Pocatello

PORTNEUF RIVER SECTION 1135: CHANNEL RESTORATION PLAN

Project Modification Report and Environmental Assessment

JANUARY 1997

PORTNEUF RIVER SECTION 1135: CHANNEL RESTORATION PLAN

Project Modification Report

Contents

Acronyms

Corps	U.S. Army Corps of Engineers
DEQ	Idaho Division of Environmental Quality
EA	Environmental Assessment
FWS	U.S. Fish and Wildlife Service
gpm	Gallons per Minute
HEP	Habitat Evaluation Procedure
hp	Horsepower
HSI	Habitat Suitability Index
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
NRCS	National Resources Conservation Service
SHPO	State Historic Preservation Office

Study Authority

Under Section 1135(b), Water Resources Development Act of 1986, as amended, the Secretary is authorized to carry out a program for the purpose of making such modifications in the structures and operations of water resources projects constructed by the Secretary that the Secretary determines 1) are feasible and consistent with the Authorized project purposes, and 2) will improve the quality of the environment in the public interest. The non-Federal share of the cost of any modifications carried out under this section shall be 25 percent. No modifications shall be carried out under this section without specific authorization by Congress if the estimated cost exceeds $5,000,000.

Purpose and Scope

Between 1966 and 1968, the Corps constructed a flood control project extending along a 6.2-mile reach of the Portneuf River through the City of Pocatello, Idaho (Figure 1). The project consisted of a 1.5-mile rectangular concrete channel and 4.7 miles of revetted levee upstream and downstream of the concrete channel.

Aerial photos taken prior to the project's construction indicate the extensive meandering of this river. Riparian vegetation and wetlands were evident along both banks, although residential encroachment had reduced the suitable habitat for fish and wildlife. Significant environmental impacts, including reduction in river meandering and a subsequent reduction of fish and wildlife habitat, were incurred as a direct result of construction of this project.

The Portneuf River flood control project has been identified as an area having strong potential for environmental improvement at a promising meander site that had been lost following the 1968 construction. A river meander site will be restored or rehabilitated to replace lost riparian habitat and other environmental values associated with the Portneuf River prior to construction of the project. The City of Pocatello would be the local sponsor of the proposed project.

P:\135602\FIGS.FH4 1996

DOWNSTREAM END OF PROJECT

Intermittent riprap channel and levee reach

North City Park Meander

BEGIN RIPRAP CHANNEL
END CONCRETE CHANNEL

Concrete channel reach

BEGIN CONCRETE CHANNEL
END RIPRAP CHANNEL

Intermittent riprap channel and levee reach

Open Lands Meanders

UPSTREAM END OF PROJECT

APPROXIMATE SCALE IN MILES

0 1/2 1

SECTION 1135 PROJECT MODIFICATION
PORTNEUF RIVER
POCATELLO, IDAHO

Figure 1
LOCATION MAP
PORTNEUF RIVER
POCATELLO, IDAHO

135602.PR.ZZ

CH2MHILL

Prior Studies, Reports, and Existing Water Projects

The Portneuf River Flood Control Project was authorized by the Flood Control Act, Public Law No. 228, approved August 18, 1941, and as amended by the Flood Control Act of December 22, 1944. The project is located at the City of Pocatello in southeast Idaho, and was constructed from July 1966 to November 1968. The project extends along a 6.2-mile reach of the Portneuf River and consists of a 1.5-mile stretch of rectangular concrete channel and 4.7 miles of revetted levee and channel reaches upstream and downstream of the concrete channel (Figure 1).

Plan Formulation

Resource Problems and Opportunities

Existing Conditions

Prior to project construction, the Portneuf River was a meandering river with extensive riparian and wetland plant communities, as well as diverse aquatic habitats. The plant communities supported a diverse wildlife community.

The upstream levee reach included seven major meanders and former meanders cutoff by the railroad prior to project construction. At least two of the major meanders and two or three of the cutoff meanders supported extensive riparian and possibly wetland vegetation. The reach of the Portneuf currently channeled by concrete flowed through the center of Pocatello as a meandering river with a sinuosity index greater than 1.5. The river banks were well-vegetated. The downstream levee reach only supported one major meander with associated riparian and wetland vegetation, but the riparian vegetation along the banks was generally well-developed. A total of nine major meanders were removed with the project, which resulted in the loss of most of the vegetation.

Vegetation has returned along the diked channel, but is less diverse in structure and extent because 36 acres of riparian and wetland habitat were lost to the construction of the flood control channel. Few large trees remain and primarily shrubs persist, providing very little shade to the stream. Natural fluvial process such as the formation of point bars, which are required for cottonwood establishment, no longer occur in most parts of the affected reach. Extensive channel modifications also eliminated all jurisdictional wetlands from the upper and middle segments. The loss of functional value of the riparian community in terms of biodiversity and species composition, wildlife habitat values, and fishery habitat values is estimated to approach 90 percent.

The loss of mature trees eliminated nest sites for hawks, owls, cavity nesters, and many other wildlife species. Species that require relatively large habitat blocks have also been eliminated, as have most or all wetland-dependent species. Generally, the wildlife community that occurs along the project area is significantly less diverse and less abundant than that which occurred in unaltered segments of the river before the project. Native wildlife use along the concrete channel segment has been all but eliminated.

Fish species present in the pre-project river habitats are still occasionally present in the project reach. High sediment loads and upstream pollution point sources have reduced habitat quality. The quality of the habitat has further declined because of concrete channelization, and removal of river meanders which contained numerous micro-habitat components. Removal of stream-side shading has also decreased habitat suitability. Incidental, personal observations by a retired Idaho Department of Fish and Game employee on the pre-project aquatic environment indicated that cold and warm water fish species used City Creek prior to the project implementation for spawning. The mouth of City Creek, which is

located in the concrete reach, has been blocked by a 4-foot drop structure and a rapid elevation change now exists from the channel to the creek.

Future Without Project Conditions

Without the proposed action, the old meander would stay dewatered for the most part and devoid of quality riparian and wetland habitats. The meander would not be rehabilitated or enhanced to assist in replacing environmental values associated with the river prior to the 1966-1968 construction of the flood control project.

Problems and Opportunities

Under current conditions, the project provides poor habitat for wildlife and fish. The degraded riparian corridor is confined to a narrow band and wetlands are absent from most of the project.

Preliminary observations of the project area have identified several potential opportunities to restore riparian and aquatic habitat in selected project reaches. Restoration of these habitats could restore part of the project area to pre-project conditions, with subsequent increases in functional values of the aquatic and riparian communities. One such site is found in North City Park.

Planning Constraints

The proposed project modifications consist of restoring water to meanders at the North City Park location through a series of weirs, pumps, or water control gates. The site would be revegetated with native riparian and wetland vegetation. The proposed modifications are consistent with the authorized project purpose of flood control.

Alternative Plans

Measures

Reintroduction of water into a river meander is the most effective way to restore wildlife and fishery habitat values to the river system. The pre-project condition was represented by a diverse riparian/wetland community and associated wildlife and fishery values. The proposed modification will restore some of these lost values.

Reasons for Selection

The City of Pocatello expressed interest in improving the riverine environment around the Portneuf River in the vicinity of the City. The Army Corps of Engineers (Corps) identified the opportunity of using Section 1135 to assist the City in this endeavor. Preliminary evaluations of the project area identified seven opportunities to improve fishery or terrestrial habitat. The proposed alternatives were subjected to hydrologic, environmental, and economic analyses, and the most feasible options were selected for further analysis.

Screening of Alternative Plans

Seven alternatives were identified as possible components of the environmental restoration project. Alternatives included the following:

1. City Creek Entrance – Modify the City Creek outlet structure and approach channel to provide fish access into the City Creek drainage basin.
2. Low Flow Channel – Install a concrete curb in the concrete reach of the flood control channel to provide deeper flow for fish.
3. North City Park Meander – Introduce flow into the left overbank to generate additional vegetation along the delivery channel banks and an abandoned meander channel.
4. Open Lands Meander – Introduce flow into the right overbank behind the railroad to generate additional vegetation along the banks of abandoned meander channels and a connecting channel.
5. Tech-Harper Road Meander – Initiate flow into the left overbank behind the left bank levee of the Pocatello Flood Control Project.
6. Large Tree Plantings – Introduce vegetation in areas appropriate to provide shade to improve conditions for a trout fishery.
7. Replace Concrete Channel – Develop a scoping estimate of the cost to remove the concrete portion of the Pocatello Flood Control Project and replace it with an urban channel designed to create a park-like setting along the river.

Preliminary analysis for hydrology and environmental resources determined that a number of alternatives were not feasible, because of lack of benefit or high cost. A summary of the analysis follows.

- Redesigning the **City Creek Entrance** resulted in a lack of measurable fishery benefits. There would not be sufficient environmental restoration benefits, particularly because available streamflows to the river for much of the year are not adequate to deliver fish to the mouth of the channel.
- The engineering costs for the **low flow channel** would be high, and fishery and wildlife benefits would be minimal. The modification to the structure would have to be unacceptably large to provide an adequate passage for fish.
- The **North City Park Meander** was promising. Quantifiable benefits exist for neotropical migratory birds (birds that migrate between North America and the New World tropics). Existing vegetation in the abandoned meander channel indicates that water flows through it for at least part of the year.
- The **Open Lands Meander** is also promising, although complicated. Quantifiable benefits exist for neotropical birds. The City requires public access to the restoration site, relocation of the railroad maintenance road, and delivery of the flow under the railroad embankment both upstream and downstream of the meanders.

- The engineering costs for the **Tech-Harper Road Meander** are quite high; however, quantifiable benefits exist for neotropical birds. Problems at the site include the presence of a sewer line lift station and delivery lines, the fact that old channel meanders have been filled in, and the need for a setback levee.
- **Large tree plantings** along the concrete channel would result in quantifiable benefits for neotropical birds. However, the trees would not be located within the confines of the Flood Control Project and would require property owner approval.
- The alternative to **replace the concrete channel** would result in significant real estate needs and relocation of numerous buildings, streets, bridges, and utilities. Although channel replacement would constitute restoration of this reach of the river, the project would have a considerable cost. The replacement of the concrete channel is also a local issue that would require extensive public involvement.
- The **No Action Alternative** would result in the water supply continuing to be cut off from the meanders, adversely impacting associated wetland areas and riparian zones. Fish and wildlife habitat would not be enhanced, and no action would be taken to promote environmental restoration along these segments of the Portneuf River.

Evaluation of Final Alternatives

The Environmental Resources Branch of the Corps conducted a U.S. Fish and Wildlife Service (FWS) Habitat Evaluation Procedure (HEP) study of 29 separate alternatives associated with the Portneuf River Restoration Project during 1994 and 1995. HEP is a formalized, quantitative method of evaluating fish and wildlife species habitat quality and determining impacts and/or benefits associated with land development projects. The basis for HEP is a series of habitat suitability models that have been developed for a variety of species. These models evaluate habitat quality by defining a relationship between a selected, measurable habitat variable such as canopy closure, with a corresponding habitat rating or score called a suitability index (SI). Suitability indices range from 1.0 (optimum habitat value) to 0.0 (no value).

Table 1 lists the original array of alternatives for the Portneuf River 1135 project. The table indicates the average annual benefit achieved in habitat units, and the annual cost per annual benefit per habitat unit. A follow-up analysis, presented in Table 2, detailed the maximum number of alternative combinations ranked by average cost per habitat unit. At the conclusion of this exercise, several cost-effective alternatives were advanced for the trade-off analysis. The alternatives were evaluated assuming a 50-year project life.

Trade-off Analysis

Table 3 ranks the cost-effective alternatives by average cost per habitat unit. The table permits a comparison among all of the alternatives for a variety of costs (including construction, investment, operation and maintenance, and others) and the average annual benefit as reflected in habitat units.

TABLE 1.
Original Array of Individual **Alternatives**
Evaluation of Final Alternatives

Code	Item	Alternative Description	Total Average Annual Cost	Average Annual Benefit (Habitat) Units	Annual Cost per Annual Benefit (Habitat) Unit
A0B0C0	1	No Action=Existing Conditions	$0	0	$0
A3B1C0	2	City Creek A/2—Retaining Walls	$30,000	0.16	$187,500
A1B0C0	3	North City Park A/Downstream Meanders	$41,000	0.5	$82,000
A3B0C0	4	North City Park C/with Solar Pump	$34,000	0.55	$61,818
A2B0C0	5	North City Park B/with Weir	$111,000	0.55	$201,818
A0B0C1	6	Open Lands Meanders	$146,000	2.18	$66,972

TABLE 2.
Maximum Number of Alternative Combinations
Ranked by Average Cost per Habitat Unit

Code	Item	Alternative Description	Total Average Annual Cost	Average Annual Benefit (habitat) Units	Annual Cost per Annual Benefit (Habitat) Unit
A0B0C0	1	No Action=Existing Conditions	$0	0	$0
A3B0C0	2	North City Park C/with Solar Pump	$34,000	0.55	$61,818
A3B1C1	3	North City Park C/with Solar Pump/Open Lands	$180,000	2.73	$65,934
A0B0C1	4	Open Lands Meanders	$146,000	2.18	$66,972
A1B0C1	5	North City Park A/Downstream Meanders/Open Lands	$187,000	2.68	$69,776
A3B1C1	6	North City Park C/with Solar Pump/C. Creek A/Open Lands	$210,000	2.89	$72,664
A0B1C1	7	City Creek A/2—Retaining Walls/Open Lands	$176,000	2.34	$75,214
A1B1C1	8	North City Park A/Downstream Meanders/C. Creek A/Open Lands	$217,000	2.84	$76,408
A1B0C0	9	North City Park A/Downstream Meanders	$41,000	0.5	$82,000
A3B1C0	10	North City Park C/City Creek A/2—Retaining Walls	$64,000	0.71	$90,141
A2B0C1	11	North City Park B/with Weir/Open Lands	$257,000	2.73	$94,139
A2B1C1	12	North City Park B/with Weir/C. Creek A/Open Lands	$287,000	2.89	$99,308
A1B1C0	13	North City Park A/Downstream Meanders/C. Creek A	$71,000	0.66	$107,576
A3B1C0	14	City Creek A/2—Retaining Walls	$30,000	0.16	$187,500
A2B1C0	15	North City Park B/with Weir/C. Creek A/2—Retaining Walls	$141,000	0.71	$198,592
A2B0C0	16	North City Park B/with Weir	$111,000	0.55	$201,818

Table 3

Cost-Effective Alternatives (Ranked by Average Cost Per Habitat Unit)

Code	Item	Alternative Description	LERRD Cost	Construction Cost	E&D	S&A	Total Project Cost	I.D.C.	Total Investment Cost	Average Annual Equivalent Cost	Average Annual OMRR&R Cost	Total Average Annual Cost	Average Annual Benefit (Habitat) Units	Annual Cost per Annual Benefit (Habitat) Unit
A0B0C0	1	No Action=Existing Conditions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0	$0
A3B0C0	3	North City Park C/Solar Pump	$7,000	$233,000	$55,000	$28,000	$323,000	[illegible]	$329,000	$26,000	[illegible]	[illegible]	[illegible]	$61,818
A3B0C1	8	North City Park C/Open Lands	$274,000	$1,362,000	$287,000	$163,000	$2,086,000	$40,000	$2,126,000	$167,000	$13,000	$180,000	2.73	$65,934
A0B0C1	6	Open Lands Meanders	$246,000	$1,168,000	$259,000	$140,000	$2,041,000	$34,000	$2,041,000	$141,000	$5,000	$146,000	2.18	$66,972
A3B1C1	9	North City Park C/City Creek A/Open Lands	$277,090	$1,594,780	$356,834	$209,556	$2,438,260	$44,000	$2,482,260	$195,000	$15,000	$210,000	2.89	$72,664
A0B1C1	7	City Creek A/2-Retaining Walls/Open Lands	$272,090	$1,368,780	$298,834	$117,556	$2,117,260	$38,000	$2,155,260	$169,000	$7,000	$176,000	2.34	$75,214
A3B1C0	4	North City Park C/City Creek A/2-Retaining Walls	$8,090	$458,780	$127,834	$78,556	$673,260	$10,000	$683,260	$54,000	$10,000	$64,000	0.71	$90,141
A0B1C0	2	City Creek A/2-Retaining Walls	$3,090	$232,780	$69,834	$46,556	$352,260	$4,000	$356,260	$28,000	$2,000	$30,000	0.16	$187,500
		Preferred Alternative Included Item 3												

Final Plan Selection

The Preferred Alternative was selected following the comparison between the average annual benefit in habitat units and annual cost per benefit unit. The restoration of old river meanders proposed under the project modification is expected to produce significant improvements in the quality and extent of riparian communities in the vicinity of the river. A 38 percent increase in the extent of palustrine forested and scrub-shrub cover types over existing conditions is anticipated. The extent of wetland areas are expected to increase as water is returned to historic meanders adjacent to the main channel. An evaluation of plant community conditions prior to initial channelization identified the presence of scattered emergent wetlands dominated by cattail (*Typha sp.*) and various species of sedges and rushes. Wetlands of this type are anticipated to re-establish following completion of the project modification. The extent of grassland is expected to decrease approximately 37 percent within the project modification area at North City Park as more upland areas are converted to riparian and wetland community types. However, the existing grasslands are comprised mainly of non-native annuals species of limited habitat value.

Long-term effects resulting from restoration activities are expected to benefit wildlife species which use wetland and riparian habitats. Increases in the abundance and diversity of forested riparian zones will provide greater amounts of roosting and nesting locations for birds, and denning sites for mammals. Restoration of wetland communities is also expected to provide greater amounts of habitat value for wetland-dependent species including amphibians and some reptiles. Restoration activities planned for the project area are expected to improve the quality of remaining upland communities, leading to a net improvement in upland wildlife habitat for the project.

The Corps' Habitat Evaluation Procedures (HEP) study initially evaluated 29 separate alternatives associated with the Portneuf River Restoration Project. Habitat suitability index (HSI) values and Habitat Unit (HU) values were projected for several alternatives assuming a 50-year life of the project. Habitat quality, reflected by HSI ranks, were projected to increase for several cover types, including palustrine forest and grassland. HU's were projected to increase from a baseline of 14.8 for the No Action Alternative to 27.7 for the North City Park Alternative. HU's for all cover types are expected to increase as a result of the project modification.

Because of the low flow rate pumped to the North City Park meander, this project site will not support a permanent fishery, but could support a put-and-take fishery for children. It may, however, indirectly benefit the mainstem fishery by providing a source of allochthonous food.

Description of Selected Plan

Plan Components

North City Park Option C with solar pumps (A3B0C1) has been identified adjacent to the Portneuf River flood control project as having the potential for environmental improvement. The area is currently unimproved land that contains remnants of an old river meander. North City Park is at the downstream end of the project (Figure 1).

The meanders at North City Park have no flowing water but are vegetated with trees and bushes. To re-establish the river meanders, water would be supplied to the remnant meanders from the Portneuf River using solar-powered pumps (Figure 2). Solar pumps are more cost-effective than an electric pump and weir system, and overhead power lines raised safety and aesthetic concerns. Solar-generated power was selected rather than buried power lines because it was most effective and the preferred option of the City of Pocatello. The system would consist of three intake weirs, three pumps, and six solar panels. Each pump would require two solar panels. These 1 1/2 horsepower (hp) surface pumps would pump an average of 100 gallons per minute (gpm) each. Pumps would run only during daylight hours and shut off at night. The pumps will provide sufficient circulation to establish through or flushing flows that avoid water stagnation. Pump intakes would be screened to prevent fish entrainment. Each of the solar panels would be approximately 8 foot by 12 foot and would be mounted on trackers to follow the sun from east to west. Water intake would be located inside a concrete weir (a concrete cube with a lid on the top for access to clean out sediment) situated alongside the riverbank. Water level in the meander would be 6 inches below the base of the willow trees following the meander. The excavation slopes would be vegetated with trees and shrubs, planted in groups according to their water needs. The construction would occur by excavating with bulldozers and front-end loaders. Excess soil material would be disposed offsite so that the established floodway is not impacted. Periodic maintenance of the pump, solar panels, and weirs would be required.

Design and Construction Considerations

A brief description of the alternative is presented in the preceding section, and the Engineering Feasibility Study for the proposed action is included in Appendix B. The intent of the design is to restore old river meanders to produce significant improvements in the quality and extent of riparian communities in the river vicinity.

The total estimated cost for the proposed project modification is $323,000. The following table summarizes the costs (in thousands).

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY

PLAN - NORTH CITY PARK

SCALE IN FEET

50' 0 50'

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SKEDER

MORROW

SKEDER

PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

NORTH CITY PARK - C
SOLAR POWERED PUMPS - SITE PLAN

SCALE AS SHOWN

SAFETY PAYS

FIGURE 2

TABLE 4
Project Modification Costs

Account	Item	Cost
01	Lands and Damages	7,000
06	Facilities	233,000
18	Cultural Resources	u/k
30	Planning, Engineering, Design	55,000
31	Construction Management	28,000
	Total Project Cost	**323,000**
Project Cost Sharing		
Federal (75%)		242,250
Non-Federal (25%)		80,750
Estimated Annual O&M		8,000

Operation and Maintenance Considerations

A Local Sponsor for project cost sharing is required by Section 1135 of the 1986 Water Resources Development Act, as amended. The Local Sponsor, the City of Pocatello, will provide 25 percent of the implementation costs, including report costs. All O&M costs will also be the responsibility of the Local Sponsor.

Plan Accomplishments

The proposed project modification will make possible the restoration of terrestrial and aquatic habitat to a more natural state as was found in pre-project conditions. A summary of the anticipated benefits is contained in the following table.

TABLE 5
Anticipated Project Benefits

Item	Without Project	With Project
Riparian/Wetland Habitat	19.8 acres	19.8 acres
Fish	Little suitable habitat	Little suitable habitat
Wildlife	14.8 Habitat Units	27.7 Habitat Units

Although project benefits are primarily directed towards improvements in riparian habitat and riparian vegetation, all aquatic and terrestrial species will benefit from improved habitat conditions.

Summary of Economic, Environmental, and Other Effects

Table 3 presented economic and environmental information about a range of alternatives, ranked by average cost per habitat unit.

Plan Implementation

Institutional Requirements

An Environmental Assessment (EA) has been drafted to assess the impacts from implementing the proposed modification on the human environment. Section 404 of the Clean Water Act review has been completed. The project is covered by Nationwide Permit No. 4 at 33 CFR 330.5, Appendix A.

The schedule for accomplishment is shown in Table 6:

TABLE 6
Schedule for Accomplishments

Activity	Date
Kick-off study team meeting	9/19/94
Initial site visit by team	11/9/94
Complete draft Project Study Plan	10/1/94
Approval of Quality Control Plan	6/21/96
Alternatives identified	1/3/96
Complete plan formulation	6/1/96
Complete design and cost estimate	6/7/96
Complete real estate appendix	6/3/96
Complete draft PCA	9/30/96
Draft report/EA done	6/14/96
Technical review completed	6/21/96
Complete EA public review/incorporate comment	8/9/96
Sign final report/submit to NPD	1/13/97
Report approval by HQ	7/1/97
Complete plans and specifications	11/1/97
Sign PCA	4/1/98
Sponsor certifies availability of LERRD	4/1/98
Award construction contract	5/1/98
Complete construction	9/30/98

Division of Plan Responsibilities

As Local Sponsor, the City of Pocatello is required to provide 25 percent of the study and implementation costs (City's portion currently estimated at $80,750), which includes the value of lands required to complete the project. In addition, the Local Sponsor is required to pay 100 percent of the incremental operation, maintenance, repair, rehabilitation, and replacement costs associated with project modifications. The Corps is responsible for 75 percent of the project costs, including design and engineering, report preparation, facilities, and construction.

Views of Local Sponsor and Other Implementing Agencies

Copies of the draft EA were distributed to several local and state agencies for review, and comments were incorporated into the draft. An onsite inspection of the proposed alternative was conducted on July 26, 1996, with representatives of the Corps, the City of Pocatello, and state agencies. Prior to project implementation, a cost sharing agreement will be approved by the City and the Corps.

Summary of Coordination

Several federal agencies have reviewed the scope for the environmental assessment, including the U.S. Fish and Wildlife Service (FWS) and the U.S. Natural Resources Conservation Service (NRCS).

Coordination has taken place with the State Historic Preservation Office (SHPO) to search cultural and historic records, Idaho Department of Fish and Game (IDFG) to review the restoration sites, Idaho Department of Water Resources (IDWR) on water rights issues and to review the scope of the EA, and Idaho Department of Health and Welfare Division of Environmental Quality (DEQ) to review the scope of the EA.

The City of Pocatello was contacted to discuss Local Sponsor responsibilities. The City of Pocatello Community Development Director and the Assistant City Engineer were consulted to assist in the alternatives evaluation process. The Portneuf Greenway Advisory Committee was consulted to collect background information. Local planning documents were reviewed.

Recommendations

I recommend the proposed project modification for the Portneuf River for approval for implementation as a Federal project under authority of Section 1135(b) of the Water Resources Development Act of 1986, as amended. Such modifications as in the discretion of the Commander, HQUSACE, may be advisable; at a first cost to the United State presently estimated at $323,000; provided that, except as otherwise presented in the recommendation, the exact amount of non-Federal contributions shall be determined by the Commander, HQUSACE, prior to project implementation in accordance with the requirements of local cooperation stated previously.

The recommendations contained herein reflect the policies governing formulation of individual projects and the information available at this time. They do not necessarily reflect program and budgeting priorities inherent in the local and state programs or in the formulation of a national Civil Works construction program. Consequently, the recommendations may be modified prior to approval and implementation funding.

\signed\
Corps of Engineers Commanding Officer

Pocatello

1996 PORTNEUF RIVER SECTION 1135: CHANNEL RESTORATION PLAN

Environmental Assessment

Contents

Contents, Continued

Acronyms

7Q10	Minimum Seven Day Average Flow with a Recurrence Interval of 10 Years
BMPs	Best Management Practices
cfs	Cubic Feet per Second
Corps	U.S. Army Corps of Engineers
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FWS	U.S. Fish and Wildlife Service
gpm	Gallons per Minute
HEP	Habitat Evaluation Procedure
hp	Horsepower
HSI	Habitat Suitability Index
HUs	Habitat Units
IDFG	Idaho Department of Fish and Game
IDHW	Idaho Department of Health and Welfare
IDWR	Idaho Department of Water Resources
NEPA	National Environmental Policy Act
NRCS	National Resources Conservation Service
PM_{10}	Small Particulate Matter in Air
SCS	Soil Conservation Service; now the NRCS
SHPO	State Historic Preservation Office
SI	Suitability Index
USGS	U.S. Geological Survey

I. Purpose and Need

Introduction

This environmental assessment (EA) considers the effects of a stream restoration initiative proposed for the Portneuf River in Pocatello, Idaho. As required by the National Environmental Policy Act (NEPA) of 1969, and subsequent implementing regulations promulgated by the Council on Environmental Quality, this assessment is prepared to determine whether the stream initiative proposed by the U.S. Army Corps of Engineers (Corps) constitutes a "...major Federal action significantly affecting the quality of the human environment..." and whether an environmental impact statement is required.

Project Purpose and Need

Between 1966 and 1968, the Corps constructed a flood control project extending along a 6.2-mile reach of the Portneuf River through the City of Pocatello, Idaho (Figure 1). The project consisted of a 1.5-mile rectangular concrete channel and 4.7 miles of revetted levee upstream and downstream of the concrete channel.

Aerial photos taken prior to the project's construction indicate the extensive meandering of this river. Riparian vegetation and wetlands were evident along both banks, although residential encroachment had reduced the suitable habitat for fish and wildlife. Significant environmental impacts, including reduction in river meandering and a subsequent reduction of fish and wildlife habitat, were incurred as a direct result of construction of this project.

Authority

Under Section 1135(b), Water Resources Development Act of 1986, as amended, the Secretary is authorized to carry out a program for the purpose of making such modifications in the structures and operations of water resources projects constructed bythe Secretary which the Secretary determines 1) are feasible and consistent with the authorized project purposes and 2) will improve the quality of the environment in the public interest. The non-Federal share of the cost of any modifications carried out under this section shall be 25 percent. No modifications shall be carried out under this section without specific authorization by Congress if the estimated cost exceeds $5,000,000. The Portneuf River flood control project has been identified as an area having strong potential for environmental improvement at a promising meander site that had been lost following the 1968 construction. The river meanders will be restored or rehabilitated to replace lost fisheries, wildlife, and other environmental values associated with the Portneuf River prior to construction of the project. The City of Pocatello would be the local sponsor of the proposed project, and total project cost would not exceed $5,000,000.

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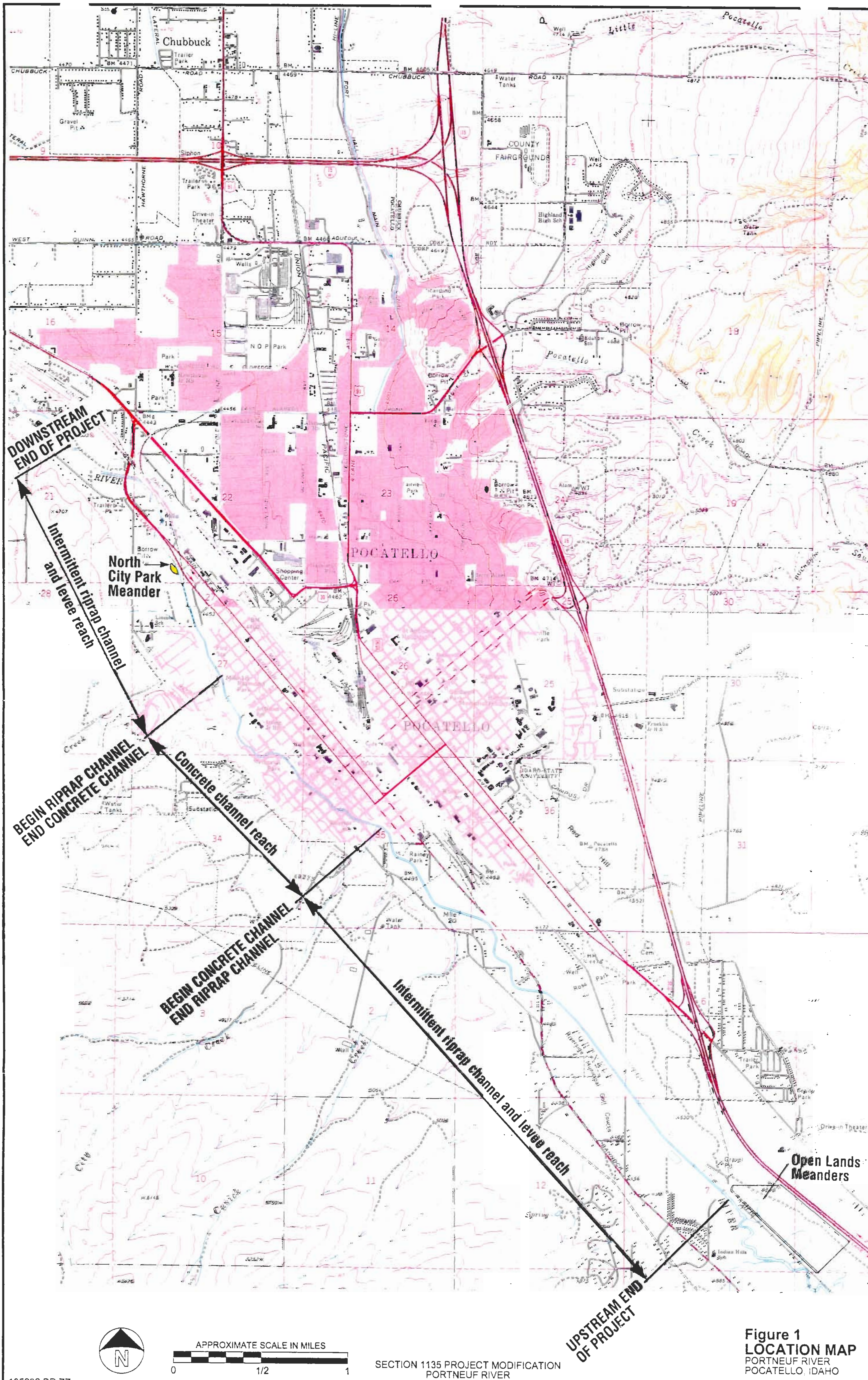

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SECTION 1135 PROJECT MODIFICATION
PORTNEUF RIVER
POCATELLO, IDAHO

Figure 1
LOCATION MAP
PORTNEUF RIVER
POCATELLO, IDAHO

CH2MHILL

II. Proposed Action

Proposed Project

North City Park has been identified as an area adjacent to the Portneuf River flood control project with the potential for environmental improvement. The area is currently unimproved land that contains remnants of old river meanders. North City Park is at the downstream end of the project.

The meanders at North City Park have no flowing water but are vegetated with trees and bushes. To re-establish the river meanders, water would be supplied to the remnant meanders from the Portneuf River using solar-powered pumps (Figure 2). The system would consist of three intake weirs, three pumps, and six solar panels; each pump requires two solar panels. These 1-1/2 horsepower (hp) surface pumps would pump an average of 100 gallons per minute (gpm) each. Pumps would run only during daylight hours. The solar pump configurations were designed by Idaho Power and are the state-of-the-art design for standard pump size. The pumps will provide sufficient circulation to establish through or flushing flows that avoid water stagnation. Pump intakes would be screened to prevent fish entrainment. Each of the solar panels would be approximately 8-feet by 12-feet and mounted on trackers to follow the sun from east to west. The water intake would be located inside a concrete weir (a concrete cube with a lid on the top for access to remove sediment) situated alongside the riverbank. Water elevation in the meander would be 6 inches below the base of the willow trees that follow the meander. The excavation slopes would be vegetated with trees and shrubs, planted in groups according to their water needs. The construction would occur by excavating with bulldozers and front-end loaders. Excess soil material would be disposed offsite so that the established floodway is not impacted. Periodic maintenance of the pump, solar panels, and weirs would be required.

No Action

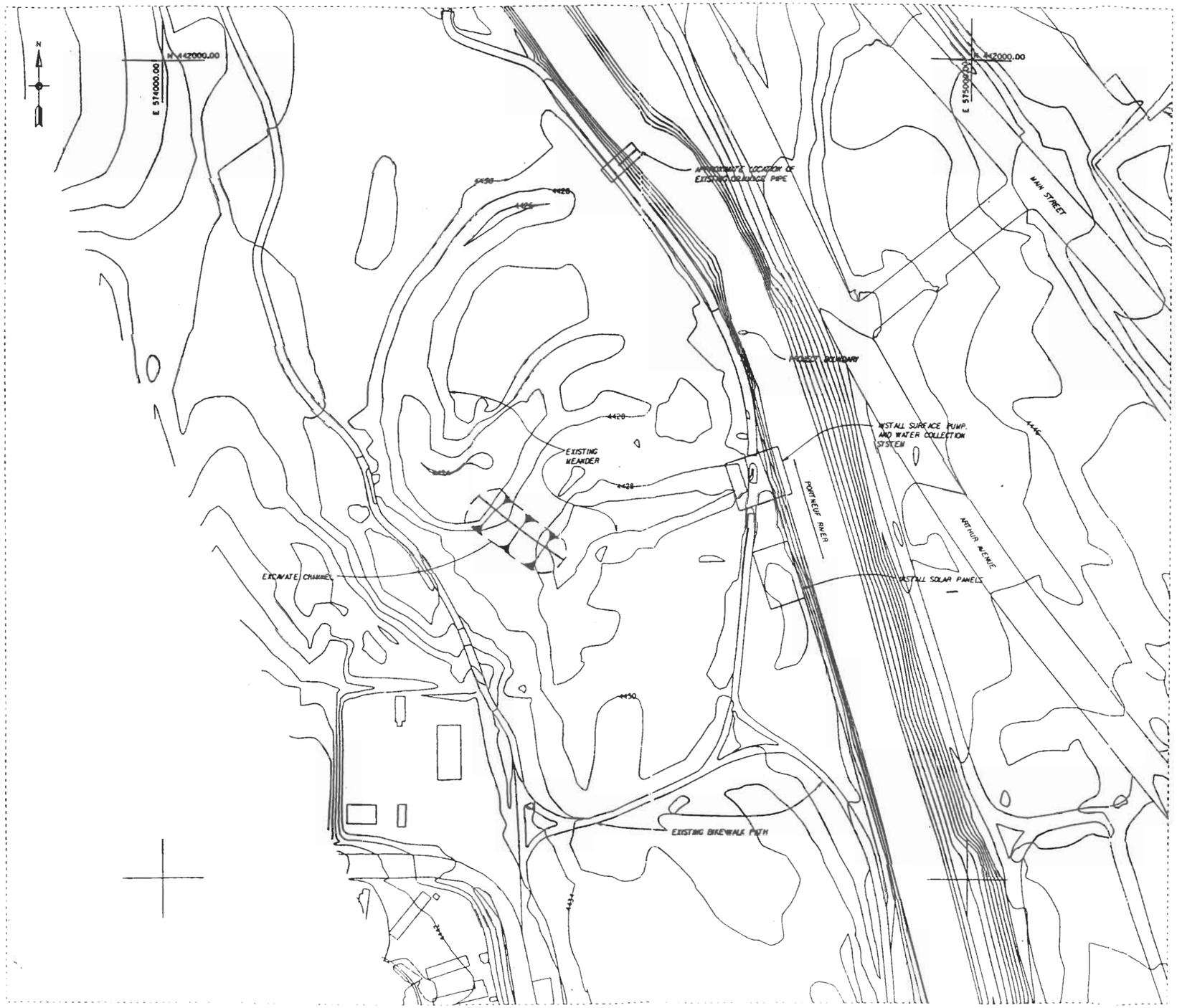
Construction of the concrete channel associated with the flood control project eliminated a significant portion of fish and wildlife habitat. The flood control project levees, channel revetment, and concrete channel further reduced the river meander. A number of meanders were also eliminated and incorporated into the landscape by local landowners. Revetted channel portions of the project have developed a riparian zone of regenerating vegetative growth. However, limits to the riparian zone will remain because adjacent land practices prevent woody vegetation from expanding.

Under the No Action Alternative, water supply would continue to be cut off from the meanders, adversely impacting associated wetland areas and riparian zones. Fish and wildlife habitat would not be enhanced, and no action would be taken to promote environmental restoration along this segment of the Portneuf River.

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY



PLAN - NORTH CITY PARK

SCALE IN FEET

50 0 50

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

DESIGNED
DRAWN
CHECKED
APPROVED

PORTNEUF RIVER
POCATELLO, ID UNIT RESTORATION

NORTH CITY PARK - C
SOLAR POWERED PUMPS - SITE PLAN

SCALE AS SHOWN | DRY. NO.

Alternatives Considered

Seven other alternatives were identified as possible components of the environmental restoration project. Alternatives included the following:

1. City Creek Entrance—Modify the City Creek outlet structure and approach channel to provide fish access into the City Creek drainage basin.
2. Low Flow Channel—Install a concrete curb in the concrete reach of the flood control channel to provide deeper flow for fish.
3. North City Park Meander—Introduce flow into the left overbank to generate additional vegetation along the delivery channel banks and an abandoned meander channel.
4. Open Lands Meanders—Introduce flow into the right overbank behind the railroad to generate additional vegetation along the banks of abandoned meander channels and a connecting channel.
5. Tech-Harper Road Meander—Initiate flow into the left overbank behind the left bank levee of the Pocatello Flood Control Project.
6. Large Tree Plantings—Introduce vegetation in appropriate areas to provide shade and improve conditions for a trout fishery.
7. Replace Concrete Channel—Develop a scoping estimate of the cost to remove the concrete portion of the Pocatello Flood Control Project and replace it with an urban channel designed to create a park-like setting along the river.

Preliminary analysis for hydrology and environmental resources determined that a number of alternatives were not feasible, because of lack of benefit or high cost. A summary of the analysis follows.

- Redesigning the **City Creek Entrance** resulted in a lack of measurable fishery benefits. Environmental restoration benefits are also insufficient, particularly because available streamflows to the river for much of the year are not adequate to deliver fish to the mouth of the channel.
- The engineering costs for the **low flow channel** would be high, and fishery and wildlife benefits would be minimal. The modification to the structure would have to be unacceptably large to provide an adequate passage for fish.
- The **North City Park Meander** was promising. Quantifiable benefits exist for neotropical migrating birds (birds that migrate between North America and the New World Tropics). Existing vegetation in the abandoned meander channel indicates that water flows through it for at least part of the year.
- The **Open Lands Meanders** is also promising, although complicated. Quantifiable benefits exist for neotropical birds. The City (the local sponsor) requires public access to the restoration site, relocation of the railroad maintenance road, and delivery of the flow under the railroad embankment both upstream and downstream of the meanders.

- The engineering costs for the **Tech-Harper Road Meander** are quite high; however, quantifiable benefits exist for neotropical birds. Problems at the site include the presence of a sewer line lift station and delivery lines, the fact that old channel meanders have been filled, and the need for a setback levee.
- **Large tree plantings** along the concrete channel would result in quantifiable benefits for neotropical birds. However, the trees would not be located within the confines of the Flood Control Project and would require property owner approval.
- The alternative to **replace the concrete channel** would result in significant real estate needs and relocation of numerous buildings, streets, bridges, and utilities. Although channel replacement would constitute restoration of this reach of the river, the project would have a considerable cost. The replacement of the concrete channel is also a local issue that would require extensive public involvement.
- The **No Action Alternative** would result in the water supply continuing to be cut off from the meanders, adversely impacting associated wetland areas and riparian zones. Fish and wildlife habitat would not be enhanced, and no action would be taken to promote environmental restoration along these segments of the Portneuf River.

Comparison of Alternatives

The goal of the environmental restoration project is to restore some of the habitat and wetland that was lost as a result of the project construction. An economic analysis matrix was developed to assess the alternatives for restoring the concrete-lined portion of the channel to a more natural condition. The average annual habitat unit was determined and applied to the matrix. At the conclusion of this exercise, it was decided that the North City Park Meander and Open Land Meanders would provide attainable and realistic opportunities for habitat enhancement and restoration (Figure 1). Fish habitat enhancement and wetland restoration would be achieved at a cost that was not prohibitive. At this point, the City Creek alternative remained of interest to the City of Pocatello. Thus, all three alternatives were selected to move forward for more detailed consideration.

An engineering feasibility study and hydrology report were used to further investigate and refine the alternatives. Three options were developed to implement the North City Park Meander, two of which required excavations and weirs to flow water into the existing meander. The third option used solar powered pumps to pump water into the existing meander. City Creek considered two potential layouts for modifying the drop structure to improve fish passage, and the Open Lands Meanders included one option to restore water flows and habitat.

At the conclusion of the engineering and hydrology studies, all three alternatives were analyzed from a real estate perspective. The City Creek Alternative was removed from additional consideration at this point because the Corps discovered that the reconstruction of the City Creek bed would not show legitimate fishery benefits.

Following agency review and after further consideration, the Open Lands Meanders Alternative was also dropped as a viable project. Concerns were raised by review agencies regarding the site and operation of the diversion structure that remain unresolved, and the

City of Pocatello does not have the funding necessary to cost-share the Open Lands Meanders portion of the project at this time.

The North City Park Alternative was evaluated further to select a pumping system. The solar powered pump system was found to be more cost-effective than the electric pump and weir system. Either overhead power lines or buried lines would be necessary to operate an electric pump. Overhead lines raised safety and aesthetic issues, so that option was removed from consideration. The use of buried power lines for an electric pump or installing a solar powered pump system remained as options. To be environmentally sensitive and because it is self-supporting, the Corps selected the solar powered system. This system also had no secondary impacts and was most effective for the proposed activity. In addition, the City of Pocatello, local sponsor for the proposed action, preferred the use of solar power because of the educational value. The University system and schools can take field trips to the site to demonstrate the system to students as an example of effective solar power use. Therefore, the Preferred Alternative is restoration of the North City Park Meander.

III. Affected Environment

Geology and Soils

Geology

The Portneuf River in the study area flows through the transition between the northeastern Basin and Range and the eastern Snake River Plain physiographic provinces. The northeastern Basin and Range is characterized by north-trending fault-block mountain ranges and intermontane basins. The eastern Snake River Plain is relatively flat topographically and consists of extrusive volcanic rocks that include basalt, rhyolitic flows, and pyroclastics. Large areas of the eastern Snake River Plain are covered with recent alluvial and eolian sand and silts, as well as gravelly flood deposits.

The Pocatello area was mapped and described in detail by Trimble (1976). The following discussion is summarized from his work. The North City Park site is underlain by Holocene-age alluvium of the Portneuf River. This alluvium consists of unconsolidated gravel, sand, and silt. An Upper Pleistocene-age terrace deposit that consists of pebble gravel and pebbly sand is located immediately east of the river.

Soils

Soil surveys were conducted throughout the Portneuf River valley by the Natural Resources Conservation Service (NRCS, formerly SCS) in 1982 (SCS, 1987). Soils along the Portneuf River are generally shallow to deep and well drained with textures ranging from gravelly silt loam to silt loam that formed in loess (wind-deposited soils), silty alluvium (river-deposited soils), mixed parent materials, or a combination. Runoff is rapid to very rapid, and the water erosion hazard is high to very high. Slopes range from 0 to 12 percent, with some slopes up to 50 percent (SCS, 1987).

Poor conservation practices (farming steep slopes and overgrazing), steep slopes, and fine-textured, erosive silt loam soils have resulted in severe erosion with subsequent sediment deposition in the Portneuf River. Water pollution problems have resulted from sediment loading into the Portneuf River since the early 1980s. The blue ribbon trout fishery has declined in part due to the sedimentation problem (IDFG, 1991). Agricultural land use practices have been considered the primary contributor to the river's water pollution problem (IDHW, 1987). Approximately 80 percent of the dry cropland in the upper river basin is located on slopes greater than 12 percent with erosion rates exceeding 20 tons per acre. This soil loss is four times the maximum rate recommended for this soil type (IDHW, 1987).

North City Park is located on the west or left bank of the river, near river mile 10. Historic meander channels are evident in the left overbank area within the park boundary. The land has been maintained as an urban wildlife habitat area, supporting trees and grasses.

Water

The Portneuf River basin contains approximately 1,290 square miles, covering most of Bannock County and parts of neighboring Bingham, Caribou, and Power Counties. The Blackfoot River basin borders it to the north and east, the Bear River basin is located to the south, and the Bannock Mountain Range is located to the west.

The river rises in the northern tip of the basin, flows due south for about 30 miles, and then travels northwesterly for about 50 miles to its confluence with the Snake River at the American Falls Reservoir. Marsh Creek, the principal tributary, enters the Portneuf River from the south and drains about 30 percent of the total basin.

Upstream of Pocatello, the mean elevation of the Portneuf River drainage area is 5,850 feet. Most runoff in the basin is derived from spring snowmelt. Rising flows generally occur in March, with maximum flows April through June, and low flows beginning in July. Summer and fall low flows average about 100 cubic feet per second (cfs) in Pocatello. The average November flow is about 250 cfs.

Information gathered by the Corps indicates that mean annual precipitation averages about 19 inches for the drainage area and ranges from less than 13 inches in the lower valleys to over 30 inches in the mountains. Precipitation amounts for individual years range from about 50 percent to 175 percent of the mean annual amounts. Normally, monthly amounts vary from about 5 to 11 percent of annual amounts. Driest months are July and August with the heaviest precipitation spread rather evenly among the months of November through June. In the winter months, a large part of the precipitation occurs as snowfall. Average annual snowfall varies from 35 inches in lower valleys to nearly 100 inches in the mountains.

Channel Morphology

Prior to construction of the flood control project and the railroad, the Portneuf River flowed through Pocatello as a meandering river with a sinuosity index of over 1.5. Stream sinuosity is the ratio of stream length to watershed length. The stream sinuosity index reflects the amount of meandering and, hence, the diversity of habitat types (Zimmer and Bachmann, 1978). The measure 1.5 is often used as the break point between classifying a river as straight or meandering (Richardson et.al., 1975); rivers that have a sinuosity greater than 1.5 are classified as meandering. Average river gradient through the project area is approximately 5 feet per mile with a range of 0.08 percent to 0.11 percent.

From 1966 to 1968, the Portneuf River flood control project was constructed in an approximately 8.65-mile reach of the river upstream, through, and downstream of the City of Pocatello. A 1.5-mile rectangular concrete channel was constructed to contain the river within the developed portion of the City, as were 4.7 miles of revetted levee and channel reaches above and below the concrete channel reach. The post-project total channel length is about 6.2 miles. Over 2 miles of original river channel were lost as a result of construction. In addition, about 800 feet of the river length was lost to the railroad embankment construction because of river channelization.

Hydrology

The U. S. Geological Survey (USGS) operates a river gauging station in the City of Pocatello. Intermittent flow records were kept from May 1897 to October 1899, and continuous daily flow records have been maintained from August 1911 to present. Records are good, although some daily flows are estimated. Mean annual flow during the period of record is 279 cfs. The instantaneous peak flow, 2,990 cfs, occurred on February 14, 1992. The lowest daily mean flow (0.23 cfs) occurred on July 19, 1979. Ninety percent of the time, the flow exceeded 65 cfs.

Two reservoirs regulate river flow above the project. The Portneuf Reservoir has a storage capacity of approximately 23,695 acre-feet, and the Chesterfield Reservoir has a storage capacity of approximately 685 acre-feet. The primary use of stored water is for irrigation. A preliminary analysis of water right claims indicated that approximately 60 to 70 percent of the water rights claimed were for irrigation or irrigation in conjunction with another use, such as stock water or domestic use (CH2M HILL, 1994).

The river periodically loses water to the groundwater system near Bancroft and below the dike at river mile 67. Most or all of the flow returns to the surface about 4 miles below Pocatello in springs along the Fort Hall Bottoms. The average annual flow from the springs is about 2,500 cfs. About 1,100 cfs of this total is assumed to come from underflow along the Snake River (Secretary of the Army, 1950). The remaining 1,400 cfs appears to come from the Portneuf system. However, little definitive information is available on the interaction of the groundwater and surface water systems in the immediate project area.

Since the project was constructed, the concrete channel has effectively eliminated any connection between the systems in the 1.5-mile reach. The rest of the project may have increased the interaction between the systems by lowering the river bed and removing fine material that could act as a barrier to flow between the groundwater and surface water systems. Shortening the river channel by 2 miles has reduced water loss due to evaporation and plant consumptive use, although this effect is minimal from a basin-wide hydrologic perspective.

Water Quality

The Portneuf River within what is now the concrete channel was observed to be turbid during fisheries studies at the site in 1967. A second river station about 2 miles downstream of the lower end of the project area was also observed to be turbid year round (Mohr, 1968). Both observations appear to reflect the effects of sediment loading to the river that continues to occur throughout much of the drainage (IDHW, 1987).

The Idaho Department of Health and Welfare (IDHW, 1987) identified sediment, nitrogen, phosphorus, and bacteria as the major pollutants in the lower Portneuf River. The study results indicated that "water quality standards and recommendations for the pollutants were consistently exceeded," with sediment being the pollutant of greatest concern. It was concluded that sediment loading to the lower Portneuf exceeds the flushing capabilities of the river, resulting in river bottom sedimentation and impacts on benthic invertebrates and trout spawning and egg incubation success.

A supplemental report in 1991 reached similar conclusions. The report noted that the upper Portneuf had been designated as a "blue-ribbon trout stream in 1968, before the declines in

water and habitat quality occurred." A 1986 Idaho Department of Fish and Game (IDFG) report also stated that trout populations in the lowest sections of the Portneuf were severely reduced because of silt.

In 1992, the Corps completed an appraisal study of the flood control project that associated poor river water quality upstream of Pocatello with pollution point sources and low flows. The degraded water quality was characterized by low pH, high phosphate levels, sludge deposits, and high bacterial counts.

It is probable that water quality conditions in the existing project reach reflect the effects of low flows, upstream pollution point sources, and upstream sediment loading. The narrative accompanying the Portneuf River Greenway Plan Resource Inventory Maps for Pocatello summarized present water quality and quantity issues for the general project reach. The issues include high sediment loads, potentially elevated water temperatures, and reduced aquatic habitat because of low flows. The concerns that have been identified in the existing project reach are related more to physical water quality characteristics than chemical characteristics.

Air Quality

Northern Bannock County is a non-attainment area for small particulate matter (PM_{10}). Sources are industrial and mining activities, wood and agricultural burning, and road dust (CH2M HILL, 1995).

North City Park is currently used as a natural area and trail site. Air quality issues would include intermittent and limited dust created by trail users, particularly during dry seasons. Vehicles traveling on paved residential streets in the vicinity also generate emissions and dust.

Aquatic Environment

Fisheries

A list of fish species presently occurring in the Portneuf River downstream of the project area is contained in Appendix A. With the exception of yellow perch, the list includes eight species that were also identified in the project reach during pre-project conditions, as well as two species (cutthroat trout and mountain whitefish) noted as occasionally present during pre-project (prior to channelization) conditions. These species probably continue to use the project reach of river to some extent today, but are primarily located upstream and downstream of the 1.5-mile lined concrete channel section.

The fish species list contained in Appendix A includes five species reported to occur downstream of the flood control project area (Bechtel Environmental, Inc., 1992) that were not identified as occurring in the project reach during pre-project conditions. These species are bluehead sucker (*Catostomus discobolus*), mottled sculpin (*Cottus bairdi*), carp (*Cyprinus carpio*), brown trout (*Salmo trutta*), and brook trout (*Salvelinus fontinalis*). It is uncertain whether or not these species also occur within the project reach. Based on the habitat requirements and tolerances of only the two trout species, it would be more likely that brown trout rather than brook trout would be present in the project area today.

Maps prepared for the Portneuf River Greenway Concept Plan, which depict results of a natural resource inventory, list fish species that are apparently present within the project reach today. Species include brown, rainbow, and cutthroat trout, Utah chub, mottled sculpin, and "suckers."

Fisheries-related water quality and quantity issues that were noted on the maps include high sediment loads, fluctuating river flows that affect the quality of spawning, and low river flows that reduce habitat quality. These issues are similar to an IDFG (1986) assessment which noted the recent general decline of the Portneuf River fishery. IDFG stated that trout populations in lower sections of the Portneuf River have been severely reduced because of silt. The assessment also stated that losses of riparian habitat and streambank erosion have caused reductions in wild trout populations. The State's fisheries management plan for the Portneuf River from American Falls Reservoir to Marsh Creek, the reach that includes the project area, includes developing a fishery for warm water species in suitable areas, maintaining present wild trout populations, and experimentally introducing blue and channel catfish.

Aquatic Invertebrates

Benthic invertebrates and water quality conditions in the Portneuf River were investigated by Minshall and Andrews (1973) from 1967 through 1971. Although it was conducted nearly 25 years ago, the study results may provide a reasonable characterization of the benthic community in the existing flood control project reach.

Two of their sampling locations were either within or near the flood control project reach. One of the stations was located at the Cheyenne Street Bridge. The second station was located in a riffle section of river just below the Swanson Diversion Dam, about 1/2 mile below the downstream extent of the project reach.

Sampling for benthic invertebrates occurred quarterly beginning in fall 1969, one year following the completion of the flood control project, and continued through summer 1970. A total of 19 benthic invertebrate taxa were collected at the upstream station. *Simulium sp.* (blackflies) were dominant in numbers (mean density of 995 individuals per sample), followed by considerably fewer *Hydropsyche sp.* (caddis flies) (mean density of 38 individuals per sample). Minshall and Andrews (1973) commented that the large numbers of these two taxa at this station are consistent with their environmental requirements of "solid substrata for attachment and relatively rapid current velocities to fulfill certain feeding and metabolic requirements." The other most abundant taxa collected at the upstream station (but considerably less abundant than *Simulium sp.* or *Hydropsyche sp.*) included Chironomidae (midges), *Ephemerella inermis* (mayflies), *Dugesia dorotocephala* (flatworms), Tubificidae (aquatic earthworms), and *Cheumatopsyche sp.* (caddis flies).

A total of 13 benthic invertebrate taxa were collected at the downstream station, 11 of which were also collected at the upstream station (Minshall and Andrews, 1973). Invertebrate densities were generally much lower at the downstream than upstream station and the order of abundance of the two numerically dominant taxa was reversed. *Hydropsyche sp.* (39 individuals per sample) and *Simulium sp.* (9 individuals per sample) were the most abundant taxa at the downstream station, followed by Tubificidae, *Physa ampullacea* (snails), Chironomidae, *E. inermis* and *Baetis tricaudatus* (both mayflies), *Cheumatopsyche sp.*, and *Argia sp.* (damselflies).

Except for the 1.5-mile-long concrete channel where naturally occurring river habitat has been eliminated, it is possible that *Simulium sp.* (blackflies) and *Hydropsyche sp.* (caddis flies) continue to be the dominant taxa, or to be among the dominant taxa, in the existing project reach. Given the sediment loading and siltation problems in the Portneuf River, it is also possible that taxa such as Chironomidae (midges) and Tubificidae (aquatic earthworms), which prefer a soft silt to sand type of substrate, are relatively abundant in the project reach.

Summaries of relatively recent benthic invertebrate investigations were presented by Bechtel Environmental, Inc. (1994). However, these studies were conducted well downstream of the project area and were focused on sampling locations designed to measure the effects of point-source pollution discharges on the benthic community and rates of community recovery proceeding downstream. Study results may not be indicative of benthic organisms present in the project reach.

Vegetation

Riparian habitat present along the project reach is discussed under the Terrestrial Environment heading in Section III. No current information on aquatic macrophytes in the project area was found during the preparation of this report; however, limited observations made during the fisheries (Mohr, 1968) and benthic (Minshall and Andrews, 1973) studies described above are presented briefly here.

Mohr (1968) found that no rooted aquatic vegetation (macrophytes) existed at a sampling location roughly 2 miles below what is now the downstream end of the project area. Minshall and Andrews (1973) reported that during their investigations from 1967 through 1971, aquatic macrophyte growth was restricted almost entirely to the upper and lower reaches of the entire river. However, some *Potamogeton cripsus* (pondweed) was collected near the Cheyenne Street Bridge, just below the upstream extent of the project reach.

Terrestrial Environment

Vegetation

Native plant communities within the Portneuf River restoration project area are relatively limited. Historically, the river area supported a diverse and well-developed riparian community with associated wetland cover types. Major community types present in the area include riparian zones, upland grasslands, and possibly wetlands.

Riparian Communities. Generally, the riparian communities that are present along the river through the project area are much less diverse and less extensive than the riparian communities that existed before the original flood control project in 1966. In some areas, ornamental trees are a component of the riparian zone. A narrow band of willows (*Salix sp.*) dominates the riparian community along the river upstream of the concrete channel and downstream of the concrete channel to the upstream crossing of Highway 30. A few narrowleaf cottonwoods (*Populus angustifolia*) occur in these reaches, but they are not widespread. In the segment downstream of the first Highway 30 crossing, the overstory is dominated by narrowleaf cottonwood and willows, with an understory of bluegrass (*Poa spp.*) and other herbaceous species growing on the dikes. Tree growth is much more extensive in the furthest downstream segment of the project area than in any other portion.

Planted ornamental trees such as weeping willow (*Salix babylonica*) are also present in the riparian zone along this reach.

Wetlands. There are currently no or very few small wetlands in the project reach of the Portneuf River. Wetlands, if present, are expected to support a limited diversity of emergent species of sedges (*Carex spp.*), rushes (*Juncus spp.*), and other herbaceous plants.

Adjacent Uplands. Most of the upland areas adjacent to the river in the project reach have been converted to urban or agricultural land uses. Existing grassland areas consist mainly of nonnative weedy annual species such as wheat grass (*Agropyron sp.*), cheat grass (*Bromustectorum*), and mustards (*Brassica*). Scattered small shrubs, including rabbit brush (*Chrysothamnus sp.*), are also expected in these communities. Areas representing a more intact upland sagebrush-grassland steppe vegetation type are found in the foothills above Pocatello.

Wildlife

Wetland and Riparian Communities. Wildlife habitat present in the project area is of very limited quality and extent. Habitat in the form of typical river meanders is nearly absent, as is any significant amount of wetland habitat. Willows comprise most of the riparian areas; the extent of the riparian/wetland zone along the river, in terms of both width and area, is reduced. As a result, wildlife use is limited to the more common species typically associated with edge habitat and/or disturbed areas. Species that typically use mature trees, such as hawks, owls, and cavity nesters, are not expected. Species that require relatively large habitat blocks, as well as most or all wetland-dependent species, are also not supported by current habitat conditions. Generally, the wildlife community that occurs along the project area is of limited diversity and abundance compared to other unaltered segments of the river. Another factor that has adversely affected wildlife along the river is continued encroachment from urban development.

At the request of Mr. Lonnie Mettler of the Corps, Dr. Charles Trost at Idaho State University commented in a letter dated April 15, 1992, on the species of birds that either nested along the river prior to channelization or that nest in similar habitat up or downstream of the project area. He concluded that most species typically found within riparian areas are not currently present in the project location due to the limited habitat condition. The most abundant avian species expected under existing conditions include the rock dove, European starling, and house sparrow.

Adjacent Upland Communities. Urban development has encroached on upland areas adjacent to the river, reducing wildlife habitat values. As a result, wildlife occurrence within these areas is expected to be limited to the more common species typically adapted to increased levels of disturbance. Typical shrub and steppe species would be expected where native upland communities remain, such as in the foothills above Pocatello.

Habitat Evaluation Procedure Study. The Environmental Resources Branch of the Corps conducted a U.S. Fish and Wildlife Service (FWS) Habitat Evaluation Procedure (HEP) study of 29 separate alternatives associated with the Portneuf River Restoration Project during 1994 and 1995. HEP is a formalized, quantitative method of evaluating fish and wildlife species habitat quality and determining impacts and/or benefits associated with land development projects. The basis for HEP is a series of habitat suitability models that

have been developed for a variety of species. These models evaluate habitat quality by defining a relationship between a selected, measurable habitat variable such as canopy closure, with a corresponding habitat rating or score called a suitability index (SI). Suitability indices range from 1.0 (optimum habitat value) to 0.0 (no value). The various suitability indices or scores are then combined in an established formula that expresses a final habitat suitability index (HSI) value specific to a particular species and cover type. As with SI values, HSI values also range from 1.0 to 0.0. These HSI values are multiplied by cover type acreage to determine Habitat Units (HUs) for each species. HUs for each species can be summed, and then divided by the total acreage of habitat, to determine a weighted mean HSI for the study area.

The evaluation species selected for the Corps' Portneuf River Restoration study were the downy woodpecker, western meadow lark, and the song sparrow. Habitat suitability for these species was assessed within five cover types identified for the project area including palustrine forest, palustrine scrub-shrub, riverine, and residential/industrial grassland. Within the palustrine forested cover types, overstory and understory conditions were evaluated for the downy woodpecker and song sparrow, respectively.

Results of the baseline HEP evaluation performed by the Corps for North City Park are summarized in Table 1. Baseline HSI values are described by a discrete scale with three rank scores: 0.0, Low, and High. Rank 0.0 is equal to an HSI of 0, rank low is equal to an HSI of 0.2 and rank High is equal to an HSI of 0.9.

TABLE 1
Baseline HEP Values for the Portneuf River Restoration Project
(North City Park—C)

	Existing HEP Values		
Cover Type	**Acreage**	**HSI Rank**	**Habitat Units**
Grassland—NCP	12.6	Low	2.5
Palustrine Forest—NCP-O	6.8	High	6.1
Palustrine Forest—NCP-U	same as above	High	6.1
Palustrine Scrub-Shrub—NCP	0.4	Low	0.1
Riverine	0.0	0.0	0.0
Total	**19.8**		**14.8**

NCP-North City Park, O-Overstory, U-Understory

Threatened and Endangered Species

The FWS was contacted for information on the potential occurrence of listed species and endangered and threatened candidate species within the Portneuf River Restoration project area. This request was made in fulfillment of the requirements of Section 7 (c) of the Endangered Species Act (1973). No species currently listed as threatened or endangered are reported for the project location. Bald eagles, which are reported to use downstream segments of the Portneuf River, apparently do not use the project area (Bechtel

Environmental Inc., 1994). Three Species of Special Concern (previously Category 2 species) may potentially occur. These include the following:

Yuma myotis	(*Myotis yumanensis*)
Long-eared myotis	(*Myotis evotis*)
Townsend's western big-eared bat	(*Plecotus townsendii*)

Surveys to confirm the presence or absence of these species within the project area have not been conducted.

Land Use

Pocatello is the county seat of Bannock County. It is located in southeast Idaho at the western foothills of the Rocky Mountains. The population is approximately 46,000. The city is a regional center for shopping, education, and medical care. Major employers include the Idaho National Engineering Laboratory, FMC, Simplot, and Idaho State University. All typical public facilities, services, and commercial transportation are found in the area. The project is located at the northerly fringe of Pocatello.

North City Park is a residentially-oriented neighborhood in northwest Pocatello with public utilities and paved streets nearby. It is bounded on the east by the Portneuf River and on the north by an open, undeveloped area. A large mobile home park is located to the west, and a mixture of mobile homes and single family dwellings is located to the south.

The site is approximately 20 acres and owned by the City. It is accessible by city streets from the west and south. The park lies near the left bank of the river within the designated floodway. It is zoned R (Residential District), although the land is maintained as a natural wildlife habitat area. Native meadow grasses and a stand of large, mature willow trees are present. No known mineral deposits of commercial value or known hazardous materials are present.

Recreation

The Portneuf River passes through the central residential section of Pocatello, near the central business district. The upstream and downstream sections of the flood control project are less centrally located, although they continue to pass through some residential developments. A number of parks have been developed adjacent to the river, where activities such as picnicking, ball games, playground use, and wading occur. Swimming and boating may not occur in the concrete channel section. Fishing occurs, although much less frequently than in the past.

Bike and pedestrian pathways have been or are being developed that follow the channel in some places. The Portneuf Greenway Concept Plan proposes to extend these trails along the channel throughout the project area, connecting the trails leading to other parts of the City.

The City constructed North City Park as an urban wildlife habitat area within the flood control project area. It is the closest natural area to the central business district. A pedestrian

and bikeway path has since been developed that crosses North City Park. A swimming hole and fishing site exists downstream of the park.

Aesthetics

The concrete channel of the river is topped with chain link fencing throughout the central city area. In some areas, vines, trees, and shrubs have grown by the fence and softened the abrupt visual intrusion of the fence. Generally, a narrow strip of vegetation occurs along the river corridor and consists mainly of grasses and shrubs. Tree cover is spotty. The river generally appears natural in sections of the project area beyond the concrete channel.

North City Park's paved pathway abuts the chain link fence for part of its route through the park. The remainder of the project area in the park is natural habitat, including mature trees, grasses, and shrubs.

Cultural Resources

The area was inhabited prehistorically and historically by Shoshone and Bannock Tribes of Native Americans. The Fort Hall Indian Reservation lies north of the urban area. Pocatello is on the route of early trails into Idaho and the Northwest. The Oregon Trail ran through the Pocatello area, and the City was established as a station and major switching yard for the Oregon Short Line Railroad in the late 1800s.

A number of independent surveys in the flood control project area have been conducted by amateur and professional archaeologists. The Portneuf River Greenway Committee (1992) attempted to summarize existing information on cultural resources as a consideration in the development of the Greenway Concept Plan. This effort blended information from the Bureau of Land Management, Idaho State University, and the Idaho State Historical Preservation Office (SHPO), resulting in the Committee's Cultural Resource Inventory.

The upstream portion of the project contains a number of petroglyphs on basalt outcroppings on the east bank of the river and along the Bannock highway. An archaeological site is located above the upstream end of the project. Several historic buildings listed on the National Register of Historic Places are located near the river in the central city area. Additional petroglyphs have been identified in the northern section of the project area.

No cultural resources were identified in the immediate vicinity of North City Park.

IV. Environmental Consequences and Mitigation

Geology and Soils

Geology

No environmental consequences would occur from the No Action Alternative or project implementation alternative to existing geologic resources.

Soils

No Action Alternative. No environmental consequences would arise as a result of the No Action Alternative. No excavation would occur in association with this project.

North City Park Alternative. The main impact to soils from project implementation would be soil loss from erosion with subsequent decline in soil productivity. Excavation to create wetlands and restore meanders could also expose alkaline subsurface soils. Since Hondoho soils are sometimes found as inclusions into the McDole-McDole Variant soil, alkalinity may present a problem for vegetation at both sites.

Best Management Practices (BMPs) will be implemented at all construction sites to avoid erosion and alkalinity problems. These practices would include the following:

- Construction will take place during low flow periods (mid-July to mid-September) and cofferdams will be used to install the pump housing.
- Silt fences and other erosion control structures will be used during construction to prevent erosion from cut slopes.
- Erosion control matting will be placed on bare soil surfaces to prevent erosion until a vegetative cover is established.
- All bare soil will be vegetated following construction, using species approved in the site revegetation plan.
- Topsoil excavated from areas that will not be revegetated will be stockpiled for use in areas to be vegetated. Where possible and as appropriate, wetland soils will be used for wetland/riparian restoration sites. Reserved soils will be stockpiled out of wetland areas in locations previously disturbed, and shall be kept moist and protected from temperature extremes. By maintaining soil moisture, the seed bank contained in the soils will be protected and preserved.
- Excavated areas to be revegetated will have reserved topsoil placed on the surface prior to planting. This will help prevent problems with alkalinity restricting plant establishment and growth.

Water

The remnant river meanders in North City Park currently do not have flowing water. In order to re-establish these meanders, water would be supplied from the Portneuf River using three solar powered pumps. These would pump an average of 100 gpm each. The water intake would be located inside a concrete weir situated alongside the riverbank.

Channel Morphology

No Action Alternative. Under the No Action Alternative, the habitat benefits associated with the increased sinuosity and watered meanders would not be obtained. The only potential negative impact on channel morphology associated with the Preferred Alternative would result from improper design; therefore, the No Action Alternative does not offer benefits that outweigh the Preferred Alternative.

North City Park Alternative. There would be no environmental consequences from implementation of the North City Park Meanders on existing channel morphology.

Hydrology

No Action Alternative. The increased bank storage and habitat benefits associated with restoring the meanders would not be achieved under the No Action Alternative.

North City Park Alternative. No environmental consequences on existing hydrology are anticipated from project implementation at this site because the flow supply to the North City Park meanders is comparatively low. The flow supply would only be approximately 5 percent of the Portneuf River's 7Q10 (an extreme low-flow event equal to the minimum 7-day average flow with a recurrence interval of 10 years). The 7Q10 for the Portneuf River at the USGS gage at Pocatello is 13 cfs (USGS, 1995).

Finally, because the reach of river through the project site is relatively short, the interaction of the ground and surface water systems is not likely to be of major importance in terms of the river hydrology.

Water Quality

No Action Alternative. The habitat benefits associated with restoring the meanders would not be achieved under the No Action Alternative.

North City Park Alternative. There would be no environmental consequences from implementation of the North City Park alternative on existing water quality.

Air Quality

No Action Alternative. Airborne dust would continue to be generated at the proposed project sites by area users (path foot traffic and vehicles in adjoining areas).

North City Park Alternative. No significant impacts would occur as a result of this action at the North City Park Meander. Minimal amounts of dust would be created by wind and trail

users. Temporary increases in dust would take place during construction, which would stop as soon as construction is completed.

Aquatic Environment

The environmental consequences and mitigation issues pertaining to fisheries, aquatic macroinvertebrates, and aquatic plants are interrelated; thus, these subjects are addressed collectively.

No Action Alternative. With the diminishing status of the existing fishery in the lower Portneuf River and the excessive sediment loading, any effort to provide additional aquatic habitat and increase the density and diversity of biota will benefit the river. If the Preferred Alternative is properly developed and maintained, these benefits could possibly be achieved. The No Action Alternative will not enhance the existing resource as an aquatic environment resource.

North City Park Alternative. There would be no environmental consequences from implementation of the North City Park alternative on the existing aquatic environment.

Terrestrial Environment

Vegetation

No Action Alternative. Vegetation would be unchanged from current conditions.

North City Park Alternative. Native plant communities within the Portneuf River restoration project area are of limited extent and quality. Construction activities associated with the project alternative, including placement of weirs and pumps, are expected to result in minor short-term impacts on existing plant communities. Areas impacted by construction are to be restored following project completion. Excavated slopes are to be revegetated with trees and shrubs that will be placed in groups along the slopes based on water requirements. Species to be planted include willow (*Salix exignu* and *S. lasiandra)*, narrowleaf cottonwood (*Populus angustifolia*), and alder (*Alnus incara)*, as well as a variety of shrubs. Upland areas disturbed by construction, as well as uplands to be rehabilitated, will be seeded with a mixture of local native grasses and forbs.

Riparian Communities. Restoration of old river meanders proposed under the North City Park Alternative is expected to produce significant improvements in the quality and extent of riparian communities in the vicinity of the river. River meanders that were present prior to initial channelization supported an extensive and diverse riparian system. Replacement of water within the meanders is expected to increase forested and scrub-shrub cover types to levels approximating historical conditions. A slight increase in the extent of riparian forest restoration is projected for the North City Park Alternative. A 38 percent increase in the extent of palustrine forested and scrub-shrub cover types are anticipated compared to existing conditions.

Wetlands. Few, if any, wetlands are present within the project area. As a result, the limited construction activities planned for the project alternative are expected to have no impact on wetland plant communities. The extent of wetland areas is expected to increase as water is

returned to historic meanders adjacent the main channel. An evaluation of plant community conditions prior to initial channelization identified the presence of scattered emergent wetlands dominated by cattail (*Typha sp.*) and various species of sedges and rushes (CH2M HILL, 1995). Wetlands of this type are anticipated to re-establish following project completion.

Adjacent Upland Communities. The extent of grassland is expected to decrease within the project area as more upland areas are converted to riparian and wetland community types. Existing grasslands, however, are comprised mainly of non-native annual species of limited value. Grassland acreage loss is estimated to be approximately 37 percent for the North City Park Alternative.

Wildlife

No Action Alternative. Wildlife habitat would be unchanged from existing conditions.

North City Park Alternative. The proposed action would have the following consequences upon wildlife and wildlife habitat.

Wetland and Riparian Communities. Existing wetland and riparian habitat conditions support only a limited number of wildlife species. Consequently, wildlife impacts associated with project development are expected to be limited and only of a short-term nature. Increased levels of disturbance are anticipated during the construction phase; however, levels may not be significantly greater than effects of local urban development.

Approximately 10 mature Pacific willows (*Salix lasiandra*) would be removed during construction. The expansion of the forested riparian community would more than compensate for this loss.

Long-term effects resulting from restoration activities are expected to substantially benefit wildlife species which used wetland and riparian habitat types. Increases in the abundance and diversity of forested riparian zones will provide greater amounts of roosting and nesting locations for birds, and denning sites for mammals. Restoration of wetland communities is expected to provide greater amounts of habitat for wetland-dependent species, including amphibians and some reptiles.

Adjacent Uplands. Current upland cover types within the project area are of limited habitat quality. Impacts anticipated from the restoration are to be primarily of a short-term nature. Under the proposed alternative, 4.6 acres of grassland are to be converted to other plant community types, resulting in a permanent loss of this habitat. As indicated, however, the current quality of upland areas is considered low. Restoration and planting activities planned for the project area are expected to improve the quality of remaining upland communities to high quality, leading to a net improvement of 4.7 HUs in upland wildlife habitat for the project.

Habitat Evaluation Procedures Study. The Corps' HEP study initially evaluated 29 separate alternatives associated with the Portneuf River Restoration Project. Habitat suitability index values and HUs were projected for several alternatives assuming a 50-year life of the project. Results of the analysis for the No Action and North City Park Alternatives are summarized in Table 2.

TABLE 2
Projected HEP Values for the Portneuf River Restoration Project

	Projected HSI and HU Values for Project Alternatives					
	No Action			NCP		
Cover Type	**Area**	**HSI**	**HU**	**Area**	**HSI**	**HU**
Grassland—NCP	12.6	Low	2.5	8.0	High	7.2
Palustrine Forest—NCP-O	6.8	High	6.1	10.9	High	9.8
Palustrine Forest—NCP-U	same as above	High	6.1	same as above	High	9.8
Palustrine Scrub-Shrub—LR	0.4	Low	0.1	0.4	Low	0.4
Riverine	0.0	Low	0.0	0.5	High	0.5
Total	**19.8**		**14.8**	**19.8**		**27.7**

NCP-North City Park, O-Overstory, U-Understory

Habitat quality, reflected by HSI ranks, were projected to increase for several cover types, including palustrine forests, scrub-shrub, and grassland. HU values were projected to increase from a baseline of 14.8 for the No Action Alternative to 27.7 for the North City Park Alternative. Habitat unit values for all cover types are expected to increase as a result of the restoration project. New riverine habitat would be developed from some of the converted grassland.

Threatened and Endangered Species

No Action Alternative. No potential benefits exist for the former Category 2 candidate species under the No Action Alternative.

North City Park Alternative. Three Species of Special Concern have been identified as potentially occurring within the Portneuf River restoration project area. These include the Yuma myotis, the long-eared myotis, and Townsend's western big-eared bat. The level of potential use of the project area is expected to be very low because of existing habitat quality. The long-eared myotis typically inhabits pinyon-juniper and coniferous forests, using hollow trees, caves, and cliff crevices for roosting. These cover types are not present. Townsend's big-eared bat is known from a variety of habitats including desert, scrub, pinyon pine and pine forest, while the Yuma myotis is typically associated with grassland, desert, and riparian communities where permanent water is available. All three species are somewhat limited by the availability of appropriate roosting sites, which can include caves, mines, hollow trees, and old buildings. Few roost sites are currently present in the project area.

Completion of the Portneuf River restoration project is not expected to result in impacts to potential habitat for the species listed above. The limited construction associated with placement of weirs and pumps is expected to have little impact on existing habitat for these species. Results of the restoration project are anticipated to increase the extent and quality of riparian habitat along the river. This action is expected to potentially benefit species, such as bats, which use riparian areas for feeding and roosting.

Land Use

No Action Alternative. The site would remain in its current land use. North City Park Meander would occasionally contain very small, disconnected water pools. No habitat improvement would be experienced. The City would continue to own North City Park and use it as a wildlife habitat area.

North City Park Alternative. Implementation of the North City Park Meander component would not impact ownership (City of Pocatello) or use patterns. In fact, the re-establishment of the river meander would be an enhancement of the land use, because it is an urban natural habitat site. Only a small portion of the park will be used for the project.

Six solar panels and three pumps would be installed to operate only during daylight hours. Three intake weirs, the solar panels, and pumps would be situated alongside the riverbank. Water would be pumped at the rate of 100 to 200 gpm into the old meander and allowed to return to the Portneuf River through an existing surface drainage culvert. The equipment would be surrounded by a security fence to prevent vandalism. The fence would be screened by vegetative plantings.

Some minor excavation would be required to provide continuous flow. A channel would be cut between the meander through the Park's vegetated area to leave as many trees as possible. Maintenance would be required on the pump and solar panels. The weirs would require periodic sediment removal.

Impacts from project construction would be short-term. Noise and dust from earth-moving equipment and potential pathway disruption during the installation of the pumps, panels, and weirs, are examples of these short-term impacts.

As needed, the excavation slopes would be revegetated with trees and shrubs. The trees and shrubs would be situated into groups along the slope based on water needs. Examples of appropriate trees and shrubs include willow, cottonwood, alder, juniper, wild rose, currant, red-oiser dogwood, and sagebrush. Upland areas would be seeded with a mix of native plants, or a grass mixture accepted by IDFG for wildlife purposes.

Soil material generated by the excavation would be disposed offsite by the contractor so the established floodway is not impacted. BMPs would be used. Future maintenance work would occur during daylight hours so that nearby residents are not disturbed by noise at night. A temporary disruption of pathway traffic is possible, although room should exist for passage.

Concerns have been raised by path users that ponding could create a mosquito breeding area, bad odors, or fetid water (see letter from Assistant City Engineer in Appendix). Therefore, water should be flushed through the meander at a sufficient level to prevent stagnant water collection.

As the local project sponsor, the City must apply for and obtain appropriate non-consumptive water rights from the State Department of Water Resources for habitat improvement. All work will be conducted on City property, which is readily accessible from nearby public roads. No real estate acquisition would be necessary.

No negative impacts to land use would be caused by this component because of compliance with mitigation measures.

Recreation

No Action Alternative. No habitat enhancement or restoration would take place at the site. North City Park would occasionally have very limited water, often in small pools in the old meander. North City Park would continue to be used as a natural habitat area, permitting an urban setting for observation of birds and some wildlife. Hikers, runners, walkers, skate boarders, roller bladers, and bikers would go on using the pathway.

North City Park Alternative. The proposed action would enhance habitat and wetlands at the North City Park Meander by re-establishing river meanders into remnant meanders from the Portneuf River. The water would serve as an attraction for wildlife (particularly birds), which would increase opportunities for casual wildlife observation. No new recreational opportunities would be provided.

As discussed in the Land Use portion of this assessment, concerns have been raised through the City Engineer's Office that the water not be permitted to pond and thus become fetid or foul-smelling. To alleviate this problem, sufficient flow should be provided to maintain water movement through the meander.

No significant negative impacts are associated with the North City Park Alternative.

Aesthetics

No Action Alternative. The landscape would remain in the present state.

North City Park Alternative. The introduction of a steady water source into the North City Park Meander would create improved wildlife habitat and restore wetland vegetation. Visually, the area would be impacted by the placement of solar panels, pumps, and weirs by the riverbank. This visual intrusion may be offset in part by the habitat enhancement the Park would gain through the re-establishment of water in the meander. Shrubs would be planted around the security fence surrounding the equipment to help screen it from the path users.

While the onsite equipment will impact the visual aesthetics, the solar power panels and associated equipment will be used by the local school system and University for educational purposes. The trade-off of greater educational opportunities for reduced visual aesthetics is recognized, but considered worthwhile. The City of Pocatello is also a strong advocate of having solar powered pumps used for operating the system and as a learning tool for students.

Cultural Resources

No Action Alternative. Current conditions would be likely to remain the same. No cultural resources have been found in the immediate vicinity of North City Park.

North City Park Alternative. The proposed action would not impact any cultural resources. A record search of the flood control project area was conducted in March 1995 by SHPO. A number of recorded cultural sites exist in the project's vicinity, but all recorded sites are located outside the potential areas of ground disturbance for North City Park.

A Corps archaeologist performed a reconnaissance of the proposed alternative in June 1995. No cultural resources were recorded or noted, and no cultural properties were found in the areas of potential disturbance. It was noted that the general land form of the entire project area suggests high potential for rock art and other cultural sites.

The excavation or land-clearing necessary to re-establish the meander will be monitored by a qualified archaeologist. Construction workers will be cautioned of cultural resource concerns. If cultural material is discovered, work must stop at that location until the find is evaluated by the archaeologist. Resource protection will occur immediately in compliance with all laws and regulations regarding cultural resources.

V. Consultation and Coordination

Coordination Prior to the Environmental Assessment Process

The Corps began preliminary examination of the North City Park Alternative beginning in 1993. Since that time, consultation and coordination has occurred among the Corps and various agencies.

The City of Pocatello signed a Letter of Intent to serve as local sponsor for the restoration project on January 10, 1994 (letter in Appendix). The City Community Development Director and Assistant City Engineer were consulted during the evaluation process. Material produced by the Portneuf Greenway Advisory Committee was used for background information, and local planning documents for Pocatello were reviewed.

SHPO was consulted May 1995, with additional contact occurring throughout the year. SHPO also conducted the cultural resources records search of the flood control project area.

IDFG met with the Corps study team investigating environmental restoration sites during a December 1994 trip to Pocatello. Initial contact was made with FWS by May 1995 to determine whether endangered or threatened species were present.

The Idaho Department of Water Resources was contacted in mid-1995 for information regarding water right requirements.

Coordination for the Environmental Assessment

Several state, federal, and local government agencies were solicited for input during the Environmental Assessment's scoping process. See the Appendix for a copy of the letter and list of notified agencies.

Distribution of the Environmental Assessment

The assessment was distributed to representatives of FWS, Idaho State Historical Society, City of Pocatello, Idaho Department of Water Resources, IDFG, NRCS, and the Idaho Department of Health and Welfare Division of Environmental Quality. The list of contacts and addresses is included in the Appendix titled Agency Correspondence.

VI. Compliance with Environmental Protection Statutes and Regulations

All appropriate environmental protection statutes and regulations shall be complied with throughout the proposed action. The Portneuf River restoration project is expected to have minimal impacts on waters of the U.S. Little, if any, wetlands are currently found within the project area and none are expected to be negatively affected by the project. Permits and regulations that must be obtained or adhered to include the following:

- Idaho Department of Water Resources (IDWR): Water rights must be obtained by the City of Pocatello as the local project sponsor.
- U.S. Army Corps of Engineers (Corps): The discharges of dredged and fill material to implement the North City Park Meander Alternative is a category of activity which is eligible for Section 404 authorization under Department of the Army Nationwide Permit No. 4, at 33 CFR 330.5, Appendix A. This nationwide permit authorizes discharges of dredged and fill material for fish and wildlife enhancement activities. For Nationwide Permit No. 4, the State of Idaho, Department of Health and Welfare, Division of Environmental Quality, has issued water quality certification under Section 401 of the Clean Water Act for qualifying activities.
- City of Pocatello: The City issues flood elevation certificates (No Rise Certification) in association with applicants filing a stream alteration permit with the State Water Resources Board. Because this project qualifies under a Nationwide Permit, a joint application for a Section 404/Stream Alteration permit is no longer required. Contact with FEMA (Larry Basich, FEMA, Seattle, Washington) confirmed it would be adequate to file a letter with the City of Pocatello that describes the design and operation documenting there would be no rise in water surface. Such a letter was sent on July 16, 1996, to Jay Cornelius, City Engineer.

Project activities are to include construction of weirs and the placement of pumps. Actions have been taken to minimize potential impacts to instream areas where weirs and pumps will be established. Project objectives have been identified that will result in the re-establishment of wetland and riparian communities in areas of historic river meander. As a result, net benefits are anticipated which eliminate the need for compensation.

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Appendix A

Species List Final Portneuf River Restoration Study; CH2M HILL, 1994

Table 3-5
PRELIMINARY LIST OF SPECIES THAT MAY OCCUR IN THE VICINITY OF THE EMF SITE

Item	Common Name	Scientific Name
Terrestrial Plants	Sage	*Artemesia*
	Chokecherry	*Prunus virginiana*
	Snowberry	*Symphoricarpus oreophilus*
	Mormon tea	*Ephedra spp.*
	Winterfat	*Eurotia lanata*
	Spiny hopsage	*Grayia spinosa*
	Littleleaf horse brush	*Tetradymia glabrata*
	Bluebunch wheatgrass	*Agropyron spicatum*
	Idaho fescue	*Festuca idahoensis*
	Needle-and-thread grass	*Stipa comata*
	Secunda bluegrass	*Poa sandbergii*
Wildlife	Western toad	*Bufo boreas*
	Western fence lizard	*Sceloporus occidentalis*
	Sagebrush lizard	*Sceloporus graciosus*
	Short-horned lizard	*Phrynosoma douglassi*
	Western rattlesnake	*Crotalus viridis*
	Gopher snake	*Pituophis catenifer*
	Sage grouse	*Centrocercus urophasianus*
	Common nighthawk	*Chordeiles minor*
	Common poorwill	*Phalaenoptilus nuttallii*
	Western meadowlark	*Sturnella neglecta*
	Sage sparrow	*Amphispiza belli*
	Brewer's sparrow	*Spizella breweri*
	Green-tailed towhee	*Chlorura chlorura*
	Sage thrasher	*Oreoscoptes montanus*
	Canyon wren	*Catherpes mexicanus*
	Rock wren	*Salpinctes obsoletus*
	Barn swallow	*Hirundo rustica*
	Say's phoebe	*Sayornis saya*
	Turkey vulture	*Cathartes aura*
	Red-tailed hawk	*Buteo jamaicensis*
	Rough-legged hawk	*Buteo lagopus*
	Great blue heron	*Ardea herodias*
	Black-crowned night heron	*Nycticorax nycticorax*
	Double-crested cormorant	*Phalacrocorax auritus*

Table 3-5 (Cont'd)

Item	Common Name	Scientific Name
Wildlife (Cont'd)	Canada goose	*Branta canadensis*
	Mallard duck	*Anas platyrhynchos*
	Sagebrush vole	*Lagurus curtatus*
	Canyon mouse	*Peromyscus crinitus*
	Ord's kangaroo rat	*Dipodomys ordi*
	Great Basin pocket mouse	*Perognathus parvus*
	Bushytail woodrat	*Neotoma fuscipes*
	Pygmy rabbit	*Sylvilagus idahoensis*
	Cottontail rabbit	*Sylvilagus sp.*
	Blacktail jackrabbit	*Lepus californicus*
	Longtail weasel	*Mustela frenata*
	Striped skunk	*Mephitis mephitis*
	Yellow belly marmot	*Marmota flaviventris*
	Townsend ground squirrel	*Citellus townsendi*
	Deer mouse	*Peromyscus maniculatus*
	Pronghorn antelope	*Antilocapra americana*
	Mule deer	*Odocoileus hemionus*
	American badger	*Taxidea taxus*
	Gray fox	*Urocyon cinereoargenteus*
	Bobcat	*Lynx rufus*
	Coyote	*Canis latrans*
Aquatic	Longnose dace	*Rhinichthys cataractae*
	Speckled dace	*Rhinichthys osculus*
	Redside shiner	*Richardsonius balteatus*
	Mountain whitefish	*Prosopium williamsonii*
	Bluehead sucker	*Catostomus discobolus*
	Mottled sculpin	*Cottus bairdi*
	Paiute sculpin	*Cottus beldingi*
	Utah chub	*Gila atraria*
	Cutthroat trout	*Oncorhyncus clarki*
	Rainbow trout	*Oncorhyncus gairdneri*
	Brown trout	*Salmo trutta*
	Brook trout	*Salvelinus fotinalis*
	Utah sucker	*Catostomus ardens*
	Carp	*Cyprinus carpio*

Appendix B

Agency Correspondence

Pocatello
A MUNICIPAL CORPORATION OF IDAHO

OFFICE O. .E MAYOR
902 E. Sherman
P.O. Box 4169
Pocatello, Idaho 83205
(208) 234-6163
FAX (208) 234-6296

PETER I. ANGSTADT
Mayor

Pocatello City Council
GREGORY R. ANDERSON
D. "BABE" CACCIA
L. ED BROWN
ROGER W. CHASE
KAREN A. McGEE
EARL R. POND

January 10, 1994

LTC James S. Weller
District Engineer
Walla Walla District
U.S. Army Corps of Engineers
Walla Walla, WA 99362-9265

Dear LTC Weller:

I was briefed by a Corps of Engineers representative on July 20, 1993, regarding restoration of fish and wildlife habitat lost as a result of construction of the existing Portneuf River, Pocatello Unit flood control project. Based on information presented at that meeting, we support continuation of studies into the feasibility phase under the authority of Section 1135, Public Law 99-662, as amended. It is our understanding that all costs incurred in completing the feasibility study will be cost-shared with the local sponsor at a rate of 25 percent non-Federal and 75 percent Federal, payable at time of construction. The City of Pocatello intends to be the local sponsor of these environmental improvements and we perceive our responsibilities to be as follows:

A. Provide, without cost to the United States, all necessary land easements and rights-of-way, relocations of utilities necessary for project construction, and subsequent operation and maintenance;

B. Assure operation, maintenance, repair, rehabilitation, and replacement during the useful life of the works as required to serve the project's intended use;

C. Provide the non-Federal share of matching funds equal to 25 percent (about $500,000) of the cost to conduct a feasibility study, prepare detailed plans and specifications, and construct the modification;

D. Hold and save the United States free from claims for damages which may result from the construction and subsequent maintenance of the project, except damages due to fault or negligence of the United States or its contractors;

E. Comply with applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646, 84 Stat. 1984; Public Law 88-352, 78 Stat. 241, 252); and

F. Execute the Assurance of Compliance pertaining to Title IV of the Civil Rights of 1984 (Public Law 88-352, 78 Stat. 241, 252).

As per our conversations with Mr. Jerry Roediger, it is understood that the City of Pocatello will not be obligated to cover any feasibility cost unless the project goes to construction upon successful negotiation of a Project Cooperation Agreement (PCA).

I have designated Mr. Mark Reid of my staff as the City's project coordinator for this work. Should you have any questions or need additional information, please contact Mr. Reid at 208-234-6184.

Sincerely,
CITY OF POCATELLO

Peter Angstadt
Mayor

mg

c: Jerry Roediger, P.E.
Donna Looze, Portneuf Greenway Foundation
Bill Davidson

IDAHO STATE HISTORICAL SOCIETY

Preserving Idaho's Past

John R. Hill, Director — Philip E. Batt, Governor

March 3, 1995

Dr. Michael Passmore
Chief, Environmental Resources Branch
Army Corps of Engineers
Walla Walla District
Walla Walla, Washington 99362-9265

RE: Portneuf River Flood Control Project, Pocatello, Idaho

Dear Dr. Passmore:

Thank you for notifying our office of actions under consideration to control flooding along the Portneuf River in Pocatello, Idaho. We have enclosed the site forms for sites recorded within the project area and citations of archaeological surveys that have been conducted within any portion of the project.

As you can see, numerous archaeological sites have been recorded within the project area. In light of this, we support your intention to conduct an archaeological survey of areas of potential disturbance. Portions of the general project have been inspected in the past, but many of the inspections were for linear projects traversing the project area or for small actions in isolated areas. From the site forms, it appears that Idaho State University (ISU) anthropology students surveyed the drainage for petroglyphs and pictographs in 1987. Apparently, we never received a survey report documenting ISU's survey so we are not certain of their research design. Their survey, however, appears to have been specific to rock art sites and would not be considered comprehensive.

We appreciate your cooperation. If you have any questions, feel free to contact either myself or Suzi Neitzel at 208-334-3847.

Sincerely,

Robert M. Yohe II
State Archaeologist and
Deputy SHPO

RMY/spn
cc: Ray Tracy, Archaeologist, USACE

Administration	Historic Preservation	Historic Sites	Historical Library and Archives	Historical Museum
210 Main Street	210 Main Street	2445 Old Penitentiary Road	450 North Fourth Street	610 North Julia Davis Drive
Boise, Idaho 83702	Boise, Idaho 83702	Boise, Idaho 83712	Boise, Idaho 83702	Boise, Idaho 83702
208-334-2682	208-334-3847, 3861	208-334-2844	208-334-3356	208-334-2120

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Idaho State Office, Ecological Services
4696 Overland Road, Room 576
Boise, Idaho 83705

May 30, 1995

Michael F. Passmore, Ph.D.
Chief, Environmental Resources Branch
Department of the Army
Walla Walla District, Corps of Engineers
201 North Third Avenue
Walla Walla, Washington 99362-1876

Subject: Portneuf River Restoration Project--Pocatello,
Species List Request
SP #1-4-95-SP-198 File #351.7000

Dear Mr. Passmore:

The U.S. Fish and Wildlife Service (Service) is providing you with a list of endangered, threatened, listed, candidate, and/or proposed species that may be present in the Portneuf River Restoration project area. You requested this species list in a letter dated April 28, 1995, received by this office on May 4, 1995. The list fulfills requirements for a species list under Section 7(c) of the Endangered Species Act of 1973 (Act), as amended. The requirements for Federal agency compliance under the Act are outlined in Enclosure 2. If the project is not started within 180 days of this letter, regulations require that you request an updated list. Please refer to the number shown on the list (Enclosure 1) in all correspondence and reports.

Section 7 of the Act requires Federal agencies to assure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. If a listed species appears on Enclosure 1, agencies are required to prepare a Biological Assessment. It would be prudent for you to consult informally with the Service in development of Biological Assessments. If you determine that a listed species is likely to be affected adversely by the proposed project, the Act requires that you request formal Section 7 consultation through this office. If a proposed species is likely to be jeopardized by a Federal action, regulations require a conference between the Federal agency and the Service.

National Wetland inventory (NWI) maps show wetlands in the vicinity of the project area. These NWI maps provide general information on wetlands but do not preclude the need for a site

specific wetland inventory of the project area by your agency. The U. S. Army Corps of Engineers is the official agency contact for site specific determinations of wetland presence/absence or wetland impacts.

Candidate species that appear on Enclosure 1 have no protection under the Act, but are included for your early planning consideration. Candidate species could be proposed or listed during the project planning period, and would then be covered under Section 7 of the Act. The Service advises an evaluation of potential effects on proposed and/or candidate species that may occur in the project area. It may be necessary for you to conduct surveys of the project area to determine the status of candidate species there. If it is likely the project will adversely affect a candidate species, we recommend you have further discussions with this office.

If you have any questions regarding Federal consultation responsibilities under the Act, please contact Marilyn Hemker of this office at 208-334-1931. Thank you for your continued interest in the Endangered Species Act.

Sincerely,

for Allison Block Haas

Charles H. Lobdell
State Supervisor, Ecological Services

Enclosures

cc: FWS-ES, E. Idaho, Pocatello (Donahoo)
IDFG, Hdqtrs., Boise
IDFG, Region 5, Pocatello

ENCLOSURE 1

LISTED AND PROPOSED ENDANGERED AND THREATENED
SPECIES, AND CANDIDATE SPECIES, THAT MAY OCCUR
WITHIN THE AREA OF THE PORTNEUF RIVER RESTORATION PROJECT
FWS-1-4-95-SP-198

LISTED SPECIES — COMMENTS

None

PROPOSED SPECIES

None

CANDIDATE SPECIES

Yuma Myotis (C2)
(Myotis yumanensis)

Long-eared Myotis (C2)
(Myotis evotis)

Townsend's Western Big-eared Bat (C2)
(Plectus townsendii)

GENERAL COMMENTS

C2 = Category 2 Taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. Further biological research and field study may be needed to ascertain the status of taxa in this category.

ENCLOSURE 2

FEDERAL AGENCIES' RESPONSIBILITY UNDER SECTIONS 7(a) AND (c) OF THE ENDANGERED SPECIES ACT

SECTION 7(a) - Consultation/Conference

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species; or result in destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after determining the action may affect a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7(c) - Biological Assessment for Major Construction Activities [1/]

Requires Federal agencies or their designees to prepare Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action[2/] on listed and proposed species. The process begins with a Federal agency in requesting from FWS a list of proposed and listed threatened an endangered species (list attached). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

We recommend the following for inclusion in the BA; an onsite inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species are present; a review of literature and scientific data to determine species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the BA should be forwarded to our office.

A major construction activity is a construction project (or other undertaking having similar physical impacts) which is a major action significantly affecting the quality of human environment as referred to in the NEPA (42 U.S.C. 4332 (2)(c).

2/ "Effects of the action" refers to the direct and indirect effects on an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.

ENGINEERING DEPARTMENT
902 E. Sherman
Pocatello, Idaho 83205-4169
(208) 234-6225 FAX (208) 234-6296

July 26, 1995

Mr. Jack Sands
Corps of Engineers
Walla Walla District
201 N 3rd
Walla Walla WA 99362-1876

Dear Sir:

Enclosed please find an aerial map of the North Park area in Pocatello, Idaho, as per your request in a telephone conversation during the week of July 10, 1995.

After a physical review of the area involved, please note the following:

1. The drainage pipe installed to the Portneuf River is a 24-inch corrugated metal pipe that followed an old meandering drainage course to the river.

2. Most users of the trail are hikers, runners, skate boarders, and roller bladers. There are very few bicycle riders (mostly small children with parents in which some are utilizing training wheels, or trikes).

3. A river oxbow has been roughly indicated. Since the pathway is in a flood zone or belt for the Portneuf River, portions of the path are subject to being inundated during relatively severe river flood stages. There is the possibility that some of these same path areas might be partially inundated due to creation of artificial ponds, etc. In summer, with river flows low, the general ground level is several feet above river flow levels. These foregoing situations might require excavating areas down to summer river levels or pumping at certain intervals during the year -- circulation could possibly be a problem.

4. Talking with people using the path, some favor it as being an asset; others felt ponding, etc. would create a mosquito breeding area, stinking slough or fetid water, objectionable to pathway users.

I apologize for not sending this information earlier. However, Dennis Hill, our geographical information system's coordinator, was out-of-town from July 13 to July 22; and I wanted to consult with him on the availability of updated topographical mapping of the area. He has informed me that such mapping does exist and that the Army Corps of Engineers in the Walla Walla District has procured maps from him in the past for another area in Pocatello. Enclosed, please find Mr. Hill's business card.

Thank you.

Sincerely,

David L. Colling

David L. Colling
Assistant City Engineer

DLC/bn

Enc.

Pocatello
A MUNICIPAL CORPORATION OF IDAHO

ENGINEERING DEPARTMENT
911 N. 7th Ave.
P.O. Box 4169
Pocatello, Idaho 83205-4169
(208) 234-6230
FAX (208) 234-6296

DENNIS J. HILL
GIS Coordinator
Project Engineer

IDAHO STATE HISTORICAL SOCIETY

Preserving Idaho's Past

John R. Hill, Director

Philip E. Batt, Governor

October 2, 1995

Mr. Michael Passmore
Chief Environmental Resources Branch
Corps of Engineers
Walla Walla District
201 North Third Avenue
Walla Walla, Washington 99362-1876

RE: Archaeological Investigations
Dent Campground Buried Cable
Portneuf River Flood Control
New Comfort Station: Merry's Bay, Dent Orchards,
Grandad Bridge

Dear Mr. Passmore:

Thank you for sending the archaeological reports for three projects in Idaho proposed by the Corps of Engineers. After reviewing the reports, we have the following comments:

1. Dent Campground Buried Cable Project, Dworshak Reservoir:
No histories properties were identified within the project area. The report states that the cable route through the campground will transect areas that appear to have the potential for buried deposits; however, subsequent conversations with Dworshak Project personnel revealed that the entire campground area was extensively impacted during original campground construction. In light of this, we feel the project can proceed with no effect on historic properties.

2. Portneuf River Flood Control Project, Pocatello, Idaho:
Considering the archaeological sensitivity of the Portneuf area, we agree that a professional archaeologist should monitor ground clearing and bank recontouring at meander sites No. 1, 2, 3, and 4. We further agree that construction at the City Creek drop structure will have no effect on historic properties given the disturbed nature of the project area.

3. New Comfort Stations, Merry's Bay Recreation Site, Dent Orchards Campground, Grandad Bridge:

We agree that construction of the comfort stations at all three locations should be monitored by a professional archaeologist.

If archaeological remains are discovered during the construction of any of these projects, Corps of Engineers archaeologist Ray Tracy should be consulted immediately.

We appreciate your cooperation. If you have any questions, feel free to contact either myself or Suzi Neitzel at 208-334-3847.

Sincerely,

Robert M. Yohe II
State Archaeologist and
Deputy SHPO

RMY/spn

CH2M HILL
Engineers
Planners
Economists
Scientists

June 7, 1996

Mr. Bob Rusink
U. S. Fish and Wildlife Service
4696 Overland Road
Boise, ID 83705

Dear Mr. Rusink:

Subject: Portneuf River Restoration Project
Species List Re-request

The Corps of Engineers received a species list for the subject project on May 5, 1995. I am writing to request an update of that list, which is attached.

A brief project description follows. Historically, the Portneuf had an extensive meander pattern. In 1968 this pattern was altered through a local flood control protection project that included 1.5 miles of concrete rectangular channel, and 4.7 miles of revetted levee and channel in two reaches at the upstream and downstream ends of the concrete channel.

Section 1135 of the Water Resources Development Act of 1986 was established to support ecosystem restoration through modification in the structures and operations of projects constructed by the Corps. In the case of the Portneuf River, Section 1135 funds have been obtained for restoration of some of the habitat and wetland at two meander sites that were lost as a result of the 1968 construction.

The sites are identified as the North City Park and Open Lands Meanders and are found on the enclosed location map and site plans. The North City Park Meander is an unimproved area of approximately 2 acres. It is located within the river floodway, in a residential neighborhood with good public access. The property is well vegetated with native meadow grasses and a stand of large, mature willow trees. Using solar powered pumps, it is proposed that the old river meander be recharged with water and developed into a productive wetland complex providing aesthetic and wildlife values. Minor excavation would be required to enable a continuous flow, and wetland plantings would further enhance the area.

Boise Office
700 Clearwater Lane, Boise, ID 83712-7708
P.O. Box 8748, Boise, ID 83707-2748
208 345-5310
Fax No. 208 345-5315

The Open Land Meanders includes a site of approximately 100 acres, also unimproved. It is physically separated from the Portneuf River's right bank by a high, Union Pacific Railroad embankment. The land is in a growing residential area and has limited accessibility, and it collects on-site surface drainage due to it's position between the railroad embankment and the grade of Interstate 15. Vegetation is primarily native meadow grasses. The project would include driving culverts beneath and through the Union Pacific Railroad embankment at the upstream and downstream ends of the site. Water would be periodically diverted into the upstream intake culvert, proceed through old, presently dewatered river meanders and ultimately be allowed to return to the Portneuf via the downstream outflow culvert. To enable water passage from the river through this project location, a small 2 foot high stoplog weir must be installed. An armored trench would be constructed at the downstream end of the project site to convey the diverted water from the outflow culvert back to the river's main channel. A permit would be required from the railroad for culvert installation, right bank weir placement, and to relocate a portion of the upland railroad service road to keep it above the diverted river water. The recharging of the old river meanders will enable wildlife habitat enhacement opportunities for the public.

Thank you for your assistance with this information. Please contact Kevin Nielsen at CH2M HILL, (208) 345-5310, or Bill MacDonald, U.S. Army Corps Of Engineers at (509) 527-7253 if you have questions about the project that you wish to have answered at this point.

Sincerely,

CH2M HILL

Chuck Blair

Enc.

Engineers
Planners
Economists
Scientists

June 10, 1996

Mayor Peter Angstadt
City of Pocatello
PO Box 4169
Pocatello, ID 83205

Dear Mayor Angstadt:

RE: Portneuf River Section 1135 Stream Restoration Project

This letter is to inform you about a draft environmental assessment which will be forwarded to you shortly for review and comment, and to solicit your input for identifying issues or concerns that should be addressed in the assessment. The environmental assessment is being conducted by CH2M HILL on behalf of the U. S. Army Corps of Engineers for the restoration of two areas on the Portneuf River at Pocatello, Idaho. Historically, the Portneuf had an extensive meander pattern. In 1968 this pattern was altered through a local flood control protection project that included 1.5 miles of concrete rectangular channel, and 4.7 miles of revetted levee and channel in two reaches at the upstream and downstream ends of the concrete channel.

Section 1135 of the Water Resources Development Act of 1986 was established to support ecosystem restoration through modification in the structures and operations of projects constructed by the Corps. In the case of the Portneuf River, Section 1135 funds have been obtained for restoration of some of the habitat and wetland at two promising meander sites that were lost as a result of the 1968 construction.

The sites are identified as the North City Park and Open Lands Meanders and are found on the enclosed location map and site plans. The North City Park Meander is an unimproved area of approximately 2 acres. It is located within the river floodway, in a residential neighborhood with good public access. The property is well vegetated with native meadow grasses and a stand of large, mature willow trees. Using solar powered pumps, it is proposed that the old river meander be recharged with water and developed into a productive wetland complex providing aesthetic and wildlife values. Minor excavation would be required to enable a continuous flow, and wetland plantings would further enhance the area.

The Open Land Meanders includes a site of approximately 100 acres, also unimproved. It is physically separated from the Portneuf River's right bank by a high, Union Pacific Railroad embankment. The land is in a growing residential area and has limited

accessibility. It collects on-site surface drainage due to it's position between the railroad embankment and the grade of Interstate 15. Vegetation is primarily native meadow grasses. The project would include driving culverts beneath and through the Union Pacific Railroad embankment at the upstream and downstream ends of the site. Water would be periodically diverted into the upstream intake culvert, proceed through old, presently dewatered river meanders and ultimately be allowed to return to the Portneuf via the downstream outflow culvert. To enable water passage from the river through this project location, a small 2 foot high stoplog weir must be installed. An armored trench would be constructed at the downstream end of the project site to convey the diverted water from the outflow culvert back to the river's main channel. A permit would be required from the railroad for culvert installation, right bank weir placement, and to relocate a portion of the upland railroad service road to keep it above the diverted river water. The recharging of the old river meanders will enable wildlife habitat enhancement opportunities for the public.

In order to maintain project funding, the Corps must work on a very fast track to complete the assessment, obtain agency comments, and proceed with the project. You will receive a copy of the draft environmental assessment during the last week of June, and we are requesting that agency comments be submitted by July 10, 1996. We realize this is a tight schedule. However, your cooperation and prompt attention to reviewing the environmental assessment will help assure that our area will continue to benefit from future opportunities for enhancement projects as they become available. If agencies do not respond quickly, we will lose this particular opportunity and future ones to enhance river habitat.

Thank you for your assistance with this important item. Please contact Kevin Nielsen at CH2M HILL, (208) 345-5310, or Bill MacDonald, U.S. Army Corps Of Engineers at (509) 527-7253 if you have scoping input or questions about the project that you wish to have answered at this point.

Sincerely,

CH2M HILL

Kevin D. Nielsen

Kevin D. Nielsen, P.E.
Project Manager

Enc.

State of Idaho
DEPARTMENT OF WATER RESOURCES
900 N. Skyline Dr., Idaho Falls, Idaho 83402-1718 - (208) 525-7161 - Fax (208) 525-7177

EASTERN REGION

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

June 19, 1996

Mr. Kevin Nielsen, Project Manager
CH2M HILL
PO Box 8748
Boise, Idaho 83712-7708

RE: Portneuf River Section 1135 Stream Restoration Project

Dear Mr. Nielsen:

Department personnel have reviewed your request for review of the Portneuf River Section 1135 Stream Restoration Project assessment and offer the following comments.

Under the purview of the Idaho Stream Channel Protection Act (Title 42, Chapter 38, Idaho Code), it appears that you will need to obtain authorization from this Department to construct/improve the proposed waterway outlets/spillways. The spillways should be designed to not cause scouring of the river bed or banks and should be constructed so that a headcut does not move up the new channel, causing sedimentation of the Portneuf River. The Department will be better able to give specific comments on these designs when a Joint Application for Permit is submitted. Normal processing time is between 30 and 60 days.

It appears from the description of the project that you will need to construct diversion works to move water from the Portneuf River into the "restoration" channels/wetlands. Diversions of water require an approved water right that must be issued by this Department. An Application for Permit to Appropriate Water must be filed to start this process. Processing time is normally 90 days, if no protests to the proposed diversion are filed.

You should be aware that there is a moratorium on authorizing any new consumptive use diversions of water within the Snake River Basin which includes the Portneuf River. In some cases, where it can be shown that the proposed diversion will not consumptively use water (i.e. inflow equals outflow), the Department may be able to approve the new diversion. If you believe this project will not consumptively use any diverted water, you should submit supporting information to that affect.

Thank you for the opportunity to comment on the project. Please contact our office if you have further questions regarding our comments.

Sincerely,

Eric S. Verner,
Stream Protection Specialist

cc: Rob Brochu, ACOE
Jim Lukins, IDFG
Blain Drewes, DEQ
Erv Ballou, IDWR-Boise

CH2M HILL Engineers Planners Economists Scientists

June 27, 1996

Ladies and Gentlemen:

About two weeks ago you received notification of and information regarding the Portneuf River Section 1135 Stream Restoration Project being conducted by the U.S. Army Corps of Engineers for two sections of the Portneuf River near Pocatello. Enclosed is the Draft Environmental Assessment and Finding of No Significant Impact for that project.

As noted in the previous letter, the Corps is working on a very fast track to obtain agency comments and final the assessment in order to maintain project funding. We are requesting that any agency comments on the Draft EA or FONSI be submitted by July 10, 1996. If it is not possible to provide comments in writing by that time, we request that you provide verbal comments before that date, and document them in writing as soon as possible.

We realize this is a very tight schedule, however, if it is not achieved, the funding for this project will be lost and future potential to enhance river habitat will be jeopardized. The Corps greatly appreciates your effort to respond within this time frame. Written comments should be submitted to: Attention: Joanne Garnett
CH2M HILL
P.O. Box 8748
Boise, ID 83706

You may contact Joanne by telephone at (208) 345-5310 with verbal comments. Thank you very much for your attention and effort to meet our schedule. Under separate cover, you will also receive the Section 404 (b) (1) Evaluation and other related documents for your review and comment. Please feel free to contact me with any questions.

Sincerely,

CH2M HILL

Kevin Nielsen by J. Garnett

Kevin D. Nielsen, P.E.
Project Manager

Boise Office 700 Clearwater Lane, Boise, ID 83712-7708 P.O. Box 8748, Boise, ID 83707-2748 208 345-5310 Fax No. 208 345-5315

IDAHO FISH & GAME
SOUTHEAST REGION
1345 Barton Road
Pocatello, Idaho 83204-1819

July 1, 1996

Phil Batt / Governor
Jerry M. Conley / Director

Kevin D. Nielsen, P.E.
Project Manager
CH2M Hill
P.O. Box 8748
Boise, ID 83706

Re: Portneuf River Restoration - Environmental Assessment

Dear Kevin,

We received the Environmental Assessment for the Portneuf River Section 1135 Stream Restoration Project on June 28. The comment deadline of July 10 does not provide us enough time to adequately review on the EA, inspect the site and draft comments. We would request that the comment deadline be extended to the end of July. Also, we would like to inspect the site with yourself or somebody familiar with the project. Please contact me for a mutually agreeable date.

As you are aware, we recently purchased 43 acres of property adjacent to the Portneuf River for development into an urban nature area. While we agree with the concept of your proposal, we have potential concerns regarding a Portneuf River water withdrawal and how it might affect stream flows through our property.

Thank you for the opportunity to review this proposal and hopefully our request to delay comments will not cause significant delays in project implementation.

Sincerely:

J.R. Lukens

J.R. Lukens
Environmental Staff Biologist

JL/jl

cc: Dexter Pitman
Paul Wackenhut
Natural Resources Policy Bureau
Mike Donahoo, U.S. Fish and Wildlife Service

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Snake River Basin Office, Columbia River Basin Ecoregion
4696 Overland Road, Room 576
Boise, Idaho 83705

July 11, 1996

Charles Blair
CH2M Hill
700 Clearwater Lane
P.O. Box 8748
Boise, Idaho 83707-2748

Subject: Portneuf River Restoration Project Species List Update
SP #1-4-96-SP-229 Updates SP #1-4-95-SP-198
File #351.8000

Dear Mr. Blair:

The U.S. Fish and Wildlife Service (Service) is writing to provide you with an updated list of threatened, endangered, candidate, and proposed species which may occur in the Portneuf River Restoration project area. You requested the update in a letter to our office on June 7, 1996 received by our office on June 10, 1996. According to our records, no listed or proposed threatened or endangered, or candidate species are found near the project. This letter officially updates species list number 1-4-95-SP-198 and provides you with a new number 1-4-96-SP-229. You should refer to the new number in subsequent correspondence and documents.

Please note that the Service is no longer categorizing candidates as C1, C2, and C3. The species that are identified as candidate species for Idaho include Bull trout, Christ's paintbrush, Northern Idaho ground squirrel and Spotted frog--Owyhee County only. The Snake River Basin Office continues to have interest in a number of plants and animals that are not designated as endangered, threatened, or candidate species under the Act. We are concerned about their population status and threats to their long-term viability. The Service will continue to provide you with information that we have about those species. Any concerns we raise about those species will be in context with the National Environmental Policy Act, Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, and other authorities.

Information concerning Federal agency obligations under the Endangered Species Act has been provided to you in the past. If you would like us to send you any of this information again or if you have questions, please contact Alison Beck Haas of my staff at (208)334-1931.

Thank you for your continued interest in endangered species conservation.

Sincerely,

Susan B. Martin

Acting Supervisor, Snake River Basin Office

cc: IDFG, Pocatello
FWS-ES, Pocatello (Donahoo) w/copy incoming

CH2M HILL TELEPHONE CONVERSATION RECORD

CALL TO: Robert Chambers, Director
Pocatello Community Development
Dept.

PHONE NO.: 208-2234-6184 **DATE:** 07/11/96

CALL FROM: Joanne Garnett **TIME:** 2:45PM

MESSAGE TAKEN BY: Joanne Garnett, AICP **PROJECT NO.:** 135602.PR.ZZ

SUBJECT: Portneuf River EA Comments

Robert distributed 5 copies of the Environmental Assessment for local review. Two responded with comments.

City Engineering asked who would do the monitoring of the weir, and who would be held liable for it if flooding occurred. I said the City would be responsible for operating the weir, and should be removed by November or as conditions warrant to avoid flooding. The Engineering Department asked who would be held liable if fish loss occurred. Robert and I agreed that the City has the option of putting a screen across the North City Park meander to keep fish out. I explained that the Open Lands Meanders are not intended to necessarily house fish (especially large fish) because they will only be about 2 feet deep. Rather, the meanders will provide organic material that will be fed into the main channel and used as fish food. It was possible that some fish could be stranded when the Open Lands Meanders go into ponding situations, but not very likely and certainly not sizable in number.

Next, the City Engineering office expressed concern about the City need for a nonconsumptive water right permit. They wondered if the permit would include a no loss provision from the diversion. I said this was the responsibility of the Department of Water Resources and they should be contacted about that question.

Bill Davidson, a local environmental consultant, expressed concern about the time frame for receiving public comments. He also gave the opinion that the problem that needs to be addressed is the concrete channel, not the re-establishment of the meanders.

Robert concluded by noting that the City will pay close attention to the agreement that is drafted between the Corps and the City of Pocatello. They are particularly concerned about liability issues.

IDAHO STATE HISTORICAL SOCIETY

Preserving Idaho's Past

John R. Hill, Director

Philip E. Batt, Governor

RECEIVED
JUL 18 1996
CH2M HILL
BOISE

July 12, 1996

Ms. Joanne Garnett
CH2M Hill
P.O. Box 8748
Boise, Idaho 83706

RE: Portneuf River Section 1135 Stream Restoration Project
Corps of Engineers

Dear Mr. Garnett:

Thank you for sending the environmental report on the proposed stream restoration project on the Portneuf River, Bannock County, Idaho. We find the sections on cultural resources consistent with our conclusions and those of the Corps of Engineers. With regard to modifications in the project design, we support the recommendation to have the monitoring archaeologist complete the survey of the 700 linear feet of new project area and of any other new areas that may result from minor project modifications.

We appreciate the opportunity to review the document. If you have any questions, feel free to contact either myself or Suzi Neitzel at 208-334-3847.

Sincerely,

Robert M. Yohe II
State Archaeologist and
Deputy SHPO

RMY/spn

Administration
210 Main Street
Boise, Idaho 83702
208-334-2682
Fax: 208-334-2775

Historic Preservation
210 Main Street
Boise, Idaho 83702
208-334-3847, 3861
Fax: 208-334-2775

Historic Sites
2445 Old Penitentiary Road
Boise, Idaho 83712
208-334-2844
Fax: 208-334-3225

Historical Library and Archives
450 North Fourth Street
Boise, Idaho 83702
208-334-3356
Fax: 208-334-3198

Historical Museum
610 North Julia Davis Drive
Boise, Idaho 83702
208-334-2120
Fax: 208-334-4059

CH2M HILL
Engineers
Planners
Economists
Scientists

July 16, 1996

Mr. Jay Cornelius
City Engineer
City of Pocatello
P.O. Box 4169
Pocatello, ID 83205

Dear Mr. Cornelius:

In compliance with Chapter 15.32, Flood Hazard Areas, Pocatello City Code, the purpose of this letter is to inform you about two proposed actions on the Portneuf River that will occur within the river floodway. The proposed actions are described in detail in the Portneuf River Environmental Assessment which you received a few weeks ago. Neither action would result in any increase in flood levels during the occurrence of the base flood discharge, provided that the following operation and design is adhered to. The critical issues related to floodway encroachment are as follows:

- At North City Park pumps will be used to divert water and there will be no obstructions in the Portneuf River. The pump housing will be inset to the existing channel bank so as not to affect the existing channel capacity.

- At Open Lands Meander, the weir must be removed prior to periods of high flow and not be reinstalled until the potential of high flow is over. Provided this operation is adhered to, the base flood elevation will not be affected since the weir footing and sidewalls will not decrease existing channel capacity. The footing will be below the existing channel invert and the outside edges of the sidewalls will be flush to the existing channel banks.

As project co-sponsor, it is the City of Pocatello's responsibility to operate and monitor the weir. FEMA has indicated it is important that the City routinely document that the required operation is being followed. Correct operation of the weir is critical to assuring that there is no rise in the base flood elevation.

Boise Office
700 Clearwater Lane, Boise, ID 83712-7708
P.O. Box 8748, Boise, ID 83707-2748
208 345-5310
Fax No. 208 345-5315

By this letter, we believe we have addressed the provisions listed in 15.32.170, Floodways, Pocatello City Code. Please contact Kevin Nielsen or Steve Miller at CH2M HILL if you have any questions about this item. Thank you for your assistance.

Sincerely,

CH2M HILL

Kelvin Anderson

Kelvin Anderson, P.E.

c: Robert Chambers/City of Pocatello

State of Idaho
DEPARTMENT OF WATER RESOURCES
900 N. Skyline Dr., Idaho Falls, Idaho 83402-1718 - (208) 525-7161 - Fax (208) 525-7177

EASTERN REGION

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

July 29, 1996

Mr. Bill MacDonald
U.S. Army Corps of Engineers
Walla Walla District
201 North Third Avenue
Walla Walla, Washington, 99362-1876

RE: Portneuf River Section 1135 Stream Restoration Project

Dear Mr. MacDonald:

Department personnel visited the project locations on the Portneuf River with you last week. We offer the following comments in addition to our letter of June 19, to Kevin Nielsen of CH2M HILL.

It appears that an approved water right must be obtained for the North City Park Meander diversion. If it is determined that there is a consumptive use of water associated with the diversion, it is likely that some type of mitigation will be required for the consumptive use (i.e. annual purchase of storage water from the Upper Snake River Water Bank). To be able to determine the consumptive use for this project you need to include the proposed diversion rate, the volume of water that will be stored in the meander and the surface area of the pond. This information may be included in the Application for Permit to Appropriate State Water.

The Open Lands Meanders project will come under the purview of the Stream Channel Protection Act (Title 42, Chapter 38 Idaho Code). You are proposing to open an old channel of the Portneuf River which can be accomplished by installation of a culvert to connect the existing channel with the old river meanders. You will need to obtain an approved Stream Alteration Permit from the Department prior to construction. It does not appear that a water right will need to be obtained for this project.

The Department supports your efforts in restoring these portions of the Portneuf River. It appears that the river system will benefit from the proposed work.

Thank you for the opportunity to comment on the project. Please

contact our office if you have further questions regarding our comments.

Sincerely,

Ronald D. Carlson,
Eastern Regional Manager

RDC:esv

cc: Rob Brochu, ACOE
Jim Lukens, IDFG
Blaine Drewes, DEQ
Kevin Nielsen, CM2H HILL

IDAHO FISH & GAME
SOUTHEAST REGION
1345 Barton Road
Pocatello, Idaho 83204-1819

Phil Batt / Governor
Jerry M. Conley / Director

August 1, 1996

Kevin D. Nielsen, P.E.
Project Manager
CH2M Hill
700 Clearwater Lane
Boise, ID 83707-2748

Re: Portneuf River Section 1135 Stream Restoration Project - Environmental Assessment

Dear Kevin,

Department personnel have reviewed the EA for the Portneuf River Stream Restoration Project, visited the site and have some comments.

We generally support the concept of rewatering former Portneuf River meanders which have been dewatered due to channelization. This will enhance habitat diversity for aquatic and riparian species. We have some concerns, however, particularly with the upstream site identified as the Open Lands Meanders (OLM). This site is adjacent to our Edson Fichter Nature Area (EFNA) property and we are concerned regarding the impact of a 15 cfs water withdrawal on fisheries and other potential recreational and educational values in this reach.

We concur that a water management plan such as the one referenced on page 47 of the EA, is necessary prior to construction of the project. The plan should specify at what flow the diversion will be terminated in order to maintain adequate flows through the EFNA and who will be responsible for diversion management. We suggest a self-regulating, passive diversion that diverts higher flows into the meander and maintains adequate flows in the main channel rather than an active, manipulated diversion. This would free any entity of a water management responsibility.

It is our preference that an alternative to the OLM site be selected where the channelized portion may not be as stable, the entire river can be permanently returned to the original channel and it would not impact our ability to develop the EFNA.

The diversion structure at the OLM site should include a calibrated weir for stream flow measurement. Also, we would like to have input to final design for both sites.

If this project is considered mitigation for the construction of 1.5 miles of rectangular concrete channel and 4.7 miles of revetted levee, we would not consider it full mitigation.

We appreciate the opportunity to review this EA and provide comments. Also, we look forward to working with the Corps and the City of Pocatello in the development of this project. Jim Lukens of our staff will be our contact for this project.

Sincerely:

Dexter R. Pitman
Regional Supervisor

DRP/JRL/jrl

cc: Jim Lukens
John Nagel
Paul Wackenhut
Natural Resources Policy Bureau
Eric Verner, IDWR
Rob Brochu, USACE, Idaho Falls
Bill MacDonald, USACE, Walla Walla
Mayor Peter Angstadt. City of Pocatello
Mike Donahoo, USFWS
Dave Hull, DEQ

Agency Scoping Mailing

Ms. Alison Beck Haas
Ecological Services
U.S. Fish and Wildlife Service
4696 Overland Road, Room 576
Boise, ID 83705

Mr. Robert Yohe II
State Archaeologist and Deputy, SHPO
Idaho State Historical Society
210 Main Street
Boise, ID 83702

Mr. David Colling
Assistant City Engineer
City of Pocatello
903 East Sherman
Pocatello, ID 83205-4169

Eastern District Office
Idaho Water Resources
900 North Skyline Drive, Suite A
Idaho Falls, ID 83402

Mayor Peter Angstadt
City of Pocatello
P.O. Box 4169
Pocatello, ID 83205

City Parks and Recreation
City of Pocatello
P.O. Box 4169
Pocatello, ID 83205

Idaho Fish and Game
1345 Barton Road
Pocatello, ID 83204

Area Office
U.S. Soil Conservation Service
1551 Baldy Avenue, Suite 2
Pocatello, ID 83201

Idaho Department of Health and Welfare
Division of Environmental Quality
224 South Arthur Avenue
Pocatello, ID 83201

Mr. Robert Chambers
Director of Community Development
P.O. Box 4169
Pocatello, ID 83205

Environmental Assessment Mailing

Ms. Alison Beck Haas
Ecological Services
U.S. Fish and Wildlife Service
4696 Overland Road, Room 576
Boise, ID 83705

Mr. Robert Yohe II
State Archaeologist and Deputy, SHPO
Idaho State Historical Society
210 Main Street
Boise, ID 83702

Mr. David Colling
Assistant City Engineer
City of Pocatello
903 East Sherman
Pocatello, ID 83205-4169

Eastern District Office
Idaho Water Resources
900 North Skyline Drive, Suite A
Idaho Falls, ID 83402

Mayor Peter Angstadt
City of Pocatello
P.O. Box 4169
Pocatello, ID 83205

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1345 Barton Road
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U.S. Soil Conservation Service
1551 Baldy Avenue, Suite 2
Pocatello, ID 83201

Mr. Robert Chambers
Director of Community Development
P.O. Box 4169
Pocatello, ID 83205

Portnuef River Watershed
Management Group
c/o Audrey Cole
Division of Environmental Quality
224 South Arthur
Pocatello, ID 83201

Portneuf Greenway Foundation
David Wessel, Executive Director
280 South Arthur
Pocatello, ID 83201

Water Pollution Control
City of Pocatello
P.O. Box 4169
Pocatello, ID 83201-4169

Bannock County Planning Office
P.O. Box 4777
Pocatello, ID 83205-4777

Planning and Zoning
City of Chubbuck
5160 Yellowstone Avenue
Chubbuck, ID 83202

Three Rivers RC&D
1551 Baldy Avenue
Pocatello, ID 83201

Bill Davidson
Environmental Consultant
421 Wayne
Pocatello, ID 83201

Groundwater Forum
c/o John Welhan
P.O. Box 8071
Pocatello, ID 83209-8071

Appendix C

Cultural Resources Survey

PRTNFRE/ER BRANCH/RT/MSW/A DRIVE
August 30, 1995

Planning Division

Dr. Robert Yohe
State Archaeologist
Idaho State Historical Society
210 Main Street
Boise, Idaho 83702

Dear Dr. Yohe:

The U. S. Army Corps of Engineers (Corps) is currently studying the Portneuf River flood control project, Pocatello, Idaho, for the feasibility of restoring the channel to a more natural condition. If possible, the stream will be restored/rehabilitated to replace lost fisheries, wildlife, and other environmental values associated with the Portneuf River.

Presently seven alternatives are being considered. One would involve modifying the City Creek entrance structure to the Portneuf River. The City Creek entrance is located in an area that was disturbed during the original construction of the concrete channel. It is unlikely that proposed changes would extend into undisturbed areas. The Corps also plans to reestablish a number of natural meanders. Ground disturbance will occur as the original river channel is reconditioned. You will find the locations of all proposed modifications on the enclosed map.

Your office performed a record search of the project area in March, 1995. A number of recorded cultural sites exist in the vicinity of the project. However, all recorded sites are located outside of potential areas of ground disturbance. Ray Tracy, of our staff, performed a reconnaissance of the proposed areas of development in June, 1995. A number of proposed restoration developments will probably not be done due to the proximity of existing houses, roads, and other structures.

The proposed developments are discussed in the enclosed report of findings and recommendations. The report concludes with the recommendation that the excavation or land-clearing necessary to reestablish meanders be monitored by qualified archaeologists. Other developments will not effect cultural resources and are recommended to proceed as planned.

We are also recommending that Corps supervisory personnel assure that workmen are cautioned about the possible presence of heritage resources and emphasize that work must stop if cultural material is encountered. We are requesting your concurrence with our findings and recommendations.

Please contact Ray Tracy at 509-527-7270 or John Leier at 509-527-7269 if you have any questions.

Sincerely,

TRACY/PL-ERcac
LEIER/PL-ER
METTLER/PL-ER
PASSMORE/PL-ER
ER FILES

Michael F. Passmore, Ph.D.
Chief, Environmental Resources Branch

Enclosure

CULTURAL RESOURCES SURVEY COVER SHEET

Author: Ray L. Tracy

Title: Portneuf River Restoration

Date: 22 August 1995

County: Bannock Section: 7,8 Township: 7S Range: 35 E
Section: 22, 27, 35 Township: 6S Range: 34E Quad: Pocatello South and Pocatello North, Idaho

Total Pages: Acres: ca. 100

Site No. none

This Report:

✓ Describes the objectives & methods
✓ Summarizes the results of the survey
✓ Reports where the survey records and data are stored
✓ Has a research design that:

Details survey objectives
Details specific methods
Details expected results
Details area surveyed
Details how results will feedback in the planning process

OAHP Use Only

NADB Document No:_____OAHP Log No:_____

My review results in the opinion that this survey report_____does_____does not conform with the Secretary of the Interior's Standards for Identification.

Signed:

_____ Date:_____

ARCHAEOLOGICAL AND HISTORIC SURVEY REPORT
IDAHO ARCHAEOLOGICAL SURVEY

A. Project Name and Statement of Objectives: Portneuf River Restoration

This document reports the results of a pedestrian surface survey of the areas which may be disturbed during the restoration of riparian habitat areas on the Portneuf River, Pocatello, Idaho. The survey was performed to determine the presence or absence of cultural resources in the project area and to determine if mitigative efforts are required prior to completion of this or future projects.

B. Full Description of the Proposed Undertaking:

The United States Army, Corps of Engineers, Walla Walla District is planning to undertake restoration of riparian habitat areas along the Portneuf River which were modified during construction of the flood control project. Restoration project areas are on a combination of public and private lands. Please refer to the enclosed maps to locate proposed actions.

Site No. 4: Here the proposal is to reestablish one or two meanders in a park area. A small amount of excavation would be necessary to open the meanders to water flow. C. O. E. biologists have stated that habitat in this area is well established as-is and any ground disturbance in this area is more likely to degrade habitat than to improve it. It is questionable if this action will be done.

City Creek Entrance Structure: Here the plan is to remove and naturalize the existing concrete drop structure to allow upstream fish migration in City Creek. This area was heavily disturbed during construction of the concrete channel and the drop structure itself. In my opinion, this action will result in little or no disturbance of undisturbed sediments.

Site No. 3: This action would reestablish a meander now located on private land. Excavation would be necessary to penetrate the existing flood control levee to allow water flow in the meander. The property here appears to have received disturbance by use for agricultural purposes. It is questionable whether this action will be undertaken because of the proximity of houses and the ownership status of the property.

Site No. 2: This action would reestablish one or two small meanders. However, housing development and construction of Indian Hills Road appears to have occurred at the proposed location. It is questionable whether this action will be undertaken because of the proximity of houses and the ownership status of the property.

Site No. 1: This action would reestablish two large meanders on the floodplain in sections 7 and 8. This appears to be the most practical and desirable undertaking. The meander

channels are deep and would require considerable bank contouring in order to establish shrub and tree cover wanted.

C. Location and General Environmental Setting:

County: Bannock
Township, Range, Section: T 7 S, R 35 E, Sec. 7 SE 1/4 and 8 SW 1/4
T 6 S, R 34 E, Sec. 22 SW 1/4, 27 NW 1/4, and 35 NW 1/4
USGS Topographic Map: Pocatello South and Pocatello North Quadrangles, Idaho 7.5 min.

D. Pre-Field Research:

1. Sources of information checked:

Cultural Resources Site Records and survey records search by Idaho State Historical Society.

2. Previous studies in this area:

1992 Northwest Pipeline System Expansion. Report 412

1989 Portneuf River Source. Report 3221

1989 Waterline, Pocatello. Report 982

1989 AT&T Fiber Optic Cable Line-Brigham City-Boise. Report 641

1992 CRM Rpt NW Pipeline Expansion Results of CRI. Report 1041

1993 Portneuf Greenway Right-of-Way. Report 323

1987? ISU Rock Art Survey ?

E. Expected Historic and Prehistoric Land Use and Site Sensitivity:

1. Known sites in this area:

Numerous archaeological sites have been recorded in the vicinity of the project area. However, no recorded cultural resources exist within areas of potential disturbance.

2. Expected sites in area:

A large number of rock art sites have been recorded near the project area. The general land form of the project area suggests high potential for cultural sites.

F. Field Methods:

1. Areas examined and type of coverage:

The areas of potential disturbance were surveyed by reconnaissance level pedestrian surface survey. Areas of erosion and other surface exposure were examined.

2. Surface and subsurface visibility:

Most of the areas surveyed were covered by grasses, affording poor surface visibility.

3. Acres surveyed: Reconnaissance: ca. 40
Intensive: ca. 5 acres

4. Areas not examined and reasons why:

Site No. 3 was not surveyed because it is located on private land. The area was scanned using binoculars for large historic features.

5. Personnel conducting or assisting in the survey: Ray L. Tracy, Staff Archaeologist, Lonnie Mettler, Wildlife Biologist

6. Dates of survey: May 30 - June 2, 1995

7. Problems encountered: none

G. Results

1. All cultural resources recorded for this area: none

2. Cultural resources noted but not formally recorded: none

H. Conclusions and Recommendations:

No cultural properties were found in the areas of potential disturbance.

If the meanders at sites No. 1, 2, 3, and 4 are to be reestablished, any ground clearing or bank recontouring operations must be monitored by a qualified archaeologist (Secretary of the Interior's Professional Qualification Standards, 48 FR 44738-9). A report of the monitoring program must be submitted to the Idaho S. H. P. O and the Corps of Engineers, Walla Walla District, Staff Archaeologist.

Modifications to the City Creek drop structure will not impact undisturbed soils. We recommend that this action proceed as planned.

Corps of engineer quality assurance or contracting representatives must assure that all workers are cautioned of cultural resource concerns. If cultural material is discovered

anywhere in the project area, work will stop at that location till the find is evaluated by a qualified archaeologist.

I. Attachments

1. Site forms: none
2. Maps: Portions of Pocatello North and Pocatello South, Idaho Quadrangles, USGS maps showing project locations and survey coverage. Project Map.
3. Other attachments: Photos of project sites.

J. Repository

United States Army Corps of Engineers, Walla Walla District, Walla Walla, Washington.

K. Certification of Results

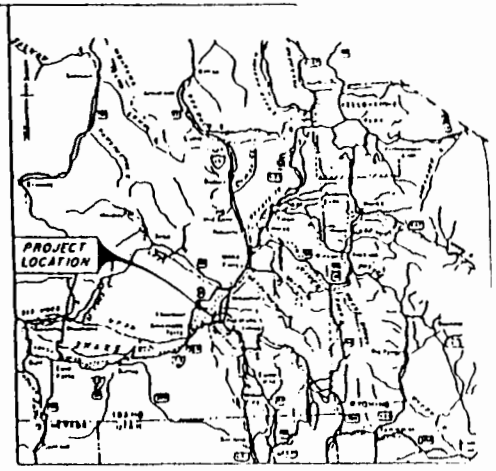
I certify that I conducted the investigation reported here, that my observations and methods are fully documented, and that this report is complete and accurate to the best of my knowledge.

signed/
Ray Tracy
Staff Archaeologist

28 Aug 1995

Date

CORPS OF ENGINEERS



VICINITY MAP

Site #1

DOWNSTREAM END OF PROJECT

Site #4

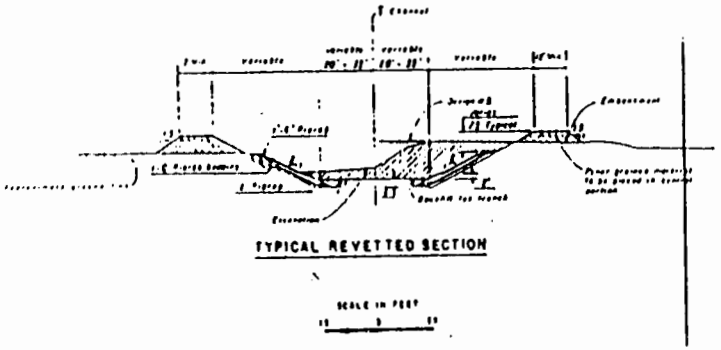
Modify City Creek Structure

GENERAL PLAN

Site #3

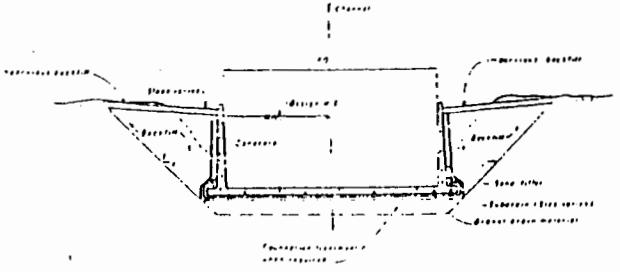
Site #2

UPSTREAM END OF PROJECT



TYPICAL REVETTED SECTION

SCALE IN FEET



TYPICAL CONCRETE CHANNEL SECTION

SCALE IN FEET

LEGEND

PORTNEUF RIVER
POCATELLO, ID. UNIT
RESTORATION PROJECT

POCATELLO, NORTH
QUAD
SITE NO 4
(REESTABLISH TWEVER
TO MEANDERS)
Chubbuck
Trailer Park
CHUBBUCK ROAD
BM 4459
BM 4471
BM 4469
BM 4464
REDMAN LATERAL
Gravel Pit
Smhon
HAWTHORNE ROAD
PHILBIN LANE
AMERICAN FALLS EXIT 20 MI. 1.5 MI TO U.S. 30
Trailer Park
Drive-in Theater
HAYES LAT
Borrow Pit
WEST QUINN ROAD
BM 4466 AQUEDUCT
Gravel Pit
Wells
UNION PACIFIC
JENSEN ST.
RIDGE ST.
N O P Park
Park
W. ELDREDGE RD
E. ELDREDGE RD
Hawthorne Jr HS
Borrow Pits
PORTNEUF
Mile 16
WT
BM 4443
Lewis and Clark Sch
Alameda Jr HS
4456 EAST ALAMEDA
BM 4481
POLE LINE AVE
YELLOWSTONE AVE
CEDAR ST.
6 LANE
4 LANE
PACIFIC
FIRST AVE
MAIN ST
MC KINLEY AVE
MORELAND AVE
PINE
MAPLE
Fairview Park
Roosevelt Sch
Pk
WAYNE
POCATEL
Shopping Center
Freckleton Park
OAK
BM 4462
50 000 FEET
420 000 FEET
112°30'
27'30"
3.4 MI TO INTERSTATE 15
Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial photographs taken 1969. Field checked 1971
Projection and 10,000-foot grid ticks: Idaho coordinate system, east zone (Transverse Mercator)
1000 0 1000
CC
DOTTED L

POCATELLO, SOUTH QUAD

SITE NO 2
(REESTABLISH TWO MEANDERS)

SITE NO 1
(REESTABLISH TWO MEANDERS)

REMOVE CITY CREEK DROP STRUCTURE

SITE NO. 4
(REESTABLISH TWO MEANDERS)

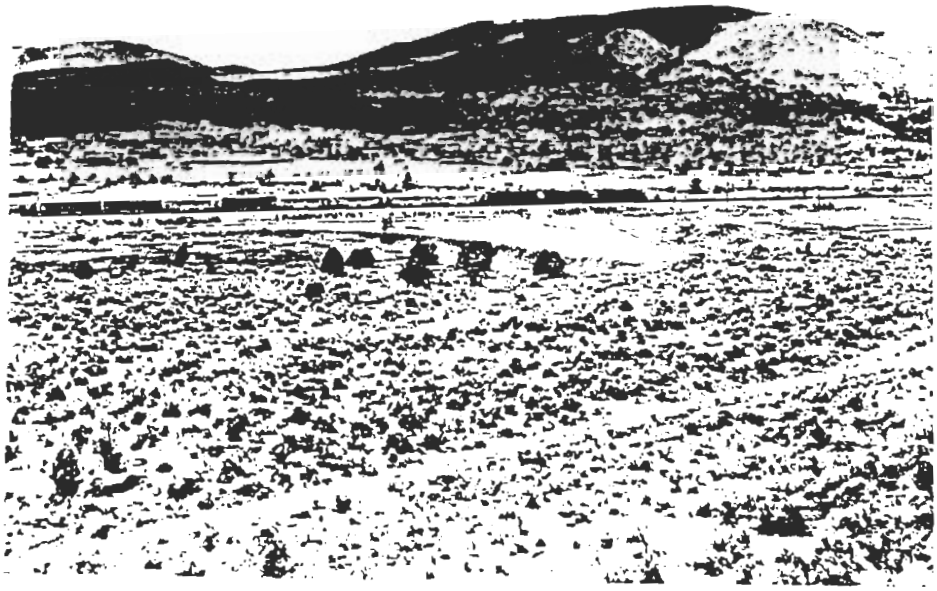
SITE NO. 3
(REESTABLISH ONE MEANDER)

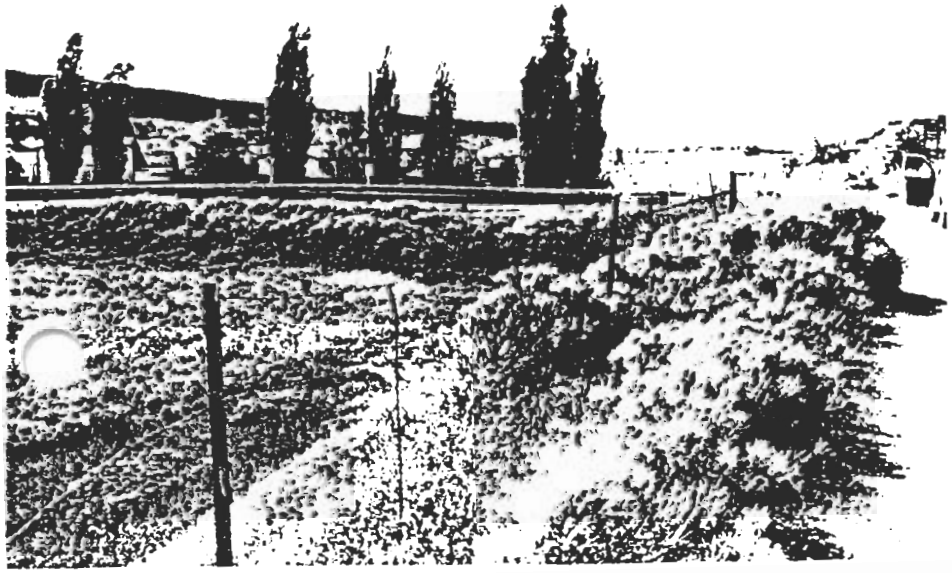
= AREAS OF RECONNAISSANCE SURVEY

= AREAS OF INTENSIVE SURVEY

SITE NO. 1
Upstream Meander

SITE NO. 1
Downstream Meander





SITE NO. 2
Showing housing and Indian Hills Road at proposed location of meanders

SITE NO. 3
Showing proposed location of meander on private property

CITY CREEK DROP STRUCTURE

SITE NO. 4
Man standing in shallow meander. Showing terrain at vicinity.

Appendix D

Finding of No Significant Impact for Portneuf River Restoration

Finding of No Significant Impact for Portneuf River Restoration

Description of Proposed Action

The Corps of Engineers (Corps) proposes to develop wetland and riparian habitat in an old isolated oxbow channel of the Portneuf River to re-establish wildlife habitat and associated aesthetic values. The area is currently unimproved land that contains remnants of an old river meander adjacent to the Portneuf River Flood Control Project constructed by the Corps between 1966 and 1968 through the City of Pocatello, Idaho. The wildlife habitat restoration would be accomplished by re-wetting the oxbow and establishing aquatic, wetland, and riparian water regimes to establish a wide diversity of natural vegetation. The vegetation will establish habitat and niches for native songbirds and small mammals.

The North City Park meander is at the downstream end of the Flood Control Project. To re-establish the river meanders, water would be supplied to the remnant meanders from the Portneuf River using solar-powered pumps. The system would consist of three intake weirs, three pumps, and six solar panels. The pumps would pump an average of 100 gallons per minute each, an amount sufficient to keep water flowing through the meanders. Approximately 3 acres of open water, emergent marsh, wet meadow, and wooded riparian habitat will be established.

The Corps is responsible for funding and implementing the construction of the improvement in accordance with its authority under Section 1135(b), Water Resources Development Act of 1986, as amended. The Secretary is authorized to carry out a program for the purpose of making such modifications in the structures and operations of water resources projects constructed by the Secretary that are determined to be feasible and consistent with the authorized project purposes, and to improve the quality of the environment in the public interest.

Alternatives were developed to enhance riparian habitat in the old river meanders of the Portneuf River. The alternatives included the following:

- No Action (no enhancement or improvement of the existing old meanders)
- Re-establishment of the meanders at North City Park

The Corps has prepared an environmental assessment (EA) addressing the proposed action and alternatives. The EA proposed a full range of alternatives from removal and major modification of the flood control project to smaller improvements such as the North City Park Alternative. Fifteen alternative measures were investigated, with combinations of measures providing over 30 possible actions. Seven alternative actions, which were identified as most feasible, were investigated in detail. Of the seven alternatives, two appeared to be most feasible and cost-effective. The two include North City Park and Open Lands Meanders Alternatives. The City of Pocatello has expressed interest in both actions, but lacks the financial capability and real estate purchasing authority to implement the Open Lands Meanders Alternative at this time. Consequently, the City has decided to implement the North City Park Alternative. The North City Park proposal, with the solar pump supply system, proved to be the most economical and effective action.

Construction and operation of North City Park proposal would result in a variety of short- and long-term effects on the physical, biological, and human environments. All of these effects are expected to be beneficial or insignificant. Impacts would include conversion of

land use and loss of 3 acres of terrestrial habitat. Construction of intake weirs would cause temporary and minor water quality impacts. Clearing and grading during construction would result in short-term, minor, and highly localized soil erosion and sediment discharge, which would have insignificant consequences for water and aquatic resources. Installation of the solar panels and pumps may temporarily cause re-routing of park users. Cultural resources would not be affected at the North City Park location. Wildlife, through enhancements to wetland and riparian plant communities, are expected to benefit substantially. In addition, adjacent upland communities will also be enhanced through juxtaposition and proximity to the project. Habitat suitability index values are expected to increase substantially to all aquatic and riparian areas and provide low to moderate increases to adjacent upland grass communities. Wildlife enhancement is expected to small mammals and birds. Song birds, which will occupy ground cover, understudy shrubs, and tree canopies, are expected to increase in both number and diversity. The Fish and Wildlife Service was contacted for information on the potential occurrence of listed species and endangered and threatened candidate species within the project area. No species currently listed as threatened or endangered are reported for the project location.

There would be no significant adverse impact upon land use. The land use would be restored to the original use as river meanders. Sufficient flow would be maintained at North City Park to maintain water movement through the meander and not allow it to pond and become fetid.

Casual wildlife observation opportunities should increase with the re-establishment of the meanders. Recreation would not be negatively impacted by the proposed action.

Conclusion

This project has been coordinated with the USFWS, IDFG, other concerned State and Federal agencies, the Shoshone—Bannock Tribe, other concerned tribes, affected local governments, and the public. The project is in compliance with all applicable laws and regulations. Based on the evaluation described in the EA, the Corps concludes that re-establishing the North City Park river meander will have significant positive effects to restore the environment. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted and an Environmental Impact Statement is not required.

US Army Corps of Engineers, Walla Walla District

Date: 1-16-97

\signed\
Donald R. Curtis, Jr.
Lieutenant Colonel, Corps of Engineers
District Engineer

Appendix B

Engineering Feasibility Study

ENGINEERING APPENDIX
FEASIBILITY STUDY
PORTNEUF RIVER, SECTION 1135

1 GENERAL

The Portneuf River flood control project is located in Pocotello, Idaho. The Corps has identified three locations along the project that have potential for environmental improvement. The locations include North City Park, City Creek, and Open Lands Meanders. These locations are shown on Plate 1. After construction completion for these projects, the City of Pocotello would gain responsibility for operating and maintaining these projects.

2 SURVEY AND MAPPING REQUIREMENTS

Analysis for this study used topography mapping with two foot contours obtained from the City of Pocotello. The city developed their mapping from aerial photography. The coordinates and elevations in city's mapping are based on the North American Datum 83 (NAD 83) and North American Vertical Datum 88 (NAVD 88). The as-built contract drawings for the Pocotello Flood Control Project are based on the National Geodetic Vertical Datum 29 (NGVD 29) and North American Datum (NAD 27). Information obtained from the as-built contract drawings used in this report have been corrected to NAD 83 and NAVD 88.

2.1 SURVEYS

In order to minimize additional surveys for the project, construction features would be staked in the field. The aerial photography mapping from the city would be used in conjunction with the field stakes to develop the construction contract

3 NORTH CITY PARK

North City Park contains remnants of old river meanders. These river meanders currently have no flowing water but are vegetated with trees and bushes. In order to reestablish these river meanders, water would be supplied to the remnant meanders from the Portneuf River. The layouts for reestablishing these meanders are shown on Plates 1A , 1B and 1C as options A, B, and C. Options A and B would require excavations and weirs to flow water into the existing meander. Option C would use solar powered pumps to pump water into the existing meander.

3.1 Geotechnical

A pneumatic drill hole (PN 4) located near the water control structure shown on sheet 1B encountered common material from elevation 4431.4 to elevation 4410.4. No bedrock was encountered in the drill hole. Based on PN 4 and field observations, bedrock is not expected to be encountered during construction. Prior to final design preparation approximately four test pits would be dug about 16 feet deep along the proposed excavation. The test pits would be used to ensure that bedrock is below the excavation zone. Also, soil samples would be obtained to run laboratory gradational analysis and soil classifications.

3.2 Project Design

3.2.1 North City Park A (Plate 1A)

This option reestablishes the old river meander by excavating a channel from the Portneuf River, through the old river meander, and then back into the Portneuf River. Water from the Portneuf would initially flow into the new channel through two 36 inch diameter culverts. These culverts would drain from the Portneuf River to the new channel. The water then flows along the new channel to the existing meander and then returns to the Portneuf River.

3.2.1.1 Channel Section

The typical channel section is shown on plate 2. The average depth of the channel would be 6 feet. . The side slopes would undulate along the length of the channel with an average slope of 6 horizontal to 1 vertical. The flattest slope would be 8 horizontal to 1 vertical and the steepest slope would be 2 horizontal to 1 vertical.

3.2.1.2 Weir

This option would require a two foot high weir just down stream of the water control gate. A weir is necessary to develop the required head for driving water through the meander. The weir would be constructed of riprap and would be keyed into the river channel 2 feet. The side slopes of the weir would be 2 horizontal to 1 vertical. A possible alternative to using riprap weirs would be inflatable weirs. These weirs would alleviate problems associated with impacting the floodway. These weirs would be self-operating. The weirs would self inflate in low water situations and would contract due to water pressures during high flows.

3.2.2 North City Park B (Plate 1B)

The location of the intake for this option is located near the end of the existing levee. Water from the Portneuf would initially flow into the new channel through two 36 inch diameter culverts. The new channel would extend from the intake to the wooded area. Along this length, culverts would be installed in two locations to pass water under existing bike/walk paths. On the existing meander end of the new channel two 36 inch diameter culverts would drain to the existing meander. The water would then follow the existing meander and would return to the Portneuf through two 36 inch diameter culverts.

3.2.2.1 Channel Section

The typical channel section is shown on plate 2. The average depth of the channel would be 6 feet. The side slopes would undulate along the length of the channel with an average slope of 6 horizontal to 1 vertical. The flattest slope would be 8 horizontal to 1 vertical and the steepest slope would be 2 horizontal to 1 vertical.

3.2.2.2 Weir

A weir height of seven feet would be necessary to develop the head for driving water into the new channel. The type of weir would be an inflatable weir. Pumps were also considered instead of a weir for this option. Preliminary cost comparisons indicate that the cost for pumps is relatively close to the cost for an inflatable weir. The inflatable weir would be prefabricated by a manufacturer.

3.2.3 North City Park C (Plate 1C)

This option uses solar powered pumps to pump water into the existing meander. The system would consist of three intake weirs, three pumps, and six solar panels. Each pump requires two solar panels. The pumps would be surface pumps with 1 1/2 hp and pump an average of 100 gpm each. The pumps would run only during daylight hours and shut off at night. Each of the solar panels would be approximately 8 foot by 12 foot in size and would sit on trackers to follow the sun from east to west. The water intake would be located inside a concrete weir situated alongside the riverbank. The concrete weir would be a concrete cube with a lid on the top for access to clean out sediment.

3.2.4 Restoration

The excavation slopes would be vegetated with trees and shrubs. The trees and shrubs would be situated into groups along the slope based on aquatic needs. The variety of trees include willow, cottonwood, alder, and juniper. The variety of bushes include wild rose, currant, red-oiser dogwood, and sage brush. Upland areas would be seeded with a mix of grasses. These grasses consist of wheat grasses and bluegrasses.

3.3 Construction Procedure

3.3.1 Weir and Outflow Structure

The weir and outflow structure are required for options A and B only and would be constructed during low flows. To construct the features, coffer dams would be used to divert water flows. The low flows occur from mid July through mid September. The coffer dams would be made of available on site soils and would be constructed by placing a six foot high berm around the construction area. Sump pumps would be used to keep the construction areas dewatered.

3.3.2 meander

The meander would be constructed by excavating with bull dozers and front end loaders. The excavated soil material would be hauled off site. Prior to excavation in the vegetated area in option 1A, existing trees and bushes within the excavation area would be cleared and grubbed. An alternative to excavating as shown on the plan sheet would be to cut a channel through the vegetated area with a backhoe and leave a many trees as possible. In option 1B, no excavation would take place within the wooded area.

3.3.3 Disposal of Excess Soil Material

Most of the project area lies within the established floodway. Excess soil material will be hauled off site and disposed of off site so the established floodway is not impacted. The disposal material would become property of the contractor and would be disposed of off site in a lawful manner.

3.4 Operation and Maintenance

This project would mostly be self maintaining. The items that would require maintenance for the options would be dredging and pruning. The sediment accumulation rate within the meander is unknown. It is assumed based on visual observance of the Portneuf River that the meander would be dredged every 10 years. Dredging would be accomplished with a small back hoe. Pruning would take place every 10 years. Option B would require periodic maintenance of the inflatable weir. Option C would require maintenance on the pump and the solar panels. Also the weirs for option C would require periodic sediment removal.

4 CITY CREEK

The purpose of this option is modify the drop structure at the mouth of city creek to allow for fish passage up city creek. Potential layouts for this option are shown on Plates 3A and 3B. In addition to modifying the drop structure, stream restoration upstream of the drop structure to the Caribou National forest would help enhance fish passage.

4.1 Geotechnical

A pneumatic drill hole (PN 13) is located on the left bank just downstream of the drop structure as shown on sheets 3A and 3B. PN 13 encountered common material from elevation 4453.5 to elevation 4431.5. No bedrock was encountered in the drill hole. Based on PN 13, bedrock is not expected to be encountered. Prior to final design preparation approximately two test pits would be dug about 16 feet deep along the proposed excavation. The test pits would be used to establish the presence of bedrock and groundwater. Also soil samples would be obtained to run laboratory gradational analysis.

4.2 Project Design

The current concrete drop structure would be replaced with stair stepped weirs. The weirs would create stair steps which would allow for fish passage up City Creek. On the upstream side of the work area, the City plans to build a new foot bridge and foot path. In order to minimize impacts to the City's new site features, a retaining wall would run along the right bank of City Creek. Along the left bank of City Creek, the bank could be excavated out or a retaining wall could be constructed to minimize impacts to the parking area. A plan view of these options is shown on plates 3A and 3B. Plate 4 shows a profile and details for this modification.

4.2.1 City Creek A (Plate 3A)

This option includes four stair stepped weirs along the creek and a retaining wall along both sides of the creek. The stair stepped weirs would be made of gabions. Gabions were selected for their durability and would take up little space since they can be placed near vertical. Other possible material types for the weirs are timbers or rock. Timbers were not used because their design life was too short and rock was not used because the area covered by rock would be large. The wall type selected was a vegetated retaining wall. Vegetated retaining walls consist of interlocking concrete cribs that are backfilled with soil. Vegetation can be planted in the soil to grow out the side of the wall. This type of retaining wall would stabilize the creek banks and at the same time provide aesthetics.

4.2.2 City Creek B (Plate 3B)

A cut slope along the left bank of City Creek was considered so that one of the retaining walls in the City Creek A option could be eliminated. Based on hydraulic studies performed by Hydrology section this option does not provide the necessary flow capacity. This option also cuts into existing access ways for residents which could have real-estate ramifications. Due to the problems with flow capacity and access City Creek B was eliminated as one of the options.

4.3 Stream Restoration

Bioengineering techniques would be used to restore the four mile stretch of City Creek running from the drop structure to the Caribou National forest. Generally, the restoration work would include keying in logs, placing boulders and excavating resting pools. Modifications would be spaced about every 300 feet along the stream. The logs would be about 8 feet long and 16 inches in diameter, the boulders would have an average diameter of about 3 feet. and the resting pools would be about 3 feet deep. Hydrology section would review designs to ensure that existing channel capacity is maintained.

4.4 Construction Procedure

4.4.1 Stair Stepped Weirs

Construction would take place during the low period for the Portneuf River. It is anticipated that the low flows for City Creek coincide with the low flows for the Portneuf River. Typically the low flows for the Portneuf River occur from mid July through mid September. Channel excavation and concrete retaining wall construction would take place prior to placement of the gabions. All concrete placement would take place in the dry. Cofferdams will be necessary for concrete retaining wall construction near the Portneuf River. To construct the gabion at station 2 + 91 a coffer dam would be built at the mouth of City Creek to keep water from the Portneuf River out of the construction area. Water from City creek would be diverted around the construction area by pumping the water from a sump into the Portneuf River. Another alternative for diverting City Creek water around the construction area would be to intercept City Creek with a diversion pipe above the construction site and divert the water into the Portneuf River.

4.4.2 Stream Restoration

The logs would be keyed into the bank with a backhoe. The boulders would be positioned and the resting pools would be excavated with a backhoe. Logs and boulders would most likely have to be obtained from off site. Logs and boulders of the specified size that are found on site would be acceptable.

4.5 Operation and Maintenance

4.5.1 Stair Stepped Weirs

Wire on the gabions will require periodic maintenance. Broken or corroded wires would be retied or replaced. The creek would be inspected annually for debris and sediment accumulation. Accumulation of debris or sediments would be removed as needed to keep the creek passable for fish. Vegetative growth would be periodically cut back so that the channel maintains adequate flood flow capacity. After a more detailed level of the design for the creek modification is established, guidance for controlling vegetative growth within the creek would be developed.

4.5.2 Stream Restoration

During the first three years after construction the stream would be monitored to assure that the logs and boulders did not create a hazard. If other bioengineering techniques are used, such as live staking, vegetation that dies would be replaced.

5 Open Lands Meanders

This area has several ancient river meanders that lie along the right bank of the river. Currently an existing railroad embankment cuts off water flows to the meanders from the river. In order to restore water flows to these meanders, water would run through a tunnel under the railroad embankment to the meanders, the flows would continue along the meanders, and then return to the river by flowing under the railroad embankment. A layout of this option is shown on plate 5.

5.1 Geotechnical

Based on visual observation of surface materials, subsurface materials along the meanders consist of silts, sands, and gravels. To determine if bedrock lies near the surface, approximately 10 test pits

would be excavated along the meanders to a depth of approximately 6 feet. Test pits to depths of 16 feet would be excavated at the ends of each tunnel. Gradational analysis would be performed on soil samples obtained from the test pits. The information from the test pits will help ensure that the right equipment is mobilized to the job site and help the government obtain a more competitive bid.

5.2 Project Design (Plate 5)

This option reestablishes the old river meander with a channel that runs from the Portneuf River, through the old river meanders, and then back into the Portneuf River. Water from the Portneuf initially passes though a water control gate. The water control gate is a concrete head wall with slide gates for shutting off flows to the reestablished meander.. After the water passes through the slide gates it runs through two 36 inch diameter culverts that run under the rail road embankment and drains into the reestablished meander. The water then flows along the reestablished meanders for about 4000 feet and then flows into an existing ditch. The ditch parallels the railroad and leads to an existing culvert. The existing culvert would be utilized in passing flows back to the river. Two additional culverts would be provided at this location for return flows. These culverts pass the water back under the railroad embankment and then into the Portneuf. A second water control gate would be located on the downstream side of these culverts. This gate would control backwater flow from the Portneuf River.

5.2.1 Water Control Gates

Flood gates would be located on both the downstream and upstream ends of meander. The downstream flood gate is necessary since flooding from the downstream end of the meander is possible. The control gates are situated on the riverward side of the railroad embankment so that high water pressures do not develop inside the culverts during floods. This will help eliminate the potential of piping material out of the embankment if the culvert develops a leak.

5.2.2 Weir

This option would require a weir across the Portneuf River to develop head for driving water through the meander. The weir would be a stoplog weir and would have a concrete base with wooden stop logs. The stop logs would be in place only during low flows and would be removed prior to high river flows. A removable stoplog weir was chosen for this site since a permanent weir could cause flooding to the adjacent properties during high flows.

5.2.3 Tunnels

The tunnels would consist of a class 5 concrete pipe as required by the Union Pacific Railroad. Concrete pipe is less corrosive and it is important that the tunnel maintain its structural integrity through the life of the railroad embankment. Loss of structural integrity of the tunnel could result in settlement of the above railroad tracks.

5.2.4 Service Road

A service road for the railroad lies along the north side of the railroad embankment. In order to maintain usability of this service road, the road would be raised to elevation of 4466 feet. The embankment would consist of material obtained from the excavation for the meander.

5.2.5 Restoration

The excavation slopes would be vegetated with trees and shrubs. The trees and shrubs would be situated into groups along the slope based on aquatic needs. The variety of trees include willow, cottonwood, alder, and juniper. The variety of bushes include wild rose, currant, red-oiser dogwood, and

sage brush. Upland areas would be seeded with a mix of grasses. These grasses consist of wheat grasses and bluegrasses

5.3 Construction Procedure

5.3.1 Water Control Gate, Weir, Outflow Structure

Construction of the water control structure including the weir would take place during low flows from mid July through mid September. Cofferdams would be placed around the weir and water control structure so that construction would take place in the dry. The contractor would construct the cofferdams with material available on site. The coffer dams will have an approximate height of 6 feet with 2 horizontal to 1 vertical side slopes.

5.3.2 Tunnels

Both microtunneling and pipe ramming methods are techniques that could be used for constructing the tunnels. To make the contract more biddable, the contractors would have the option for selecting the tunneling technique. With microtunneling, a microtunneling machine, a mole, would excavate material as it advances under the embankment. A 42-inch steel pipe would be pushed behind the mole as the mole advances through the embankment. If pipe ramming is the selected method, the contractor would first ram a 42-inch diameter steel pipe under the railroad embankment. A pneumatic hammer would work for this purpose. Then the contractor would remove soil material from the steel pipe with an auger. With either method a 36-inch concrete pipe would be placed through the steel pipe. After placing the concrete pipe, the contractor would tremie the annulus between the two pipes with concrete.

5.3.3 Service Road

The contractor would use material from the meander excavation for building up the access road embankment. The embankment would be constructed in six inch lifts and be compacted to 90 percent of the ASTM D 1557 maximum density.

5.4 Operation and Maintenance

The slide gates at both the upstream and downstream locations would be operated to control water flow into the meanders. During high flows the gates would be shut down completely to prevent flooding. The water elevation in the meander would be kept below elevation 4464 which is 2 feet below the elevated access road elevation. During low flows the stop logs would be positioned in the weir so that water is diverted into the meander. After the low flows, the City would remove the stop logs. Also, the City would periodically dredge the meander to maintain the flows through the meander. Dredging may be required every 10 years and would be accomplished with a bob cat

6 SCHEDULE FOR DESIGN AND CONSTRUCTION

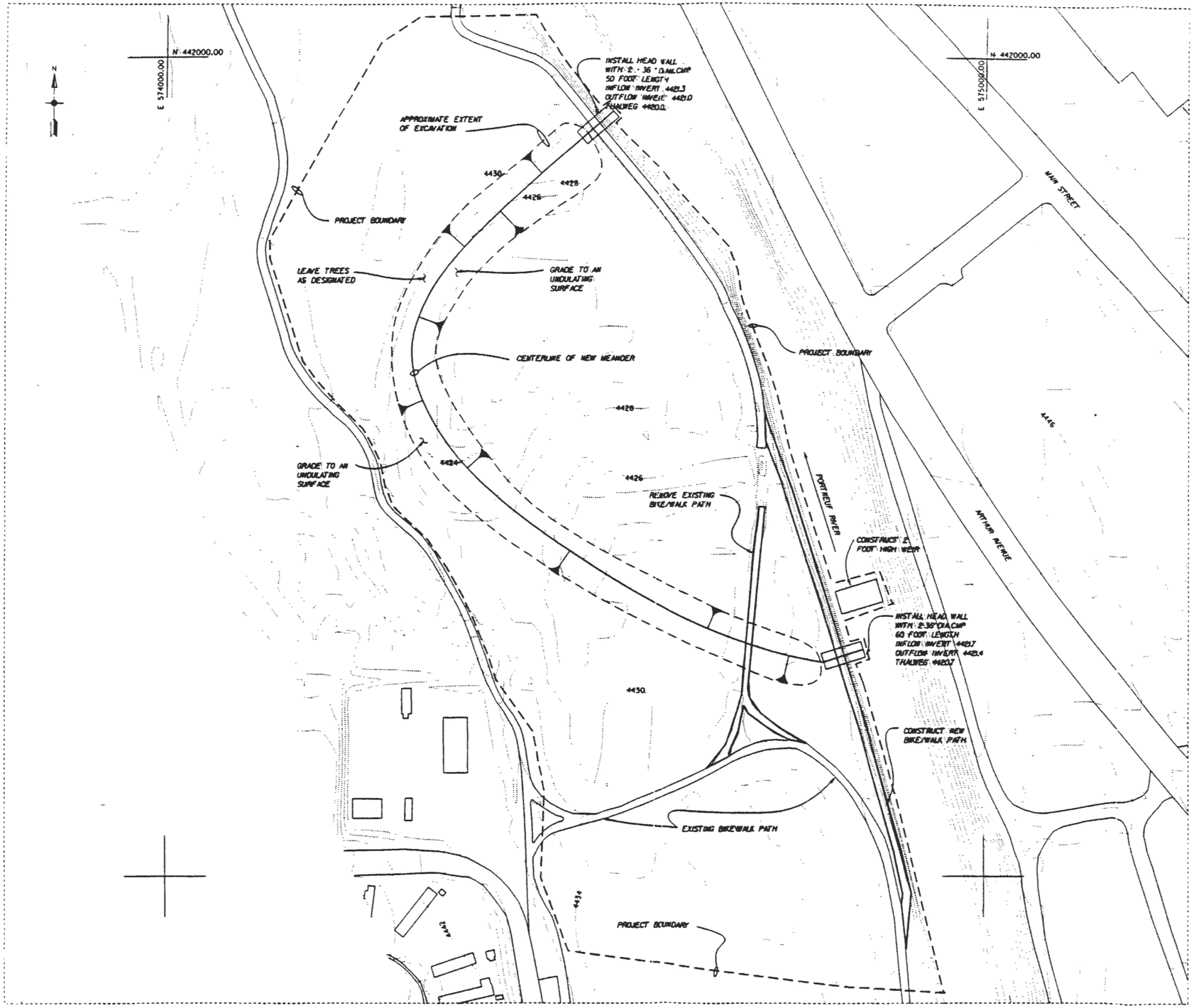
Design to 60%	120 days
Complete Design	90 days
Finalize for Advertising	15 days
* Advertise	30 days
Award	30 days
Start Construction	30 days
Construct	365 days

* Before the contract is advertised all lands, easements, right-of-ways, relocations and disposal areas (LERRD) will have to be acquired. The district will have had to certify that the LERRD is complete. It will take approximately 1 year to complete the LERRD.

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY



PLAN - NORTH CITY PARK

SCALE IN FEET

50' 0 50'

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.
2. THE MEANDER SHALL BE GRADED TO AN UNDULATING SURFACE AS STAKED IN THE FIELD. THE SLOPES VARY FROM 2H : 1V TO 8H : 1V.

COMPUTER AIDED DESIGN & DRAFTING

U . S . ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SHELDER — DESIGNED BY

ORTH — DRAWN BY

CHECKED BY

SUPERVISED

PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

NORTH CITY PARK - A
SITE PLAN

APPROVED — DATE

SCALE AS SHOWN | INV. NO.

SHEET NO. — FILE NO.

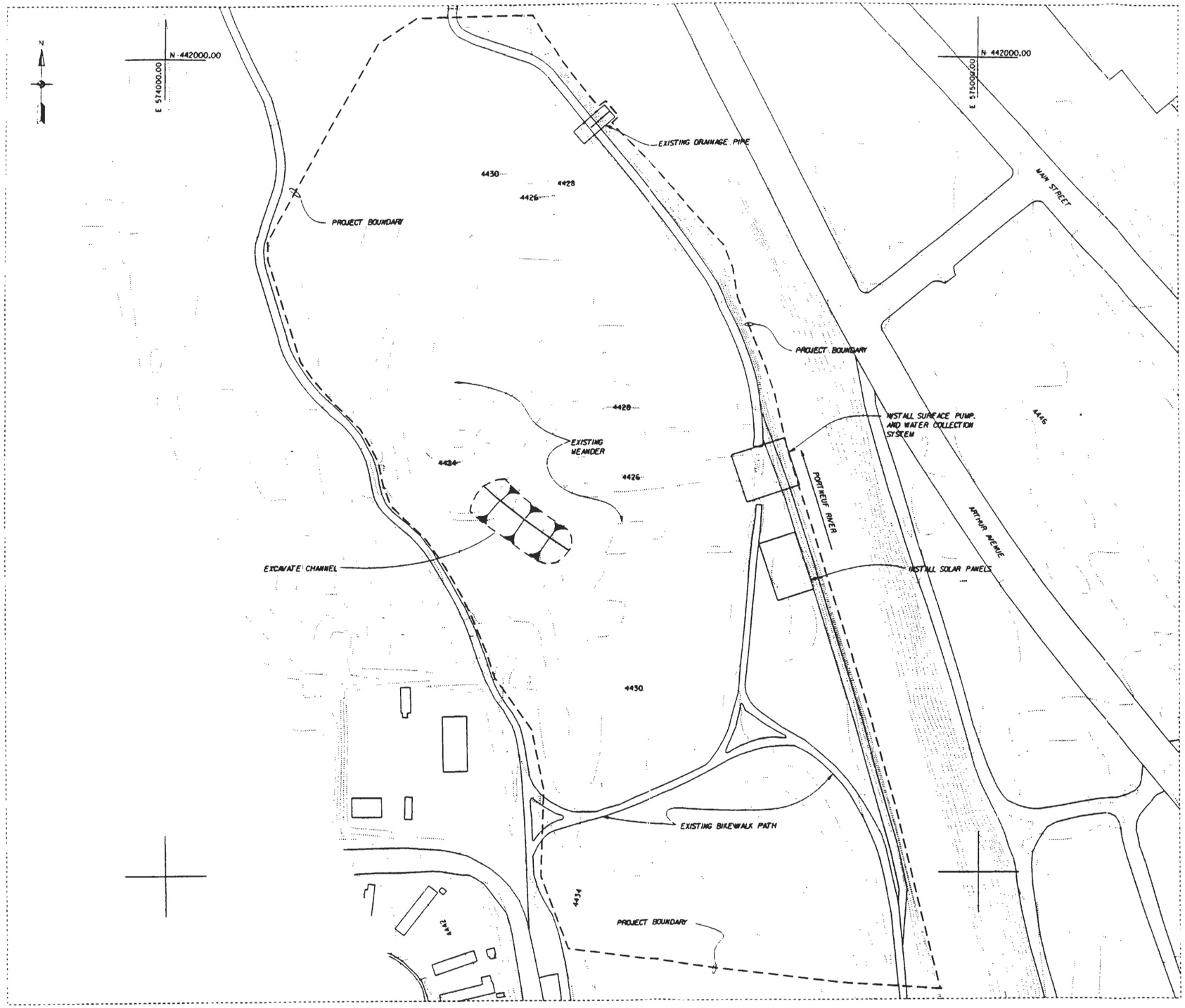
PLATE 1A

VALUE ENGINEERING PAYS

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY



PLAN - NORTH CITY PARK

SCALE IN FEET

50' 0 50'

NOTES:

1. SURVEY DATUM ; VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

DESIGNED BY	SHEIDER
DRAWN BY	MORROW
CHECKED BY	SHEIDER

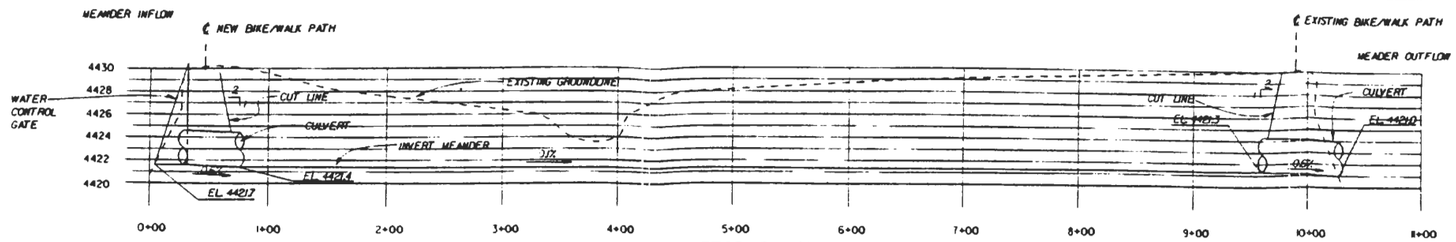
PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

NORTH CITY PARK - C
SOLAR POWERED PUMPS - SITE PLAN

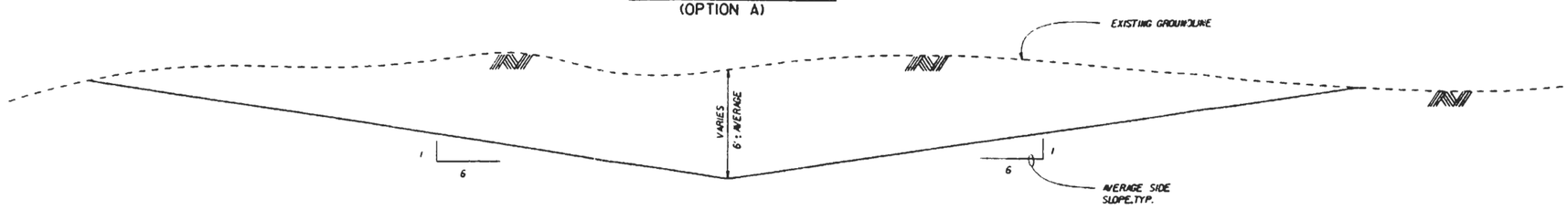
SCALE AS SHOWN | DRV. NO.

PLATE IC

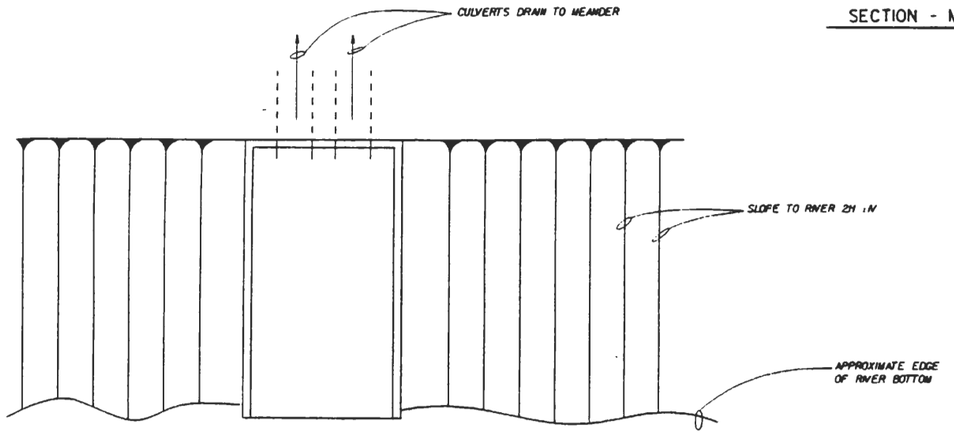
VALUE ENGINEERING PAYS



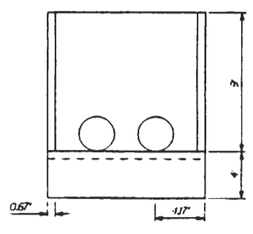
PROFILE - MEANDER
(OPTION A)



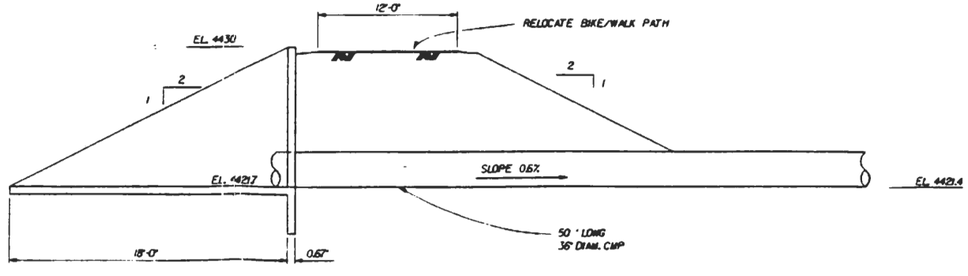
SECTION - MEANDER



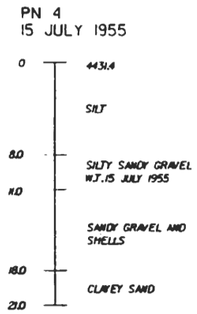
PLAN - HEAD WALL



FRONT - HEAD WALL



ELEVATION - HEAD WALL



NOTE:

THE WATER CONTROL GATE AND CHANNEL SLOPE WILL BE SIMILIAR FOR OPTION B. THE PROFILE AND ELEVATIONS WILL CHANGE FOR OPTION B.

NOTE:

ALL CONCRETE REINFORCED WITH NO. 4 REBAR, SPACED 12" O.C. E.W.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

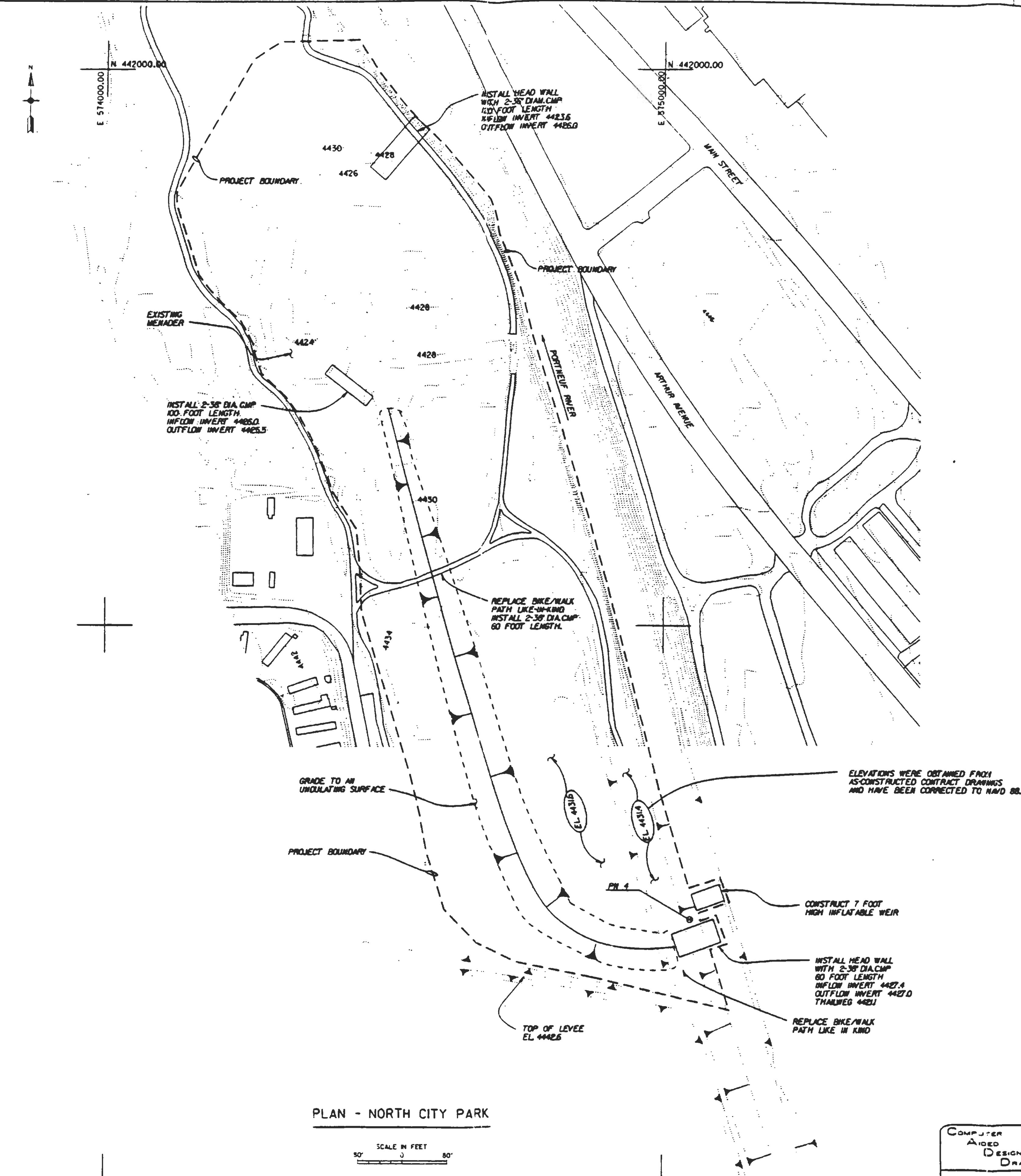
SHEIDER
SHEIDER
M

PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

NORTH CITY PARK - A & B
DETAILS

SCALE AS SHOWN | INV. NO.

PLATE 2



PLAN - NORTH CITY PARK

SCALE IN FEET
50' 0 80'

COMPUTER AIDED DESIGN & DRAFTING

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.

2. THE MEANDER SHALL BE GRADED TO AN UNDULATING SURFACE AS STAKED IN THE FIELD. THE SLOPES VARY FROM 2H : 1V TO 8H : 1V.

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SNEIDER
ORTH

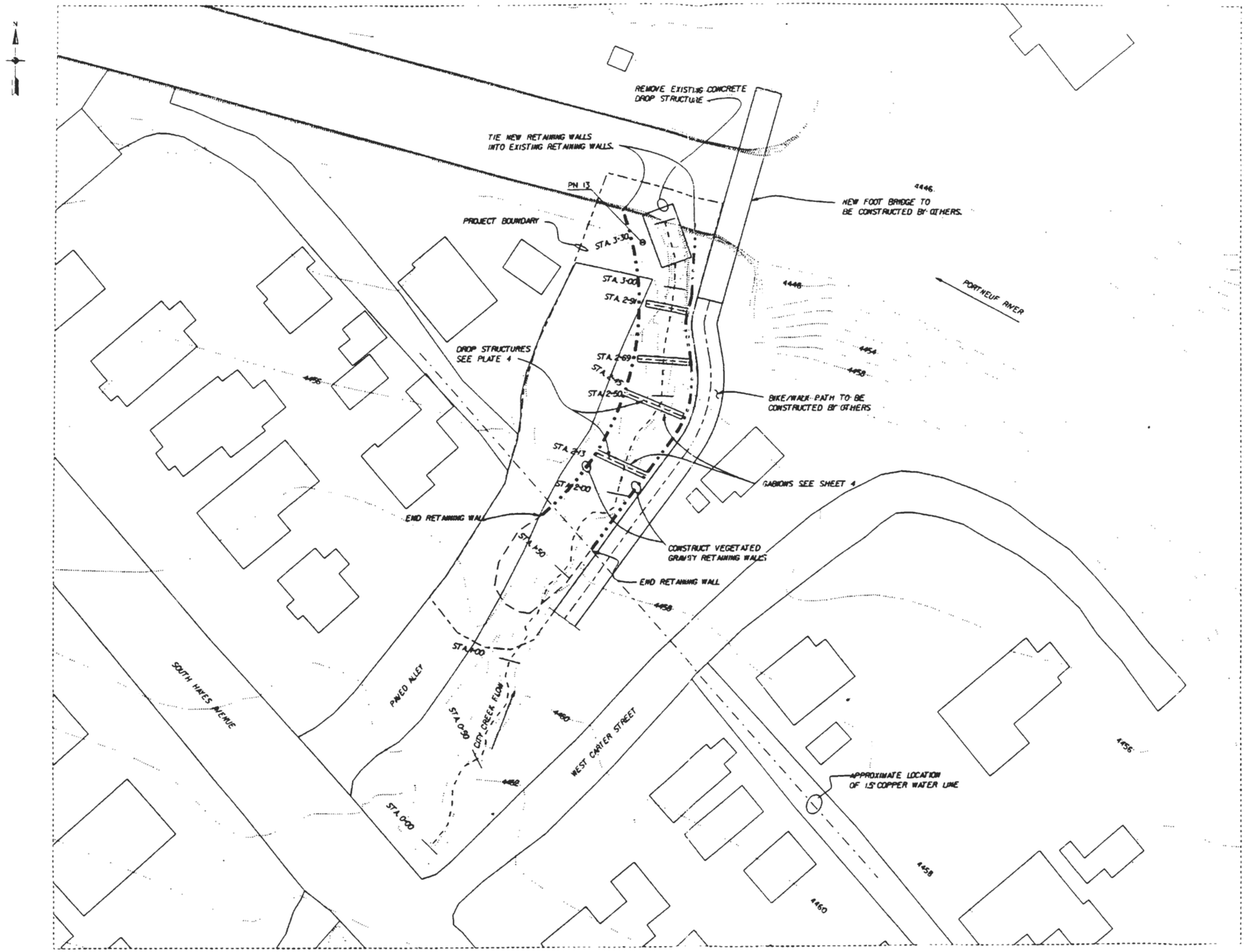
PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

NORTH CITY PARK - B

SITE PLAN

SCALE AS SHOWN | INV. NO.

PLATE 1B



PLAN - CITY CREEK

SCALE IN FEET
20' 0 20'

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.
2. EXCESS SOIL MATERIAL SHALL BE DISPOSED OF OFF SITE AT THE EXPENSE OF THE CONTRACTOR.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SHEIDER
KDD
H.

PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

CITY CREEK - A
SITE PLAN

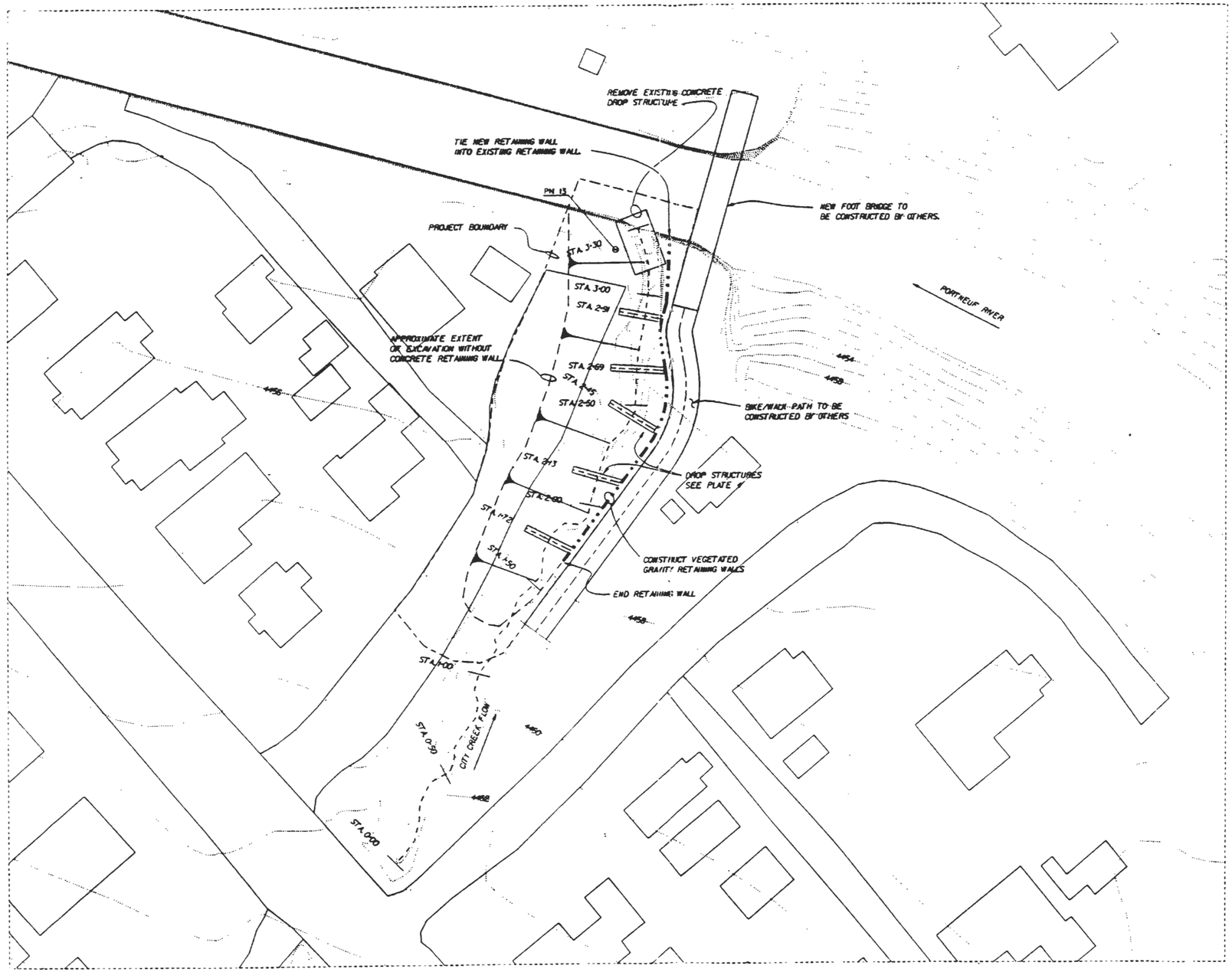
SCALE AS SHOWN | INV. NO.

PLATE 3A

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY



PLAN - CITY CREEK

SCALE IN FEET

10' 0 20'

NOTES:

1. SURVEY DATUM : VERTICAL NAVD 88 HORIZONTAL NAD 83 STATE PLANE EAST IDAHO ZONE.
2. EXCESS SOIL MATERIAL SHALL BE DISPOSED OF OFF SITE AT THE EXPENSE OF THE CONTRACTOR.

COMPUTER AIDED DESIGN & DRAFTING

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SNEIDER

KDD

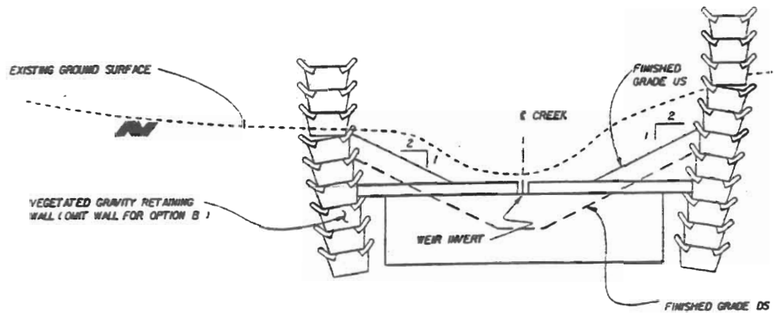
PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

CITY CREEK - B
SITE PLAN

SCALE AS SHOWN INV. NO.

PLATE 3B

VALUE ENGINEERING PAYS

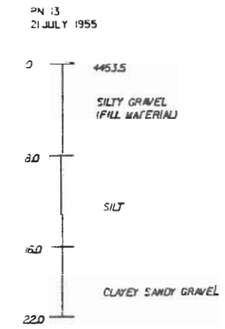


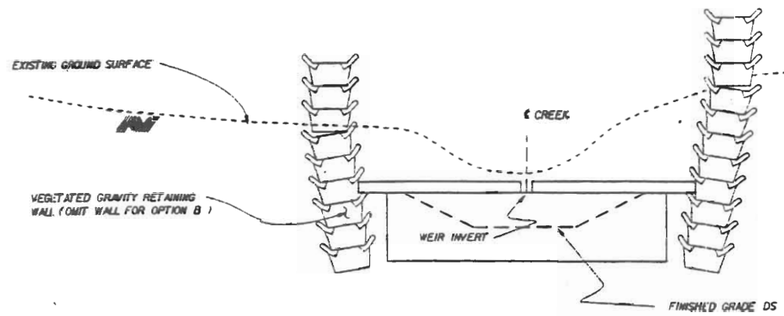
SECTION - DROP STRUCTURE

STA. 2 + 69 AND 2 + 91

SCALE IN FEET
5' 0 5'

PN 13
21 JULY 1955

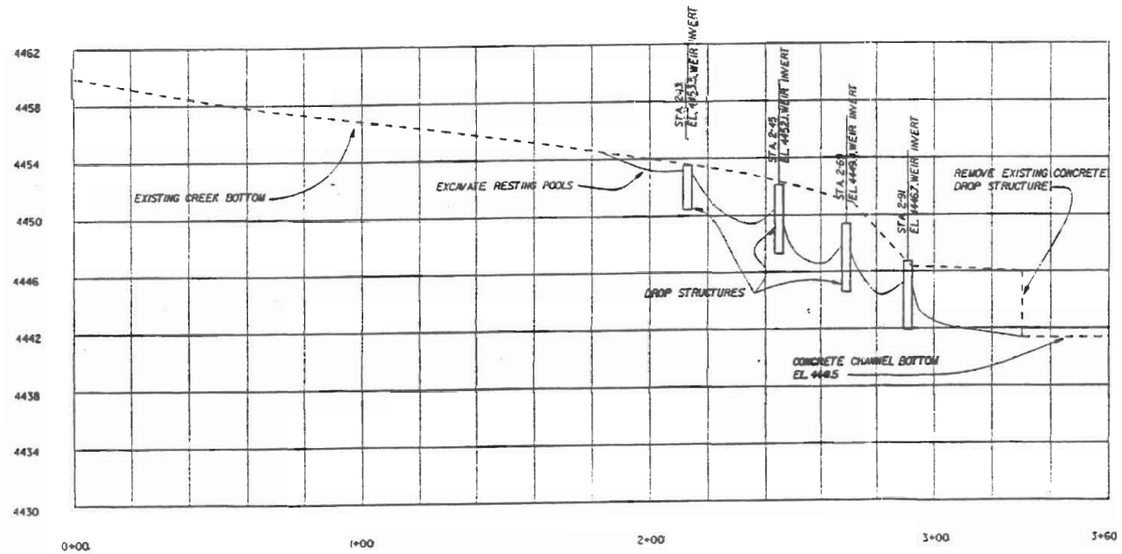




SECTION - DROP STRUCTURE

STA. 2 + 13 AND 2 + 45

SCALE IN FEET
5' 0 5'



PROFILE - CREEK BOTTOM

HORIZONTAL SCALE IN FEET
30' 0 30'

VERTICAL SCALE IN FEET
4' 0 4'

NOTE:
ELEVATION BASED ON NAVD 88

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SWEIDER — DESIGNED BY
DATH — DRAWN BY
H — CHECKED BY

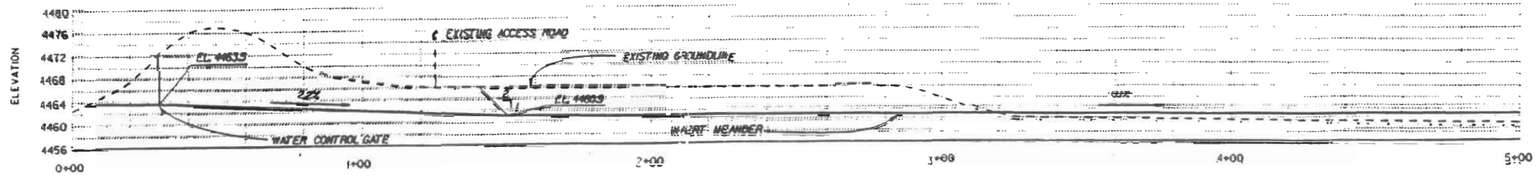
PORTNEUF RIVER
POCATELLO, ID. LIMIT RESTORATION

CITY CREEK A
DETAILS

COMPUTER AIDED DESIGN & DRAFTING

SCALE AS SHOWN INV. NO.

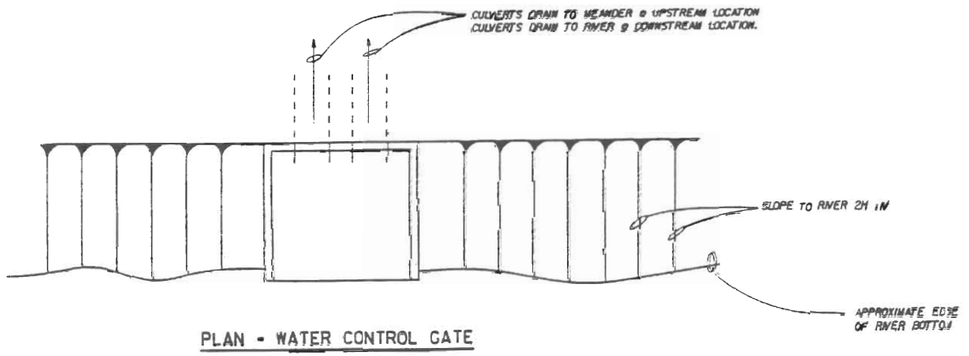
PLATE 4



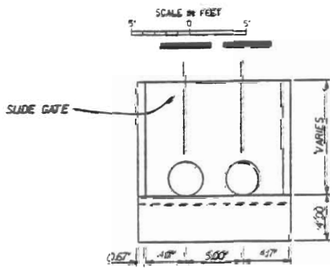
STATIONING IN FEET

PROFILE - MEANDER INFLOW

(PROFILE OF MEANDER OUTFLOW IS SIMILAR)



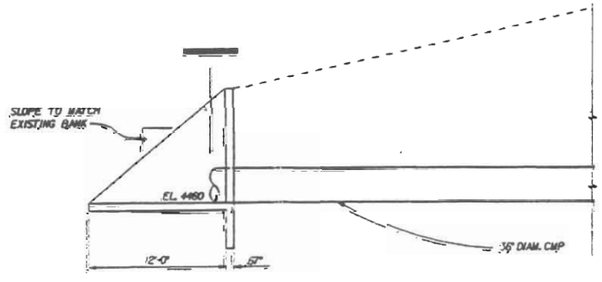
PLAN - WATER CONTROL GATE



FRONT - WATER CONTROL GATE

SCALE IN FEET

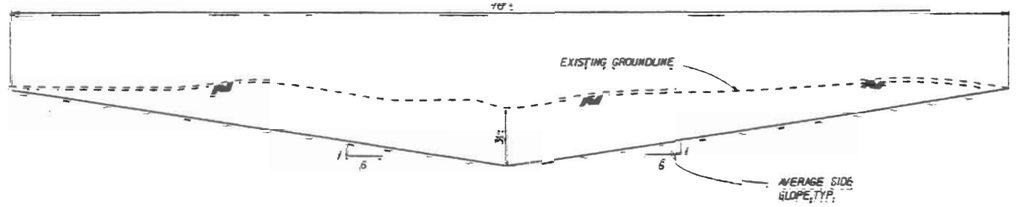
5' 0 5'



ELEVATION - WATER CONTROL GATE

SCALE IN FEET

5' 0 5'



SECTION - MEANDER

NOT TO SCALE

NOTE:
ALL CONCRETE REINFORCED WITH NO. 4 REBAR, SPACED 12" O.C. E.W.

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SNEIDER — DESIGNED BY
SNEIDER — DRAWN BY
N. — CHECKED BY
CHIEF, —

PORTNEUF RIVER
POCATELLO, ID. UNIT RESTORATION

OPEN LANDS MEANDERS
DETAILS

SCALE AS SHOWN (INV. NO.

PLATE 6

CYMPHONY AIDED DESIGN & DRAFTING

Appendix C

Real Estate

CENPW-RE (405a) 3 June 1996

MEMORANDUM FOR Chief, Planning Division
ATTN: CENPW-PL-PF (Bill MacDonald)

SUBJECT: Portneuf River Section 1135 Study - Real Estate Appendix

Enclosed for your use is a complete hard copy of the Real Estate Appendix for this study. A "Word 6.0" disk of the text (map exhibits excluded) is also provided.

\signed\
Richard Carlton
Chief, Real Estate Division

Enclosures

REAL ESTATE APPENDIX

PORTNEUF RIVER SECTION 1135 PROJECT
AT
POCATELLO, IDAHO

1. GENERAL.

This appendix provides a real estate perspective on the project modification initiatives proposed within this study. (Reconnaissance level approval was set forth in CECW-PW 2nd endorsement, January 1994, subject: Portneuf River, Pocatello, ID. Unit Restoration, Section 1135 (b) Initial Appraisal Report, CWIS No. XXXXX.) Two locations have been selected where environmental initiatives will help restore portions of the Portneuf River to a more natural condition. At those locations, dewatered river meanders will be rehabilitated and recharged to assist in replacing lost fisheries, wildlife and other environmental values associated with the river prior to the July 1966 - November 1968 construction of the local flood control project. The sponsor (City of Pocatello, Idaho) supports environmental restoration and enhancement along the Portneuf River.

2. AREA, CITY AND NEIGHBORHOOD.

Pocatello, the county seat of Bannock County, is found in southeast Idaho at the western foothills of the Rocky Mountains. It has a population of about 46,000, with 53,000 living in the greater metropolitan area that includes neighboring Chubbuck. The city is considered to be a regional center for shopping, education and medical care. Its principal economic base comes from manufacturing, education, phosphate mining, agriculture and related processing, nuclear research and tourism. Major employers include the Idaho National Engineering Laboratory, FMC/Simplot and Idaho State University. All typical public facilities, services and commercial transportation (air, bus, and rail) are found in the Pocatello area. These combined factors all contribute to a strong and growing economy.

The two project locations exhibit differing neighborhood characteristics as they respectively lie at the northerly and southerly fringes of town.

(a) North City Park is in a residentially oriented neighborhood with public utilities and paved streets nearby. It is bounded on the east by the Portneuf River and on the north by an open, undeveloped area. Westerly is a large mobile home park (Oak Tree Manor) and to the south is a mixture of mobile homes and modest single family dwellings.

(b) The Open Lands Meanders site lies in a broad, unimproved band between Interstate Highway 15 (and light industrial properties beyond) to the east, and the Union Pacific Railroad/Portneuf River corridor to the west. Immediately southeast are some rural homesites and small farms. Across the railroad/river corridor to the southwest lies the Juniper Hills Country Club Golf Course and residential property. To the west, between the railroad embankment and the river is an Idaho State habitat management unit. Further west and northwest across the river is additional residential use (i.e., small acreages, subdivisions) and the Indian Hills Elementary School. Land to the north is mostly unimproved.

3. PROPERTY/PROJECT DATA.

(a) North City Park: This 2± acre city owned project site is located in northwest Pocatello (portion of Section 22, Township 6 South, Range 34 East, E.B.M.) and is accessible from the west and south by Aspen Lane and Riverside Drive, respectively. All public utilities are available along those streets. The subject area is unimproved and lies near the left bank of the Portneuf River within the designated floodway. The soil is of the McDole - McDole Variant complex, 0 to 2% slopes, which is deep, well drained and typically found on the low terraces of flood plains. While this soil is suitable as irrigated cropland (capability subclasses IIc irrigated, and VIc non-irrigated) there is general hazard of flooding when not diked, and of frost action, causing it to be risky to develop and difficult to maintain sidewalks, streets, etc. This portion of North City Park is zoned R - Residential District. It has an open space factor of 1.8 meaning that, if available, the minimum allowable lot sizes for single family dwellings and duplexes are 5,400 and 7,650 square feet, respectively. The subject area is well vegetated with native meadow grasses and a stand of large, mature willow trees. It has no known mineral deposits of commercial value nor any known presence of hazardous material. No relocations of facilities are anticipated at the site and there will be no displacements or resettlements under Public Law 91-646. Moreover, there are no known outstanding interests or easements that are not sponsor owned.

The intent of this project area is to recharge an old river meander (at approximate elevation 4428) that was dewatered by the local flood control project. Using solar panels as an electricity source, water would be pumped at the rate of 100 - 200 gallons per minute into the old meander and allowed to return to the Portneuf River via an existing surface drainage culvert. Some minor excavation would be required to enable a continuous flow.

(b) Open Lands Meanders: This is an unimproved, 100± acre site that is located south of Pocatello in Sections 7 & 8, Township 7 South, Range 35 East, E.B.M. Access is limited, although it can be legally gained from a point on county owned Cheyenne Avenue at the extreme northwest corner. It can also be reached (subject to permission) from the restricted railroad service road on the west. Lastly, access may be gained via a more lengthy, circuitous route by traveling south on Old Highway 91 past the subject to Hildreth Road, thence doubling back beneath Interstate Highway 15 and proceeding

through private roads and property. The subject site is somewhat low lying and level except for two old, centrally located river meanders and a small lava rock plateau on the east side. Before the railroad embankment was installed on its 150 foot wide right-of-way, the subject area was within the 100 year flood plain of the Portneuf River. However, with the added protection of the embankment, , it is now considered to lie within the 500 year flood plain. The soil is of the McDole - McDole Variant complex, 0 to 2% slopes, which was described previously under the North City Park project data. Vegetation is primarily native meadow grasses. One of the two private owners has tried to grow handline irrigated alfalfa on 7± acres to the northwest. The Open Lands Meanders site is zoned MU - Multiple Use District. Most uses are either permitted or conditionally permitted under this classification. (A condition for homesites, for instance, is that they must be at least one acre in size, although larger lot sizes may be required by the District Health Department depending upon the circumstances involved.) The property has no known mineral deposits of commercial value, nor any known presence of hazardous material. There will be no displacements or resettlements under Public Law 91-646. Only a single relocation is anticipated (see paragraph number 4, "Real Estate Requirements"). There are no known outstanding interests or easements that might affect the value of the site.

The intent of this project area is to drive culverts beneath and through the Union Pacific Railroad embankment at the upstream and downstream ends of the site. Water would be periodically diverted into the upstream intake culvert, proceed through two old, presently dewatered river meanders (to be connected by excavation) and ultimately be allowed to return to the Portneuf River via the downstream outflow culvert. In order to facilitate continued flowage at low river levels, a small 2 foot high stoplog weir would be constructed near the intake culvert. This structure would remain idle or be removed during normal flows. Access for its construction, operation and maintenance can only be achieved from the left shoreline. It may be gained by exiting the Bannock Highway at Old Orchard Subdivision and proceeding northerly on public streets until reaching private property. From that point, a 10± foot wide road would be built along the line separating Sections 17 & 18 , Township 7 South, Range 35 East, E.B.M., until reaching the weir site some 1,600± feet distant. The common section line separates four private residential owners on the west from the country club golf course on the east. (Land for the left bank weir and the staging area for its construction are also owned by the country club.) At the downstream end of the project site, an armored trench would be constructed to convey the diverted water from the outflow culvert back to the Portneuf River's main channel. To install the culvert and trench features, access from Cheyenne Avenue needs to be improved temporarily. Once the outflow system has been completed, this temporary access route will be restored to its previous condition. The recharging of the two old river meanders will enable tree and shrub growth and thereby enhance wildlife habitat. It is expected that a total of nine ownerships will be impacted in some way by this initiative.

4. REAL ESTATE REQUIREMENTS.

Two Pocatello areas have been selected for habitat restoration initiatives. Current ownership rights at those locations and the respective interests required for project implementation are outlined as follows:

(a) North City Park: This is an unimproved area which is owned in fee by the sponsor. Only a small portion of the park will be used. In order to introduce water from the Portneuf River through the 2± acre project area and back into the river, it will be necessary for the sponsor to apply for and obtain appropriate non-consumptive water rights for habitat improvement. All work will be conducted on the sponsor's land, which is readily accessible from nearby public roads. Hence, no real estate acquisition will be necessary at this location. (See accompanying real estate planning map.)

(b) Open Lands Meanders: The primary project site is an unimproved, 100± acre area that is recommended for acquisition in fee from its two private owners. The site is physically separated from the Portneuf River's right bank by a high, Union Pacific Railroad embankment. In order to enable water passage from the river through this project location and back again, a small weir must be installed and culverts placed beneath the railroad at both the upstream and downstream ends of the site. A 5± acre permit from the railroad will be required for culvert installation, right bank weir placement, and to relocate (raise in place) a portion of the upland railroad service road to keep it above the diverted river water. Said service road would then be used under the permit for maintenance of project features. As required under the North City Park initiative, the sponsor must apply for and obtain appropriate non-consumptive water rights for habitat improvement.

At the upstream (intake) end of the project site, it is recommended that a standard channel improvement easement approximating 3,600 square feet be acquired from the opposite (left bank) riparian fee owner for the construction, operation and maintenance of a small weir. As the weir will only be utilized during very low river flows, any upstream pooling will be minor and remain within normal flow parameters. Hence, no flowage easements will be necessary as a result of weir operation. Vehicular access to the weir location is only physically possible from the left bank uplands. As no improved or legal access from the public road system exists, acquisition of perpetual standard road easement rights (measuring approximately 10 feet by 1,600 feet overall) is recommended, affecting five private landowners. At the weir location, a 0.5± acre temporary work area easement (standard) of six months duration will be required for staging and construction purposes.

At the downstream (outlet) end of the project site, a 0.5± - 1.0± acre standard flowage easement is recommended to convey flows across the state owned riparian zone between the outflow culvert and the river. A six month standard temporary work area easement encompassing 0.5± - 1.0± acre of state land will also be necessary to access, stage and

install the downstream culvert and outflow trench. (See accompanying real estate planning map.)

Correct standard estate language may be found within ER 405-1-12, Change 7. More particularly, the estates are described within that regulation as follows:

1. Fee Estate:	Paragraph 1, Figure 5-6.
2. Channel Improvement Easement:	Paragraph 8, Figure 5-6d.
3. Road Easement:	Paragraph 11, Figure 5-6e.
4. Flowage Easement (occasional flooding):	Paragraph 6, Figure 5-6b.
5. Temporary Work Area Easement:	Paragraph 15, Figure 5-6f.

5. REAL ESTATE COSTS:

(a) North City Park is found in a residential neighborhood, has good public access and all utilities are available. If flood protection along the Portneuf River could be installed, this area would lend itself very well to residential development as local demand is strong and the location is desirable. However, given its status of being situated within the floodway of the river and the high expenses associated with flood protection, the highest and best use is considered to be as presently utilized, i.e., as a neighborhood park enjoyed by recreationists and wildlife.

(b) Open Lands Meanders lies south of town in a growing residential area. Soils are conducive to weight bearing and are crop productive if irrigable. A large detriment to the site is its limited accessibility. Also, it is low lying between the railroad embankment and the grade of I-15, causing surface drainage to collect on site. Utilities are available, but at some distance away. (Electric service does parallel the railroad right-of-way, however.) As alternative locations exist, there is not sufficient market pressure to warrant expending the amounts of money that would be required to develop the site for residential purposes, or to economically farm it. Accordingly, it is felt that the highest and best use of the property is as presently utilized, i.e., as open meadowland pasture.

Given all of the foregoing information provided in this Real Estate Appendix, the following is an estimated breakdown of project real estate costs:

01. LANDS AND DAMAGES

NORTH CITY PARK unimproved

ITEM	QUANTITY	UNIT	COST	PROJECT
LAND				
Fee (sponsor)	2 acres	$2000	$4000	
	Contingency (20%)**		800	

	Subtotal		$4800	$4800	

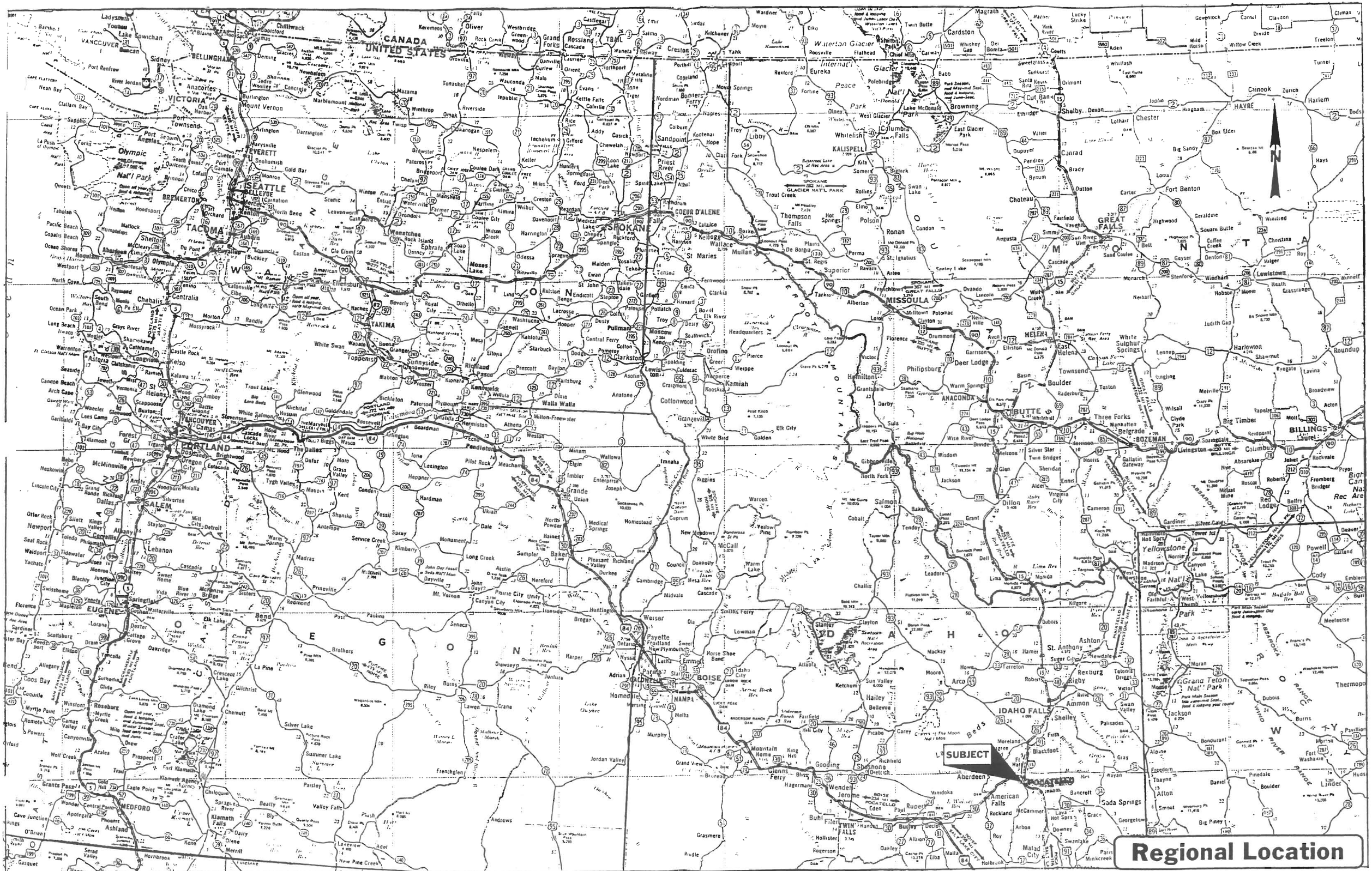
OPEN LANDS MEANDERS unimproved

ITEM	QUANTITY	UNIT	COST		PROJECT
LAND					
Fee (2-private)	100 acres	$1500	$150000		
Easements-Road					
(5-private)	0.565 acre	Lump Sum	5000		
Easement-Channel Impt					
(1-private)	3600 sq. ft.	Lump Sum	1000		
Easements-Temp Work					
(2-private)	1 - 2 acres	Lump Sum	1000		
Easement-Flowage					
(1-state)	.5 - 1 acre	LumpSum	1500		
Permit					
(Railroad)	5 acres	Lump Sum	5000		
	Subtotal		$163500		
	Contingency (20%)**		32700		
	Subtotal		$196200	$196200	
Total Land				$201000	$201000
ADMINISTRATION - Sponsor					
Includes mapping/survey, title evidence, appraisal, negotiation & closing, misc. coordination			$ 35000		
	Contingency (20%)**		7000		
			$ 42000		$ 42000
ADMINISTRATION - Government					
Federal review & assistance			$ 15000		
	Contingency (20%)**		3000		
			$ 18000		$ 18000
TOTAL PROJECT REAL ESTATE COSTS					**$261000**

**NOTE: A 20% contingency has been added to each category comprising this total. This allows for negotiation latitude and the passage of time between this report and actual real estate acquisition.

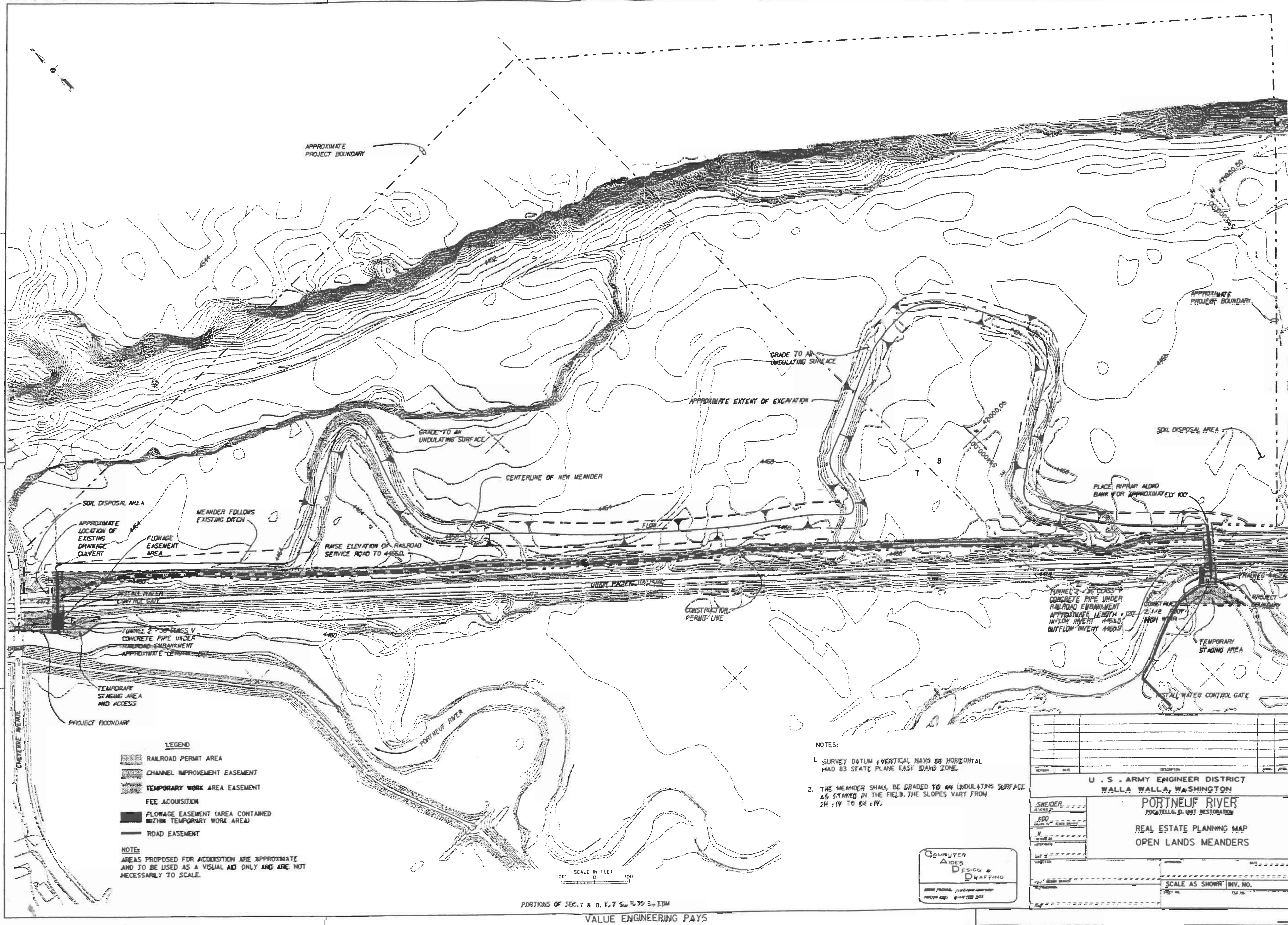
REAL ESTATE MILESTONES AFTER FEASIBILITY

ACTIVITY	COE INITIATE	COE COMPLETE	LS INITIATE	LS COMPLETE
Execution of PCA		9/1/96 (forecast)		9/1/96 (forecast)
Formal transmittal of final ROW drawings to LS & instruction to acquire LERRD		PCA+5days		
Prepare mapping & legal descriptions			PCA+10days	PCA+2months
Obtain title evidence			PCA+10days	PCA+2months
Obtain tract appraisals			PCA+2months	PCA+3months
Review tract appraisals	PCA+3¼months	PCA+3¾months		
Conduct negotiations			PCA+4months	PCA+6months
Obtain possession				PCA+7months



Regional Location

CORPS OF ENGINEERS SAFETY PAYS U. S. ARMY



VALUE ENGINEERING PAYS

REFERENCE FILES ATTACHED YES NO LEVELS ON FOR CONTRACT DRWGS S SCALE S

Appendix D

Draft Project Cost Share Agreement

Pocatello
A MUNICIPAL CORPORATION OF IDAHO

OFFICE OF THE MAYOR
911 North 7th Avenue
P.O. Box 4169
Pocatello, Idaho 83205
(208) 234-6163
FAX (208) 234-6297

PETER F. ANGSTADT
Mayor

Pocatello City Council
GREGORY R. ANDERSON
[illegible] BABET CACCIA
ROGER W. CHASE
RON FRASURE
KAREN McGEE
HARRY NEUHARDT

July 31, 1996

LTC James Weller
District Engineer
U.S. Army Corps of Engineers
201 N. 3rd Avenue
Walla Walla, WA 99362-1876

Re: Portneuf River 1135 Project

Dear Colonel Weller:

The City of Pocatello appreciates the work of the Army Corps of Engineers and especially Mr. William F. McDonald, a Corps of Engineers Study Manager, for the design assistance on the Portneuf River 1135 Project.

At this time, the City is reviewing the "Project Cooperation Agreement" and the recently available project cost estimates. This review is necessary to help us determine whether or not the City can sign the agreement and commit funding. We respectfully request additional time to conduct this review. It is anticipated that should our review be favorable, a letter of support may be offered as soon as September 1, 1996. If this is unacceptable, please let me know. Thank you.

Sincerely,

Peter Angstadt
Mayor

PA:dg

c: William F. McDonald, Study Manager COE
Robert Chambers, CD&R Director
Dean Tranmer, City Attorney

Pocatello
A MUNICIPAL CORPORATION OF IDAHO

OFFICE OF THE MAYOR
911 North 7th Avenue
P.O. Box 4169
Pocatello, Idaho 83205
(208) 234-6163
FAX (208) 234-6297

PETER J. ANGSTADT
Mayor

Pocatello City Council
GREGORY R. ANDERSON
[illegible]
ROGER W. CHASE
RON FRASURE
KAREN McGEE
HARRY NEUHARDT

October 9, 1996

LTC James Weller
District Engineer
U.S. Army Corps of Engineers
201 N. 3rd Avenue
Walla Walla, WA 99362-1876

Re: Portneuf River 1135 Project

Dear Colonel Weller:

The City of Pocatello has reviewed the "Project Cooperation Agreement" in detail. It is determined that should the City Council provide the required match for this project in the 1997-98 budget year, the City will sign the agreement. We therefore request that this project, particularly the North City Park Meanders component, be extended through 1997. Thank you.

Sincerely,

Peter Angstadt
Mayor

PA:dg

c: William F. McDonald Study Manager COE
Robert Chambers, CD&R Director
Dean Tranmer, City Attorney

BETWEEN
THE DEPARTMENT OF THE ARMY
AND
City of Pocatello
FOR MODIFICATION OF THE
Portneuf Section 1135

THIS AGREEMENT is entered into this _____ day of _____, 19 __, by and between the DEPARTMENT OF THE ARMY (hereinafter the "Government"), represented by the U.S. Army Engineers for the Walla Walla District, Walla Walla WA 99362, the District (hereinafter the "District Engineer") and the **City of Pocatello** (hereinafter the "Non-Federal Sponsor"), represented by the **Mayor of Pocatello**.

WITNESSETH, THAT:

WHEREAS, the Secretary of the Army completed construction of the **Portneuf Flood Protection Project** hereinafter the "Existing Project", as defined in Article I.A. of this Agreement in 1970;

WHEREAS, modification of the Existing Project is authorized by Section 1135(b) of the Water Resources Development Act of 1986, Public Law 99-662, as amended;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Cooperation Agreement for implementation of the North City Park Measure(hereinafter the "Project Modification", as defined in Article I.B. of this Agreement);

WHEREAS, Section 1135 (b) of the Water Resources Development Act of 1986, Public Law 99-662, as amended, specifies the cost-sharing requirements applicable to this Project Modification;

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the implementation of the Project Modification in accordance with the terms of this Agreement.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

A. The term "Existing Project" shall mean the Portneuf River Flood Control project consisting of levees and dikes and other associated features.

B. The term "Project Modification" shall mean construct a wetland complex in dewatered river meander in North City Park. Water will be supplied from an intake weir constructed in the adjacent federal flood control channel as generally described in the Portneuf River Section 1135 dated October,1996 and approved by the District Engineer on _____, 19___.

C. The term "total project modification costs" shall mean all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to implementation of the Project Modification. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to, feasibility phase planning costs; all engineering and design costs, including those incurred in the feasibility phase; the costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XV.A. of this Agreement; the costs incurred by the Government for clean-up and response in accordance with Article XV.C. of this Agreement; costs of historic preservation activities in accordance with Article XVIII.A. of this Agreement; actual implementation costs; supervision and administration costs; costs of participation in the Project Coordination Team in accordance with Article V of this Agreement; costs of contract dispute settlements or awards; the value of lands, easements, rights-of-way, relocations, and suitable borrow and dredged or excavated material disposal areas for which the Government affords credit in accordance with Article IV of this Agreement; and costs of audit in accordance with Article X of this Agreement. The term does not include any costs for operation, maintenance, repair, replacement, or rehabilitation; any costs due to betterments; or any costs of dispute resolution under Article VII of this Agreement.

D. The term "financial obligation for implementation" shall mean a financial obligation of the Government other than an obligation pertaining to the provision of lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas, that result or would result in a cost that is or would be included in total project modification costs.

E. The term "implementation" shall mean all actions required to carry out the Project Modification including all actions required for modification in operations of the Existing Project.

F. The term "non-Federal proportionate share" shall mean the ratio of the Non-Federal Sponsor's total cash contribution required in accordance with Article II.D.2. of this Agreement to total financial obligations for implementation as projected by the Government.

G. The term "period of implementation" shall mean the time from the effective date of this Agreement to the date that the District Engineer notifies the Non-Federal Sponsor in writing of the Government's determination that implementation of the Project Modification is complete.

H. The term "highway" shall mean any public highway, roadway, street, or way, including any bridge thereof.

I. The term "relocation" shall mean providing a functionally equivalent facility to the owner of an existing utility, cemetery, highway or other public facility, or railroad when such action is authorized in accordance with applicable legal principles of just compensation. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant removal of the affected facility or part thereof.

J. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

K. The term "functional portion of the Project Modification" shall mean a portion of the Project Modification that is suitable for tender to the Non-Federal Sponsor to operate and maintain in advance of completion of the entire Project Modification. For a portion of the Project Modification to be suitable for tender, the District Engineer must notify the Non-Federal Sponsor in writing of the Government's determination that the portion of the Project Modification is complete and can function independently and for a useful purpose, although the balance of the Project Modification is not complete.

L. The term "betterment" shall mean a change in the design and construction of an element of the Project Modification resulting from the application of standards that the Government determines exceed those that the Government would otherwise apply for accomplishing the design and construction of that element.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to the availability of funds and using those funds and funds provided by the Non-Federal Sponsor, shall expeditiously implement the Project Modification, applying those procedures usually applied to Federal projects, pursuant to Federal laws, regulations, and policies.

1. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations. The Government shall not issue the solicitation for the first contract for implementation until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the Project Modification. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract modifications, including change orders, prior to the issuance to the contractor of a Notice to Proceed. In any instance where providing the Non-Federal Sponsor with notification of a contract modification or change order is not possible prior to issuance of the Notice to Proceed, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of

solicitations, award of contracts, execution of contract modifications, issuance of change orders, resolution of contract claims, and performance of all work on the Project Modification (whether the work is performed under contract or by Government personnel), shall be exclusively within the control of the Government.

2. Throughout the period of implementation, the District Engineer shall furnish the Non-Federal Sponsor with a copy of the Government's Written Notice of Acceptance of Completed Work for each contract for the Project Modification.

B. The Non-Federal Sponsor may request the Government to accomplish betterments. Such requests shall be in writing and shall describe the betterments requested to be accomplished. If the Government in its sole discretion elects to accomplish the requested betterments or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs due to the requested betterments and shall pay all such costs in accordance with Article VI.C. of this Agreement.

C. When the District Engineer determines that the entire Project Modification is complete or that a portion of the Project Modification has become a functional portion of the Project Modification, the District Engineer shall so notify the Non-Federal Sponsor in writing and furnish the Non-Federal Sponsor with an Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual (hereinafter the "OMRR&R Manual") and with copies of all of the Government's Written Notices of Acceptance of Completed Work for all contracts for the Project Modification or the functional portion of the Project Modification that have not been provided previously. Upon such notification, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project Modification or the functional portion of the Project Modification in accordance with Article VIII of this Agreement.

D. The Non-Federal Sponsor shall contribute 25 percent of total project modification costs in accordance with the provisions of this paragraph.

1. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Government determines the Non-Federal Sponsor must provide for the implementation, operation, and maintenance of the Project Modification, and shall perform or ensure performance of all relocations that the Government determines to be necessary for the implementation, operation, and maintenance of the Project Modification.

2. If the Government projects that the value of the Non-Federal Sponsor's contributions under paragraph D.1. of this Article and Articles V, X, and XV.A. of this Agreement will be less than 25 percent of total project modification costs, the Non-Federal Sponsor shall provide an additional cash contribution, in accordance with Article VI.B. of this Agreement, in the amount necessary to make the Non-Federal Sponsor's total contribution equal to 25 percent of total project modification costs.

3. If the Government determines that the value of the Non-Federal Sponsor's contributions provided under paragraphs D.1. and D.2. of this Article and Articles V, X, and XV.A. of this Agreement has exceeded 25 percent of total project modification costs, the Government, subject to the availability of funds, shall reimburse the Non-Federal Sponsor for any such value in excess of 25 percent of total project modification costs. After such a determination, the Government, in its sole discretion, may provide any remaining Project Modification lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas and perform any remaining Project Modification relocations on behalf of the Non-Federal Sponsor. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government under this paragraph, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

E. The Non-Federal Sponsor may request the Government to provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or perform relocations on behalf of the Non-Federal Sponsor. Such requests shall be in writing and shall describe the services requested to be performed. If in its sole discretion the Government elects to perform the requested services or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the requested services and shall pay all such costs in accordance with Article VI.C. of this Agreement. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government under this paragraph, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

F. The Government shall perform a final accounting in accordance with Article VI.D. of this Agreement to determine the contributions provided by the Non-Federal Sponsor in accordance with paragraphs B., D., and E. of this Article and Articles V, X, and XV.A. of this Agreement and to determine whether the Non-Federal Sponsor has met its obligations under paragraphs B., D., and E. of this Article.

G. The Non-Federal Sponsor shall not use Federal funds to meet its share of total project modification costs under this Agreement unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

ARTICLE III - LANDS, RELOCATIONS, DISPOSAL AREAS, AND PUBLIC LAW 91-646 COMPLIANCE

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, and rights-of-way required for the implementation, operation, and maintenance of the Project Modification, including those required for relocations, borrow materials, and dredged or excavated material disposal. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, and rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, and rights-of-way. Prior to the end of the period of implementation, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each construction contract, the Non-Federal Sponsor shall provide the Government with authorization for entry to all lands, easements, and rights-of-way the Government determines the Non-Federal Sponsor must provide for that contract. The Non-Federal Sponsor shall ensure that lands, easements, and rights-of-way that the Government determines to be required for the operation and maintenance of the Project Modification and that were provided by the Non-Federal Sponsor are retained in public ownership for uses compatible with the authorized purposes of the Project Modification.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the improvements required on lands, easements, and rights-of-way to enable the proper disposal of dredged or excavated material associated with the implementation, operation, and maintenance of the Project Modification. Such improvements may include, but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, and de-watering pumps and pipes. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions of such improvements in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with construction of such improvements. Prior to the end of the period of implementation, the Non-Federal Sponsor shall provide all improvements set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare plans and specifications for all improvements the Government determines to be required for the proper disposal of dredged or excavated material under that contract, submit such plans and specifications to the Government for approval, and provide such improvements in accordance with the approved plans and specifications.

C. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for the implementation, operation, and maintenance of the Project Modification, including those necessary to enable the removal of borrow materials and the proper disposal

of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with such relocations. Prior to the end of the period of implementation, the Non-Federal Sponsor shall perform or ensure the performance of all relocations as set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all relocations the Government determines to be necessary for that contract.

D. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided pursuant to paragraphs A., B., or C. of this Article. Upon receipt of such documents the Government, in accordance with Article IV of this Agreement and in a timely manner, shall determine the value of such contribution, include such value in total project modification costs, and afford credit for such value toward the Non-Federal Sponsor's share of total project modification costs.

E. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for the implementation, operation, and maintenance of the Project Modification, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - CREDIT FOR LANDS, RELOCATIONS, AND DISPOSAL AREAS

A. The Non-Federal Sponsor shall receive credit toward its share of total project modification costs for the value of the lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Non-Federal Sponsor must provide pursuant to Article III of this Agreement, and for the value of the relocations that the Non-Federal Sponsor must perform or for which it must ensure performance pursuant to Article III of this Agreement. However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas that have been provided previously as an item of cooperation for another Federal project, including the Existing Project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas to the extent that such items are provided using Federal funds unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute.

B. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provides the Government with authorization for entry thereto. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph B.3. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with paragraph B.2.a. of this Article, unless thereafter a different amount is determined to represent fair market value in accordance with paragraph B.2.b. of this Article.

a. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, or the Non-Federal Sponsor chooses not to obtain a second appraisal, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to paragraph B.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to paragraph B.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid.

If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to paragraph B.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall, prior to instituting such proceedings, submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific real property interests to be acquired in such proceedings. The Government shall have 60 days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60-day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60-day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with sub-paragraph B.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are required for the implementation, operation, and maintenance of the Project Modification, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five-year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement

to determine reasonableness, allocability, and allowability of costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with Article III.E. of this Agreement.

C. After consultation with the Non-Federal Sponsor, the Government shall determine the value of relocations in accordance with the provisions of this paragraph.

1. For a relocation other than a highway, the value shall be only that portion of relocation costs that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a relocation of a highway, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the State of Idaho would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. Relocation costs shall include, but not necessarily be limited to, actual costs of performing the relocation; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, but shall not include any costs due to betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available. Relocation costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

D. The value of the improvements made to lands, easements, and rights-of-way for the proper disposal of dredged or excavated material shall be the costs of the improvements, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such costs shall include, but not necessarily be limited to, actual costs of providing the improvements; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with providing the improvements, but shall not include any costs due to betterments, as determined by the Government.

ARTICLE V - PROJECT MODIFICATION COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 days after the effective date of this Agreement, shall appoint named senior representatives to a Project Modification Coordination Team. Thereafter, the Project Modification Coordination Team shall meet regularly until the end of the period of implementation. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Modification Coordination Team.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Modification Coordination Team informed of the progress of implementation and of significant pending issues and actions, and shall seek the views of the Project Modification Coordination Team on matters that the Project Modification Coordination Team generally oversees.

C. Until the end of the period of implementation, the Project Modification Coordination Team shall generally oversee the Project Modification, including issues related to design; plans and specifications; scheduling; real property and relocation requirements; real property acquisition; contract awards and modifications; contract costs; the Government's cost projections; final inspection of the entire Project Modification or functional portions of the Project Modification; preparation of the proposed OMRR&R Manual; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, replacement, and rehabilitation of the Project Modification; and other related matters.

D. The Project Modification Coordination Team may make recommendations that it deems warranted to the District Engineer on matters that the Project Modification Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Project Modification Coordination Team. The Government, having the legal authority and responsibility for implementation of the Project Modification, has the discretion to accept, reject, or modify the Project Modification Coordination Team's recommendations.

E. The costs of participation in the Project Modification Coordination Team shall be included in total project modification costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE VI - METHOD OF PAYMENT

OPTION-I [USE OPTION I IF IMPLEMENTATION OF THE PROJECT MODIFICATION WILL BE COMPLETED WITHIN ONE FISCAL YEAR, OR IF NON-FEDERAL SPONSOR ELECTS TO PROVIDE ITS SHARE IN ONE LUMP SUM. DELETE THE ENTIRE OPTION IF IT DOES NOT APPLY.]

A. The Government shall maintain current records of contributions provided by the parties and current projections of total project modification costs and costs due to betterments. At least quarterly, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project modification costs, of total costs due to betterments, of the components of total project modification costs, of each party's share of total project modification costs, of the Non-Federal Sponsor's total cash contributions required in accordance with Articles II.B., II.D., and II.E. of this Agreement, and of the non-Federal proportionate share. On the effective date of

this Agreement, total project modification costs are projected to be $323,000, and the Non-Federal Sponsor's cash contribution required under Article II.D. of this Agreement is projected to be $80,750. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall provide the cash contribution required under Article II.D.2. of this Agreement in accordance with the following provisions: Not less than 45 calendar days prior to the scheduled date for issuance of the solicitation for the first construction contract, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government determines to be required from the Non-Federal Sponsor to meet its projected cash contribution under Article II.D.2. of this Agreement. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of the required funds by delivering a check payable to "FAO, USAED, Walla Walla District to the District Engineer. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for implementation incurred prior to commencement of the period of implementation; and (b) the non-Federal proportionate share of financial obligations for implementation as they are incurred during the period of implementation. In the event the Government determines that the Non-Federal Sponsor must provide additional funds to meet the Non-Federal Sponsor's cash contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required. Within 60 calendar days thereafter, the Non-Federal Sponsor shall provide the Government with a check for the full amount of the additional required funds.

1. Not less than 45 calendar days prior to the scheduled date for issuance of the solicitation for the first construction contract, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for implementation through the first fiscal year of implementation, including the non-Federal proportionate share of financial obligations for implementation incurred prior to the period of implementation. Not later than such scheduled date, the Non-Federal Sponsor shall [1] provide the Government with the full amount of the required funds by delivering a check payable to "FAO, USAED, Walla Walla District]" to the District Engineer.

2. For the second and subsequent fiscal years of implementation, the Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of that fiscal year, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the non-Federal proportionate share of projected financial obligations for implementation for that fiscal year. No later than 30 calendar days prior to the beginning of the fiscal year, the Non-Federal Sponsor shall make the full amount of the required funds for that fiscal year available to the Government through the funding mechanism specified in Article VI.B.1. of this Agreement.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for implementation incurred prior to the period of implementation; and (b) the non-Federal proportionate share of financial obligations for implementation as they are incurred during the period of implementation.

4. If at any time during the period of implementation the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the non-Federal proportionate share of projected financial obligations for implementation for the current fiscal year, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required, and the Non-Federal Sponsor, no later than 60 calendar days from receipt of such notice, shall make the additional required funds available through the payment mechanism specified in Article VI.B.1. of this Agreement.

C. In advance of the Government incurring any financial obligation associated with additional work under Article II.B. or II.E. of this Agreement, the Non-Federal Sponsor shall [1] provide the Government with the full amount of the funds required to pay for such additional work by delivering a check payable to "FAO, USAED, Walla Wall District" to the District Engineer.

D. Upon completion of the Project Modification or termination of this Agreement, and upon resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the results of the final accounting. The final accounting shall determine total project modification costs, each party's contribution provided thereto, and each party's required share thereof. The final accounting also shall determine costs due to betterments and the Non-Federal Sponsor's cash contribution provided pursuant to Article II.B. of this Agreement.

1. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor is less than its required share of total project modification costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Non-Federal Sponsor shall, no later than 90 calendar days after receipt of written notice, make a cash payment to the Government of whatever sum is required to meet the Non-Federal Sponsor's required share of total project modification costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement.

2. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor exceeds its required share of total project modification costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Government shall, subject to the availability of funds, refund the excess to the Non-Federal Sponsor no later than 90 calendar days after the final accounting is complete. In the event existing funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE VII - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VIII - OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R)

A. Upon notification in accordance with Article II.C. of this Agreement and for so long as the Project Modification remains authorized, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project Modification or the functional portion of the Project Modification, at no cost to the Government, in a manner compatible with the Project Modification's authorized purposes and in accordance with applicable Federal and State laws as provided in Article XI of this Agreement and specific directions prescribed by the Government in the OMRR&R Manual and any subsequent amendments thereto.

B. The Non-Federal Sponsor hereby gives the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor owns or controls for access to the Project Modification for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project Modification. If an inspection shows that the Non-Federal Sponsor for any reason is failing to perform its obligations under this Agreement, the Government shall send a written notice describing the non-performance to the Non-Federal Sponsor. If, after 30 calendar days from receipt of the notice, the Non-Federal Sponsor continues to fail to perform, then the Government shall have the right to enter, at reasonable times and in a reasonable manner, upon property the Non-Federal Sponsor owns or controls for access to the Project Modification for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project Modification. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Government shall operate to relieve the Non-Federal Sponsor's obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this Agreement.

ARTICLE IX - INDEMNIFICATION

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from the implementation, operation, maintenance, repair, replacement and rehabilitation of the Project Modification, and any Project Modification-related betterments, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures and for a minimum of three years after the period of implementation and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. Pursuant to 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507, as implemented by Office of Management and Budget (OMB) Circular No. A-128 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-128, and such costs as are allocated to the Project Modification shall be included in total project modification costs and cost shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in total project modification costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE XI - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government agree to comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army."

ARTICLE XII - RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights such other party may have to seek relief or redress against such contractor either pursuant to any cause of action that such other party may have or for violation of any law.

ARTICLE XIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XIV - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under Article II.B., II.D., II.E., VI, or XVIII.C. of this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the Project Modification is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project Modification.

B. If appropriations are not available in amounts sufficient to meet the Government's share of Project Modification expenditures for the then-current or upcoming fiscal year, the Government shall so notify the Non-Federal Sponsor in writing, and 60 calendar days thereafter either party may elect without penalty to terminate this Agreement or to suspend future performance under this Agreement. In the event that either party elects to suspend future performance under this Agreement pursuant to this paragraph, such suspension shall remain in effect until such time as the Government receives sufficient appropriations or until either the Government or the Non-Federal Sponsor elects to terminate this Agreement.

C. In the event that either party elects to terminate this Agreement pursuant to this Article or Article XV of this Agreement, both parties shall conclude their activities relating to the Project Modification and proceed to a final accounting in accordance with Article VI.D. of this Agreement.

D. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article XV of this Agreement shall not relieve the parties of any obligation previously incurred. Any delinquent payment shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per

centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or cause to be performed, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist in, on, or under lands, easements, and rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation, operation, and maintenance of the Project Modification, except for any such lands, easements, or rights-of-way that are owned by the United States and administered by the Government, and except for any such lands that the Government determines to be subject to the navigation servitude. The Government shall perform, or cause to be performed, all investigations on lands, easements, or rights-of-way that are owned by the United States and administered by the Government. For lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction. All actual costs incurred by the Non-Federal Sponsor or the Government for such investigations for hazardous substances shall be included in total project modification costs and cost shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

B. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way, that the Government determines, pursuant to Article III of this Agreement, the Non-Federal Sponsor must provide for the implementation, operation, and maintenance of the Project Modification, the Non-Federal Sponsor and the Government shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until both parties agree that the Non-Federal Sponsor should proceed.

C. The Government and the Non-Federal Sponsor shall determine whether to initiate implementation of the Project Modification, or, if already in implementation, whether to continue with work on the Project Modification, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation,

operation, and maintenance of the Project Modification. Should the Government and the Non-Federal Sponsor determine to initiate or continue with implementation after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination on lands, easements or rights of way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation, operation, and maintenance of the Project Modification, except for any such lands, easements, or rights-of-way owned by the United States and administered by the Government. Such costs shall not be considered a part of total project modification costs. In the event the Non-Federal Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under this paragraph upon direction by the Government, the Government may, in its sole discretion, either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the Project Modification. The Government shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination on lands, easements, or rights of way owned by the United States and administered by the Government. All costs incurred by the Government shall be included in total project modification costs and cost shared in accordance with the terms of this Agreement.

D. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear any necessary cleanup and response costs as defined in CERCLA. Any decision made pursuant to paragraph C. of this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. As between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the Project Modification for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project Modification in a manner that will not cause liability to arise under CERCLA.

ARTICLE XVI - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and either delivered personally, or by telegram, or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

Peter Angstadt, Mayor
Office Of The Mayor
911 North 7th Avenue
Pocatello, Idaho 83205

If to the Government:

LTC Donald R. Curtis, Jr.
District Engineer
U.S. Army Corps of Engineers
Walla Walla District
201 North Third Avenue
Walla Walla, WA 99362-1876

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVII - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - HISTORIC PRESERVATION

A. The costs of identification, survey and evaluation of historic properties shall be included in total project modification costs and cost shared in accordance with the provisions of this Agreement.

B. Pursuant to Section 7(a) of Public Law 93-291 (16 U.S.C. Section 469c(a)), the costs of mitigation and data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in total project modification costs, up to the statutory limit of one percent of the total amount the Government is authorized to expend for the Project Modification.

C. The Government shall not incur costs for mitigation and data recovery that exceed the statutory one percent limit specified in paragraph B. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit in accordance with Section 208(3) of Public Law 96-515 (16 U.S.C. Section 469c-2(3)). Any costs of mitigation and data recovery that exceed the one percent limit shall be included in total project modification costs and shall be cost shared in accordance with the provisions of this Agreement.

THE DEPARTMENT OF THE ARMY

BY:_____
LTC Donald R. Curtis, Jr.
District Engineer

DATE:_____

THE CITY OF POCATELLO

BY:_____
Peter Angstadt
Mayor of Pocatello

DATE:_____

CERTIFICATE OF AUTHORITY

I, _____, do hereby certify that I am the principal legal officer of the City of Pocatello, that the City of Pocatello is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and the City of Pocatello in connection with the Portneuf Section 1135, and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, and that the persons who have executed this Agreement on behalf of the City of Pocatello have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this _____ day of _____ 19___.

_____

Peter Angstadt
Mayor of Pocatello

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

_____

Peter Angstadt, Mayor
City of Pocatello

DATE: _____

Appendix E

Total Project Cost Summaries: North City Park and Open Lands Meanders

SUBTOTAL - ALL CONTRACTS

****** TOTAL PROJECT COST SUMMARY ******

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE DRAFT LETTER, DATED: 22 JuL 96

PROJECT: PORTNEUF RIVER NORTH PARK OPTION C SECTION 1135
LOCATION: POCATELLO, IDAHO

DISTRICT: WALLA WALLA
P.O.C.: KIM CALLAN, CHIEF, COST ENGINEERING

CURRENT MCACES ESTIMATE PREPARED: 11 Jun 96
EFFECTIVE PRICING LEVEL: 1 APRIL 96

AUTHORIZ./BUDGET YEAR: 1997
EFFECT. PRICING LEVEL: 1 OCT 96

ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	COST ($K)	CNTG ($K)	TOTAL ($K)	.....FULLY FUNDED ESTIMATE..... SPENT THRU FY 96 ($K)	COST ($K)	CNTG ($K)	FULL ($K)
06.3--	WILDLIFE FACILITIES & SANCTUAR GOVERNMENT FURNISH SERVICES	189	38	20%	227	194	39	233		194	39	233
	TOTAL CONSTRUCTION COSTS =====	189	38	20%	227	194	39	233		194	39	233
01---	LANDS AND DAMAGES	6	1	20%	7	6	1	7		6	1	7
18---	CULTURAL RESOURCES											
30---	PLANNING, ENGINEERING & DESIGN	40	8	20%	48	41	8	49	6	41	8	55
31---	CONSTRUCTION MANAGEMENT	22	5	23%	27	23	5	28		23	5	28
	TOTAL PROJECT COSTS ==========	257	52	20%	309	264	53	317	6	264	53	323

TOTAL FEDERAL COSTS ==========> 323

TOTAL NON-FEDERAL COSTS ==========>

THIS TPCS REFLECTS A PROJECT COST CHANGE OF $ --- ----- --------

THE MAXIMUM PROJECT COST IS =======> $ -------- --------

DISTRICT APPROVED:

_____ CHIEF, COST ENGINEERING, Kim Callan

_____ CHIEF, REAL ESTATE, Richard Carlton

_____ CHIEF, PLANNING, Douglas Frei (ACTING)

_____ CHIEF, ENGINEERING , Surya Bhamidipaty,Ph. D., P. E.

_____ CHIEF, OPERATIONS, Wayne John

_____ CHIEF, CONSTRUCTION, Gary Willard

_____ CHIEF, CONTRACTING, Jackie Anderson

_____ PROJECT MANAGER, William Mac Donald, P. W. S.

_____ DDE (PM), Mark Charlton

DIVISION APPROVED:

_____ CHIEF, COST ENGINEERING

_____ DIRECTOR, REAL ESTATE

_____ CHIEF, PROGRAMS MANAGEMENT

_____ DIRECTOR OF PPMD

APPROVED DATE: _____

Walla Walla District

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE DRAFT LETTER, DATED: 22 JuL 96

PROJECT: PORTNEUF RIVER NORTH PARK OPTION C SECTION 1135
LOCATION: POCATELLO, IDAHO
DISTRICT: WALLA WALLA
P.O.C.: KIM CALLAN, CHIEF, COST ENGINEERING

		CURRENT MCACES ESTIMATE PREPARED: 11 Jun 96 EFFECTIVE PRICING LEVEL: 1 APRIL 96				AUTHORIZ./BUDGET YEAR: 1997 EFFECT. PRICING LEVEL: 1 OCT 96				.....FULLY FUNDED ESTIMATE.....				
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	OMB (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FEATURE MID PT	OMB (%)	COST ($K)	CNTG ($K)	FULL ($K)
06.3--	Portneuf River Restoration North park Option C Section 1135	189	38	20%	227	2.7%	194	39	233	4 QTR 97		194	39	233
	TOTAL CONSTRUCTION COSTS =====	189	38	20%	227		194	39	233			194	39	233
01---	LANDS AND DAMAGES	6	1	20%	7	2.7%	6	1	7	4 QTR 97		6	1	7
18---	CULTURAL RESOURCES			20%		2.7%				4 QTR 97				
30--- 21.0%	PLANNING, ENGINEERING & DESIGN	40	8	20%	48	2.7%	41	8	49	4 QTR 97		41	8	49
31--- 12.0%	CONSTRUCTION MANAGEMENT	22	5	20%	27	2.7%	23	5	28	4 QTR 97		23	5	28
	TOTAL COSTS ==========	257	52	20%	309		264	53	317			264	53	317

NOTE: 30 ACCOUNT WAS DERIVED FROM THE FOLLOWING: 25% OF CONSTRUCTION FOR DESIGN FOR NORTH PARK & 20% OF CONSTRUCTION DESIGN FOR OPEN MEANDERS

CONSTRUCTION COST ESTIMATE

Provide Portneuf River Restoration (Section 1135)
SOLICITATION NO. DACW68-95-R-

31 May 1996

SUMMARY

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	CONTINGENCY SEE BASELINE ROLLUP SHEET	AMOUNT	
✓ 0001	NORTH PARK OPTION C	1	JOB	$188,300		$188,300	189
0002	MEANDERS	1	JOB	$946,800		$946,800	947
	TOTAL CONSTRUCTION COST					$1,135,100	
					USE	$1,136,000	

APPROVED BY: KIM CALLAN, PE
Chief Cost Eng. Branch

6/18/96

CONSTRUCTION COST ESTIMATE PAGE___OF____

PROJECT: PORTNEUF RIVER RESTORATION
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R

PRICE LEVEL DATE: APRIL 1996
DATE PREPARED: 31 MAY 1996

PROPOSED WORK : INDIRECT COSTS

TASK DESCRIPTION			TOTAL $ COST
BID ITEM 1 NORTH PARK C			
DIRECT COST BROUGHT FORWARD			$105,553.57
MOB and DEMOB COSTS			$35,800.00
SUBTOTAL			$141,353.57
PRIME'S FIELD OFFICE (12%)	@	0.120	$16,962.43
SUBTOTAL			$158,316.00
PRIME'S G and A (6%)	@	0.060	$9,498.96
SUBTOTAL			$167,814.96
PRIME'S PROFIT (10%)	@	0.100	$16,781.50
SUBTOTAL			$184,596.45
CONTINGENCY COST (%)	@	0.000	$0.00
SUBTOTAL			$184,596.45
BOND and INSURANCE	@	0.020	$3,691.93
TOTAL DIRECT and INDIRECT COST			$188,288.38
TOTAL COSTS ROUNDED			$188,300

CHECKED BY:

BID ITEM 2 MEANDERS			
DIRECT COST BROUGHT FORWARD			$674,961.77
MOB and DEMOB COSTS			$35,800.00
SUBTOTAL			$710,761.77
PRIME'S FIELD OFFICE (12%)	@	0.120	$85,291.41
SUBTOTAL			$796,053.18
PRIME'S G and A (6%)	@	0.060	$47,763.19
SUBTOTAL			$843,816.37
PRIME'S PROFIT (10%)	@	0.100	$84,381.64
SUBTOTAL			$928,198.01
CONTINGENCY COST (%)	@	0.000	$0.00
SUBTOTAL			$928,198.01
BOND and INSURANCE	@	0.020	$18,563.96
TOTAL DIRECT and INDIRECT COST			$946,761.97
TOTAL COSTS ROUNDED			$946,800

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE PAGE___OF_____

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R- ?

PRICE LEVEL DATE: APRIL 1998
DATE PREPARED: 31 MAY 1998

PROPOSED WORK : SOUTH END OPEN LANDS MEANDERS

TASK DESCRIPTION	QUANTITY		LABOR				EQUIPMENT			MATERIAL OR S	TOTAL	
	NO. UNITS	TYPE UNIT	UNIT MAN/HRS	TOTAL MAN/HRS	RATE PER HOUR	LABOR $ COST	UNIT COST	EQUIP $ COS	UNIT COST	MATERIAL $ C	$ COST	unit $
JACK PIPE UNDER RAILROAD TRACKS	560	LF	0.000	0.00	42.91	0	0.00	0	650.00	364,000	364,000	*$650.00 /LF*
CLASS 5 CONC. PIPE UNDER RR TRACKS	560	LF	0.250	140.00	42.91	6,007	1.00	560	45.00	25,200	31,767	*$56.73 /LF*
CLEARING,EXCAVATION & FINE GRADING	32000	CY	0.025	800.00	42.91	34,327	2.15	68,800	0.00	0	103,127	*$3.22 /CY*
HAUL RUBBLE & EXCESS FROM JOB SITE	1800	CY	0.047	84.60	42.91	3,630	1.75	3,150	0.00	0	6,780	*$3.77 /CY*
FORM & POUR CONC CONTROL STRUCT.	9	CY	10.280	92.52	42.91	3,970	28.00	252	230.66	2,076	6,296	*$699.76 /CY*
GATES	2	EA	0.002	0.00	42.91	0	0.10	0	2400.00	4,800	4,800	*$2,400.19 /EA*
SLIDE GATES	2	EA	0.933	1.87	42.91	80	10.00	20	800.00	1,800	1,700	*$850.03 /EA*
RESTORATION WORK, and SEEDING	11000	SY	0.010	110.00	42.91	4,720	0.25	2,750	0.25	2,750	10,220	*$0.93 /SY*
PLANTINGS (AS PER B. MCDONALD)	1	Job								47,000	47,000	*$47,000.00 /Job*
DEWATERING, TEMP. COFFER DAM &ETC;	1	LOT	40.000	40.00	42.91	1,716	********	2,500	2500.00	2,500	6,716	*$6,716.33 /LOT*
CONC. STEEL & WOOD WEIR	20	CY	12.000	240.00	42.91	10,298	100.00	2,000	700.00	14,000	26,298	*$1,314.90 /CY*
ROAD EMBANKMENT FILL	2400	CY	0.000	0.00	42.91	0	0.00	0	14.00	33,600	33,600	*$14.00 /CY*
ROAD EMBANKMENT GRAVEL	500	CY	0.020	10.00	42.91	429	0.00	0	14.00	7,000	7,429	*$14.86 /CY*
IDAHO SALES TAX ON MAT. @ 5 %											25,226	
TOTAL OF DIRECT COSTS						$65,177		$80,032		$504,626	$874,982	

Prepared by Robert J. Hynek
Cost Engineering Branch

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE PAGE___OF___

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R- ?

PRICE LEVEL DATE: APRIL 1998
DATE PREPARED: 31 MAY. 1998

PROPOSED WORK : NORTH PARK PLAN C

TASK DESCRIPTION	QUANTITY		LABOR				EQUIPMENT		MATERIAL		TOTAL	
	NO. UNITS	TYPE UNIT	UNIT MAN/HRS	TOTAL MAN/HRS	RATE PER HOUR	LABOR	UNIT COST	EQUIP	UNIT COST	MATERIAL	$ COST	unit $
REMOVE ASPHALT BIKE PATH	110	SY	0.074	8.14	42.91	349	0.70	77	0.00	0	426	*$3.88 /SY*
REPLACE ASPHALT BIKE PATH	110	SY	0.087	9.57	42.91	411	0.30	33	3.60	418	862	*$7.83 /SY*
CLEARING,EXCAVATION & FINE GRADING	100	CY	0.020	2.00	42.91	86	2.80	280	0.00	0	366	*$3.66 /CY*
HAUL RUBBLE & EXCESS FROM JOB SITE	500	CY	0.047	23.50	42.91	1,008	1.75	875	0.00	0	1,883	*$3.77 /CY*
WETLAND RESTORATION WORK, TREE (10) REMOVAL & PLANTINGS	4700	SY	0.010	47.00	42.91	2,017	1.00	4,700	2.25	10,575	17,292	*$3.68 /SY*
SECURITY FENCING 40' x 80' PLUS GATE	200	LF			42.91				15.00	3,000	3,000	*$15.00 /LF*
DEWATERING, TEMP. COFFER DAM &ETC;	1	LOT	160.000	160.00	42.91	6,865	5000.00	5,000	2500.00	2,500	14,365	*$14,365.33 /LOT*
OUTFLOW CULVERTS 36" X 100'	200	LF	0.280	56.00	42.91	2,403	0.30	60	3.60	760	3,223	*$16.11 /LF*
FORM & POUR CONC. WEIR STRUCT.	3	CY	10.150	30.45	42.91	1,307	28.00	84	236.00	705	2,096	*$698.52 /CY*
FURNISH and INSTALL100GPM PUMPS	3	EA	4.000	12.00	42.91	515	15.00	45	2100.00	6,300	6,860	*$2,286.63 /EA*
PURCHASE & INSTALL SOLAR SYSTEM FOR POWER	3	EA	16.000	48.00	42.91	2,060	360.00	1,080	15732.00	47,198	50,336	*$16,778.53 /EA*
PIPE TRENCHING FOR PVC	120	LF	0.020	2.40	42.91	103	0.15	18	0.00	0	121	*$1.01 /LF*
FURNISH & INSTALL P V C PIPE	120	LF	0.031	3.72	42.91	160	0.00	0	1.00	120	280	*$2.33 /LF*
CHANNEL EXCAVATION	100	CY	0.000	0.00	42.91	0	0.00	0	4.50	450	450	*$4.50 /CY*
HAUL EXCAVATED MAT OFF SITE	100	CY	0.000	0.00	42.91	0	0.00	0	3.75	375	375	*$3.75 /CY*
IDAHO SALES TAX ON MAT. COST @ 5%											3,620	
TOTAL OF DIRECT COSTS						$17,283		$12,252		$72,399	$105,554	

Prepared by Robert J. Hynek
Cost Engineering Branch

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R

PRICE LEVEL DATE: APRIL 1996
DATE PREPARED: 31 MAY 1996

PROPOSED WORK : MOB and DEMOB

WORK SHEET

Work Type: MOB and DEMOB
Plant and Equipment
Direct Cost ONLY

Work Schedul 8 Hrs per Day
Miles/ Mob Point to Project: 10.00
TRAVEL TIME PORTAL-to-PORTAL @ 35MPH
TRAVEL HOURS 0.5714

Crew Description	Quantity Or No. Req'd	Hourly Rate ($/Hr)	Total For Crew ($/Hr)		Pieces To Haul
		Labor and Equipment Cost			
Foreman	1.00	46.50	46.50		avg working crew rate
Mechanic	1.00	$45.00	$45.00		
Operators	4.00	$46.40	$185.60		$42.91
Carpenters	1.00	$42.05	$42.05		
Teamsters	2.00	$39.15	$78.30		
Labors	3.00	$39.15	$117.45		
				$514.90	Rate /hr
Equipment				Includes burden	
Ford F250 PU 1/3 Time	0.33	$6.95	$2.29		
25 Ton Crane 1/4 TIME (loading & unload)	0.25	$33.50	$8.38		
Kenworth Tractors	4.00	$38.62	$154.48		
Tractor- Loader- Backhoe @ standby rate	1.00	$3.19	$3.19		1 ea
Loader @ standby rate	1.00	$15.70	$15.70		1
Flat-Bed Trailer (1), and Lowboy Trailer (2)	3.00	$5.95	$17.85		0
Van Type Trailer for tools and office (1)	2.00	$5.95	$11.90		2
Hyd. Excavetor @ standby rate	1.00	$23.30	$23.30		1
370 hp Dozer with U blade @ standby rate	1.00	$24.72	$24.72		1
225 hp Scrapers at 20 cy @ standby rate	3.00	$24.78	$74.34		3
Rigging/Tools 3% Lab	Item		$15.45		
				$351.60	
Total Hourly Cost		Labor & Equip.:	$866.50		9 pc

Crew and Hauling Cost

Equipment and Plant Required	Quantity or Pcs of Each	Labor Hours Prep & Load Unload/Setup	$ Cost to Prep and Load Unload & Set	Haul Cost $	
MOBILIZATION	1.0000	24	20,796	44	
DEMOBILIZATION	1.0000	16	13,864	44	
Misc. Tools & Plant	1.0000	1	866	191	
TOTAL MOB and DEMOB			$35,526	$280	**$35,807**

CONSTRUCTION COST ESTIMATE

Provide Portneuf River Restoration (Section 1135)
SOLICITATION NO. DACW68-95-R-

31 May 1996

SUMMARY

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	CONTINGENCY SEE BASELINE ROLLUP SHEET	AMOUNT	
0001	NORTH PARK OPTION C	1	JOB	$188,300		$188,300	191
✓ 0002	MEANDERS	1	JOB	$946,800		$946,800	917
	TOTAL CONSTRUCTION COST					$1,135,100	
					USE	$1,136,000	

APPROVED BY: KIM CALLAN, PE
Chief Cost Eng. Branch

6/10/96

CONSTRUCTION COST ESTIMATE

PAGE___OF____

PROJECT: PORTNEUF RIVER RESTORATION
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R

PRICE LEVEL DATE: APRIL 1998
DATE PREPARED: 31 MAY 1998

PROPOSED WORK : INDIRECT COSTS

TASK DESCRIPTION			TOTAL $ COST
BID ITEM 1 **NORTH PARK C**			
DIRECT COST BROUGHT FORWARD			$105,553.57
MOB and DEMOB COSTS			$35,800.00
SUBTOTAL			$141,353.57
PRIME'S FIELD OFFICE (12%)	@	0.120	$16,962.43
SUBTOTAL			$158,316.00
PRIME'S G and A (6%)	@	0.060	$9,498.96
SUBTOTAL			$167,814.96
PRIME'S PROFIT (10%)	@	0.100	$16,781.50
SUBTOTAL			$184,596.45
CONTINGENCY COST (%)	@	0.000	$0.00
SUBTOTAL			$184,596.45
BOND and INSURANCE	@	0.020	$3,691.93
TOTAL DIRECT and INDIRECT COST			$188,288.38
TOTAL COSTS ROUNDED			**$188,300**

CHECKED BY:

BID ITEM 2 **MEANDERS**			
DIRECT COST BROUGHT FORWARD			$674,981.77
MOB and DEMOB COSTS			$35,800.00
SUBTOTAL			$710,781.77
PRIME'S FIELD OFFICE (12%)	@	0.120	$85,291.41
SUBTOTAL			$796,053.18
PRIME'S G and A (6%)	@	0.060	$47,763.19
SUBTOTAL			$843,816.37
PRIME'S PROFIT (10%)	@	0.100	$84,381.64
SUBTOTAL			$928,196.01
CONTINGENCY COST (%)	@	0.000	$0.00
SUBTOTAL			$928,196.01
BOND and INSURANCE	@	0.020	$18,563.96
TOTAL DIRECT and INDIRECT COST			$946,761.97
TOTAL COSTS ROUNDED			**$946,800**

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE

PAGE___OF_____

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R- 7

PRICE LEVEL DATE: APRIL 1996
DATE PREPARED: 31 MAY, 1996

PROPOSED WORK : NORTH PARK PLAN C

TASK DESCRIPTION	QUANTITY		LABOR				EQUIPMENT		MATERIAL		TOTAL	
	NO. UNITS	TYPE UNIT	UNIT MAN/HRS	TOTAL MAN/HRS	RATE PER HOUR	LABOR	UNIT COST	EQUIP	UNIT COST	MATERIAL	$ COST	unit $
REMOVE ASPHALT BIKE PATH	110	SY	0.074	8.14	42.91	349	0.70	77	0.00	0	426	*$3.88 /SY*
REPLACE ASPHALT BIKE PATH	110	SY	0.087	9.57	42.91	411	0.30	33	3.80	418	862	*$7.83 /SY*
CLEARING,EXCAVATION & FINE GRADING	100	CY	0.020	2.00	42.91	86	2.80	280	0.00	0	366	*$3.66 /CY*
HAUL RUBBLE & EXCESS FROM JOB SITE	500	CY	0.047	23.50	42.91	1,008	1.75	875	0.00	0	1,883	*$3.77 /CY*
WETLAND RESTORATION WORK, TREE (10) REMOVAL & PLANTINGS	4700	SY	0.010	47.00	42.91	2,017	1.00	4,700	2.25	10,575	17,292	*$3.68 /SY*
SECURITY FENCING 40' x 80' PLUS GATE	200	LF			42.91				15.00	3,000	3,000	*$15.00 /LF*
DEWATERING, TEMP. COFFER DAM &ETC;	1	LOT	160.000	160.00	42.91	6,865	5000.00	5,000	2500.00	2,500	14,365	*$14,365.33 /LOT*
OUTFLOW CULVERTS 36" X 100'	200	LF	0.280	56.00	42.91	2,403	0.30	60	3.80	760	3,223	*$16.11 /LF*
FORM & POUR CONC. WEIR STRUCT.	3	CY	10.150	30.45	42.91	1,307	28.00	84	235.00	705	2,096	*$698.52 /CY*
FURNISH and INSTALL100GPM PUMPS	3	EA	4.000	12.00	42.91	515	15.00	45	2100.00	6,300	6,860	*$2,286.63 /EA*
PURCHASE & INSTALL SOLAR SYSTEM FOR POWER	3	EA	16.000	48.00	42.91	2,060	360.00	1,080	15732.00	47,198	50,336	*$16,778.53 /EA*
PIPE TRENCHING FOR PVC	120	LF	0.020	2.40	42.91	103	0.15	18	0.00	0	121	*$1.01 /LF*
FURNISH & INSTALL P V C PIPE	120	LF	0.031	3.72	42.91	160	0.00	0	1.00	120	280	*$2.33 /LF*
CHANNEL EXCAVATION	100	CY	0.000	0.00	42.91	0	0.00	0	4.50	450	450	*$4.50 /CY*
HAUL EXCAVATED MAT OFF SITE	100	CY	0.000	0.00	42.91	0	0.00	0	3.75	375	375	*$3.75 /CY*
IDAHO SALES TAX ON MAT. COST @ 5%											3,620	
TOTAL OF DIRECT COSTS						$17,283		$12,252		$72,399	$105,554	

Prepared by Robert J. Hynek
Cost Engineering Branch

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE

PAGE___OF____

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R- 7

PRICE LEVEL DATE: APRIL 1996
DATE PREPARED: 31 MAY 1996

PROPOSED WORK : SOUTH END OPEN LANDS MEANDERS

TASK DESCRIPTION	QUANTITY		LABOR				EQUIPMENT			MATERIAL OR $	TOTAL	
	NO. UNITS	TYPE UNIT	UNIT MAN/HRS	TOTAL MAN/HRS	RATE PER HOUR	LABOR $ COST	UNIT COST	EQUIP $ COS	UNIT COST	MATERIAL $ C	$ COST	unit $
JACK PIPE UNDER RAILROAD TRACKS	560	LF	0.000	0.00	42.91	0	0.00	0	650.00	364,000	364,000	*$650.00 /LF*
CLASS 5 CONC. PIPE UNDER RR TRACKS	560	LF	0.250	140.00	42.91	6,007	1.00	560	45.00	25,200	31,767	*$56.73 /LF*
CLEARING,EXCAVATION & FINE GRADING	32000	CY	0.025	800.00	42.91	34,327	2.15	68,800	0.00	0	103,127	*$3.22 /CY*
HAUL RUBBLE & EXCESS FROM JOB SITE	1800	CY	0.047	84.60	42.91	3,630	1.75	3,150	0.00	0	6,780	*$3.77 /CY*
FORM & POUR CONC CONTROL STRUCT.	9	CY	10.280	92.52	42.91	3,970	28.00	252	230.66	2,076	6,298	*$699.76 /CY*
GATES	2	EA	0.002	0.00	42.91	0	0.10	0	2400.00	4,800	4,800	*$2,400.10 /EA*
SLIDE GATES	2	EA	0.933	1.87	42.91	80	10.00	20	800.00	1,600	1,700	*$850.03 /EA*
RESTORATION WORK, and SEEDING	11000	SY	0.010	110.00	42.91	4,720	0.25	2,750	0.25	2,750	10,220	*$0.93 /SY*
PLANTINGS (AS PER B. MCDONALD)	1	Job								47,000	47,000	*$47,000.00 /Job*
DEWATERING, TEMP. COFFER DAM &ETC;	1	LOT	40.000	40.00	42.91	1,716	********	2,500	2500.00	2,500	6,716	*$6,716.33 /LOT*
CONC. STEEL & WOOD WEIR	20	CY	12.000	240.00	42.91	10,298	100.00	2,000	700.00	14,000	26,298	*$1,314.90 /CY*
ROAD EMBANKMENT FILL	2400	CY	0.000	0.00	42.91	0	0.00	0	14.00	33,600	33,600	*$14.00 /CY*
ROAD EMBANKMENT GRAVEL	500	CY	0.020	10.00	42.91	429	0.00	0	14.00	7,000	7,429	*$14.86 /CY*
IDAHO SALES TAX ON MAT. @ 5 %											25,228	
TOTAL OF DIRECT COSTS						$65,177		$80,032		$504,528	$674,962	

Prepared by Robert J. Hynek
Cost Engineering Branch

CHECKED BY: KWP

CONSTRUCTION COST ESTIMATE

PAGE___OF_

PROJECT: PORTNEUF RIVER
POCATELLO, IDAHO

PROJECT OR IFB NO.
DACW 68-95-R

PRICE LEVEL DATE: APRIL 1996
DATE PREPARED: 31 MAY 1996

PROPOSED WORK : MOB and DEMOB

WORK SHEET

Work Type: MOB and DEMOB
Plant and Equipment
Direct Cost ONLY

Work Schedul 8 Hrs per Day
Miles/ Mob Point to Project: 10.00
TRAVEL TIME PORTAL-to-PORTAL @ 35MPH
TRAVEL HOURS 0.5714

Labor and Equipment Cost

Crew Description	Quantity Or No. Req'd	Hourly Rate ($/Hr)	Total For Crew ($/Hr)	Pieces To Haul	
Foreman	1.00	46.50	46.50	avg working crew rate	
Mechanic	1.00	$45.00	$45.00		
Operators	4.00	$46.40	$185.60	$42.91	
Carpenters	1.00	$42.05	$42.05		
Teamsters	2.00	$39.15	$78.30		
Labors	3.00	$39.15	$117.45		
			$514.90	Rate /hr	
Equipment			Includes burden		
Ford F250 PU 1/3 Time	0.33	$6.95	$2.29		
25 Ton Crane 1/4 TIME (loading & unload)	0.25	$33.50	$8.38		
Kenworth Tractors	4.00	$38.62	$154.48		
Tractor- Loader- Backhoe @ standby rate	1.00	$3.19	$3.19		1 ea
Loader @ standby rate	1.00	$15.70	$15.70		1
Flat-Bed Trailer (1), and Lowboy Trailer (2)	3.00	$5.95	$17.85		0
Van Type Trailer for tools and office (1)	2.00	$5.95	$11.90		2
Hyd. Excavator @ standby rate	1.00	$23.30	$23.30		1
370 hp Dozer with U blade @ standby rate	1.00	$24.72	$24.72		1
225 hp Scrapers at 20 cy @ standby rate	3.00	$24.78	$74.34		3
Rigging/Tools 3% Lab	Item		$15.45		
			$351.60		
Total Hourly Cost		Labor & Equip.:	$866.50		9 pc

Crew and Hauling Cost

Equipment and Plant Required	Quantity or Pcs of Each	Labor Hours Prep & Load Unload/Setup	$ Cost to Prep and Load Unload & Set	Haul Cost $	
MOBILIZATION	1.0000	24	20,798	44	
DEMOBILIZATION	1.0000	16	13,864	44	
Misc. Tools & Plant	1.0000	1	866	191	
TOTAL MOB and DEMOB			$35,526	$280	**$35,807**

CONCRETE COST WORK SHEET

PROJECT: POCATELLO PORTNEUF RIVER 1135

				(LABOR)			(EQUIPMENT)		(MATERIAL (OR) OTHER)		
TASK DESCRIPTION form & pour (3) weir's	NO. UNITS	TYPE UNIT	UNIT MAN/HR	TOTAL MAN/HR	RATE/ HOUR	COST	UNIT COST	TOTAL COST	UNIT COST	COST	TOTAL COST
FINE GRADING	30	SF	0.004	0.1	39.15	5	0.05	2	0	0	6
FALSE WORK UP & DN	0	SF	0.175	0.0	39.15	0	0.07	0	0.00	0	0
ERECT & STRIP FORM	240	SF	0.073	17.5	46.50	815	0.06	14	0.75	180	1009
REINFORCING STEEL	180	LBS	0.005	0.9	46.50	42	0.00	0	0.30	54	96
REINFORCING MESH	0	SF	0.005	0.0	46.50	0	0.00	0	0.16	0	0
PLACE CONCRETE *	3	CY	0.750	2.3	39.15	88	0.55	2	85.00	255	345
PUMP CONCRETE *	0	CY	0	0.0	0.00	0	12.50	0	0	0	0
FINISH CONCRETE	20	SF	0.025	0.5	40.50	20	0.02	0	0.10	2	23
CURE CONCRETE	20	SF	0.003	0.1	39.15	2	0	0	0.04	1	3
PROTECT CONCRETE	0	HRS	1	0.0	39.15	0	0	0	0.03	0	0
CONCRETE ADDITIVE	3	CY	0	0.0	0	0	0	0	1.00	3	3
TESTING	1	EA	0	0.0	0	0	0	0	100.00	100	100
ROUGH HARDWARE	1	LOT	0	0.0	0	0	0	0	10.00	10	10
CHAMFER STRIPS	60	LF	0.015	0.9	39.15	35	0	0	0	0	35
DRILL FOR DOWELS	0	EA	0.300	0.0	39.15	0	0.02	0	0.75	0	0
CONST/JOINTS KC	0	LF	0.040	0.0	39.15	0	0.04	0	0.50	0	0
EXPANSION JOINTS	6	LF	0.030	0.2	40.50	7	0.01	0	0.20	1	9
WATERSTOP	0	LF	0.055	0.0	40.50	0	0.00	0	4.00	0	0
ANCHOR BOLTS	0	EA	0.090	0.0	40.50	0	0.00	0	1.00	0	0
DOVETAIL SLOT	0	LF	0.020	0.0	40.50	0	0.00	0	0.45	0	0
SACKING/ PATCHING	240	SF	0.033	7.9	39.15	310	0.00	0	0.15	36	346
	SUBTOTAL			30.35		$1,325		$18		$642	$1,985
	SALES TAX ON MAT.									50	50.08
	SMALL TOOLS 5% LAB.							66			66.23
	TOTAL					$1,325/3		$84/3		$692/3	$2,101
						unit $ 441.66		$ 28		$ 230.66	
						$ 42.91 = 10 MH				COST PER YARD =	$700.27

PRICE LEVEL DATE:
DATE PREPARED:
PREPARED BY: Robert j. Hynek C.C.E.T.

SUBTOTAL - ALL CONTRACTS

**** TOTAL PROJECT COST SUMMARY ****

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE DRAFT LETTER, DATED: 22 JuL 96

PROJECT: PORTNEUF RIVER MEANDERS SECTION 1135
LOCATION: POCATELLO, IDAHO

DISTRICT: WALLA WALLA
P.O.C.: KIM CALLAN, CHIEF, COST ENGINEERING

		CURRENT MCACES ESTIMATE PREPARED: 11 Jun 96 EFFECTIVE PRICING LEVEL: 1 APRIL 96				AUTHORIZ./BUDGET YEAR: 1997 EFFECT. PRICING LEVEL: 1 OCT 96			.........FULLY FUNDED ESTIMATE.........			
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	COST ($K)	CNTG ($K)	TOTAL ($K)	SPENT THRU FY 96 ($K)	COST ($K)	CNTG ($K)	FULL ($K)
06.3--	WILDLIFE FACILITIES & SANCTUAR GOVERNMENT FURNISH SERVICES	947	189	20%	1,136	973	195	1,168		973	195	1,168
	TOTAL CONSTRUCTION COSTS =====	947	189	20%	1,136	973	195	1,168		973	195	1,168
01---	LANDS AND DAMAGES	214	43	20%	257	220	44	264		220	44	264
18---	CULTURAL RESOURCES	8	2	20%	10	8	2	10		8	2	10
30---	PLANNING, ENGINEERING & DESIGN	199	40	20%	239	204	41	245	214	204	41	459
31---	CONSTRUCTION MANAGEMENT	114	22	19%	136	117	23	140		117	23	140
	TOTAL PROJECT COSTS ==========	1,482	296	20%	1,778	1,522	305	1,827	214	1,522	305	2,041

TOTAL FEDERAL COSTS ==============> 2,041

TOTAL NON-FEDFRAL COSTS ==========>

THIS TPCS REFLECTS A PROJECT COST CHANGE OF $ --- ----- --------

DISTRICT APPROVED:

THE MAXIMUM PROJECT COST IS =======> $ -------- --------

[illegible] for CHIEF, COST ENGINEERING, Kim Callan

[illegible] CHIEF, REAL ESTATE, Richard Carlton

[illegible] CHIEF, PLANNING, Douglas Frei (ACTING)

[illegible] for CHIEF, ENGINEERING , Surya Bhamidipaty,Ph. D., P. E.

[illegible] CHIEF, OPERATIONS, Wayne John

[illegible] CHIEF, CONSTRUCTION, Gary Willard

[illegible] CHIEF, CONTRACTING, Jackie Anderson

[illegible] PROJECT MANAGER, William Mac Donald, P. W. S.

[illegible] ~~DDE~~ (PM), Mark Charlton

DIVISION APPROVED:

_______________ CHIEF, COST ENGINEERING

_______________ DIRECTOR, REAL ESTATE

_______________ CHIEF, PROGRAMS MANAGEMENT

_______________ DIRECTOR OF PPMD

APPROVED DATE: _______________

Walla Walla District

THIS ESTIMATE IS BASED ON THE SCOPE CONTAINED IN THE DRAFT LETTER, DATED: 22 JuL 96

PROJECT: PORTNEUF RIVER MEANDERS SECTION 1135
LOCATION: POCATELLO, IDAHO
DISTRICT: WALLA WALLA
P.O.C.: KIM CALLAN, CHIEF, COST ENGINEERING

		CURRENT MCACES ESTIMATE PREPARED: 11 Jun 96 EFFECTIVE PRICING LEVEL: 1 APRIL 96				AUTHORIZ./BUDGET YEAR: 1997 EFFECT. PRICING LEVEL: 1 OCT 96				.....FULLY FUNDED ESTIMATE.....				
ACCOUNT NUMBER	FEATURE DESCRIPTION	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	OMB (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	FEATURE MID PT	OMB (%)	COST ($K)	CNTG ($K)	FULL ($K)
06.3--	Portneuf River Restoration Meanders Section 1135	947	189	20%	1,136	2.7%	973	195	1,168	4 QTR 97		973	195	1,168
	TOTAL CONSTRUCTION COSTS =====	947	189	20%	1,136		973	195	1,168			973	195	1,168
01---	LANDS AND DAMAGES	214	43	20%	257	2.7%	220	44	264	4 QTR 97		220	44	264
18---	CULTURAL RESOURCES	8	2	20%	10	2.7%	8	2	10	4 QTR 97		8	2	10
30--- 21.0%	PLANNING, ENGINEERING & DESIGN	199	40	20%	239	2.7%	204	41	245	4 QTR 97		204	41	245
31--- 12.0%	CONSTRUCTION MANAGEMENT	114	22	20%	136	2.7%	117	23	140	4 QTR 97		117	23	140
	TOTAL COSTS ==========	1,482	296	20%	1,778		1,522	305	1,827			1,522	305	1,827

NOTE: 30 ACCOUNT WAS DERIVED FROM THE FOLLOWING: 25% OF CONSTRUCTION FOR DESIGN FOR NORTH PARK & 20% OF CONSTRUCTION DESIGN FOR OPEN MEANDERS