



NOAA
FISHERIES

Columbia Basin Partnership Workshop #1

Northern Pikeminnow Management Program

May 4, 2016

Northern Pikeminnow Management Program

Began removal fishery in 1991 (Sport-Reward Fishery)

Objective:

Increase the survival of outmigrating juvenile salmon and steelhead by reducing the number of larger, predatory pikeminnow in the mainstem Columbia and Snake rivers

Goals:

- Remove 10-20% of predatory-sized pikeminnow per year
- Evaluate response of pikeminnow to sustained fisheries
- Check for compensatory predation by smallmouth bass and walleye
- Evaluate effect of program on salmonid predation



Results

- Over 4.5 million northern pikeminnow removed
- Low impact to resident/anadromous salmonids
- 10-20% Exploitation achieved in 21 of 25 years
- Estimated 38% reduction in salmonid predation
- Compensation by remaining predators minimal
- Credible science: ~30 journal articles published



Program Structure/Partner Roles

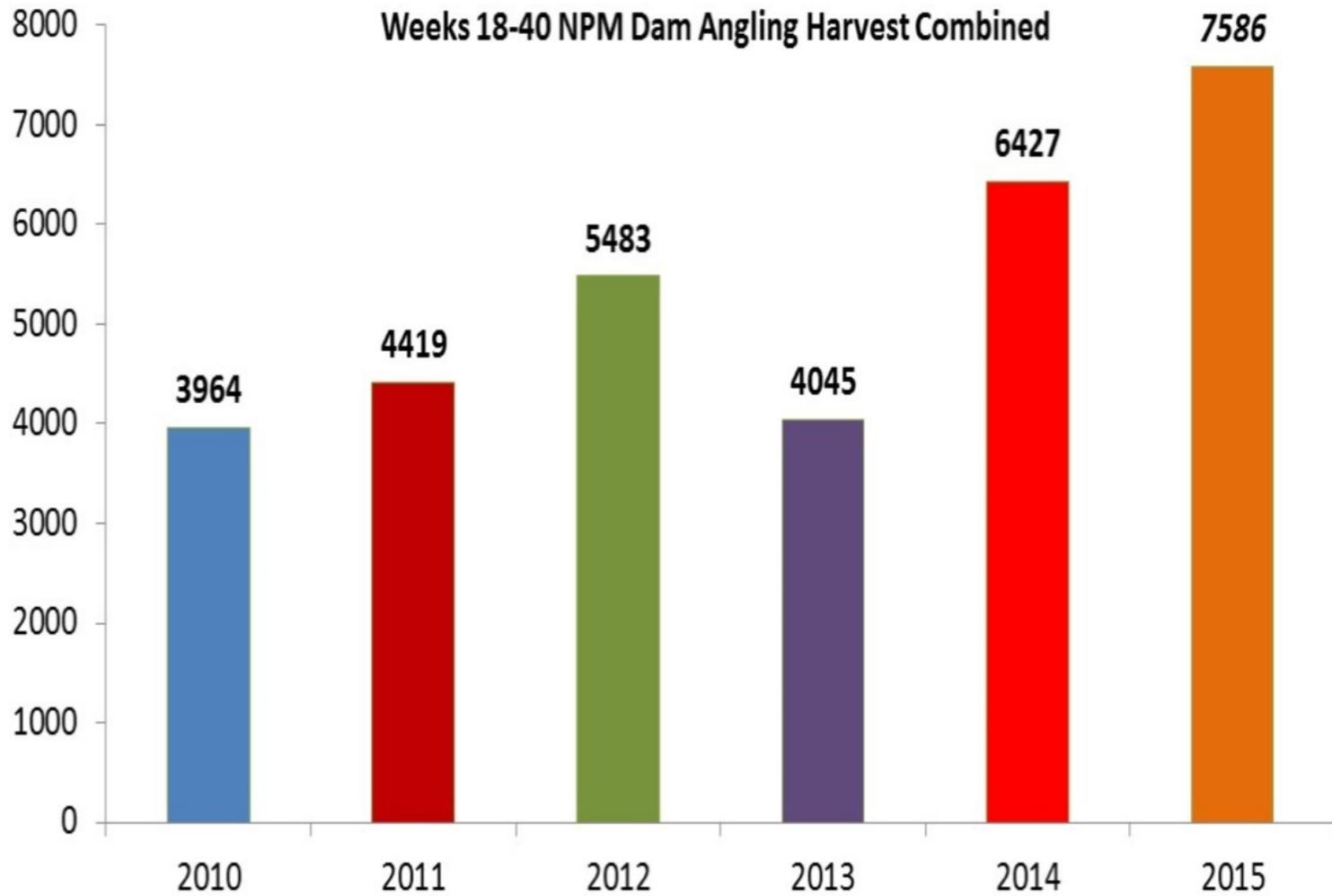
- **ODFW**
 - 1) Evaluate exploitation rate and size composition of northern pikeminnow harvested in various fisheries
 - 2) Evaluate response of pikeminnow to sustained fisheries
 - 3) Check for compensatory predation by smallmouth bass and walleye.
 - 4) Evaluate effect of program on salmonid predation.
- **WDFW**
 - 1) Implement the system-wide Northern Pikeminnow Sport-Reward Fishery (19 Registration Stations)
 - 2) Collect biological data on catch
 - 3) Implement/Supervise Dam-Angling Fishery
- **PSMFC**
 - 1) Technical, contractual, fiscal and administrative oversight
 - 2) Administer voucher payments
 - 3) Seasonal hiring of Dam Anglers



2015 Registration Stations



For updates on the Northern Pikeminnow Sport-Reward Fishery visit pikeminnow.org



Mid-Columbia Pikeminnow Removal

- Douglas County PUD
 - Funds pikeminnow removal efforts in Wells pool & tailrace
 - Started ~1995
 - Setlines and hook and line
 - ~269,000 pikeminnow removed from 2008 to 2014

Non-native Piscivorous Fish

- Primarily smallmouth bass and walleye
- Predation workshop held 2008
- BPA funded 3-year study (2011-2013) examined:
 - Diet of non-native fish (walleye, smallmouth bass, channel catfish) in mid-Columbia R.
 - Role of juv. American shad in diets, and effect on health & condition prior to onset of winter
 - Inconclusive results re. shad
 - Found that a diet of mostly fish resulted in best condition entering winter

Non-native Piscivorous Fish (cont.)

- BPA funded 2-year study (2011-2012) examined:
 - Predation by smallmouth bass on out-migrating salmonids
 - Relative densities of SMB in forebays & tailraces of TDA, JDA & MCN to ID potential “hotspots”
 - JDA & MCN forebays had highest densities
 - Characterize the diet of SMB, quantifying predation on juv. Salmonids
 - Overall SMB diets: 35% fish, 65% invertebrates; vary by location & season
 - Local predation on juv. salmonids can be intense during large outmigrations

Non-native Piscivorous Fish (cont.)

- Northern pike
 - Spokane Tribe project to remove N. pike from L. Roosevelt
 - Present there since at least 2009



- Anecdotal report of N. pike caught in JDA pool

Questions?