

START

Fitzgerald

0011597
2

AVIAN COMMUNITY INTERACTIONS WITH MID-COLUMBIA
RIVER WATER LEVEL FLUCTUATIONS:
PATTERNS OF RESOURCE USE
AND SPECIES INVENTORY

By
Gregory Gene Books



A thesis submitted in partial fulfillment of
the requirement for the degree of

MASTER OF SCIENCE

WASHINGTON STATE UNIVERSITY
Program in Environmental Sciences

1984

91120501602

AVIAN COMMUNITY INTERACTIONS WITH MID-COLUMBIA
RIVER WATER LEVEL FLUCTUATIONS:
PATTERNS OF RESOURCE USE
AND SPECIES INVENTORY
ABSTRACT

by Gregory G. Books, M.S.
Washington State University, 1984

Chairman: Eldon H. Franz

Peaking operations of Columbia River dams cause water level fluctuations. The effects of these water level fluctuations on the avian community were studied at two sites near Richland, Washington. Observations of avian habitat associations and activities were recorded twenty days per month for a year.

Observations, and related studies from the literature, suggest that fluctuating water levels have three major effects on the avian community: 1) fluctuating water levels moisten previously dry soils which facilitates the spread of willows providing important bird habitat; 2) two avian guilds, ground feeders and water surface gleaners, receive a food subsidy from effects of fluctuating water levels on aquatic and terrestrial organisms, and; 3) fluctuating water levels reduce nest success of ground nesters, especially ducks.

91120501603