



Lower Dungeness River Floodplain Restoration and Levee Realignment

June, 2018

PARTNERS: Clallam County; Jamestown S'Klallam Tribe; WA Department of Ecology; PSAR; US Fish & Wildlife Service; SRFB; WA Department of Fish & Wildlife; WA Department of Transportation; North Olympic Lead Entity for Salmon; North Olympic Land Trust; PCC Farmland Trust; US Army Corps of Engineers; Local Businesses & Property Owners

Lower Dungeness River Floodplain Restoration

Before



After





Dungeness River



Dikes



Side Channels



Estuary Dikes

River Dikes

Dungeness Estuary Project



Why restore estuary and lower river?

ISSUES:

- Increased flood hazard risk.
- Redd scour/loss of primary spawning habitat.
- ESA Listed fish: Chinook, summer chum, winter steelhead, bull trout.
- Lost tidal prism - sediment fills in the bay.
- Impaired water quality.
- Increased riverbed load instability and riverbed rise.
- Loss of critical habitat on Pacific flyway.



Problem

- Increased channel confinement causes streambed level rise (aggradation) in project reach and upstream:
- Increased bedload instability – redd scour; water quality
- Increased flood risk



ACOE Levee, ~RM 1, 2007



ACOE levee, January, 2016

The Dungeness' Access to the Floodplain:

- Increases river bed stability by decreasing channel velocities
- Provides additional sediment storage outside the main channel (improves water quality)
- Allows for stable meander development
- Provides black cottonwood and western red cedar to recruit into the river
- Provides connection to over 200 combined acres of floodplain (Rivers End/Middle Reach)



Benefits to Salmon

fall chinook, coho, pink, summer chum, steelhead, bull trout, cutthroat trout

Greater stability in mainstem spawning habitat

(chinook, chum, lower river pink)

Reduced velocities, increases habitat for rearing/migration

(chinook, chum, coho, pink, steelhead, and bull trout)



Side channels/meanders developed, increases habitat for rearing and migration

(chinook, chum, coho, pink, steelhead, and bull trout)

Large woody debris available, increased habitat for rearing and migration

(chinook, chum, coho, pink, steelhead, and bull trout)

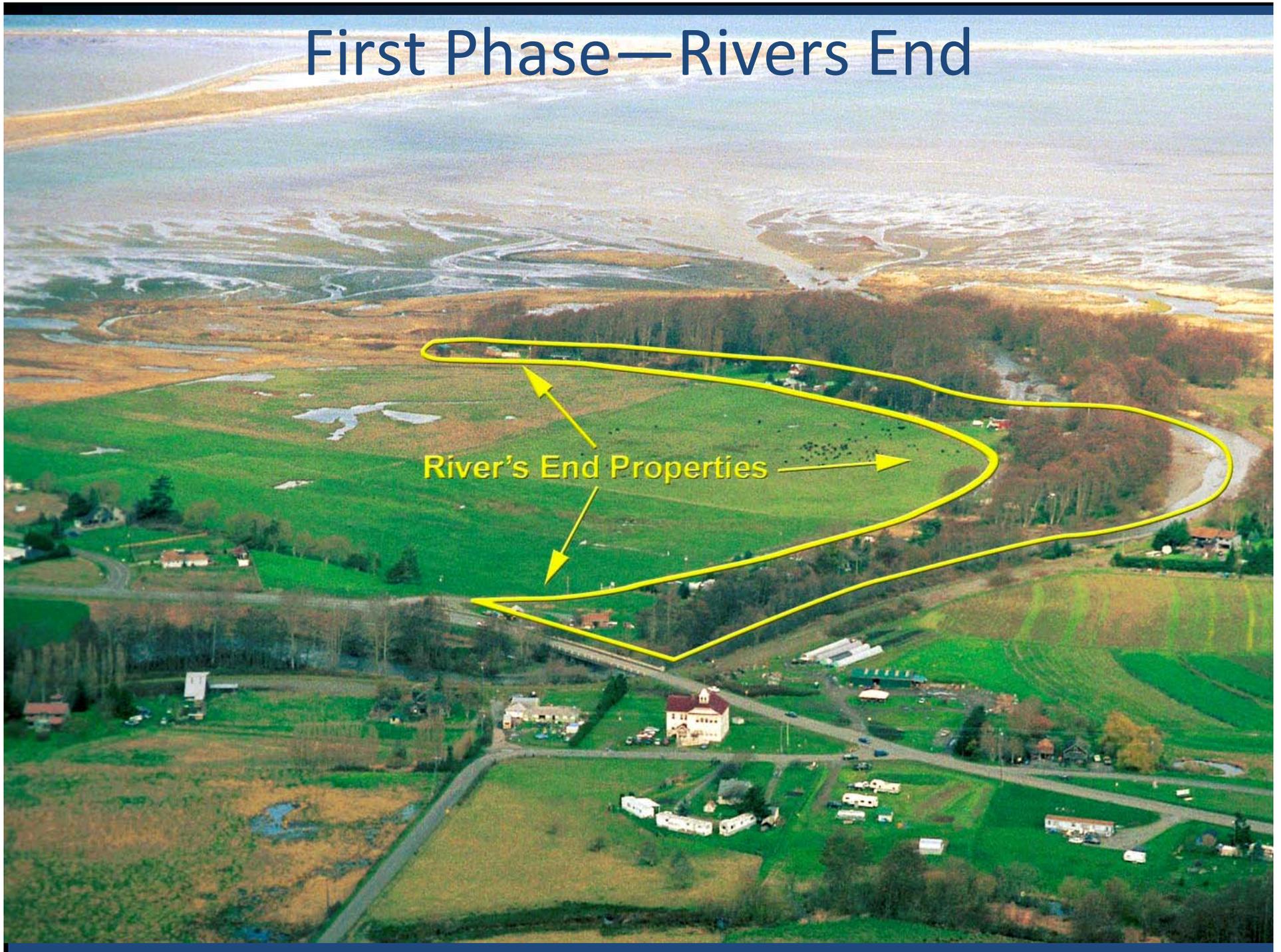
Chinook Redds 2010-2017



Restoration Reach Chinook Redds 2010 to 2017

First Phase—Rivers End

River's End Properties

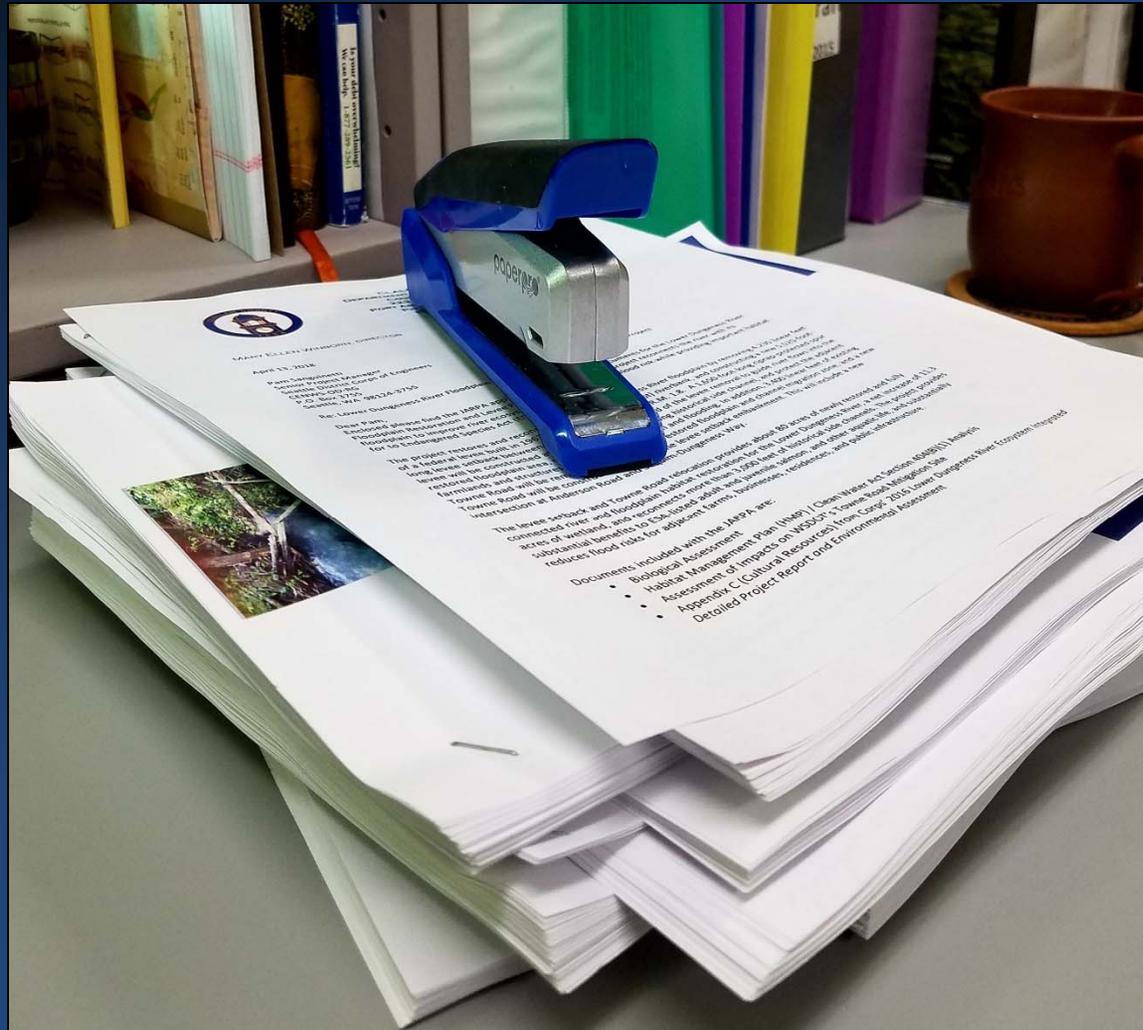


Towne Road Restoration

Extensive restoration, reforestation and replanting work on project properties.



Permitting



Relocate Road



Hot Springs Road 12/2017

Cathy Lear

Better parking/safer trail access



