



US Army Corps
of Engineers®
Seattle District

Skagit River General Investigation Study

Comparison of Environmental Consequences



Resources Impacted	Comprehensive Urban Levee Improvement (CULI) Alternative	Joe Leary Slough (JLS) Bypass Alternative	Swinomish Bypass Alternative
Hydrology and Hydraulics	Increase in water surface elevations; increase overbank discharges at Sterling; no effects from sea level change; under climate change scenarios, probability of the current 1% ACE discharge could increase to 4% ACE	Reduces maximum flood elevations; same effects as CULI Alternative for sea level change, climate change, and cumulative impacts	Reduces maximum flood elevations; increased downstream discharges for 4% ACE; same effects as CULI Alternative for sea level change, climate change, and cumulative impacts
Wetlands Habitat	Approx 3 acres impacted	Approx 57 acres impacted	Approx 141 acres impacted
Riparian / Aquatic Habitat	Impacts to riparian; impacts to off-channel habitat; impacts to large woody debris (LWD)	Impacts to off-channel habitat and LWD; increased sediment & impact to submerged marine vegetation & tidal channels in Padilla Bay	Similar to JLS Bypass Alternative, with less of an impact to Padilla Bay due to buffering effect of wetland at Telegraph Slough
Wildlife and Fish including ESA Species	Temporary wildlife impacts related to construction; impacts to fish communities in Skagit River and Skagit Bay related to hydrology and perpetuation of poor quality habitat	Impacts to fish communities due to high entrainment risk in bypass, impacts to fish communities in Padilla Bay during flood events due to changes in salinity and sediment delivery	Impacts to fish communities due to high entrainment risk in bypass, Impacts to fish communities in Padilla Bay due to buffering effect of the wetland at Telegraph Slough
Cultural Resources	Impacts to four unevaluated archaeological sites, historic levees and five unevaluated historic structures	Impacts to archaeological sites in levee corridor, impacts to WA State Register Barn, 63 historic structures in corridor	Impacts to the Historic settlement of Avon, increased erosion of significant prehistoric sites

ACE = annual chance of exceedance