The National Hydrography Data Set: SF Bay Area

Eric Wittner and Lester McKee

Watershed Program
San Francisco Estuary Institute
May 2002
National NHD Goals

• To provide the framework for linking water-related data (spatial and tabular) to the surface water drainage network

• To enable the analysis and display of these water-related data in upstream and downstream order

• To encourage the development and incorporation of higher resolution data required by many users
What is NHD

• Cooperative effort of the USEPA and the USGS

• A comprehensive set of digital spatial data that contains information about surface water features (lakes, ponds, streams, rivers, springs and wells)

• Surface water features are combined to form "reaches"

• Based upon the content of USGS Digital Line Graph (DLG) hydrography

• Integrated with reach-related information from the EPA Reach File Version 3 (RF3)

• A seamless hydrography layer between sub-basins that allows complete upstream or downstream querying
The Roles of the USGS in Sacramento

The NHD effort in California is collaborative in nature.

The USGS Sacramento seeks out partners who have a interest in managing data at a regional level. These partnerships provide support to the NHD effort in a variety of ways:

1. Distribute the cost of NHD
2. Provide local knowledge into the geographic areas being developed
3. Provide feedback as to local needs and requirements so that USGS may work to incorporate those needs into future edits
4. Provide high resolution data for integration into future versions of the NHD
Who is Coordinating and Collaborating in California
Needs and Benefits in the Bay Area

- Consistent naming of reaches and description of spaces and places
- Sharing of information using maps
- A regionally consistent watershed base map
- Determination of the number of watersheds that enter the Bay
- Management using the watershed as the fundamental unit
- Prioritization of watersheds for study or management on a regional basis
Bay Areas collaborators / funding sources

- San Francisco Bay Regional Water Quality Control Board
- State Water Resources Control Board
- Alameda Countywide Clean Water Program
- Alameda County Flood Control District
- Santa Clara Valley Water District
- U.S. Environmental Protection Agency
Bay Area Stream Fishes is now the Active Layer

Select Rectangle
**Sample Station Summary (STN0121)**

- **Stream Name:** Guadalupe River
- **County:** Santa Clara
- **Watershed:** Guadalupe River Watershed
- **Location:** opposite Oak Canyon Development (end of Pam Lane, off Coleman Road)
  - California roach (*Levinia symmetricus*)
    - **No of Fishes:** 30
    - **Collection Date:** JUN-01-1994
    - **Notes:** plus 200 observed at less than 10 mm TL
      - This is a native fish
      - No photograph on record
  - Rainbow Trout/Steelhead (*Oncorhynchus mykiss*)
    - **No of Fishes:** 25
    - **Collection Date:** JUN-01-1994
    - **Notes:** plus 25 observed within size range
      - This is a native fish

**Bay Area Stream Fishes**

<table>
<thead>
<tr>
<th>Rec</th>
<th>ENTITY ID</th>
<th>CREATED</th>
<th>UPDATED</th>
<th>CREATOR</th>
<th>EDITOR</th>
<th>#SHAPEA</th>
<th>MDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STN0119</td>
<td>19990514</td>
<td>19990514</td>
<td>owong</td>
<td>owong</td>
<td>[point]</td>
<td>175</td>
</tr>
<tr>
<td>2</td>
<td>STN0120</td>
<td>19990514</td>
<td>19990514</td>
<td>owong</td>
<td>owong</td>
<td>[point]</td>
<td>177</td>
</tr>
<tr>
<td>3</td>
<td>STN0121</td>
<td>19990515</td>
<td>19990515</td>
<td>owong</td>
<td>owong</td>
<td>[point]</td>
<td>178</td>
</tr>
</tbody>
</table>
Storm Drains 24 inch and greater is now the Active Layer