

# DISPOSITIVE FORM

file Sk

K. F. C. Study

(AR 340-15)

OFFICE SYMBOL OR FILE REFERENCE

SUBJECT

NPSEN-PP-W

Skagit River Basin, Hydrologic Studies

TO Ch, Basin Plng Br  
THRU: Ch, Proj Plng Br

FROM Ch, Water Control Sec

DATE 18 Dec 64

CMT 1

Westby/hm/476

1. The U.S.G.S. has maintained a discharge station on the Skagit River near Mount Vernon, Washington since October 1940. This gage is located on the downstream side of U.S. Highway 99 bridge. Between 1941 and 1962 the stages for flows below 30,000 cfs have raised about 2.0 feet. For flood stages the rating curves are not so well defined, but it is estimated that there has been an increase of about 1.5 feet.

2. A number of factors have contributed to this increase in river stages including: closing of distributaries; construction of sills and levees; increased length of distributaries by reason of extension of delta sediment deposits; and possibly a general increase in river bottom elevation. Comparison made between river bottom profiles <sup>below</sup> between Mount Vernon for the years 1932 and 1950 showed no appreciable change in the elevation of average river bottom. No evaluation of river bottom changes since 1950 have been made.

3. The Skagit River is estimated to carry an average annual bed load of sediment of about 700,000 cubic yards. The accumulation of this sediment on the Skagit River delta tide flats can be noted over the years. At one time the south Fork carried the major portion of river discharge and provided the maximum depths for navigation. Sediment deposition in the South Fork has reversed conditions so that at present the South Fork carries only about 40% of the total river discharge.

4. A forecast of what changes in river stage may be expected in the future is difficult to make. Some increase in stages over the years can be expected by reason of the gradual extension of the delta deposits. However, if no further encroachments are made on the existing channel and some existing restrictions removed, it is believed that increases in stage over the next 50 years may be held to one foot.

*Westby*  
WESTBY

cc: Bechly

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