

# Watershed Monitoring and Assessment Program



## On-land Visual Trash Assessments

*User Documentation for Web-accessible Database*

Version 1.0

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## **On-land Visual Trash Assessments** *User Documentation for Web-accessible Database*

**Background:** In response to concerns about urban trash impacts on receiving water bodies in the San Francisco Bay area, the San Francisco Bay Regional Water Quality Control Board (Water Board) included trash reduction requirements in the Municipal Regional Stormwater NPDES Permit for Phase I communities in the Bay area, also known as the Municipal Regional Permit (MRP). Through these requirements, cities and counties in the Bay Area must reduce trash from their Municipal Separate Storm Sewer Systems (MS4s). To establish a starting point to determine progress towards the goal of reducing trash to a “no adverse impact” level, cities and counties developed baseline trash generation maps depicting the level of trash available to stormwater conveyances. One method to demonstrate progress towards trash reduction goals is to conduct **On-land Visual Trash Assessments** using documented protocols (EOA, 2014). Bay Area cities and counties began conducting assessments in 2014.

**Purpose and Objectives:** In 2015, an **Online Visual Trash Assessment Database** was created to store assessment data and improve the efficiency of assessment data entry. More specifically, the database was created to: (1) streamline the data entry process when conducting on-land visual trash assessments via electronic data entry screens, (2) store results remotely and provide web accessibility, and (3) help cities/counties schedule assessments more easily. In 2016, trash load reduction calculations and full capture data were added to the online database.

**Terminology:** There are several terms used throughout the guidance document. Definitions for each commonly used term are provided below.

- **Site** – Pre-selected length of street/sidewalk that is approximately 1000 feet long. The site forms the linear extent where the assessment is conducted. Though a site is a length of street, it is located by its center point latitude and longitude. Each site has a predetermined identification (i.e., Site ID).
- **Assessment** – an on-land visual trash assessment conducted at a site on a particular date.
- **Staff** – personnel who perform the assessment.
- **Blank/base map** – a map with a line segment identifying the site typically in a .jpg file.
- **Substantial variation** – pertains to a site that has areas identified as having different trash categories.
- **Edited map** – a blank map on which staff has segmented the original line to show substantial variation. An edited map is typically in a PDF or Jpg file, but the database will accept a png, gif, tif or bmp file type.
- **TMA** – Trash Management Area.

### **Accessing the Online Database**

- The on-land trash assessment database can be accessed via the following web address:

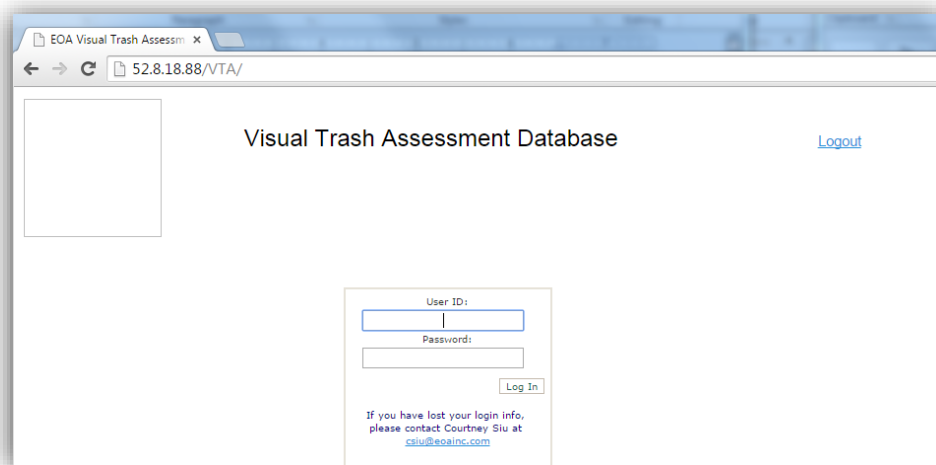
<http://52.8.18.88/VTA/>

The database is also available via the “members only” sections of the Countywide Stormwater Program’s website.

## **Username and Password**

Field and office/administrative staff have different logins to the database. Passwords are case-sensitive.

- a. Field Staff have the ability to:
  - i. Enter new staff
  - ii. Enter new assessments
  - iii. Query data for their agency
  - iv. Download blank base maps
  - v. Upload edited maps
  - vi. Upload assessment photos
  
- b. Office/Administrative Staff has the same capability as field staff, but can also:
  - i. Edit staff
  - ii. Edit assessments
  - iii. Enter and edit sites
  - iv. Query street sweeping data for assessment scheduling



**\*\*\*Note:** Data accessibility is determined by username, which is linked to a specific city/county. Only those staff with an applicable username can access data from a specific city or county.

## Data Entry Tab

The data entry tab is used to enter new or edit existing assessment site information or assessment data. Staff information can also be added or edited via this tab.

- **To Edit Existing Sites**

- a. Click on “Manage Sites” (available for Admin Log-in Only)
- b. Select the site that you wish to edit from the first pull-down menu, “Select a Site”

Visual Trash Assessment Database

**Site Information**  
\* Bold fields are Required

Select a Site: SMO0009

Site Information Form Fields:

- Site: SMO0002
- \* Site: SMO0007
- SMO0008
- SMO0009**
- SMO0011
- \* County: SMO0015
- SMO0016
- \* Program: SMO0017
- \* Permit: SMO0021
- \* Center Point Latitude: SMO0035
- \* Center Point Longitude: SMO0037
- SMO0046
- \* Primary: SMO0046

- c. Make your changes
- d. Click “Save”
- e. Click “Close” to return to the main menu

- **To Add New Sites**

- a. Click on “Manage Sites”
- b. Make sure “Create New Site” is selected from the “Select a Site” pull-down menu

Visual Trash Assessment Database [Logout](#)

**Site Information**  
\* Bold fields are Required

Select a Site: Create New Site

Site Information Form Fields:

- Site: SMO0002
- \* Site: SMO0007
- SMO0008
- SMO0009
- \* County: SMO0011
- SMO0015
- \* Program: SMO0016
- \* Permit: SMO0017
- SMO0021

- c. Enter the applicable information into fields. **Bolded** fields should be completed at a minimum.
- d. Click “Save”
- e. Click on the “Upload Site Maps” to upload a blank, base map (or click “Close” to return to the main menu). The map should be in a .jpg file format.

- **To Add New Staff**

- a. Click on “Manage Staff Members”
- b. Administrative staff will need to select “Create New Staff” from the first pull down menu
- c. Fill in fields – **bolded** items are required
- d. Click Save. The database should tell you that your entry has been saved
- e. Enter more staff members or click “Close” to return to the main menu

- **To Edit Existing Assessments**

- a. Click on “Manage Assessments”
- b. Select the assessment (site and date) you wish to edit from the “Select a Site” pull down list. The site and date only appear for an Admin log-in.

Visual Trash Assessment Database [Logout](#)

Visual Trash Assessment Field Form Data Entry

Select an Assessment to Edit: Create New Assessment  
 SMO0131 - 07/15/2014  
 SMO0131 - 06/11/2015  
 SMO0135 - 07/17/2014  
 SMO0135 - 06/11/2015  
**SMO0136 - 07/13/2014**  
 SMO0136 - 06/18/2015  
 SMO0137 - 07/15/2014  
 SMO0137 - 06/15/2015  
 SMO0138 - 07/16/2014  
 SMO0138 - 06/26/2015

\* Site ID: None Selected [or Sites](#)

\* Date Assessed:  **D**

\* Staff 1:

Staff 2:

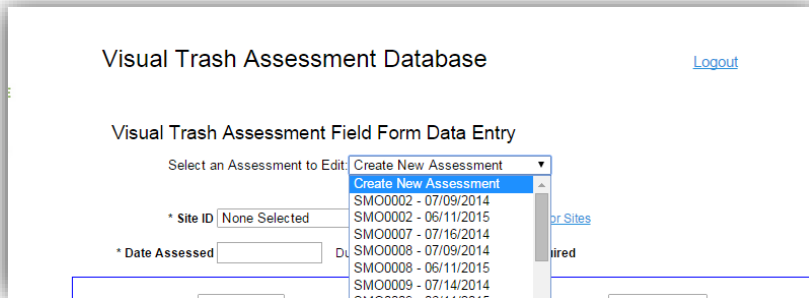
Assessment Type:

Assessment Type:

- c. Make the changes to the assessment data. Changes cannot be made to the “Site ID”, or “Date Assessed”
- d. Click “Close” to return to the main menu

- **To Add New Assessments**

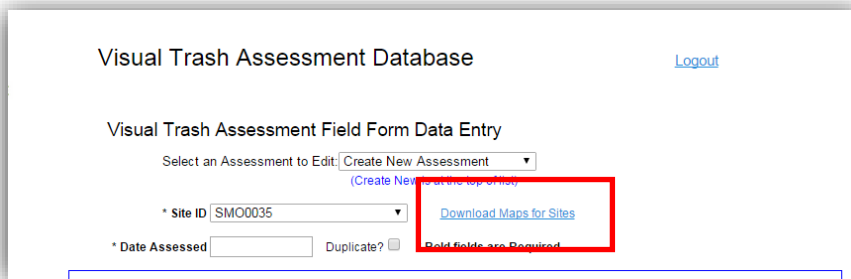
- a. Click on “Manage Assessments”
- b. Make sure “Create New Assessment” is selected from the “Select an Assessment to Edit” drop down list



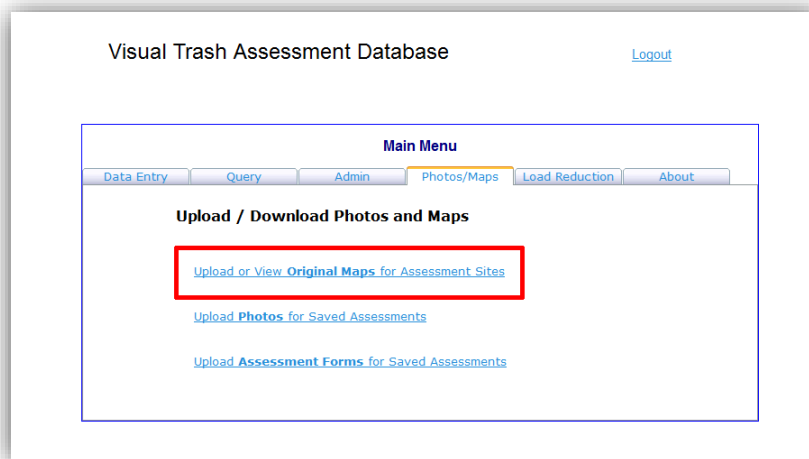
- c. Select the Site from the Site ID list, and enter the Date Assessed.
- d. Fill in the results and click "Save"

**To Upload Photos and Maps**

- **To Download the Blank Maps** for the assessment:
  - a. From the Manage Assessments page, click on "Download Maps for Sites" to navigate to the map page



- b. From the "Photos/Maps" tab, click on "Upload or View Original Maps for Assessment Sites."



- i. Select a site ID at the top of the page
- ii. Click “View” next to the map that you want to download
- iii. Save the map to a local drive using the Windows pop-up screen. After saving, Close the Windows pop-up screen
- iv. Click “Return” at the top of the page to return to the main menu

### Visual Trash Assessment Database [Logout](#)

**Manage Site Map Files** Return

Select a Site for Map Upload:

Map Description (optional, 50 chars.)

**To Upload a Map:**

1 - Use the Browse... button to select your Map -

No file chosen

2 - Then use the Upload Map File button to Upload your Map -

**Uploaded Site Maps**

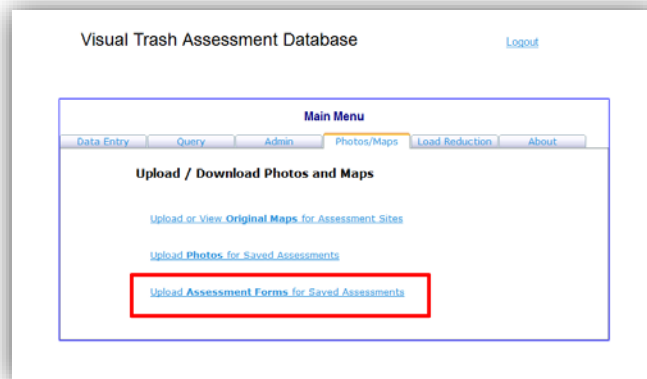
	Site Map Description	Site Map Filename	
<a href="#">View</a>	Map Image SMO0002	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0002.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0007	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0007.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0008	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0008.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0009	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0009.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0011	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0011.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0015	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0015.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0016	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0016.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0017	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0017.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0021	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0021.jpg	<a href="#">Delete</a>
<a href="#">View</a>	Map Image SMO0035	C:\inetpub\wwwroot\VTAMapUpload\Map Image SMO0035.jpg	<a href="#">Delete</a>

1 2 3 4 5 6

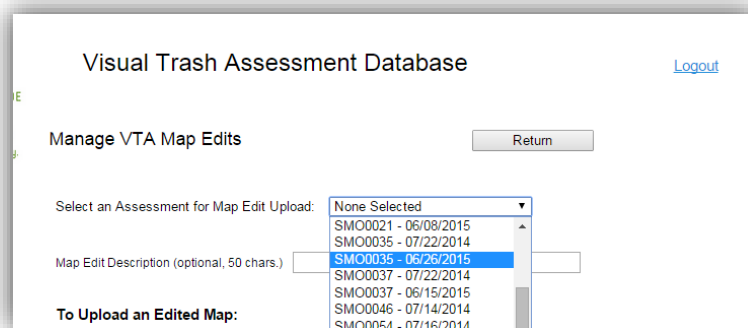
- **To Upload an Edited Map if an assessment has substantial variation**
  - a. Download the map from the database (see instructions above)
  - b. Open the file in Paint or other program that allows image editing
  - c. Segment the map and assign categories to the segments



- d. Save the Edited Map to a local drive
- e. Alternatively, print the blank map, mark areas in sharpie, and scan the edited map to your local drive
- f. Upload an Edited Map to the database by navigating to the “Photo/Maps” tab.
  - i. Click “Upload Assessment Forms for Saved Assessments”



- ii. Select the corresponding assessment from the pull-down li



- iii. Add a description (optional)
- iv. Browse to the file location on the local drive
- v. Click "Upload Map Edit File"

Visual Trash Assessment Database [Logout](#)

Manage VTA Map Edits [Return](#)

Select an Assessment for Map Edit Upload: SMO0035 - 06/26/2015

Map Edit Description (optional, 50 chars.)

**To Upload an Edited Map:**  
1 - Use the Browse... button to select your Map Edit -  
[Choose File](#) No file chosen  
2 - Then use the Upload Map Edit File button to Upload your map -  
[Upload Map Edit File](#)

Uploaded Map Edits

Map Edit Description	Map Edit Filename
No Map Edit Files for selected Assessment	

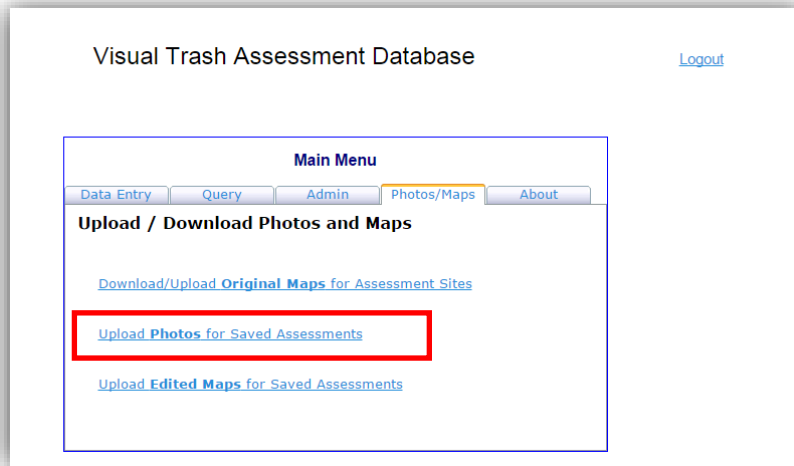
- **To Upload a Photo** of an assessment
  - a. From the Manage Assessments page - if a photo was taken of the site, it can be added after the site has been saved. Click the "Add Photo" button to navigate to the photo page. This button is disabled until the site information has been saved.

Comments

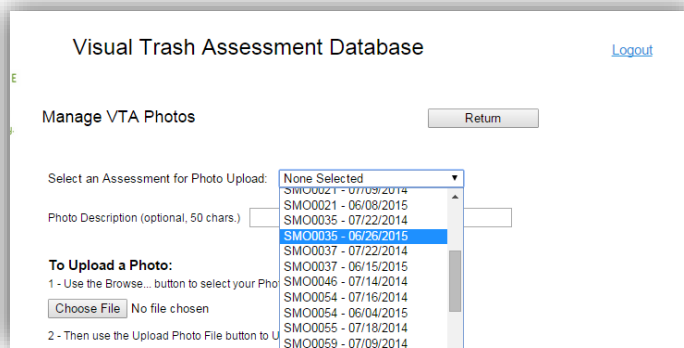
[Save](#) [Close](#) [Add Photos](#)

Visual Trash Assessment record has been added.

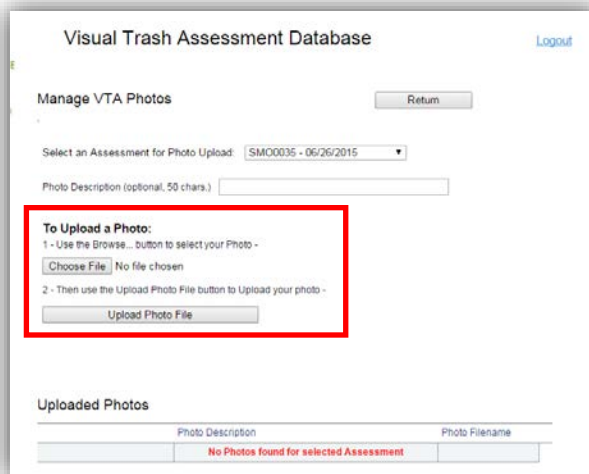
- b. From the “Photos/Map” Tab, click Upload Photos for “Saved Assessments”



- c. Select the corresponding assessment from the pull-down list



- d. Add a description of the photo (Optional)  
e. Browse to the file location  
f. Click “Upload Photo File”



## Query Tab

The “Query” tab is used to query and export assessment data.

- To **Query** assessment data, navigate to the query tab:

**Main Menu**

Data Entry | **Query** | Admin | Photos/Maps | Load Reduction | About

**Search for Completed Assessments:**

Assessment Type: ALL  
Permittee: Campbell  
TMA: ALL  
Site ID: ALL  
Staff Code: ALL  
Active?: Both  
Start Date:   
End Date:   
**Search Assessments**

**Search for Assessment Sites:**

Permittee: Campbell  
TMA: ALL  
Site ID: ALL  
Active?: Both  
**Search Sites**

- Select fields to filter
- Click “Search Assessments” to see the results
- Click “Export to CSV” to export the results as a comma delimited file. A CSV file can be opened in Microsoft Excel. When the Windows pop-up screen appears, Open and/or Save the file in the normal fashion.

Visual Trash Assessment Database [Logout](#)

[Return to Main Menu](#) **Export to CSV** 89 records found

Site ID	Date Assessed	Assessment Type	Assessment Reason	Duplicate	Staff 1	Staff 2	Staff 3	Observed Trash Category (Overall)	Total Results Feet	Low Results (ft)	Mod Results (ft)
01000077	03/05/2015	...	...	...	...	...	...	...	...	...	...

- At the bottom of the page, use “Search for Assessment sites” to find available sites for future Assessments.
  - a. Select fields to filter
  - b. Click “Search Sites”

## Admin Tab

The “Admin” tab is used to by Admin Staff to change the lengths or categories of sites, and look up optimal dates for conducting assessments.

- To use the **Scheduling** tool for assessments click the “Admin” tab
- Click “Open Form” at the bottom of the page

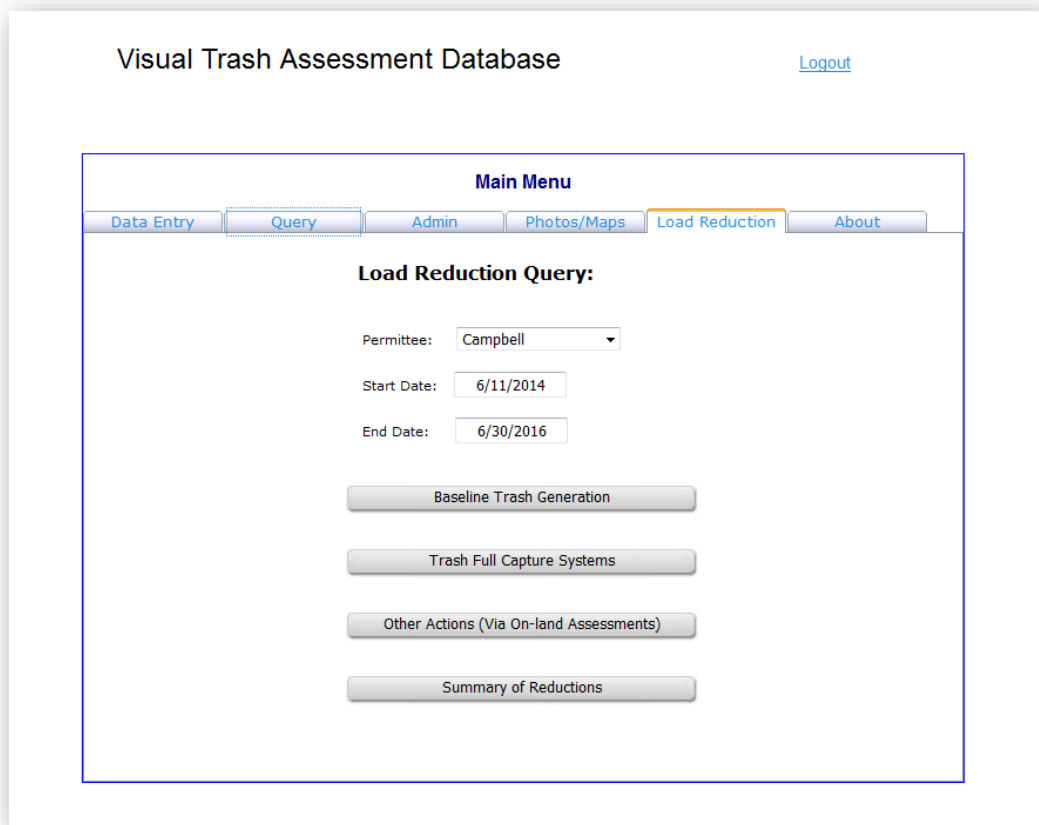
The screenshot shows the 'Visual Trash Assessment Database' interface. At the top right is a 'Logout' link. Below it is a 'Main Menu' with tabs for 'Data Entry', 'Query', 'Admin', 'Photos/Maps', and 'About'. The 'Admin' tab is selected. Under 'Administrative Options', there are sections for 'Update Category Lengths' (with an 'Update' button and a link to 'View recent Automatic Updates') and 'Manually Change Category Lengths' (with an 'Enter Assessment Date' input field, a 'Go' button, and a note: '\*\*Do not leave any category blank - enter 0 instead\*\*'). At the bottom, a red box highlights the 'Scheduling' section, which includes the text 'Look Up Sites by Optimal Day/Week' and an 'Open Form' button.

- Select the week (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>) and day of the week of interest
- Click “Go” to see the results
- Click “Export to CSV” to export the results as a comma delimited file, which can be opened in Excel

The screenshot shows the search results page for the 'Visual Trash Assessment Database'. It features a search bar with the text 'Search for Sites by Optimal Day/Week'. To the right of the search bar are buttons for 'Return to Main Menu' and 'Export to CSV', and a status indicator '334 records found'. Below the search bar is a form titled 'Select the week and day for your assessments' with dropdown menus for 'Week' (set to '1st') and 'Day of the Week' (set to 'Wednesday'), and a 'Go' button. At the bottom, a table header is visible with columns: 'Site ID', 'Last Confirmed', 'Optimal Week', 'Optimal day', 'Street 1', and 'Street 1 Schedule'.

## Load Reduction Tab

The Load Reduction Tab is used to generate tables for annual reporting on overall % reduction due to Trash Full Capture Systems and On-Land Assessments. A Summary of Reductions table is also presented, which is included in the C.10 annual reporting document. Additional tables on baseline generation, full capture, and other actions are also included for reference.



The screenshot displays the 'Visual Trash Assessment Database' web application. At the top right, there is a 'Logout' link. Below the title is a 'Main Menu' with several tabs: 'Data Entry', 'Query', 'Admin', 'Photos/Maps', 'Load Reduction', and 'About'. The 'Load Reduction' tab is currently selected and highlighted. The main content area is titled 'Load Reduction Query:' and contains the following fields and buttons:

- Permittee: Campbell (dropdown menu)
- Start Date: 6/11/2014 (text input)
- End Date: 6/30/2016 (text input)
- Baseline Trash Generation (button)
- Trash Full Capture Systems (button)
- Other Actions (Via On-land Assessments) (button)
- Summary of Reductions (button)

To begin click the **Load Reduction** tab.

- Select desired Start and End dates; trash assessment data between these dates will be used in the calculation
- Click on one of the following four buttons to view summarized baseline or results data:

### Baseline Trash Generation

- Table depicts the baseline acres of jurisdictional acres with Low, Moderate, High, and Very High generation in each TMA

**Visual Trash Assessment Database** [Logout](#)

[Return to Main Menu](#)

<b>Baseline Trash Generation</b>						
Permittee	Primary TMA	Baseline Area (acres)				Total
		L	M	H	VH	
Campbell	C01-2	9	90	74	0	<b>173</b>
Campbell	C02-2	48	69	64	0	<b>181</b>
Campbell	C03-2	0	0	0	0	<b>0</b>

### Trash Full Capture Systems

- Trash reduction achieved through Trash Full Capture Systems is depicted
- The first table is used for annual reporting and depicts the % overall trash load reduction contributed by full capture in each TMA
- The table below shows additional reference information: baseline acres treated by full capture in each trash generation category. The rightmost column shows the percent of each TMA treated by Full capture systems.

<b>Trash Full Capture Systems</b>		
Permittee	Primary TMA	Jurisdiction-wide Reduction %
Campbell	C01-2	<b>4.5</b>
Campbell	C02-2	<b>14.0</b>
Campbell	C03-2	<b>5.6</b>

Permittee	Primary TMA	Baseline Area Treated by Trash Full Capture Systems (acres)					Total	% of TMA Treated by Trash Full Capture Systems (M, H, VH)
		L	M	H	VH			
Campbell	C01-2	2	14	15	0	32	<b>18</b>	
Campbell	C02-2	9	36	48	0	94	<b>63</b>	
Campbell	C03-2	0	1	23	0	23	<b>62</b>	

### Other Actions (Via On-Land Assessments)

- This table is used for annual reporting and shows the available miles for assessment, the street miles assessed, the number of sites and average # of visits conducted (in the timeframe set on the "Load Reductions" tab) and the percent jurisdiction-wide reduction associated with these actions in each TMA

Summary of On-land Visual Assessments								
Permittee	Primary TMA	Total Street Miles Available for Assessment (M, H, VH only)	Street Miles Assessed	% of Applicable Street Miles Assessed	# of Sites	# of Assessments	Avg # of Assessments Conducted at Each Site	Jurisdiction-wide Reduction (%)
Campbell	C01-2	6.26	0.43	6.79	2	7	3.5	13.7
Campbell	C02-2	4.54	0.00	0.00	0	0	0.0	0.0
Campbell	C03-2	1.42	0.00	0.00	0	0	0.0	0.0

## Summary of Reductions

- This table is also used for annual reporting and compares baseline generation to the current reporting year generation after accounting for full capture and for other control measures (via On-Land Assessments).
- The Overall Trash Reduction Percentage via Full Capture Systems, and Other Control Measures is displayed in the rightmost column.

Assessment Load Reduction																			
Permittee	Primary TMA	2009 Baseline Trash Generation (Acres)					Trash Generation (Acres) in FY 15-16 After Accounting for Full Capture Systems					Jurisdiction-wide Reduction via Full Capture Systems (%)	Trash Generation (Acres) in FY 15-16 After Accounting for Full Capture Systems and Other Control Measures					Jurisdiction-wide Reduction via Other Control Measures (%)	Jurisdiction-wide Reduction via Full Capture AND Other Control Measures (%)
		L	M	H	VH	Total	L	M	H	VH	Total		L	M	H	VH	Total		
Campbell	C01-2	9	90	74	0	173	38	75	59	0	173	4.5	106	60	7	0	173	13.7	18.2
Campbell	C02-2	48	69	64	0	181	132	33	16	0	181	14.0	132	33	16	0	181	0.0	14.0

## Questions

For questions about database functionality and logging in, please contact **Courtney Siu** at [csiu@eoainc.com](mailto:csiu@eoainc.com)

For questions related to performing assessments or selecting sites, please contact **Andrea Trese** at [atrese@eoainc.com](mailto:atrese@eoainc.com)