APPENDIX (X?)
Substantive Compliance for
Clean Water Act Section 404 and Rivers and Harbors Act

1. Introduction.

The purpose of this document is to record the Corps' evaluation and findings regarding this project pursuant to Section 404 of the Clean Water Act (CWA) and the Rivers and Harbors Act (RHA).

The following actions are covered by this document:

a. Construction of a 770 foot long driven sheet pile with a concrete cap floodwall
b. Placement of 600 feet of rock riprap for bank protection on the river side of the upstream end of the floodwall.
c. Large woody debris (LWD) placement and river bank riparian plantings

The information contained in this document reflects the findings of the project record. Specific sources of information include the following:

a. St. Maries Section 205 Timber Floodwall Replacement Study. Detailed Project Report and Environmental Assessment. February 2001
b. Biological Assessment of St. Maries Section 205 Timber Floodwall Replacement Study. February, 2001.
c. Advanced Measures Project Information Report, St. Maries Idaho, USACE, March 1999.
d. 404(b)(1) Evaluation (see below)
e. Public Interest Review (see below)

The structure of this document contains the substantive compliance issues from the Clean Water Act 404(b)(1) Guidelines [40 CFR §230.12(a)] and the Regulatory Programs of the Corps of Engineers [33 CFR §320.4(a)].

2.0 Project Background.

The project site is located on the St. Joe River in north central Idaho. The St. Joe River has a total drainage area of 1,886 square miles and is a major tributary to Coeur d' Alene Lake and the Spokane River system. The river flows from the western slopes of the Bitterroot Range on the Idaho/Montana border.

The city of St. Maries is protected from flooding on the St. Joe River by an extensive earthen levee system and a wooden floodwall. The study area is the approximately 195-acre floodplain that is protected by the existing wooden floodwall and levee system. The existing timber floodwall and adjacent earthen levees were constructed by the Corps of Engineers in 1942 under

the Flood Control Act of June 28, 1938 (Public Law #761). Recent Corps of Engineers inspection reports indicate that the wooden floodwall has exceeded its design life and that many of the timbers are damaged or rotted through, or missing altogether. In addition, the wall seeps during high water events. Land use in the flood hazard area is primarily residential, industrial, and commercial. The wooden floodwall is located on property owned by the Potlatch Corporation, which is Benewah County's largest employer. The mill at the project site employs 380 local residents. Sixteen other businesses are located in the hazard area, as are 56 residential structures. Land use is anticipated to remain the same in the foreseeable future.

Based on a request from the city of St. Maries dated 3 December 1997, the Corps initiated the Feasibility Study in 1998 with the city of St. Maries serving as the local sponsor.

Based on requests for assistance from the Governor of Idaho and the city of St. Maries received in February and March 1999, Seattle District Corps of Engineers conducted an investigation and produced an Advance Measure Project Information Report. Emergency construction was subsequently performed to shore up the deteriorated floodwall prior to the 1999 flood season. The emergency repairs consist of driven H-piles on the land side of the floodwall, a continuous steel waler bolted to the H-piles, and wire rope wrapped around the river side timber piles and secured to the H-piles. The design life of the emergency repairs is estimated to be less than five years.

3.0 Project Need.

The primary need for the community of St. Maries is flood protection adequate to a 200-year event. The city of St. Maries is protected from flooding on the St. Joe River by an extensive earthen levee system and a wooden floodwall. Flood protection for the community of St. Maries is dependent upon maintaining the integrity of the entire city system. The deteriorating wooden floodwall portion of the existing flood control system at St. Maries does not currently provide adequate flood protection. Currently, water levels at or above a 13-year event can be expected to cause catastrophic failure of the floodwall. Failure also will eventually occur from sustained moderate water levels, on the order of a two-year event, or from continual raising and lowering of water levels from season to season. It is unknown whether the failure would be sudden and catastrophic, or gradual. Regardless of the failure type, the resulting damages would be economically devastating to the community. Reconstruction of the floodwall will provide residents and businesses with a sufficient level of high-quality flood protection.

4.0 Project Purpose.

The project purpose is to develop solutions for providing the community of St. Maries with flood protection, while meeting required criteria for NED, environmental quality, regional development, and other social effects.

5.0 Availability Of Less Environmentally Damaging Practicable Alternatives to Meet the Project Purpose.

The Corps evaluated the alternatives using a wide range of criteria including the CWA and RHA. The criteria were used to screen and evaluate the different alternative plans and to measure each plan's contribution to the National Economic Development (NED), Environmental Quality (EQ), Regional Development (RD), and Other Social Effects (OSE) of the Water Resources Council's Principles and Guidelines. A full evaluation of this issue is included in the February 2001 St. Maries Section 205 Timber Floodwall Replacement Study. The alternatives evaluated for this project were as follows:

a. **Alternative 1 (No Action).** The no-action option would result in the eventual complete failure of the floodwall. Failure will eventually occur from sustained moderate water levels, on the order of a two-year event, or from continual raising and lowering of water levels from season to season. Furthermore, water levels at or above a 13-year event can be expected to cause catastrophic failure of the floodwall. The local sponsor and other agencies lack the means to prevent this failure under the federal no-action alternative. This alternative fails to meet the project purpose of providing flood protection to the community of St. Maries.

b. **Alternative 2 (Sheet Pile Wall With Concrete Cap Alternative- Recommended Plan)** Replacing the existing wooden floodwall with a driven sheet pile wall and concrete cap is the recommended option. The new floodwall would be built within the footprint of the existing structure, minimizing real estate and environmental impacts. The wall would be built to the same level of flood protection as the rest of the existing flood control system.

c. **Alternative 3 (Concrete Wall Alternative).** This option would provide a replacement floodwall in the existing footprint. The level of flood protection would be the same as the sheet pile wall alternative. The benefits, therefore, would be the same as the sheet pile wall alternative, but the initial costs would be higher. Annual maintenance costs would be the same as the sheet pile alternative.

d. **Alternative 4 (Earthen Levee Alternative)** This option would provide an earthen levee section in place of the existing wooden floodwall. Flood protection and therefore benefits would be the same as the floodwall options described above. The construction and maintenance costs would be significantly lower. However, this option was removed from further consideration because it will not fit in the footprint of the existing structure. Moving construction outside of the existing project footprint is not an option because of space limitations on Potlatch property on the landward side. The existing structure is immediately adjacent to the access road and the mill building, and expanding the footprint would impair access and/or require relocation of mill facilities. This is unacceptable to Potlatch and the city of St. Maries. Moving riverward would cause an increase in the water surface profile and have adverse environmental impacts.

e. **Alternative 5 (Timber Crib Wall Alternative.)** This option would provide a new double-wall floodwall similar to the existing structure. Flood protection, benefits and annual costs would be the same as the sheet pile alternative. This option was removed from further consideration because of the expense and difficulty associated with obtaining timbers to construct the wall and treating them in order to prevent deterioration.

f. **Alternative 6** (**Expand Existing Advance Measures Repair)** This option would add on to the existing H-pile shoring that was driven on the land side of the crib wall under PL 84-99 Advance Measures in February 1999. H-piles would be driven on the river side and the wall would be shored up using steel walers and wire ropes. This option was eliminated because it would not provide long-term protection, nor does it solve the problem of the rotting and broken timbers.

Findings. The results of feasibility planning indicate that only one alternative, the driven sheet pile floodwall with concrete cap, met the requirements of economic, engineering, and environmental feasibility while responding to the planning criteria and the sponsor's and community's needs to the greatest extent possible.

6.0 Significant Degradation, Either Individually or Cumulatively, To the Aquatic Environment

a. Impacts on Ecosystem Function.

Potential impacts to aquatic resources were considered during the design of the proposed work, and steps have been taken to minimize construction impacts. Direct impacts to aquatic resources will be avoided by working during July and August (in the dry) and leaving as much as possible the existing vegetation. Also, plantings and large woody debris (LWD) will be incorporated into the bank protection design.

In the recommended alternative, bank protection will be required for 600 feet on the river side of the upstream end of the floodwall due to erosion of the slope. Bank stabilization structures and flow diversion structures alter a river's natural adjustment processes resulting in changes in channel morphology (Beschta and Platts 1986, (Baker et al. 1988, Backiel and Benczak 1989, Surian 1999, Dister et al. 1990, Elser 1968). Thus, bank stabilization structures not only alter the banks they are designed to protect, but by redirecting a river's energy, change the morphology and physical structure of a river. Because bank stabilization structures restrain a river's natural lateral channel migration, they allow less large woody debris input, substrate deposition, and side-channel formation, and thereby lead to decreased habitat quality for fish. These changes in turn, would be expected to limit abundance and production of fish.

However, positive or neutral effects on fish resulting from bank stabilization with riprap have been observed in warmwater systems (Pennington et al. 1983a; Pennington et al. 1983b). (Pennington et al. 1985, Farabee 1986, Hjort et al. 1984) and coldwater systems (Hunt 1988, Avery 1995, Binns 1994, Knudsen and Dilley 1987**,** Michny 1988, Lister et al. 1995). Overall,

assessments of riprap in coldwater systems inhabited by salmonids tended to show deleterious effects (Elser 1968, Knudsen and Dilley 1987, Thurow 1988, Beamer and Henderson 1998).

Overall literature that addresses the effects of bank stabilization with riprap on river biota provides ambiguous results when considered in aggregate. Some case studies showed higher diversities and abundances of fish and invertebrates along riprapped banks than natural banks. Other studies indicated decreases in abundances and diversities of fish along riprapped banks compared to natural banks. In some studies, benefits were accrued by some species while others were deleteriously affected.

Due to the fact that various enhancements can be incorporated into riprapped banks to benefit fish (shields et al. 1995, Lister et al. 1995, US Fish and Wildlife Service 1992, Michny 1987, Kallemeyn and Novotny 1977, Hunter 1991; Mcclure 1991; Shields 1991). The corps has designed rip rapped banks that incorporate woody vegetation provide more cover for fish and have a more natural appearance than rock riprap. Furthermore, Shields (1991) found that rip rapped banks on the Sacramento river, California, that incorporated woody vegetation suffered less damage from high flow velocities than unvegetated banks of the same age and similar curvature

In this project the pre-existing conditions are already degraded and no longer natural. Therefore, the effects of riprap and large woody debris may be viewed more realistically as partial mitigation of more severe past damage.

Best management practices will be used to minimize turbidity releases into St. Joe river. However, during rainy weather there could be a release of sediment into the river. Suspended sediment produces little or no direct mortality on adult fish at levels observed in natural, relatively unpolluted streams.

It seems likely that fish have evolved behavioral or physiological adaptations to temporary high concentrations of suspended sediment in order to survive short-term conditions caused by natural spates and floods. Chronic high suspended sediment concentrations that are initiated by anthropogenic sources, however, may not be tolerated.

Despite early speculation about gill damage by suspended sediment (Cordone and Kelley 1961; Herbert and Merkens 1961), few reports indicated gill damage and impairment of respiratory function as a source of mortality (Mcleay et al. 1987; Redding et al. 1987; Reynolds et al. 1989). Whereas high suspended sediment concentrations may not be immediately fatal, thickening of the gill epithelium may cause some loss of respiratory function (Bell 1973)

One of the major sublethal effects of high suspended sediment is the loss of visual capability, leading to reduced feeding and depressed growth rate. Several researchers have reported decreased feeding and growth by fish in turbid conditions resulting from suspended sediment.

More is known about the effects of suspended sediment on macroinvertebrates. The most common direct effect observed in experiments with fine sediments has been a pronounced increase in downstream drifting. Such increased drift has been attributed primarily to a decrease

in light with consequent drift responses similar to behavioral drift in a diel periodicity. Extraordinary drift under prolonged high levels of suspended sediment may deplete benthic invertebrate populations.

Severe damage to benthic invertebrate populations can be caused by heavy sediment deposits. The affected organisms consist mainly of the insect orders Ephemeroptera, Plecoptera, and Trichoptera, (EPT), which generally are the forms most readily available to foraging fish. Virtually no research has been conducted on the effect of sediment on the meiofauna of streambeds, despite increasing appreciation of the ecological importance of these small organisms to fisheries.

Any effect of sediment input to St. Joe River is likely to be of minor consequence since the biological effect of episodic inputs has been found generally to be temporary. Rapid recovery often results from invertebrate drift from upstream reaches. In an Ohio stream, sediments from eroding deposits of glacial lacustrine silt, although natural, simulated episodic events. The glacial silt periodically reduced benthic macroinvertebrates up to 5 km downstream from the site (Dewalt and Olive 1988). However, after one of the glacial silt deposits was completely eroded, sediment input ceased, the stream deposits cleared, and drift from upstream quickly restored benthic populations. In British Columbia, temporary siltation from a pipeline crossing reduced local benthos populations by up to 74% but benthos recovery was rapid after construction stopped (Tsui and Mccart 1981).

Also, because riprap provides many interstitial spaces and high amounts of surface area, aquatic invertebrates often flourish therein. Riprap in streams often becomes a location for sediment and debris deposition (Shields 1991), which enhances habitat for benthic invertebrates by providing additional food and cover (Burress et al. 1982; Mathis et al. 1982), except when the deposited sediments consist of sand (Sanders et al. 1986).

b. Impacts on Recreational, Aesthetic and Economic Values.

Impacts related to recreation and aesthetics are considered minimal. Construction activities will not adversely impact the economy of the area. Prime recreational destinations do not occur in the project area. This impact is not expected to prevent people from visiting St. Maries. The proposed project is expected to have a significant benefit for the local economy.

The existing average annual flood damages between the zero damage point and the 200-year flood are $663,000. Under this alternative, if the proposed project (providing 200-year flood protection) was constructed and in operation, the estimated $663,000 in average annual damages will be prevented. Also, this alternative would contribute to overall community development by a reduction of the depressing economic effects of flood damages within the project area.

Findings. The Corps has determined that there would be no significant adverse impacts to aquatic ecosystem functions and values. It is expected that some aquatic ecosystem functions and values will temporarily degrade during construction. However, it is expected that these functions and values will return when operations are completed.

7.0 Appropriate and Practicable Measures To Minimize Potential Harm to the Aquatic Ecosystem

a. Impact Avoidance Measures.

The project will be built during late summer/early fall when wintering bald eagles or migrating bull trout will not be present

b. Impact Minimization Measures.

The Corps will take all steps during construction and monitoring of the project to minimize impacts to aquatic resources. The Corps will monitor water quality during and after construction to assure that any impacts to water quality will be temporary in nature and minimal in overall impact. Construction would take place during low water, minimizing impacts to the river. Contingencies will be in place if any of the water quality protection measures fail to achieve their intended function. The Corps will observe all construction windows to assure that impacts to migratory fish will be avoided or minimized. Specifically these best management practices (BMPs) will be implemented:

1. Riparian and wetland areas will be avoided as staging or refueling areas.
2. Equipment will be stored, serviced, and fueled away from aquatic habitats or other sensitive areas.
3. The project will use clean material to minimize the release of fines into the aquatic environment.
4. Existing roadways or travel paths will be used for access to project sites when possible.
5. Excavation and transport equipment machinery will be limited in capacity, but sufficiently sized to complete required activities.
6. All garbage will be removed from the project site and disposed of properly; undisturbed vegetated buffer zones will be retained along the project to the greatest extent possible to reduce sedimentation rates, channel instability, and aquatic habitat impacts.
7. Riprap will be limited to the extent absolutely needed and the use of bio-engineered techniques employed where possible.
8. The Corps will stockpile native riparian vegetation removed during construction and replant it in the riparian corridor after construction of engineered features.
9. Will isolate the work area from the open water to prevent sediment delivery and turbidity in the river.

c. Compensatory Mitigation Measures.

The project will result in the placement of 600 feet of rock rip rap. Large woody debris will be incorporated into the bank protection design to partially mitigate the impact of rip rap bank protection. Native plants will be planted in areas where it is necessary to remove existing vegetation. No additional compensatory mitigation will be required.

Findings. The Corps has determined that all appropriate and practicable measures have been taken to minimize potential harm.

8.0 Other Factors In the Public Interest.

a. Fish and Wildlife. The Corps has coordinated with State and Federal agencies, as well as Native American Nations to assure careful consideration of fish and wildlife resources.

The Corps has prepared a Biological Evaluation in accordance with the Endangered Species Act. The Corps will assure full compliance with the Endangered Species Act prior to project implementation.

b. Water Quality. The Corps will coordinate the construction design with the Idaho Department of Environmental Quality and the US Environmental Protection Agency to assure compliance with State Water Quality Standards.

c. Historic and Cultural Resources. The Corps will coordinate with the State Historic Preservation Office.

d. Activities Effecting Coastal Zones. The Corps has determined that this project is consistent with the Coastal Zone Management Act.

e. Environmental Benefits. Plantings would be placed on the river side of the floodwall where little or no vegetation currently exists.

f. Navigation. The proposed work would not obstruct navigable water of the United States.

Findings. The Corps has determined that this project is within the public interest.

9.0 Conclusions. The Corps finds that this project complies with the substantive elements of Section 404 of the Clean Water Act and the Rivers and Harbors Act.

404(b)(1) Evaluation [40 CFR §230] and Evaluation for General Policies for the Evaluation of Permit Applications [33 CFR §320.4]

404(b)(1) Evaluation [40 CFR §230]

Potential Impacts on Physical and Chemical Characteristics (Subpart C)

1. Substrate [230.20]

The overall site substrate is not anticipated to be changed as result of the project. The existing surface substrate is mostly unconsolidated fine-grained silts and sands. The riparian zones contain coarser sediments including areas of shoreline armoring (riprap). The earth fill within the crib wall appears to consist predominantly of fine-grained sands and silts. Soils from ground surface to about 4 to 6 feet below ground surface consist of soft to very soft sands, silty sands, and sandy silts with varying organic content. These soils overlay a deposit of loose sands and soft clays and sandy clays. Native sediments underlying the subsurface consist of coarser sands. Where rip rap is placed along the shoreline, the physical substrate would change from a soil, gravel, and rock fragments to gravel and large angular rock. This work will not effect the geology or disrupt geologic process in the area.

2. Suspended Particulate/Turbidity [230.21]

During placement of rip rap along the river bank and general construction activities there may be localized increases in turbidity and suspended particulates. These levels will be of short duration with minor impacts. The project will be monitored frequently to ensure that all activities fully comply with state water quality requirements. Increases in turbidity during construction will be reduced by employing best management practices (BMP)s. BMPs include the use of silt screens, hay bails, monitoring of construction vehicles, extra

precaution when fueling, and the timing of construction. Following construction there will not be any continuing increases in turbidity. The Corps has determined that water quality impacts from suspended particulates and turbidity to be minor and short-term in nature for all actions.

3. **Water Quality [230.22]**
   The Corps has determined that there would be no adverse long-term impacts to the water column from sediment exposure. Changes in water quality would be limited to a slight increase in suspended particulates and turbidity during and immediately after construction. Long term water quality would not significantly change. Water quality parameters other than turbidity, such as fecal coliform, temperature and dissolved oxygen will not be affected by the project. The site will be carefully monitored in accordance the 401 Certification for the action.

4. **Current Patterns and Water Circulation [230.23]**
   The Corps expects no disruption of current patterns and water circulation at this site during or after construction.

5. **Normal Water Fluctuations [230.24]**
   There will be no effect on normal (non-flood) water fluctuations as a result of this project.

6. **Salinity Gradients [230.25]**
   This project would occur in freshwater; therefore, no effects on salinity are expected.

Potential Impacts On Biological Characteristics of the Aquatic Ecosystem (Subpart D)

1. **Threatened and Endangered Species [230.30]**
   The Corps is in the process of preparing a biological assessment for this project and will be in close coordination with the U.S. Fish and Wildlife Service to assure compliance with the Endangered Species Act.

2. **Aquatic Food Web [230.31]**
   Bank revetment will likely contribute to alterations of the natural flow regime which may result in numerous physical and biological changes to the river's ecosystem. Fish habitat may be affected through loss of bank gravel sources for spawning areas, channel narrowing, increase in scour and erosion in the channel (due to narrowing), reductions in channel migration and bank heterogeneity, decrease in habitat diversity, and removal of vegetative cover. However, incorporation of fish habitat structures and vegetation plantings will provide enhanced fish habitat over the existing fairly degraded condition.

3. **Wildlife [230.32]**
   No wildlife species are expected to be adversely affected by the proposed action. Bird and wildlife life use may be temporarily disrupted at the sites during construction. These impacts will be short-term and insignificant in nature.

Potential Impacts to Special Aquatic Sites (Subpart E)

Proposed actions are not anticipated to have any impact on special aquatic sites as described in subpart E of the Section 404(b)(1) guidelines.

1. **Sanctuaries and Refuges [230.40]**
   The proposed action will have no effect on sanctuaries or refuges

2. **Wetlands [230.41]**
   The proposed action will have no effect on wetlands.

3. **Mudflats [230.42]**
   The proposed action will have no effect on mudflats.

4. **Vegetated Shallows [230.43]**
   The proposed action will have no effect on vegetated shallows.

5. **Coral Reefs [230.44]**
   Not applicable.

6. **Riffle and Pool Complexes [230.45]**
   The proposed action will have no direct effect on riffle and pool complexes.

Potential Effects on Human Use Characteristics (Subpart F)

1. **Municipal and Private Water Supplies [230.50]**
   Following completion, the proposed action would not adversely affect water supplies municipal and private water supplies.

2. **Recreation and Commercial Fisheries [230.51]**
   The site is not located in the vicinity of public water supply or commercial fishing use. Some recreational fishing occurs in the area. Minor effects from construction noise and disturbance would be expected during construction.

3. **Water-related Recreation [230.52]**
   Water-related recreation is not expected to be impacted.

4. **Aesthetics [230.53]**
   Aesthetics will not be impacted. The construction activities at the site will be temporarily unsightly, but the long-term effect will be negligible. The action will not significantly change the general character of this area. Riparian plantings may enhance the aesthetics of the river bank over time.

5. **Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves [230.54]**
   Not applicable.

Evaluation and Testing (Subpart G)

1. **General Evaluation of Dredged or Fill Material [230.60]**

All material to be placed at the project site will be commercially purchased from a commercial quarry and is not likely to contain toxic or hazardous substances. All material will be disposed of in an approved upland landfill that will be identified prior to construction.

2. **Chemical, Biological, and Physical Evaluation and Testing [230.61]**
   There are timbers treated with creosote found within the project area that will needed to be disposed of off-site. According to the Idaho Department of Environmental Quality, treated timbers (creosote and pentachlorophenol) are not hazardous wastes. These timbers may be disposed either by placement in a municipal landfill (which may require waste characterization), timbers may be reused, such as for landscaping, or used as fuel in air-permitted industrial furnaces or boilers.

   No soil sampling is required to determine if the soil to be removed is hazardous. If waste characterization of the soil and timbers is required for disposal, collection of two wood core samples and two soil samples will be sufficient. The samples would be tested for semi-volatiles in a laboratory analysis.

Action to Minimize Adverse Effects (Subpart H)

1. **Actions Concerning the Location of the Discharge [230.70]**
   The materials to be discharged are clean and the materials to be excavated will be taken to an appropriate upland disposal site. Also, see 230.61 above.

2. **Actions Concerning the Material to be Discharged [230.71]**
   Materials for the revetment would be obtained from local quarries and consist of large rock which would not contain toxic materials or organic soils.

3. **Actions Controlling the Material after Discharge [230.72]**
   Following placement of the revetment materials for the revetment and buttress fill, no further dispersion is expected, therefore no measures to control placement of these materials are considered necessary.

4. **Actions Affecting the Method of Dispersion [230.73]**
   The rip rap will be placed at the site in the quickest possible method to reduce turbidity impacts. It is recognized that there will be an elevation of turbidity downstream of the rip rap site, and the Corps will continue to coordinate with EPA as a permit requirement for Section 401 Water Quality Certification. The rock rip rap revetment will be primarily constructed "in the dry" to avoid water quality impacts. Turbidity monitoring will also occur upstream and downstream of the site to ensure there are no violations of state water quality standards.

5. **Actions Related to Technology [270.74].**
   The technology used in the proposed project is considered acceptable for this scope of work. Disposal will involve use of a hydraulic excavator with material to be transported by dump truck for placement within the proposed fill area. No other specific actions to minimize effects are considered necessary.

6. **Actions Affecting Plant and Animal Populations [270.75]**
   The Corps will coordinate construction activities with the Tribal, State, and Federal resource agencies to assure minimal impacts to fishery resources and other wildlife. At the site the least amount of existing vegetation will be removed as possible. Impacts to existing plant and animal populations will be reduced or compensated for through timing (to avoid impacts to juvenile salmon, threatened and endangered species). Cumulative impacts from this project consist of altered or eliminated habitat. These affected habitats will be replaced and maintained as practicable by mitigation structures.

7. **Actions Affecting Human Use [230.76]**
   The Corps has taken all appropriate and practicable steps to assure minimal impacts to human use, their safety and general appreciation of the area.

8. **Other Actions [230.77]**

General Policies for the Evaluation of Permit Applications [33 CFR §320.4]

1. **Public Interest Review [320.4(a)]**

   The Corps finds these actions to be in compliance with the 404(B)(1) guidelines and not contrary to public interest.

2. **Effects on Wetlands [320.4(b)]**
   See 404(b)(1) evaluation.

3. **Fish and Wildlife [320.4(c)]**
   The Corps consulted with State and Federal resource agencies and other interested members of the public on this action.

4. **Water Quality [320.4(d)]**
   The Corps will certify that this project will not violate State Water Quality Standards as part of their equivalent 401 Certification that will be prepared specifically for the construction design.

5. **Historic, Cultural, Scenic, and Recreational Values [320.4(e)]**
   A phone conversation was held on June 8, 2000 between Ms. Neitzel of the Idaho State Historic Preservation Office (ISHPO) and David Grant of the US Army Corps of Engineers, Seattle District. The Deputy SHPO recommended that a site visit occur after the crib wall had been removed and the original grade exposed. Cultural resource monitoring of the placement of sheet pile is not recommended because it does not result in subsurface exposure.

6. **Effects on Limits of the Territorial Sea [320.4(f)]**
   Not applicable.

7. **Consideration of property ownership [320.4(g)]**
The total project area needed for construction includes approximately 2.97 acres of land. The proposed flood control features fall within the footprint of an existing federally assisted project constructed in 1939 by the Government involving approximately .40 of an acre. The city of St. Maries, Idaho, non-Federal Sponsor owns fee interest in this area with a right for access to the project site.

For project construction, the non-Federal Sponsor will need to acquire 0.50 of an acre for a temporary work area adjacent to the project footprint and as shown on Exhibit A. The non-Federal Sponsor will also make available 2.07 acres of City lands as a temporary disposal site for the treated timbers (creosote and pentachlorophenol) and soil which are not considered hazardous waste. Both temporary work area easements are needed for approximately one (1) year to cover the period of construction.

Construction of the recommended plan may have impacts on a small office building owned by Potlatch, located on the river side of the floodwall near the downstream end of the structure. Access to the building may be disrupted during the construction period. In addition, there are power lines, water supply lines, fire water lines, and telephone cables that will need to be relocated. It will be necessary to coordinate construction with the Potlatch Corporation.

8. **Activities Affecting Coastal Zones [320.4(h)]**
Not applicable

9. **Activities in Marine Sanctuaries [320.4(i)]**
Not applicable.

10. **Other Federal, State, or Local Requirements [320.4(j)]**
The Corps will obtain ESA concurrence from the US Fish and Wildlife Service before construction of project.

11. **Safety of Impoundment Structures [320.4(k)]**
Not applicable.

12. **Floodplain Management [320.4(l)]**
The study is in full compliance. The Corps considered alternatives supporting avoidance of development in the flood plain, continuing to reduce hazards and risks associated with floods and to minimize the impact of floods on human safety, health and welfare, and restoring and preserving the natural and beneficial values of the base flood plain.

13. **Water Supply and Conservation [320.4(m)]**
Not applicable.

14. **Energy Conservation and Development [320.4(n)]**
Not applicable.

15. Navigation [320.4(o)]

This project will not impede current navigation.

16. Environmental Benefits [320.4(p)]

See the biological assessment and 404(b)(1) evaluation

17. Economics [320.4(q)]

Economic studies were undertaken which included studies enumerating and evaluating damages related to the existing economic development in the flood plain, sensitivity evaluations and optimization scenarios evaluating the benefits and costs of alternative project scopes. The outcome of these evaluations combined with engineering, environmental, and local sponsor considerations have led to the selection of the recommended plan.

18. Mitigation [320.49(r)]

Appropriate and practicable steps such as planning for anticipated impacts, sensitivity to the environment through design, mitigation for lost resources, and maintenance controls to minimize potential adverse impact of the proposed project on the aquatic ecosystem have been incorporated into the project design.