ST SCIENCE INFORMATION DIVISION

Fisheries Independent Surveys System Survey Inventory (FINSS-SI)

Public User's Manual

National Marine Fisheries Service
Office of Science and Technology
Science Information Division

March 31, 2010

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1 Introduction

The purpose of the Fishery-Independent Surveys System (FINSS) is to 1) support the mission of the Fisheries and the Office of Science and Technology, 2) present the NMFS survey information to users, and 3) empower effective discovery, access and use of NMFS survey information. FINSS is a web based application designed to support the planning and budgeting processes, and to provide abilities to answer questions through web queries. Survey Inventory (SI) is one of the major components of FINSS that will initially provide historical survey data from FY2004 to FY2008.

The Objectives of this system are:

- Develop a five-year (FY04-08) Survey Inventory that shows the history and breadth of NMFS fishery-independent observations across regions;
- Serve up trusted fishery-independent survey information and enable NMFS customers to easily find the information on the web with visualization;
- Respond to data calls and planning/budgeting scenarios;
- Establish definitions and standards for fishery-independent metadata repository;
- Develop policies and procedures for fishery-independent metadata collection, maintenance, updating and reporting in the national level database.

The FINSS product includes user interface and reporting capability for users to search and query the database. FINSS is sponsored by NMFS Office of Science and Technology (ST), developed by the ST Science Information Division, and supported/contributed by the six NMFS Science Centers.

The system is structured in a hierarchical fashion. Proceeding from the top level down, the levels and some of the key parameters found under each is summarized as follows:

- Survey Level:
    - Survey Name
    - Science Center
    - Lab/Division
    - Survey Year
    - Survey Purpose
    - Funding Source
    - Targeted Species
- Cruise Level
    - Cruise Number
    - Cruise Start Date
    - Cruise End Date
    - Platform Type
    - Gear
- Station Level
    - Location Type (Point Station or Track-line)
    - Station ID
    - Lat/Lon

1.1 Basic Terminology

As a general guide, some of the basic terminology used in the Survey Inventory application is defined here.

Survey:	A descriptor of a series of similar cruises (same region, vessel type, target species, principal gear deployed, etc.).
Science Center:	One of the NMFS science centers (AFSC, NWFSC, SWFSC, PIFSC, NEFSC, or SEFSC)
Lab/Division:	Laboratory/division or facility which conducted the survey
Survey Year:	Calendar year when the survey was conducted
Survey Name:	Name defined by each science center
Survey Purpose:	Description of what the survey accomplished (e.g., stock assessment, seafloor mapping)
Survey Frequency:	How often the survey was conducted (e.g., annually, bi-annually, quarterly, by season)
Funding Source:	Source of funds (e.g., NOAA corporate fund, NMFS program fund, NMFS cooperative research fund)
Targeted Species:	Names of the species that were targeted from the Endangered Species Act (ESA) list, Marine Mammal Protection Act (MMPA) list, or Fish Stock Sustainability Index (FSSI) list
Cruise:	A trip composed of one or more legs on a single vessel
Cruise Number:	Cruise ID/code used to support each particular survey
Cruise Start Date:	Date the ship left port for a particular survey
Cruise End Date:	Date the ship returned to port after a particular survey
Platform Type:	Type of platform (e.g., NOAA research vessel, charter vessel)
Platform Name:	Name of vessel
Gear:	Sampling method/device used during a cruise

Location Type:	Category (point station or track-line) that best describes the location at which observations were made for the given survey and cruise
Station ID:	Station ID/code assigned by the Science Center to identify the stations
Begin Lat/Lon:	The Latitude/Longitude where a particular survey sampling activity started. For a “point station” location type, this is the only location value entered.
End Lat/Lon:	The end Latitude/Longitude that is filled in for a “track-line” location type

1.2 Scope for User's Manual

This Survey Inventory User's Manual is primarily focused on serving the Public User. Since the software interface is very intuitive, a fairly high level approach is used for illustrating its operation. The manual primarily deals with the basic mechanics of viewing and creating reports using the web application screens. Besides serving as a general reference, the manual can be used as training material for new users.

2 Public User Interface

The user interface for the public user is straight-forward and is limited to viewing the survey inventory data information. The user needs to select search parameters, initiate the search, and observe the survey related parameters. There is also the capability to create spreadsheet and map reports.

For the public user interface the application allows the user to:

- Perform survey search by supplying search parameters
  - Science Center
  - Survey Name
  - Survey Year
- View information for a selected survey at
  - Survey Level
  - Cruise Level
  - Station Level
- Generate a survey report
  - XLS Spreadsheet
  - Map

Additional details regarding the application capabilities and usage are covered in the following screens.

2.1 Access the Survey Inventory Application

For the public user operation, the user does not need a login or password. To access the Survey Inventory application, simply perform the following:

1. Select the Access Survey Inventory button from the public web page. This will produce the login screen shown in Figure 1.

2. Select the 'Visit as a Guest' button. No username or password is required.

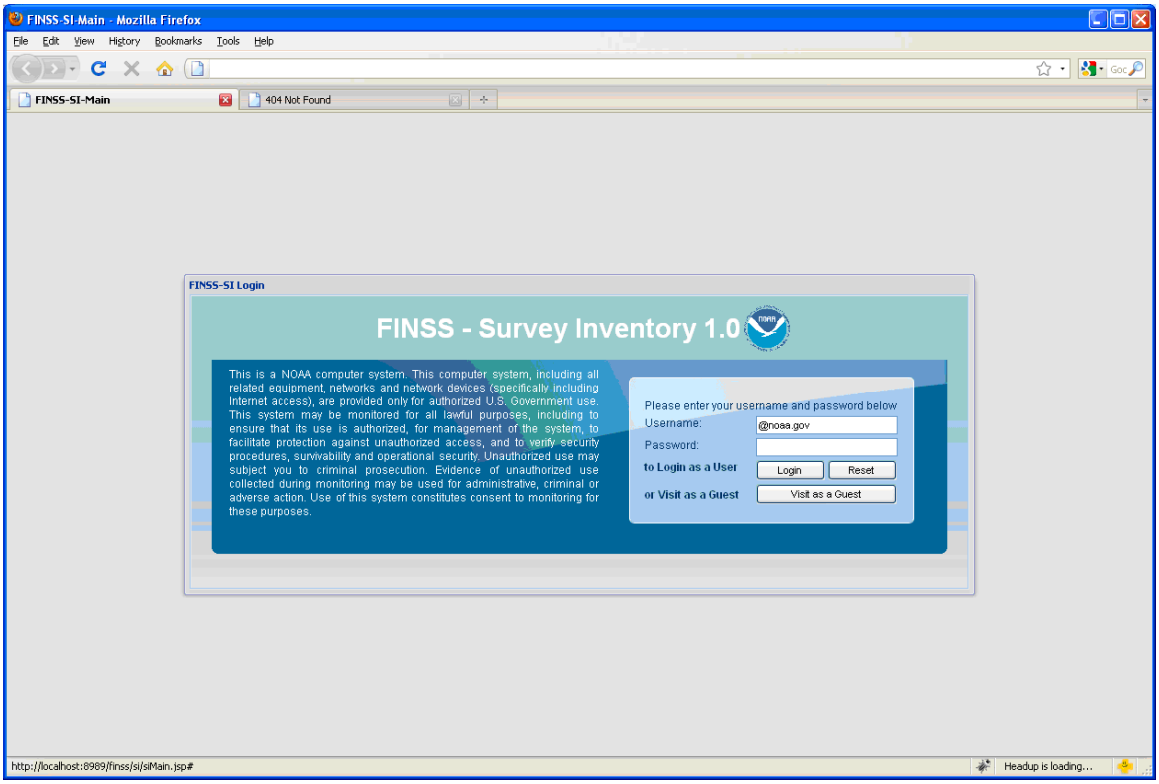


Figure 1 – Login Screen for FINSS – Survey Inventory

After starting up the Survey Inventory application (with ‘Visit as a Guest’ operation), the initial screen shown in Figure 2 will be displayed.

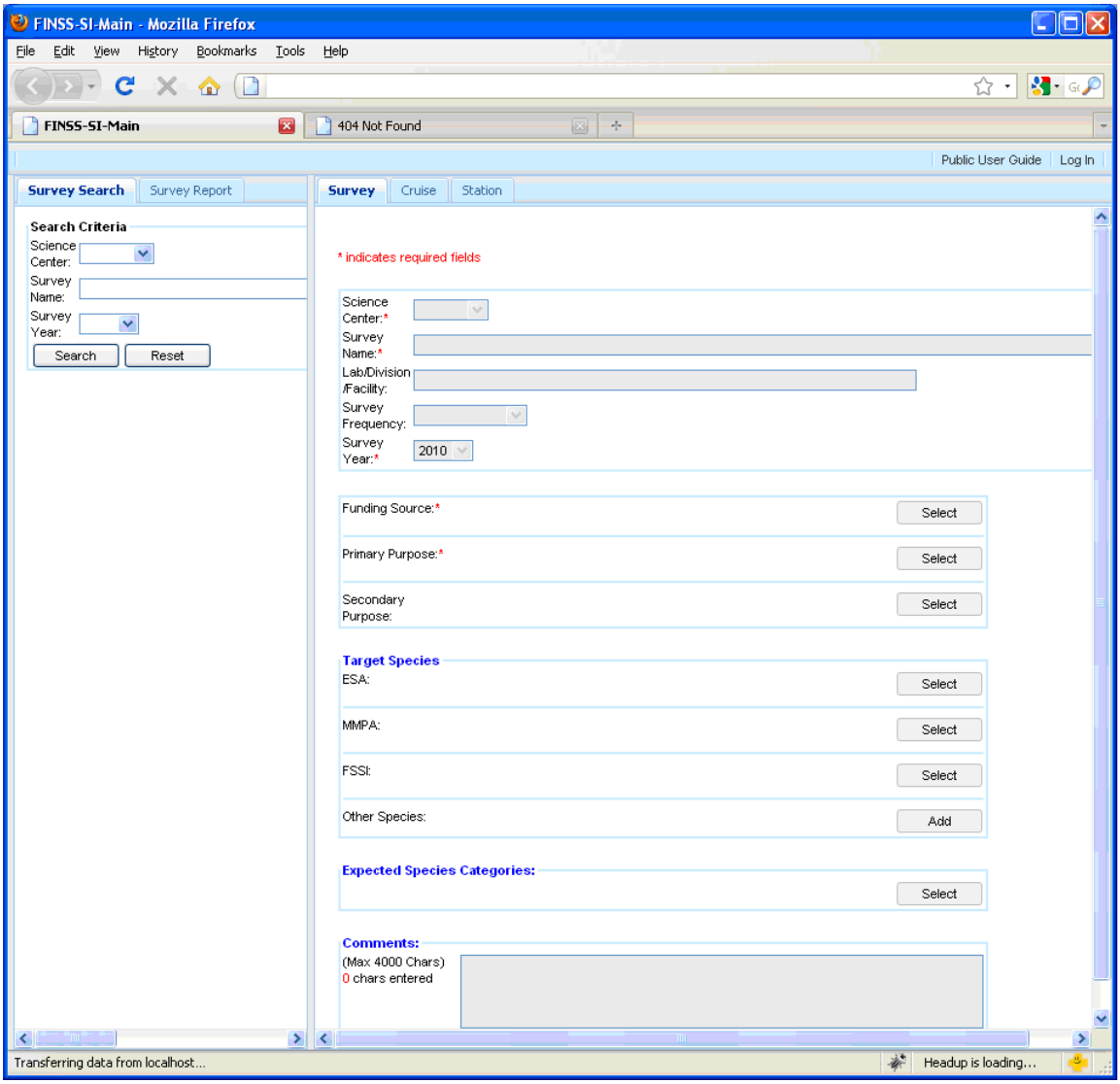


Figure 2 – Initial Screen for Survey Inventory

2.2 Survey Search

Survey data in the Survey Inventory application is setup in a hierarchical structure consisting of Survey, Cruise, and Station. Initially, the user must supply a Search Criteria in the left panel of the screen. There are drop-down menus like the one illustrated in Figure 3 to assist the user.

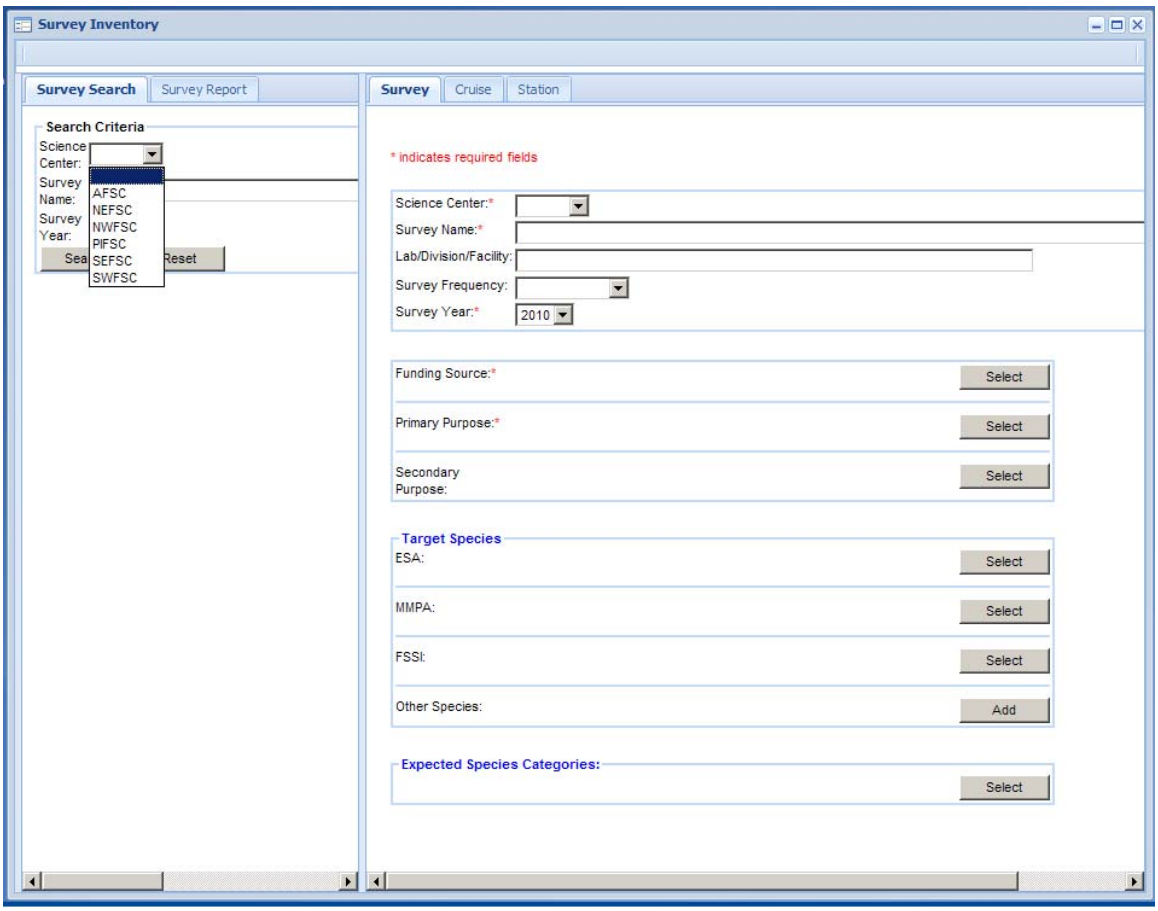


Figure 3 – Drop-Down Menu for Search Criteria

To perform a search for a Survey, execute the steps covered in the next few pages:

1. **Supply/select the search criteria for performing the search:**

    - Science Center
    - Survey Name (optional)
    - Survey Year

A sample search setup screen is shown in Figure 4. For this example a search will be performed for all surveys conducted by NEFSC for the 2007 survey year.

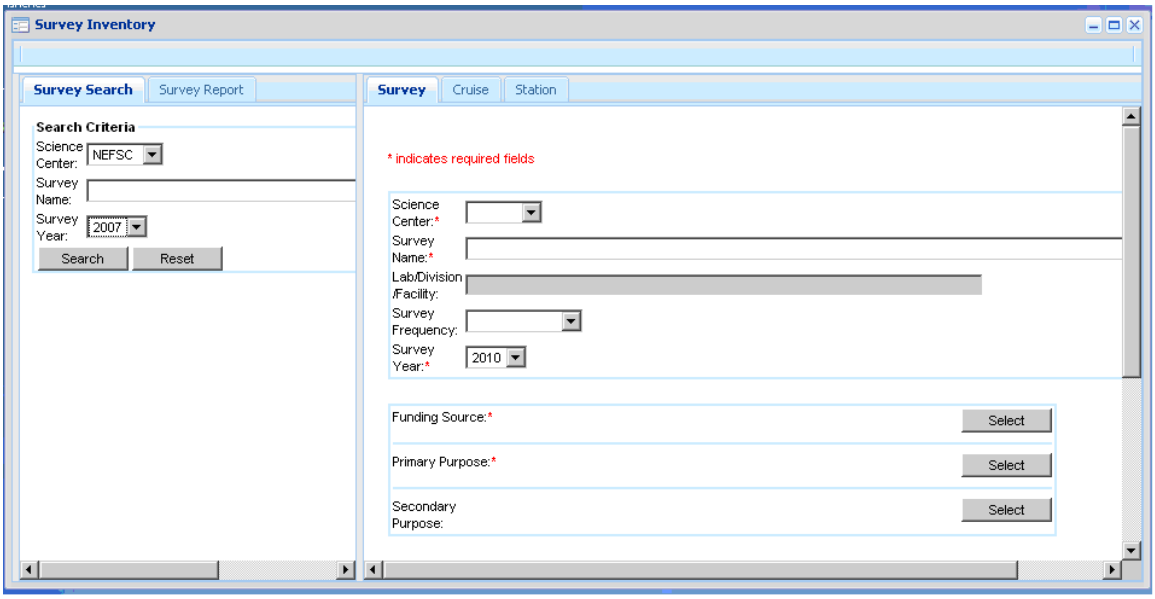


Figure 4 – Sample Search Setup Screen

2. **Select the Search button in the left panel to initiate the search.**

The results for this search are displayed in the left panel. An example showing the results from the survey search is illustrated in Figure 5.

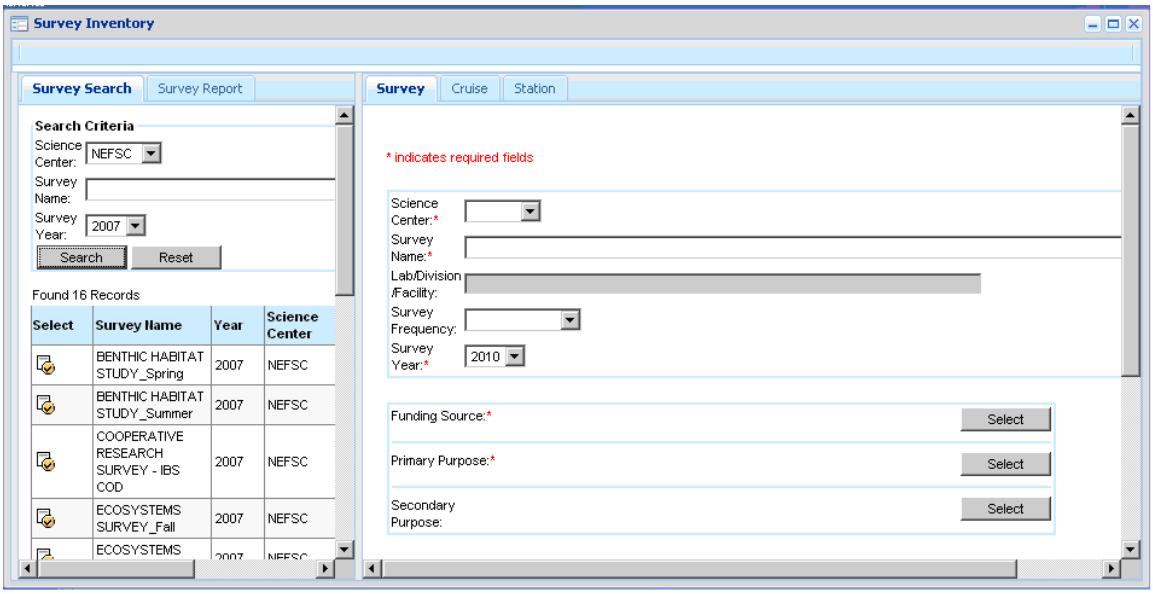


Figure 5 – Sample Survey Search Results

3. **Select one of the surveys from the set of records found for the given search criteria.**

Simply select the icon in the far left column that is next to the Survey Name of interest. The Survey parameters are then filled out in the right panel (under the 'Survey' tab). Figure 6 shows the filled out form resulting from this selection. Note that for the Public login, the user may only view survey parameters.

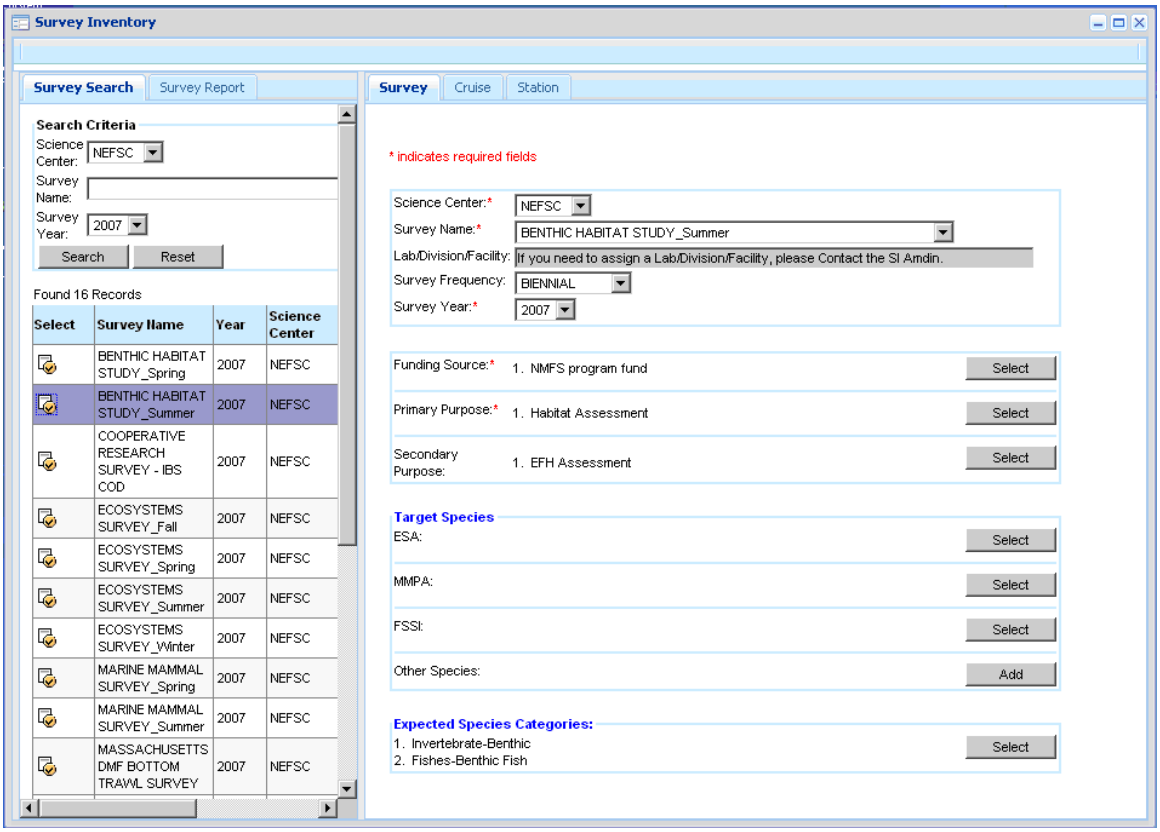


Figure 6 – Selected Survey

4. **Select the Cruise tab to observe the cruise related parameters for the selected survey.**

The data for this particular case are shown in Figure 7. Note that there is only the one entry under Cruise List. For cases where there are two or more entries, the user may select a cruise from the Cruise List.

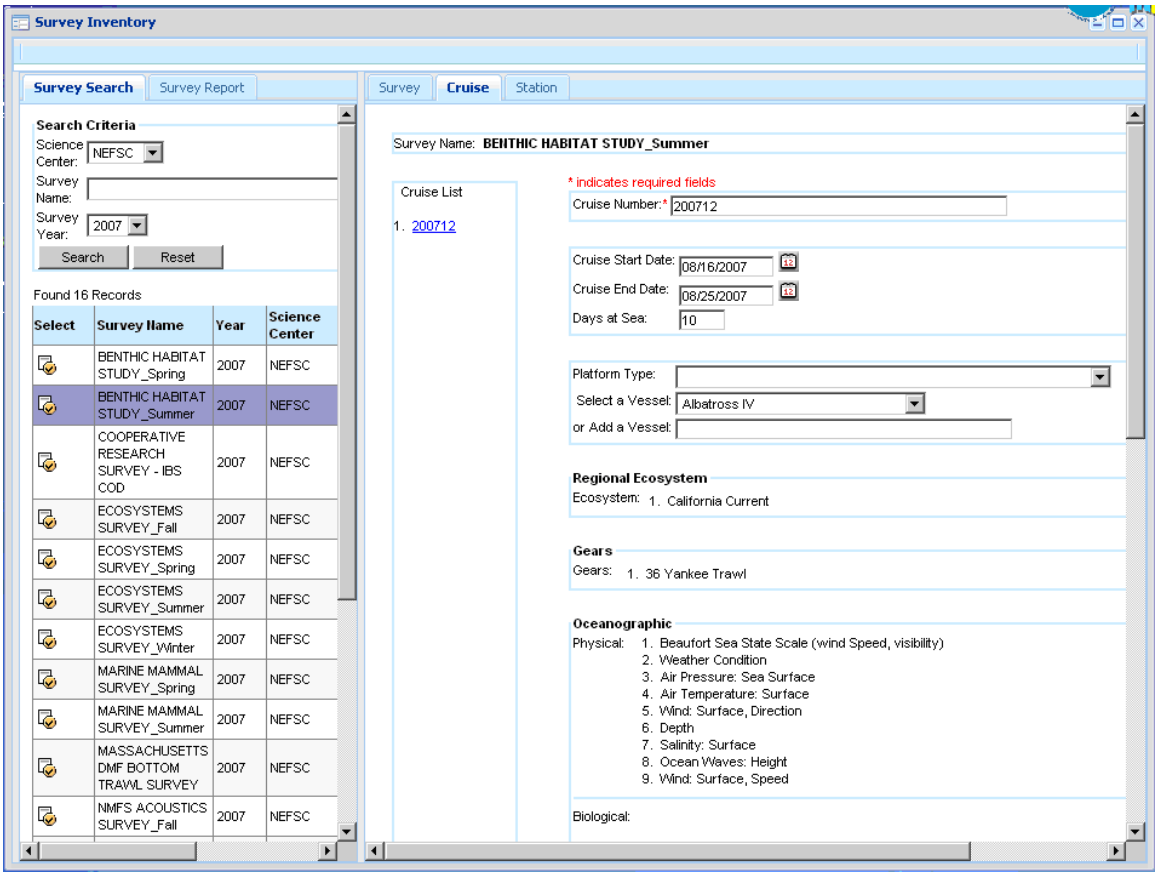


Figure 7 – Cruise Information for the Selected Survey

5. **Select the Station tab to observe the Station data for the selected survey.**

The Station information for this selected survey is illustrated in Figure 8. In this case the Location Type is Track-Line where both Begin Lat/Lon and End Lat/Lon values are listed out for the stations.

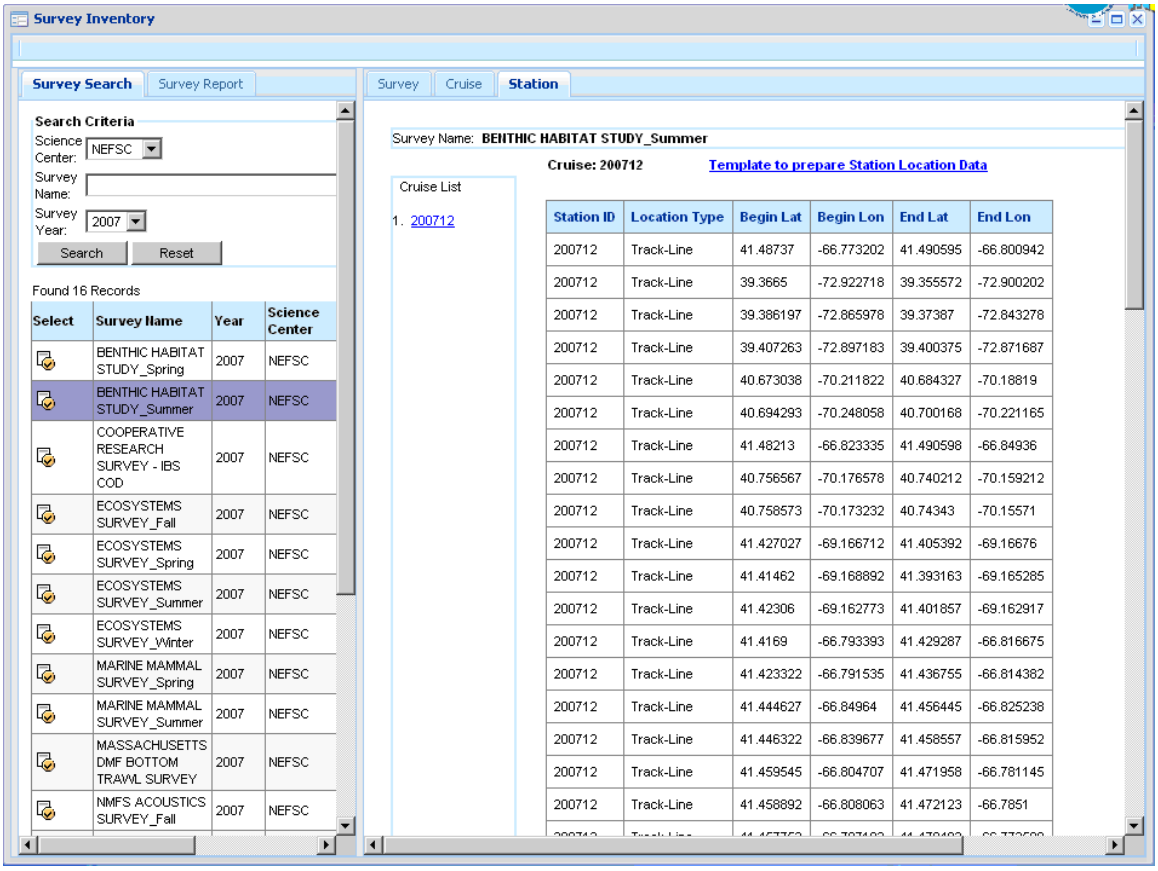


Figure 8 – Station Information for the Selected Survey

Another example for Station information for a selected survey is shown in Figure 9. In this particular case the Location Type is Point where only Begin Lat/Lon values are listed for the stations.

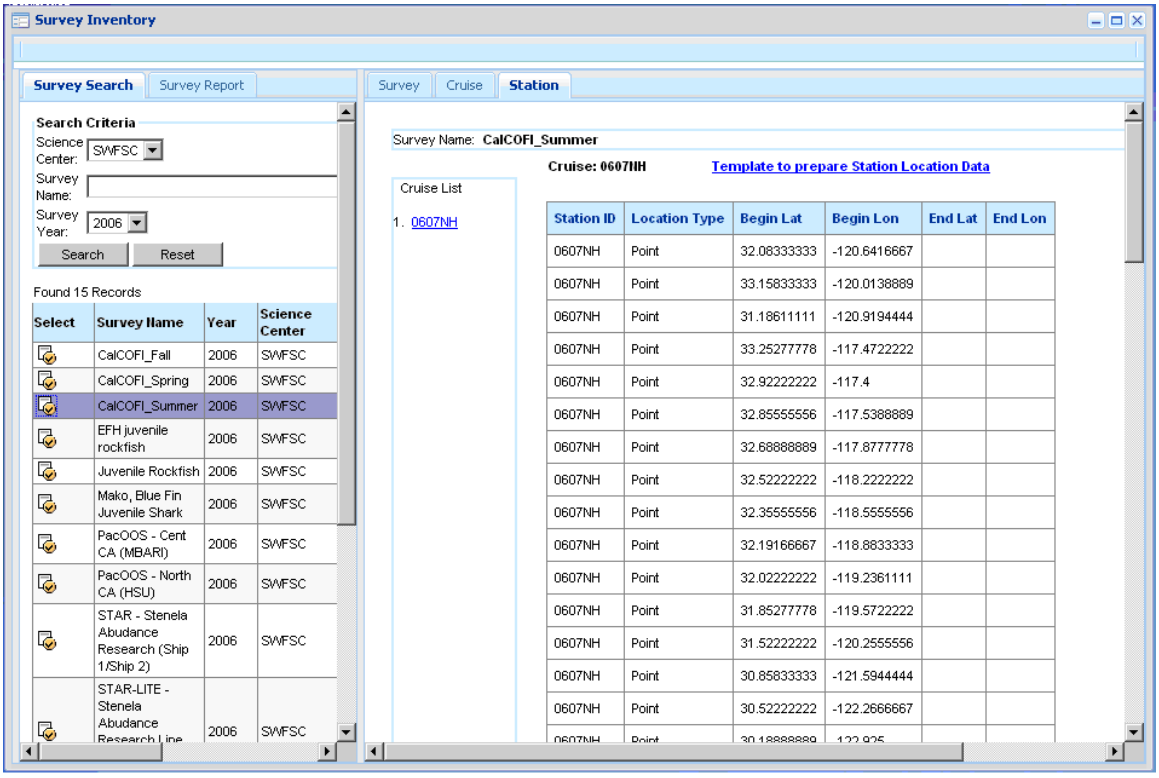


Figure 9 – Station Information for another Selected Survey Example

2.3 Survey Report Generation

The Survey Inventory application has the capability to generate a variety of reports. The user is first required to set up the Report Criteria. This consists of selecting parameters in the left panel for Science Center, Survey Name, Funding Source, Purpose, and Survey Year. An example of this (SWFSC Science Center - 2007) is shown in Figure 10.

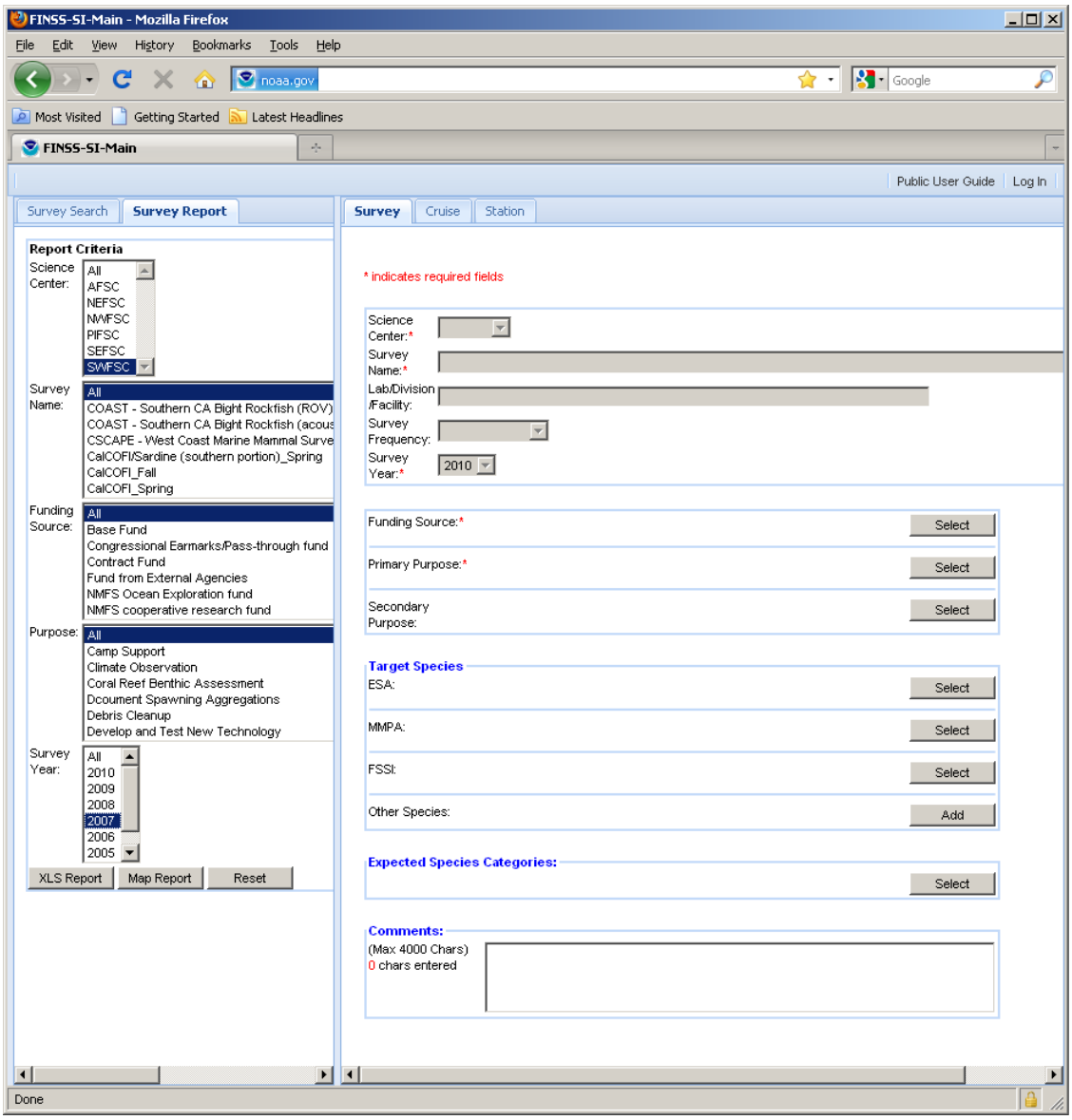
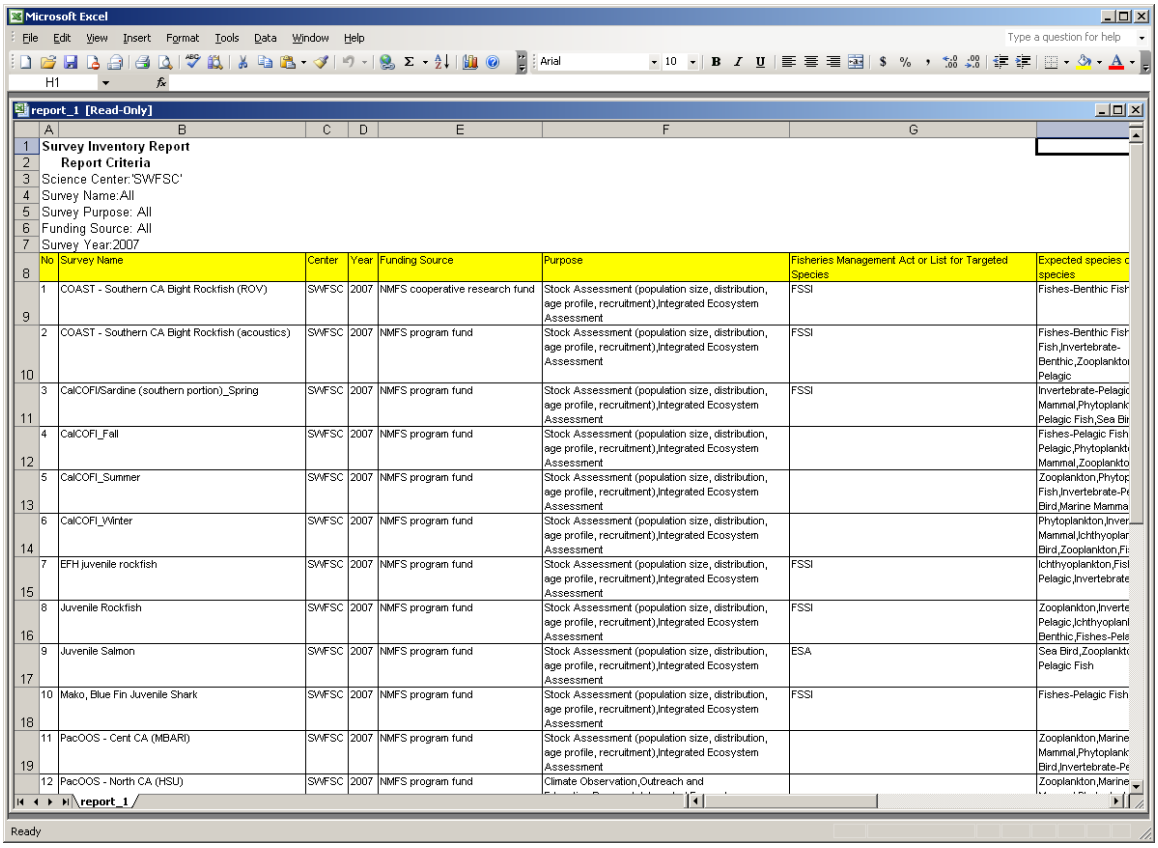


Figure 10 – Sample Setup for Survey Report

Select the XLS Report button to produce a spreadsheet report. The resulting report from the above Report Criteria parameters (SWFSC – 2007) is shown in Figure 11.



Survey Inventory Report
Report Criteria
Science Center:'SWFSC'
Survey Name:All
Survey Purpose: All
Funding Source: All
Survey Year:2007

No	Survey Name	Center	Year	Funding Source	Purpose	Fisheries Management Act or List for Targeted Species	Expected species c species
1	COAST - Southern CA Bight Rockfish (ROV)	SWFSC	2007	NMFS cooperative research fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Fishes-Benthic Fish
2	COAST - Southern CA Bight Rockfish (acoustics)	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Fishes-Benthic Fish Fish,Invertebrate- Benthic,Zooplankto Pelagic
3	CalCOFI/Sardine (southern portion)_Spring	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Invertebrate-Pelagic Mammal,Phytoplank Pelagic Fish,Sea Bir
4	CalCOFI_Fall	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment		Fishes-Pelagic Fish Pelagic,Phytoplankt Mammal,Zooplankto
5	CalCOFI_Summer	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment		Zooplankton,Phytop Fish,Invertebrate-Pe Bird,Marine Mamma
6	CalCOFI_Winter	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment		Phytoplankton,Inver Mammal,Ichthyoplar Bird,Zooplankton,Fi
7	EFH juvenile rockfish	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Ichthyoplankton,Fish Pelagic,Invertebrate
8	Juvenile Rockfish	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Zooplankton,Inverte Pelagic,Ichthyoplan Benthic,Fishes-Pele
9	Juvenile Salmon	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	ESA	Sea Bird,Zooplankt Pelagic Fish
10	Mako, Blue Fin Juvenile Shark	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment	FSSI	Fishes-Pelagic Fish
11	PacOOS - Cent CA (MBARI)	SWFSC	2007	NMFS program fund	Stock Assessment (population size, distribution, age profile, recruitment),Integrated Ecosystem Assessment		Zooplankton,Marine Mammal,Phytoplank Bird,Invertebrate-Pe
12	PacOOS - North CA (HSU)	SWFSC	2007	NMFS program fund	Climate Observation,Outreach and		Zooplankton,Marine

Figure 11 – Sample Spreadsheet Report

Select the Map Report button to generate the map for the supplied report criteria. The resulting map from the criteria (SWFSC 2007) is shown in Figure 12. There are two component overlays for this map. One indicates the outline for the Exclusive Economic Zone (EEZ). The other component is the "heat map" display, which shows the observation density for the currently selected stations, calculated for a grid with a given cell size. These cells are color-coded using a range of colors (indicated by the scale in the right panel) whose "temperature" is proportional to density.

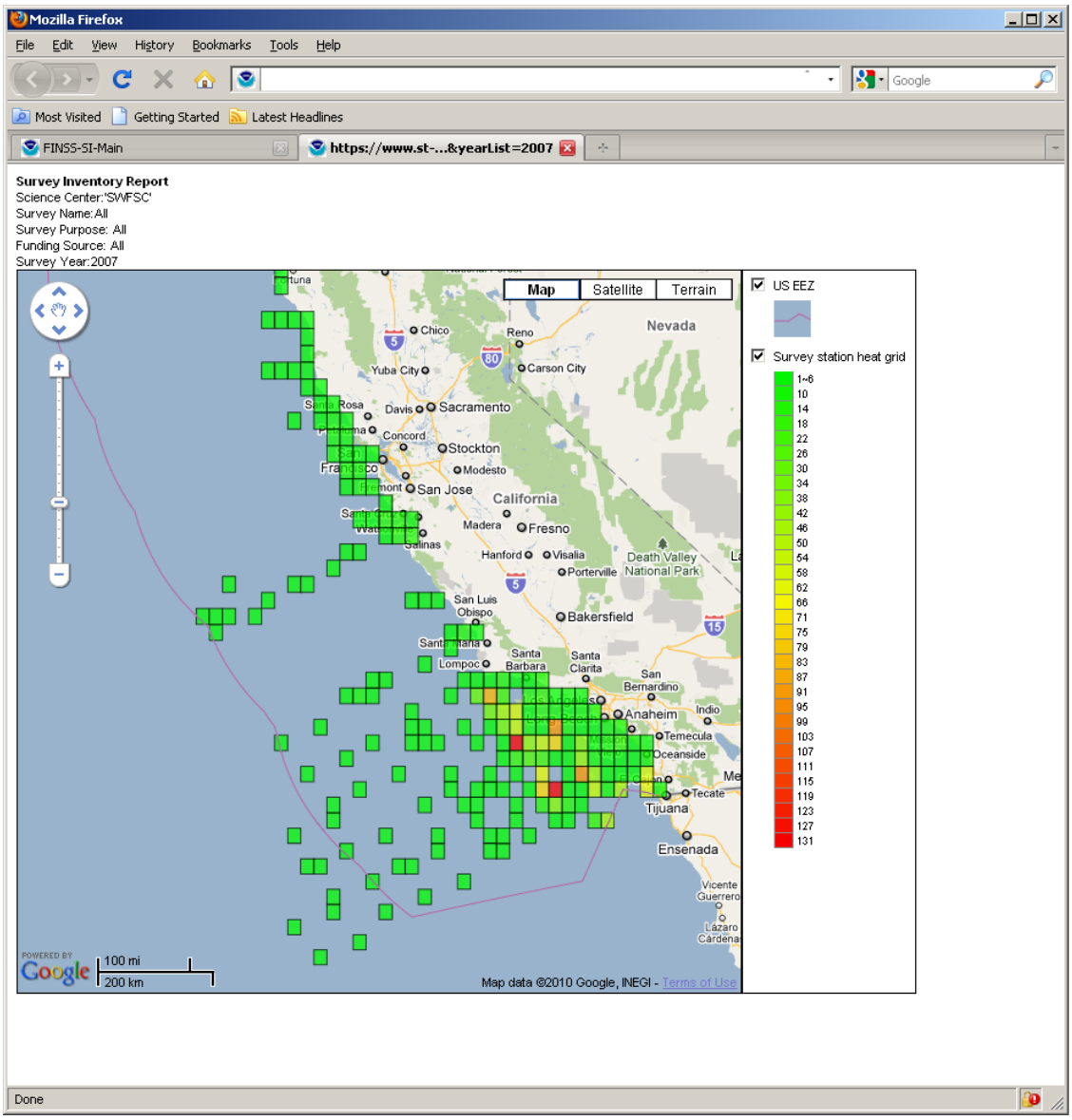


Figure 12 – Map Report Generated for SWFSC 2007 Example

Select any one of the cells to get a display of the actual number of stations for that cell. An example of this is displayed in Figure 13.

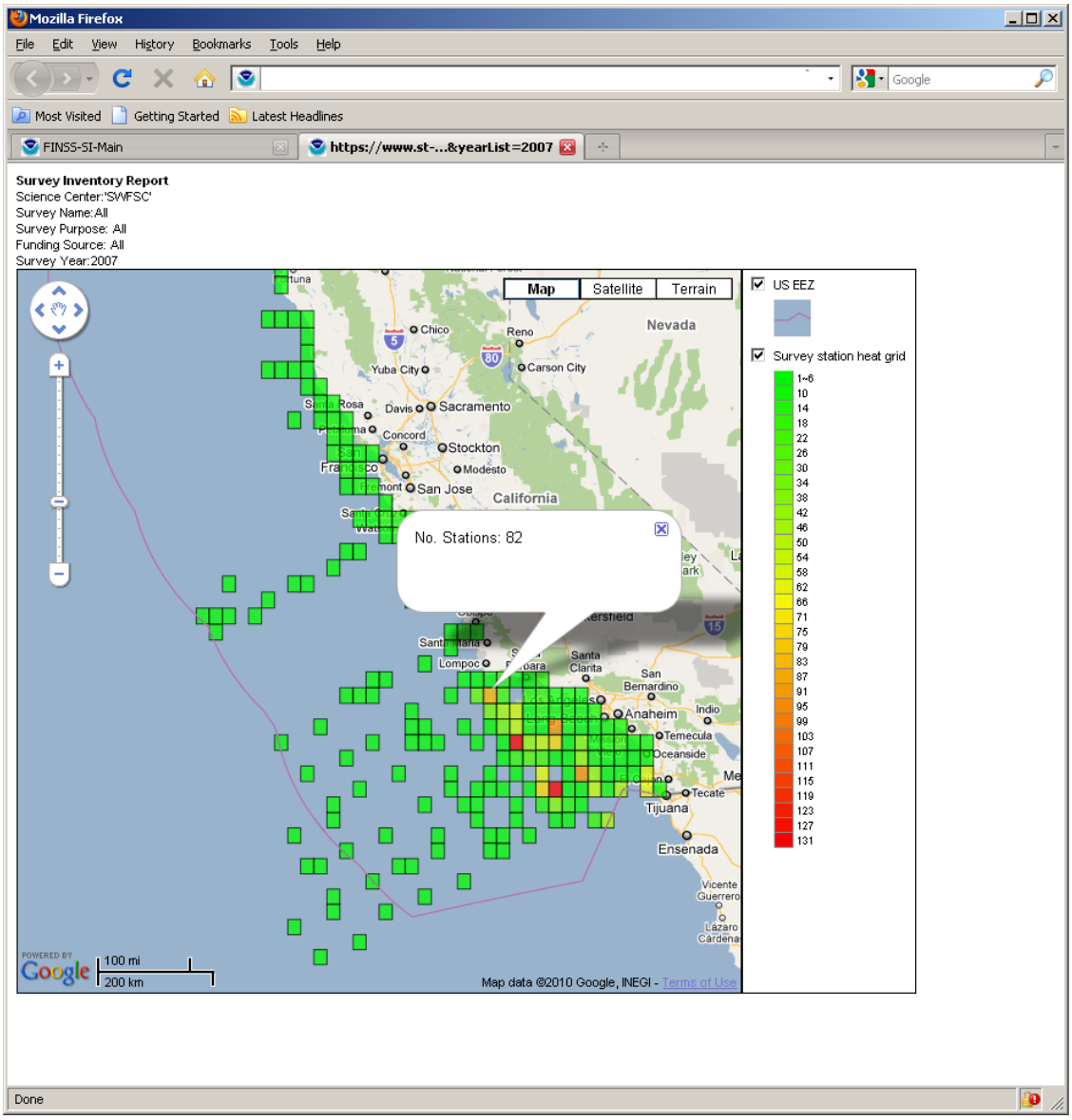


Figure 13 – Number of Stations for a Selected Cell