTURAL MEASURES		
Construction		
Multipurpose Dam	1 ea.	1,725,000
Irrigation Distribution System	Lump sum	1,201,000
Irrigation Wells	24 ea.	109,000
Irrigation Pumping Plants	24 ea.	55,000
Channel Improvement	Lump Sum	72,000
Basic Recreation Facilities	Lump Sum	91,000
Fish and Deer Mitigation Measures	Lump sum	41,000
Subtotal Construction		3,294,000
Engineering Services		758,000
Land Rights		359,000
Project Administration2/		54,000
TOTAL STRUCTURAL MEASURES		4,465,000

1/ Price Base · 1970

2/ Cost includes State Dam Filing Fees, Water Rights Acquisition and Contract Administration.

TABLE V - DISTRIBUTION OF STRUCTURAL COST
Moffett Creek Watershed, Klamath River Basin

STRUCTURAL MEASURES	INSTALLATION COSTS (Dollars)1/ Construction	Engineering Services	Land Rights	Project Admin.	Installation Cost
Multipurpose Reservoir					
Flood Prevention	373,000	86,900	10,000	8,0002/	477,000
Agricultural Water	1,206,000	277,000	160,000	27,0002/	1,670,000
Recreation Storage	146,000	34,000	154,000	3,0002/	337,000
Subtotals	1,725,000	397,000	324,000	38,000	2,484,000
Irrigation Distribution System	1,201,000	276,000	22,000	12,000	1,511,000
Irrigation Wells	109,000	25,000	6,000	1,000	141,000
Irrigation Pumping Plants	55,000	13,000		600	68,600
Channel Improvement	72,000	17,000	3,000	1,000	93,000
Basic Recreation Facilities	91,000	21,000	4,000	1,000	117,000
Fish and Deer Mitigation Measures	41,000	9,000	-	400	50,400
TOTAL	3,294,000	758,000	359,000	54,000	4,465,000

1/ Price Base - 1970

2/ Cost includes State Dam Filing Fee and Water Rights Acquisition.

TABLE VI · ANNUAL COST
Moffett Creek Watershed, Klamath River Basin
(Dollars) 1/

Item	Amortization of Installation Cost2/	Operation Maintenance & Replacement cost	Total
Multipurpose Reservoir	134,200	6,200	140,400
Irrigation Distribution System	81,700	10,400	92,100
Irrigation Wells	7,600	2,300	9,900
Irrigation Pumping Plants	3,700	9,500	13,200
Channel Improvement	5,000	1,000	6,000
Basic Recreation Facilities	6,300	9,400	15,700
Fish & Deer Mitigation Measures	2,700	2,600	5,300
TOTAL	241,200	41,400	282,600

1/ Price Base · 1970. Installation Costs; Adjusted Normalized Prices · OM&R Costs

2/ 100-year evaluation period, 5-3/8% interest.

TABLE VII - COMPARISON OF BENEFITS AND COSTS FOR STRUCTURAL MEASURES
Moffett Creek Watershed, Klamath River Basin
(Dollars) 1/

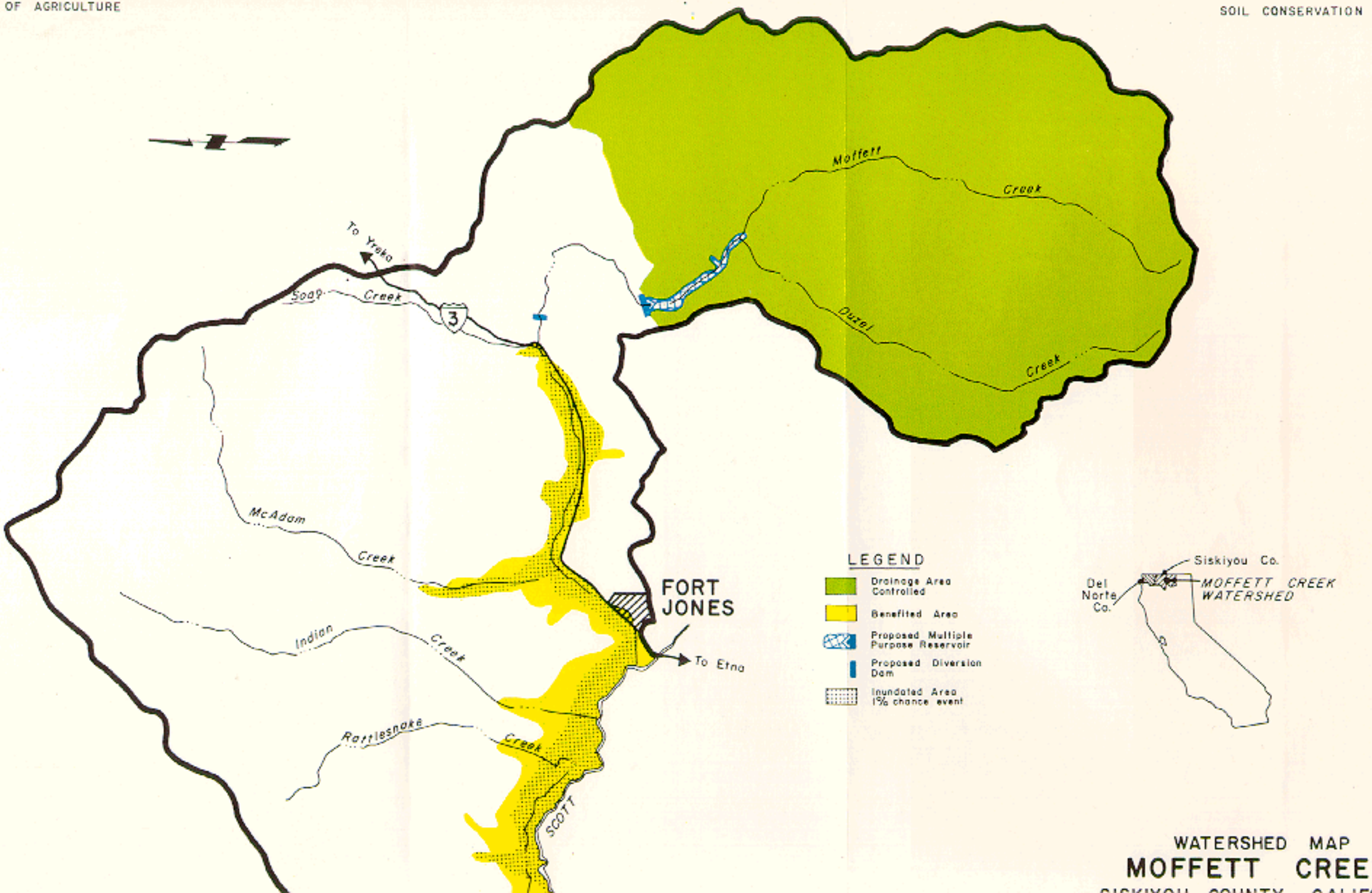
Item	AVERAGE ANNUAL BENEFITS					Average Annual Cost	Benefit-Cost Ratio
	Flood Prevention	Irrigation	Recreation	Secondary	Total		
Multiple Purpose Dam and Reservoir, Irrigation Delivery System	28,500	318,000	42,900	38,900	428,300	282,600	1.5:1
TOTAL	28,500	318,000	42,900	38,900	428,300	282,600	1.5:1

1/ Price Base: Construction Costs - 1970; Benefits, O&M Adjusted Normalized Prices

TABLE VIII - COST ALLOCATION AND COST-SHARING SUMMARY
Moffett Creek Watershed, Klamath River Basin
(Dollars) 1/

Purpose	Cost Allocation	Cost-Sharing	
	Total	Federal	Other
Flood Prevention	579,000	558,000	21,000
Irrigation	3,425,000	1,815,000	1,610,000
Recreation	461,000		234,000
TOTAL	4,465,000	2,600,000	1,865,000

1/ Price Base: 1970



WATERSHED MAP

MOFFETT CREEK

SISKIYOU COUNTY, CALIFO