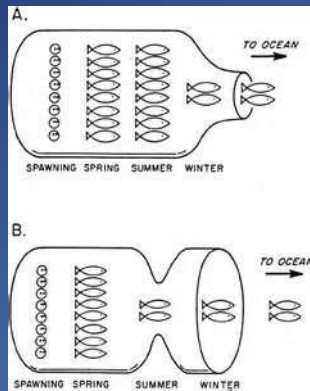
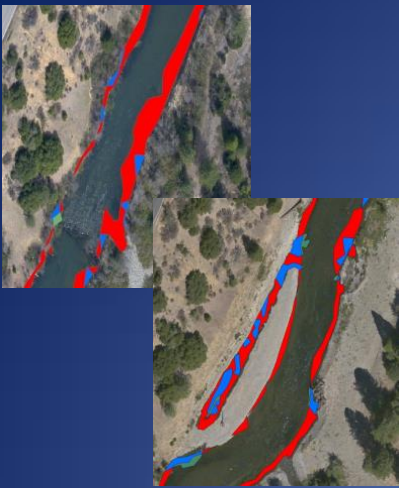
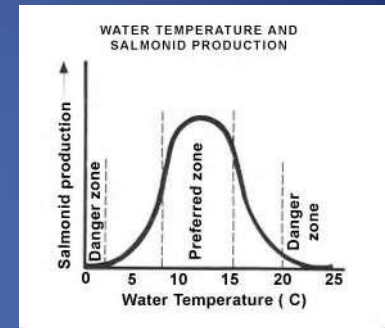


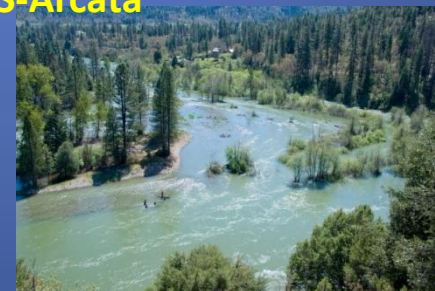
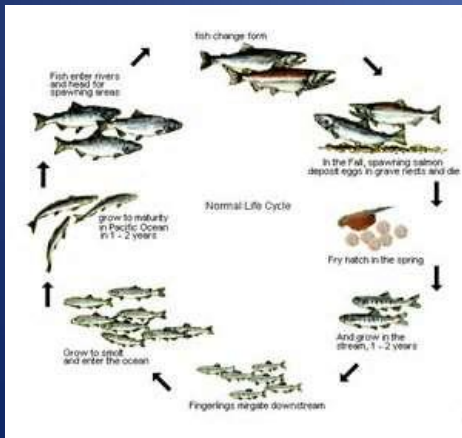


TRRP Salmonid Production Model Update for the TMC



March 27, 2014
Redding, CA

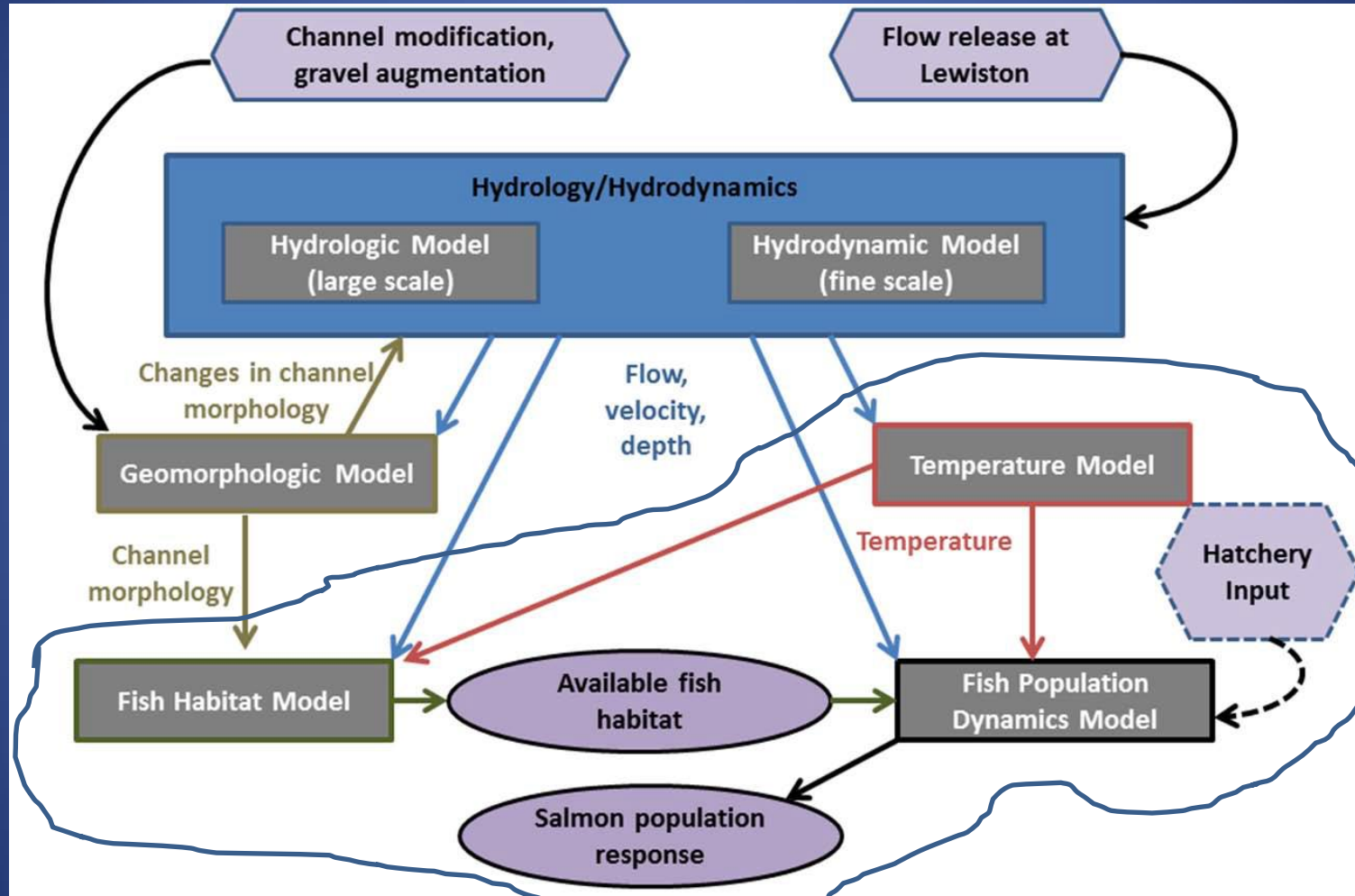
Joe Polos, USFWS-Arcata



TRRP Decision Support System Framework

- Integrate existing models
 - Outputs must match inputs
 - Avoid models with multiple unobservable states
- Importance of Integration with Klamath River Modeling
 - Same models
 - Same spatial and temporal resolution

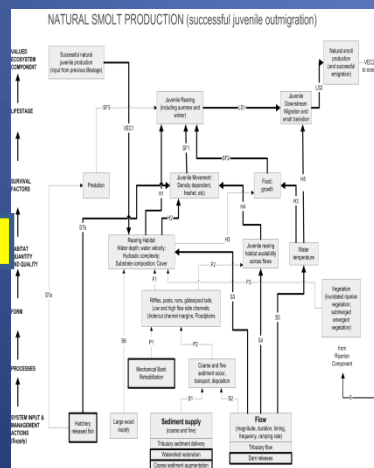
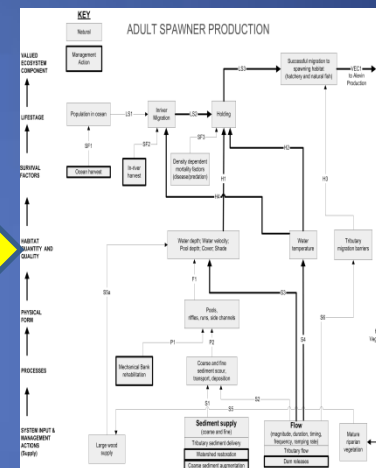
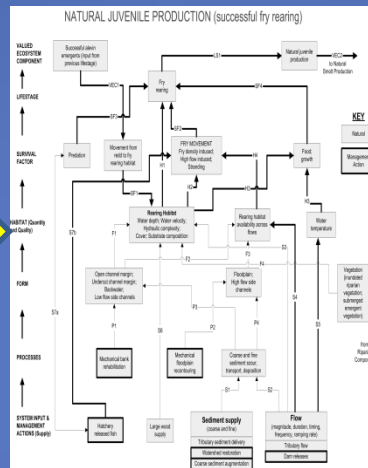
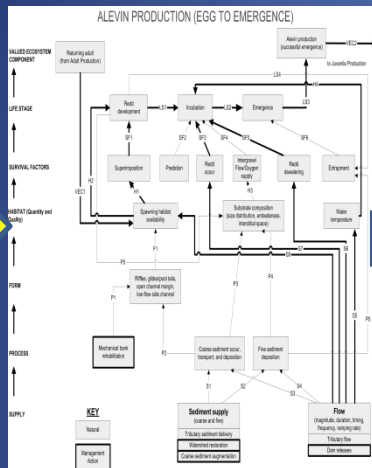
Decision Support System - TRRP Conceptual Integrated Model



Source: James T. Peterson. 2013. Decision Support System framework for adaptive management. Presentation at TRRP 2013 Science Symposium TRRP's Scientific Advisory Board Review of Phase 1; January 8, 2013.

Trinity River Restoration Program - Salmonid Production Model Workshop

TRRP Fish Production Model – Reduce Conceptual Models for each life stage into a functioning model to be used to evaluate alternate management actions, make predictions, monitor and assess outcomes, and reassess our knowledge of the system.



Klamath Fish Production Model has the structure; need to populate it with Trinity data where appropriate.

Fish Production Model for the TRRP

- **Recommended by SAB as a component of the Decision Support System.**
 - The proposed domain for the model is from Lewiston to Weitchpec.
 - SAB recommended efforts should be restricted to the original project reach (Lewiston to N. Fork) until the flow-to-habitat component in particular, and any other model component, are completed for the original project reach.
 - Proposal submitted as part of the FY2014 work plan and approved by TMC
 - 2- year project
- Overall goal of the project is to construct, calibrate, and validate a fish production model as part of the Trinity River DSS.

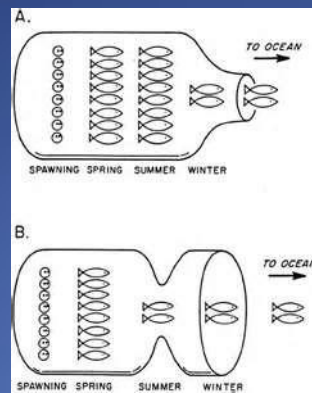
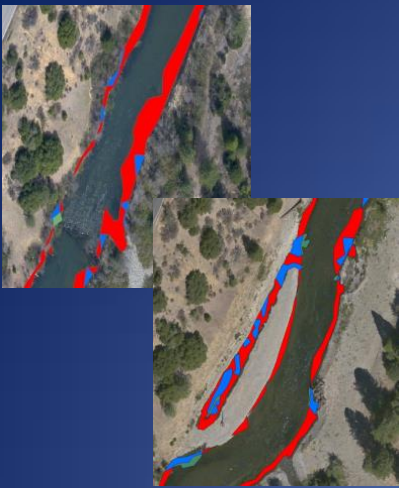
- 1st meeting with the modelers was on March 5th
- Started with an overview of the Klamath model
- Identified data needs for the model

Trinity River Restoration Program - Salmonid Production Model Workshop

- Identified data sets needed for the Trinity model
 - TRRP has substantial data that will support the development of the model
 - Habitat
 - Outmigrant monitoring
 - Redd and carcass monitoring
 - **40 mile 2D physical model** – huge benefit
 - The 11 biological 2D models will be integrated into this systemic model
 - **Daily water temperature model** –
 - being developed by USFS with funding from USFWS – Regional office and USBR-Klamath Falls
 - will be linked with the Klamath temperature model
 - Data needs
 - Systemic substrate mapping
 - A plan being developed to collect these data this summer
 - Possibly some additional fry utilization data
 - Accounting for juvenile production watershed

Path forward

- 2-year project
- The group will meet again in about 3 months, the next meeting date is dependent on the 2D physical and biological modeling efforts which is the foundation of the model.
- Efforts will also be initiated to pull together other datasets that will be used to develop the model.



QUESTIONS ?

