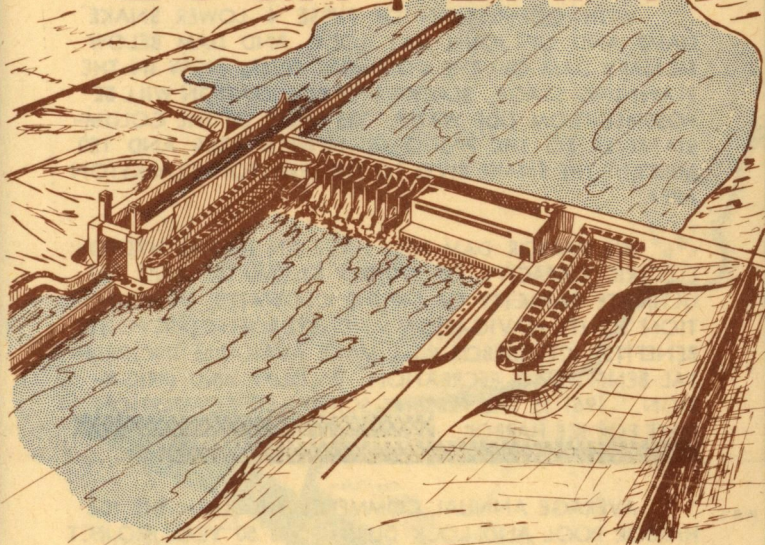


Ice Harbor

LOCK & DAM



**U S ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON**

CORPS OF ENGINEERS

About the Dam and the Snake River

ICE HARBOR LOCK AND DAM IS THE FIRST OF 4 AUTHORIZED DAMS ON THE LOWER SNAKE RIVER, THAT WILL ULTIMATELY EXTEND SLACKWATER NAVIGATION FROM THE CONFLUENCE OF THE SNAKE AND COLUMBIA RIVERS, 150 MILES UPSTREAM TO LEWISTON, IDAHO.

THE RESERVOIR BEHIND ICE HARBOR DAM WILL EXTEND 35 MILES UPSTREAM TO THE SITE OF THE SECOND PROPOSED SNAKE RIVER DAM, LOWER MONUMENTAL, AT RIVER MILE 45. THE THIRD PROPOSED DAM WILL BE LITTLE GOOSE DAM AT RIVER MILE 72 AND THE FOURTH, LOWER GRANITE DAM AT RIVER MILE 113.

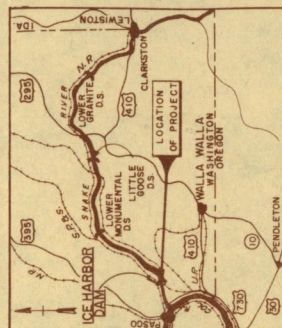
WITH COMPLETION OF THESE 4 LOWER SNAKE DAMS AND OF JOHN DAY LOCK AND DAM BELOW MCNARY DAM ON THE COLUMBIA RIVER, NOW IN THE PLANNING STAGE, SLACKWATER NAVIGATION WILL BE POSSIBLE FROM TIDE WATER, 325 MILES UP THE COLUMBIA RIVER TO THE PASCO-KENNEWICK AREA AND 150 MILES UP THE SNAKE RIVER TO THE LEWISTON-CLARKSTON AREA.

ICE HARBOR DAM WILL HAVE AN INITIAL HYDRO-ELECTRIC CAPACITY OF 270,000 KILOWATTS AND AN ULTIMATE CAPACITY OF 540,000 KILOWATTS. IN ADDITION TO ITS NAVIGATION AND HYDROELECTRIC POWER BENEFITS, ICE HARBOR WILL MAKE AVAILABLE INCIDENTAL BENEFITS TO RECREATION, WILDLIFE AND IRRIGATION. 1961 IS THE PRESENT SCHEDULED COMPLETION DATE FOR ICE HARBOR.

AVERAGE ANNUAL COMMERCE THROUGH THE ICE HARBOR POOL AND LOCK DURING ITS 50 YEAR PROJECT LIFE IS ESTIMATED AT 2,500,000 TONS ANNUALLY, CONSISTING OF BULK COMMODITIES SUCH AS WHEAT, WOOD PRODUCTS, LIMESTONE, AND ORES, PETROLEUM PRODUCTS, FERTILIZER, FARM MANUFACTURING EQUIPMENT AND CONSTRUCTION MATERIAL.

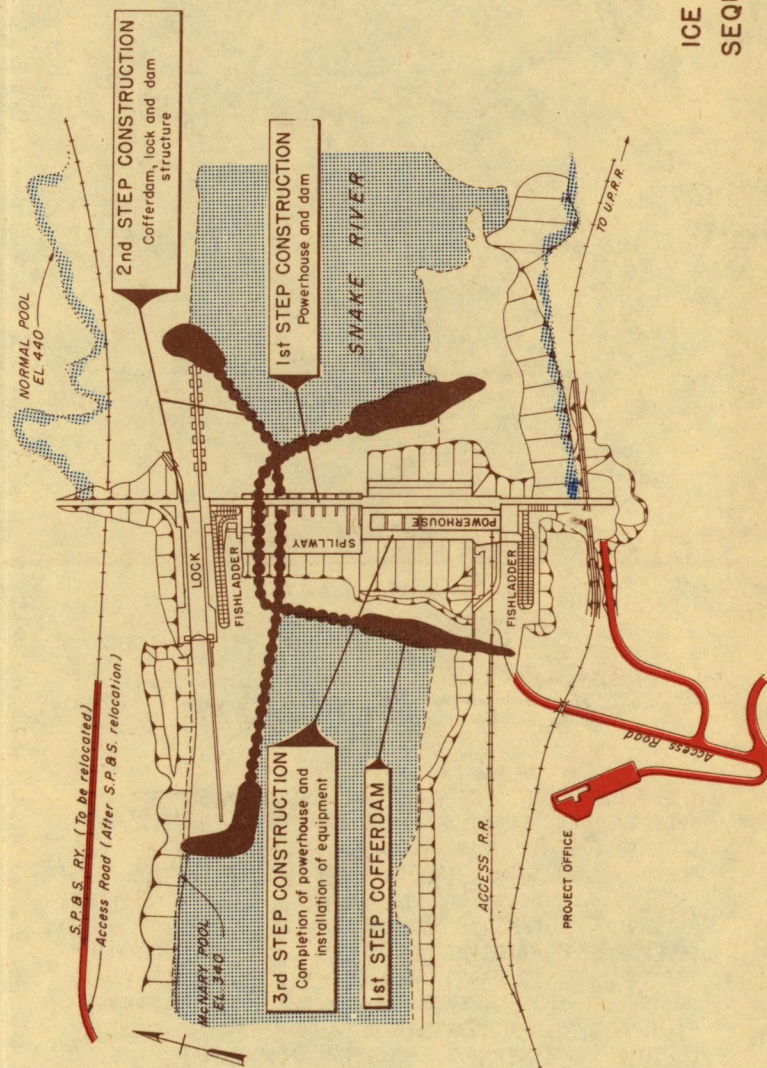
THE NAVIGATION LOCK AT ICE HARBOR DAM AND THE THREE AUTHORIZED DAMS ON SNAKE RIVER WILL BE UNIFORMLY, 86 FT. WIDE BY 675 FT. LONG. THIS CORRESPONDS TO THE LOCK DIMENSIONS AT MCNARY, THE DALLES, AND JOHN DAY - STILL IN THE PLANNING STAGE.

FISH PASSAGE FACILITIES WILL BE CONSTRUCTED ON THE NORTH AND SOUTH SHORE OF ICE HARBOR DAM, SIMILAR TO INSTALLATIONS AT DOWNSTREAM DAMS ON THE COLUMBIA RIVER.



REGIONAL MAP
SCALE IN MILES
0 10 20 30

SCALE IN FEET
0 400 800



ICE HARBOR LOCK AND DAM
SEQUENCE OF CONSTRUCTION

Statistics

GENERAL

STREAM	SNAKE RIVER
DRAINAGE AREA, SQUARE, MILES	109,000
NORMAL POOL ELEVATION, MSL	440
LENGTH NORMAL POOL, MILES	35
NORMAL POOL AREA, ACRES	9,200
LENGTH OF DAM OVER-ALL, FEET	2,790
COST OF DAM COMPLETE	\$135,000,000
SCHEDULED COMPLETION DATE	1961

SPILLWAY SECTION

LENGTH SPILLWAY, FEET	600
NUMBER SPILLWAY BAYS	10
SIZE OF GATES, FEET	50 BY 53
SPILLWAY CAPACITY, CFS	850,000

POWERHOUSE

POWERHOUSE LENGTH, FEET	661
NUMBER POWER UNITS INITIALLY	3
NUMBER POWER UNITS ULTIMATELY	6
TURBINES, TYPE	KAPLAN
REVOLUTIONS PER MINUTE	90
HORSEPOWER PER UNIT	143,000
GENERATOR CAPACITY PER UNIT, KW	90,000
TOTAL INSTALLED CAPACITY, KW	540,000

NAVIGATION LOCK

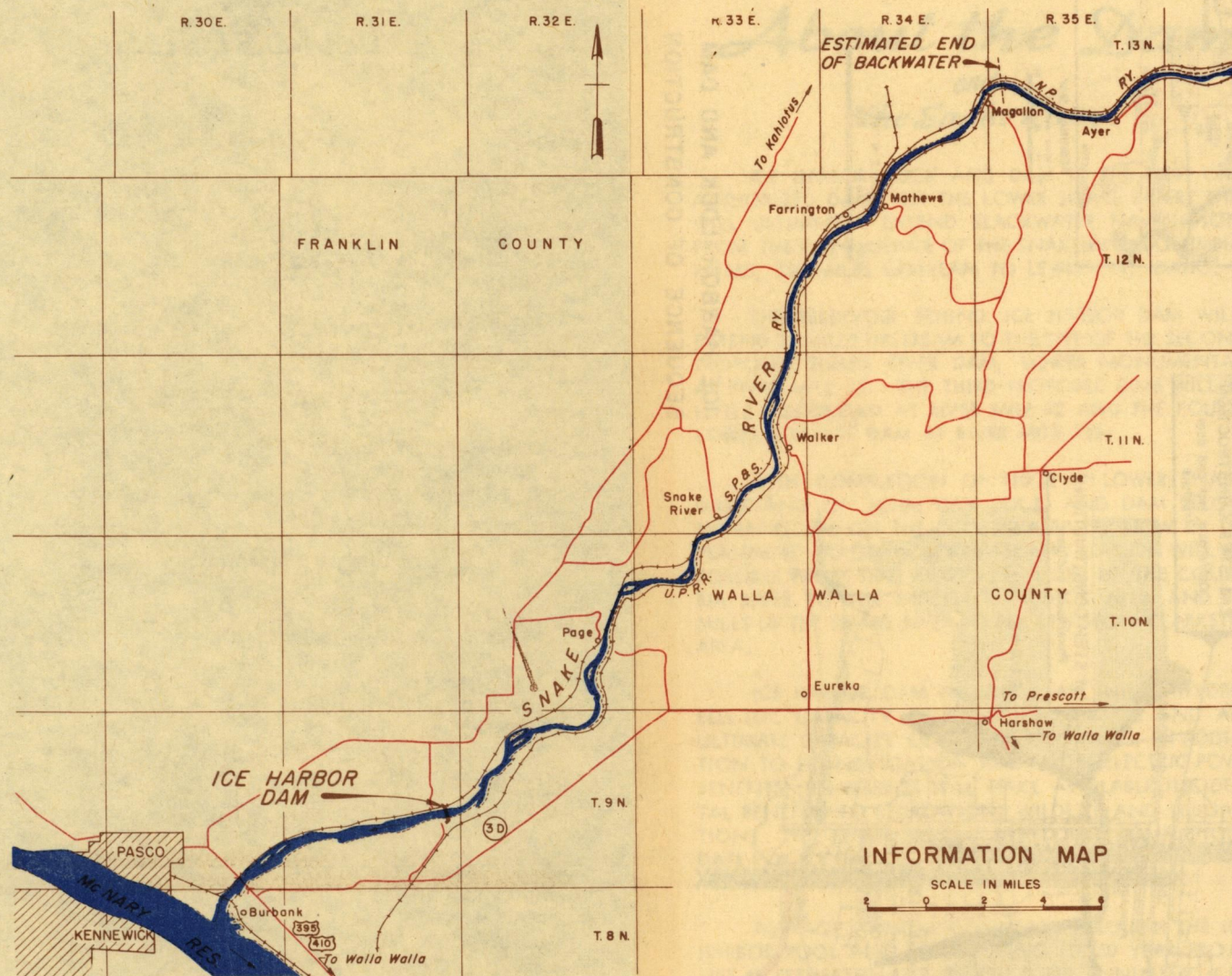
NAVIGATION LOCK TYPE	SINGLE LIFT
MAXIMUM LIFT, FEET	103
LOCK LENGTH, FEET	675
LOCK WIDTH, FEET	86
HEIGHT DOWNSTREAM GATE, FEET	119
FILLING TIME MINUTES	15

FISHLADDER

NUMBER FISH LADDERS	2
SLOPE RATIO	1 TO 16

MISCELLANEOUS

MILES RAILROADS AFFECTED	53
ACRES LAND ACQUIRED	5,784
COST OF LAND ACQUIRED	\$1,245,000



Location

ICE HARBOR LOCK AND DAM IS LOCATED AT MILE 9.7 ON THE SNAKE RIVER AT THE HEAD OF THE MCNARY DAM RESERVOIR. THE SOUTH SHORE OF THE DAMSITE IS APPROACHED BY TURNING EAST OF HIGHWAY 410 OR 395 AT BURBANK, WASH. AND PROCEEDING 5 MILES ON HIGHWAY 3-D TO WHERE THE SOUTH SHORE ACCESS ROAD LEADS NORTH. THE NORTH SHORE APPROACH IS FROM THE PASCO-WASHTUCNA ROAD TURNING SOUTH ABOUT 12 MILES EAST OF PASCO.

Recreation

THE 9,200 ACRE LAKE THAT WILL BE CREATED ON THE SNAKE RIVER BY ICE HARBOR DAM, WILL EXTEND UP-STREAM TO THE LOWER MONUMENTAL DAM SITE. THE RECREATIONAL FACILITIES NOW ENJOYED BY THE PUBLIC ON MCNARY DAM RESERVOIR, SUCH AS BOATING, FISHING, OUTBOARD MOTORING AND SAILING WILL BE EXTENDED ANOTHER 35 MILES. WITH THE COMPLETION OF JOHN DAY DAM ON THE COLUMBIA AND THE REMAINING THREE DAMS ON THE SNAKE PLEASURE CRUISING WILL BE POSSIBLE FROM THE PACIFIC OCEAN TO THE VERY HEART OF THE INLAND EMPIRE.