

FIGURES

Figure 1-1: Snohomish River basin and vicinity

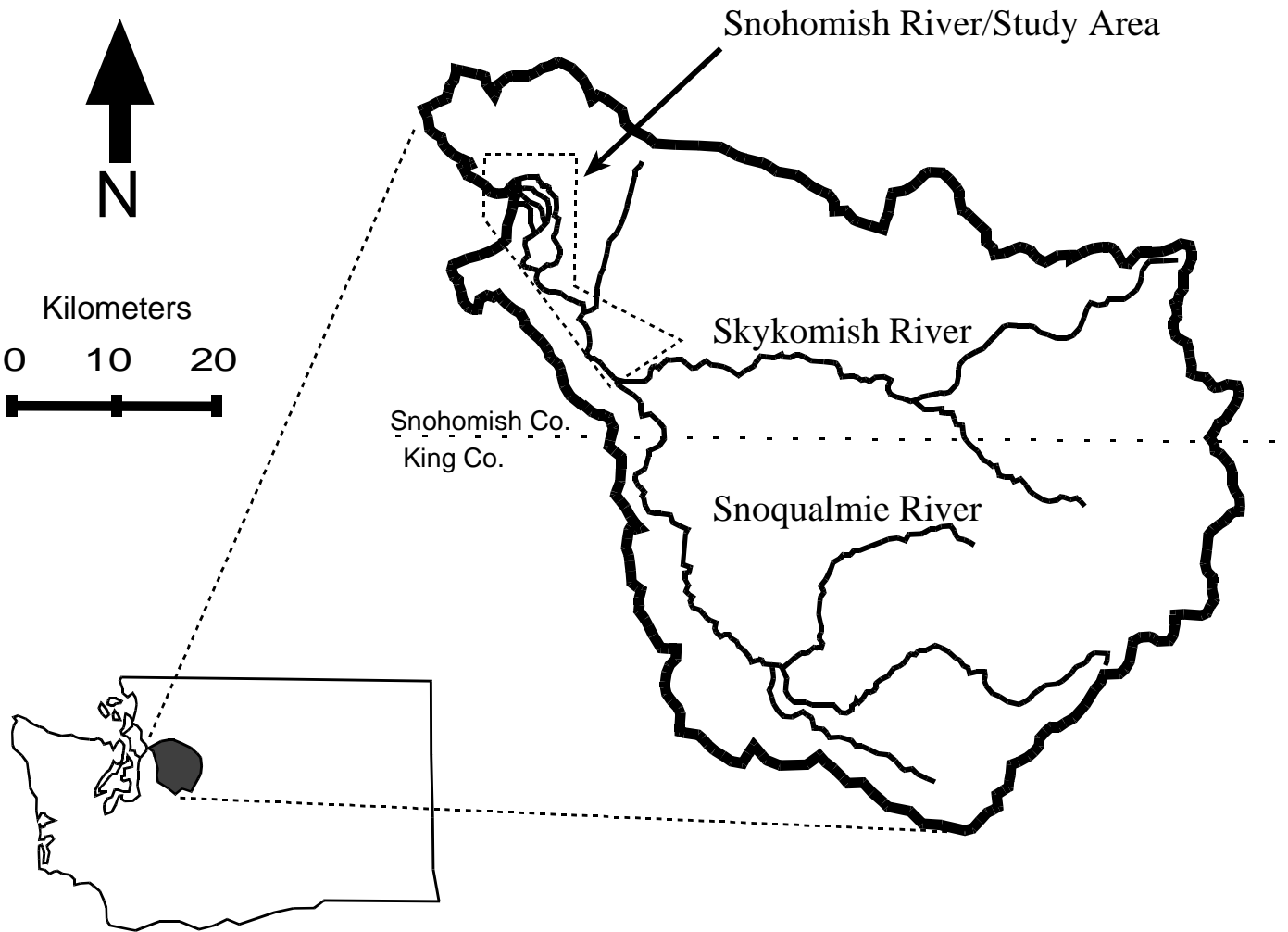


Figure 1-2: Study area

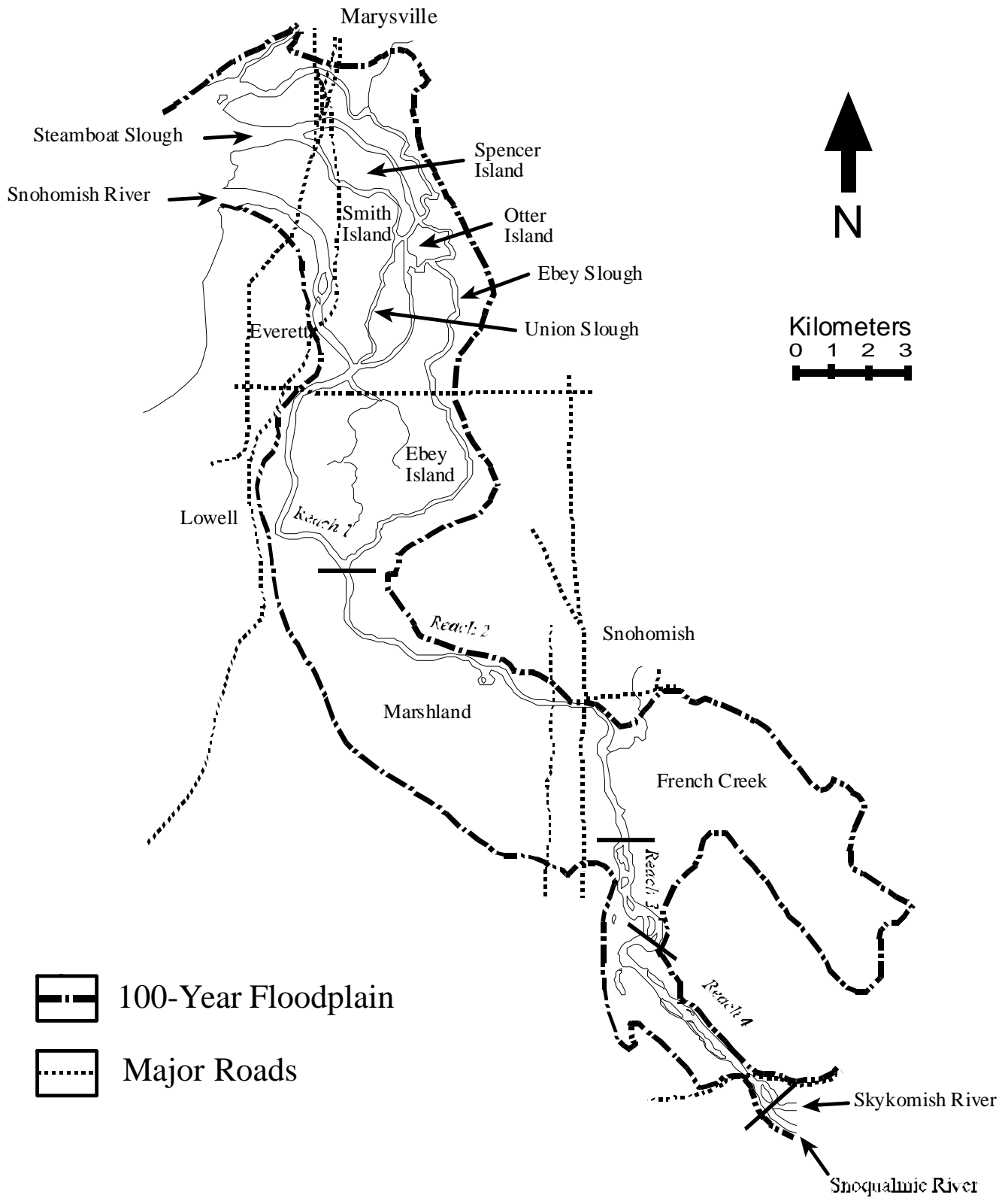


Figure 2-3: Riparian survey sites

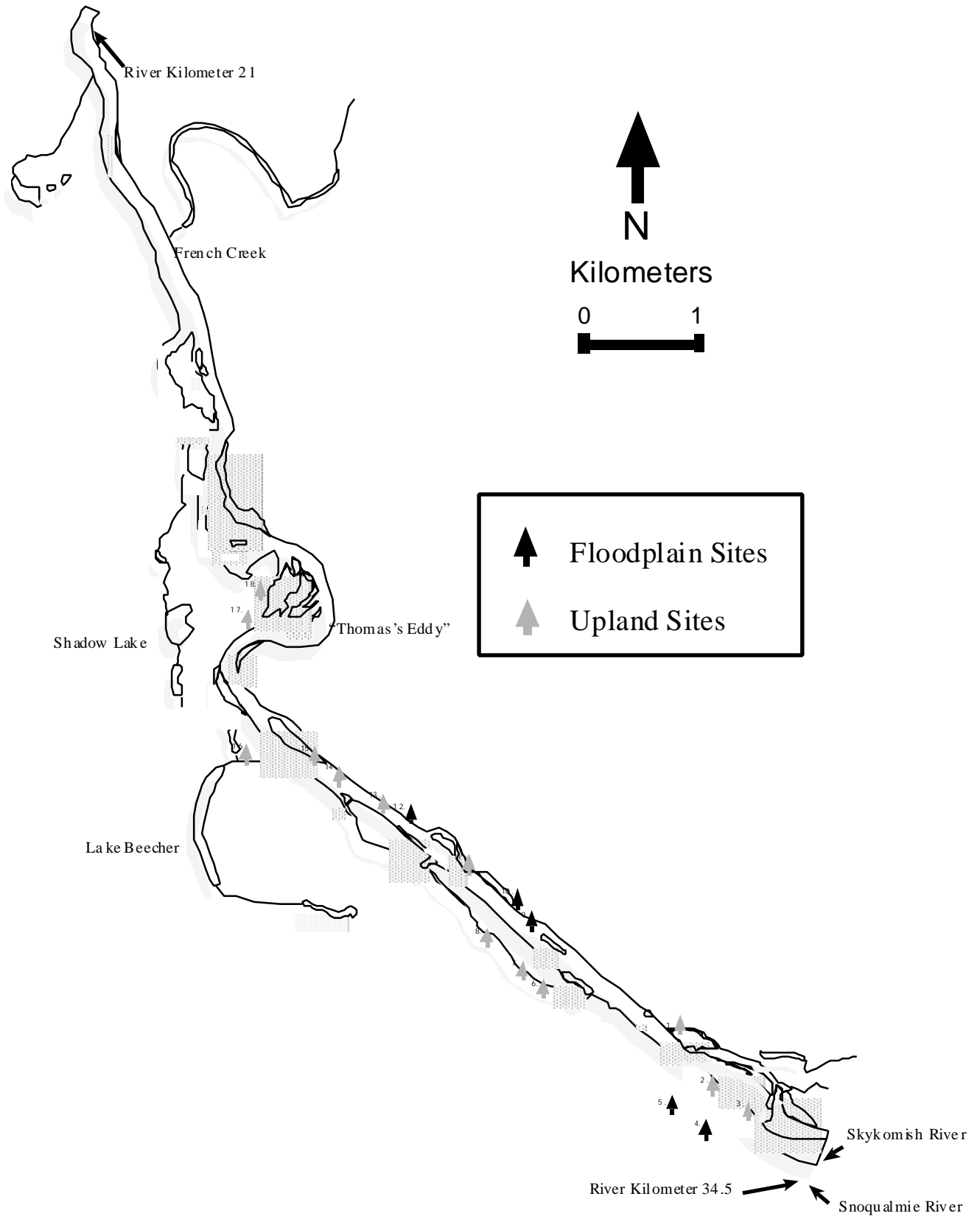
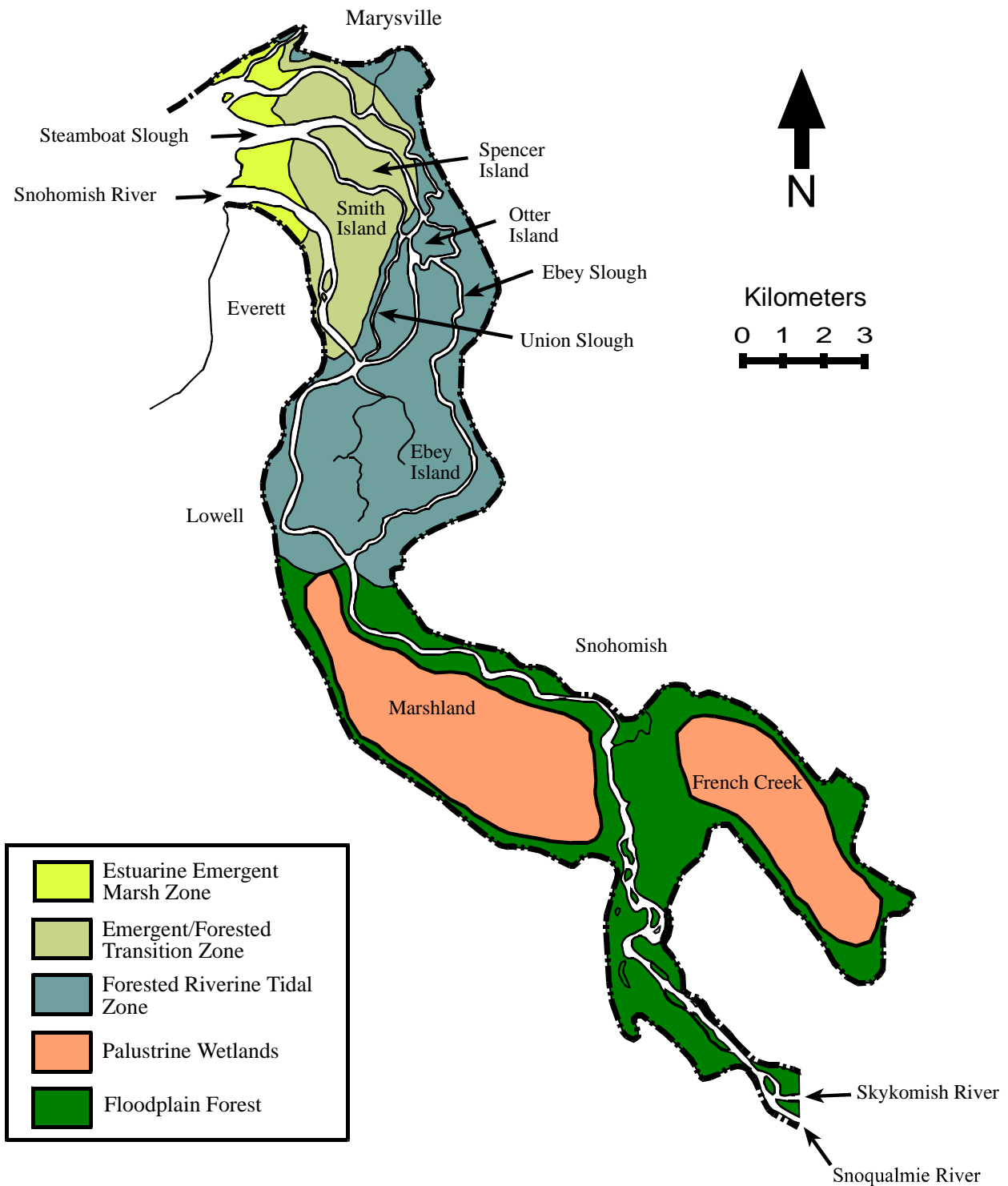
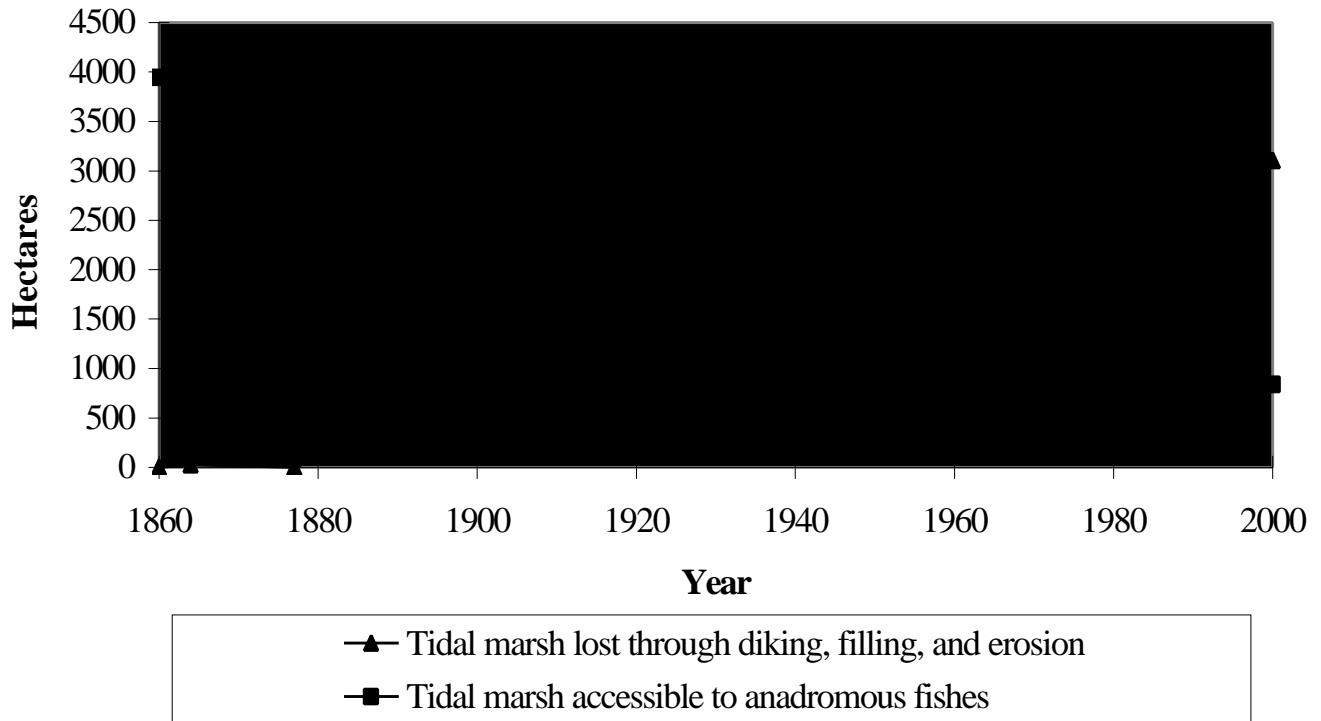


Figure 3-4: Approximate location of wetlands within the 100-Year floodplain of the Snohomish River in the mid-19th century



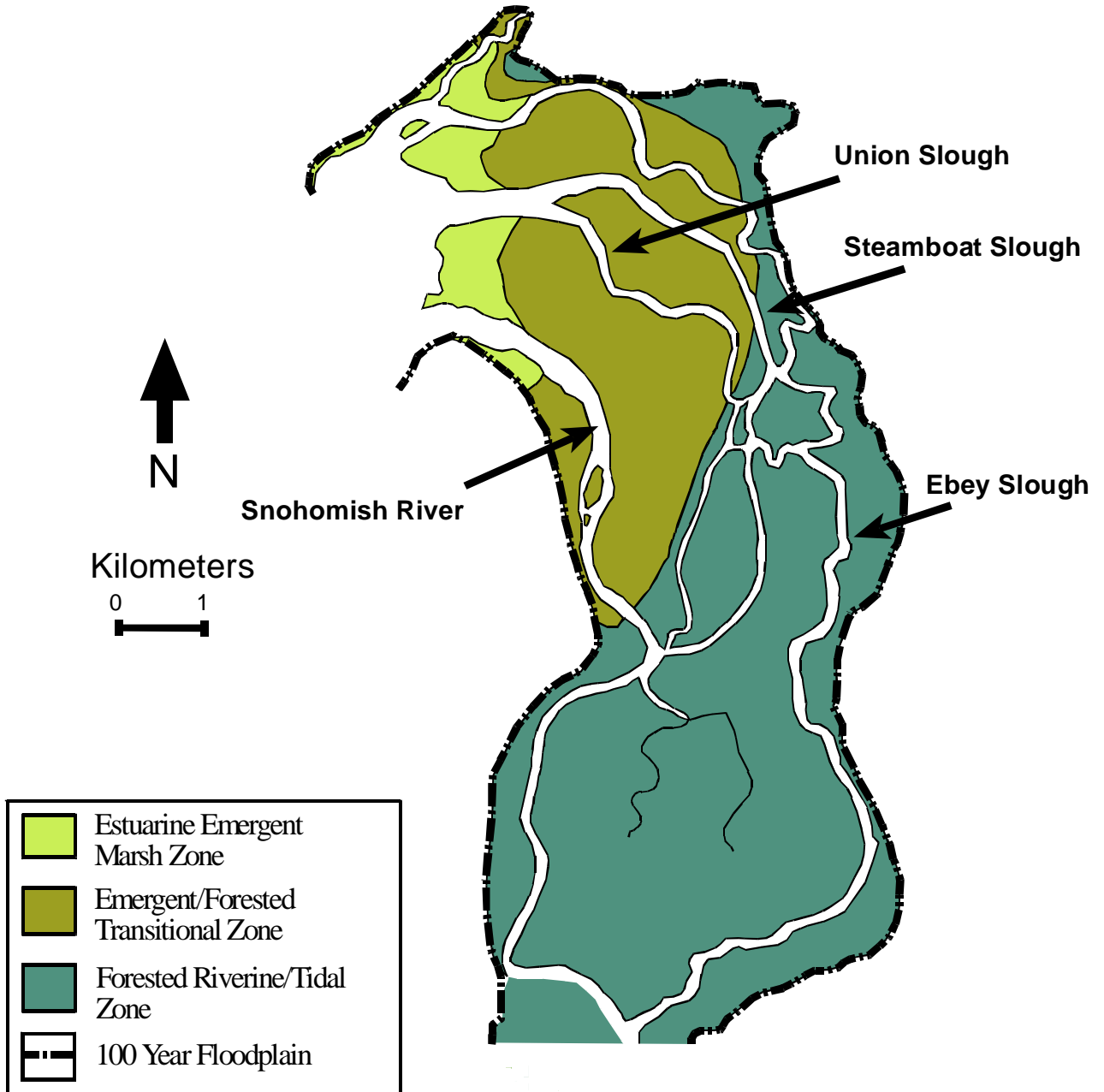
Based on interpretation of Government Land Office survey (Surveyor General, 1869-74)

Figure 3-5: Diking history of the lower Snohomish estuary



The spatial extent of this analysis is from the head of Ebey Slough to Priest Point. Mudflats are not included. The historic extent of wetlands was measured from the USC&GS map 1884-85. Data sources are 1864, 1877, 1883 (Nesbit, 1885); 1909 (ACOE, 1901, USGS, 1909); 1933 (1:12000-scale aerial photomosaic); 1941 (War Department orthophotos, 1944); 1969 (Cordell et al., 1998); 1975 (Pentec, 1992); 1996 (1:12000 scale aerial photos).

Figure 3-6: Extent of habitat zones in the lower Snohomish estuary prior to diking



Based on an interpretation of the Government Land Office Survey (Surveyor General, 1869-74)

Figure 3-7: Change in tidal marsh area in the lower Snohomish estuary by habitat zone

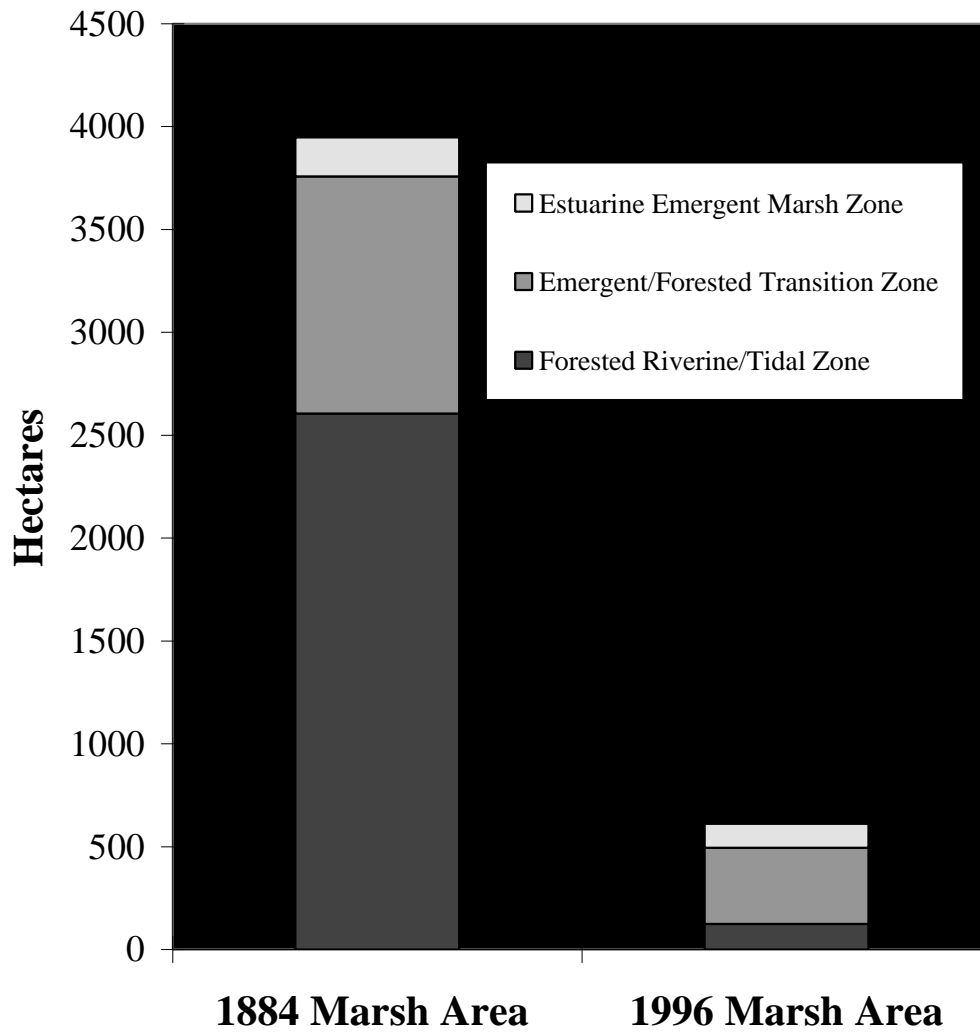
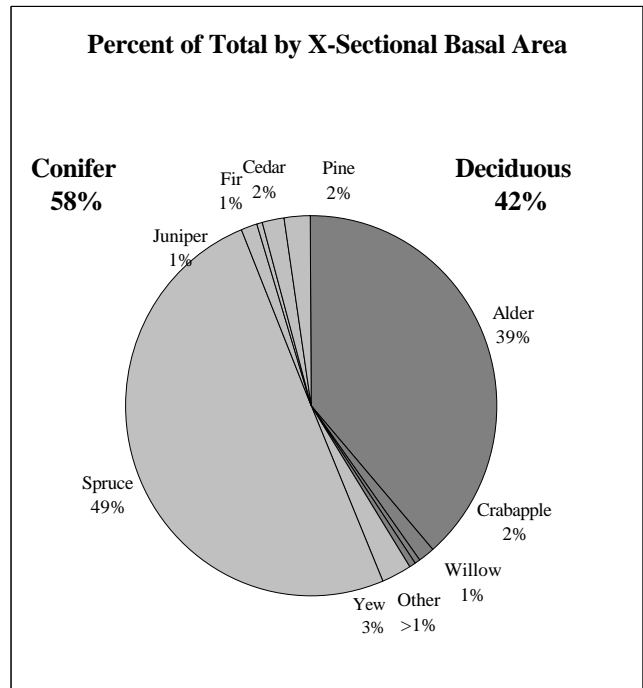
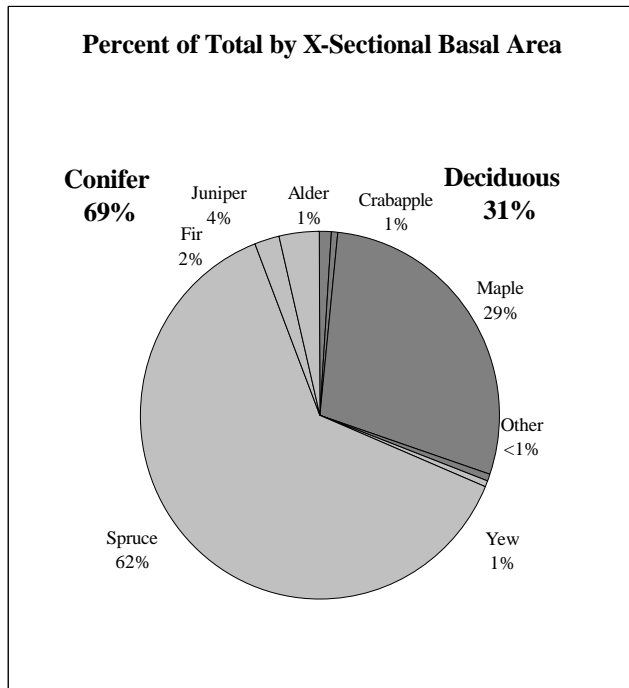
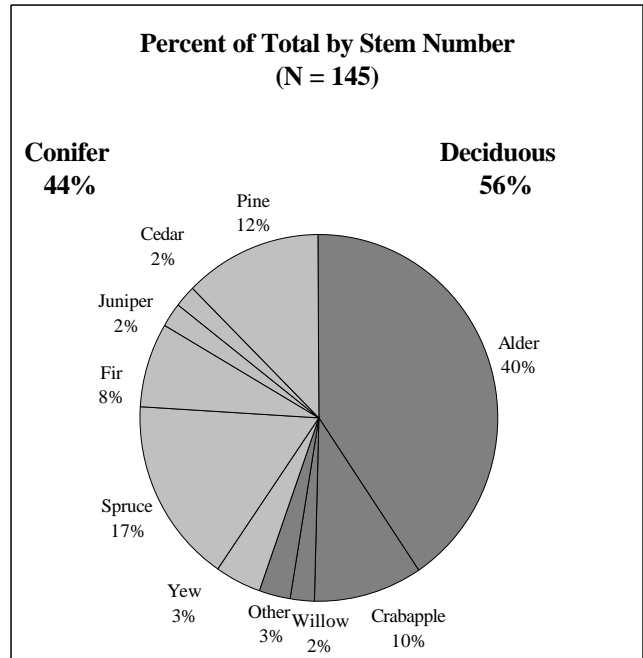
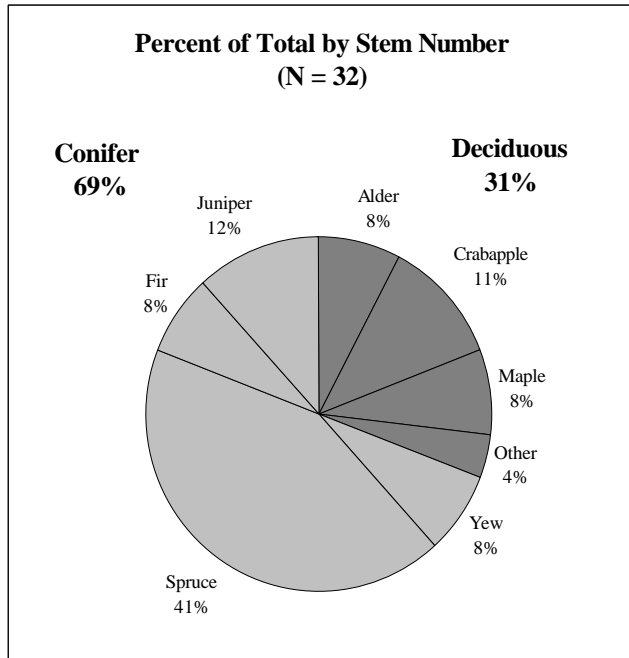


Figure 3-8: Historic forest composition in the lower Snohomish Estuary

Emergent/Forested Transition Zone

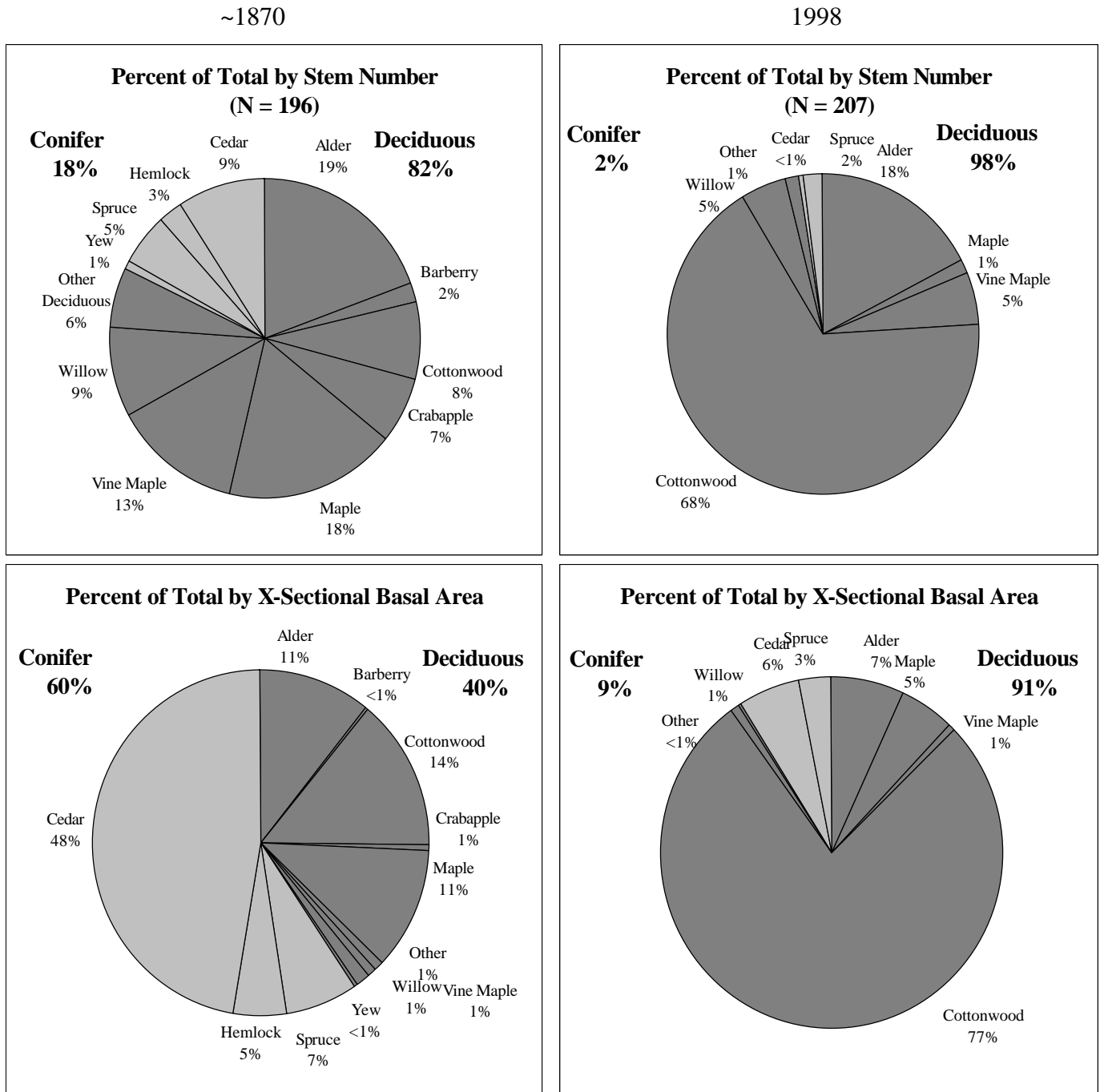
Forested Riverine/Tidal Zone



No witness trees were identified at 52 survey points, presumably because no trees were close to the survey marker.

No witness trees were identified at 11 survey points, presumably trees were close to the survey marker.

Figure 3-9: Change in size and distribution of floodplain trees with potential for recruitment by the Snohomish River



Average tree diameter = 37 cm

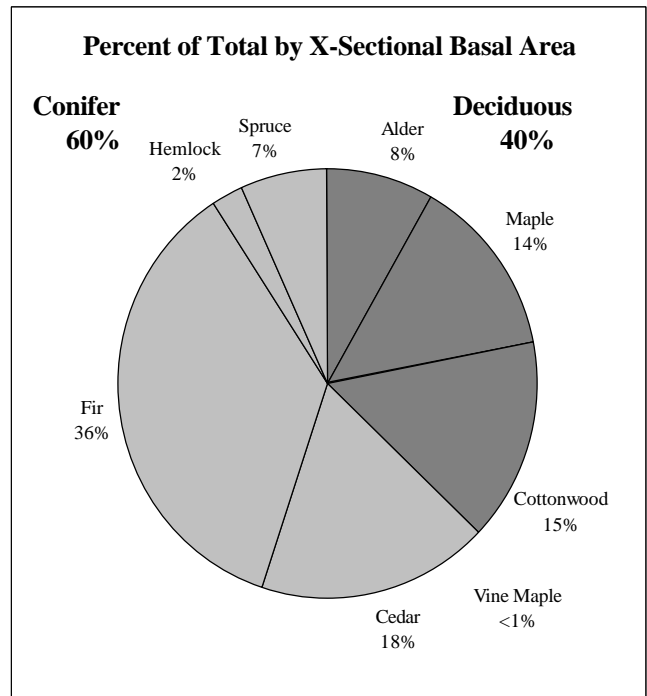
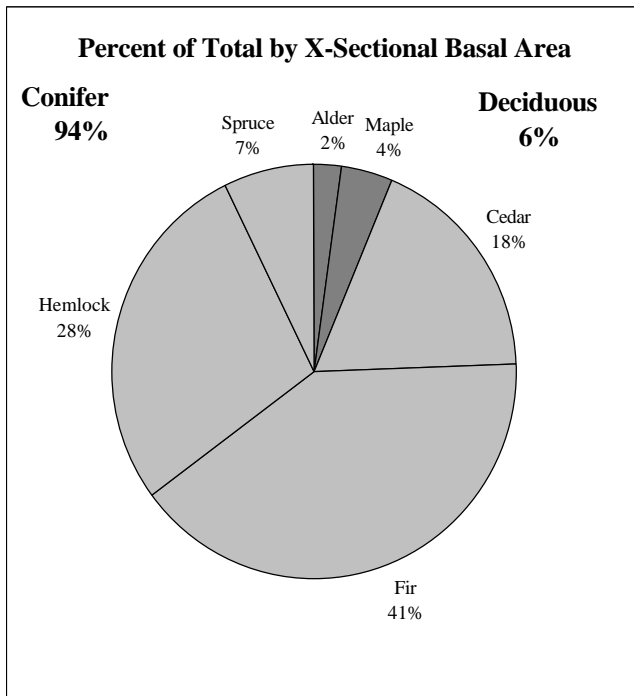
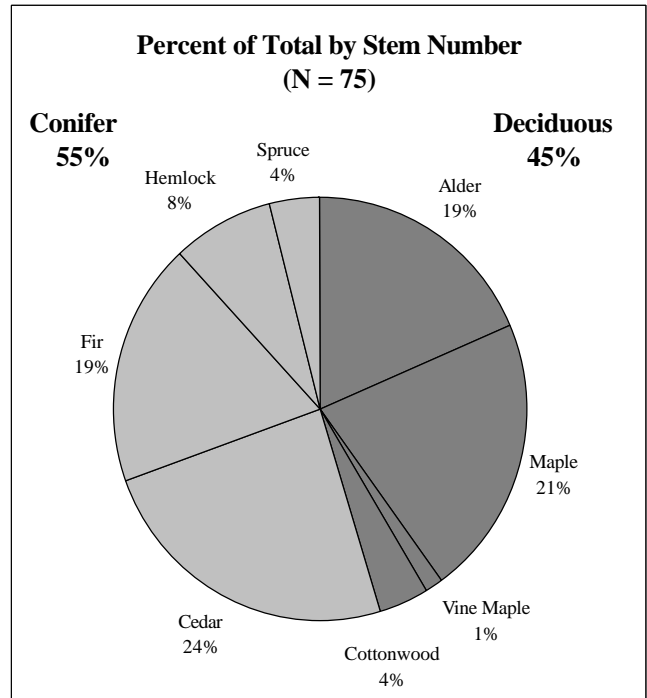
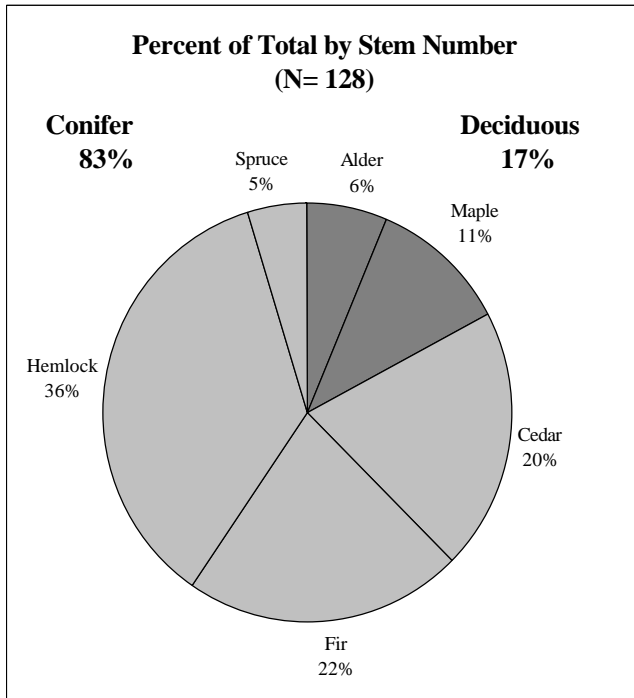
Average tree diameter = 28 cm

No witness trees were identified 4 times, presumably because no trees were close to the survey marker.

Figure 3-10: Change in size and distribution of non-floodplain trees with potential for recruitment by the Snohomish River

~1870

1998

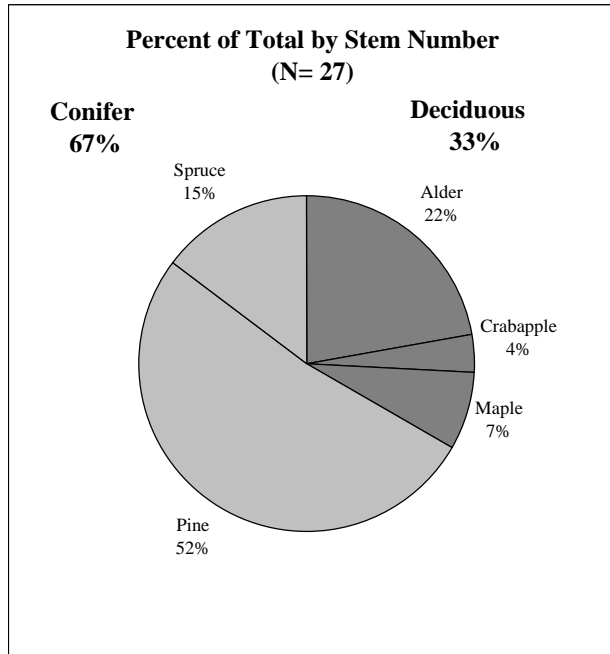


Average tree diameter = 49 cm

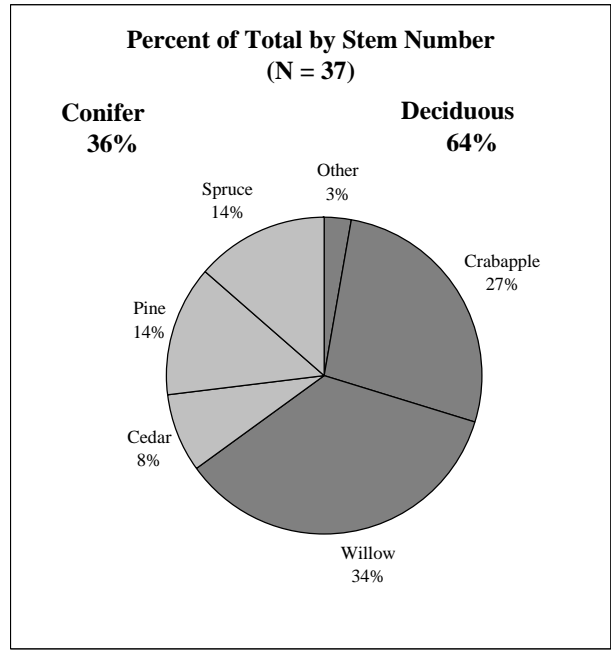
Average tree diameter = 46 cm

Figure 3-11: Historic forest composition in Marshland and French Creek marshes

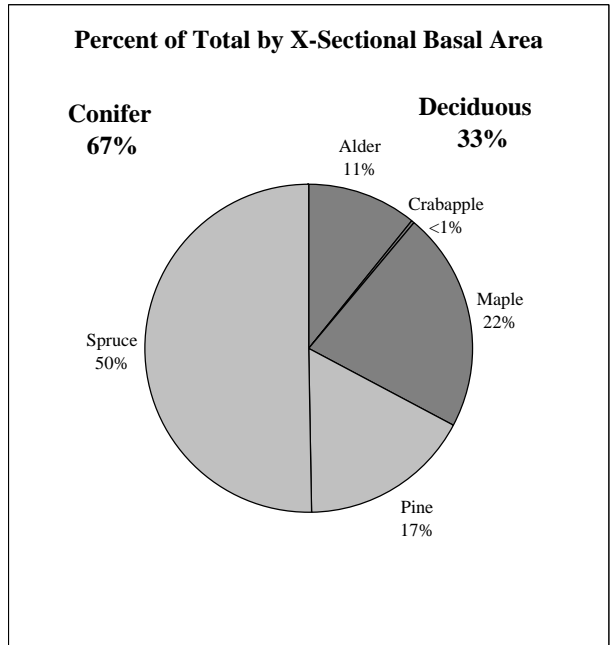
Marshland



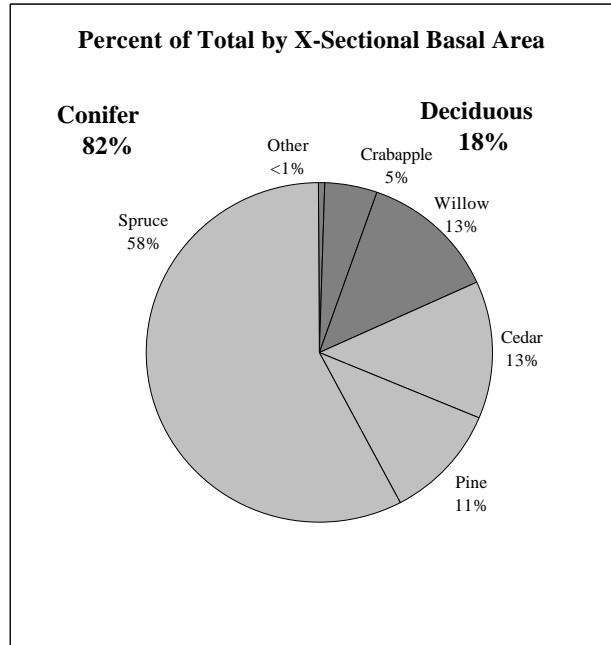
French Creek



Percent of Total by X-Sectional Basal Area



Percent of Total by X-Sectional Basal Area



N = Number of witness trees surveyed = 27
 No witness trees were identified 21 of 48 points, presumably because no trees were close to the survey marker.
 Average distance to witness trees = 16 m
 Average tree diameter = 28 cm

N = Number of witness trees surveyed = 37
 Witness trees were identified adjacent to each marker.
 Average distance to witness trees = 6 m
 Average tree diameter = 13 cm

Figure 3-14: Average residual pool depth in the Snohomish River (RK 24.5-RK 33) by primary pool forming factor

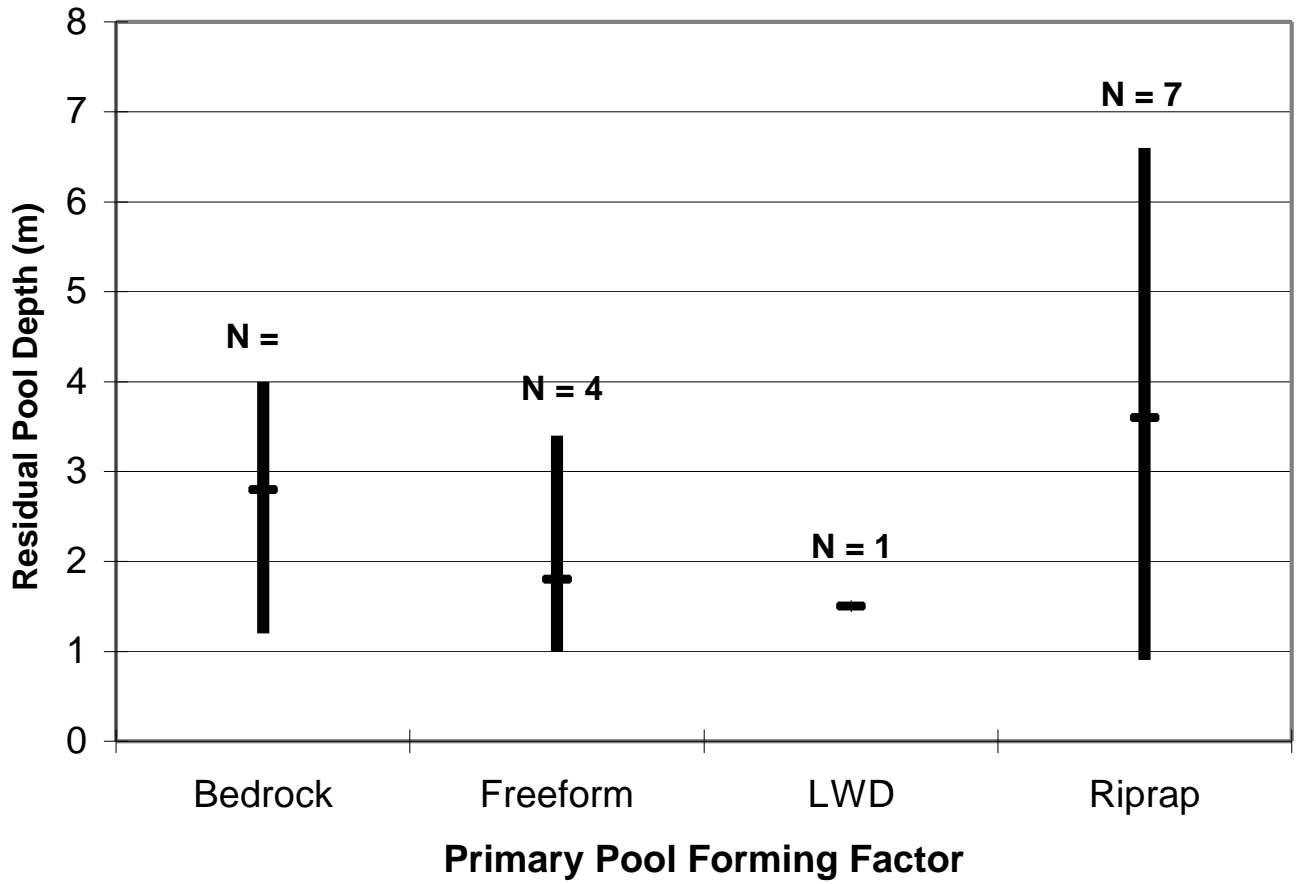


Figure 3-15: Large woody debris decay class and position in the channel cross-section in the Snohomish River

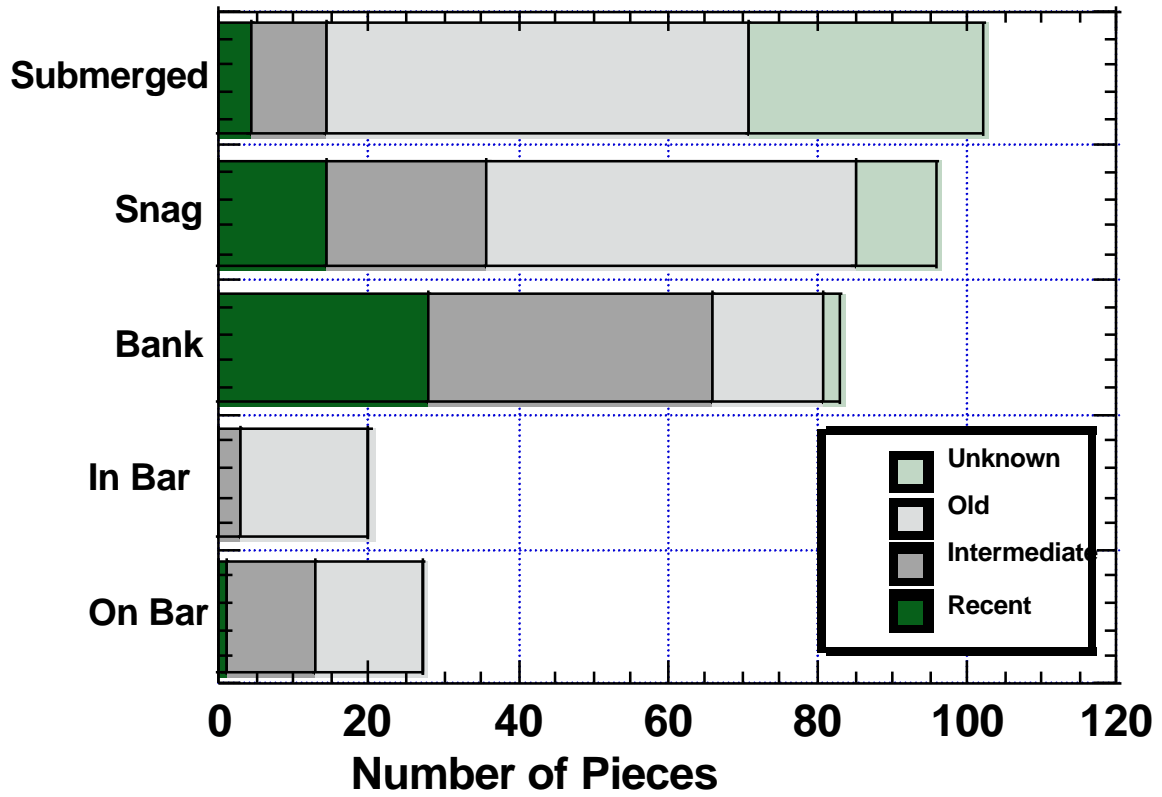


Figure 3-16: Longitudinal and cross-sectional distribution of large woody debris in the Snohomish River

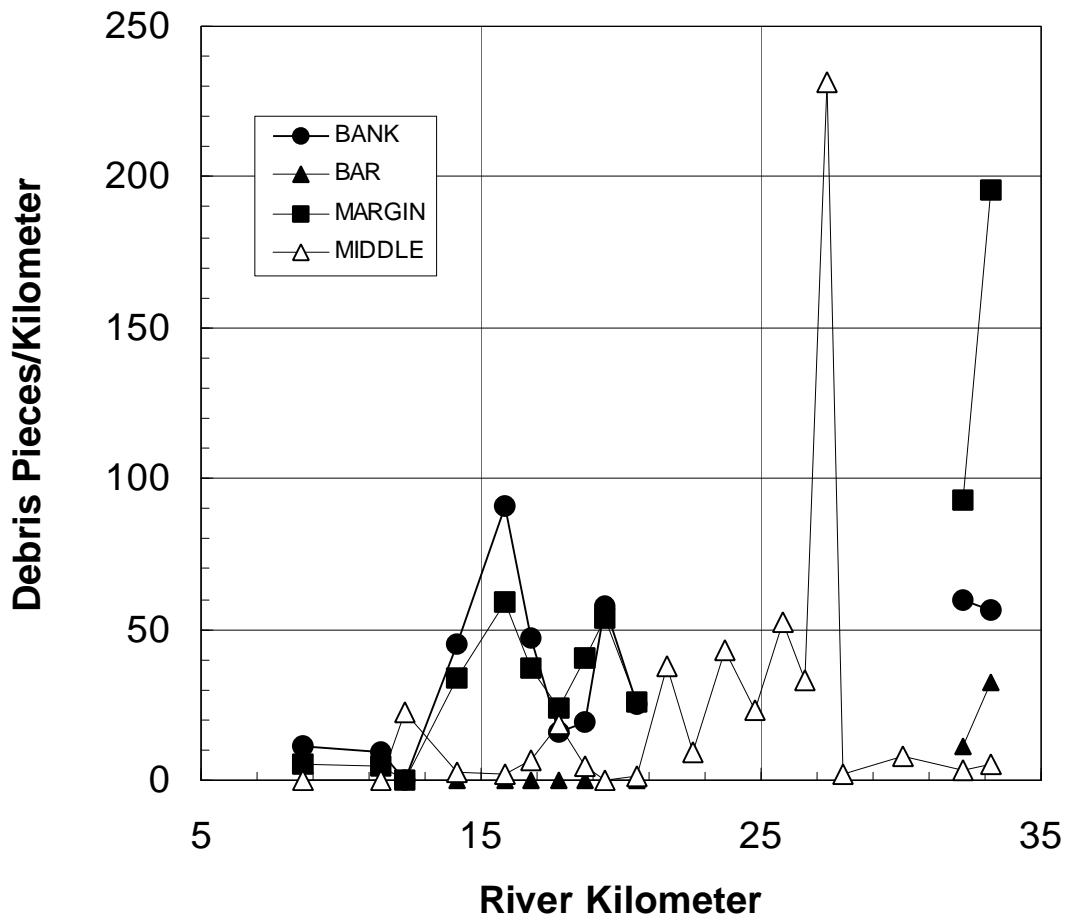


Figure 3-17: Frequency of large woody debris and jams in the Snohomish and Nisqually rivers

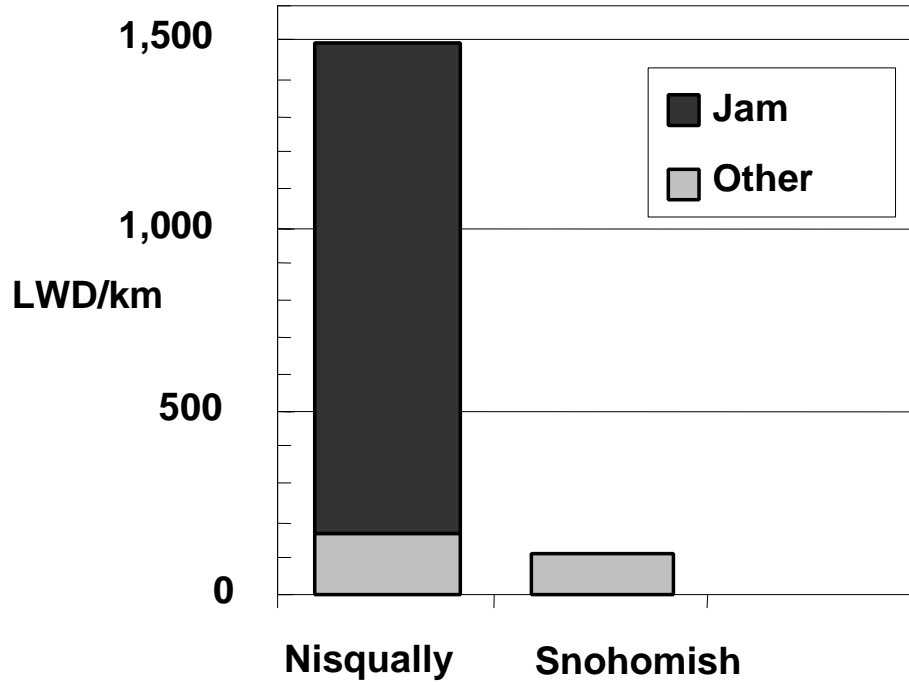


Figure 3-18: Large woody debris dimensions in the Snohomish and Nisqually rivers

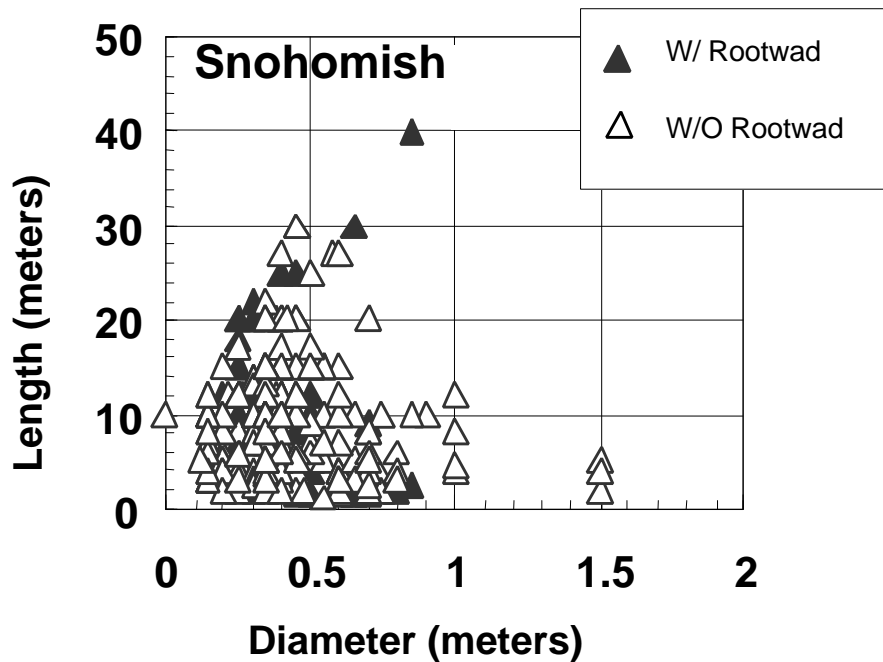
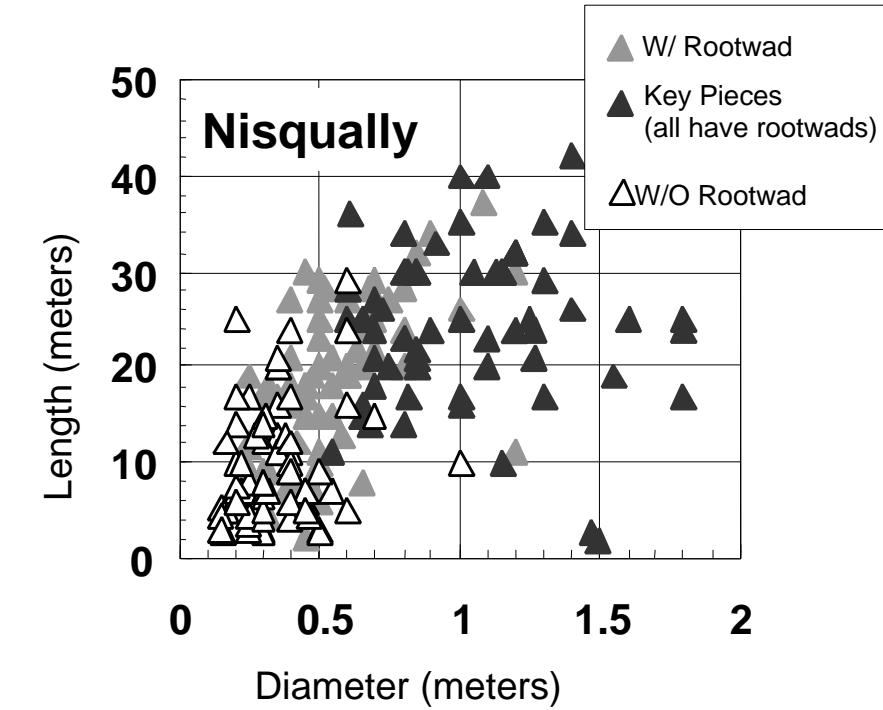


Figure 3-19: Edge cover along natural and hydromodified banks of the Snohomish River

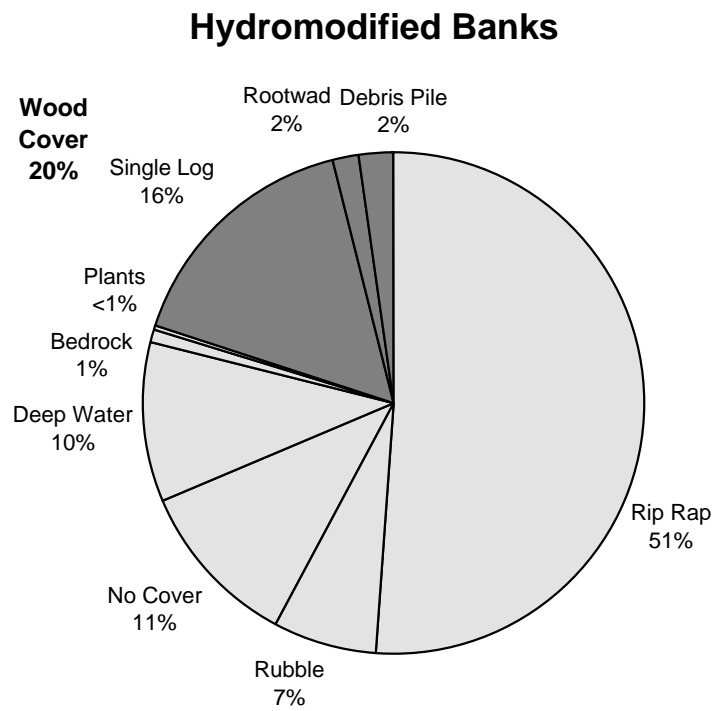
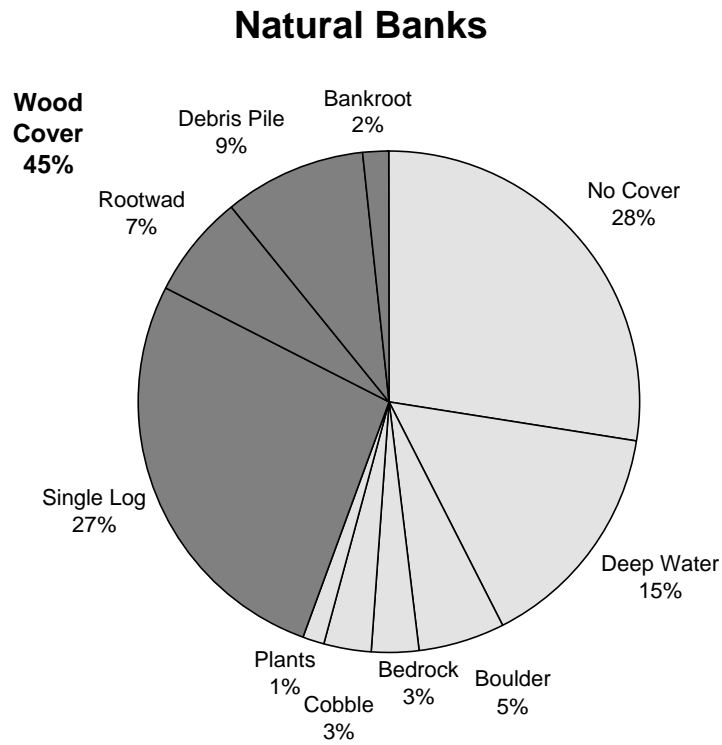


Figure 4-20: Chinook smolt production capacity in the lower Snohomish estuary by habitat zone

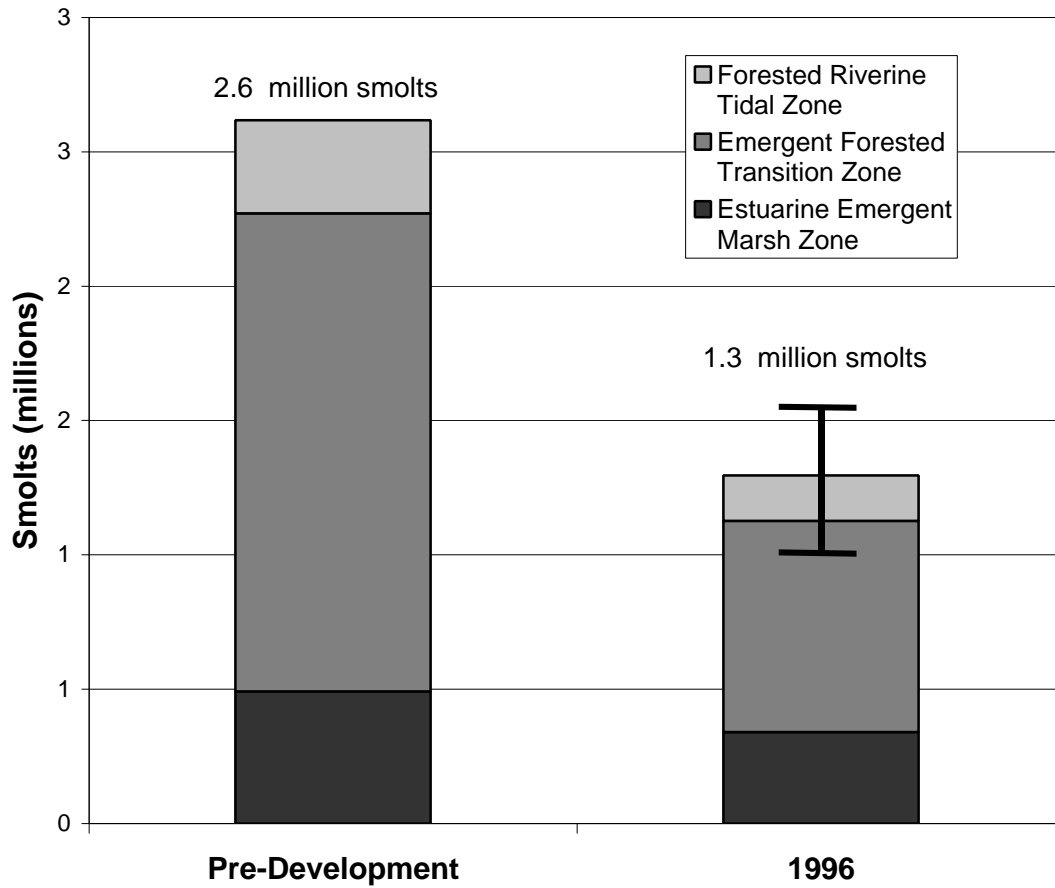


Figure 4-21: Chinook smolt production capacity in the lower Snohomish estuary by habitat type

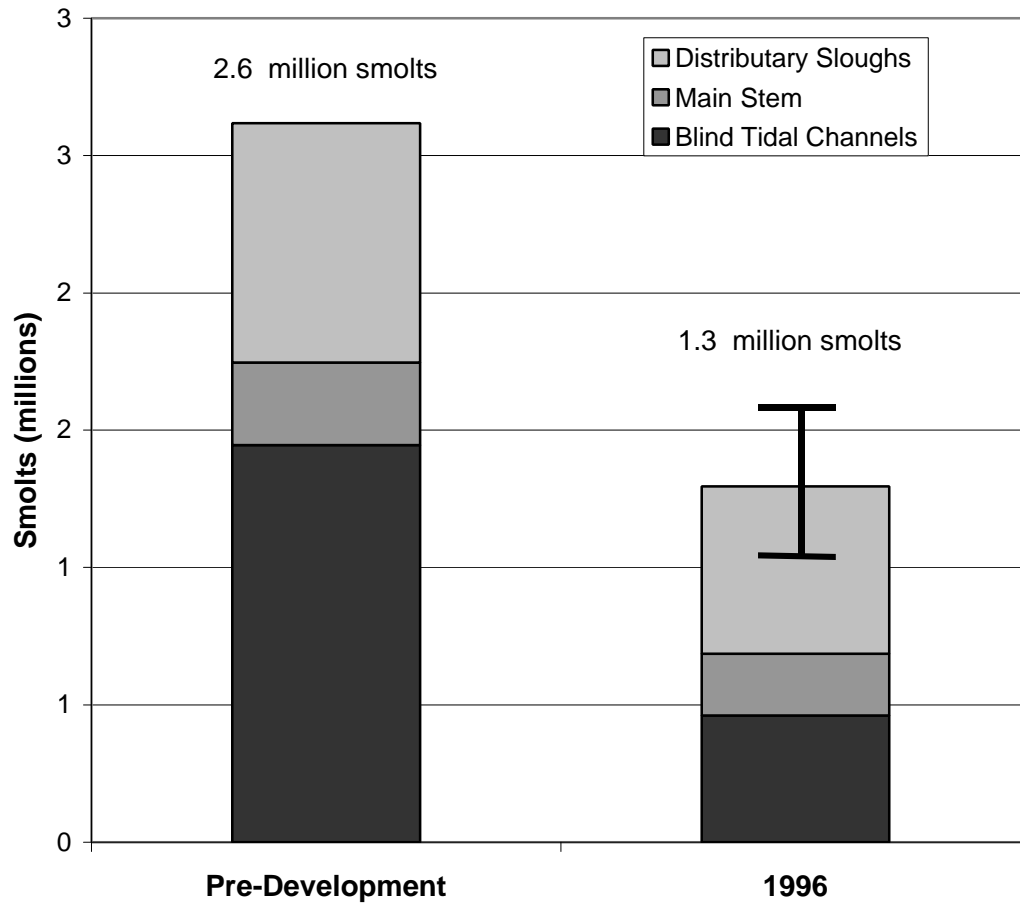


Figure 4-22: Coho smolt production capacity in the lower Snohomish estuary by habitat zone

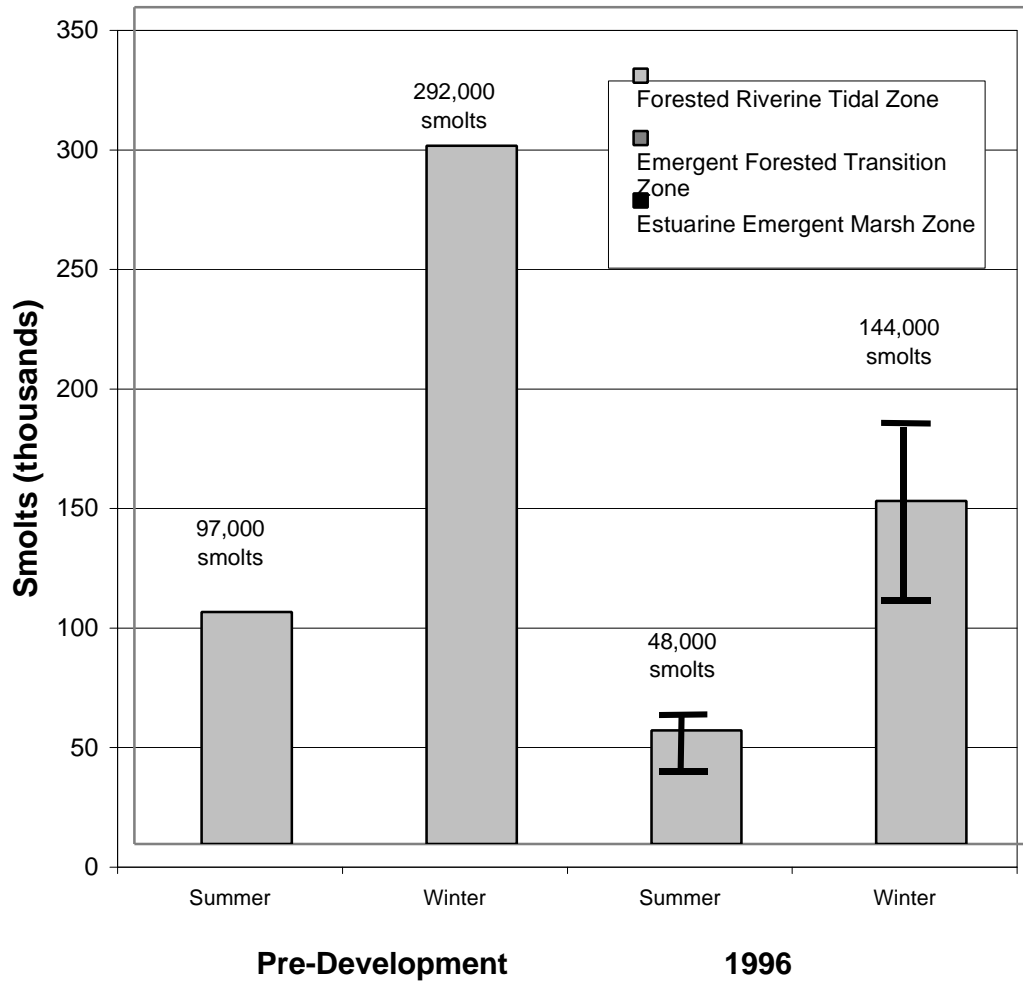


Figure 4-23: Coho smolt production capacity in the lower Snohomish estuary by habitat type

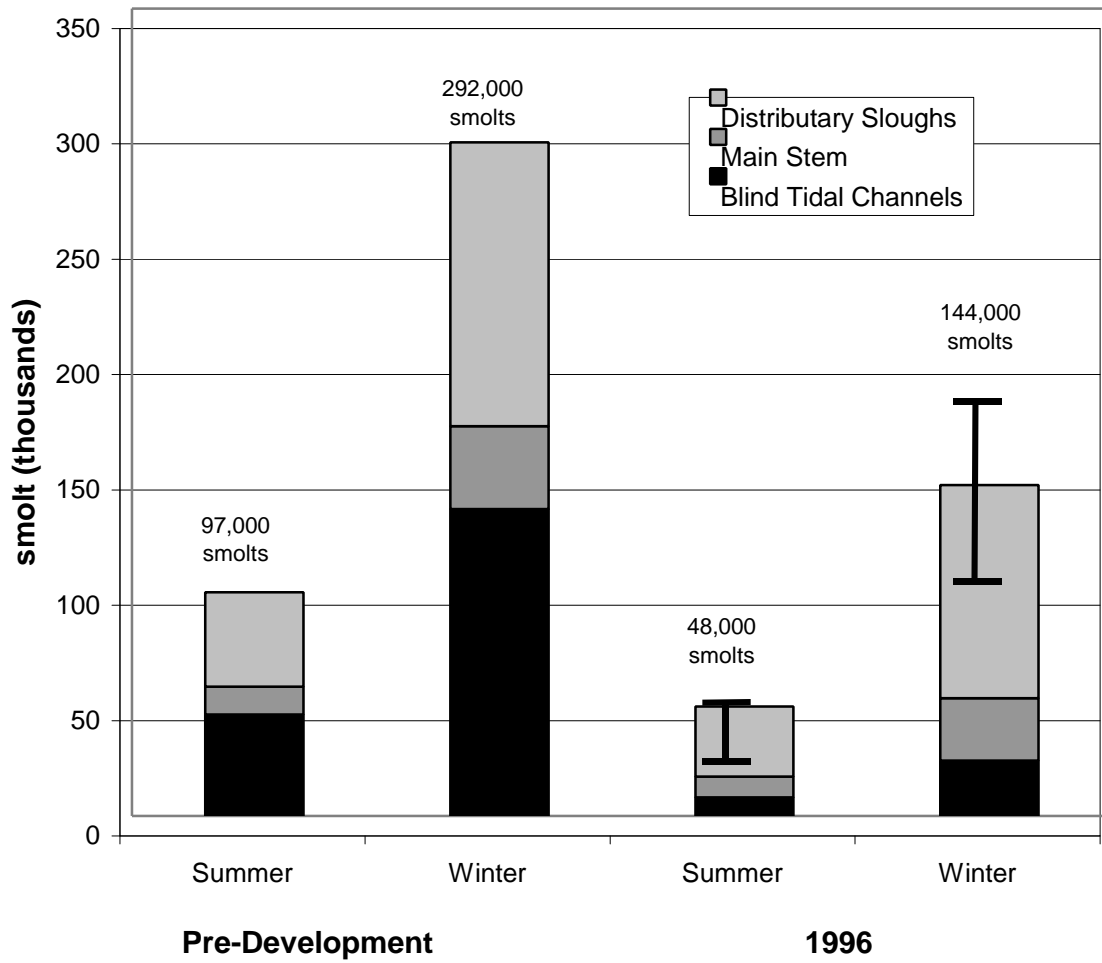


Figure 4-24: Pre-smolt chinook rearing capacity in the Snohomish floodplain by habitat type

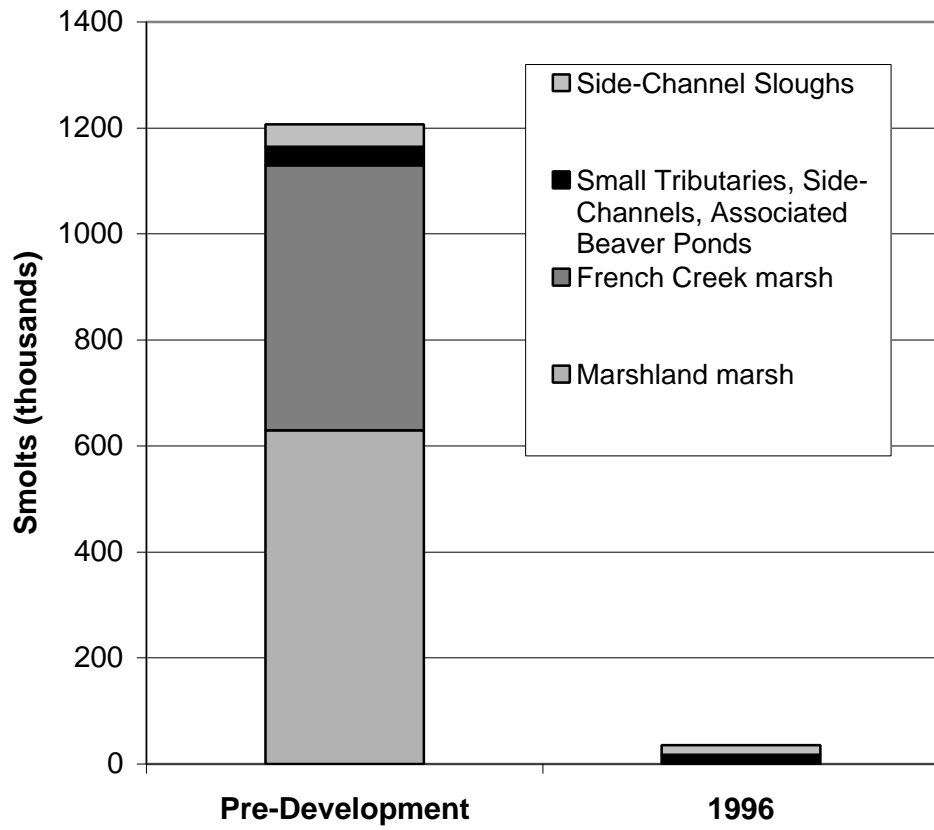


Figure 4-25: Coho smolt production capacity in the Snohomish floodplain (upstream of Ebey Slough, RK 12.4) by habitat type

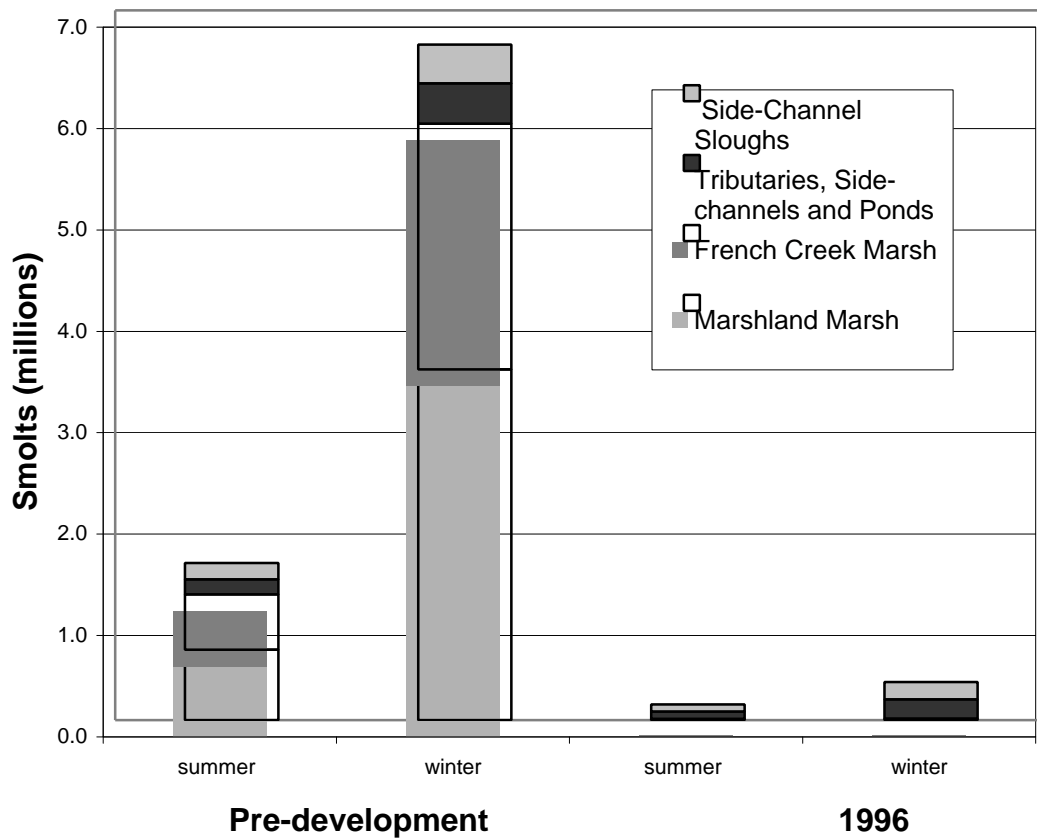


Figure 4-26: Percent change in rearing capacity in the main-stem Snohomish River under historic and future conditions scenarios

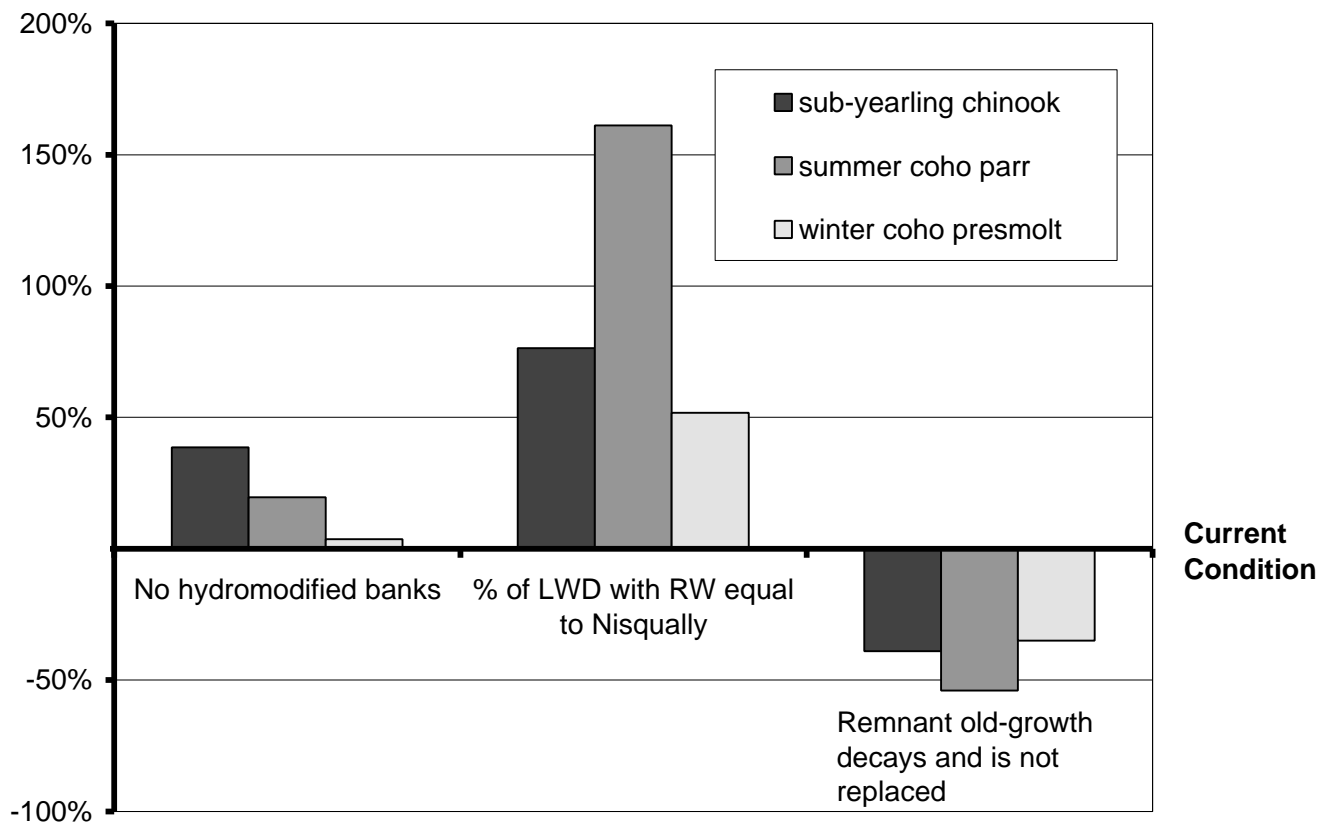


Figure 4-27: Relative change in chinook production potential by habitat type from pre-settlement condition

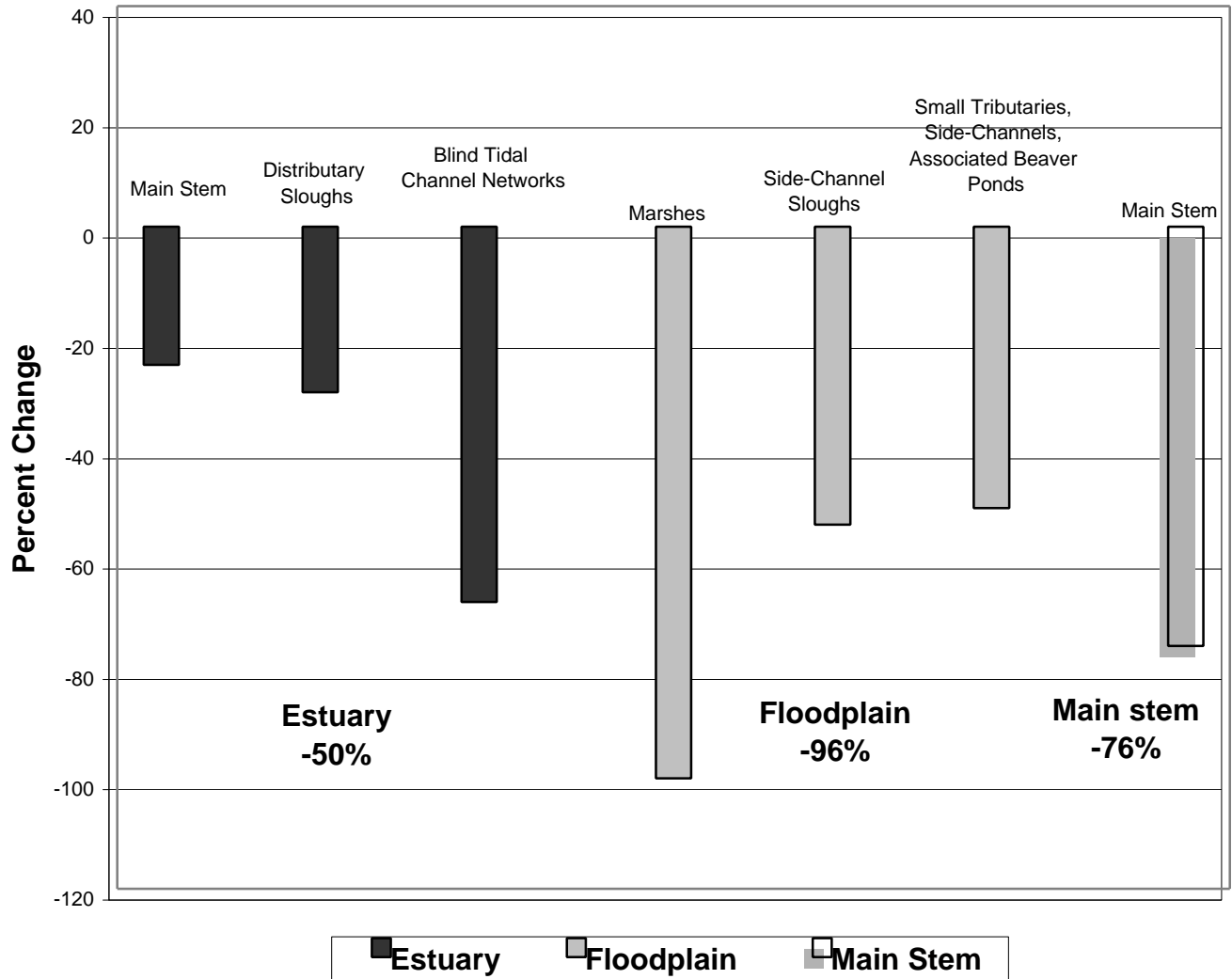


Figure 4-28a: Relative change in summer coho production potential by habitat type from pre-settlement condition

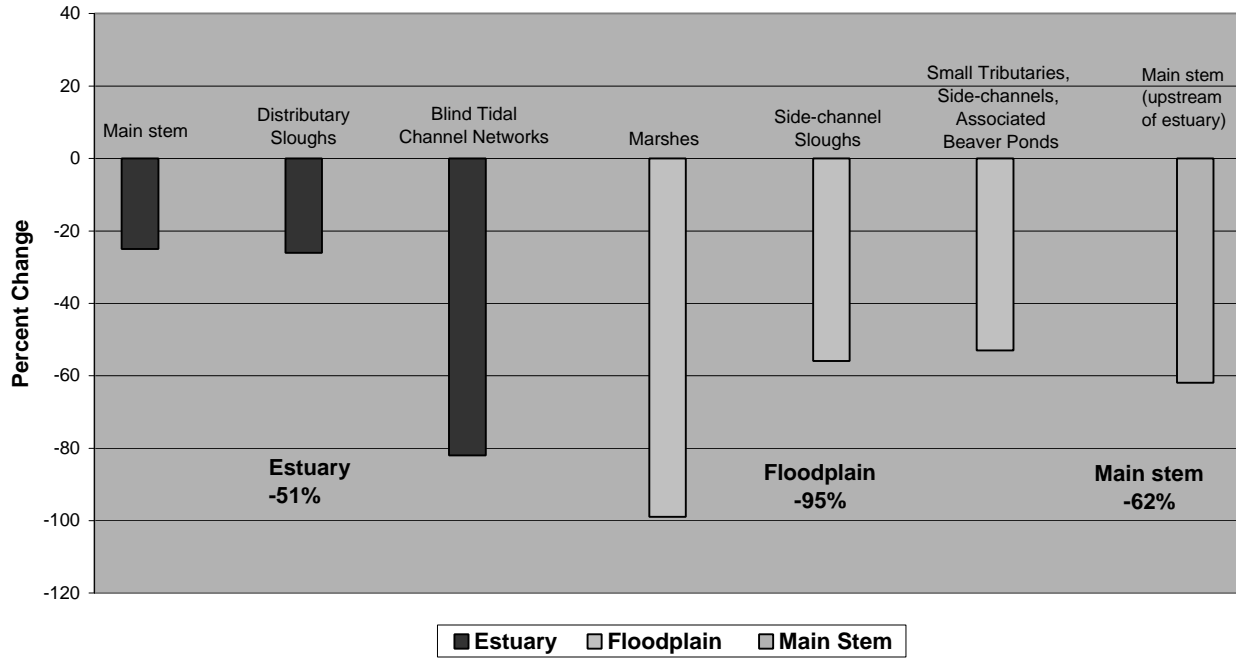


Figure 4-28b: Relative change in winter coho production potential by habitat type from pre-settlement condition

