

# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)





San Diego County  
Water Authority



*An Online Tool to Measure  
Outdoor Water Savings*

October 9, 2008

# Overview

Project Scope

Features & Approach

WaterSmart Target Demo

Lessons Learned

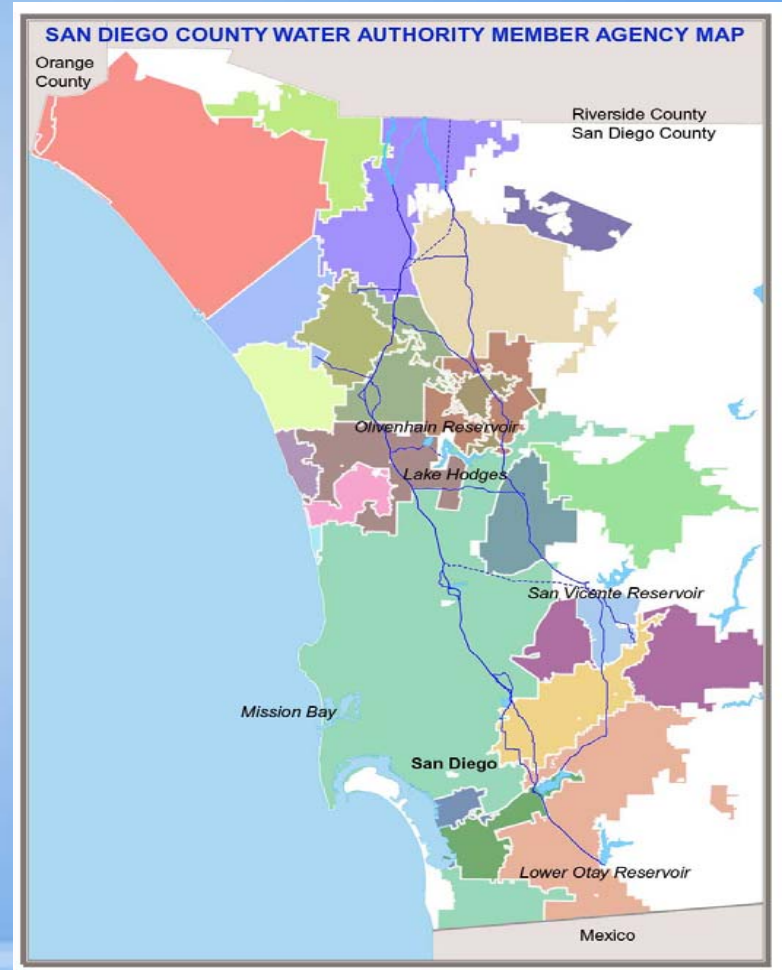
Partners & Project Contacts



San Diego County  
Water Authority

# Project Scope

- Wholesale Agency
- 24 Retail Agencies
  - Small - Large
  - Rural - Urban
  - Coastal - Inland
  - Municipal – Agency
- Dedicated – Mixed Meters





# Features

Customized Agency Data Portal

Simplified Landscape Area Measurements

Comprehensive Performance Reports

Overuse Notification System



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# Approach

Address Key Concerns

Early Adopters

Alpha – Beta - All

WOW Factor



# Incentives and Cost Effectiveness

WaterSmart Target



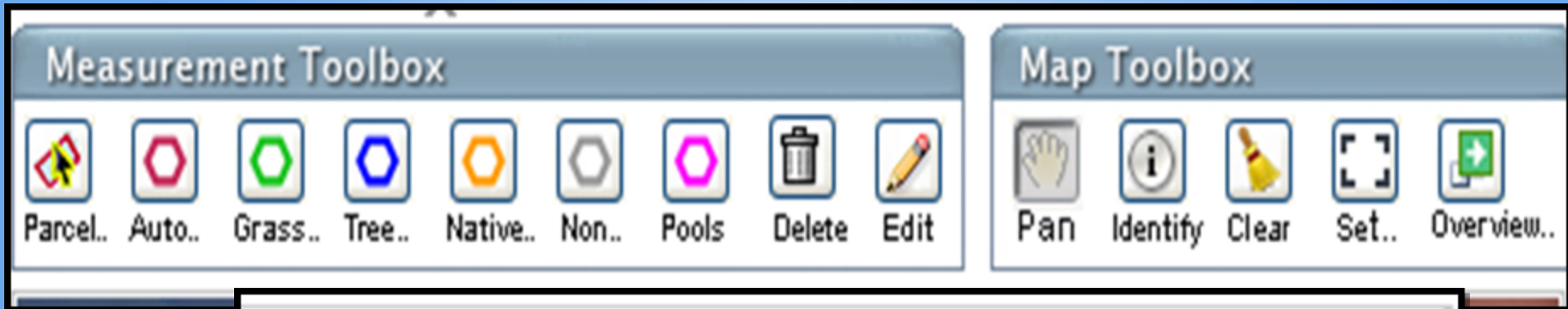
Audits/Technical Assistance



Incentives



# Landscape Area Measurement Tool

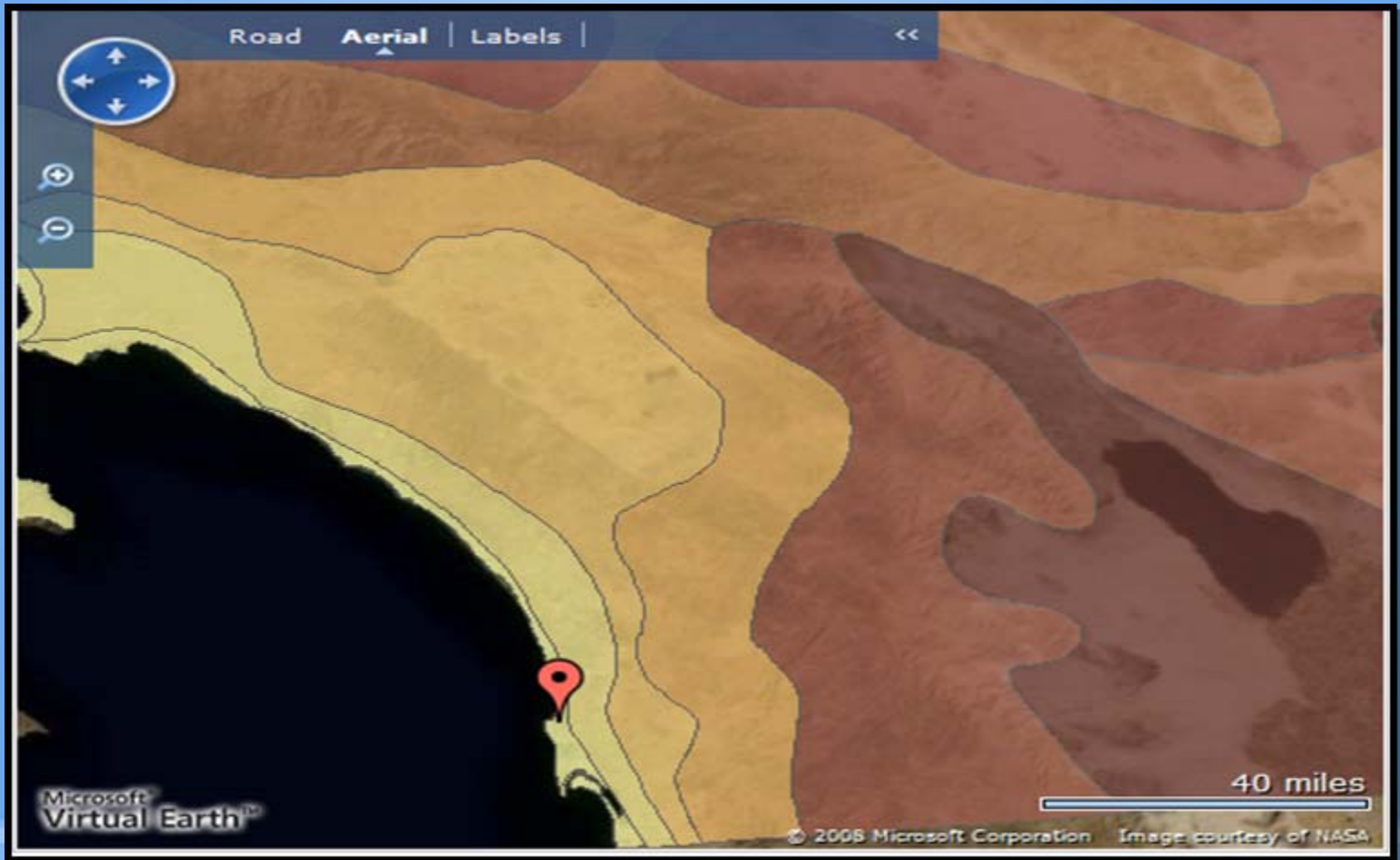


## Landscape Area Measurement

<b>Total Area:</b>	164,878	sq. ft.
Non Vegetation:	35,428	sq. ft.
Vegetation :	129450	sq. ft.
<b>WaterSmart Target Area:</b>	129,450	sq. ft.



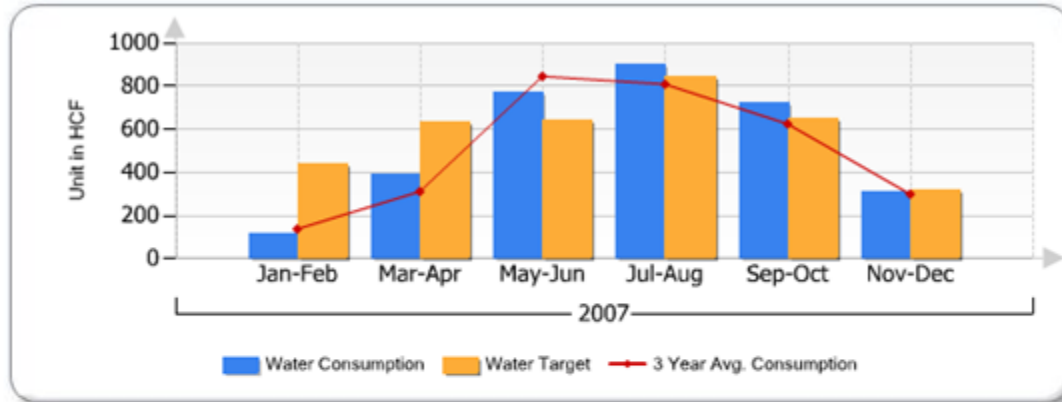
# Evapotranspiration



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# WaterSmart Target

View Report: Annual Select Period: 2007



Period	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Water Consumption	116.00	393.00	768.00	898.00	720.00	307.00
Water Target	438.14	637.37	643.41	847.82	652.90	315.67

## Your Average Use Comparison

**Average Use** 3,003.67 HCF  
**Actual Use** 3,202.00 HCF  
 You are 7% over your average use.

## Your Water Target Comparison

**Water Target** 3,535.31 HCF  
**Actual Use** 3,202.00 HCF  
 You are 9% under your water target.

💰 Money Saved: \$0.00

*Estimate value of water (actual use-water target) based on potable water rate.*

## Landscape Area Measurement

**Total Area:** 164,878 sq. ft.  
**Non Vegetation:** 35,428 sq. ft.  
**Vegetation:** 129,450 sq. ft.  
**WaterSmart Target Area:** 129,450 sq. ft.

## Water Target Formula

Water Target Formula:  $((ETo \times ETo \text{ adjustment}) - (\% \text{ Precipitation} \times \text{Precipitation}) \times \text{Area}) \times \text{Conversion factor}$  in HCF

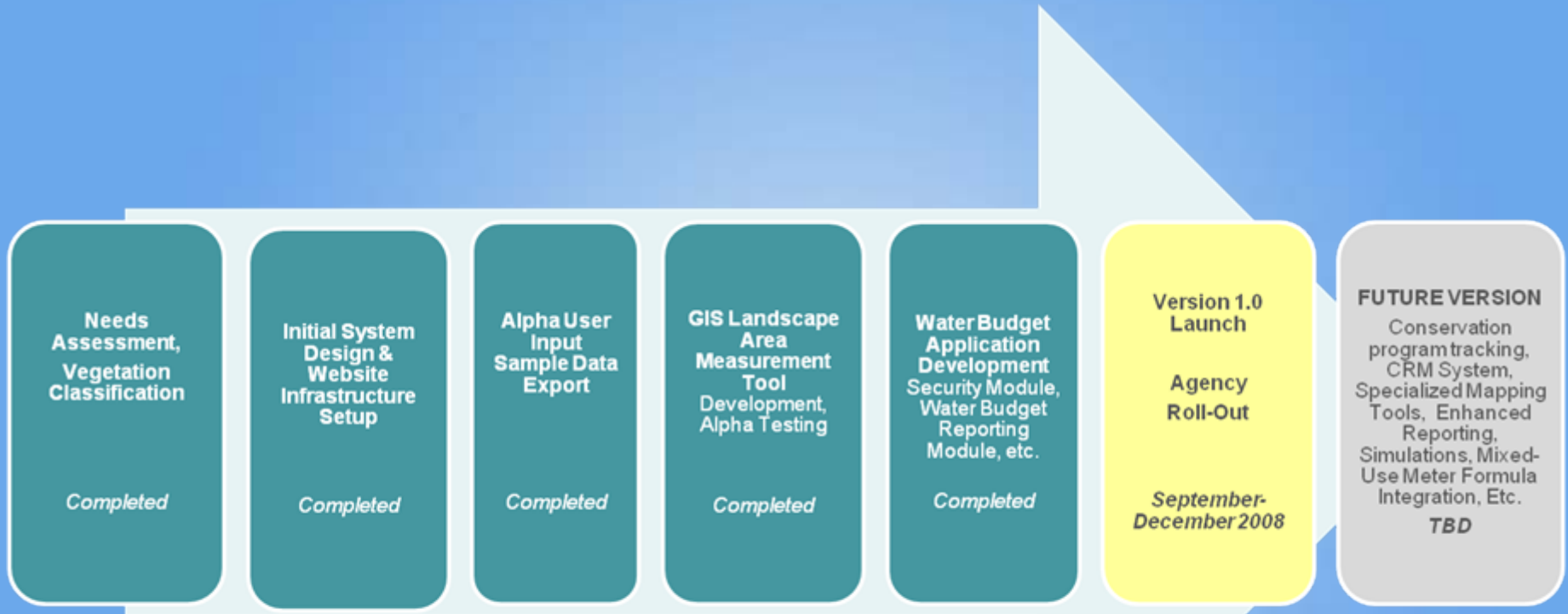
\*CIMIS Station = 173 (Torrey Pines)

\*\*One billing unit = HCF



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Water Authority

# Key Project Steps: Overview





# WaterSmart Target Demo



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A better way to beautiful

User Name:

Password:

Remember me next time.

Log In

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User Name:

Password:

Remember me next time.

Log In



**A better way to beautiful**

- Home
- Customers
- Report
- Data
- Settings
- Administration







Name Account Meter

Customer Name

[Help](#) [Print](#) [Change Password](#) [Logout](#)

**Welcome: Sample Agency**

**Quick Links**

-  [San Diego County Water Authority](#)
-  [The 20 Gallon Challenge](#)
-  [SoCal WaterSmart](#)
-  [Save Water - Save A Buck](#)
-  [California Urban Water Conservation Council](#)
-  [Member Agency Directory](#)

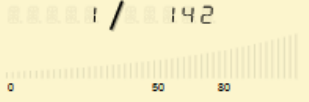
**Announcements**

- [Governor Declares Drought](#)  
*June 4, 2008*
- [Last chance for point-of-purchase voucher discounts July 1](#)  
*May 23, 2008*

**Measurement Progress**

Measurement completed

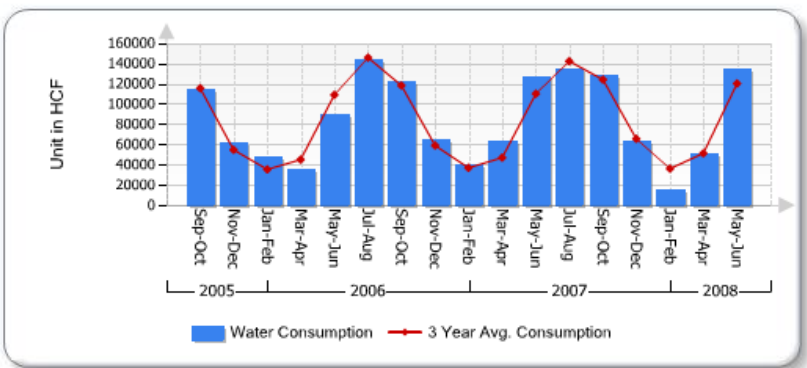
1 / 142



**Agency Statistics**

- Total Customers: 71
- Total Sites: 142
- Total Area: 387,390,561 sq. ft.
- Measurement pending: 141
- Measurement completed: 1

**Agency Collective Consumption**



Unit:

Avg. Year(s):

Interval:

FROM:  TO:



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### Welcome: Sample Agency

#### Quick Links

[San Diego County Water Authority](#)

[The 20 Gallon Challenge](#)  
Save Water Now

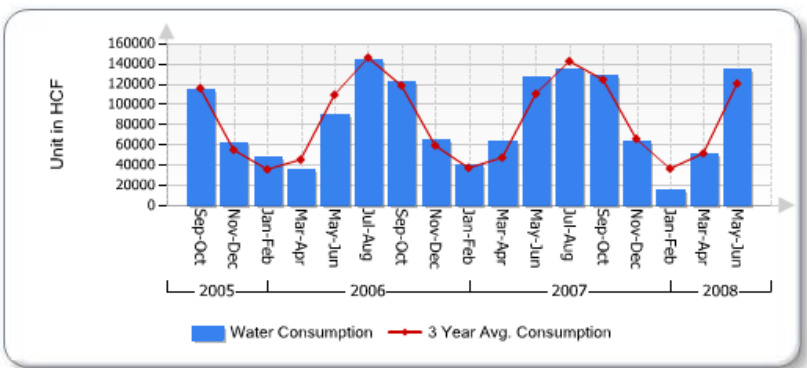
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[Save Water - Save A Buck](#)

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#### Agency Collective Consumption



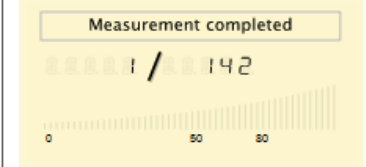
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 Avg. Year(s):    
 Interval:

FROM:  TO:

#### Announcements

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*June 4, 2008*
- [Last chance for point-of-purchase voucher discounts July 1](#)  
*May 23, 2008*

#### Measurement Progress



#### Agency Statistics

Total Customers :	71
Total Sites :	142
Total Area :	387,390,561 sq. ft.
Measurement pending :	141
Measurement completed :	1



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Name Account Meter

Customer Name

Help Print Change Password Logout

### Customer Search

> Name:  > Account #:  > Meter #:  > Site Size:

> Address:  > City:  > Over Target:  > Active:

> Zip Code:  > Meter Type:  > Classification:  > Status:

Customers Found: 71, Sites Found: 153

Customer	Account	Type	Class	Report	Measure Tool
<b>557 BOYSENBERRY LANE LLC</b>					
<a href="#">1040 ANDREASEN DRIVE, ESCONDIDO, CA</a>	SX2118591	Irrigation	NA		
<b>ATCHLEY, HM &amp; BEVERLY</b>					
<a href="#">6226 EL CAMINO DEL NORTE, RANCHO SANTA FE, CA</a>	95X91X446X96	Irrigation	Institutional-Other		
<b>BLUHM, NEIL</b>					
<a href="#">EL MONTEVIDEO, RANCHO SANTA FE, CA</a>	95X93X488X92	Irrigation	Institutional-Other		
<b>BOCA DEL MAR HOA</b>					
<a href="#">111 123 VIA DE LA VALLE, RANCHO SANTA FE, CA</a>	91X96X179X99	Irrigation	Institutional-Other		
<b>CALTRANS</b>					
<a href="#">LOMAS SANTA FE DR, SOLANA BEACH, CA</a>	96X91X935X99	Irrigation	Recycled		
	96X91X969X99	Irrigation	Recycled		
<b>CITY OF SOLANA BEACH</b>					
<a href="#">302 SOLANA VISTA DR, SOLANA BEACH, CA</a>	91X98X994X99	Irrigation	Institutional-Other		
<a href="#">44R SANTA BARTOLA, SOLANA BEACH, CA</a>					

Last Searches

Recent Sites

- Home
- Customers
- Report
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- Settings
- Administration

Last Searches

Recent Sites

[LA COLONIA PARK SOLANA BEACH, CA 92075](#)

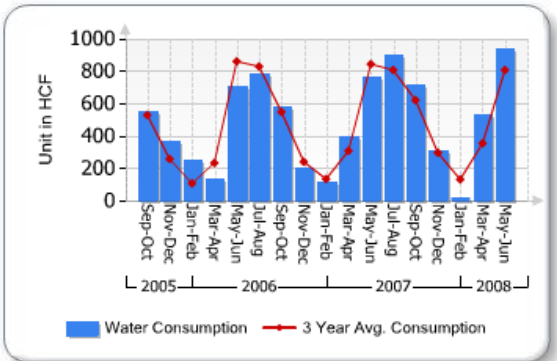
## CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075    Account(s): 96X91X932X99    Customer: CITY OF SOLANA...

Site Mode

- Overview
- Reports
- Measure Tool
- Consumption
- Settings

### Consumption and Target Overview

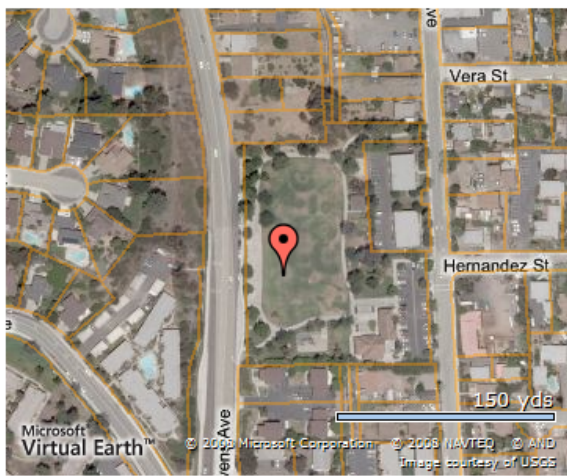


Unit: HCF    FROM: 9/1/2005 TO: 6/30/2008

Avg. Year(s): 3    1M 3M YTD 6M 1Y 2Y 3Y Max

Interval: 2M

### Satellite Map



[Print Portrait Map](#) | [Print Landscape Map](#)

### Landscape Area Measurement

GIS Manual

Use this measurement? Yes:

Unit: sq. ft.

Total Area: 0 sq. ft.

Non Vegetation: 0 sq. ft.

Vegetation: 0 sq. ft.

**WaterSmart Target Area:** 0 sq. ft.

Status: Measurement pending Save

Type: Satellite Save

### Notes

Empty text area for notes.



- Home
- Customers
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- Administration

Last Searches

Recent Sites

[LA COLONIA PARK SOLANA BEACH, CA 92075](#)

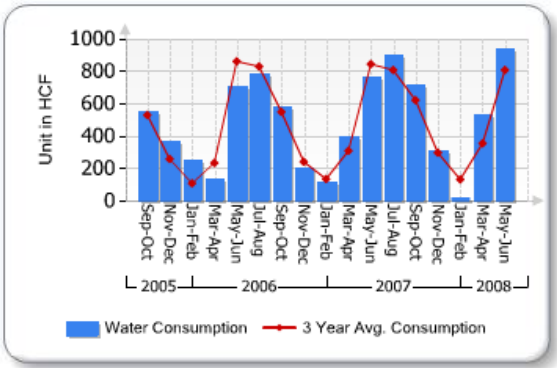
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Site: LA COLONIA PARK SOLANA BEACH, CA 92075    Account(s): 96X91X932X99    Customer: CITY OF SOLANA...

Site Mode

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- Reports**
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### Consumption and Target Overview

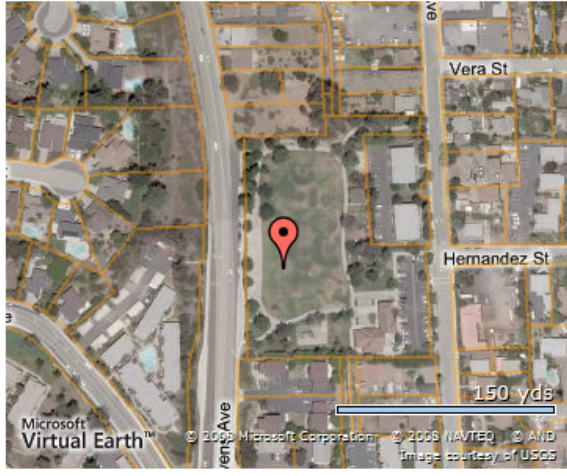


Unit: **HCF**    FROM: 9/1/2005    TO: 6/30/2008

Avg. Year(s): **3**    **1M 3M YTD 6M 1Y 2Y 3Y Max**

Interval: **2M**

### Satellite Map



[Print Portrait Map](#) | [Print Landscape Map](#)

### Landscape Area Measurement

GIS **Manual**

Use this measurement? Yes:

Unit: **sq. ft.**

**Total Area:** 0 sq. ft.

**Non Vegetation:** 0 sq. ft.

**Vegetation:** 0 sq. ft.

**WaterSmart Target Area:** 0 sq. ft.

Status: **Measurement pending**    **Save**

Type: **Satellite**    **Save**

### Notes

Empty text area for notes.

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Site: LA COLONIA PARK SOLANA BEACH, CA 92075    Account(s): 96X91X932X99    Customer: CITY OF SOLANA...

Site Mode

- Overview
- Reports
- Measure Tool
- Consumption
- Settings

#### Map Layers

- Custom Areas
- Parcels
- Classifications
- Agency Boundary
- ETO
- Infrared Imagery

#### Search

Address    Parcel

Street, City, State, Zip

Find Address

#### Classification Results

Unit: sq. ft.

<b>Total Area:</b>	0 sq. ft.
Non Vegetation:	0 sq. ft.
<input type="checkbox"/> Grass & Ground Cover:	0 sq. ft.
<input type="checkbox"/> Trees & Shrubs:	0 sq. ft.
<input type="checkbox"/> Native Vegetation:	0 sq. ft.
<input type="checkbox"/> Pool:	0 sq. ft.

**WaterSmart Target Area:** 0 sq. ft.

Status: Measurement pending    Save

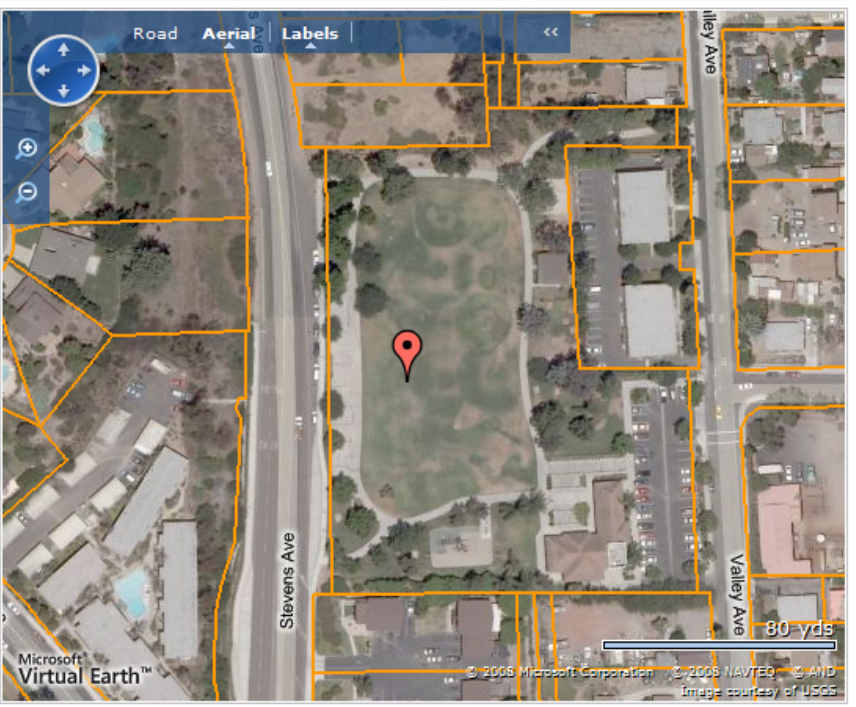
Type: Satellite    Save

#### Measurement Toolbox

- Parcel..
- Auto..
- Grass..
- Tree..
- Native..
- Non..
- Pools
- Delete
- Edit

#### Map Toolbox

- Pan
- Identify
- Clear
- Set..
- Overview..



Pop-out



- Home
- Customers
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Site Mode

- Overview
- Reports
- Measure Tool
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#### Map Layers

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#### Search

Address

Street, City, State, Zip

#### Classification Results

Unit:

<b>Total Area:</b>	0 sq. ft.
Non Vegetation:	0 sq. ft.
<input type="checkbox"/> Grass & Ground Cover:	0 sq. ft.
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<input type="checkbox"/> Native Vegetation:	0 sq. ft.
<input type="checkbox"/> Pool:	0 sq. ft.

**WaterSmart Target Area:** 0 sq. ft.

Status:

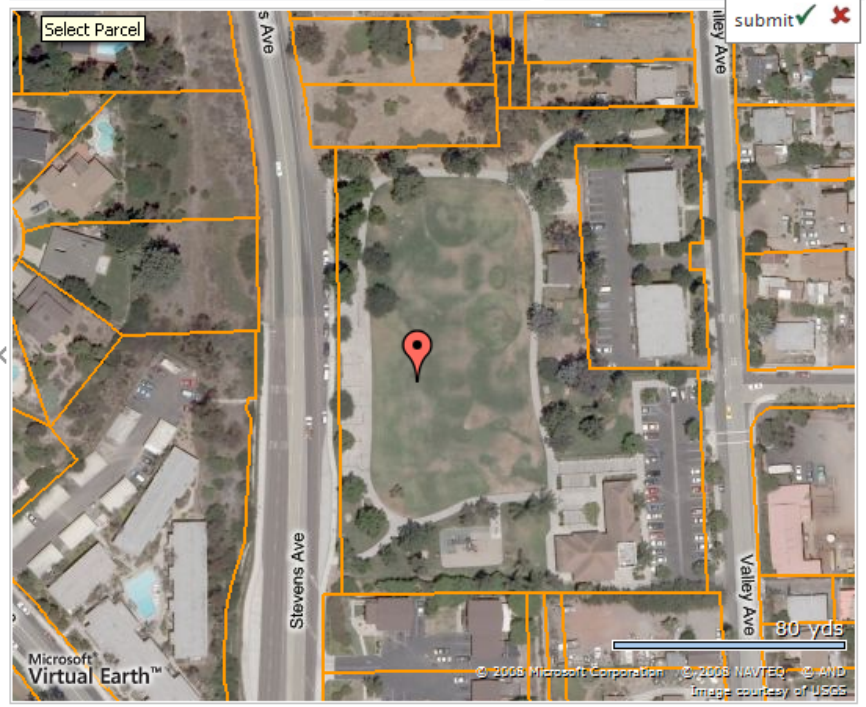
Type:

#### Measurement Toolbox

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#### Map Toolbox

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Pop-out

- Home
- Customers
- Report
- Data
- Settings
- Administration

### CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075    Account(s): 96X91X932X99    Customer: [CITY OF SOLANA...](#)

Site Mode

- Overview
- Reports
- Measure Tool
- Consumption
- Settings

#### Map Layers

- Custom Areas
- Parcels
- Classifications
- Agency Boundary
- ETO
- Infrared Imagery

#### Search

Address  Parcel

Street, City, State, Zip

#### Classification Results

Unit:

<b>Total Area:</b>	0 sq. ft.
Non Vegetation:	0 sq. ft.
<input type="checkbox"/> Grass & Ground Cover:	0 sq. ft.
<input type="checkbox"/> Trees & Shrubs:	0 sq. ft.
<input type="checkbox"/> Native Vegetation:	0 sq. ft.
<input type="checkbox"/> Pool:	0 sq. ft.
<b>WaterSmart Target Area:</b>	0 sq. ft.

Status:

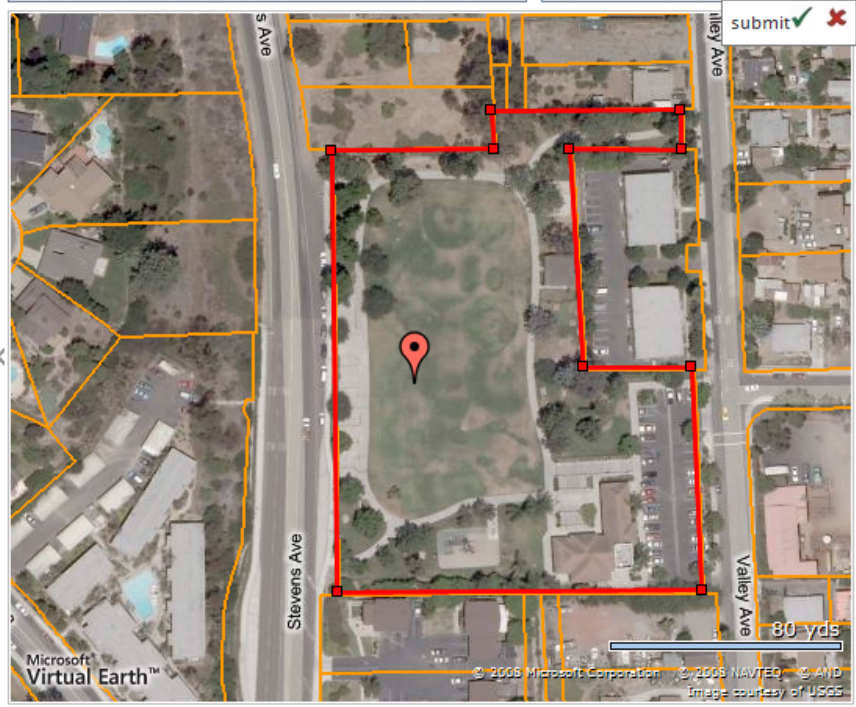
Type:

#### Measurement Toolbox

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#### Map Toolbox

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Pop-out

- Home
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### CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075    Account(s): 96X91X932X99    Customer: CITY OF SOLANA...

Site Mode

- Overview
- Reports
- Measure Tool
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#### Map Layers

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Address

Street, City, State, Zip

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**WaterSmart Target Area:** 0 sq. ft.

Status:

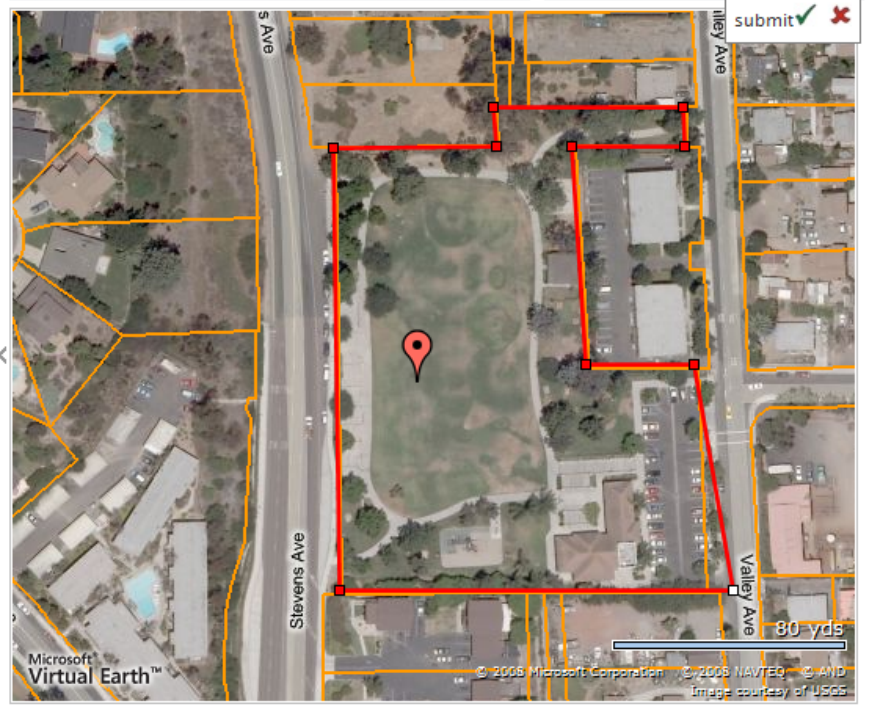
Type:

#### Measurement Toolbox

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#### Map Toolbox

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Pop-out



Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...

Site Mode

- Customers
- Report
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Last Searches

Recent Sites  
LA COLONIA PARK  
SOLANA BEACH, CA 92075

- Overview
- Reports
- Measure Tool
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- ### Map Layers
- Custom Areas
  - Parcels
  - Classifications
  - Agency Boundary
  - ETO
  - Infrared Imagery

### Search

Address Parcel

Street, City, State, Zip

Find Address

### Classification Results

Unit: sq. ft.

<b>Total Area:</b>	164,878 sq. ft.
Non Vegetation:	35,428 sq. ft.
<input checked="" type="checkbox"/> Grass & Ground Cover:	77167 sq. ft.
<input checked="" type="checkbox"/> Trees & Shrubs:	52283 sq. ft.
<input checked="" type="checkbox"/> Native Vegetation:	0 sq. ft.
<input checked="" type="checkbox"/> Pool:	0 sq. ft.

**WaterSmart Target Area:** 129,450 sq. ft.

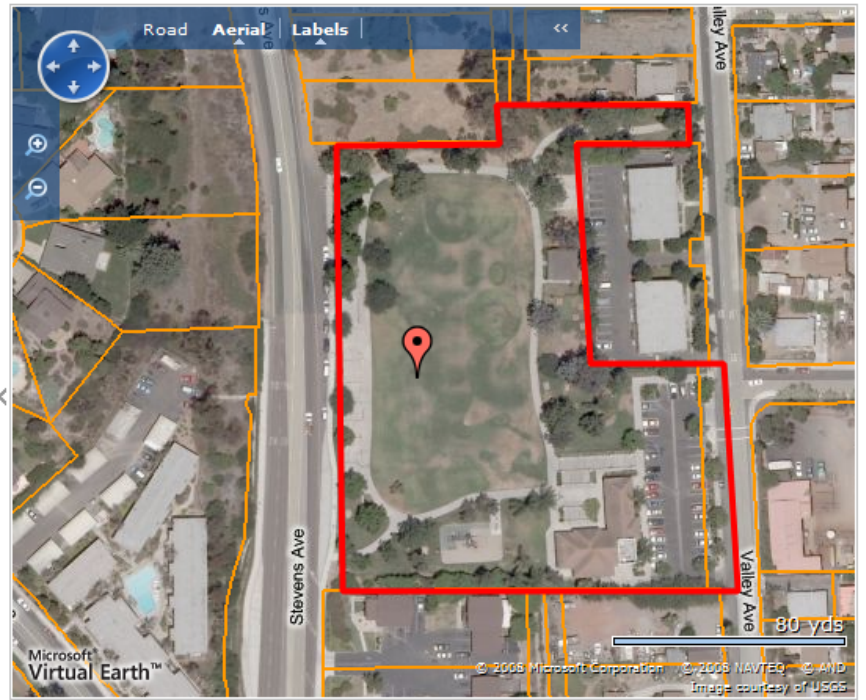
Status: Measurement pending Save

Type: Satellite Save

Last Modified By **simone**  
9/19/2008 5:04:17 PM

- ### Measurement Toolbox
- Parcel..
  - Auto..
  - Grass..
  - Tree..
  - Native..
  - Non..
  - Pools
  - Delete
  - Edit

- ### Map Toolbox
- Pan
  - Identify
  - Clear
  - Set..
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Pop-out

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...

Site Mode

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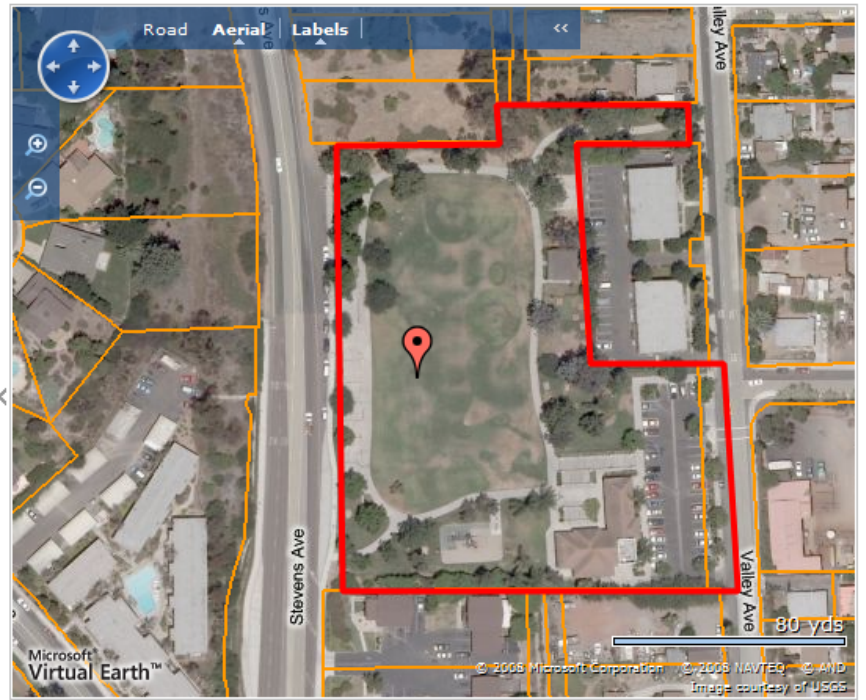
Status:  Save

Type:  Save

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Pop-out

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...

- Customers
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Last Searches

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LA COLONIA PARK  
SOLANA BEACH, CA 92075

- Overview
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Address Parcel

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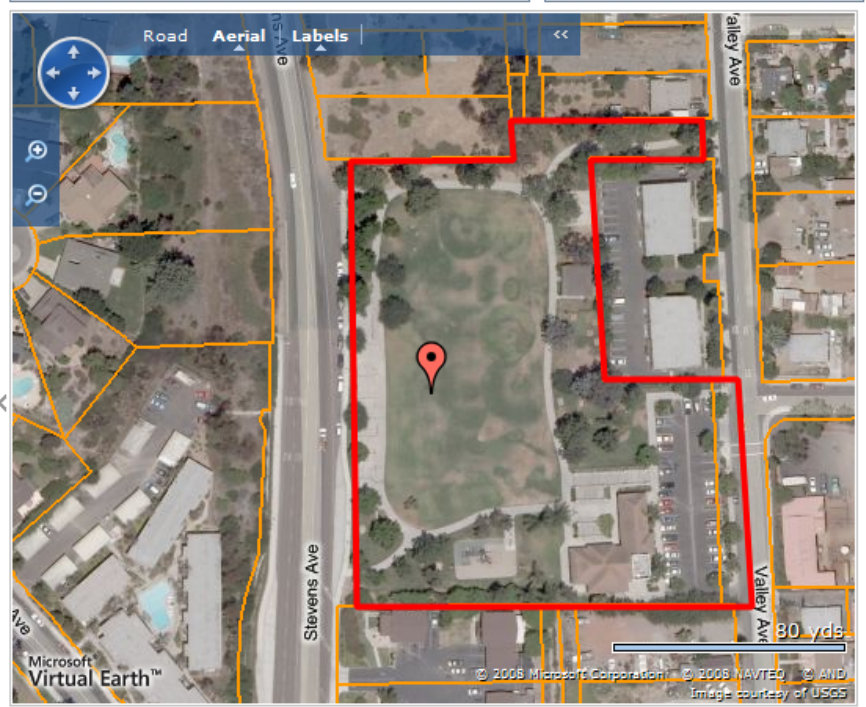
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Type: Satellite Save

Last Modified By **simone**  
9/19/2008 5:10:55 PM

- ### Measurement Toolbox
- Parcel..
  - Auto..
  - Grass..
  - Tree..
  - Native..
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  - Delete
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- ### Map Toolbox
- Pan
  - Identify
  - Clear
  - Set..
  - Overview..



Pop-out





A better way to beautiful

Name Account Meter  
Customer Name [Go]  
Help Print Change Password Logout

CITY OF SOLANA BEACH  
Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...  
Site Mode

Overview Reports Measure Tool Consumption Settings

- Map Layers**
- Custom Areas
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  - Agency Boundary
  - ETO
  - Infrared Imagery

- Measurement Toolbox**
- Parcel..
  - Auto..
  - Grass..
  - Tree..
  - Native..
  - Non..
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  - Delete
  - Edit

- Map Toolbox**
- Pan
  - Identify
  - Clear
  - Set..
  - Overview..

**Search**

Address Parcel

Street, City, State, Zip

Find Address

**Classification Results**

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<input checked="" type="checkbox"/> Native Vegetation:	0 sq. ft.

Road Aerial Labels

Parcel Info:

APN: 2981610100  
 PARCELID: 5004943  
 ACREAGE: 0.63000  
 SHP\_ID\_ARE: 27448.03619480000

---

SITUS\_ADDR: 710  
 SITUS\_STRE: VALLEY  
 SITUS\_SUFF: AVE  
 SUBNAME: LA COLONIA  
 UNITQTY: 0  
 ZIP: 92075

---

OWN\_ADDR1: P O BOX 145  
 OWN\_ADDR2: SOLANA BEACH CA  
 OWN\_NAME1: BRUUN ROBERT F TR  
 OWN\_ZIP: 92075

80 yds

Microsoft Virtual Earth™



A better way to beautiful

Name Account Meter  
Customer Name  Go

Help Print Change Password Logout

### CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: [CITY OF SOLANA...](#)

Site Mode

Overview Reports Measure Tool Consumption Settings

#### Map Layers

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- Infrared Imagery

#### Search

Address Parcel  
Street, City, State, Zip

#### Classification Results

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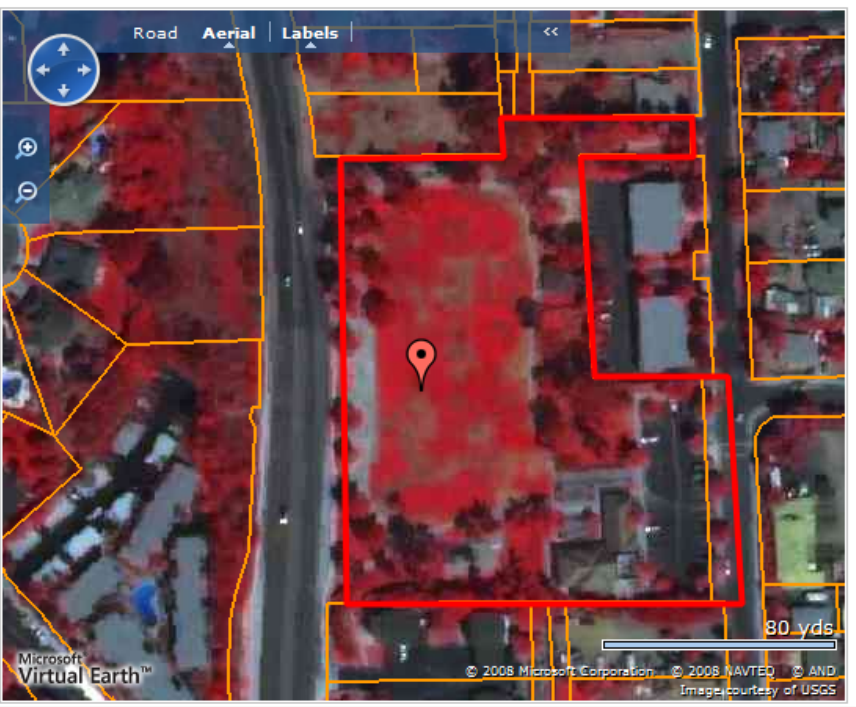
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#### Map Toolbox

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- Identity
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- Overview..



#### Last Searches

#### Recent Sites

[LA COLONIA PARK SOLANA BEACH, CA 92075](#)





A better way to beautiful

Name Account Meter Customer Name [Go] Help Print Change Password Logout

CITY OF SOLANA BEACH Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA... Site Mode

Overview Reports Measure Tool Consumption Settings

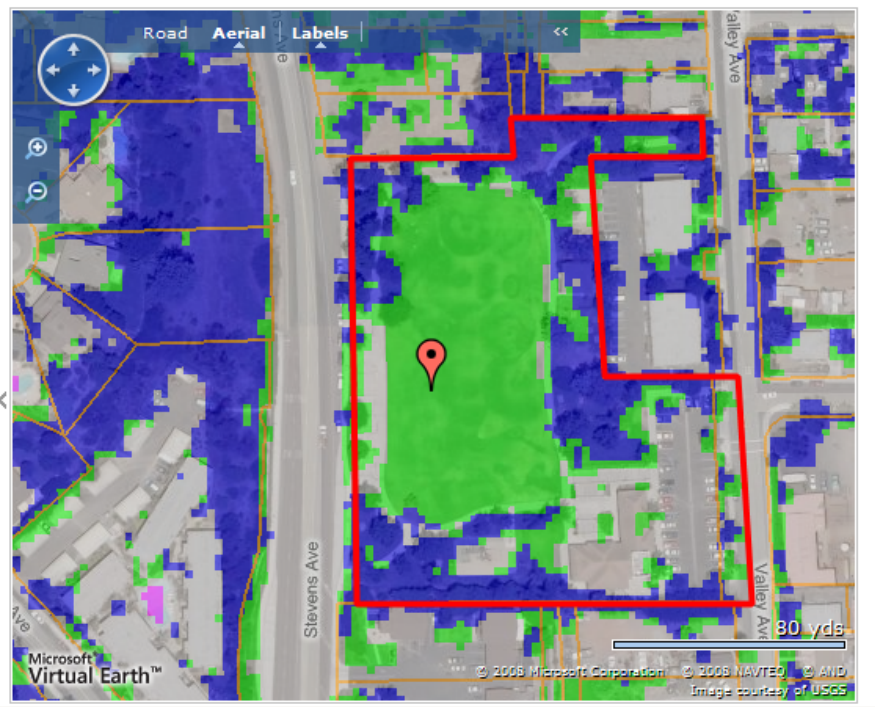
- Map Layers Classifications Other Grass Turf and Ground Cover Trees and Shrubs Native Vegetation Non Vegetation Pools Agency Boundary

- Measurement Toolbox Parcel.. Auto.. Grass.. Tree.. Native.. Non.. Pools Delete Edit

- Map Toolbox Pan Identity Clear Set.. Overview..

Search Address Parcel Street, City, State, Zip Find Address

Classification Results Unit: sq. ft. Total Area: 164,878 sq. ft. Non Vegetation: 35,428 sq. ft. Grass & Ground Cover: 77167 sq. ft. Trees & Shrubs: 52283 sq. ft. Native Vegetation: 0 sq. ft.



Last Searches

Recent Sites LA COLONIA PARK SOLANA BEACH, CA 92075



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Name Account Meter Customer Name [Go]

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CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...

Site Mode

Overview Reports Measure Tool Consumption Settings

Meter Number: 56662215

Data Chart


Show: 12 periods of history prior to 8/31/2008 In: HCF

Export to Excel

Meter Number	Period	Water Type	Consumption
56662215	8/1/2008 - 8/31/2008	Recycled	0.00 HCF
56662215	7/1/2008 - 7/31/2008	Recycled	0.00 HCF
56662215	6/1/2008 - 6/30/2008	Recycled	509.00 HCF
56662215	5/1/2008 - 5/31/2008	Recycled	430.00 HCF
56662215	4/1/2008 - 4/30/2008	Recycled	397.00 HCF
56662215	3/1/2008 - 3/31/2008	Recycled	133.00 HCF
56662215	2/1/2008 - 2/29/2008	Recycled	5.00 HCF
56662215	1/1/2008 - 1/31/2008	Recycled	13.00 HCF
56662215	12/1/2007 - 12/31/2007	Recycled	99.00 HCF
56662215	11/1/2007 - 11/30/2007	Recycled	208.00 HCF
56662215	10/1/2007 - 10/31/2007	Recycled	333.00 HCF
56662215	9/1/2007 - 9/30/2007	Recycled	387.00 HCF

Last Searches

Recent Sites LA COLONIA PARK SOLANA BEACH, CA 92075



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Name Account Meter

Customer Name

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**CITY OF SOLANA BEACH**

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA...

Site Mode

Overview Reports Measure Tool Consumption **Settings**

Status:

**Measurement Settings (Show Details)**

**Target Formula (Show Details)**

Water Target Formula:

**MAWA AB 1881 Formula:**

Generic Description: (((ETO x ETO adjustment) - (% Precipitation x Precipitation) x Area) x Conversion factor) in HCF

Formula: (((ETO\* x  ETO adjustment) - ( % Precipitation x Precipitation<sup>2</sup>) x Area(sq. ft.)) x Volumetric Conversion Factor)

\*3 Year Running Average for Projected Water Targets. Will reflect actual ETO for previous periods.

**Estimated Water Use (Show Details)**

**Last Searches**

**Recent Sites**

[LA COLONIA PARK SOLANA BEACH, CA 92075](#)

- Report
- Data
- Settings
- Administration

Last Searches

Recent Sites  
[LA COLONIA PARK SOLANA BEACH, CA 92075](#)

- Overview
- Reports
- Measure Tool
- Consumption
- Settings

## Water Target Report

### Customer and Agency Information



**General Information**

**Agency Name:** Sample Agency

**Agency Information:** 555 Main Street  
San Diego, CA, 90017  
555-555-5555

**Customer Name:** CITY OF SOLANA BEACH

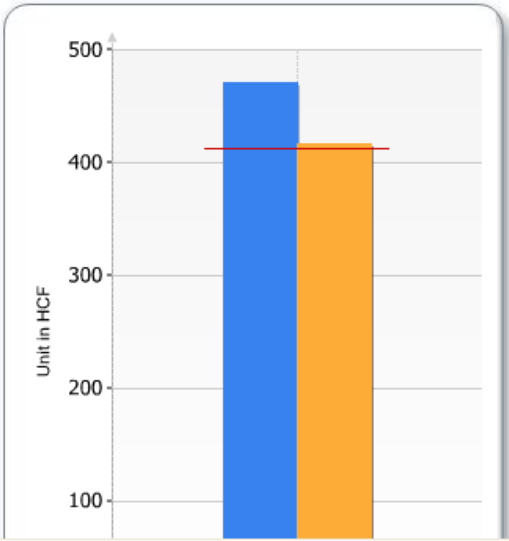
**Account Number:** 96X91X932X99

**Meter Number(s):** 56662215

**Service Address:** LA COLONIA PARK , SOLANA BEACH, CA 92075

### Water Usage and Target

View Report: Billing Period Select Period: 7/1/2007 - 7/31/2007



**Your Average Use Comparison**

Average Use	Actual Use
413.33 HCF	471.00 HCF

You are 14% over your average use.

**Your Water Target Comparison**

Water Target	Actual Use
416.58 HCF	471.00 HCF

You are 13% over your water target.

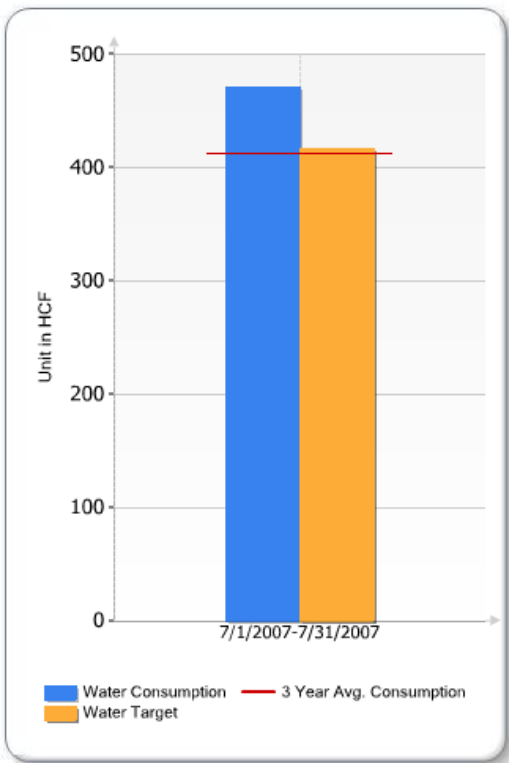
**Money Saved:** \$0.00  
*Estimate value of water (actual use-water target) based on potable water rate.*

**Landscape Area Measurement**

<b>Total Area:</b>	164,878 sq. ft.
Non Vegetation:	35,428 sq. ft.
Vegetation :	129,450 sq. ft.

**Water Usage and Target**

View Report: Billing Period Select Period: 7/1/2007 - 7/31/2007



**Your Average Use Comparison**

Average Use	Actual Use
413.33 HCF	471.00 HCF

You are 14% over your average use.

**Your Water Target Comparison**

Water Target	Actual Use
416.58 HCF	471.00 HCF

You are 13% over your water target.

💰 Money Saved: \$0.00  
*Estimate value of water (actual use-water target) based on potable water rate.*

**Landscape Area Measurement**

<b>Total Area:</b>	164,878 sq. ft.
Non Vegetation:	35,428 sq. ft.
Vegetation :	129,450 sq. ft.
<b>WaterSmart Target Area:</b>	129,450 sq. ft.

**Water Target Formula**

Water Target Formula:  $((E_{to} \times E_{to} \text{ adjustment}) - (\% \text{ Precipitation} \times \text{Precipitation}) \times \text{Area}) \times \text{Conversion factor}$  in HCF

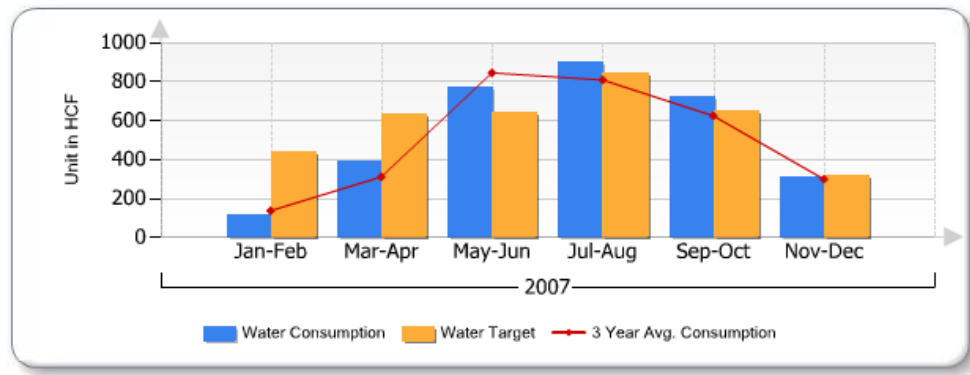
\*CIMIS Station = 173 ([Torrey Pines](#))  
**\*\*One billing unit = HCF**

**Satellite View of Site**



**Water Usage and Target**

View Report: **Annual** Select Period: **2007**



Period	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Water Consumption	116.00	393.00	768.00	898.00	720.00	307.00
Water Target	438.14	637.37	643.41	847.82	652.90	315.67

**Your Average Use Comparison**

<b>Average Use</b>	<b>Actual Use</b>
3,003.67 HCF	3,202.00 HCF

You are 7% over your average use.

---

**Your Water Target Comparison**

<b>Water Target</b>	<b>Actual Use</b>
3,535.31 HCF	3,202.00 HCF

You are 9% under your water target.

💰 Money Saved: \$0.00  
 Estimate value of water (actual use - water target) based on potable water rate.

**Landscape Area Measurement**

<b>Total Area:</b>	164,878 sq. ft.
Non Vegetation:	35,428 sq. ft.
Vegetation :	129,450 sq. ft.
<b>WaterSmart Target Area:</b>	129,450 sq. ft.

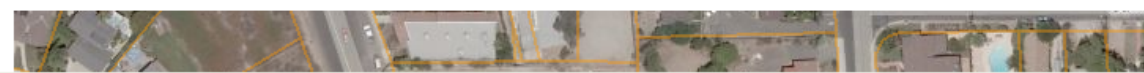
---

**Water Target Formula**

Water Target Formula:  $((ETo \times ETo \text{ adjustment}) - (\% \text{ Precipitation} \times \text{Precipitation}) \times \text{Area}) \times \text{Conversion factor}$  in HCF

\*CIMIS Station = 173 ([Torrey Pines](#))  
 \*\*One billing unit = HCF

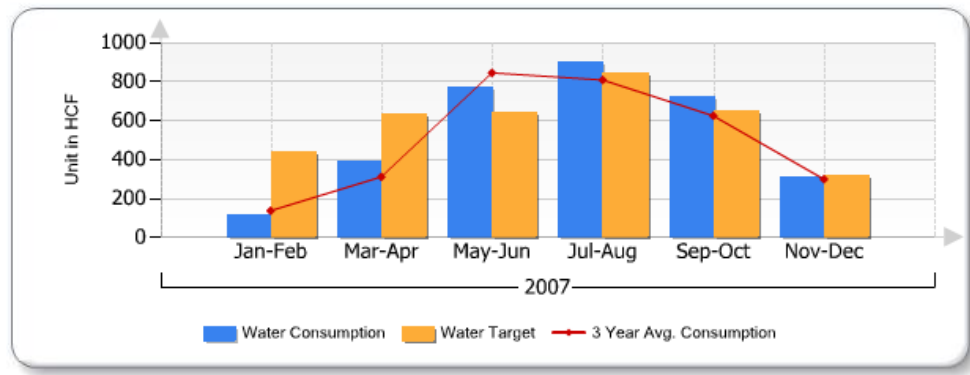
**Satellite View of Site**





**Water Usage and Target**

View Report: Annual Select Period: 2007



Period	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Water Consumption	116.00	393.00	768.00	898.00	720.00	307.00
Water Target	438.14	637.37	643.41	847.82	652.90	315.67

**Your Average**  
**Average Use**  
 3,003.67 HCF  
 You are 7% over y

**Your Water Tar**  
**Water Target**  
 3,535.31 HCF  
 You are 9% unde

**Money Saved:**  
 Estimate value of w  
 potable water rate.

WaterSmart Target - ...

http://localhost:10000

WaterSmart Target - ETO ...

Interval	ETo	Precipitation
1	5.08	2.22
2	7.39	0.97
3	7.46	0.1
4	9.83	0.1
5	7.57	0.3
6	3.66	2.82

Local intranet 100%

**Landscape Area Measurement**

**Total Area:** 164,878 sq. ft.

**Non Vegetation:** 35,428 sq. ft.

**Vegetation:** 129,450 sq. ft.

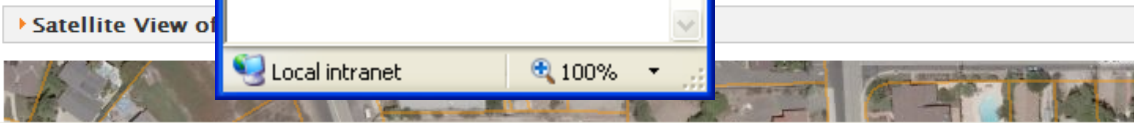
**WaterSmart Target Area:** 129,450 sq. ft.

**Water Target Formula**

Water Target Formula:(((ETo x ETo adjustment) - (% Precipitation x Precipitation) x Area) x Conversion factor) in HCF

CIMIS Station = 173 ([Torrey Pines](#))

**\*\*One billing unit = HCF**





## Water Target Report

### Customer and Agency Information

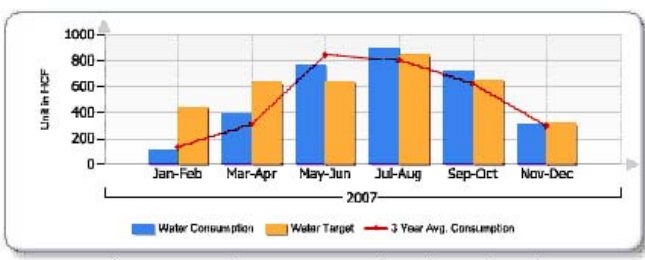


#### General Information

**Agency Name:** Sample Agency  
**Agency Information:** 555 Main Street  
 San Diego, CA, 92017  
 555-555-5555  
**Customer Name:** CITY OF SOLANA BEACH  
**Account Number:** 00X01X002X00  
**Meter Number(s):** 00500215  
**Service Address:** LA COLONIA PARK, SOLANA BEACH, CA  
 92075

### Water Usage and Target

Annual: 1/1/2007-12/31/2007



Period	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Water Consumption	115.00	393.00	758.00	898.00	720.00	307.00
Water Target	458.14	657.37	643.41	847.82	592.90	315.67

#### Your Average Use Comparison

**Average Use:** 8,005.67 HCF  
**Actual Use:** 8,202.00 HCF  
 You are 2% over your average use.

#### Your Water Target Comparison

**Water Target:** 8,585.81 HCF  
**Actual Use:** 8,202.00 HCF  
 You are 3% under your water target.  
 Money Saved: \$0.00  
 Estimate value of water (actual use - water target) based on potable water rate.

#### Landscape Area Measurement

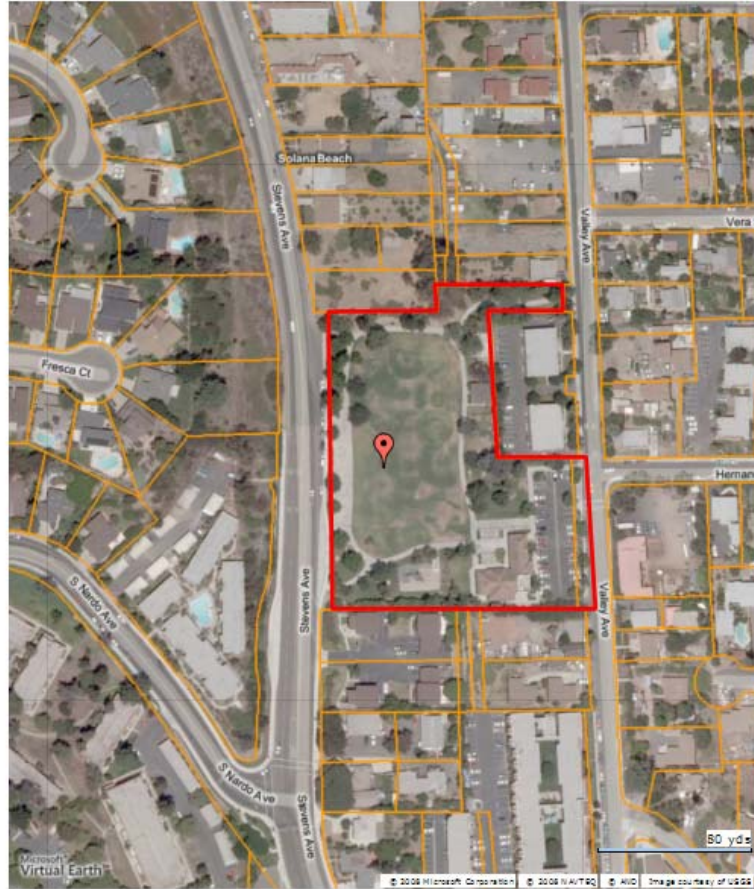
**Total Area:** 164,875 sq. ft.  
**Non-Vegetation:** 25,422 sq. ft.  
**Vegetation:** 139,453 sq. ft.  
**WaterSmart Target Area:** 129,450 sq. ft.

**Water Target Formula:**  
 Water Target Formula: ((S<sub>To</sub> x S<sub>To</sub> adjustment) - (N x Precipitation) + Precipitation) x Area x Conversion Factor) in HCF

HCMS Station = 172 (Torrey Pines)  
 One billing unit = HCF



Satellite View of Site



- Home
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Last Searches

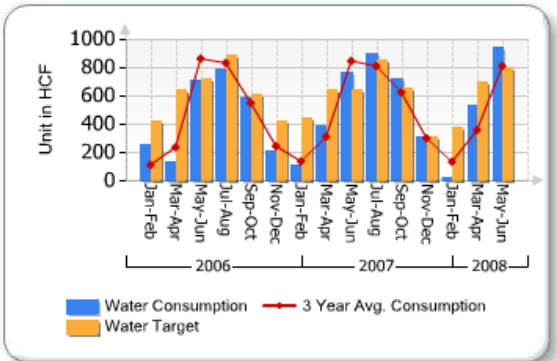
Recent Sites

## CITY OF SOLANA BEACH

Site: LA COLONIA PARK SOLANA BEACH, CA 92075 Account(s): 96X91X932X99 Customer: CITY OF SOLANA... Site Mode

- Overview
- Reports
- Measure Tool
- Consumption
- Settings

### Consumption and Target Overview

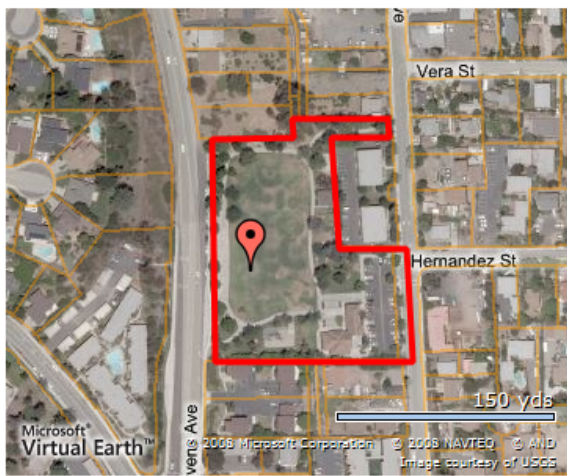


Unit: HCF FROM: 1/1/2006 TO: 6/19/2008

Avg. Year(s): 3 1M 3M YTD 6M 1Y 2Y 3Y Max

Interval: 2M

### Satellite Map



[Print Portrait Map](#) | [Print Landscape Map](#)

### Landscape Area Measurement

GIS Manual

Use this measurement? Yes:

Unit: sq. ft.

**Total Area:** 164,878 sq. ft.

**Non Vegetation:** 35,428 sq. ft.

**Vegetation:** 129,450 sq. ft.

**WaterSmart Target Area:** 129,450 sq. ft.

Status: Measurement completed Save

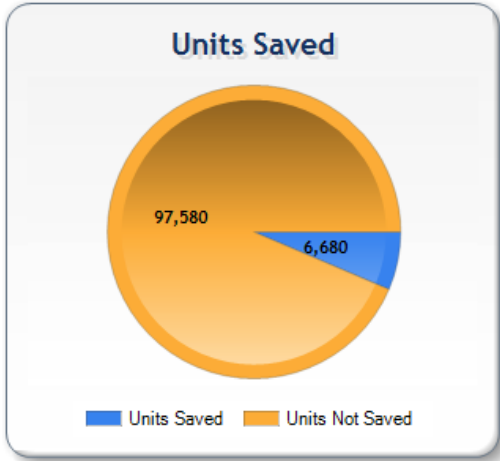
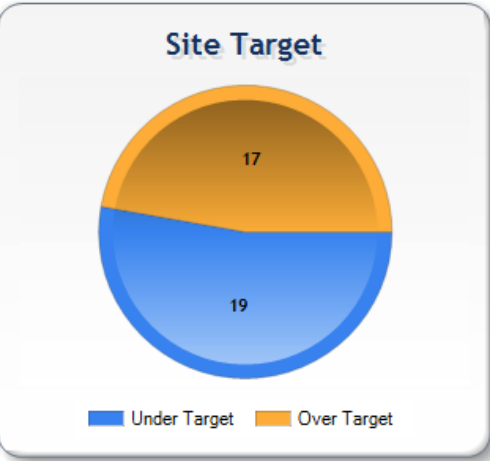
Type: Satellite Save

### Notes

Notes area with a scroll bar.

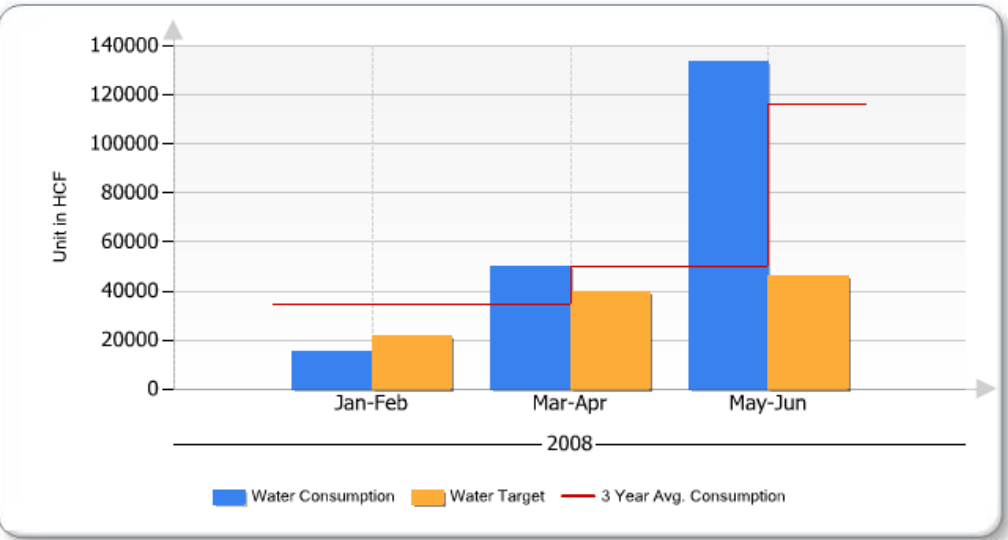
- A better way to beautiful
- Home
- Customers
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- Data
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- Administration

Report



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Unit: HCF Avg. Year(s): 3 Interval: 2M 1M 3M YTD 6M 1Y 2Y 3Y Max FROM: 1/1/2008 TO: 6/19/2008

Account Type Account Class Measurement Completed  
 --All-- --All-- --All--



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- Home
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- Data
- Settings
- Administration

Name Account Meter

Customer Name

[Help](#) [Print](#) [Change Password](#) [Logout](#)

## Settings

### General Settings



#### Account Information

Address: 555 Main Street  
 Address2:   
 City: San Diego  
 State: CA  
 Zip: 90017  
 Email:   
 HomePage:   
 Phone Number: 555-555-5555  
 Fax Number:   
[Edit](#)

Last Searches

Recent Sites

Unit of Measure:

Default Billing Frequency:

- Measurement Settings (Show Details)
- Water Target Formula (Show Details)
- Estimated Water Use (Show Details)
- Billing Settings (Show Details)

[Lookup Tables](#)






Water Budget Management System: Report (January 1st - Dec... M

Message

Reply Reply Forward Delete Move to Folder Create Rule Block Sender Not Junk Categorize Follow Up Mark as Unread Find

Respond Actions Junk E-mail Options

From: Simone Lawhun Sent: Mon 7/28/2008 5:47 PM  
 To: Simone Lawhun  
 Cc:  
 Subject: Water Budget Management System: Report (January 1st - December 31st, 2007)



July 25th, 2008

You have received the following Notification from the Water Budget Management System

Agency: **City of Escondido**  
 Report Period : **January 1st – December 31st, 2007**

**Sites Statistics**

<b>With Water Budgeted:</b>	12 site(s)	<b>Without Water Budget</b>	469 site(s)
<b>Over Budget:</b>	7 site(s)	<b>Under Budget:</b>	5 site(s)

**Over Budget Customers**

Customer Name	Site Name	% Over Budget
Bernardo Santa Fe HOA	<a href="#">153 1/2 Camino Del Postigo Escondido CA 92029</a>	8990%
Barcelona HOA	<a href="#">1805 Country Club Ln Escondido CA 92026-1002</a>	1137%
Atlantic & Pacific Mgmt	<a href="#">344 W 2nd Ave Escondido CA 92025-4127</a>	640%
American Golf Corp	<a href="#">3647 1/2 Camino Baiada Escondido CA 92025-7948</a>	625%
504 LP / Terracina HOA	<a href="#">Bernardo Ave Escondido CA 92029</a>	621%

[Login to the Water Budget Management System](#)

Use this link to [manage your notifications](#) from the Water Budget Management System. This is a non monitored email account. If you have questions please [Contact Us](#).

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Sample: Water Budget Management System: Your Re... M

Message

Reply Reply Forward Delete Move to Folder Block Sender Categorize Follow Up Mark as Unread Find

Respond Actions Junk E-mail Options

From: Simone Lawhun Sent: Mon 7/28/2008 6:09 PM  
 To: Simone Lawhun  
 Cc: Keith Wong  
 Subject: Sample: Water Budget Management System: Your Report (January 1st - December 31st, 2007)



July 25th, 2008

You have received the following Notification from the Water Budget Management System

Name: **GROVES AT CARMEL DEL MAR**  
 Report Period : **January 1st – December 31st, 2007**

**Sites Address:** [3527 1/2 Caminito Carmel Landing, San Diego, CA](#)

<b>Water Budget:</b>	4,096.52 HCF	<b>Actual Use</b>	4,603.20 HCF
<b>Over Budget:</b>	12% Over	<b>Savings Potential:</b>	\$1,087.80

Message: Site Over Budget! [Water Conservation Tips](#)

**Sites Address:** [3675 Caminito Carmel Landing, San Diego, CA](#)

<b>Water Budget:</b>	2,731.02 HCF	<b>Actual Use</b>	2,987.47 HCF
<b>Over Budget:</b>	9% Over	<b>Savings Potential:</b>	\$2,564.53

Message: Site Over Budget! [Water Conservation Tips](#)

Use this link to [manage your notifications](#) from the Water Budget Management System. This is a non monitored email account. If you have questions please [Contact Us](#).

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## Register for My Account

Enter the information below to access your Account. Any information you provide is strictly confidential. This information will not be given, sold or shared with any person, company, or organization external to San Diego County Water Authority.

### Create Login Account

#### Customer Information

First Name: \*

Last Name: \*

Title:

Business Name:

Phone Number:

Extension:

#### Account Verification

Account Number: \*

Account 5-digit Zip Code: \*

Meter Number: \*

Next

 \* = required field

# Potential Future Enhancements

- Conservation Programs Database/Tracking
- Additional Interactive Mapping Tools and Views (e.g., Recycled Water, Additional Data Layers, Custom Views)
- Full Customer Relationship Management (CRM)
- Addition of Mixed Meter WaterSmart Targets





# Lessons Learned

## Labor Intense

Antiquated Agency Billing Systems

Billing Data Entry Inconsistencies

Human Verification Necessary

Area Served by Meters



# Partners



## SDCWA Member Agencies



San Diego County  
Water Authority

# Contacts

## San Diego County Water Authority

Mayda Z. Portillo

Sr. Water Resource Specialist

858.522.6762

[mportillo@sdcwa.org](mailto:mportillo@sdcwa.org)

## Civic Resource Group

Greg Curtin

Principal

213.225.1170 x 234

[gregc@civicresource.com](mailto:gregc@civicresource.com)



San Diego County  
Water Authority