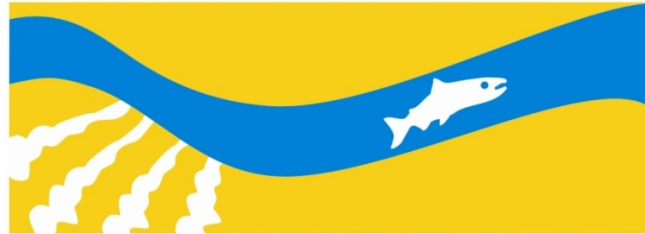


**SAN JOAQUIN RIVER**  
RESTORATION PROGRAM



**Fisheries Technical Feedback Group Meeting**  
**Sacramento, Ca**  
**Fall-run Captive Rearing Study**

**Paul Adelizi**  
California Department of Fish and Game

**November 2, 2012**



# Why a Conservation Hatchery?

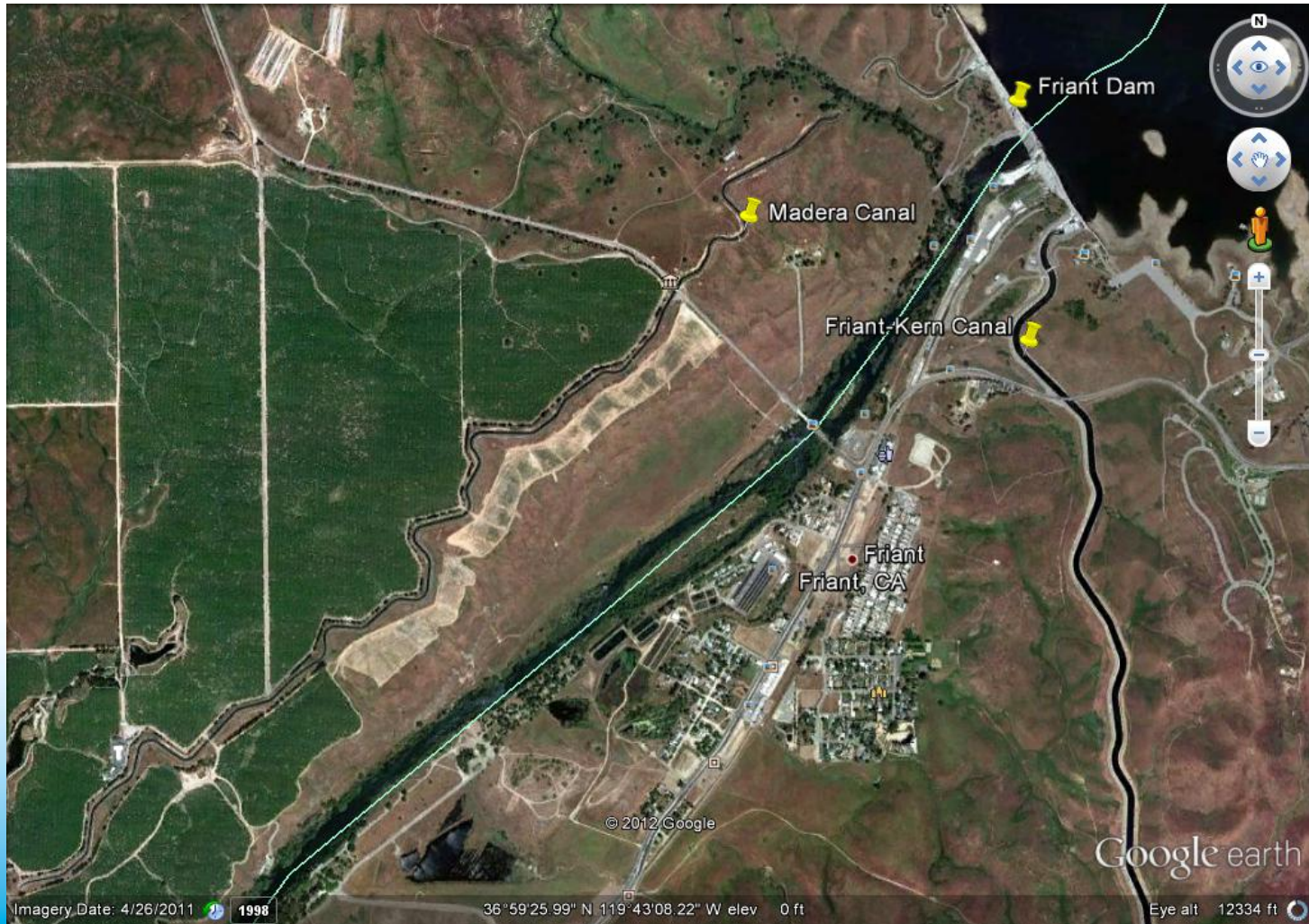
- Central Valley spring-run Chinook salmon populations in California are threatened.
- The Conservation Hatchery will amplify the small numbers of fish removed from donor populations.
- The Conservation Hatchery will focus on salmon research, targeted for the San Joaquin River.



Harry Morse, Photographer



# Proposed Location





# Proposed Location







## Program Focus

- Balancing science and nature in effort to create a naturally reproducing and self-sustaining population.

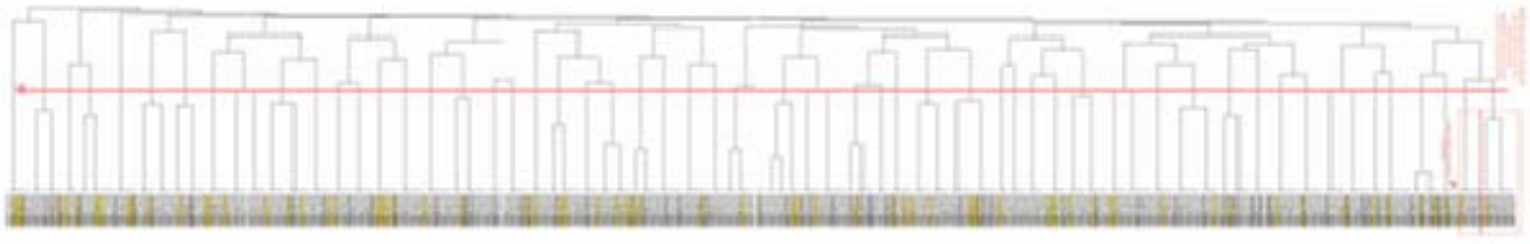




## Program Focus - Genetics

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- Genetic Diversity
  - Start with diverse population
  - Mate unrelated individuals
  - Use modern genetic tools (SNPs)
  - Track individuals





# Tracking Individuals

- Passive Integrated Transponders
- Photo Recognition
- Visual Implant Tags







# Modulating Growth Rates

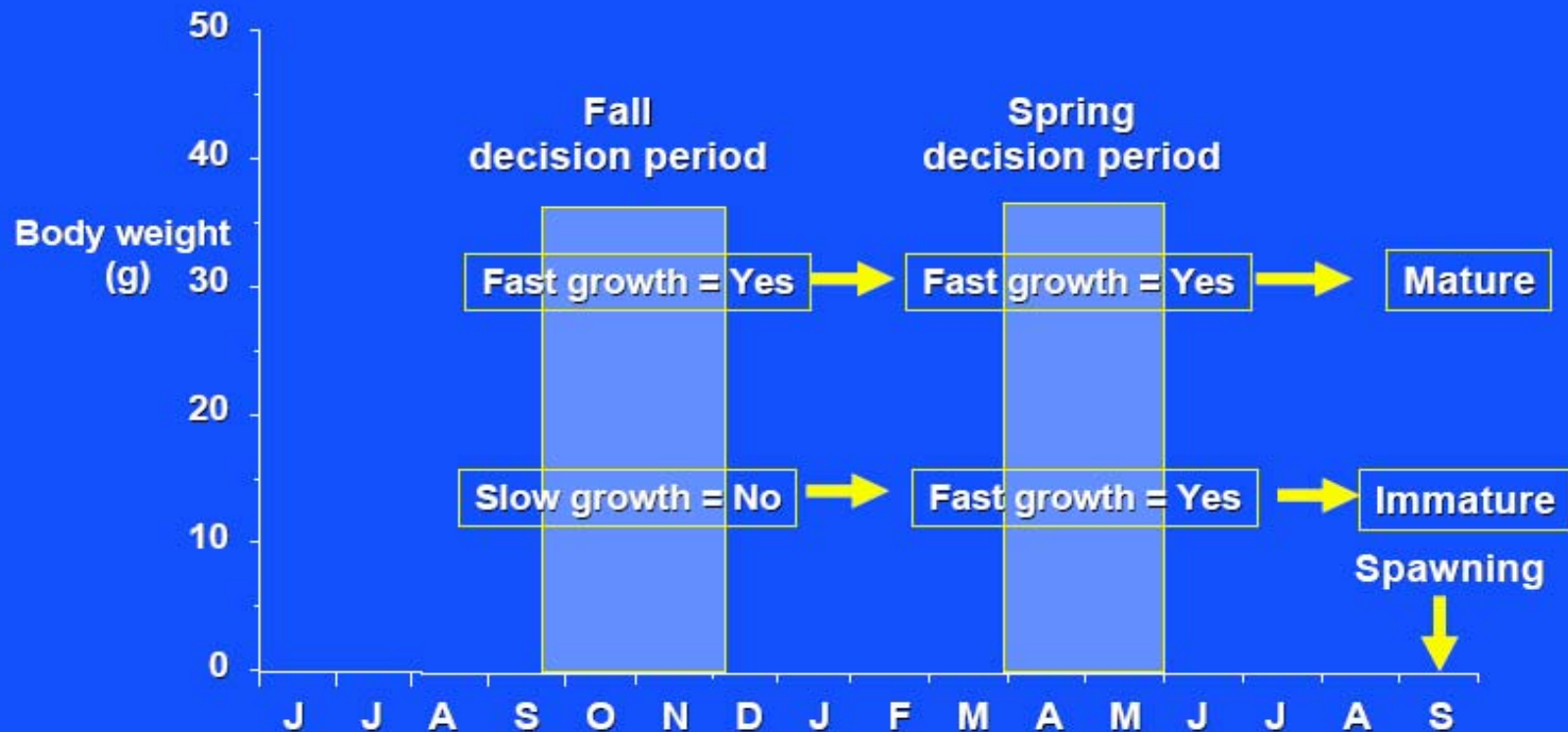
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# Controlling Maturation

## Critical periods for maturation decision – based on body size/growth rate





# Cryopreservation





# Natural Feeds, etc.

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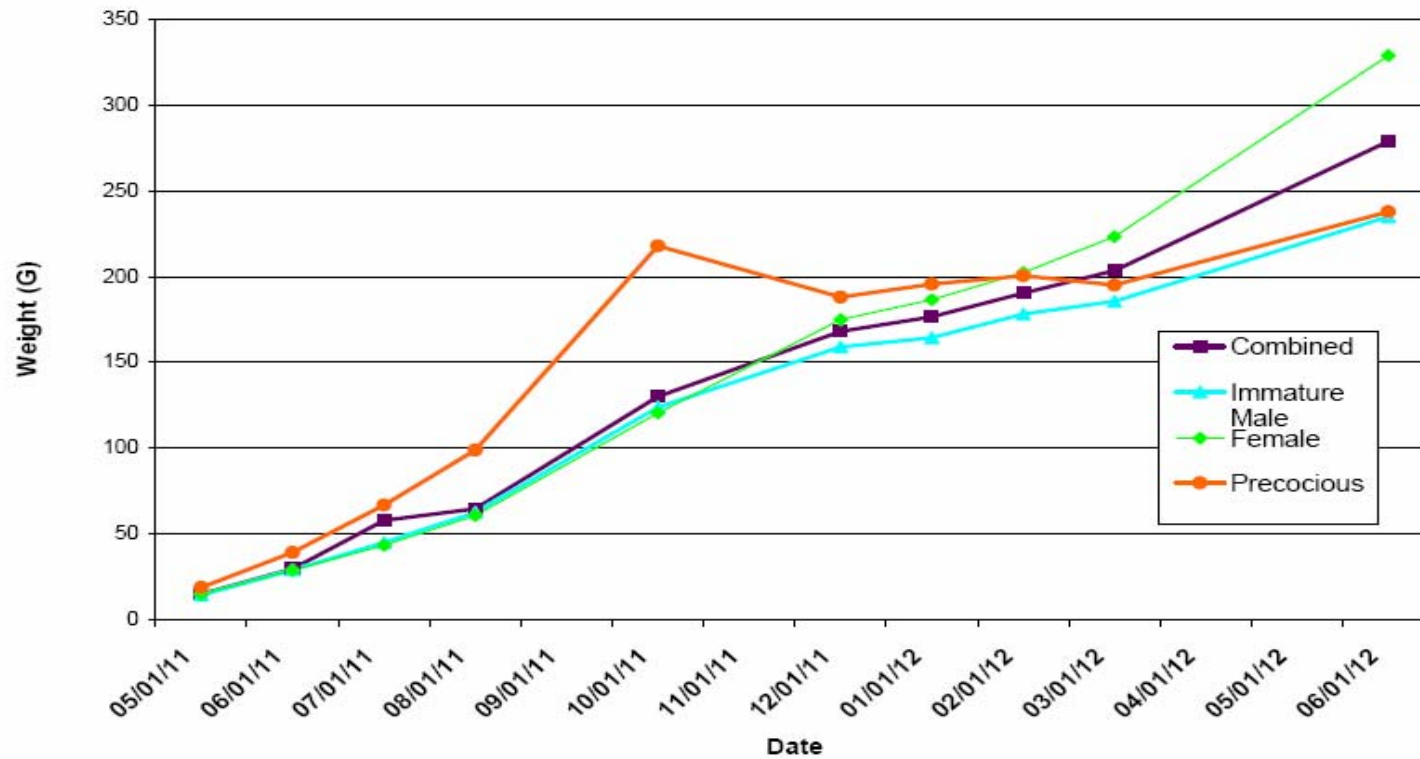
# Pilot-scale Research Area





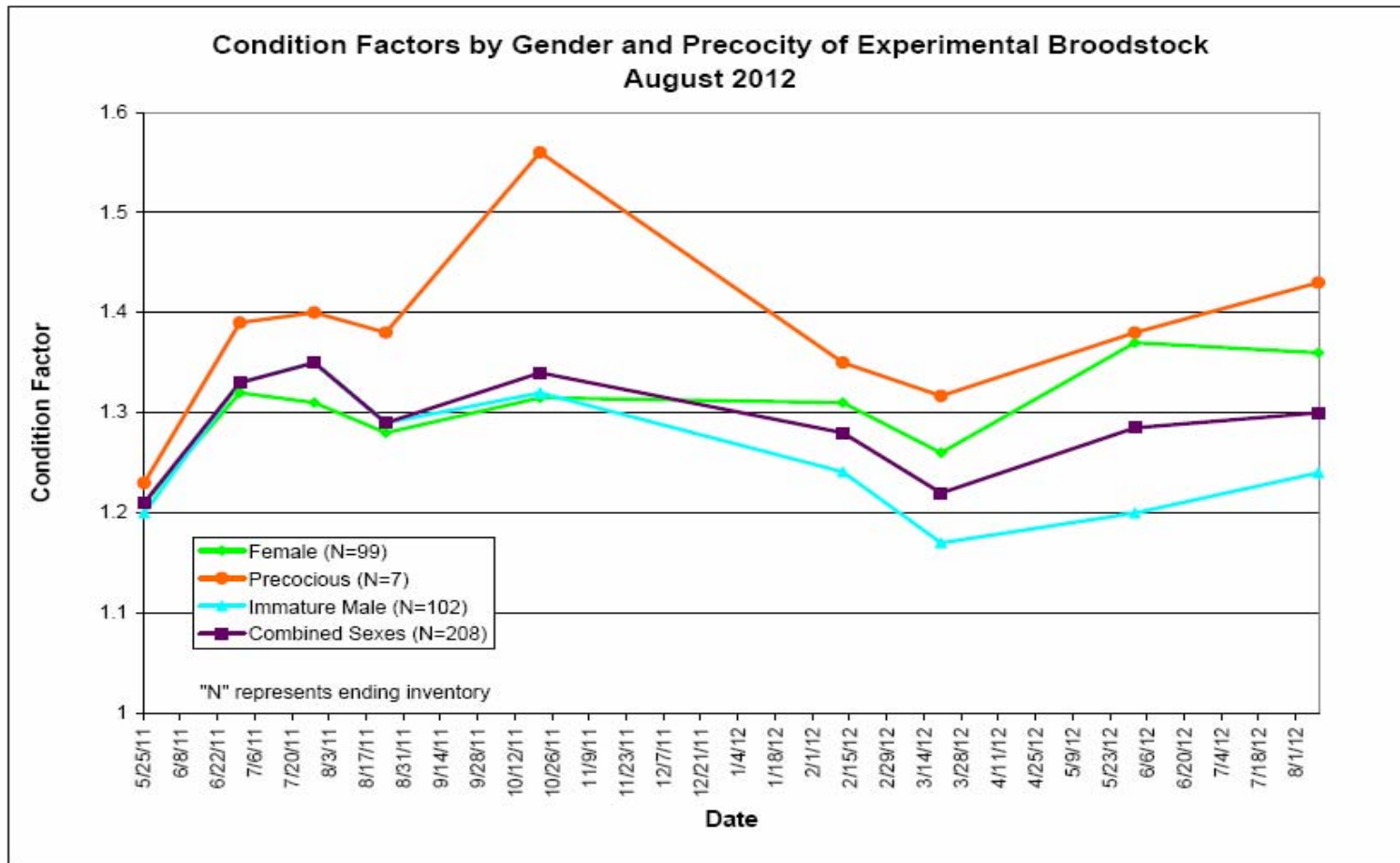
# Controlling Growth Rates

Average Weight by Gender and Precocity of Experimental Broodstock  
August 2012





# Controlling Growth Rates





## Other Research Activities

- Telemetry Studies
- Egg Survival Studies
- Streamside Incubation
- Complex Rearing Environments





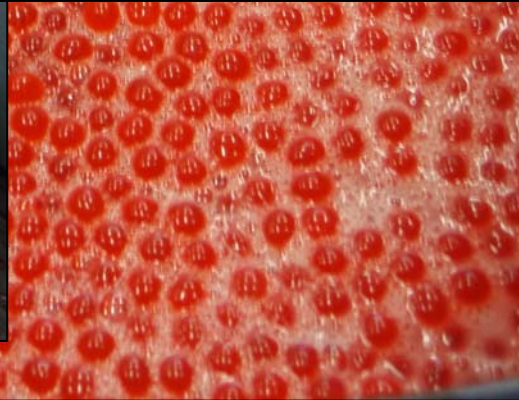


# 2012 Telemetry Study





# Feather River Spawn Tracking





## Acknowledgements

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- US Fish and Wildlife Service
- National Marine Fisheries Service
- NOAA's Southwest Fisheries Science Center
- US Bureau of Reclamation
- UC Davis Genomic Variation Lab