

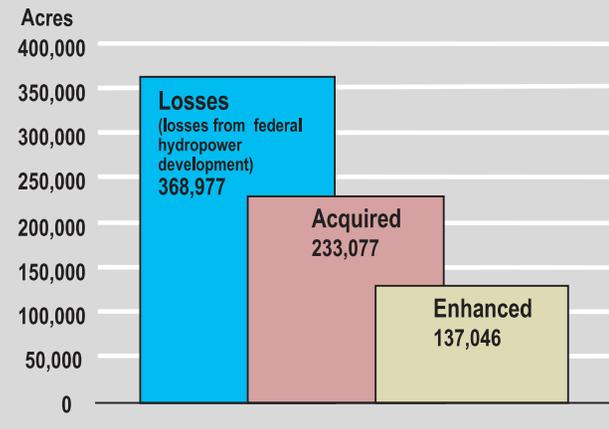
IV. Wildlife

Development of the Columbia Basin hydropower system affected many species of wildlife as well as fish. Some floodplain and riparian habitats important to wildlife were inundated when reservoirs were filled. These losses are presented in Figure 15 along with acquired acreage, including purchases and conservation easements, and enhanced acreage. Taken together, acquired and enhanced acres are counted as mitigation against total losses.

In some cases, fluctuating water levels caused by dam operations created barren vegetation zones, which expose wildlife to increased predation. In addition to these reservoir-related effects, a number of other activities associated with hydroelectric development altered land and stream areas in ways that affect wildlife. These include road construction, draining and filling of wetlands, stream channelization, construction of transmission lines and corridors and the ongoing operation of the dams. Thus, there are losses attributable to both the construction of dams and their related facilities and to the continuing operation of the dams.

Through the program, wildlife species affected by hydropower development were identified and loss estimates were determined for each mainstem dam. The Council and Bonneville worked with the region's wildlife managers and Indian tribes to develop a system of crediting habitat acquisitions against the losses.

FIG 15
Wildlife Acres, Lost, Acquired and Enhanced



Mitigation is summarized in Figure 16 and is measured in terms of habitat units in order to account for habitat quantity as well as quality. A habitat unit is an amount of habitat that supports one animal of a particular species, and the size of habitat units varies among species. A habitat unit for an elk, for example, is much different than a habitat unit for a sage grouse.

The Council estimates that the development of the hydrosystem caused a total loss of 433,085 habitat units for all affected species. Consistent with the Council's program, Bonneville negotiated wildlife mitigation agreements with the states and Indian tribes to mitigate for lost habitat units. In many of these agreements the states or tribes also manage the acquisitions. To date, about 150,000 habitat units have been

credited through acquisitions of habitat or habitat-protection agreements. The question remains unsettled as to how much credit to grant for acquired habitat, although the Council has recently provided a compromise solution.

The Council's program recognizes that some projects to improve fish habitat also provide benefits to wildlife, and so the program allows crediting of wildlife benefits from these projects. While habitat has been acquired and habitat units credited through the Council's program, there has been little direct monitoring of wildlife



Before

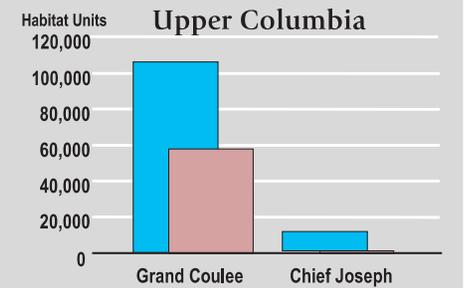
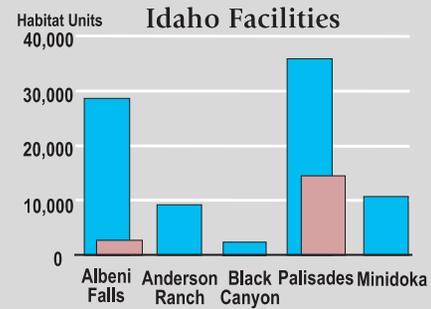
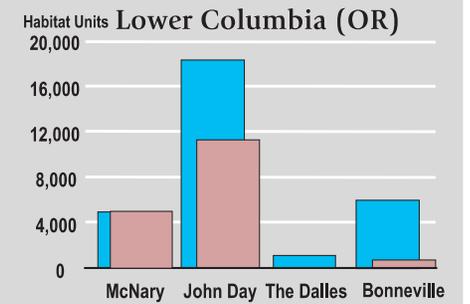
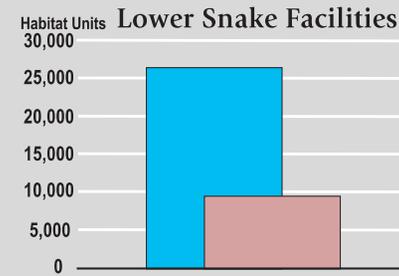
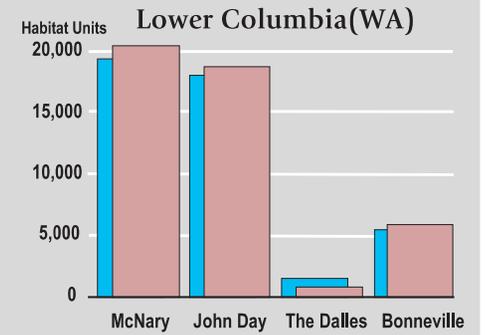
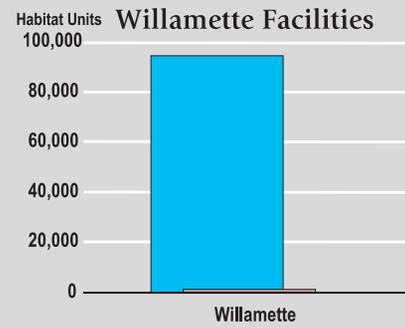
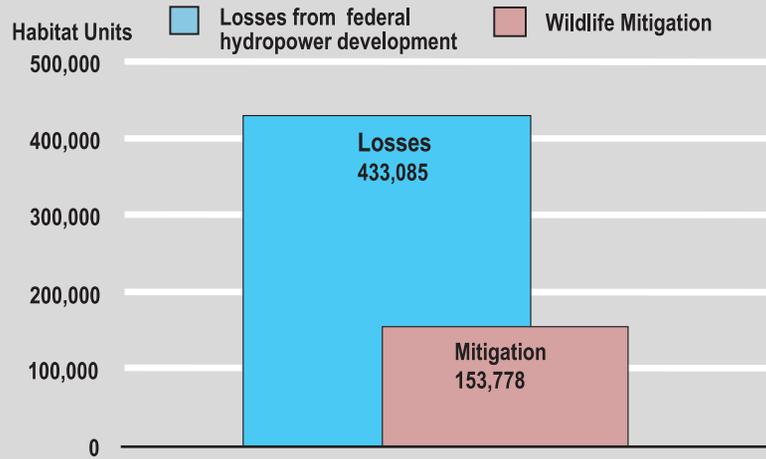
Habitat restoration and protection is occurring throughout the Basin. Restoration includes the planting of native grasses along streams and rivers.

After



populations by fish and wildlife managers to determine the effectiveness of the acquisitions. The Council has asked that monitoring be improved in the future.

FIG 16
Wildlife Habitat Units: Lost & Mitigated
 1978-1999



* Note: "Acres acquired within the state of Idaho for Dworshak agreement are not measured in habitat units and are not included in these totals."

FIG 17
Properties Protected by BPA for Wildlife Purposes
 1978-2000

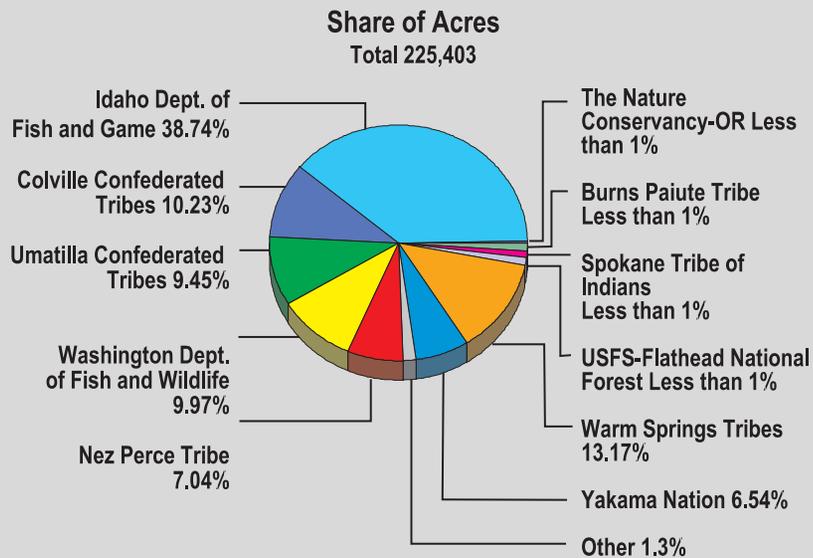
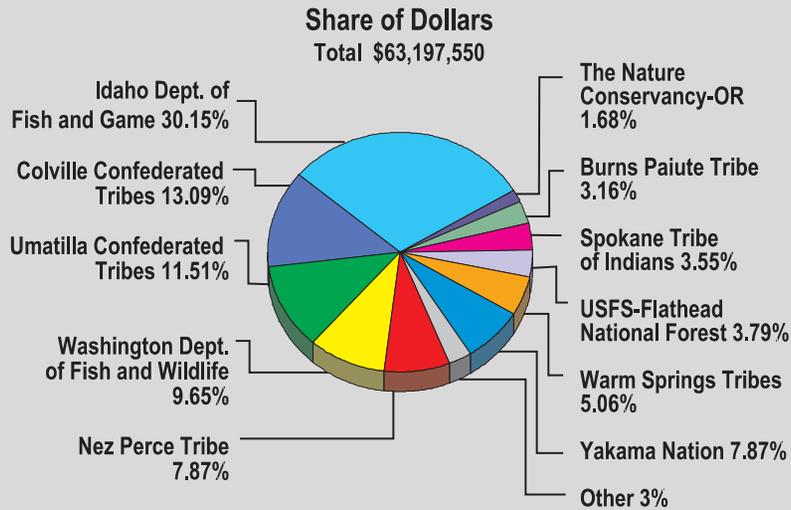


FIG 18
Properties Purchased by BPA for Wildlife Purposes by Province
 1978-2000

