

# DISPOSITION FORM

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REFERENCE OR OFFICE SYMBOL

SUBJECT

NPSEN-PL-ER

Skagit River Project - Environmental Input to Design of Downstream Levees.

XR THRU: ~~Ch, Png Br~~

FROM Ch, Env Res Sec

DATE 5 September 1978 CMT 1

TO: ~~Ch, Reg Png Sec~~  
Ch, Des Br

Mettling/pb/3624

WJF / FB RICH  
BROOKS JESSE - file OFFICE

1. Purpose. As a result of concerns raised during the 29 August 1978 Resource Agency Workshop for the subject project and the follow-up field trip on 30 August 1978, we request that the recommendations discussed below be considered in the final design of the downstream levees. Preliminary information regarding the alignments and riprap locations was obtained from the scoping analysis performed by Entranco Engineers and was made available to the agencies at the 29 August workshop.

2. Recommendations. Of major concern to the resource agencies is the placement of riprap into the river as it modifies shoreline habitat and can be detrimental to salmon resources for which the shore zone is the primary migration and rearing area. A second major concern is the removal of existing riparian vegetation which provides food cover and other benefits to fish and wildlife. These concerns are the basis for which the following recommendations are made. In developing them, it has been assumed that there will be no channel improvements on the North Fork or on Freshwater Slough.

a. General. These recommendations pertain to the entire downstream levee reach in general.

(1) That a minimal amount of riprap be placed into the river. Consideration should be given to avoiding the placement of riprap into the river in areas where levees are set back and will be riprapped and in areas where riprap already exists along the river bank. Where feasible, consideration should also be given to the substitution of riprap by another erosion control method such as the placement of sod.

(2) That in certain cases where the placement of riprap is necessary, a relatively large size be utilized in the river to provide some replacement of habitat for fish. A few locations where such would be desirable are pointed out below under specific recommendations. Additional areas may be indicated when the final locations of the riprap are available.

(3) That riprap placement be avoided on the inside bank of bends in the river. These areas provide shallow, lower velocity resting and rearing areas for migrating juvenile salmonids.

(4) That in cases where the river bank slope is gradual under existing conditions and where the placement of riprap into the river cannot be avoided, the riprap be sloped (e.g., 3:1) to minimize impacts to the shore zone, as well as to provide fishermen access.

(5) That where riprap must be placed in areas of public access to the river, and where the slope cannot be altered from 2:1, that the riprap be graded to provide places for fishermen to fish from the river's edge.

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(6) That in the design of the levees, consideration be given to minimal encroachment on riparian vegetation; only necessary removal of rootballs and snags in the shore zone; and only necessary removal of mature trees.

b. Specific. These recommendations were developed for the areas examined during the 30 August field trip. Additional environmental data for each area is provided in inclosure 1. For the general location of each area discussed, refer to inclosure 2. Station references were taken from Skagit River orthophotos (copy available in ERS).

Area 1. North Fork, Stations 280 - 313, left bank. In selected locations within this reach, that riprap be designed to allow fishermen access to the river.

(a) Stations 295 - 313. If placement of riprap in the river is unavoidable, that large riprap be used to offset adverse impacts to fisheries by providing some replacement of cover.

Area 2. North Fork, Stations 180 - 240, left bank, and Stations 960 - 974, right bank.

(a) Stations 180 - 240. That the dense stands of vegetation along the river's edge be preserved. That placement of riprap and removal of snags and rootballs in this reach be minimized to the extent possible. If placement in the river is unavoidable, in selected areas, large riprap is recommended.

(b) Station (approximately) 220. That this island and the channel around it be left undisturbed.

*right bank*  
(c) Station 960 - 974. That no riprap be placed riverward in this area. If such is unavoidable, that the slope of the riprap be gradual to allow fishermen access and to minimize impacts to the shore zone.

(d) Station (approximately) 190. That, if riprap is necessary, fishermen access be provided at the public use area located at this station.

Area 3. North Fork, Stations 80 - 140, left bank, and Stations 860 - 910, right bank. That removal of snags and rootballs be avoided to the extent possible within this reach.

(a) Stations 900 - 910. That no riprap be placed in the river in this reach.

(b) Stations 80 - 100. That no riprap be placed in the river in this reach.



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Area 4. **Main Stem**, Stations 680 - 720, left bank; Stations 680 - 725, right bank.


(a) Station 680 - 725, right bank. That the necessity for adding additional riprap riverward at this bend be reexamined. If such placement is necessary, that fishermen access be provided on the riprap and that large riprap be selectively placed in the river.

(b) Station (approximately) 720, left bank. That placement of riprap in the river be avoided and that rootball and snag removal be minimized.

Area 5. **South Fork**, Stations 110 - 160, right bank. That no additional riprap be placed in the river in this reach and that the dense stand of trees along the river be left undisturbed. The contractor's drawings indicated that no riprap would be placed at this location.

Area 6. **South Fork, Tom Moore Slough**, Stations 1055 - 1120. That minimal encroachment riverward be considered in levee design. This is one area where mitigation planting may be necessary to restore the prime riparian habitat lost to the levee right-of-way. It is noted that the contractor's analysis indicated that no riprap would be placed either on the levees or into the river in this reach.

3. Request that we meet at your earliest convenience to discuss these recommendations and their incorporation into the downstream levee project. If any of the recommendations require further clarification, please contact Ms. Karen Mettling, extension 3624.

  
Steven F. Dice

2 Incl  
as

cc w/incl:  
Dice  
Bush/Mettling  
Reg Plng (Brooks)  
Reg Plan (Worthington)  
Des Br (Cook)  
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Ch, E&SES  
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ERS RP File (Skagit River Levees)