

Role of Citizen Based Monitoring Programs in Creating a Healthy Watershed

Shannon Quigley
San Diego River Park Foundation
Headwaters to Ocean
October 29, 2009

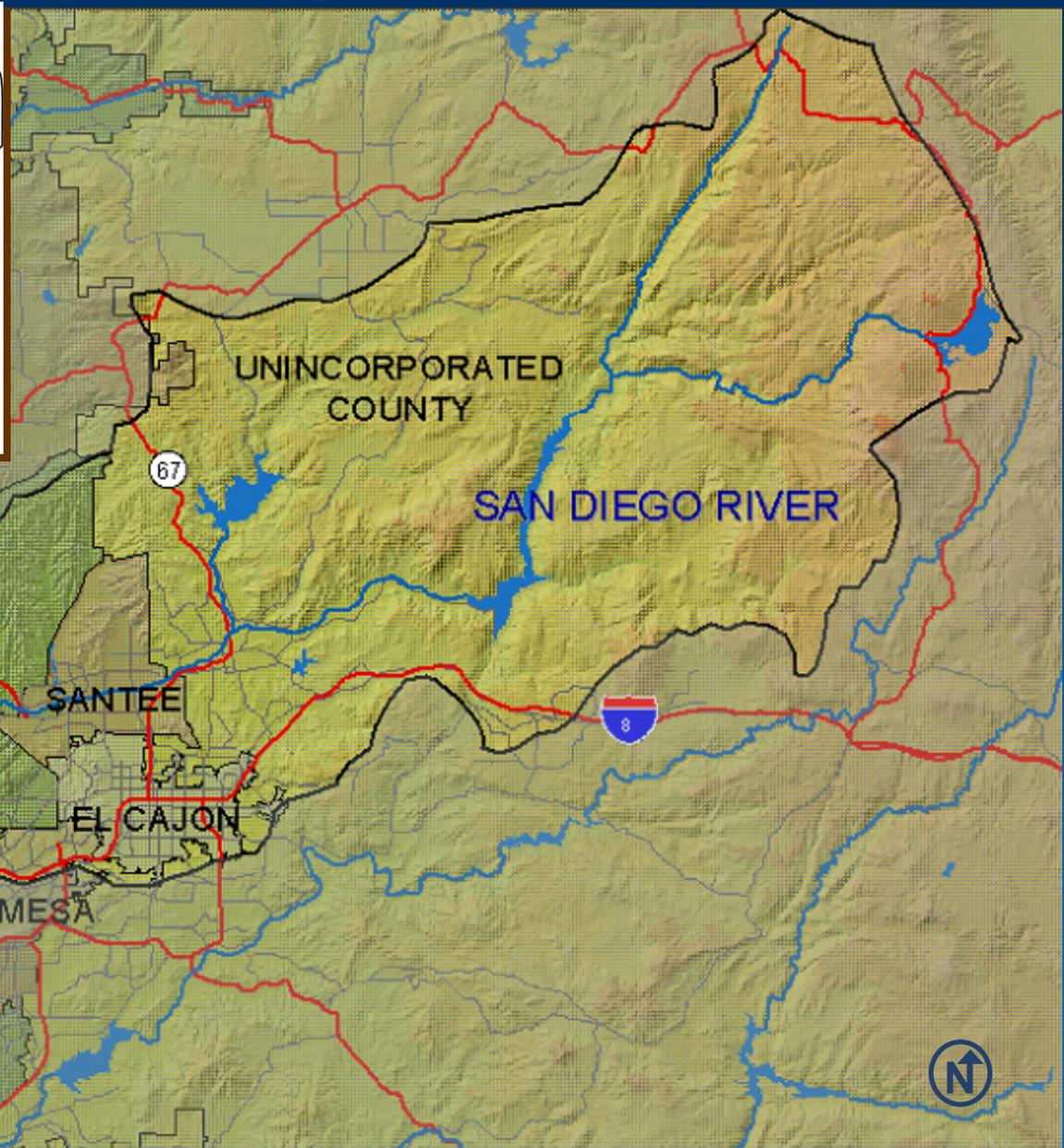
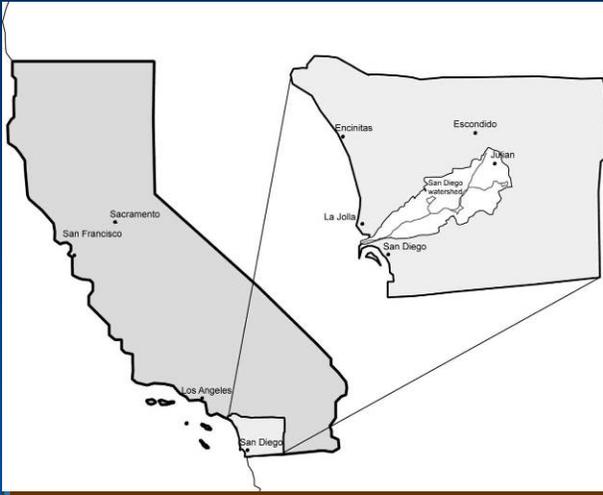


San Diego River Park Foundation

- 501 (c) (3) Non Profit Public Benefit Corp.
- Mission: *To Support and Empower Community Groups Working to Restore and Enhance the San Diego River and its Watershed and to Foster Stewardship of this Important Community and Regional Asset*
- *To create the San Diego River Park*



San Diego River Watershed

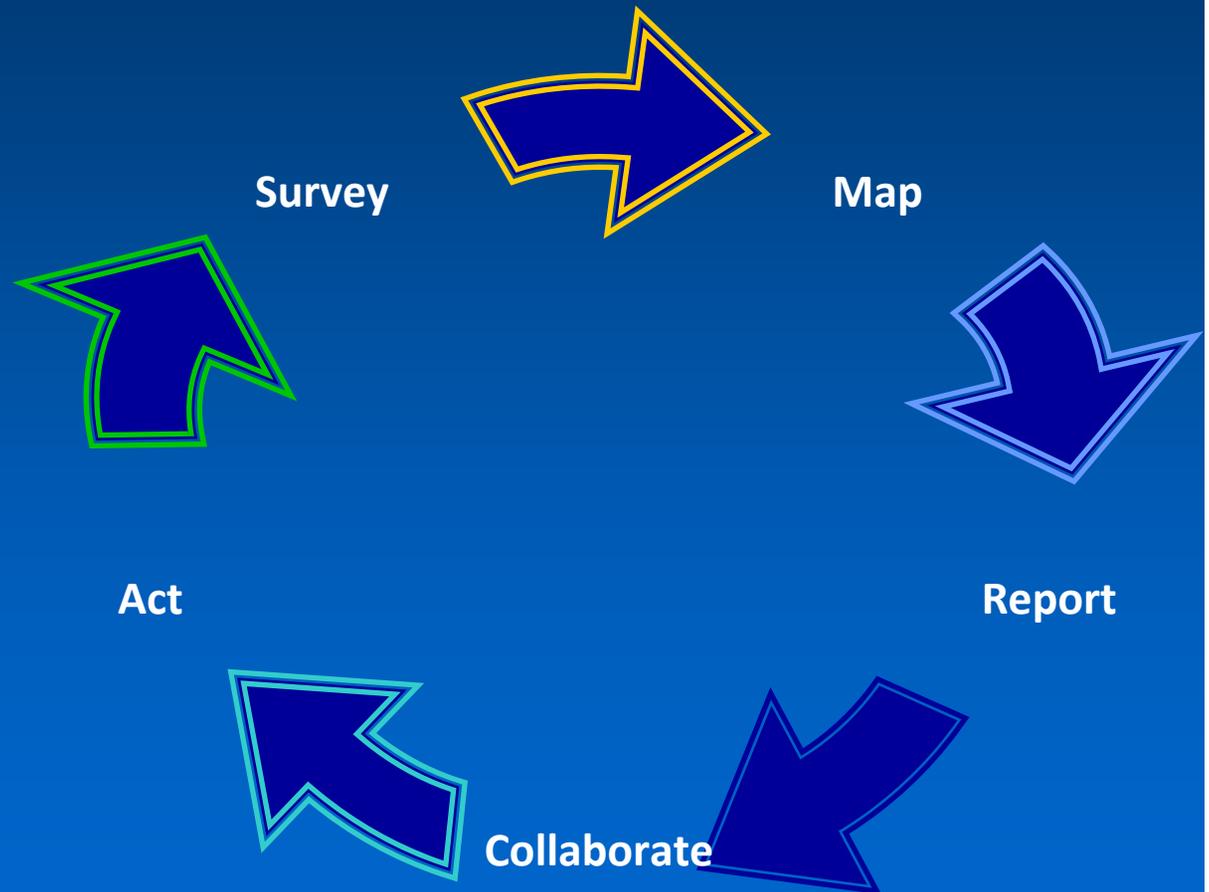


Challenges



Healthy River Healthy Communities

- Volunteer Survey
- Mapping
- Collaborative Action



Healthy River Healthy Communities

- River Watch
- River Blitz
- Clean and Green Team
- River Rescue



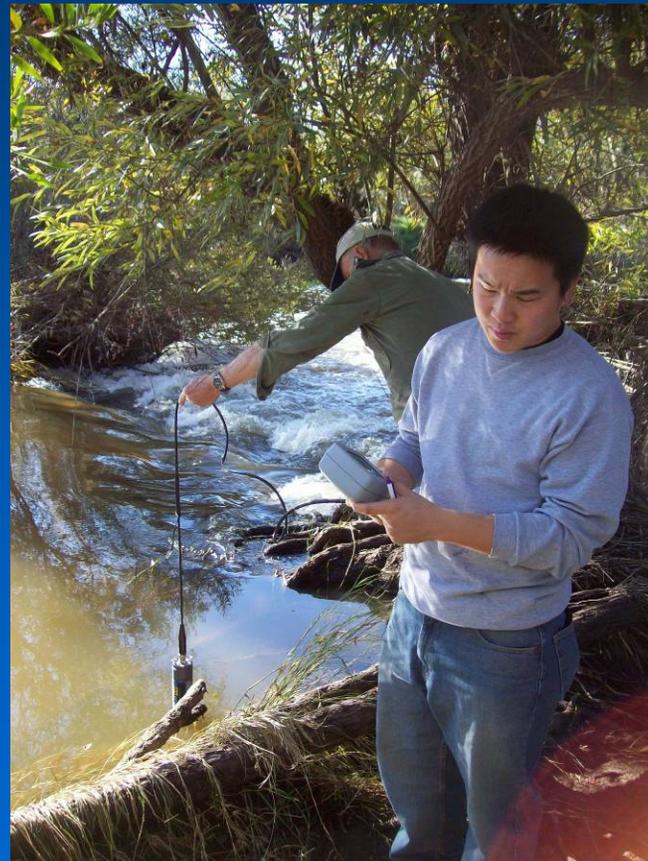
Healthy River Healthy Communities

- 2,500 Volunteers
- 10,000 Hours
- 1 Million Pounds of Trash
- Completion of 5th Water Year Monthly Monitoring



River Watch

- Monthly
- 15 Sites
- YSI 6920 Sonde
- Nitrate and Phosphate Test Kits
- Qwiklite Toxicity Test



River Blitz

- Bi-annual
- 30 miles
- 2-3 Hour Survey Segments
- Trained Volunteer Leaders



Web-based Information Center

- Survey Results

www.ecolayers.biz/sdrpf-riverblitz

- Water Quality

www.ecolayers.biz/sdrpf-riverwatch

- Trash Data

www.imrivers.com/sandiego



Water Quality

San Diego River Park Foundation

Water Boards
San Diego Regional Water Quality Control Board
San Diego River Watershed Data Portal
RiverWatch Data

San Diego River Conservancy

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Select Watershed Program: **RiverWatch Data**

Monitoring Site Selected: Cottonwood Ave: RCP plant

Parameter: **Dissolved Oxygen** Click on site icon to see more information

Impaired: Dissolved Oxygen < 5.0
Healthy: Dissolved Oxygen > 5.0
No Recent Data

Map | Satellite | Hybrid | Terrain

Site No: 14
Site Name: Cottonwood Ave: RCP plant
Latitude : 32.84707
Longitude: -116.97335
[More Info](#)
[View Data](#)
[View Charts](#)

Historical data at: Cottonwood Ave: RCP plant

- Dissolved Oxygen
- Percent Dissolved Oxygen
- Phosphate
- Specific Conductivity
- Temperature
- pH
- Nitrate

Most recent value at all monitored sites: 9 2009

- Dissolved Oxygen
- Percent Dissolved Oxygen
- Phosphate
- Specific Conductivity
- Temperature
- pH
- Nitrate

Health Metric

Health Status

Watershed Programs

Reports, Charts and On-line Tools



Reports and Charts



← Back [Download Report](#) [Number of Rows: 14]

Dissolved Oxygen				
Site No	Site Name	Sample Date	Result	Unit
1	Estuary E	09-20-2009	4.400	mg/L
2	River Garden E	09-20-2009	2.820	mg/L
3	Fashion Valley	09-20-2009	0.720	mg/L
4	FSDRIP at Mimis Restaurant	09-20-2009	5.390	mg/L
5	Ward Road	09-20-2009	2.430	mg/L
6	Kaiser Pond	09-20-2009	0.380	mg/L
7	Admiral Baker Golf Course	09-20-2009	5.250	mg/L
9	Jackson Drive Outfall	09-18-2009	9.390	mg/L
10	Old Mission Dam W	09-18-2009	7.220	mg/L
11	West Hills Pkwy: Gaging station	09-18-2009	4.800	mg/L
12	Carlton Oaks Dr: Santee Lakes	09-18-2009	5.050	mg/L
13	Mast Park: Pedestrian bridge	09-18-2009	5.340	mg/L
14	Cottonwood Ave: RCP plant	09-18-2009	1.900	mg/L
15	Forester Creek	09-18-2009	4.080	mg/L



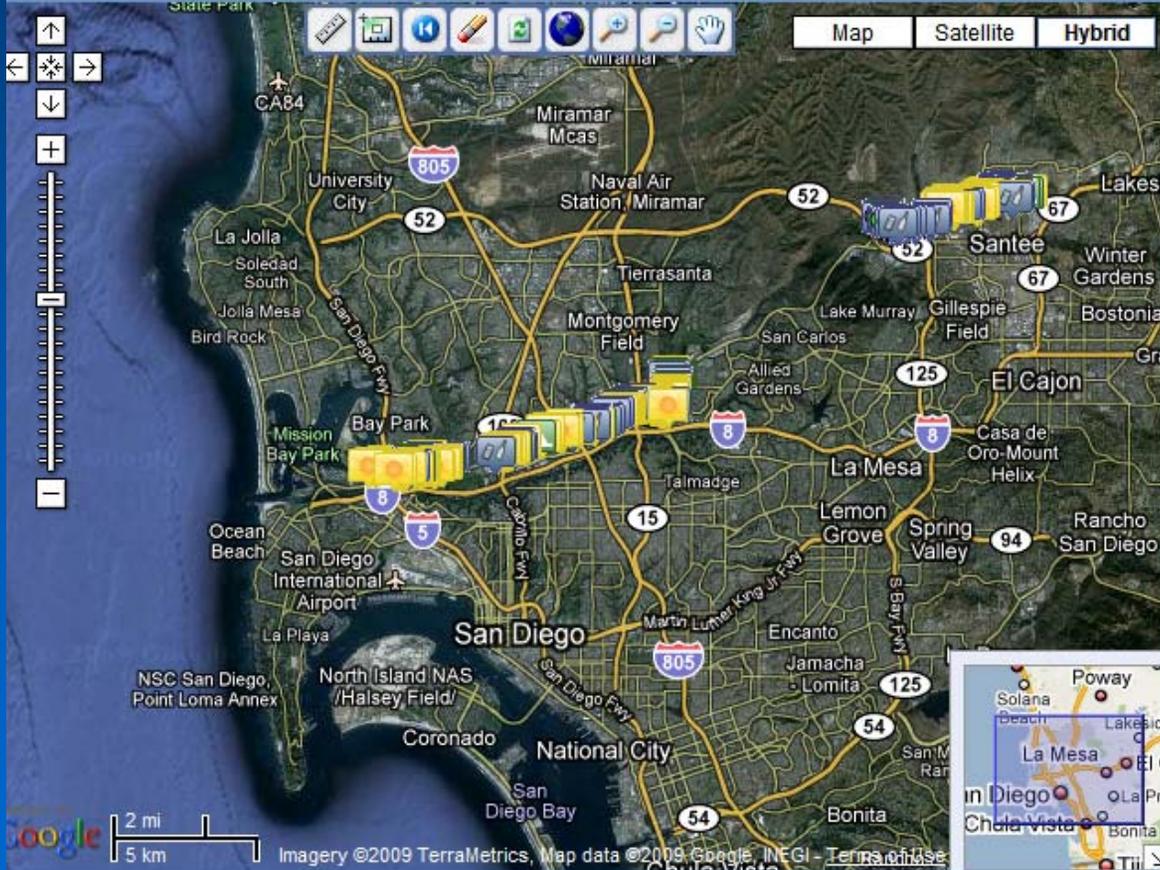
Trash Data



The San Diego River Park Foundation

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SEARCH CRITERIA

Category

Any

Search

Join us for a healthy river and a healthy community.

[Check out the Clean River Video](#)

You can make a difference by volunteering or donating. [Learn More](#)

- trash
- trash (removed)
- Encampment (active)
- Encampment (inactive)

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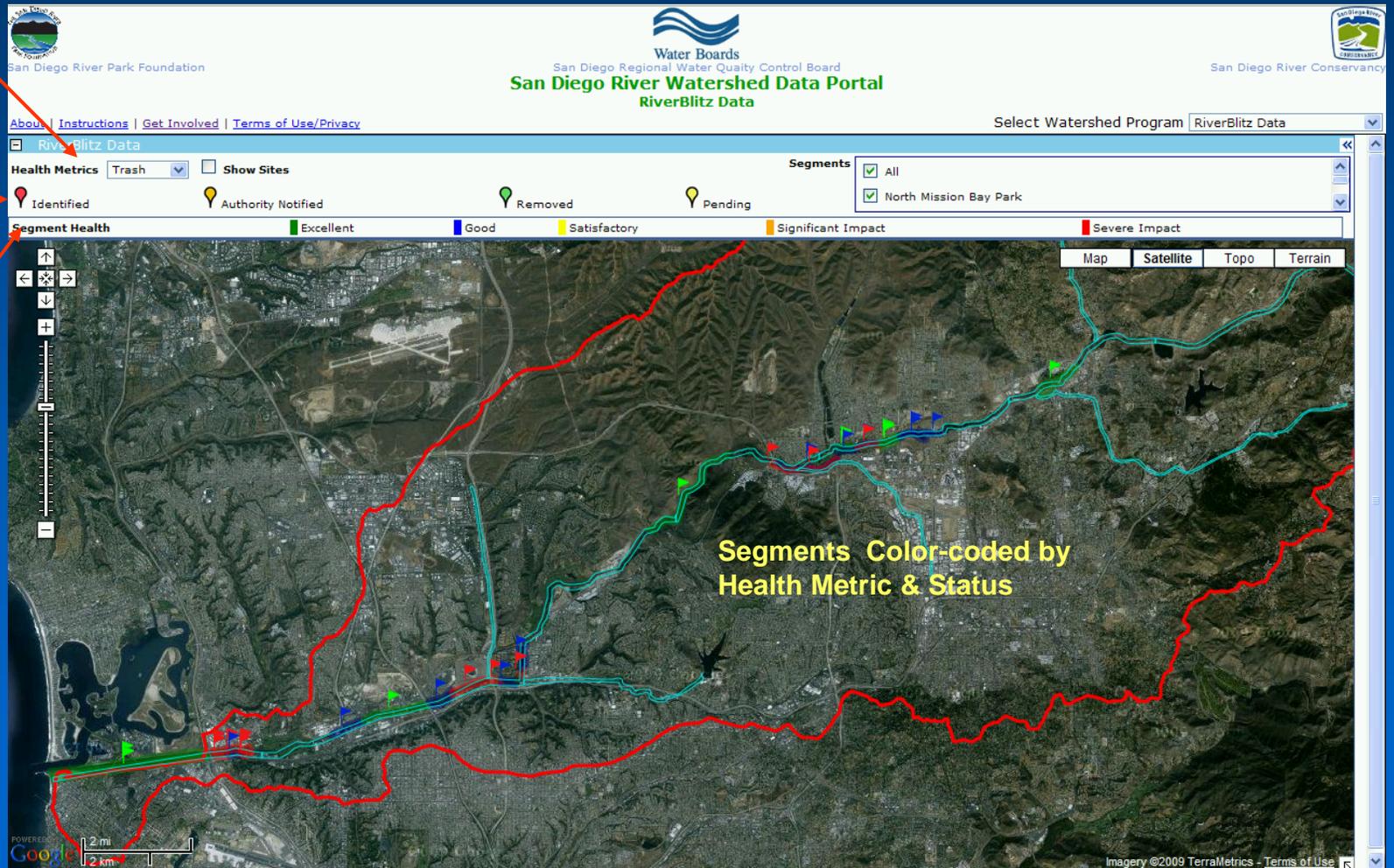
River Health

Health Metrics:

- Trash
- Invasives
- Toxicity
- Overall

Trash Site Status

Segment Health Status



San Diego River Park Foundation



Reports and Statistics

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Invasive Statistics: Segment 11

FeatureID	Longitude	Latitude	SurveyDate	InvasivePlantName	Comments
RB-N0174	-117.12208	32.77878	10/26/2008	Arundo	near camp- way pt. 4, can't really tell sq. footage
RB-N0175	-117.12197	32.77908	10/26/2008	Arundo	
RB-N0176	-117.12122	32.77942	10/26/2008	Arundo	
RB-N0177	-117.12088	32.77954	10/26/2008	Arundo	
RB-N0178	-117.11984	32.7799	10/26/2008	Arundo	hard to tell sq. footage. It starts approx 50' in from road
RB-N0179	-117.12122	32.77949	10/26/2008	Brazilian Pepper Tree	Pepper Tree w/ camp underneath
RB-N0180	-117.11894	32.7803	10/26/2008	Brazilian Pepper Tree	
RB-N0181	-117.11879	32.78031	10/26/2008	Brazilian Pepper Tree	
RB-N0182	-117.11557	32.78103	10/26/2008	Brazilian Pepper Tree	Multi Trunks
RB-N0183	-117.11943	32.78002	10/26/2008	Tamarisk	
RB-N0184	-117.12204	32.779	10/26/2008	Mixed	Arundo and castor bean, contains a small camp- way pt. 4
RB-N0185	-117.12189	32.77926	10/26/2008	Mixed	numerous pepper trees w/ castor beans and pampas grass- some natives, mixed in notably toyon
RB-N0186	-117.12079	32.77963	10/26/2008	Mixed	Fan Palm and Pepper tree
RB-N0187	-117.11982	32.77994	10/26/2008	Mixed	Mixed tamarisk, pepper tree, and pampas grass
RB-N0188	-117.11943	32.78002	10/26/2008	Mixed	line of pepper trees w/ arundo behind pepper into river
RB-N0189	-117.11919	32.78014	10/26/2008	Mixed	eucalyptus and pepper trees - and castorbian
RB-N0190	-117.11801	32.7802	10/26/2008	Mixed	line of pepper trees w/ arundo fanpalms and pampas grass
RB-N0191	-117.11791	32.78061	10/26/2008	Mixed	arundo, castor bean, and pepper trees, eucalyptus
RB-N0192	-117.11744	32.78072	10/26/2008	Mixed	solid line of arundo, eucalyptus, pepper trees

Trash Statistics: Segment 07B

Trash Site	Longitude	Latitude	Date Identified	Current Status	Comments
RB-T0180	-117.18992	32.76161	10/25/2008	Identified	
RB-T0181	-117.19287	32.76193	01/25/2008	Identified	
RB-T0182	-117.19244	32.76087	10/26/2008	Identified	
RB-T0183	-117.18961	32.76138	10/25/2008	Identified	
RB-T0184	-117.19173	32.76092	10/25/2008	Identified	
RB-T0185	-117.19030	32.76143	10/25/2008	Identified	
RB-T0186	-117.19044	32.76167	10/25/2008	Identified	
RB-T0187	-117.18941	32.76152	10/25/2008	Identified	
RB-T0188	-117.19180	32.76189	10/25/2008	Identified	
RB-T0189	-117.19301	32.76100	10/25/2008	Identified	

◀ Back [Print](#)
Date: 10-25-2009

Title: Health Metric Trend Over Time 11
(Note: A = 100; B = 80; C = 60; D = 40; F = 20; No Data = 0)

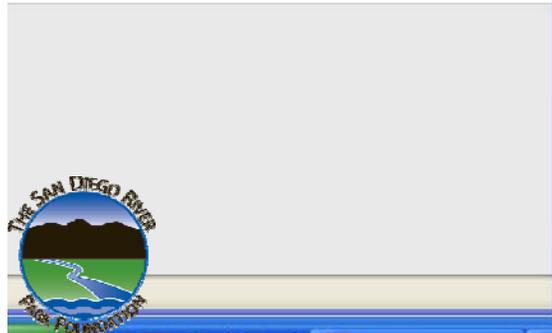


Action

Trash Removal-

- The Clean and Green Team
 - bi-monthly large scale volunteer clean-ups
- River Rescue
 - small or remote sites, weekdays
- Stakeholder Partnerships
- IMRivers





Santee near Cottonwood Ave and Chubb Ln

Name	Santee near Cottonwood Ave and Chubb Ln
Date	08/08/08
Category	trash (removed)
Comments	old VW car imbedded in trees

Picture - Mozilla Firefox

http://data.imrivers.com/bulk_site1/picture.php? pic_name=../webfolder/sandiego/M104/Exterior:081513440608.jpg&oid=51184&blogid=sandiego

Name	Santee near Cottonwood Ave and Chubb Ln
Category	trash (removed)
Date	08/08/08
Photograph By	Shannon Quigley



Action

- Invasive Plant Removal
- Graffiti Removal



Invasive Profile



San Diego River Park Foundation



Water Boards
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San Diego River Watershed Data Portal
RiverBlitz Data



San Diego River Conservancy

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Select Watershed Program RiverBlitz Data

RiverBlitz Data

Health Metrics Invasive Show Sites

Segments All
 North Mission Bay Park

[Invasives Legend](#)

Segment Health

[Close](#)

- Arundo
- Brazilian Pepper Tree
- Canary Island Date Palm
- Eucalyptus
- Mexican Fan Palm
- Tamarisk
- Mixed
- Castor Bean

Good Satisfactory Significant Impact Severe Impact

[Map](#) [Satellite](#) [Topo](#) [Terrain](#)

FeatureID: RB-N0181
Waypoint: 20
Invasive Type: Brazilian Pepper Tree
Canopy Cover(Sq. ft): ~ 900

[View Site Data](#)

FeatureID: RB-N0214
Waypoint: 0 24
Invasive Type: Mixed
Canopy Cover(Sq. ft): 500

FeatureID: RB-N0223
Waypoint: 0 24
Invasive Type: Mixed
Canopy Cover(Sq. ft): 500

FeatureID: RB-N0206
Waypoint: 0 24
Invasive Type: Mixed
Canopy Cover(Sq. ft): 500

POWERED BY Google 500 ft
200 m

Map data ©2009 Google, INEGI - [Terms](#)



Partnerships and Collaboration

City of San Diego Stormwater
Padre Dam Municipal Water District
Helix Water District
City of Santee
County of San Diego Sheriff's
Department Santee Station
City of El Cajon Stormwater
City of San Diego Parks and
Recreation
The San Diego River Conservancy
Department of Fish and Game
San Diego Police Department Eastern
and Western Division
San Diego Regional Water Quality
Control Board
SPAWAR
City of San Diego Graffiti Paint Bank

Aquafina
Home Depot
H.G. Fenton Property Management
Kaiser
HSBC Auto Finance
REI
Lincoln Military Housing
Armed Services YMCA
John Smith Earthworks
Hervey Family Fund at the San Diego
Foundation
Take Pride in America
American Rivers
Union Bank of California
SonTek/YSI
San Diego State University River Net



Volunteers

- Armed Services YMCA
- Lincoln Military Housing
- University of California, San Diego
- Wal-Mart
- Qualcomm
- San Diego State University
- Mail Boxes Etc.
- Hanblecyea
- AmeriCorps
- Magnolia Trails Girl Scouts
- HSBC
- Court Referral
- Volunteer San Diego
- Warren Walker
- Kipp Adelante Academy
- High Tech Middle School
- High Tech High
- Helix Charter School
- Hilton Management Team



San Diego River Park Foundation



Next Steps

- Remove identified existing trash and debris by October 2010
- Inclusion of headwaters, tributaries and canyons within watershed- facilitate action through survey and monitoring techniques.









www.sandiegoriver.org