RECLAMATION
Managing Water in the West

Real Time Salinity Visualization & Management (RTM) Tool

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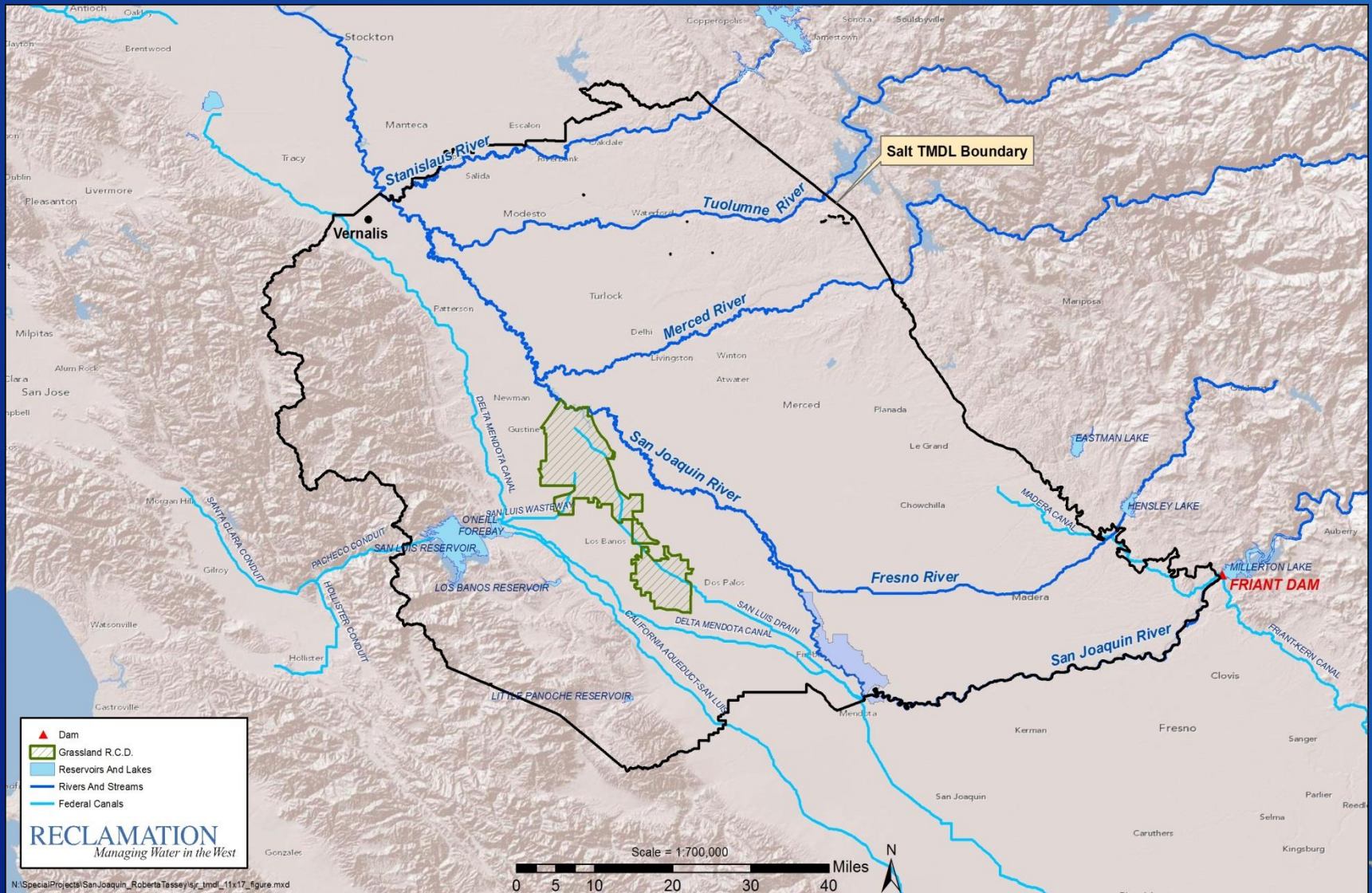**Water Resource Modeler**

U.S. Department of the Interior
Bureau of Reclamation

Outline

- Study Site (GWD)
- Overview of the Real Time Salinity Visualization and Management Tool
- The Tool Demonstration
- Acknowledgement
- Questions

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Grassland Water District

Grassland Water District

- ~ 51,537 acres, majority of this land is wetland habitat, Los Banos, CA.

- Primary function - Deliver water

- Canal system -- ~110 miles

The RTM Tool Overview

- Desktop tool, GIS Based, Coded in C# .net and ArcObject programming

- Five Components:

1. Retrieve and Parse Real Time Data

    Canal, station, date & time, EC, flow, stage, etc.

2. Load and Parse Historical data

3. Visualizing Spatial-Temporal data

    Animation of EC, Flow, Salt Load of canals in user selected time period, time steps (hourly or daily)
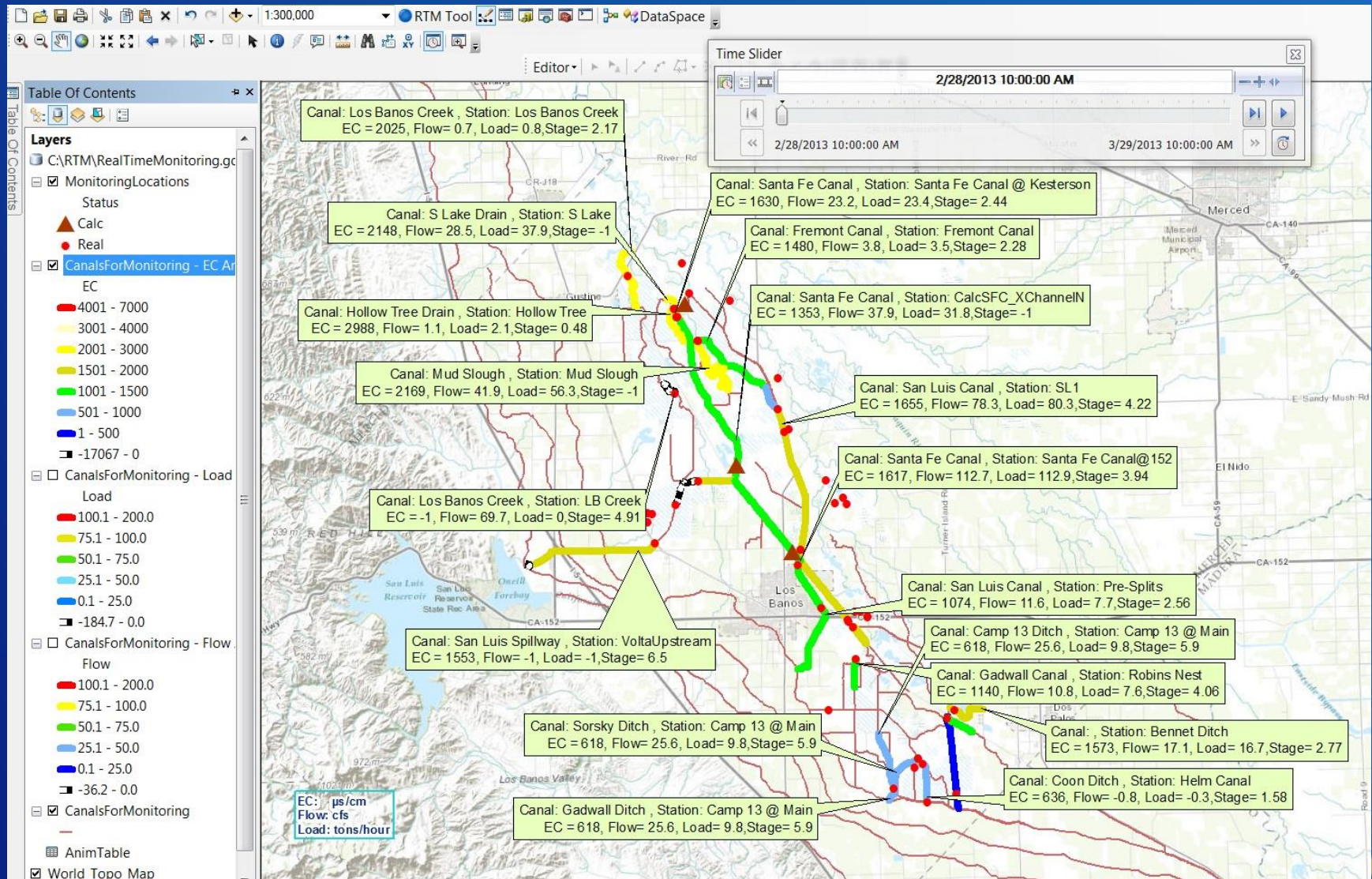
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# The RTM Tool Overview (cont.)

4. Time Series Graph

- Visualizing time series EC, load, flow & stage for selected canal(s) at hourly or daily time step

- Calculate and visualize sum of time series load of selected canals at hourly or daily time step

- Export data and graph

5. Visualization of Flow, Water Quality at a Canal/Location Without Monitoring Station
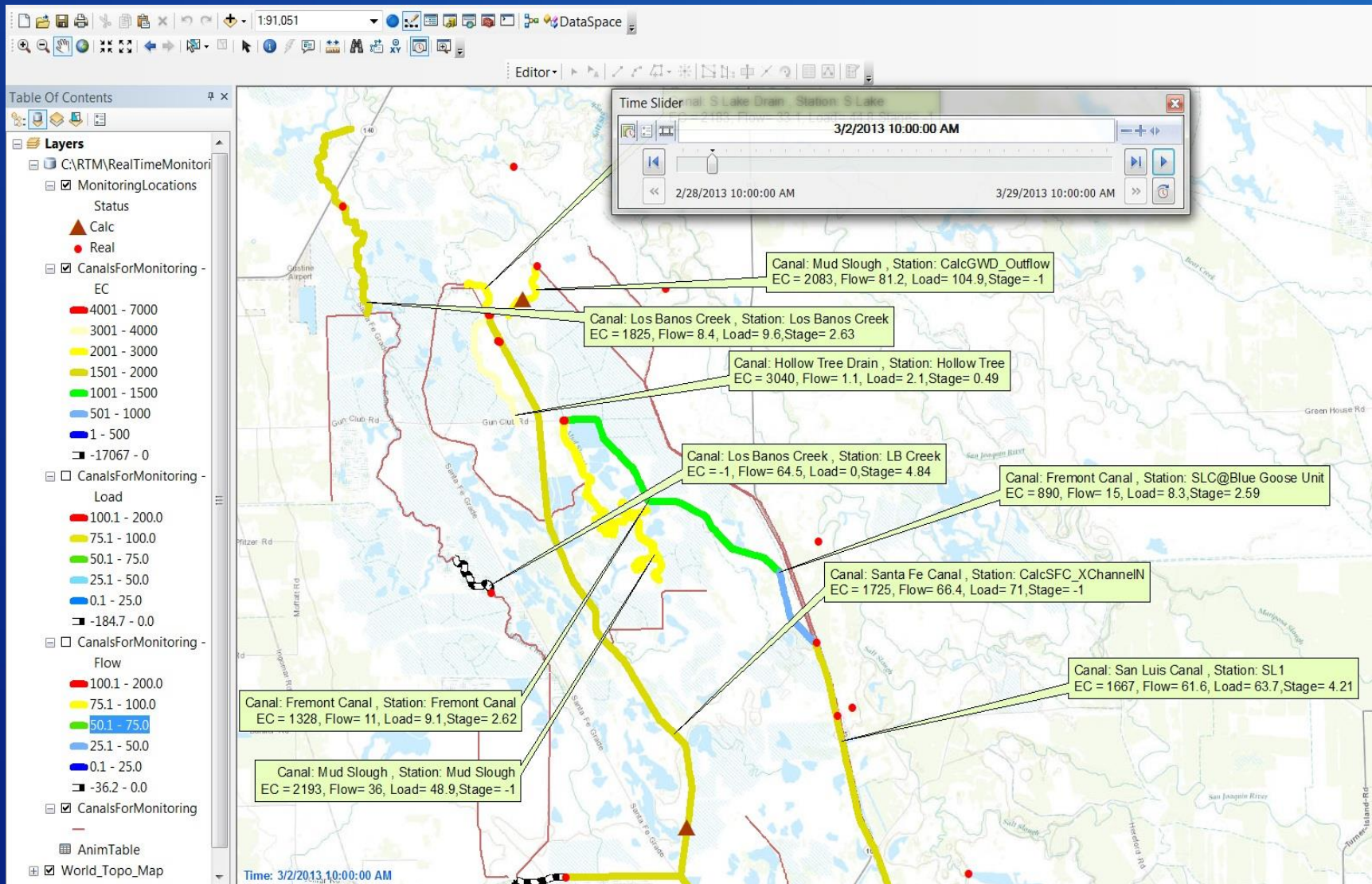
Visualizing Spatial-Temporal Data

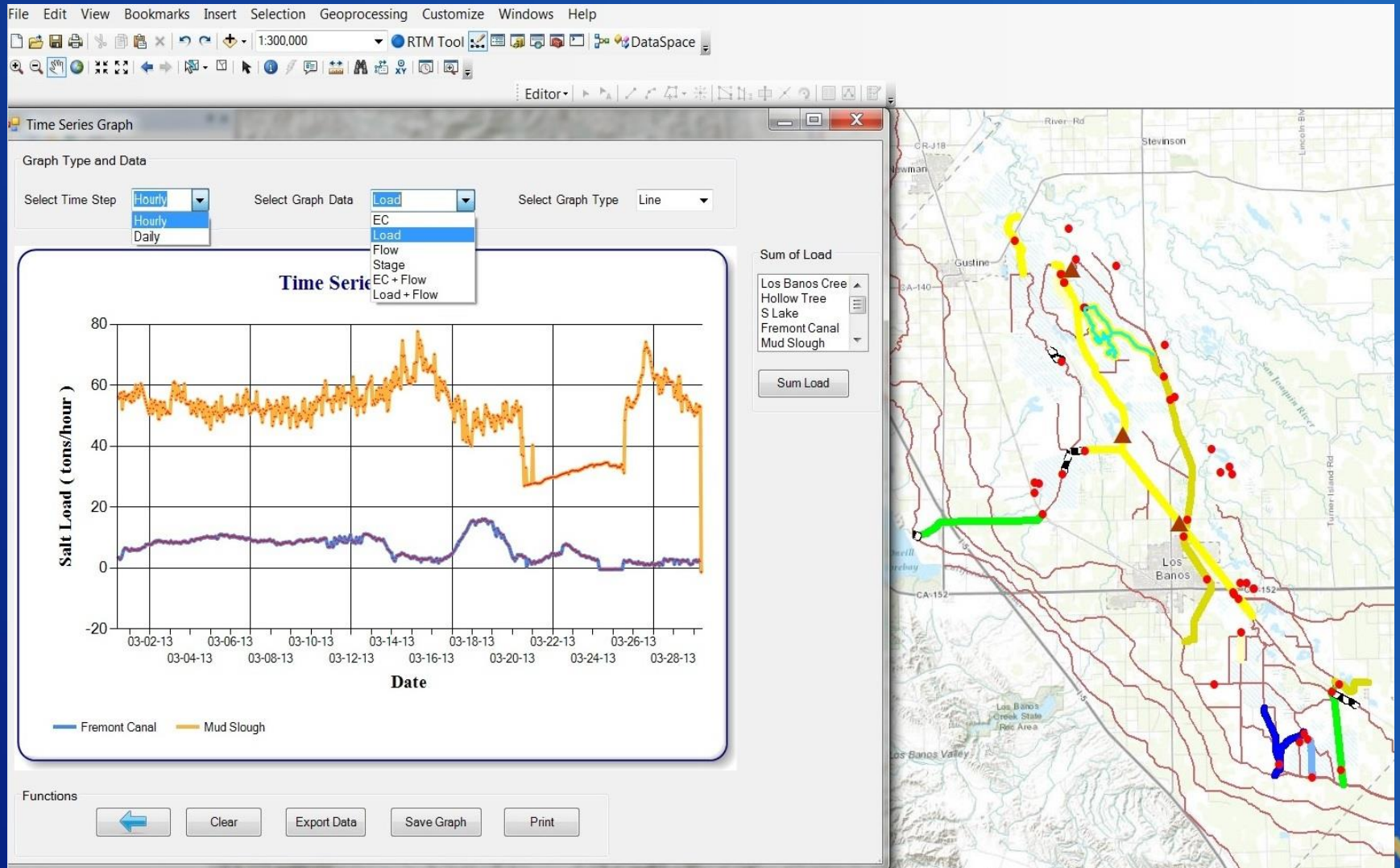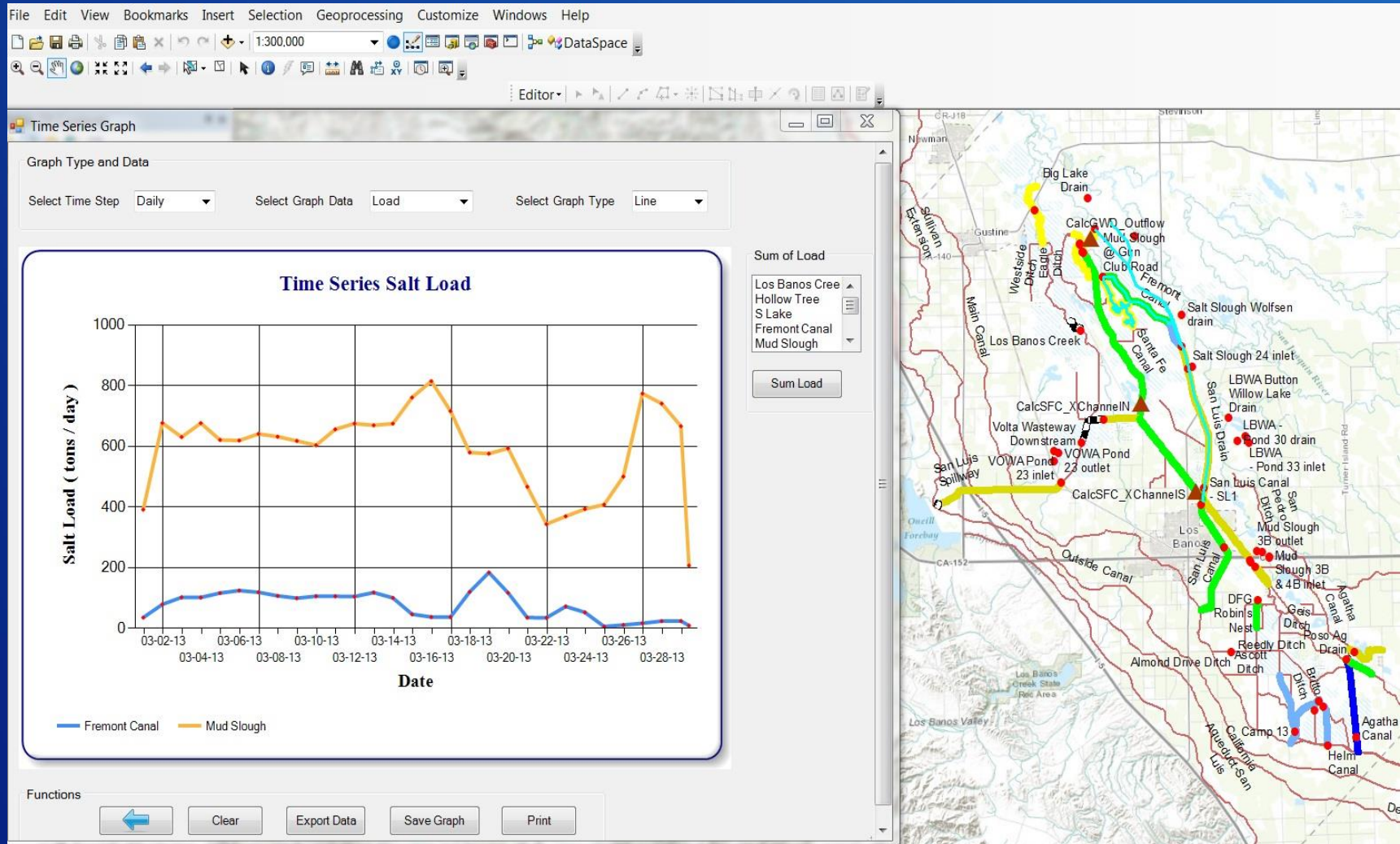# Full Extent Animation of All Canals – With Table
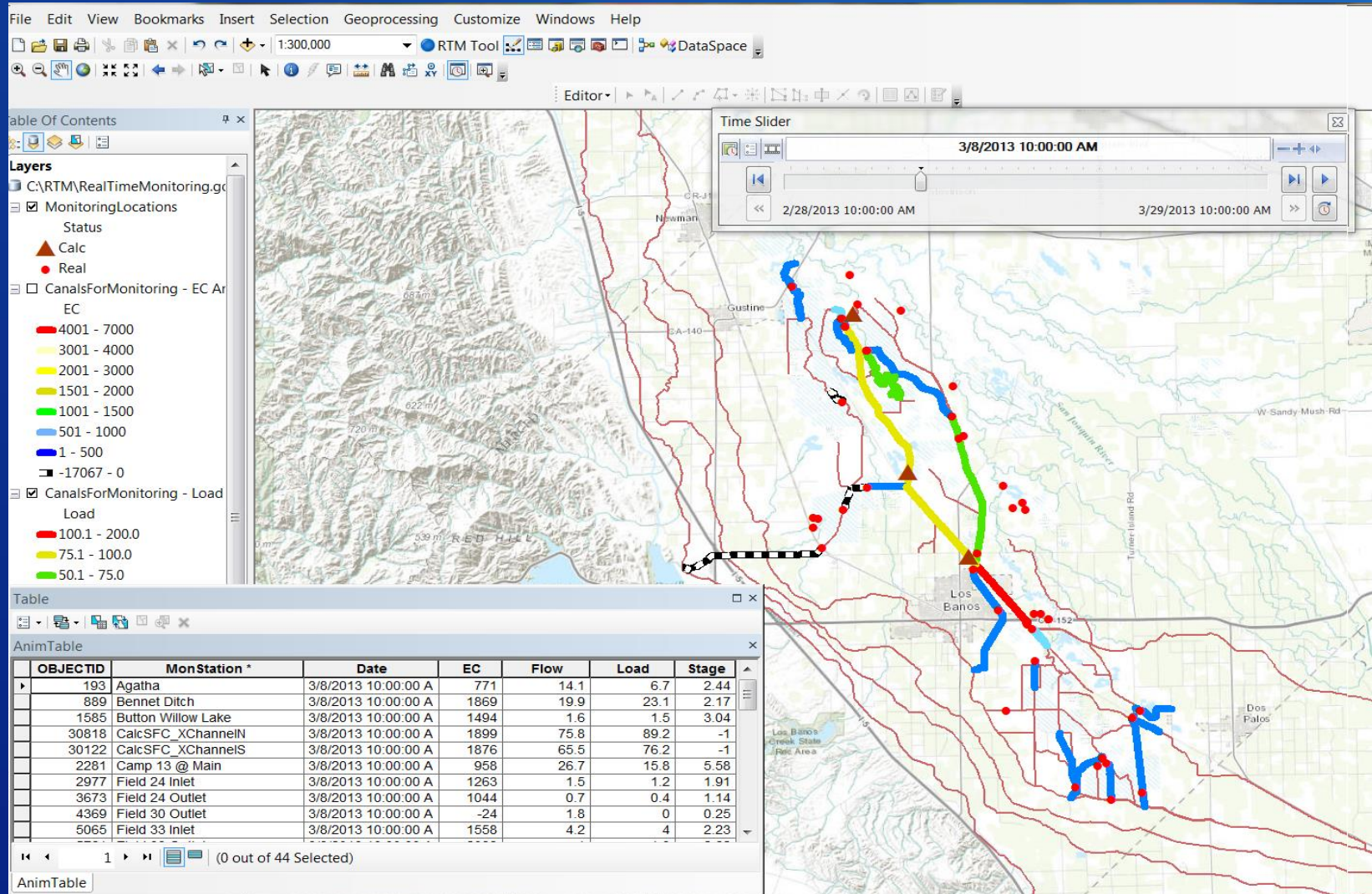
Animation of Canals – Area North

Hourly Time Series Graph of any Selected Canal(s) (Mschart)

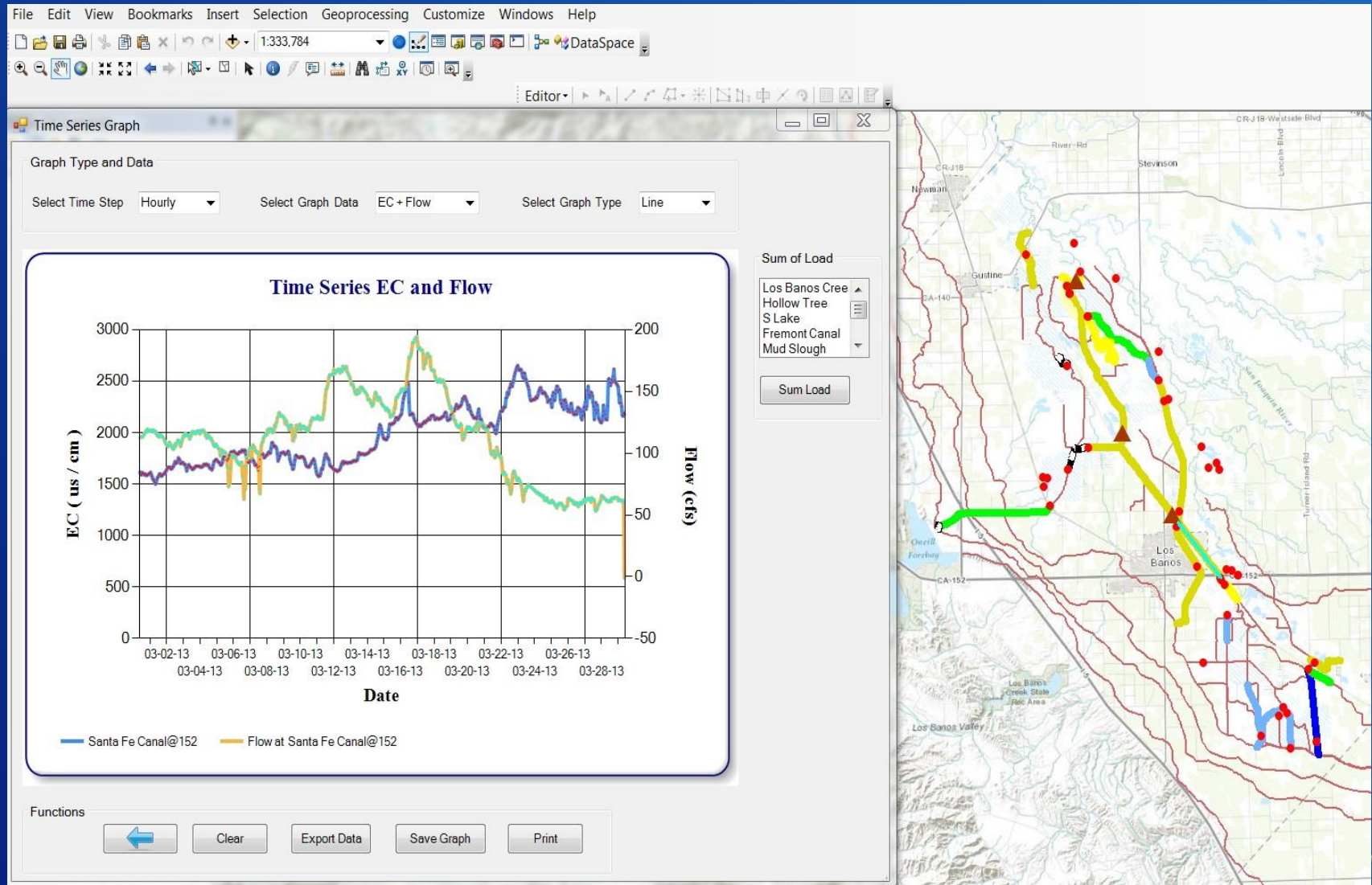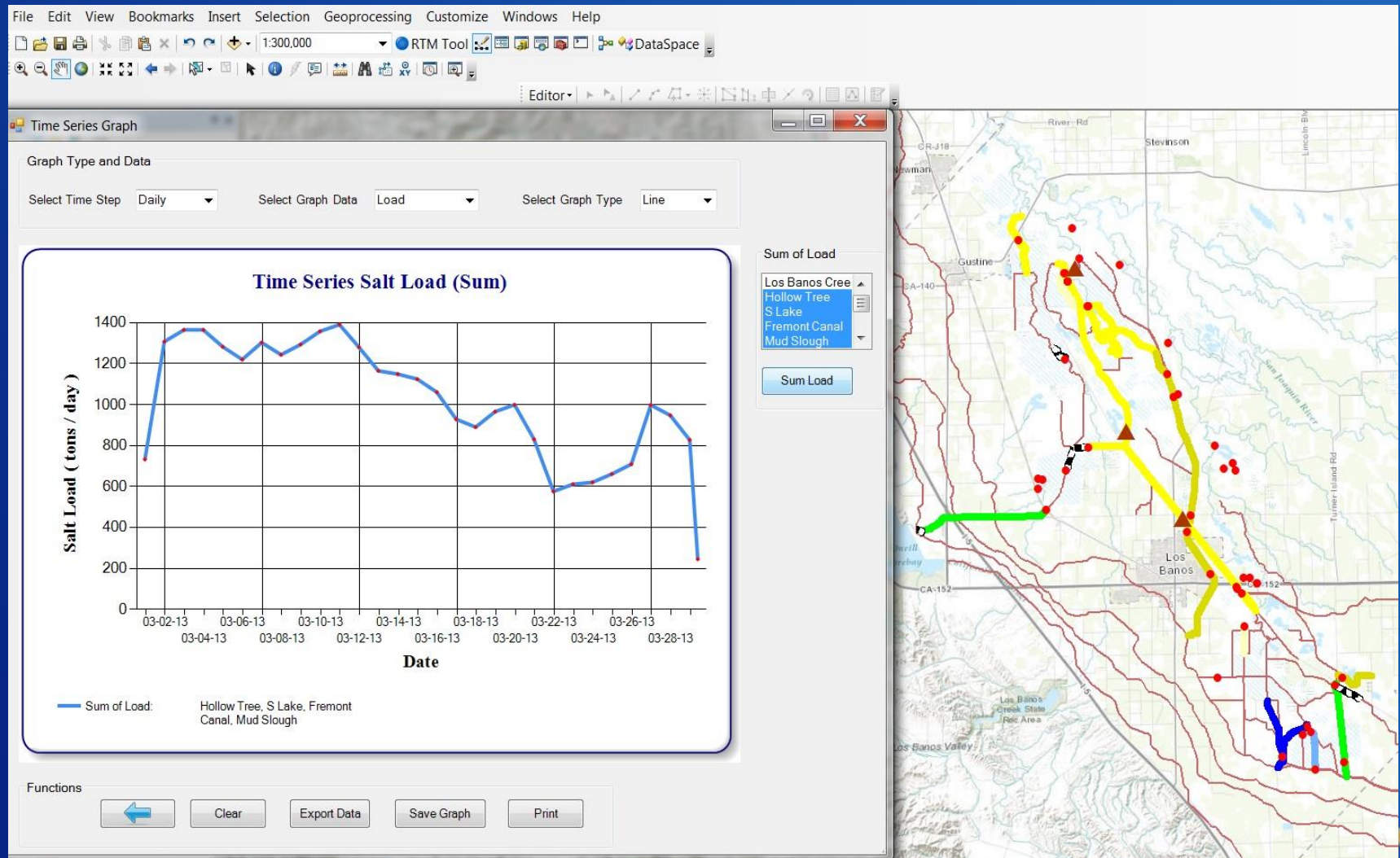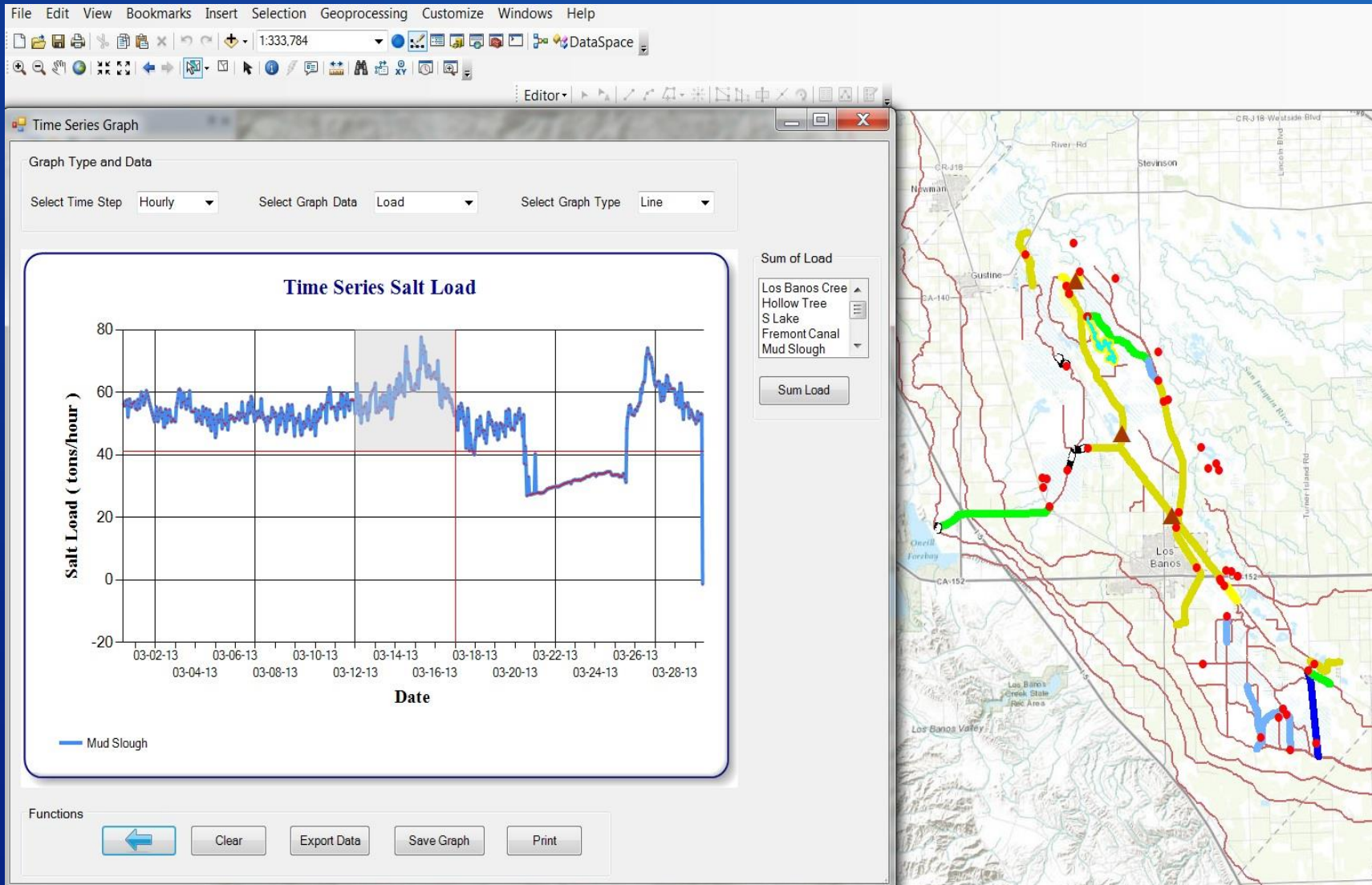# Daily Time Series Graph of any Selected Canal(s) (Mschart)

Add Flow to the Time Series Graph
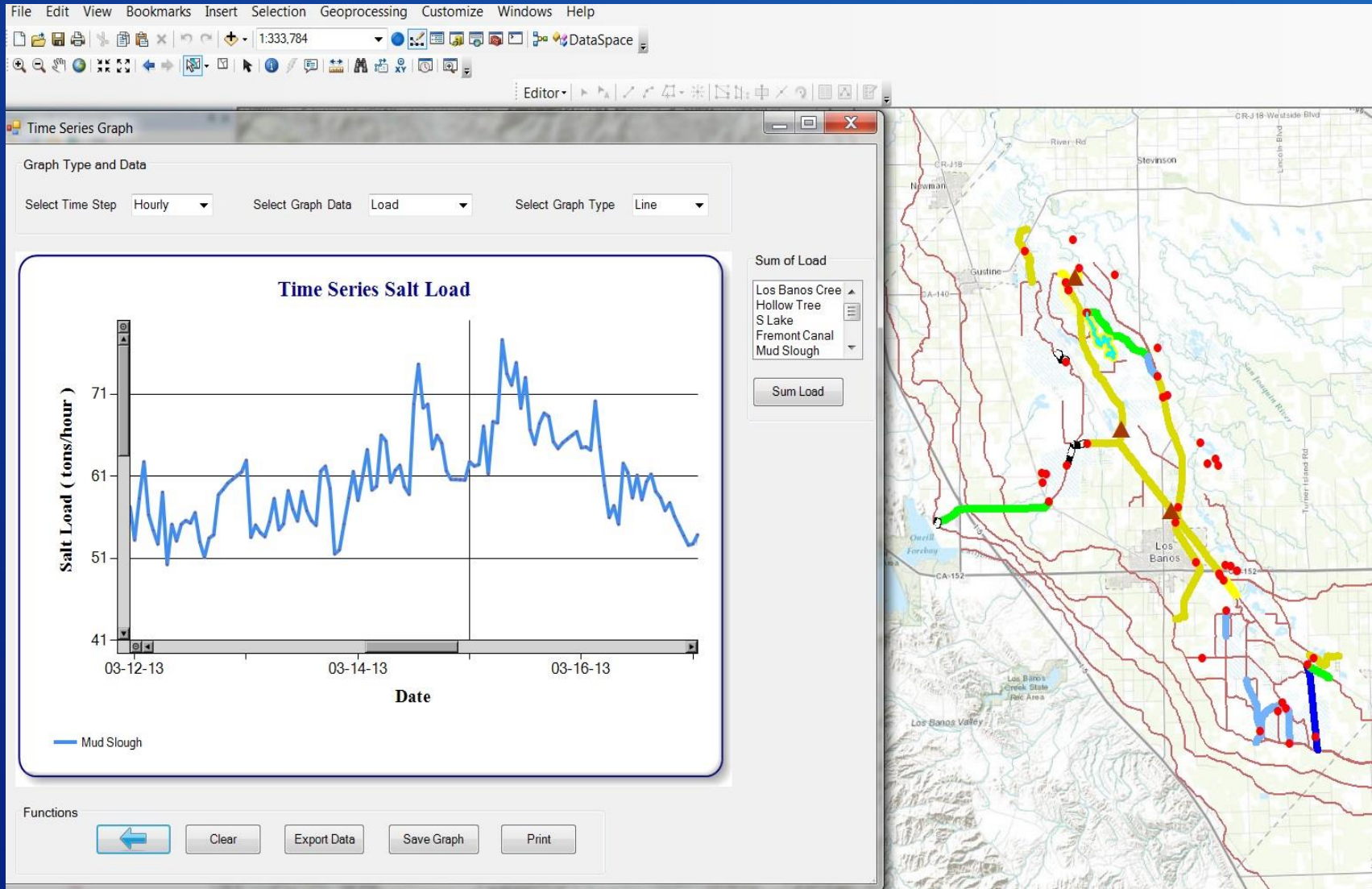
Sum of Time Series Load of Selected Canals (Mschart)

Graph Zoom in

Graph Zoom in (cont.)

Acknowledgement

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   --- MPGIS

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   --- BOR

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