

REGIONAL PLANNING BRANCH WORK REQUEST

NPSen-PL-RP

NO: SLCI-3

TO: Chief

Copy
To

DATE: 11 July 1977

- | | | | | |
|-------------------------------------|------------------------|-------------------------------------|---|--|
| <input type="checkbox"/> | Regional Plng Sec | <input checked="" type="checkbox"/> | | |
| <input type="checkbox"/> | Project Plng Sec | <input type="checkbox"/> | | |
| <input checked="" type="checkbox"/> | Water Control Sec | <input type="checkbox"/> | Study | <u>Skagit River</u> |
| <input type="checkbox"/> | Econ & Soc Eval Sec | <input type="checkbox"/> | | |
| <input type="checkbox"/> | Envir Res Sec | <input type="checkbox"/> | At | <u>Levee and Channel Improvements</u> |
| <input type="checkbox"/> | Urban Studies Sec | <input type="checkbox"/> | | |
| <input type="checkbox"/> | Flood Plain Mgmt. Svcs | <input type="checkbox"/> | Work | <u>Hydrologic and Hydraulic Analyses</u> |
| <input type="checkbox"/> | Survey Branch | <input type="checkbox"/> | | <u>Acct</u> |
| <input type="checkbox"/> | F&M Branch | <input type="checkbox"/> | FY <u>77/78</u> Limit \$ <u>see below</u> | No <u>see below</u> |
| <input type="checkbox"/> | Design Branch | <input type="checkbox"/> | | |
| <input type="checkbox"/> | Prog Dev Branch | <input checked="" type="checkbox"/> | Due <u>see below</u> | Proj Engr <u>Brooks</u> Ext <u>3621</u> |
| <input type="checkbox"/> | Pro & Cost Analysis | <input checked="" type="checkbox"/> | | |
| <input type="checkbox"/> | Cook | <input checked="" type="checkbox"/> | | |
| <input type="checkbox"/> | Brooks | <input checked="" type="checkbox"/> | | |

Work to be used in:

- A. Survey Report: Reconnaissance , Preliminary , Final
- B. Continuing Authority (Sec.): Reconnaissance , DPR
- C. Other: General Design Memorandum

Inlosures:

Reference: DF from Ch, Water Control Sec. (dtd 15 June 1977), Subject; Study Cost estimate, Skagit River Levee and Channel Improvements.

Description of Work:

1. Request you proceed with the following hydrology and hydraulic studies. From Survey Branch, you will receive channel sections in late September 1977, topography maps of over-flow areas in early November 1977 and profiles of existing levees in mid-January 1978.
2. Hydrograph analyses at Sedro Woolley: Develop design quality 25-, 50-, 100-, and 200-year flood hydrographs for Skagit River at Sedro Woolley. These shall represent the present river condition and 74,000 acre feet of flood control storage in Baker Lake.
3. Hydrologic analysis of interior drainage; Develop interior drainage hydrographs coincident to 25-, 50-, 100-, and 200- year river floods on the Skagit River at Sedro Woolley. Locations for these will be coordinated at a later date with the project engineer.
4. Routing, combining and backwater analysis; Route and combine design flood hydrographs (item 1) and respective interior drainage hydrographs (item 2) and determine 25-, 50-, 100-, and 200-year water surface profiles for:
 - a. The existing river condition.
 - b. the flood control project.

Enc 1
NPSen FORM 203
Mr. (Rev)

P004344

Requested by R. A. SKRINDE, Chief, Regional Plng Sec

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Work Request

STUDY Skagit River Levee and Channel Improvements

No SLC-3

5. Discharge/frequency relationships, summer flood, winter floods; Develop summer and winter discharge/frequency curves for Skagit River at Sedro Woolley for existing and project cases.
6. Standard Project Flood; Adjust the latest approved SPF on Skagit River at Sedro Woolley for added flood control at Baker Lake.
7. Levee design profiles; Prepare levee profiles for 25-, 50-, 100-, and 200-year design protection (considering any applicable tidal effects and including required freeboard).
8. Design requirements; Provide design requirements for channel improvements, and provide bank slope protection requirements based on velocities and assumed 1V to 2H side slopes.
9. Coordination meetings; Attend coordination meetings as required during levee design coordination and project analysis. Provide technical assistance at public meetings, at workshops as necessary and in response to questions from agencies, groups, and individuals.
10. Written presentations; Provide written presentations on Hydrologic and Hydraulic studies for use in the General Design Memorandum and the Environmental Impact Statement. Cover such items as they apply, precipitation, rainfall-runoff relationships such as used in SSARR analysis, flood routing and frequency analyses as well as the hydraulic concepts and parameters used in water surface profile determinations. Prepare associated tables, figures, graphs and plates to help express pertinent details of these presentations.
11. Charges and Funding FY 77; During fiscal year 1977, hydrologic and hydraulic work shall be charged to BA 207 30 4L1 0 BC00. Charges may be made in the amount of \$4,000 during fiscal year 1977 generally for starting the hydrology work described in paragraph 2 above.
12. Charges and Funding FY 78; For fiscal year 1978 work, charge numbers will be issued when available. Charges are not to exceed \$31,000 for fiscal year 1978 hydrology and hydraulic work. Completion dates are listed below for the various items of work.

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WORK REQUEST
STUDY: Skagit River Levee and Channel Improvements
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<u>PARAGRAPH</u>	<u>COMPLETION DATE</u>	<u>HYDROLOGY</u>	<u>HYDRAULICS</u>
2	30 Oct 77	\$ 2,200	\$ 0
3	15 Jan 78	2,000	0
4.a.	30 Apr 78	500	7,500
4,b.	15 Jun 78	500	4,500
5	28 Feb 78	3,000	0
6.	28 Feb 78	800	0
7.	15 Jun 78	0	1,500
8.	15 Jun 78	0	3,500
9.	30 Nov 78	1,000	1,500
10.	30 Sep 78	1,000	1,500
		<u>\$11,000</u>	<u>\$20,000</u>

13. If the completion dates can not be accomplished, the project engineer must be informed as early as possible. All major assumptions must be coordinated with the project engineer.