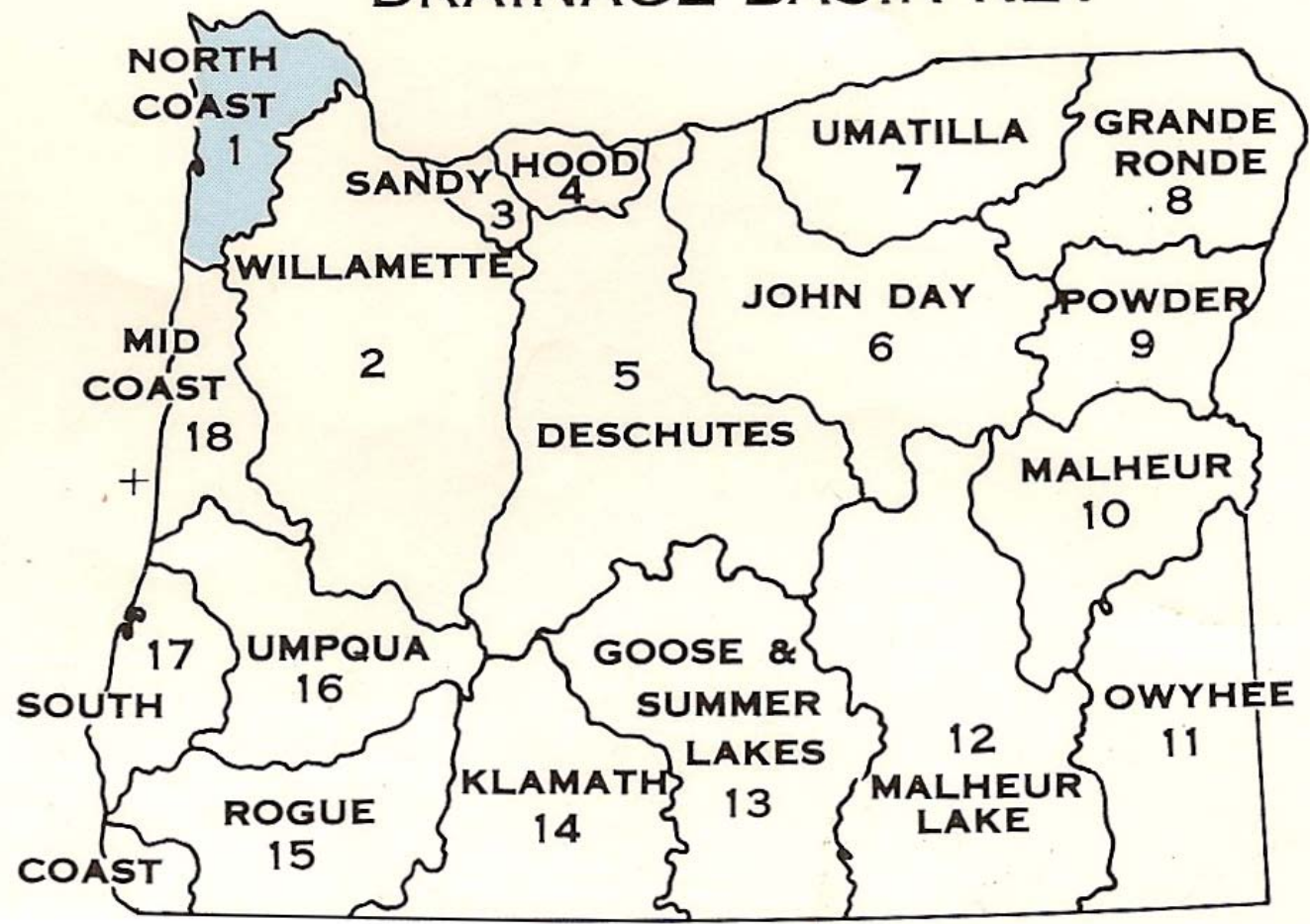


North Oregon Coast Coho Salmon Management Considerations

- Prioritize basins and sub basins for coho
- Habitat
- Harvest
- Hatcheries
- Research

DRAINAGE BASIN KEY



Lower Columbia Basins

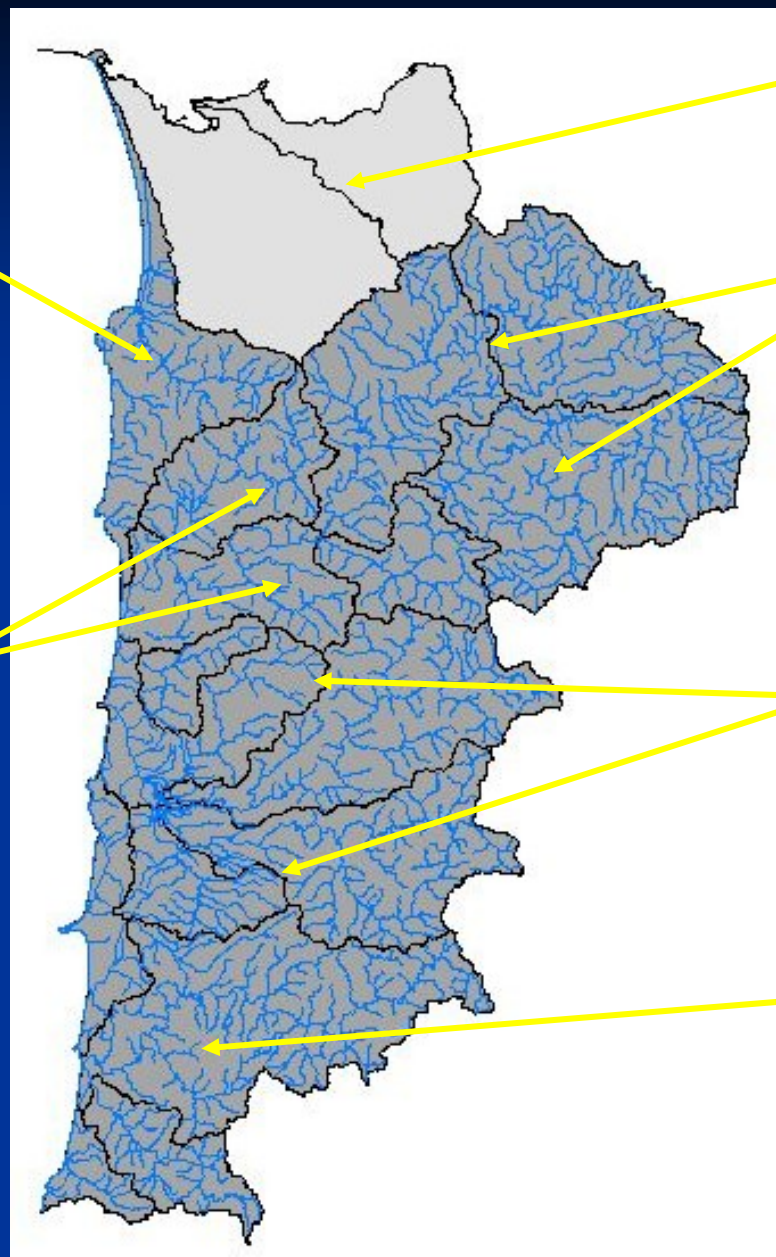
Necanicum

Upper Nehalem

Lower Nehalem

Tillamook Bay Basins

Nestucca



Priority Areas for Coho Salmon

- First priority to ensure all independent populations achieve & maintain level of health beyond viability.
 - Work to move Nehalem & Tillamook from fail to pass+
 - Assume changes in harvest & hatchery production are moving populations in that direction
 - All major basins are equal priority, but not all areas within basin will be high priority.

Other Fish Considerations

- Spring & Fall chinook salmon
- Chum salmon
- Winter steelhead
- Cutthroat trout
- Lamprey
- Other non-game fish

Major Limiting Factors

- High harvest levels of coho in 70's & 80's
- Poor ocean survival in late 80's and 90's
- Most coho habitat in poor condition
 - Over winter habitat still limiting
 - Effects of Tillamook Burns
 - Stream cleaning, LWD removal
 - Historic timber harvest, urban and Ag development

Habitat Limiting Factors

- Stream complexity & over-winter habitat
- Connectivity / passage for juveniles & adults
- Floodplain habitat
 - River, estuary, sloughs, etc.
 - Development impacts
 - Rural residential, land use changes & practices, etc.
- Water quality & quantity
 - Currently withdrawals limited & site specific

Habitat Strategies

- Emphasize protection of existing habitat
- Advise, coordinate, & cooperate with other agencies and landowners to prevent or reduce loss of coho habitat
 - Consider alternative development in sensitive areas
 - Site specific recommendations
 - Recognize economic considerations for landowners and local economy
- Pursue additional voluntary protection measures and habitat restoration in select areas beneficial to coho.

Habitat Restoration Projects

- Target coho salmon as primary consideration in restoration projects in suitable areas.
- Some restoration occurs in waters with benefits to multiple species; some target other species.

Selection of Restoration Projects

- Be opportunistic for projects
 - Target cooperative landowners, public & private
 - Timber sales, culvert replacements, etc.
- Use intrinsic potential maps, juvenile data, RBA data, AQI data, watershed assessments, etc. to identify areas for habitat restoration needs and opportunities.

Restoration Projects

- Focus in high intrinsic potential habitat areas
 - Streams, floodplains
 - Sloughs, backwaters
 - Freshwater & estuarine wetlands
- Address over-winter habitat

Federal Forest Land

- USFS & BLM land covers approximately 80% of Neskowin, Little Nestucca and Nestucca basins; about 20% of the north coast area.
- Current management provides wide streamside buffers and prevents steep slope logging.
- Active in restoration and passage improvement activities.

State and Private Forest Land

- Tillamook basin: approximately 80% state land, 20% private timber.
 - Most coho habitat on state land
- Nehalem basin: Approximately 50:50 state, private timber.
 - State mostly in lower 1/3
 - Private mostly upper 1/3
 - Middle 1/3 fairly even split
 - Best coho habitat in mid & upper 2/3

State & Private Timber Land

- Necanicum & Ecola: 98% private timber.
- Private timber companies active in in-stream restoration and passage corrections
 - In several basins their lands contain the majority of coho habitat
 - Projects usually associated with timber sales & road maintenance

State Forest Land

- Being managed under the NW Oregon State Forests Management Plan
 - ODFW involved in plan development
 - Riparian areas managed for Older Forest Structure
 - Salmon Anchor Habitat with increased protections
 - Basin watershed assessments being developed
 - Fund full time restoration biologist for ODFW to work specifically on State Forest Land fish habitat restoration projects

Agricultural Land

- Tends to be concentrated between foothills and estuaries except in Nehalem.
- Much of the high intrinsic potential area in Tillamook is Ag land
- Focus on restoration in high intrinsic potential areas with cooperative landowners
 - High economic input areas
 - Tend to be flood prone
 - Challenge to re-establish floodplain connectivity & maintain economic Ag use.
- Tillamook Wetland Project
 - Dike breaching, slough re-connection, Ag use

Land Use Planning

- Continue to look at site specific conditions on development activities to minimize negative impacts, particularly in high intrinsic potential areas.
- Look to provide “incentive programs” that are useable by all.
- Adhere to existing regulations – setbacks, development activities, etc.

Water Use

- Anticipate increasing demand with increasing development.
- Stream withdrawals detrimental to fish
 - Reduced flows, unscreened pumps, diversion dams
- Recommend alternatives to direct stream withdrawal
 - Wells, storage tanks, possibly reservoirs in non fish systems
- Passage at existing diversions

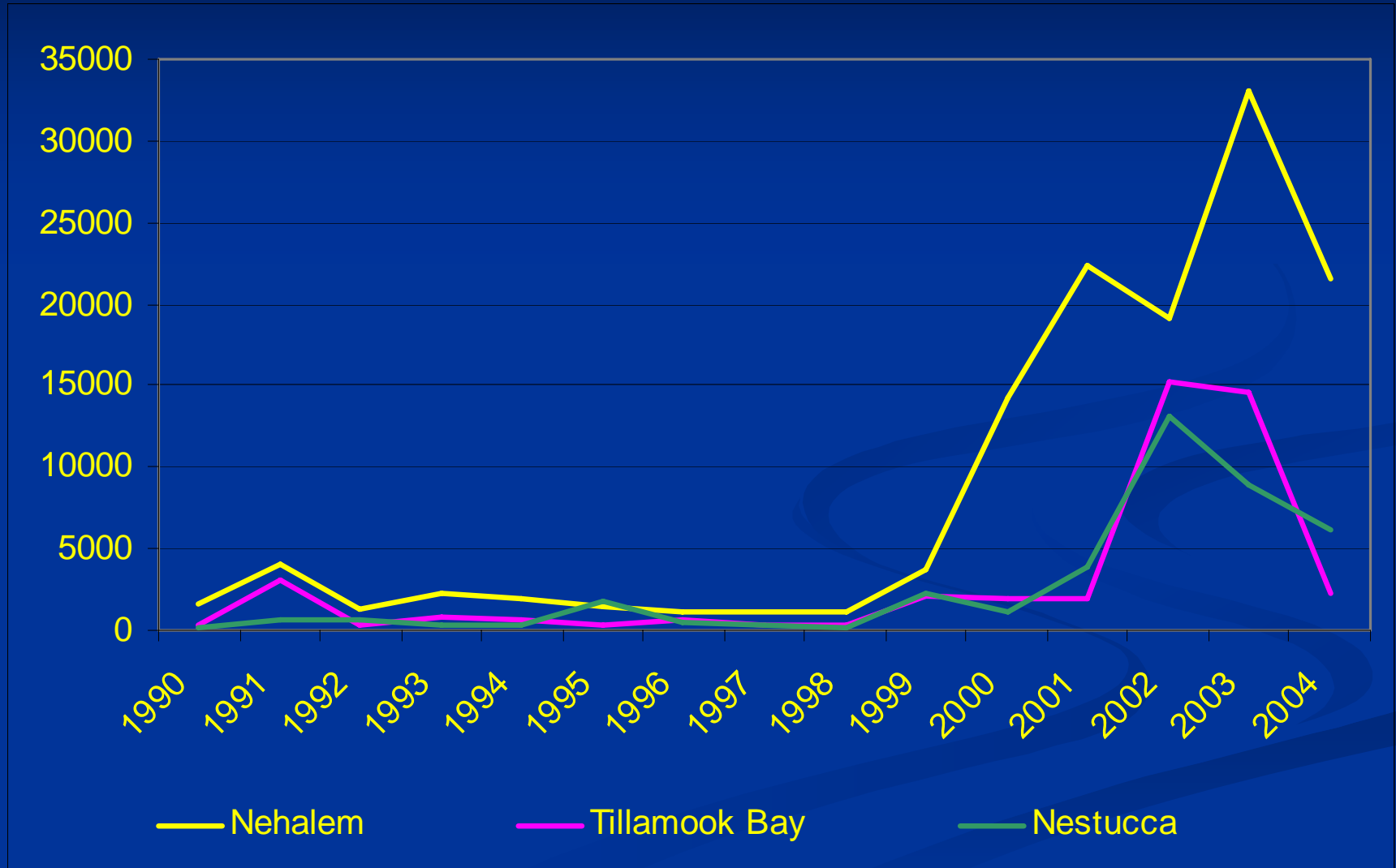
Stream Enrichment

- Abundant natural spawners well below historic levels
- Lack of stream complexity makes carcass retention difficult
- Benefits may be limited compared to other habitat factors, but still important in high energy systems with high flushing potential.
- Focus in areas with good connectivity and good habitat

Coho Harvest

- Reduced from historical levels, naturally produced fish now protected from direct harvest
- Major reduction in ocean fishing under Amendment 13
- No current in-basin harvest of wild coho
- Possibility of future conservative in-basin harvest in Nehalem in good ocean conditions
- Limited future potential in all other basins until populations demonstrate stability and sustainability

Wild Coho Spawner Abundance

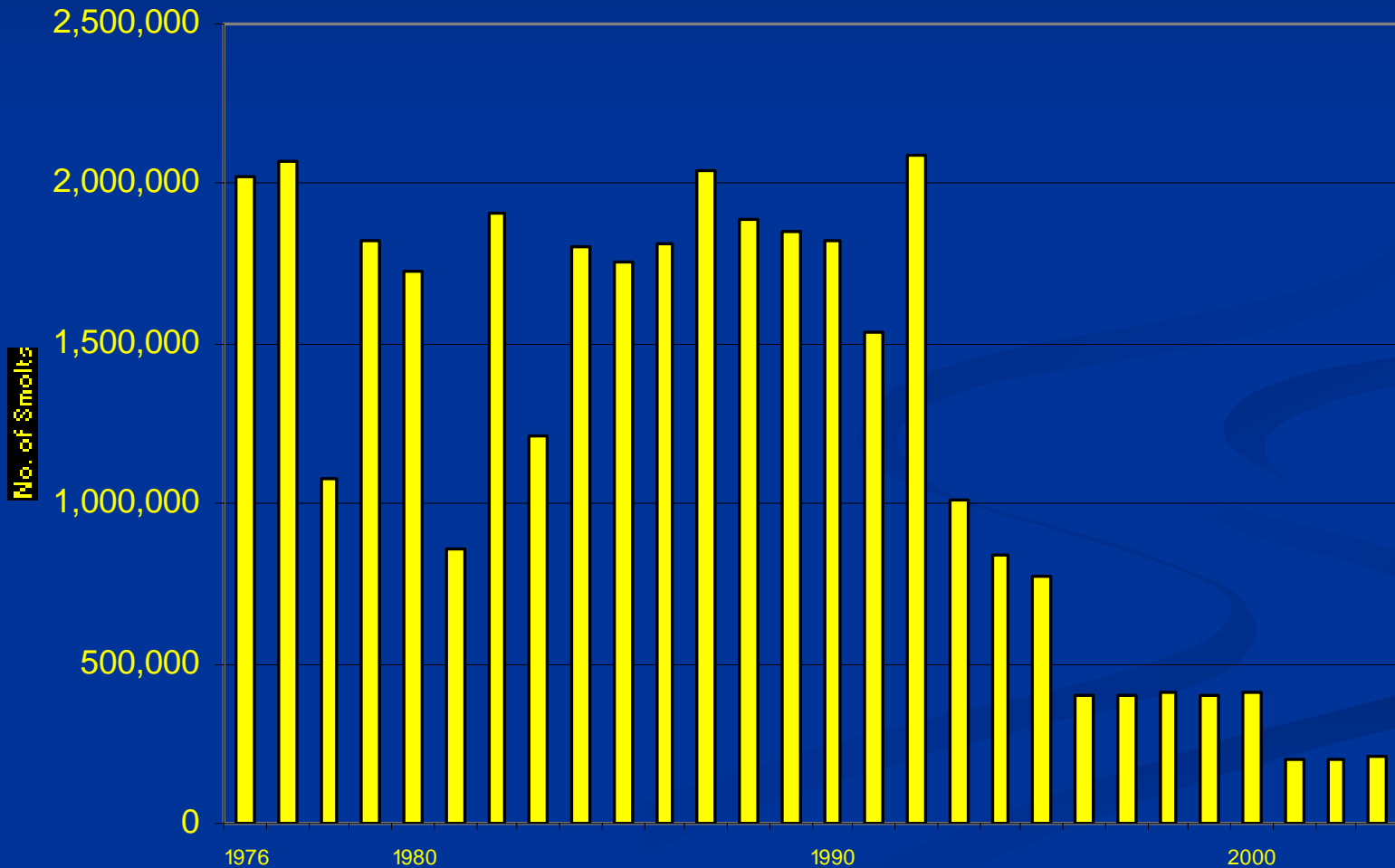


Hatcheries

- Historic programs reduced, only small programs remain in place
- Recommend programs stay at current levels
- Recommend no out-of-basin releases

Hatchery Releases

Tillamook District Coastal Hatchery Coho Smolt Releases



Future Threats

- Out of basin water use (Willamette Valley)
 - Wilson River ?, Upper Nehalem ??, ??
- Land conversions and ensuing development of those areas
- Continued loss of wetland / floodplain habitat
- Increasing local demand for water
- Avian predation
 - Terns working south from Columbia estuary

Research Ideas

- Wetland / floodplain function & restoration options in high economic / urban areas
- Better understanding and inventory of high intrinsic potential habitats
- Local slough & estuary use by juvenile coho
- Tidegates – what works & what doesn't, which locations have greatest potential habitat?
- Summer rearing habitat – do we know all we really need to know about it, is it limiting in some areas?
- Mainstem rearing – where is it & how important is it?