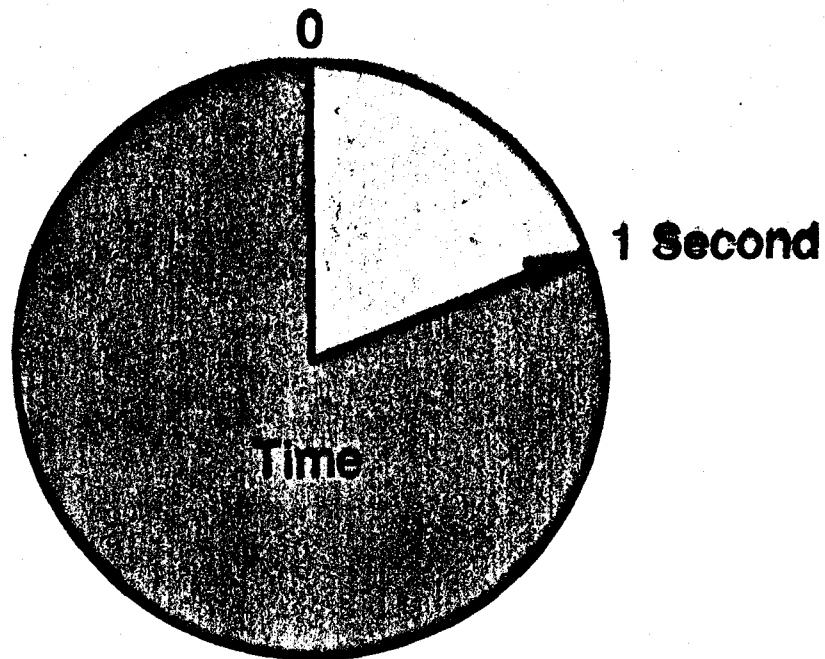
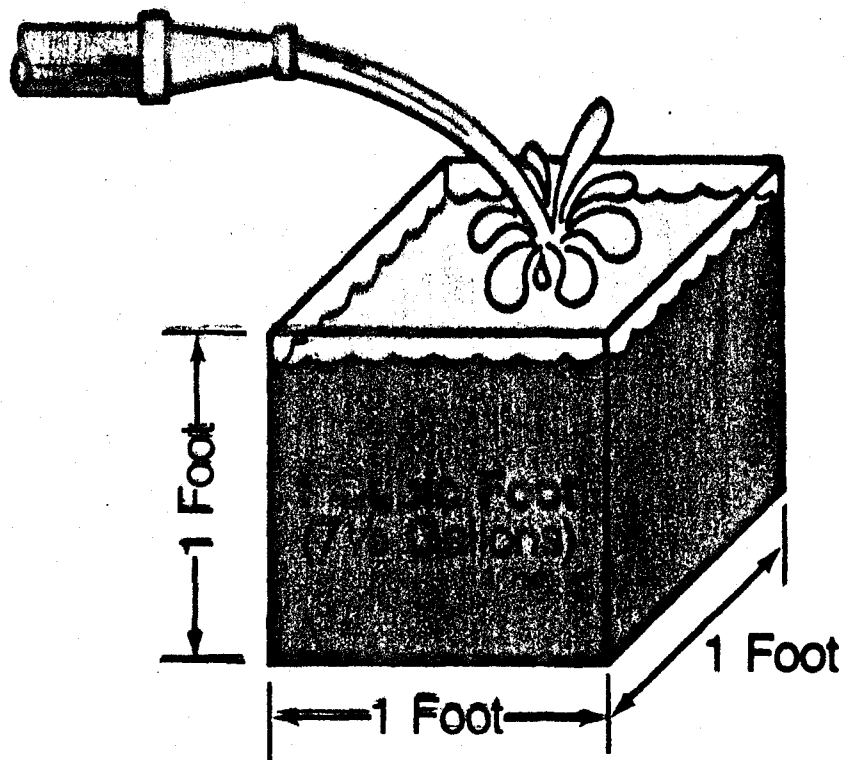


# Flow Rate

## Cubic Feet Per Second (C.F.S.)

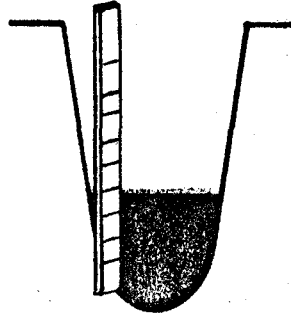


$$\frac{\text{Capacity}}{\text{Time}} = \frac{1 \text{ Cubic Foot}}{1 \text{ Second}} = 1 \text{ Cubic Foot Per Second}$$

# Hydrographs

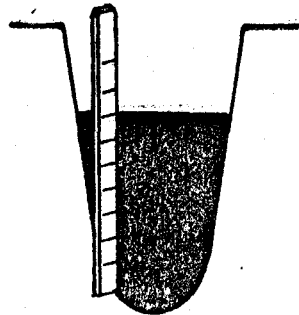
## Skagit River Gage at Concrete

24 Feet or  
40,000 C.F.S.



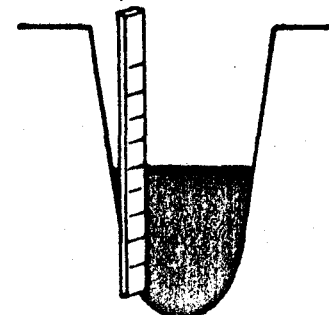
25 December

40 Feet or  
147,000 C.F.S.

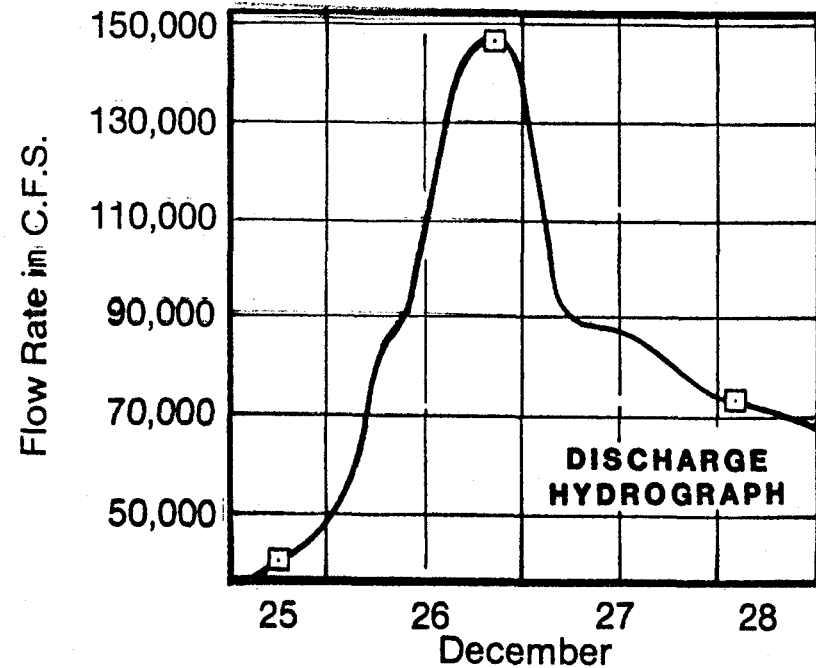
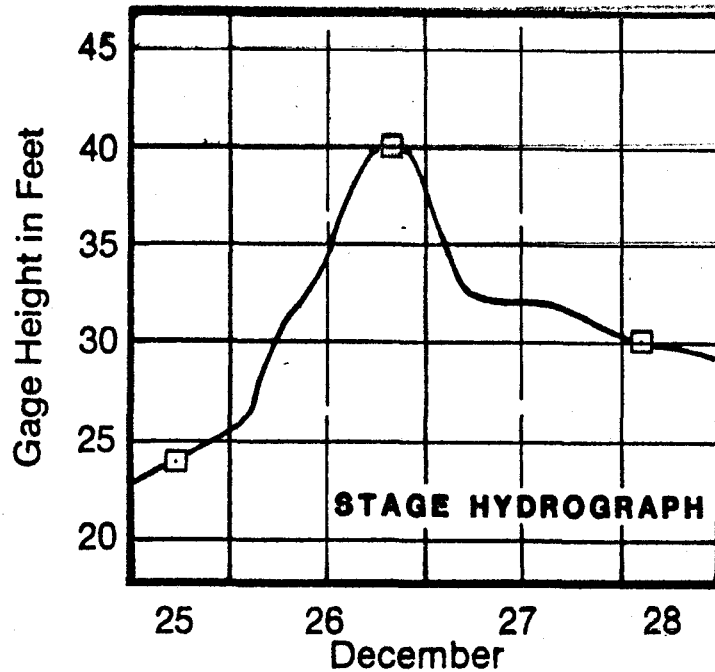


26 December

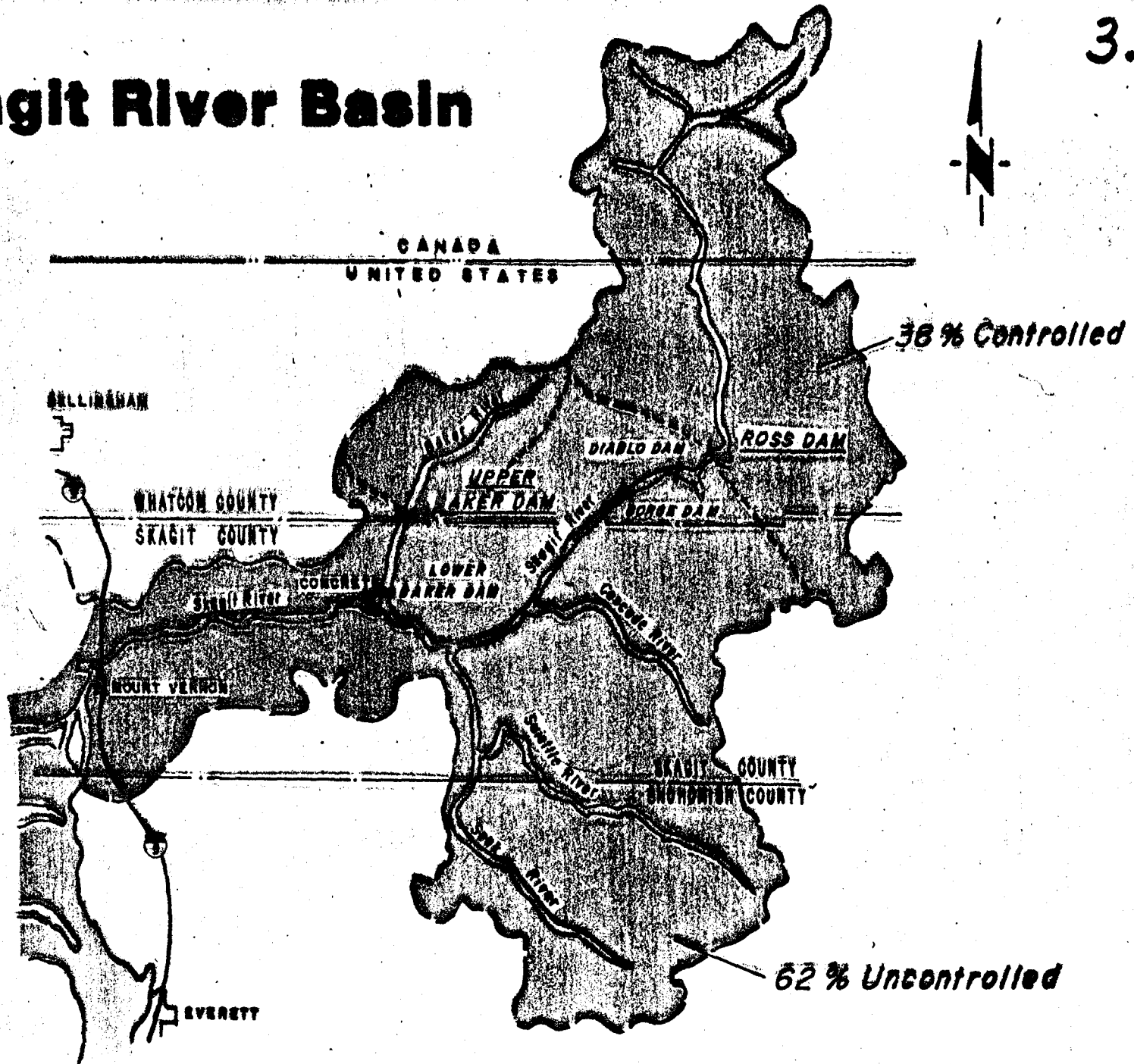
30 Feet or  
75,000 C.F.S.



28 December



# Skagit River Basin



# **Flood Control Responsibilities**

## **NATIONAL WEATHER SERVICE — SEATTLE**

Forecasts weather and river conditions

## **CORPS OF ENGINEERS — SEATTLE**

Monitors weather, river and reservoirs

Provides regulating instructions to dams

## **PUGET SOUND POWER & LIGHT AND SEATTLE CITY LIGHT**

Maintains flood storage space

Operate dams — gate changes

## **SKAGIT COUNTY PUBLIC WORKS DEPT.**

Provides flood information to the public

Coordinates flood emergency activities

# Reservoir Regulation Guidelines for Flood Control

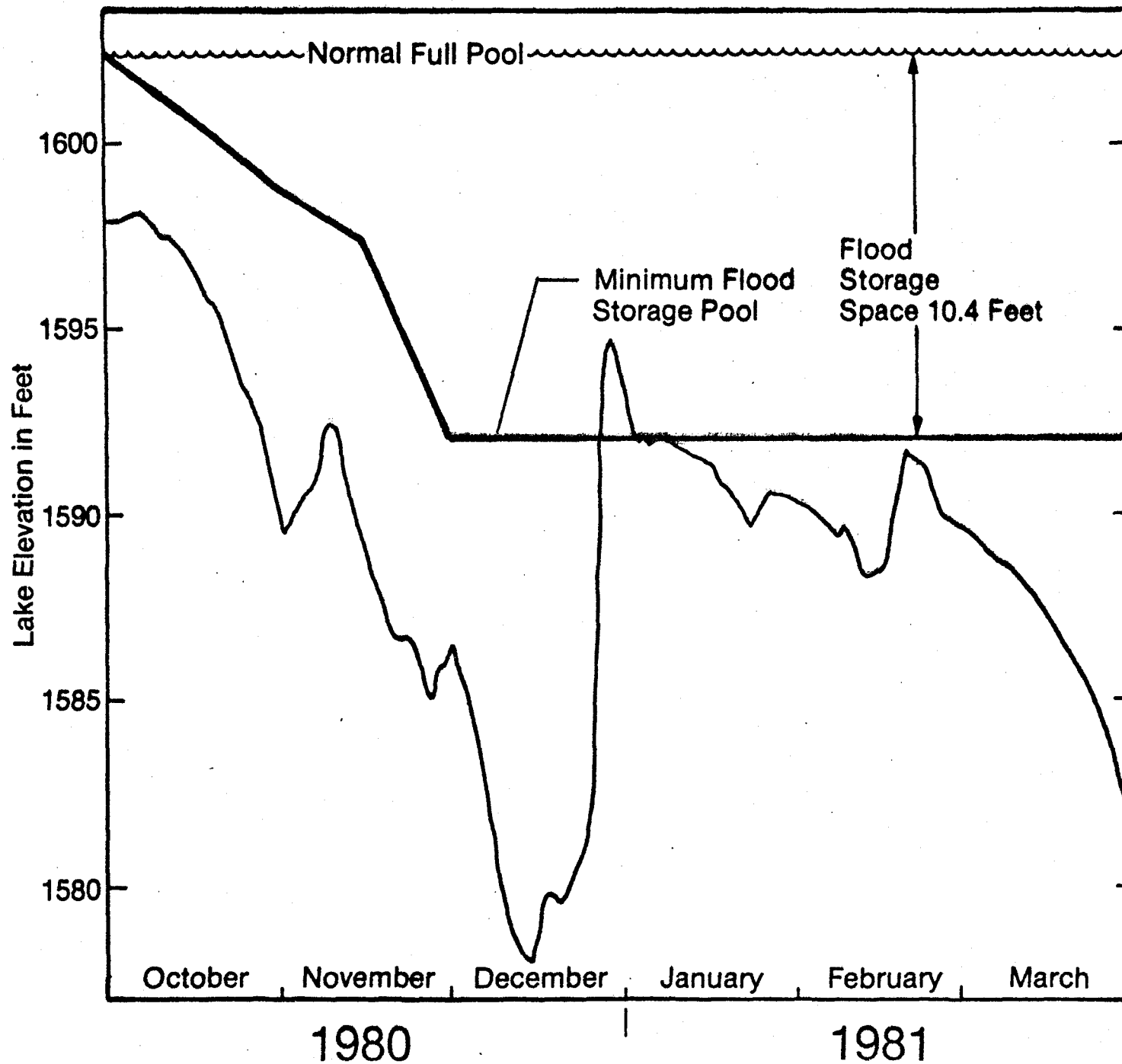
10.

- **Regulate flows forecast to exceed 90,000 c.f.s. (32.2 feet) at Concrete**
- **Reduce outflow from dams (except minimum power flows)**
- **Store floodwater in reservoir**
- **Release stored water when flow at Concrete recedes**
- **Maintain recession at Concrete**

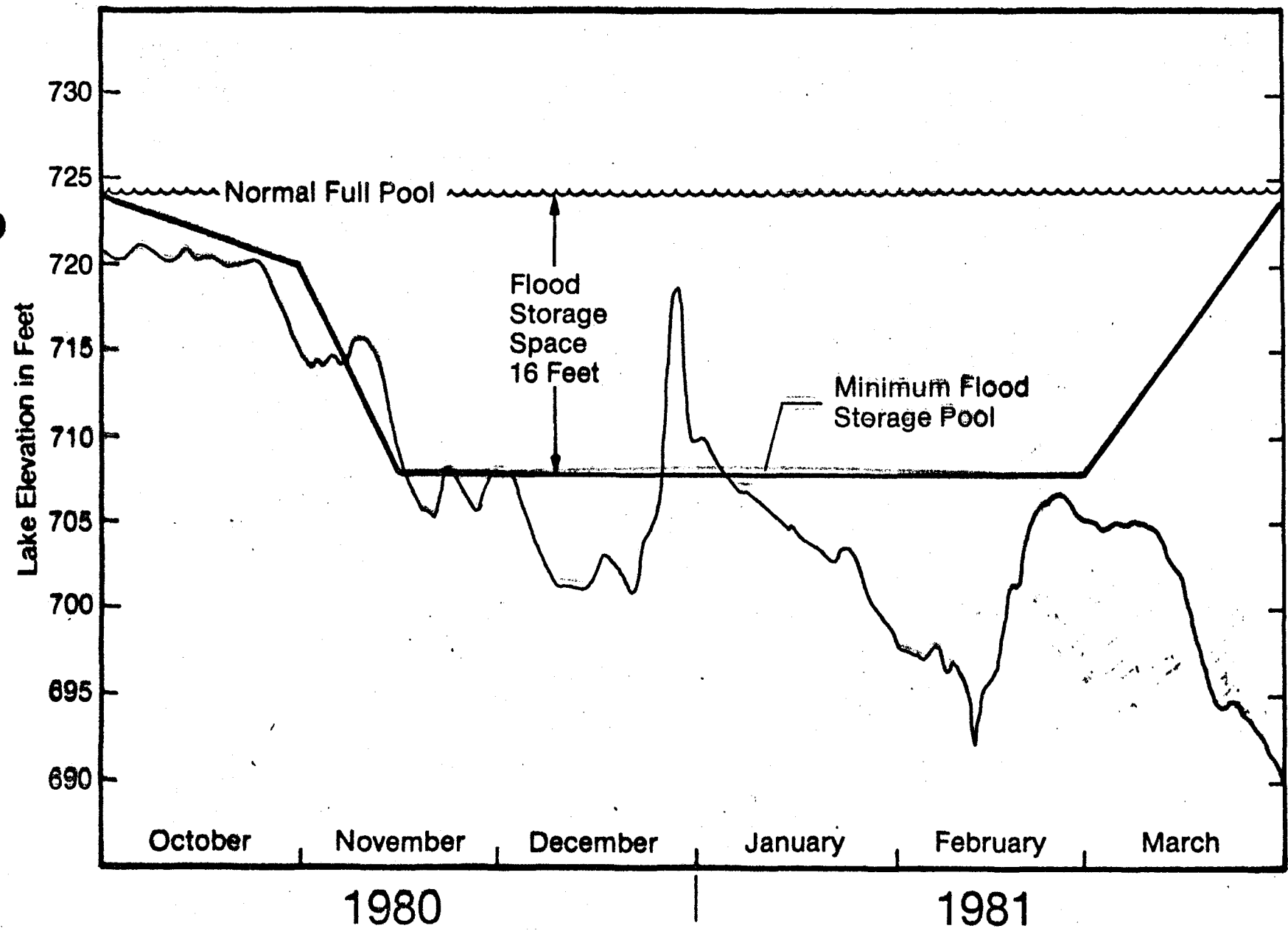
INR 5

# Ross Lake and Dam

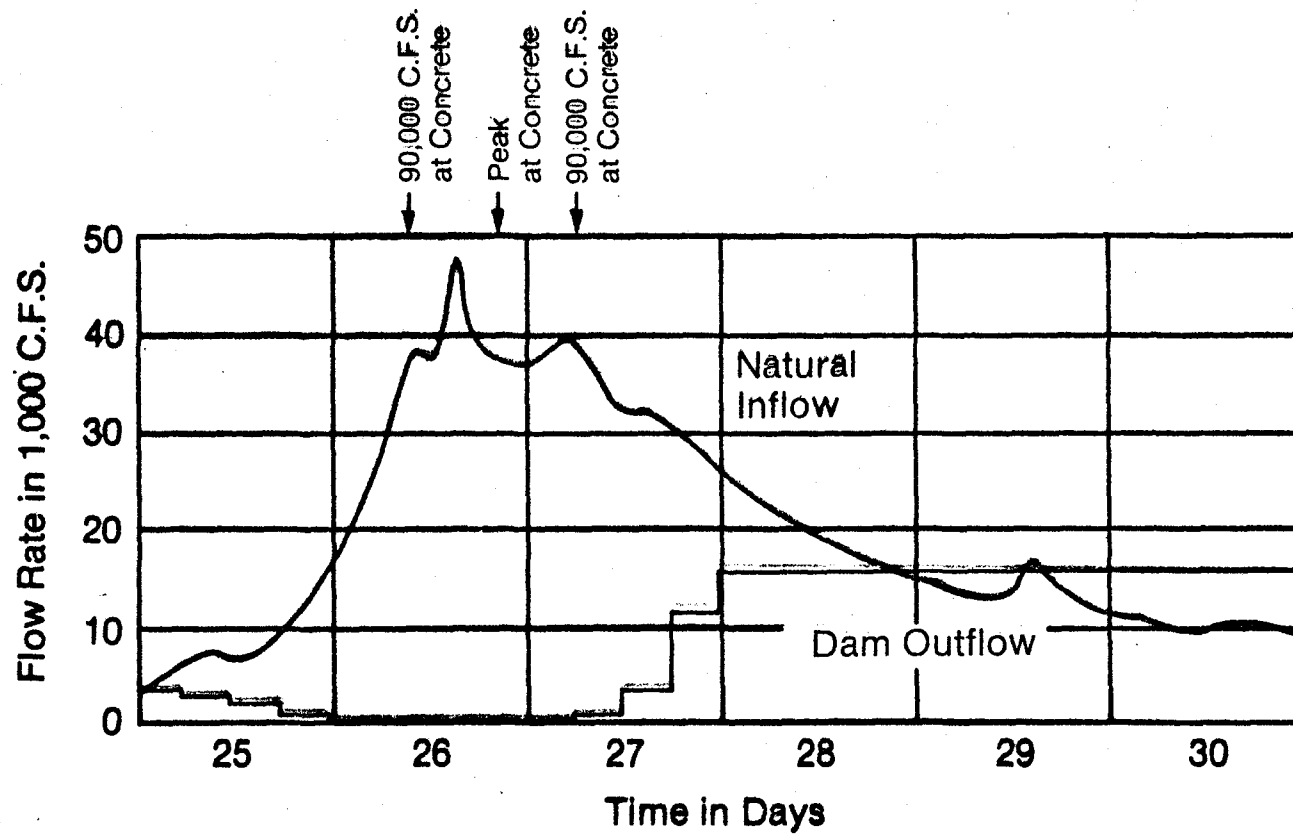
11.



# Baker Lake and Upper Baker Dam

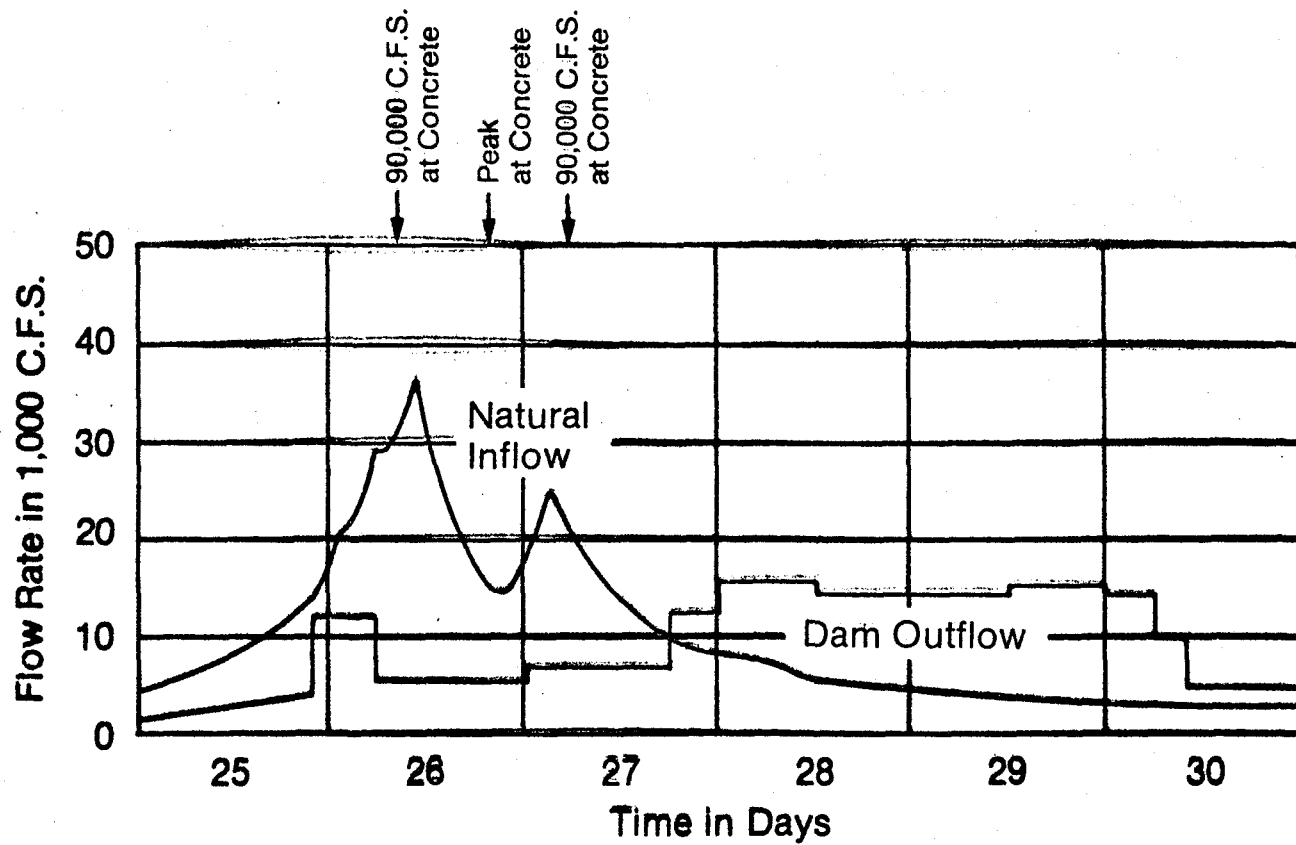


# Skagit River at Ross Dam December 1980 Flood





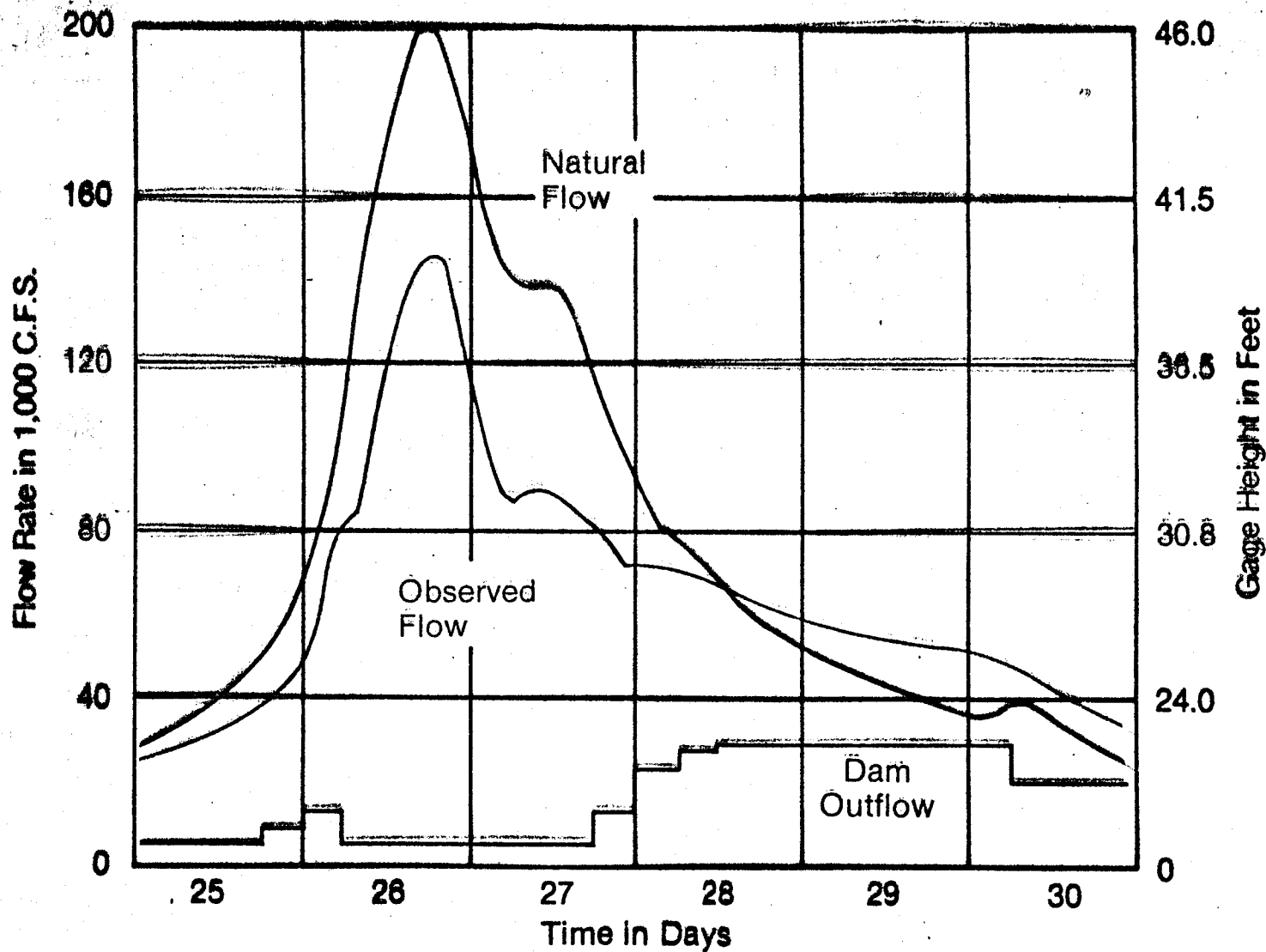
# Skagit River at Upper Baker Dam December 1980 Flood



# Skagit River at Concrete

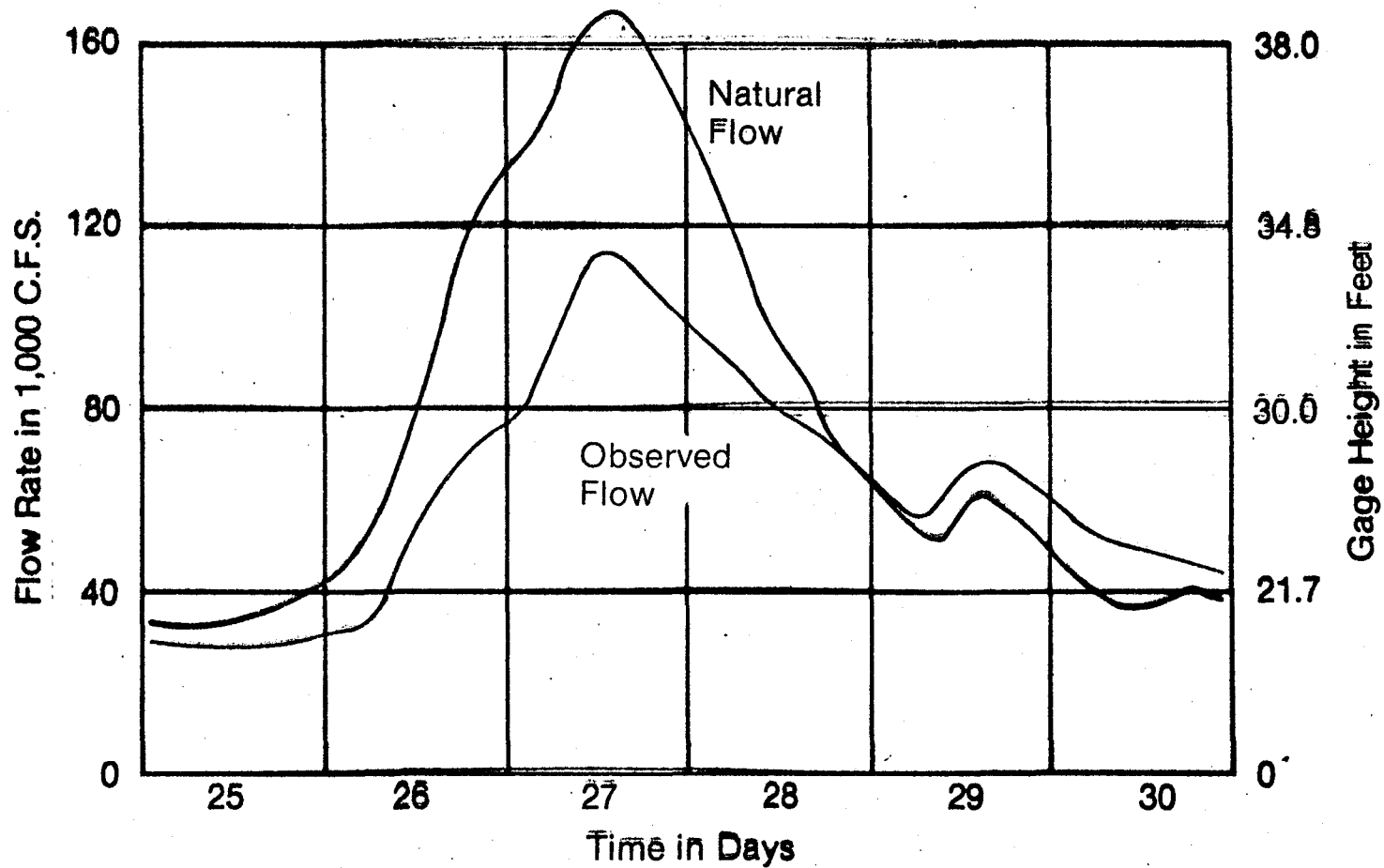
## December 1980 Flood

15.



# Skagit River at Mount Vernon December 1980 Flood

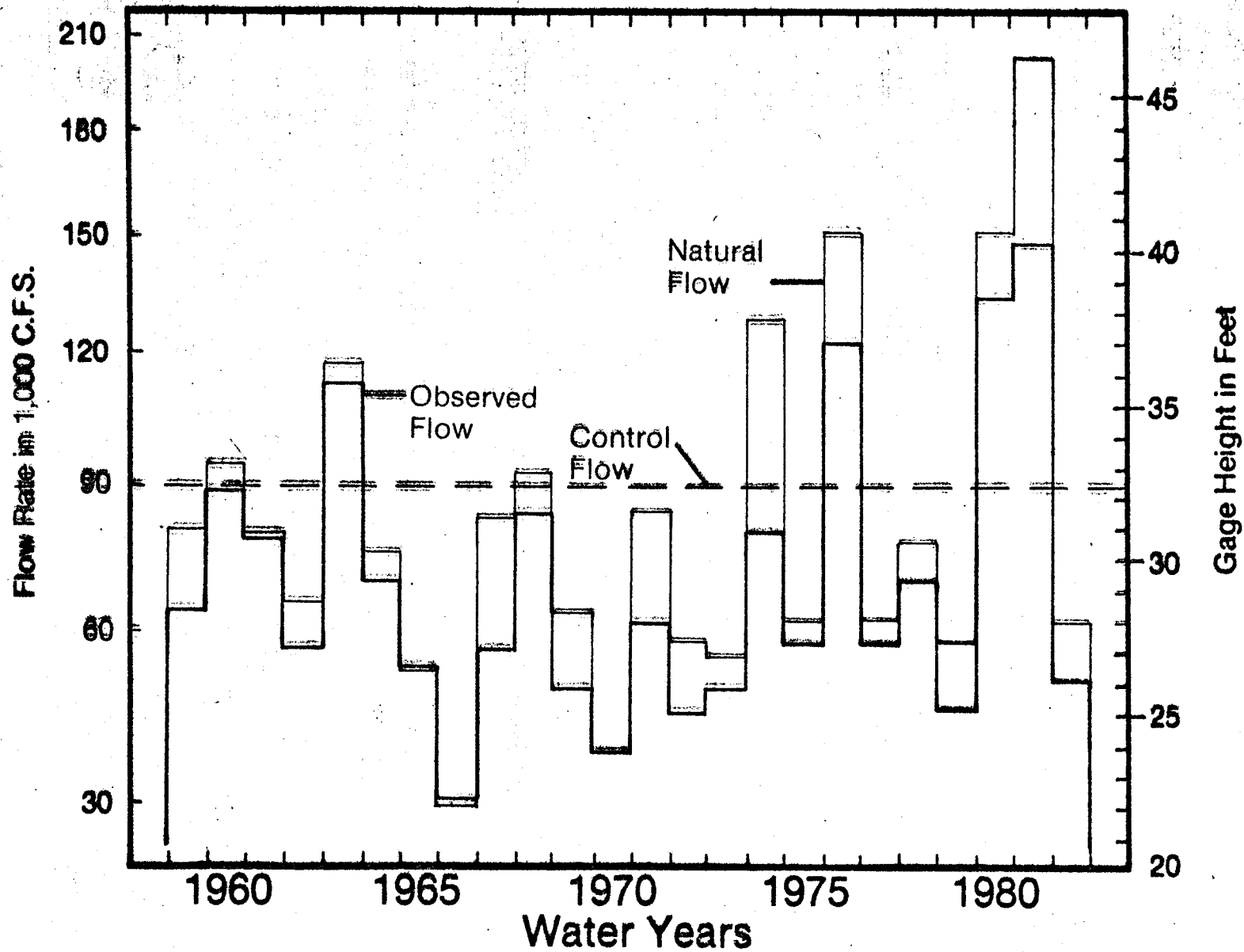
16.



# Skagit River at Concrete

## Effects of Reservoir Storage

17.



# Summary

- Corps regulates flows above 90,000 c.f.s. (32.2 ft.) at Concrete
- Dams incidently regulate flows below 90,000 c.f.s.
- Dams provide flood damage reduction
- But dams cannot eliminate the possibility of flooding