



Water Use Efficiency and Water Quality Improvements

City of Newport Beach 2013 -2014 Annual Report



water use efficiency



water quality

100 Civic Center Drive
Newport Beach, California 92660



energy

Table of Contents

Program Overview 1

Water Use Efficiency 1

 20% Reduction by 2020 2

 Water Use Efficiency Programs 3

 1. Recycled Water Connections

 2. Landscape Water Budget Program

 3. Rebate Incentives

 4. Water Smart Hotel Program

 5. Public Outreach

 a. *Print and Media*

 b. *Education and Partnerships*

 c. *Community Events*

 d. *Upcoming Projects and Programs*

Beach and Bay Water Quality 7

 Newport Beach’s Honor Roll Recognition 8

 TMDL Challenges 8

 Impacts to Beach water Quality Decrease 8

 Water Quality Projects and Programs 8

 1. Food Facility Inspections

 2. Pest Management

 3. Street Sweeping

 4. Buck Gully Resource Management Plan

 5. Upper Newport Bay Ecosystem Restoration

 6. Runoff Reduction Program

 7. OCTA Water Quality Grants

 8. Marina Trash Skimmers

 9. Civic Center Bio-Swales

 10. Infiltration Galleries

 11. Wetland Restoration

- 12. Selenium Reduction
- 13. Sediment TMDL
- 14. Street Gutter Study
- 15. Traveling Tidepool

Energy Efficiency – Water Energy Nexus 12

 1. Marina Park Savings by Design

 2. Civic Center - Savings by Design

 3. Efficient Street Lighting

 4. Energy Use Database

 5. Plug Load Sensors

 6. Water Pump Stations

 7. Energy Action Plan

Conclusion 13

Abbreviations

CTR	California Toxic Rule
BMP	Best Management Practices
EAP	Energy Action Plan
GPD	Gallons Per Day
HRZ	Hazard Reduction Zone
HOA	Home Owner Associations
LEED	Leadership in Energy and Environmental Design
LED	Light Emitting Diode
MST	Microbial Source Tracking Study
NPDES	National Pollutant Discharge Elimination System
OCTA	Orange County Transit Authority
SCE	Southern California Edison
SCG	Southern California Gas
TMDL	Total Daily Maximum Load
VFD	Variable Frequency Drive

Program Overview

The City of Newport Beach now has a very interesting and effective environmental program that includes:

1. Ramping-up water use efficiency programs,
2. Protecting and restoring beach and bay water quality including coastal, riparian and upland habitats, and
3. Improving energy conservation related to water projects and programs.

This marks the 3rd year of the Water Use Efficiency and Water Quality Annual Report which provides a summary the City's progress toward complying with State and Federal requirements, as well as implementing the City's vision for protecting and restoring our natural resources.



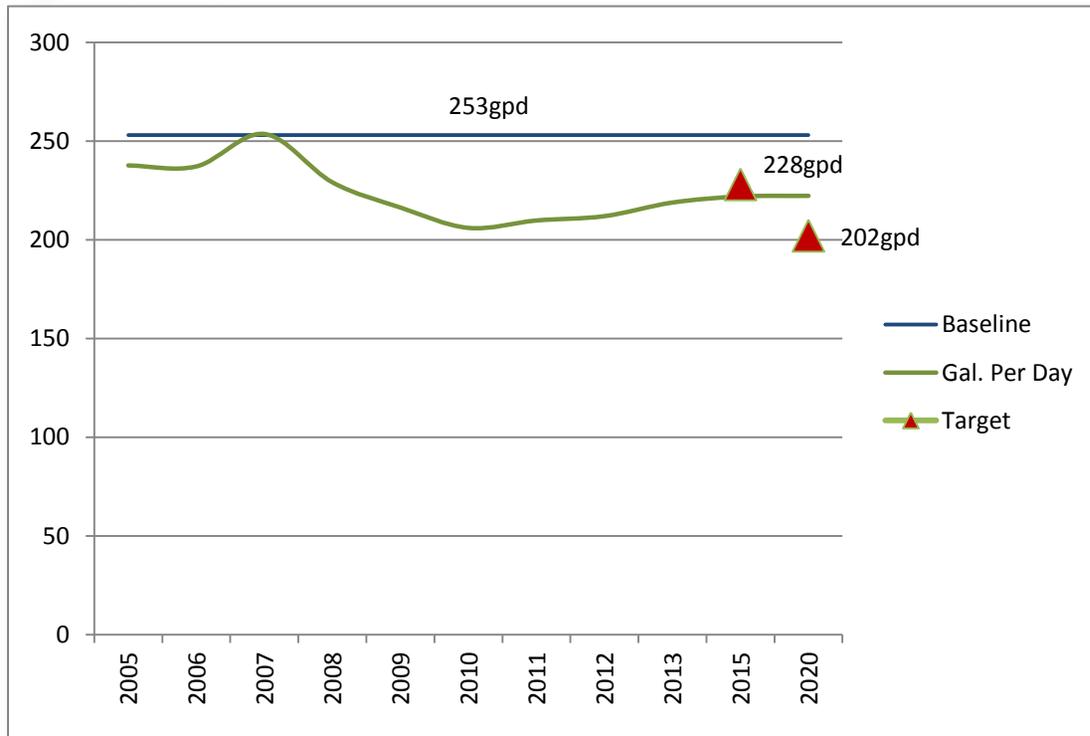
Water Use Efficiency

With all the lush landscapes in our neighborhoods, a visitor to our City might be surprised that that we live in semi-arid region. Water supplies in the State are beginning to be stretched to the limit. Therefore, the value of water is expected to rise as the population in the State increases. If California experiences a number of consecutive drought years, the price of water imported to Southern California could increase substantially. Efficient use of water can mitigate the impact of likely price increases.

City water comes from two sources: imported water purchased from the Metropolitan Water District and City ground water wells located in Fountain Valley.

Water demand in the City depends on several inter-related factors including weather, the degree of economic activity, business activity and production, population growth and the number of visitors to our town.

Figure 1: 20% x 2020 Reduction



20% Reduction by 2020

California passed legislation (Senate Bill x7-7) setting targets to reduce water consumption across the State by 20 percent by Year 2020. The City can meet this goal through either a 20%

decrease in overall City water use, or as a combined group effort as part of the Orange County 20x2020 Regional Alliance. This alliance is comprised of 29 retail urban water suppliers in Orange County. The Orange County 20x2020 Regional Alliance was created to allow water suppliers to meet their 20% by 2020 reduction targets through the successful region-wide programs.

Figure 1 shows total water consumption in the City since 2005. The goal is to reduce 20% from a baseline water consumption of 253 gallons per day (gpd) per person. Between 2007 and 2010, consumption decreased 18% to 206 gpd per person. Since 2010 however, there has been a slow but steady increase in consumption to 228 gpd per person per day. About 60% of this amount is used for landscape irrigation, over 135 million gallons. While the 2015 water consumption target of 230 gpd per person is expected to be met, additional water conservation efforts will be required by the City to achieve the 2020 goal of 202 gpd per person.

Note, in Figure 1, peak consumption occurred in 2007, one of the driest years on record. It is anticipated that 2013 and 2014 may also be as dry and demand could increase.

Table 1 (page 3) summarizes the City’s on-going water use efficiency programs that could be expanded, as well as other

water saving programs and measures that could be implemented.

Table 1: Water Use Efficiency Programs

✔ = On-going ● = Future Consideration

- ✔ Increase Recycled Water Capacity
- ✔ HOA Landscape Water Budget Program
- ✔ Rebate Incentives
- ✔ Public Outreach: Customized Messaging
- ✔ City Parks and Facility Water Budgets
- ✔ Smart Irrigation Controller Installations
- ✔ High Efficiency Irrigation Nozzles
- Install a regional Weather Station (Civic Center)
- Measure M Grant -Median Turf Removal
- Home Water Audits
- Public Spaces Program - Turf Replacement
- Green Gardens Demonstration Projects
- Tiered Water Rate and Over Water Use Deterients
- Posiedon-Water Reuse and Distribution

Water Use Efficiency Projects

The following sections summarize the City’s programs and projects aimed at increasing the efficiency of water use.

1. Recycled Water Connections

This year, Our Lady Queen of the Angles was approved for recycled water delivery. The Big Canyon Golf Course already utilizes recycled water for its irrigation purposes.

2. Landscape Water Budget Program

A landscape water budget is the amount of water required to irrigate a landscape to maintain the health of plants without wasting water. Having this budget enables the City to hold contracted landscapers accountable for appropriate water application.

In FY2012, the City saved **5.3 acre ft.** (1.7 million gallons) of water on its public spaces, including street medians. Twenty Four HOA’s have enrolled in the program with an anticipated reduction of **6.4 acre ft** (2.1 million gallons).

3. Rebate Incentives

Customers are encouraged to install various water saving devices in and outside the home incentivized by generous rebates. Since 2001, installing these water saving devices, have reduced water use by 6,430 acre-ft, over **two billion gallons saved** over 13 years! Source: MWDOC

Rebates currently available through MWDOC include:

- Weather Based Irrigation Controllers
- High Efficient Spray Nozzles
- Turf Replacement
- High Efficient Clothes Washers
- High Efficient Toilets
- Ultra Low Flow Toilets

4. Water Smart Hotel Program

This program provides water use surveys, customized facility reports and technical assistance to hotels that invest in water use efficiency improvements. This program offers water

saving devices – such as toilets, cooling systems, kitchen and cleaning equipment.

5. Public Outreach

Staff continues to explore for more effective ways to relay water efficiency information to residents.

a. Print and Media

Websites: WaterSmartNewport.org and CleanWaterNewport.com - Maintained by staff and provide meaningful information on water-use efficiency and protecting water quality.

Social Media: twitter © channel over 600 followers. Facebook © over 2200 followers.



Municipal Statement Inserts: Bi-monthly seasonal messages. (Electronic bill pay customers receive a copy of the inserts with their e-statements.)

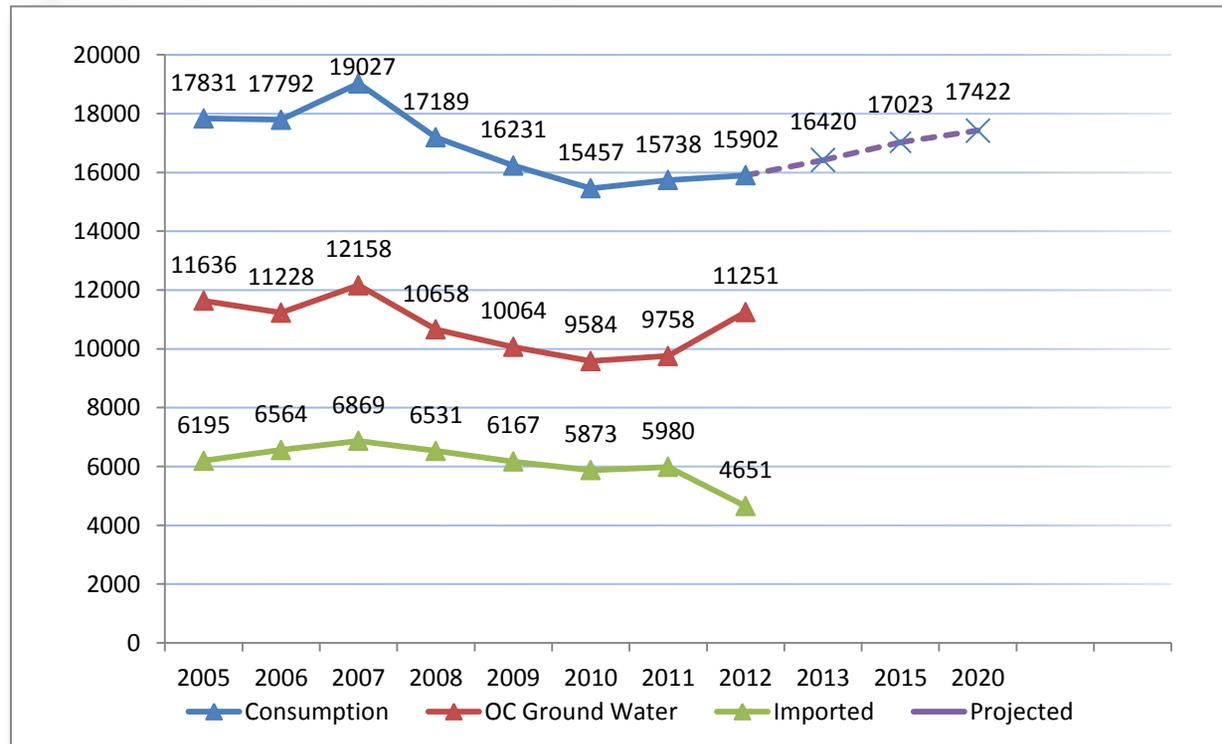
Newsletter: Provides information regarding residential customer consumption comparisons, special events and rebates.

Contests: Residents are awarded an irrigation system makeover that includes a landscape audit, and installation of a weather based controller and efficient stream nozzles.

July- Smart Irrigation Month: Special campaign to engage residents on reducing landscape watering and fixing irrigation in disrepair.



Figure 2: Total Water Delivery (Acre Feet)



b. Education and Restoration Partnerships

The City appreciates having Inside the Outdoors, Department of Education, Surfrider, MiOcean, Zero Trash Newport, and the Irvine Ranch Conservancy as partners in our community outreach and restoration efforts.



c. Community Events

Earth Day: 1,700 attended the Peter and Mary Muth Interpretive Center for a day of environmental education.



World Water Day: Twelve-time World Champion surfer, Rob Machado spoke to students at Corona del Mar High School about the importance of

water and how they can assist underdeveloped countries to have clean drinking water.

Coastal Cleanup Day: A 559 volunteers removed 12,270 lbs. of trash and 300 lbs. of recyclables from the mudflats in Upper Newport Bay.

Corona del Mar Association Expo: This event provided residents a one-on-one opportunity to talk with city staff and volunteers on a wide range of topics including current and future environmental projects.



Grand Opening - Civic Center: The opening celebration was attended by thousands of residents and visitors. Public Works showcased the City's numerous water conservation and environmental projects.

Race for the Cure: The foundation provided a booth for the Public Works Department to provide information to over 24,000 attendees regarding the City's environmental protection, restoration and energy programs.

Children’s Water Education Festival: Nearly 7,000 third, fourth and fifth grade students participated in hands-on water and environmental activities.

WaterMiser Workshop: This marked that third successful event attended by 75 Newport Beach residents. The workshop provided practical guidance and water wise gardening tips.

d. Upcoming Projects and Programs

Irvine Ranch Conservancy (IRC): The City’s Environmental Section teamed up with IRC to create a demonstration garden site within a highly visible section of Buck Gully. Shallow-rooted, exotic plant species will be replaced by drought tolerant native plants. These deeply rooted plants need less water and will provide better stability to the canyon slope. The City expects the irrigation runoff to Buck Creek will be reduced as well as improving fire safety in the gully.

Water Use Mobile Application: Using a “smart phone” myNB app is a new way to connect with the City of Newport Beach. This app will provide residents data on their water use as well as updates on ocean and bay water quality.



Water Smart Program: This novel program provides city water customers emails on their household water use and provides customized suggestion on ways to save water and money. Based on an initial test

conducted over the past year, a control group showed water consumption decrease by 3 percent. This year, the City will increase customer outreach from 2,000 to 5,000 customers.

Public Spaces Program – Water Smart Landscape Program

(Prop 84): This program will provide incentives to implement water efficient landscape improvement projects. The program specifically targets implementation of comprehensive landscape improvements for publicly-owned and commercial landscape properties. The program grants up to \$2.00 per square foot or 35% of total project cost, whichever is less.



Home Certification Program: Through MWDOC, this program provides a report to the homeowner showing ways to make their home water efficient.

Irrigation and Turf Replacement: Through an OCTA (Orange County Transit Authority) water quality grant, city staff will propose the replacement of turf grass within the medians with drought tolerant plants along a three mile stretch along San Joaquin Hills Rd. and Jamboree Rd. The goal is reducing water use and runoff.

Environmental PSA: The City’s existing public service announcement will be updated October 2013. The PSA will be shown at all Newport Beach movie theaters prior to each movie and shared by city social media and websites.

Beach and Bay Water Quality

Good beach and bay water quality is a priority for this community as well as for Orange County residents. City Council continues to provide funding for water quality improvement projects and the City's Water Quality/Coastal Tidelands Committee provides proactive community involvement for developing policies, programs and project suggestions.

The city's efforts to reduce sediment, trash, bacteria, fertilizers, pesticides and toxic pollutants, as well as reduce runoff from over-irrigation and wash-down activities, has resulted in the best local water quality seen in over 40 years. These improvements are being fortified by innovative public outreach programs that range from promotion of watershed science classes in our high schools to messaging customized to the water quality issues for each sub-watershed.



Newport Beach, Calif., Boasts Cleanest U.S. Coast

July 31, 2013

Newport beaches earn a five-star rating and "A" grades

When it comes to clean sandy beaches and the safest water quality, Newport Beach, Calif., received top marks from both the National Resources Defense Council (NRDC) and Heal the Bay organizations. Newport beaches scored a perfect five stars and "A" grades in both reports, making them among the cleanest in the country.



"These high marks for Newport beaches show the determination and committed expertise by the city and its workers to maintain and monitor our beaches, the boating community for protecting our precious waters from spillage of potentially dangerous chemicals and the beachgoers for respecting and keeping clean this treasure that we have—miles of pristine coastline," said Newport Beach & Co. President and CEO Gary Sherwin.

The NRDC issued star ratings to 200 popular beaches around America, awarding up to five stars for exceptionally low violation rates and strong testing and safety practices. Criteria included testing oceans samples more than once a week, immediacy of public notification after a violation, and immediacy of posting closure notices both on the sand and online.

The NRDC only issued 13 ratings of the full five stars and Newport Beach's 38th street and 52nd/53rd street stations both took top marks. Newport Beach's Orange Street station earned four out of five stars.

The NRDC Report coincided with Heal the Bay's newest annual report card, which issued A through F grades to more than 500 West Coast beaches. The better the grade a beach received, the lower the risk of contracting illness from water recreation at that location.

The world famous Newport Beach surf spot, "The Wedge," received an A+ grade and was one of only 35 beaches that made the Heal the Bay Honor Roll—an achievement for maintaining high water quality during all three conditions (summer dry weather, winter dry weather, and winter wet weather).

Heal the Bay issued grades for 34 beaches in Newport Beach and 28 of those beaches earned A+ grades. Not one of the spots in Newport Beach made the dreaded "Beach Bummers" list, which reveals the most polluted beaches. Sherwin says these ratings are important to families arriving to Newport Beach on vacation, as much as the locals who enjoy the Newport Beach coastline daily. "Families want to have confidence when they book a vacation, or make a day-trip to a coastal destination that the experience is a not only enjoyable, but safe. Newport Beach is proud to welcome visitors to some of the cleanest beaches in the country."

newportbeachindy.com JULY 26, 2013

Going Green

The Green culture appears monthly at the Newport Beach Independent. You can learn more about what is going on with your water on sand and in the sea at www.beach.org.

Newport Leads in Water Quality

By GARY BROWN, EXECUTIVE DIRECTOR | OC COASTGARDIAN

Newport Beach leads in the pulse of this city.

Most residents grow up being warned and playing on the sand since they could walk. Some might even try to convince you that they were born in the water.

This tight-knit community continues to prove its passion and commitment to protecting the ocean threat that exists there as a city: their beaches.

Newport Beach consistently goes above and beyond the mandated EPA regulations for water quality to make sure water for residents and the tourists that support our local economy.

The city takes strong measures to protect its waters from one of the most damaging forces for any coastal community: debris. For the past 11 years, the city has tracked and cleaned all of its 1,237 catch basins and corners of the city where they sweeping programs to collect 3,688 tons (lbs) of debris and litter.

It is very important for our visitors and residents to have clean water that they can see, breathe and enjoy," said John Kappeler, the Water Quality Manager for the city of Newport Beach.

Excellent water quality stems from extensive, long-term projects that make water quality a top priority to ensure residents, public officials and Newport Beach community members.

The Duck Gully Resource Management Plan details a 20-year plan to make ongoing improvements to the coastal system to increase public access, fire safety, water quality, and outdoor plant restoration. The city also shows extensive support of water conservation projects, education programs, and campaigns such as the OC "Be a Water Hero" campaign, the "Smart Griggswater Month," and the annual Children's Water Education Festival.

Newport Beach consistently applies for grant funding for the best tools and debris removal devices and items. Some of this funding comes from Orange County water approval Measure M, a fund for the installation of water quality devices and natural treatment systems to clean up polluted urban runoff before it enters harbors and oceans. The city has utilized Measure M Tier 1 grant awards for litter removal and trash diversion projects to Newport Bay.

With Newport's commitment to clean water, the city and its comprehensive plans for water quality improvements projects act as an example to be followed by its neighbors up and down the coast. According to Kappeler, one the reasons the city needs to be pro active with their water quality measures is because Newport Beach is situated at the end of a funnel for upstream cities. All of the polluted urban runoff from inland cities then becomes Newport Beach's problem.

There is plenty of work to be done, and that's such as Sustainable California Day (held on July 25) serves as a reminder that all cities and residents need to continue the fight for clean water.

Source: the beach

The following pages provide an overview of our water quality challenges and the direction the City is taking to mitigate these challenges.

Newport Beach's Honor Roll Recognition

Heal the Bay's water quality report card for fiscal year 2012-2013 shows continuing water quality improvements for Newport Bay. Nearly all of Newport's beaches receive "A" grades during summer months. While there are some beach impacts during the winter season, winter water quality continues to improve.

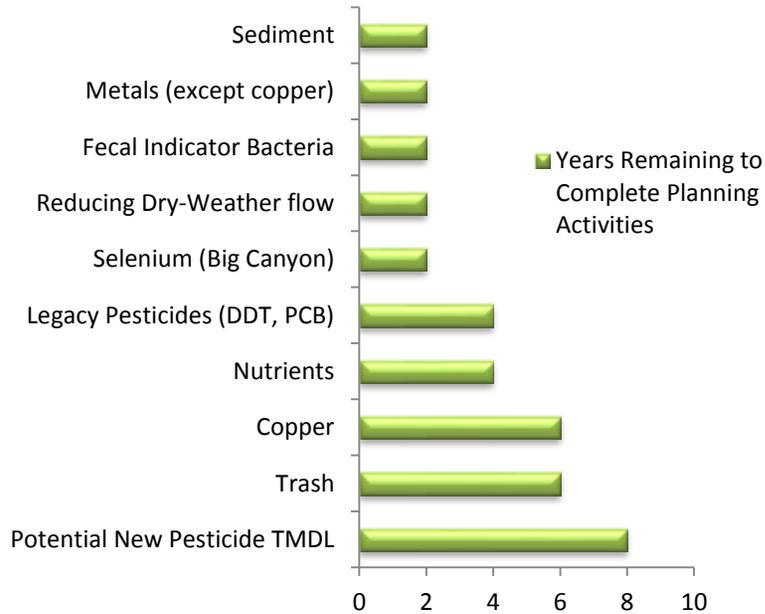
NEWPORT BEACH WATER QUALITY GRADES 2012-2013			
	Summer Dry (April-Oct)	Winter Dry (Nov-Mar)	Wet Weather Year-Round
Orange Street	A	A	D
52nd/53rd Street	A+	A	A
38th Street	A+	A	A
15th/16th Street	A	A	A+
Balboa Pier	A+	A	A+
The Wedge	A+	A+	A+
Newport Dunes-North	A	A	F
Newport Dunes-East	A	C	F
Newport Dunes-Middle	A	C	F
Newport Dunes-West	A	F	F
Bayshore Beach	A	A+	F
Via Genoa Beach	A	A	B
Lido Yacht Club Beach	A+	A	B
Garnet Avenue Beach	B	A	C
Abalone Avenue Beach	A	A	A
Park Avenue Beach	A	A+	A
Onyx Avenue Beach	A	A	A

	Summer Dry (April-Oct)	Winter Dry (Nov-Mar)	Wet Weather Year-Round
Ruby Avenue Beach	A	A+	B
Grand Canal	A	A	A
43rd Street Beach	A+	A	A
38th Street Beach	A	A+	C
19th Street Beach	A	A+	A
15th Street Beach	A+	A	B
10th Street Beach	A+	A	D
Alvarado/ Bay Isle Beach	A	B	D
N Street Beach	A+	A+	A
Harbor Patrol Beach	A	A+	A+
Rocky Point Beach	A	A	A
Corona Del Mar Corona Del Mar	A	A	A+
Little Corona Beach	B	B	A+
Pelican Point Pelican Point	A	A+	A+
Crystal Cove	A+	A+	B
Crystal Cove	A+	A	A+
Muddy Creek	A+	A	A+
El Moro Beach	A+	A+	A+

TMDL Challenges

Good progress has been made toward understanding how to handle the various TMDL's listed below. Figure 3 shows approximate durations remaining to complete planning activities after which time efforts will be shifted toward implementing mitigation programs and performing effectiveness monitoring.

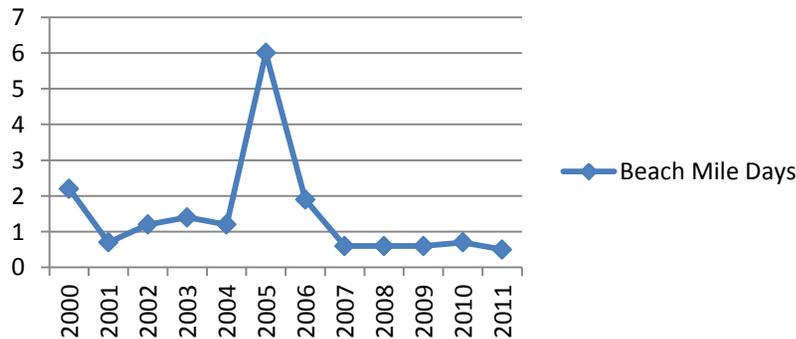
Figure 3: TMDL Planning Timelines



Impacts to Beach Water Quality Decrease

Closures or posting of beaches in Newport Beach due to high bacteria continue to decline. From a high of 6 beach-mile-days

Beach Mile Days



in 2005, (a Beach Mile-Day is defined as the length of posted or closed beaches multiplied by the number of days of posting or closure) to less than a 0.5 beach mile days in 2011. Reduced beach mile days mean better ocean water quality.

Water Quality Projects and Programs

1. Food Facility Inspections

NPDES violations decreased by 18%. The majority of violations were minor in nature.

2. Pesticide Usage (TMDL)

Integrating native planting into the cityscape pallet is one way to reduce pesticide application and the possibility of these pesticides from entering the ocean. Applied amounts were **reduced by 29%** (22,000 lbs.) in FY 12-13 compared to last year's usage.

3. Street Sweeping

39,495 curb miles were swept removing 5,698 tons (dry) of debris.



4. Buck Gully Resource Management Plan

The Resource and Recreation Management Plan for Buck Gully was completed detailing a 20-year work plan and defining a series of capital improvement projects to address public access, fire safety, water quality and native restoration

5. Upper Newport Bay Ecosystem Restoration Project

Completed a multi-year, \$47 million dredging project to restore the Upper Newport Bay. The project was completed under budget and on time with nearly all of the navigable channels dredged to a depth of at least minus 10 feet Mean Lower Low Water.



6. Runoff Reduction Program

Through a State Proposition 84 grant award, the program has assisted over 2,000 customers and installed over 51,900 high efficiency nozzles, and 1,048 weather based

irrigation controllers. According the Metropolitan Water District's numbers, the estimated annual water saved is over 34 acre-ft (110 million gallons). Irrigation runoff has been reduced by about 14,000 gallons per day.

7. OCTA Water Quality Grants

Two CDS units (Continuous Deflection Separation) have been installed with more planned installations in the near future.

The CDS system screens, separates and traps grease, sediment, trash and debris (Styrofoam, fast food containers, plastic, cigarette butts, etc.) pollutants,



including capture and removal of 100% of floating pollutants.

1. Newport Blvd @ 15th St.
2. City Yard Transfer Station
3. Dover Dr. (future)
4. Balboa Coves (future)
5. Begonia Park (future)
6. Pelican Point (future)
7. CDM High School (future)
8. Newport Dunes. (future)

8. Marina Trash Skimmers

The marina trash skimmer is attached to a dock or fixed location and collects floating trash and debris while passing the "skimmed" water back into the bay. Six locations are being scouted for installation.



9. Civic Center Bio-Swales

Setting the standard for large development, the Civic Center and Park includes a catchment system that collects and naturally treats storm water and irrigation runoff from the Civic Center and Park. These catchment swales keep dry weather runoff from ever entering the ocean.

10. Infiltration Galleries

Crystal Cove State Park, Reef Point Parking Lot: Modifications of parking lot and medians capture, infiltrate and filter dry-weather and stormwater runoff.

Promenade at Shorcliffs: This infiltration gallery uses pervious pavement and gravel filtration to capture and infiltrate irrigation runoff before it drains to the ocean.



11. Big Canyon Selenium Mitigation Program

Based on a 15-year work plan approved by the Regional Board, the City has initiated an irrigation runoff reduction program in the upper canyon and will be constructing two projects this fiscal year to kick off our mitigation program.

12. Wetland Restoration

Crystal Cove Cottage Village Ponds: Invasive non-native plants were removed from Los Trancos Creek and replanted with a



native hydroseed mix containing pickleweed and a of variety salty grasses.

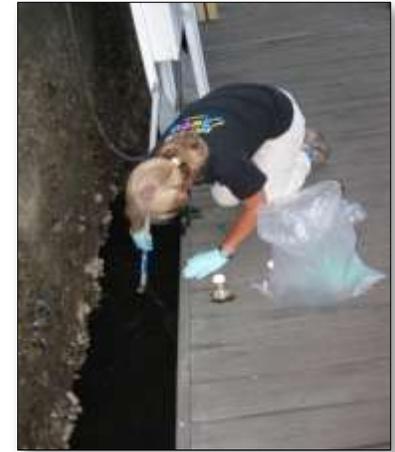
13. Sediment TMDL

The City is working with our upstream

neighbors to cost effectively remove sediment in San Diego Creek to prevent it from entering the in-channel and in-bay sediment retention basins. The City is also working with upstream partners to obtain a State 319h grant to restore fire damage areas in the foothills to reduce the release of fine sediments that eventually end up in Newport Bay.

14. Street Gutter Study

A two phase study has been initiated to investigate sources of bacteria found at the outlet of the “Arches” storm drain located at the west end of the harbor. **Phase 1** will determine bacterial loading from the outfall, assess bacterial contributions from biofilm and investigate other bacterial sources related to the marina. **Phase 2** is a watershed-wide Microbial Source Tracking Study (MST). This will involve field and laboratory methods to identify potential sources of bacteria.



15. Traveling Tidepool

A City of Newport Beach mobile aquarium (expected winter 2013) will bring touch tanks filled with marine animals like sea stars, stingrays and sharks to you. Activities will introduce students to concepts about food chains, watershed protection, and Southern California marine habitats in addition to the hands-on experience with the animals.

Energy Efficiency - Water Energy Nexus

Water Energy Nexus refers to the critical link between finite energy resources and finite water resources. Creating drinking water is an energy intensive undertaking; treating, pumping and distributing water require huge energy resources. Reducing water consumption within the City aids in the sustainability of water supplies, improves health of the ocean and bay, decreases energy consumption and reduces greenhouse gas emissions.

California's Assembly Bill 32 California Global Warming Solutions Act (AB 32) sets a target to decrease greenhouse emissions statewide to 1990 levels by the year 2020. Reducing greenhouse gas emissions to 1990 levels means cutting approximately 30% from business-as usual emissions levels projected for 2020, or about 15% from today's levels.

The City of Newport Beach recognizes the impact carbon emissions have on global climate change. The City is aiming to reduce its energy consumption and greenhouse gas emissions to become a more sustainable community. The following are some recent steps towards making Newport Beach an energy efficient "Smart City".



1. Marina Park Savings by Design:

LED lighting, natural daylight and use of water saving devices for building consumption and use of recycled materials for interior and exterior building components represent several of the sustainable design characteristics of this project.

2. Civic Center - Savings by Design:

This project was constructed to be certified as LEED (Leadership in Energy and Environmental Design) Gold. The City of Newport Beach is committed to the mission of building a community that is sustainable and environmentally friendly.

3. Efficient Street Lighting:

The City completed a large-scale LED streetlight conversion of over 400 LED streetlight fixtures on City streets. The lighting is metered, enabling accurate energy consumption and savings. The retrofits have yielded over **50% savings in**



energy consumption over the prior lighting system.

4. Energy Use Database:

Via SCE and SCG city staff can access energy consumption for use in determining performance measures and verifying retrofit viability for future projects.

5. Plug-Load Sensors:

This small sensor under each desk throughout the Civic Center turns off office equipment when activity is absent. The anticipated energy savings is 42,600 KWh per year.

6. Water Pump Stations:

Due to the geography of the city a substantial amount of energy is used for pumping potable water throughout



Newport Beach. Three of the five pump stations have been retrofitted with VFD (Variable Frequency Drive) pumps. Since their installation 535,000 KWh has been saved with an anticipated **1.28 million KWh**

saved annually, enough to power 140 homes per year.

7. Energy Action Plan (EAP):

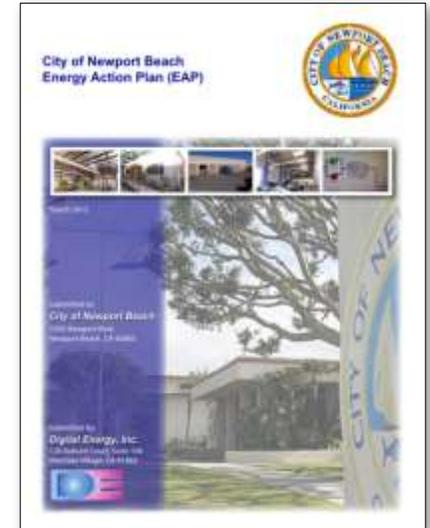
The City has developed an EAP aiming to reduce its energy consumption and greenhouse gas emissions (GHG) to become a more sustainable community. The main goal of the EAP is to provide a roadmap for reductions in energy use in facility buildings and operations.

CONCLUSION

The City’s ongoing environmental projects and programs have demonstrated reductions in customer water demand, improvement in ocean and bay water quality on a consistent basis and now balancing our energy efficient portfolio of projects.

With respects to water use efficiency, the most successful programs include the City’s rebate programs and consistent public outreach. However, further water demand reductions may be required.

Ocean and bay water quality continue to improve due to the efforts of projects and policies that drive behavioral change. The Public Works-Environmental Section continues to look for innovative approaches to the changing conditions that challenge improving water



quality. The City looks forward to positive results from completed and upcoming projects including infiltration projects in Newport Coast, OCTA grant funded in-stream CDS units that capture trash and sediment, and a large scale runoff reduction program focused on installing weather based irrigation equipment for residential properties and HOA common areas.

Additionally, the City is setting the example by being proactive in the approach to **energy design and retrofits**. Evidence of this is clearly exemplified by its recent construction efforts of the Oasis Senior Center awarded LEED Silver and the new Civic Center that too will likely achieve a LEED Gold certification. The future of the city's energy projects have been detailed in the recently prepared Energy Action Plan. This plan provides a strategic framework of current and future projects that will result in increased efficiency and sustainability.



Prepared by Shane Burckle
Public Works - Environmental Section
sburckle@newportbeachca.gov
949-644-3214