

# Coho Recovery Update

Bay Delta Region

November 2, 2010

California Department  
of  
Fish and Game

# Update

## 1) Monitoring Trends

## 2) Recovery Actions

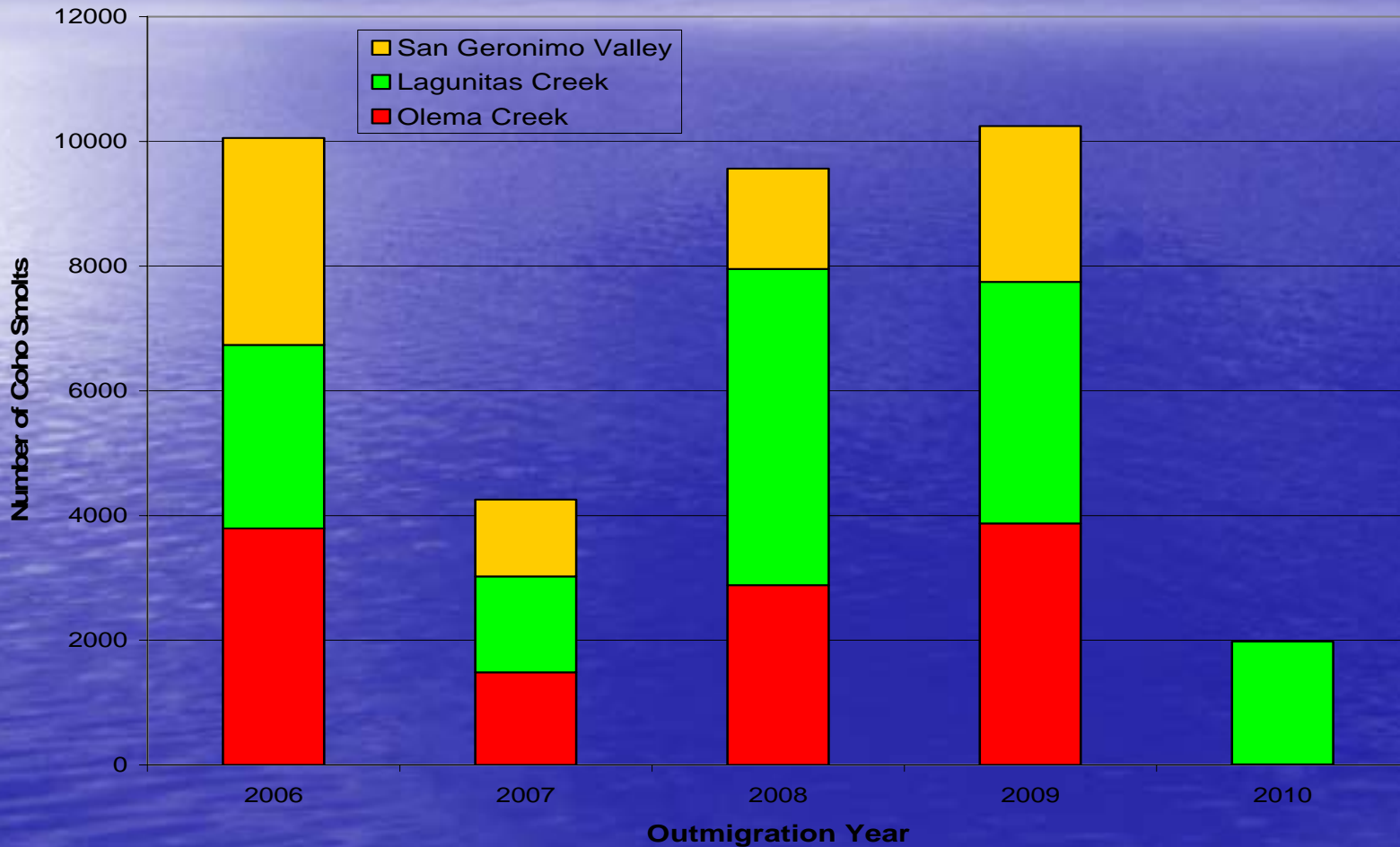
Habitat Restoration through FRGP

Russian River Coho Salmon Captive Broodstock Program

Emergency Coho Recovery Efforts

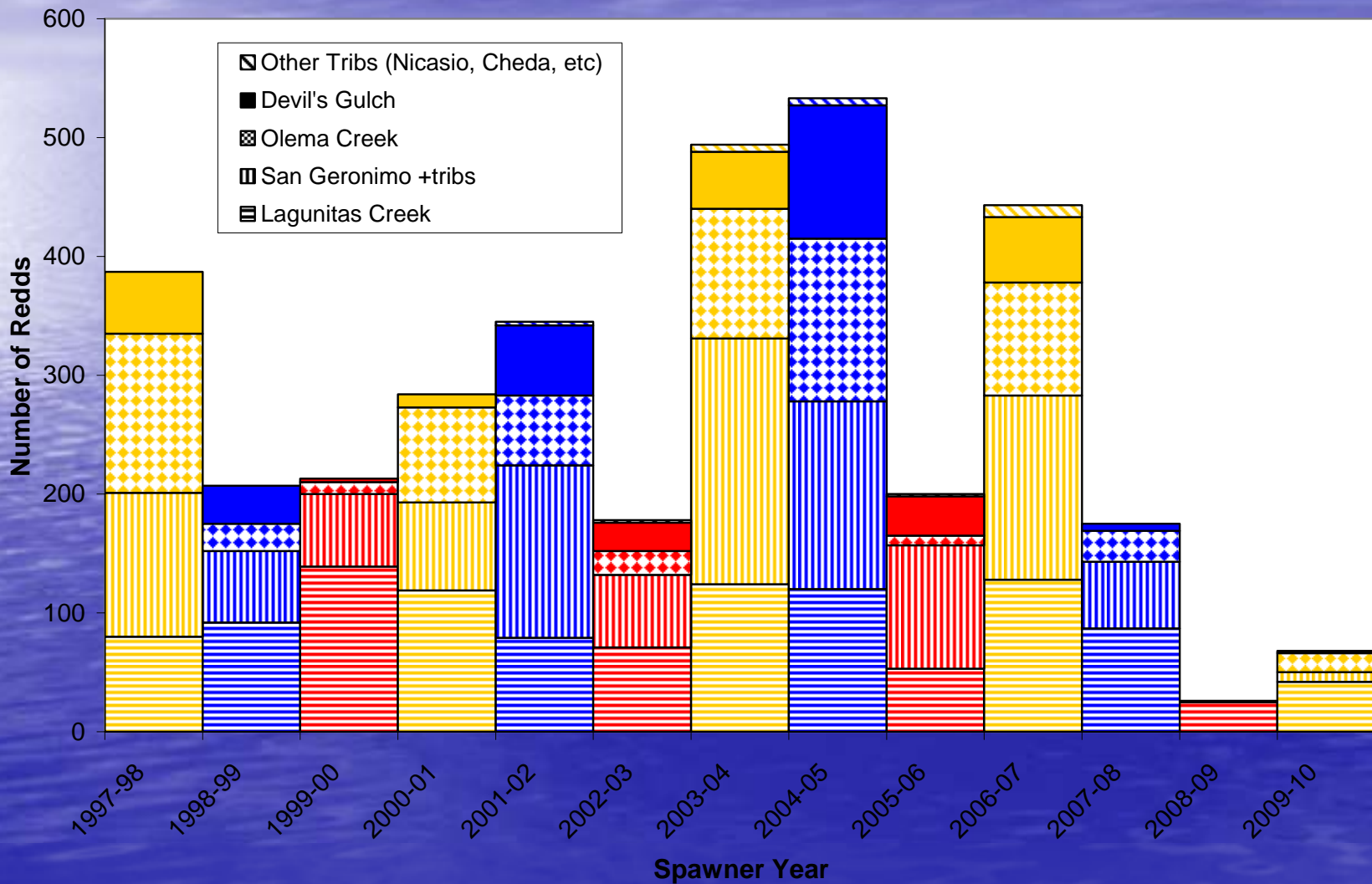
# Monitoring Trends

## Lagunitas Creek



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## Lagunitas Creek





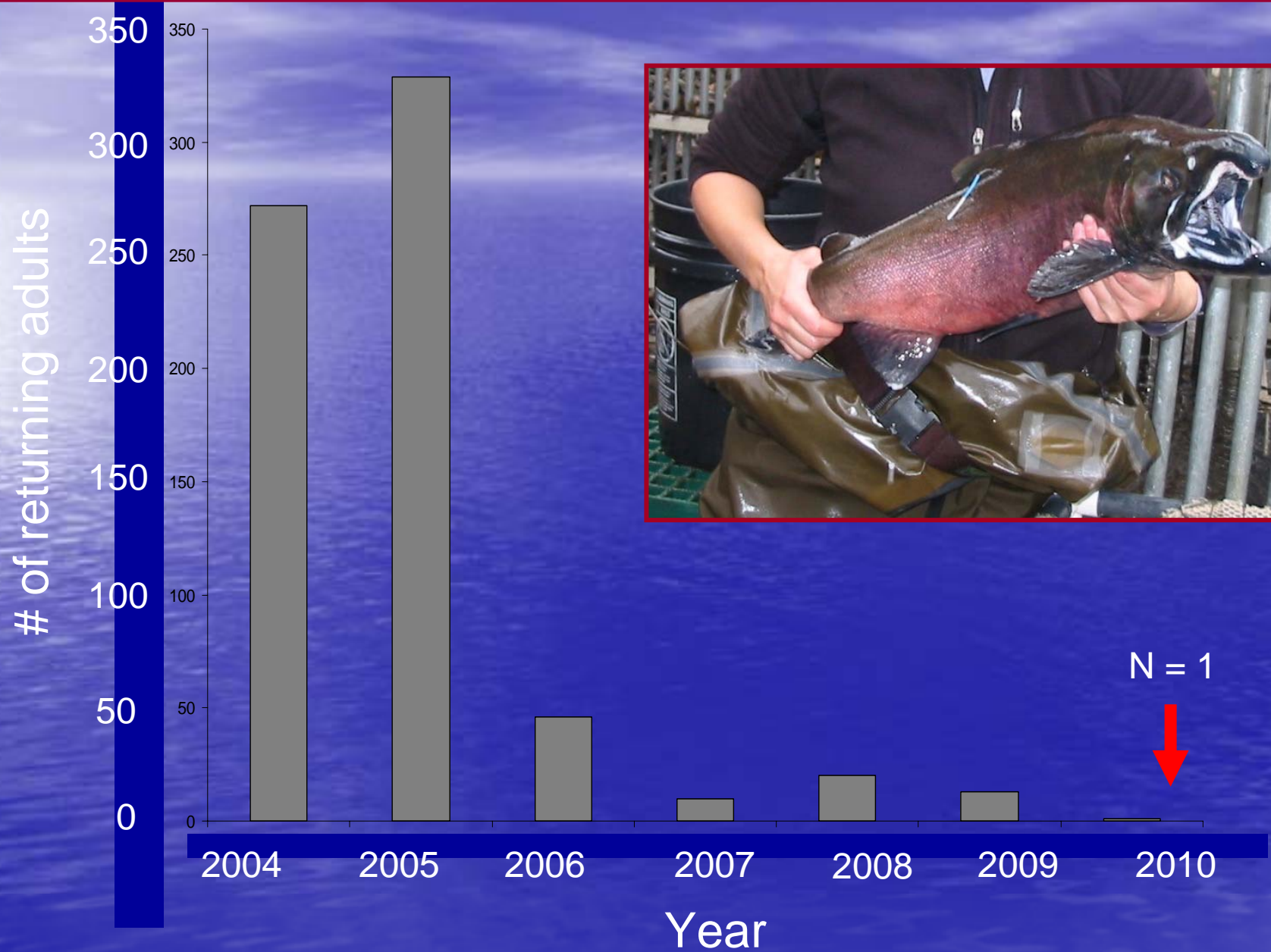
# Monitoring Trends

Scott Creek, Waddell Creek, Gazos Creek

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For the first time in 19 years, no coho were observed in Scott Creek, Waddell Creek and Gazos Creek (Santa Cruz Co.) in 2010 with the same sampling effort as in previous years (Dr. Jerry Smith, SJSU)

# Coho Returns to Scott Creek: 2004-2010



N = 1  
↓



# SOS: California's Native Fish Crisis

Moyle et al. (2008)

*“With the possible exception of the small population in the Lagunitas Creek watershed, Central California coast coho are on the verge of extinction.”*

*“The most important factor for this species' survival is to protect and enhance watersheds that have the potential to support coho salmon. These watersheds include Scott, Waddell, and Lagunitas Creeks and the Garcia, Noyo and Gualala Rivers. Other efforts needed to prevent extinction include (1) developing recovery hatcheries in conjunction with habitat improvement measures,...”*

# Towards Coho Recovery



Freshwater Habitat Restoration



Population Augmentation





# Coho Recovery Activities

## Habitat Restoration – FRGP

Dam Removal on Dutch Bill Creek (Russian River)





# Coho Recovery Activities

## Habitat Restoration – FRGP

Culvert Retrofit on Dutch Bill Creek (Russian River)





# Coho Recovery Activities

## Habitat Restoration – FRGP

Culvert Replacement on Arroyo Creek (Lagunitas Creek)





# Coho Recovery Activities

## Habitat Restoration – FRGP

Lagoon and wetland restoration on Redwood Creek (Muir Beach)



# SOS: California's Native Fish Crisis

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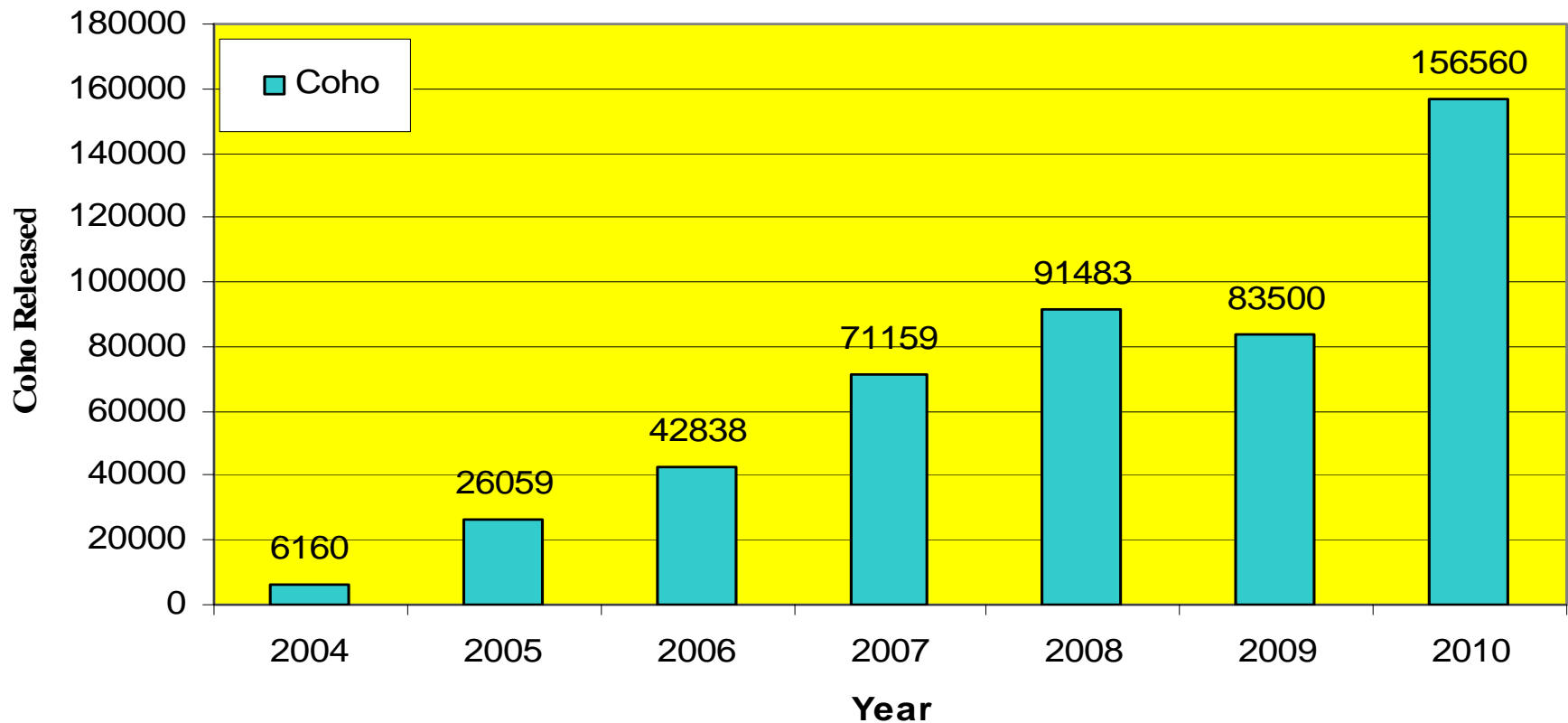
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# Coho Recovery Activities

## Captive Breeding

### Russian River Coho Salmon Captive Broodstock Program

#### RRCSCBP Coho Releases





# RRCSCBP Summary

- 475,000 coho released 2004-2010
- Program includes 15 release streams
- Upstream migrant trapping in Mill Creek (175 adult coho projected to return in 2010/11)
- Outbreeding with Olema Creek coho since 2008/09 has increased survival
- Program includes smolt releases with instream acclimation to allow imprinting
- Warm Springs Hatchery currently holds coho from Scott Creek and Olema Creek for captive rearing purposes



# DFG Coho Recovery Emergency Measures

(DFG scoping meeting June 22, 2010)

## Technical Work Groups

- Priority habitat protection and restoration
- Education and outreach
- Captive rearing in conservation hatcheries
- Permitting, law enforcement and fishing regulations
- Instream flows
- Funding sources
- Population and watershed monitoring

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Results will be communicated to a DFG/NMFS Management Committee to guide recovery actions