

INVENTORY OF RIPARIAN HABITATS

AND ASSOCIATED WILDLIFE ALONG
COLUMBIA

AND
SNAKE
RIVERS

NP U.S. ARMY CORPS OF ENGINEERS
HD NORTH PACIFIC DIVISION
1976



VOLUME II B
LOWER COLUMBIA
RIVER

VOLUME 2B

INVENTORY OF RIPARIAN HABITATS
AND ASSOCIATED WILDLIFE ALONG
THE COLUMBIA RIVER

to

U.S. Army Corps of Engineers
Wildlife Work Group

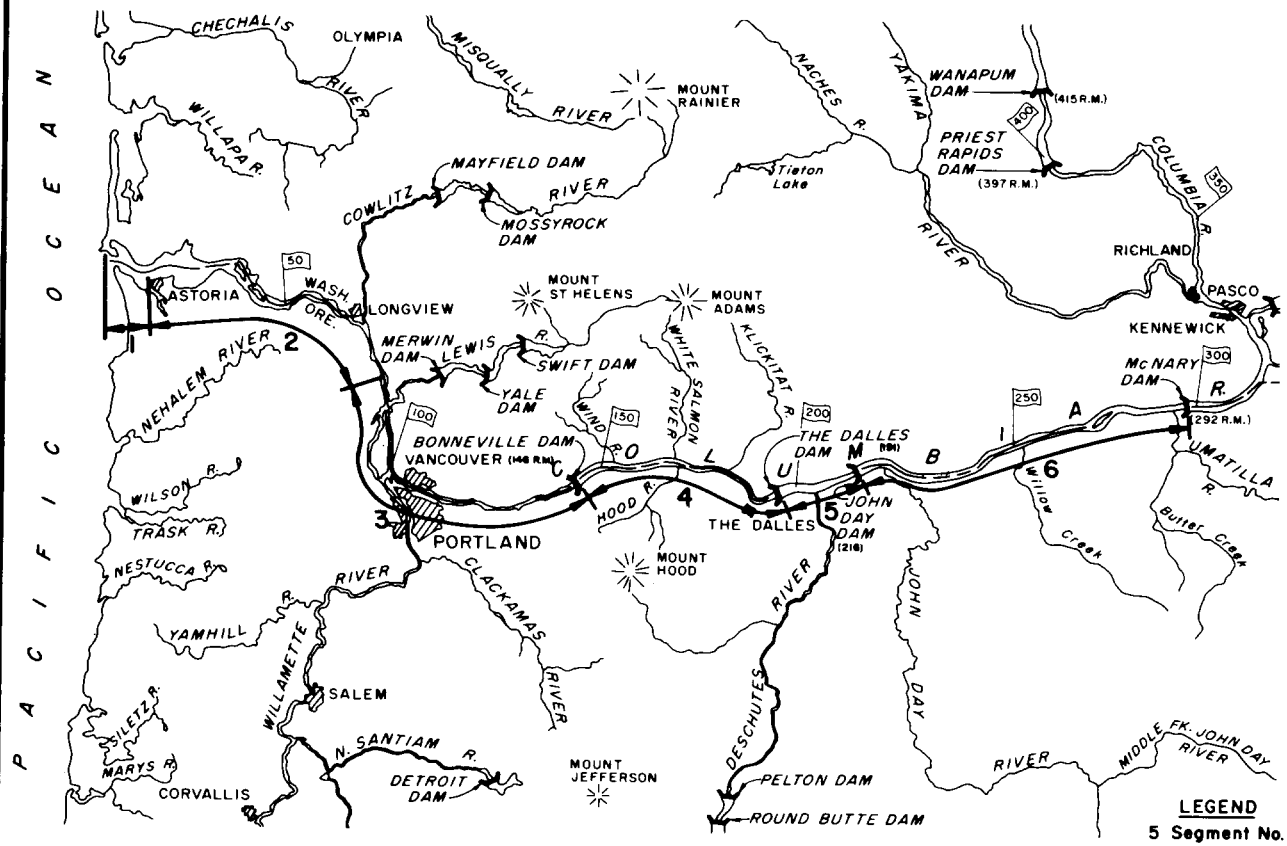
from

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Oregon State University



LEGEND
5 Segment No.

NOT TO SCALE

FISHERIES ENGINEERING RESEARCH PROGRAM
INVENTORY OF RIPARIAN HABITATS
1973-1975
OREGON STATE UNIVERSITY
STUDY AREA
COLUMBIA RIVER
RMO TO RM 292
U.S. ARMY ENGINEER DISTRICT, WALLA WALLA

APPENDIX B

VEGETATIVE AND LAND FORM LEGEND

- 100 Barren land
 - 110 Sand dunes
 - 120 Erosion pavement
 - 130 Rock lands
 - 140 Shorelines, beaches, tideflats, and river banks
 - 141 Rock
 - 141.1 Rock cliffs
 - 141.2 Talus
 - 142 Gravel
 - 143 Sand
 - 144 Mud
 - 145 Shell
 - 146 Coral
 - 148 Rock rip-rap
 - 149 Undifferentiated classes
 - 150 Bare ground
 - 160 Litter

- 200 Water resources
 - 210 Ponds, lakes, and reservoirs
 - 211 Ponds
 - 212 Lakes
 - 213 Reservoirs
 - 214 Embayments
 - 220 Water courses
 - 221 Rivers
 - 222 Creeks
 - 223 Canals and ditches
 - 224 Sloughs

- 300 Natural vegetation
 - 310 Herbaceous types
 - 311 Predominately annuals
 - 312 Forb types
 - 312.1 Annuals
 - 312.11 Mullein
 - 312.12 Russian thistle
 - 312.2 Perennials
 - 312.21 Balsamroot
 - 312.22 Biscut root
 - 312.23 Clover
 - 312.24 Goldenrod
 - 312.25 Dock
 - 312.26 Peppergrass
 - 312.3 Either annuals or perennials
 - 312.31 Smartweed
 - 312.32 Daisey

- 314 Grassland
 - 314.1 Reed canarygrass
 - 314.2 Cheatgrass brome
 - 314.3 Sandberg bluegrass
 - 314.4 Bluebunch wheatgrass
 - 314.5 Crested wheatgrass
 - 314.6 Bulbous bluegrass
 - 314.7 Others
 - 314.71 Unidentified Wheatgrass
 - 314.72 Unidentified Bluegrass
 - 314.73 Wildrye
 - 314.74 Beachgrass
 - 314.8 Two species mixtures
 - 314.81 Cheatgrass/Sandberg bluegrass
 - 314.82 Cheatgrass/Bluebunch wheatgrass
 - 314.83 Cheatgrass/Bulbous bluegrass
 - 314.84 Bluebunch wheatgrass/Sandberg bluegrass
 - 314.85 Bluebunch wheatgrass/Crested wheatgrass
 - 314.86 Cheatgrass/Crested wheatgrass
 - 314.87 Cheatgrass/Needlegrass
 - 314.88 Others
 - 314.9 Three species mixtures
 - 314.91 Cheatgrass/Sandberg bluegrass/Bluebunch wheatgrass
 - 314.92 Cheatgrass/Sandberg bluegrass/Annual fescue
 - 314.93 Cheatgrass/Sandberg bluegrass/Idaho fescue
 - 314.94 Cheatgrass/Sandberg bluegrass/Bulbous bluegrass
 - 314.95 Cheatgrass/Sandberg bluegrass/Needlegrass
 - 314.96 Cheatgrass/Bluebunch wheatgrass/Annual fescue
 - 314.97 Bluebunch wheatgrass/Sandberg bg/Idaho fescue
 - 314.98 Bluebunch wheatgrass/Sandberg bg/Wildrye
 - 314.99 Others
- 315 Meadows
 - 315.1 Sedge
 - 315.2 Rush
 - 315.3 Grass
- 316 Marshes
 - 316.1 Cattail
 - 316.2 Bulrush
 - 316.3 Sedge
 - 316.4 Grass
 - 316.5 Cattail/Bulrush
 - 316.6 Cattail/Sedge
 - 316.7 Bulrush/Sedge
 - 316.8 Tidal marsh
 - 316.81 "high" marsh--Sedge/Grass
 - 316.82 "low" marsh--Bulrush
- 318 Aquatic vegetation
- 319 Undifferentiated complexes of herbaceous types
- 320 Shrub types
 - 325 Shrub steppe
 - 325.1 Sagebrush

- 325.11 Big sagebrush
- 325.12 Three-tip sagebrush
- 325.2 Rabbitbrush
 - 325.21 Gray rabbitbrush
 - 325.22 Green rabbitbrush
 - 325.23 Gray and green rabbitbrush (mixed)
- 325.3 Bitterbrush
 - 325.31 Antelope bitterbrush
- 325.4 Buckwheat
- 325.5 Mountain-mahogany
- 325.6 Ceanothus
- 325.7 Others
 - 325.71 Greasewood
- 325.8 Two species mixtures
 - 325.81 Gray rabbitbrush/Big sagebrush
 - 325.82 Gray rabbitbrush/Antelope bitterbrush
 - 325.83 Gray rabbitbrush/Buckwheat
 - 325.84 Big sagebrush/Antelope bitterbrush
 - 335.86 Antelope Bitterbrush/Buckwheat
- 325.9 Three species mixtures
 - 325.91 Gray rabbitbrush/Green rabbitbrush/Big sagebrush
 - 325.92 Gray rabbitbrush/Green rabbitbrush/Ante. bitterbrush
 - 325.93 Gray rabbitbrush/Green rabbitbrush/Buckwheat
 - 325.94 Gray rabbitbrush/Big sagebrush/Antelope bitterbrush
- 327 Macrophyllous shrub and vine
 - 327.1 Willow
 - 327.2 Blackberry
 - 327.3 Rose
 - 327.4 Sumac
 - 327.5 Poison oak
 - 327.6 Chokecherry
 - 327.7 Hackberry
 - 327.8 Others
 - 327.9 Two and three species mixtures
- 329 Undifferentiated complexes of shrub types
- 330 Savanna-like types
 - 332 Broadleafed tree over herb layer
 - 333 Coniferous tree over herb layer
 - 334 Mixed broadleafed and coniferous tree over herb layer
 - 335 Broadleafed tree over shrub layer
 - 336 Coniferous tree over shrub layer
 - 337 Mixed broadleafed and coniferous tree over shrub layer
- 340 Forest and woodland types
 - 341 Coniferous forests
 - 341.1 Sitka Spruce
 - 341.2 Western Redcedar
 - 341.3 Douglas fir
 - 341.4 Ponderosa Pine
 - 341.5 Two species mixtures of conifers
 - 341.51 Sitka Spruce/Western Redcedar
 - 341.52 Sitka Spruce/Douglas fir
 - 341.53 Western Redcedar/Douglas fir
 - 341.54 Douglas fir/Ponderosa Pine

- 341.6 Three species mixtures of conifers
 - 341.61 Sitka Spruce/Western Redcedar/Douglas fir
- 342 Broadleaf forests
 - 342.1 Willow
 - 342.11 Small trees (less than 15 ft. tall)
 - 342.12 Large trees (greater than 15 ft. tall)
 - 342.13 Dead snags present
 - 342.2 Cottonwood
 - 342.21 Small trees (less than 15 ft. tall)
 - 342.22 Large trees (greater than 15 ft. tall)
 - 342.3 Oak
 - 342.4 Ash
 - 342.5 Maple
 - 342.6 Alder
 - 342.7 Two species mixtures of broadleaved trees
 - 342.71 Willow/Cottonwood
 - 342.711 Small trees (less than 15 ft. tall)
 - 342.712 Large trees (greater than 15 ft. tall)
 - 342.713 Dead snags present
 - 342.72 Willow/Ash
 - 342.73 Willow/Alder
 - 342.74 Cottonwood/Oak
 - 342.75 Cottonwood/Ash
 - 342.76 Oak/Ash
 - 342.77 Oak/Maple
 - 342.78 Maple/Alder
 - 342.79 Undifferentiated two species mixtures
 - 342.8 Three species mixtures of broadleaved trees
 - 342.81 Willow/Cottonwood/Ash
 - 342.82 Willow/Cottonwood/Oak
 - 342.83 Willow/Ash/Oak
 - 342.84 Cottonwood/Oak/Ash
 - 342.85 Cottonwood/Ash/Maple
 - 342.86 Oak/Ash/Maple
 - 342.9 Other broadleaved trees
 - 342.91 Russian olive
 - 342.92 Locust
 - 342.93 Tree-of-Heaven
 - 342.94 White Poplar
- 343 Conifer-broadleaved mixed forests
 - 343.1 Two species mixtures
 - 343.11 Oak/Douglas fir
 - 343.12 Oak/Ponderosa Pine
 - 343.13 Ash/Douglas fir
 - 343.14 Maple/Douglas fir
 - 343.15 Alder/S. Spruce
 - 343.16 Alder/W. Redcedar
 - 343.17 Alder/Douglas fir
 - 343.18 Cottonwood/S. Spruce
 - 343.19 Undifferentiated two species mixtures

- 343.2 Three species mixtures (1 conifer, 2 broadleaved)
 - 343.21 P. Pine/Oak/Maple
 - 343.22 D. fir/Oak/Maple
 - 343.23 D. fir/Oak/Ash
 - 343.24 D. fir/Alder/Maple
 - 343.25 D. fir/Ash/Maple
 - 343.26 S. Spruce/Cottonwood/Willow
 - 343.27 W. Redcedar/Alder/Maple
- 343.3 Three species mixtures (2 conifers, 1 broadleaf)
 - 343.31 P. Pine/ D. fir/Oak
 - 343.32 P. Pine/D. fir/Maple
 - 343.33 D. fir/S. Spruce/ Maple
 - 343.34 D. fir/S. Spruce/Alder
 - 343.35 D. fir/W. Redcedar/Maple
 - 343.36 D. fir/W. Redcedar/Alder
 - 343.37 S. Spruce/W. Redcedar/Cottonwood
 - 343.38 S. Spruce/W. Redcedar/Alder
 - 343.39 Undifferentiated three species mixtures
- 343.4 Four species mixtures
 - 343.41 S. Spruce/W. Redcedar/Cottonwood/Alder

500 Agricultural Production

- 510 Field crops (to include 520 vegetable and truck crops)
- 530 Tree, shrub, and vine crops (orchards)
- 540 Pasture
- 560 Idle lands

600 Urban and resource extraction

- 610 Residential
- 640 Industrial
- 650 Transportation, communications, and utilities (and their right-of-way)
 - 651 Railroads
 - 652 Roads
 - 654 Airport
 - 655 Telephone
 - 656 Power lines and facilities
- 660 Resource extraction
 - 661 Sand and gravel
 - 662 Mines and mine waste areas
- 670 Open space and recreational facilities
 - 671 Developed parks or campgrounds
 - 672 Undeveloped parks or campgrounds
 - 673 Public access areas, boat ramps