



#### How do we define habitat?

- Quantity
- Quality
- For each life stage and population (time and space)
- Fish accessibility

#### **Habitat Terms**

**Total Inundated Area:** Amount of land water covers

**Suitable Habitat:** Inundated land that meets fish criteria (i.e. depth, velocity, cover, etc.)

#### **Available Suitable Habitat:**

Inundated land that meets fish criteria currently existing in the SJRRP area



### **Simplified ESHE Process**

- Calculate Number of Fish in Reach I
- Determine fish timing in each downstream reach
- Use survivals to determine fish populations in downstream reaches
- Use a growth function to determine fish size in each reach
- Combine fish size with the number of fish and a territory size relationship to determine required suitable habitat



## **Inputs**

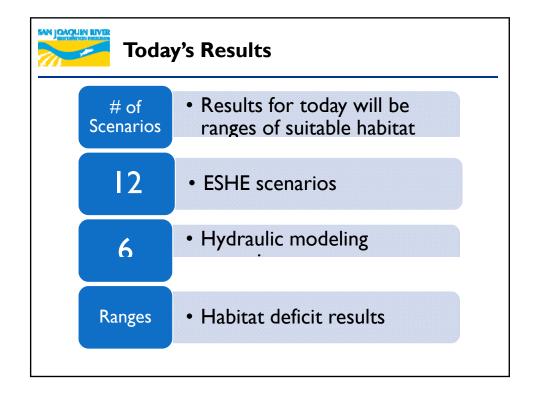
- Juvenile population numbers
- Survivals
- Juvenile timing, migration speed, and entry date
- Relationships between juvenile size, time, habitat amount and habitat quality
- Depth Criteria
- Velocity Criteria
- Cover Delineation
- Flow scenarios





# **Available Habitat and Integration Process**

- 2D hydraulic modeling to determine currently available suitable habitat given criteria
- Combine available suitable habitat by water year type
- Subtract available suitable habitat from needed suitable habitat to determine habitat deficit





# **Your Input**

- Additional input data to use
  - Fisheries Biology
  - Available habitat criteria
  - Cover data
- Assumptions and Limitations