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March 4, 2025

## **MEMORANDUM**

TO: Fish and Wildlife Committee members FROM: Heather Hendrixson, Patty O'Toole

SUBJECT: Overview of Resist-Accept-Direct Framework Tool for Management Decisions

## **BACKGROUND:**

Presenter: Mike Hudson, U.S. Fish and Wildlife Service, Supervisory Fish and Wildlife

**Biologist** 

Summary: The Council will hear an overview of the Resist-Accept-Direct (RAD) Framework

used by some federal agencies to make informed decisions while considering

various influences on the landscape. The RAD framework lays out three

approaches for making management decisions for systems undergoing ecosystem transformation: 1) Resist, where managers work to maintain or restore ecosystem

composition, structure, processes, or function on the basis of historical or acceptable current conditions, 2) Accept, where managers allow ecosystem

composition, structure, process, or function to change autonomously, and 3) Direct, where managers actively shape change in ecosystem composition,

structure, processes, or function toward preferred new conditions.

Relevance: The Council supported two different frameworks in development of its Subbasin

Plans. The planning process utilized the Ecosystem Diagnosis and Treatment (EDT) planning tool along with the Qualitative Habitat Assessment (QHA) tool. Both are based on a two-condition model, comparing the "patient" or current condition of a watershed attribute to its "template" or reference (historical) condition. The RAD framework adds two additional possible conditions (accept

and direct), where autonomous, acceptable environmental changes are allowed to occur or where managers guide restoration toward new, feasible conditions.

Workplan: Program Policy and Planning, Coordination with other Programs

Background:

Ecosystems are transforming under the pressures of altered temperature and precipitation regimes, invasive species, and recreational and urban development, with substantial shifts in ecological processes and important ecosystem services occurring rapidly. As regions experience various levels of ecological transformation, our current management toolbox may be incomplete for achieving conservation goals and the sustainable provision of ecosystem services, including fisheries production and wildlife habitat. Managers navigating ecosystem transformation can benefit from considering broader objectives beyond the focus on resisting ecosystem change by also considering whether accepting change, or directing it along a preferred pathway, might be more appropriate (RAD framework). Utilizing the RAD framework may allow managers to better allocate scarce resources, resulting in more effective conservation actions or sustainable restoration. The RAD framework provides options for complicated management decisions that address continued ecological transformation across the Pacific Northwest and elsewhere.

US Fish and Wildlife Service staff will provide an overview of the RAD framework, some examples of RAD applications in the Fish and Wildlife Service, and its relevance to management in the Columbia River Basin.

More info: Resist-Accept-Direct Framework