



Conejo
Recreation & Park District

Water Conservation Policy

March 2014

Conejo Recreation and Park District

Water Conservation Policy

Since the passage of the Water Conservation Act of 2009 by the California's legislature, the District has been working to reduce its water consumption by 20% by the year 2020.

Therefore, in accordance with the Act and the District's Strategic Plan, Conejo Recreation & Park District staff (herein referred to as the "the District"), has developed the following policy pertaining to water conservation.

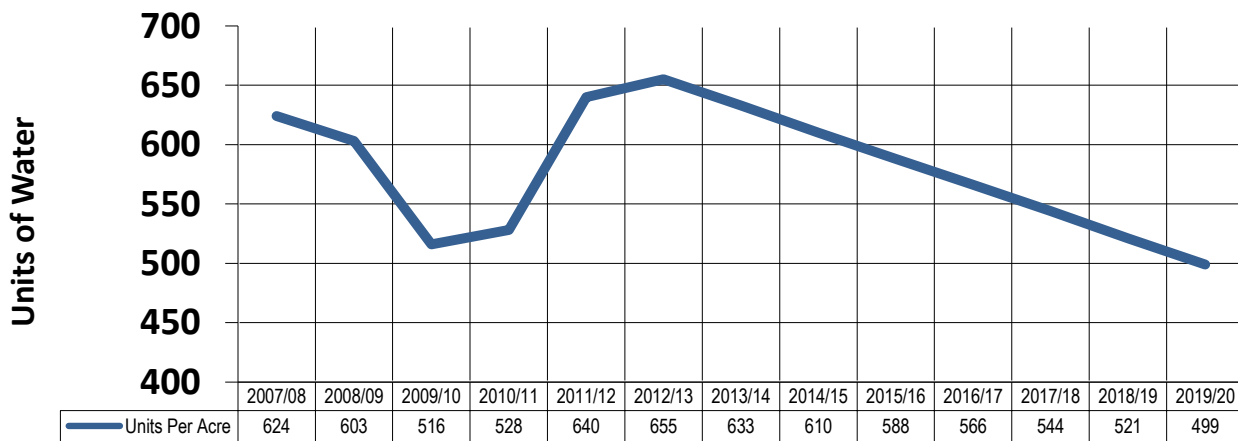
To achieve these goals, the District must maintain a steady supply of water resources to sustain its park sites and open space areas. In the following pages, these goals are outlined in more detail to assist the District in this effort and to help the public interpret subsequent changes to parks, facilities, and open space.

2007-2020 Water Actual Use/Projection

TABLE 1

	Rainfall (inches)	Fiscal Year	Water Usage (Units)	Developed Acreage	Units Per Acre	% Change Compared to Benchmark Year
ACTUAL	4.89	2007/2008	326,373	523	624	-
ACTUAL	13.69	2008/2009	325,497	540	603	3.37%
ACTUAL	8.45	2009/2010	278,741	540	516	17.31%
ACTUAL	16.97	2010/2011	285,287	540	528	15.39%
ACTUAL	8.74	2011/2012	345,609	540	640	-2.56%
ACTUAL	4.86	2012/2013	370,483	565	655	-4.97%
PROJECTED	15.22	2013/2014	357,645	565	633	-1.40%
PROJECTED	15.22	2014/2015	346,480	568	610	2.16%
PROJECTED	15.22	2015/2016	336,924	573	588	5.73%
PROJECTED	15.22	2016/2017	324,318	573	566	9.30%
PROJECTED	15.22	2017/2018	311,712	573	544	12.87%
PROJECTED	15.22	2018/2019	298,533	573	521	16.43%
PROJECTED	15.22	2019/2020	285,927	573	499	20.00%

Water Use Per Developed Acre



- The above table and graph show a projection based on a 20% reduction in water use between the benchmark 2007/2008 value and the goal year of 2020. From the actual data available, the District has increased its water use by 4.97%.
- Unit of water equals 748 gallons.
- Historical rainfall data is from <http://www.wunderground.com/history/airport/KCMA/2011/7/1/MonthlyHistory.html>
- Projected Rainfall data is the average historical rainfall for the area.
- Fiscal year runs from 1 July- 30 June.
- Above developed acreage projection based on exhibit A, estimated from 2013/2014 – 2022/2023 Ten Year CIP Plan and staff adjustments, located on page 5.

Water Use Comparison

TABLE 2

	Fiscal Year	Unmitigated Water Use (Units)	Mitigated Water Use (Units)	Savings (Units)
ACTUAL	2007/2008	326,373	326,373	0
ACTUAL	2008/2009	336,960	325,497	11,463
ACTUAL	2009/2010	336,960	278,741	58,219
ACTUAL	2010/2011	336,960	285,287	51,673
ACTUAL	2011/2012	336,960	345,609	-8,649
ACTUAL	2012/2013	352,560	370,483	-17,923
PROJECTED	2013/2014	352,560	357,645	-5,085
PROJECTED	2014/2015	354,432	346,480	7,952
PROJECTED	2015/2016	357,552	336,924	20,628
PROJECTED	2016/2017	357,552	324,318	33,234
PROJECTED	2017/2018	357,552	311,712	45,840
PROJECTED	2018/2019	357,552	298,533	59,019
PROJECTED	2019/2020	357,552	285,927	71,625

The above table shows the vast difference between doing nothing (unmitigated water use utilizing actual 2007 units – 1 unit of water equals 748 gallons - per acre rate) and progressively reducing water use per acre (mitigated water use utilizing actual and projected units per acre rate from Table 1). The column to the far right depicts the quantity of this difference. If no improvements are made on water use within the District, use could soar to approximately 70 thousand units above the projected goal.

Exhibit A

Park Name	Total Acres	Developed Acres	Undeveloped Acreage	Projected Development	Projected Year
Estella Park	1.9	1.9	0.0	None	
Banyan Park	7.4	3.0	4.4	4.4	2015/2016
Morrow Circle	4.0	0.0	4.0	None	
Del Norte	3.7	0.0	3.7	None	
Old Meadows Park	31.0	6.2	24.8	0.5	2014/2015
Stagecoach Inn Museum	5.0	5.0	0.0	None	
Hickory Park	4.6	4.6	0.0	None	
Cypress Park	5.0	5.0	0.0	None	
Borchard Community Park	28.7	28.7	0.0	None	
Suburbia Park	2.0	2.0	0.0	None	
Thousand Oaks Community Park	35.8	22.0	13.8	None	
Oakbrook Neighborhood Park	13.5	13.5	0.0	None	
Evenstar Park	4.0	4.0	0.0	None	
Lynn Oaks Park	8.8	4.0	4.8	None	
Russell Access Strips	1.0	1.0	0.0	None	
Russell Park	7.0	7.0	0.0	None	
Triunfo Park	23.4	23.4	0.0	None	
Conejo Creek North	44.1	44.1	0.0	None	
Fiore Playfield	9.6	7.1	2.5	None	
Beyer Park	4.0	4.0	0.0	None	
Conejo Creek West	51.1	44.0	7.1	None	
Conejo Creek South	54.7	50.3	4.4	0.0	
Conejo Community Park	38.4	20.0	18.4	None	
Wendy Park	4.3	4.3	0.0	None	
Glenwood Park	5.2	5.2	0.0	None	
Conejo Valley Botanic Garden	39.6	39.6	0.0	None	
Waverly Park	5.5	5.5	0.0	None	
Thousand Oaks Teen Center	0.0	0.0	0.0	None	
Conejo Creek Southwest	14.1	0.0	14.1	14.1	2022/2023
Goebel Senior Center	0.0	0.0	0.0	None	
Knoll Park	21.1	0.0	21.1	None	

Exhibit A (continued)

Park Name	Total Acres	Developed Acres	Undeveloped Acreage	Projected Development	Projected Year
Pepper Tree Playfield	21.7	21.7	0.0	None	
Wildwood Neighborhood Park	5.8	5.8	0.0	None	
Cañada Park	9.2	4.0	5.2	None	
Sunset Hills Park	5.8	5.8	0.0	None	
Spring Meadow Park	7.2	7.2	0.0	None	
Wildflower Playfield	19.0	19.0	0.0	None	
Stagecoach Inn Park	4.9	4.9	0.0	None	
Kimber Park	8.3	8.3	0.0	None	
Farland House	0.0	0.0	0.0	None	
Walnut Grove Park	6.5	6.5	0.0	None	
Southshore Hills Park	4.5	4.5	0.0	None	
Northwood Park	8.5	8.5	0.0	None	
Newbury Gateway Park	6.9	2.3	4.6	None	
Crowley House	0.0	0.0	0.0	None	
El Parque de la Paz	4.8	4.8	0.0	None	
North Ranch Neighborhood Park	12.0	12.0	0.0	None	
North Ranch Playfield	12.0	12.0	0.0	None	
Lang Ranch Neighborhood Park	10.4	7.0	3.4	None	
Lang Ranch Community Park	124.0	0.0	124.0	3.0	2014/2015
McCrea Ranch	219.4	0.0	219.4	None	
Rancho Conejo Playfield	12.7	12.7	0.0	None	
Dos Vientos Neighborhood Park	5.2	5.2	0.0	None	
Walnut Grove Equestrian Center	13.0	4.5	8.5	None	
McCrea Ranch West	58.9	0.0	58.9	None	
Hillcrest Center	8.8	4.0	4.8	None	
Dos Vientos Community Park	27.8	27.8	0.0	None	
Sycamore Neighborhood Park	4.5	4.5	0.0	None	
Del Prado Playfield	26.0	16.0	10.0	None	
Total	1126.3	564.4	561.9	22.0	
*Bold Denotes Future Park Acreage					

In response to this projection, the District concludes there will be approximately 22 acres of new development over the next 10 years (2013-2022). This justifies a continued increase in total annual water consumption despite a continuous reduction in per acre water use, as illustrated by the graph and tables on pages 2 and 3 above.

Conejo Recreation and Park District Water Conservation Policy

Goals

1. USE WATER EFFICIENTLY IN AGENCY FACILITIES

Enacting policies and procedures to assess, maintain and repair existing plumbing fixtures, pipes and irrigation systems in all agency buildings and facilities is critical to efficient water use.²

Due to the cost of water (more so than the availability of water created by drought conditions), the District has been continuously looking for ways to maintain turf and landscaping at its parks while simultaneously conserving water. Drought conditions and water shortages from whatever cause (i.e. lack of rain locally, regulatory, legislative or contractual causes, such as Governor Brown's drought declaration in January 2014), prior to the former Governor's declaration of a state-wide water shortage emergency in February 2009, and the City of Thousand Oaks' declaration of Level 1 water supply shortage, bring even more attention to the District's complete dependence on large quantities of imported water. (District Mandatory Water Conservation Practices, July 2009)

Current Practice:

- The District utilizes maintenance reporting software and telephone reporting for irrigation and other plumbing problems; this allows the District to fix leaks and breaks in a timely matter in order to reduce water waste.

Objectives:

- Develop an electronic reporting system that links its website to the existing maintenance program. This will include an automatic email response when the problem is fixed; as part of the current intranet project.
- Expand iCentral controls to all parks and utilizing advanced irrigation principles in all new development.

Challenges:

- Cost of infrastructure upgrades limit the speed of system renovations.

2. REPLACE EXISTING APPLIANCES AND FIXTURES WITH WATER-EFFICIENT ONES

These include low-flow toilets, urinals and cooling towers. Installing water saving plumbing and appliances in existing buildings and operations can save money through reduced energy use.³

Current Practice:

- The District uses low volume urinals and toilets fitted with infra-red automatic valves. In addition, the District has indefinitely suspended washing its vehicles except for maintaining sanitary conditions, and has curtailed washing tennis courts. When vehicles and tennis courts are cleaned, the District utilizes high-pressure, low volume cleaning equipment. (District Mandatory Water Conservation Practices, July 2009)

- The District utilizes water budgeting equipment, iCentral satellite-based controllers (currently above 85% of parks), automatic valve shutdown, and gate valves for maintenance projects. These products are used to minimize waste during routine maintenance by allowing staff to close the irrigation network piping to avoid draining large quantities of water prior to repair.
- The District participates in the Edison low energy retrofit program and has replaced outdated A/C infrastructure with up-to-date alternatives.

Objectives:

- Research advanced plumbing equipment that will improve on our current low-water infrastructure. This includes ultra-low water urinals, toilets, and controlled valve sink faucets.
- Reach 90% coverage with iCentral, satellite-based controllers by 2020.

Challenges:

- Many of these products and devices are costly and budgeting limits the speed to which they can be implemented.

3. USE DROUGHT TOLERANT PLANTS IN AGENCY PARKS

Using drought tolerant plants, along with water efficient irrigation practices, may reduce outside water use by as much as 25 to 50 percent.⁴

Current Practice:

- The District takes non-essential portions of a park (other than sports fields and high-use public areas) and cap irrigation heads and converts the ground cover to wood chips. (District Mandatory Water Conservation Practices, July 2009)
- The District utilizes drought-tolerant species when and where applicable.

Objectives:

- Convert 30 acres of turf by 2016
- Research turf alternatives such as synthetic turf for playfields.
- Explore alternative uses for outlying park areas.
- Increase native planting and emphasizing drought-tolerant species:

“The native plants of California are unlike any other in the world. From the richly colored expanse of spring wildflowers in the desert to groves of Monterey cypress on the coast, California's wild gardens are immensely diverse and awe-inspiring in their beauty. They define the landscape and offer Californians a sense of place, pride and stability, and they provide habitat for endemic wildlife species that exist no place else on earth.” -California Native Plant Society
- Utilize drought-tolerant species to increase the natural flora and fauna habitat and decrease water needs.
- Develop a District-wide Landscape Specifications Plan; this will lay the ground for a drought-tolerant planting palate.

Challenges:

- Drought-tolerant planting, turf alternatives, and wood chipped areas have faced considerable challenges due to financial issues and the public perception and familiarity that parks should be lush and green.

4. USE RECYCLED WATER FOR AGENCY PARKS

*State law declares that the use of potable water for non-potable uses is a waste or unreasonable use of water if recycled water is available.*⁵

Current Practice:

- The City of Thousand Oaks does not have recycled water available; however the Las Virgenes Municipal Water District (LVMWD) provides recycled water at its Tapia Water Reclamation Facility (TWRF).

Objectives:

- Possible recycled water availability in the Westlake area from the LVMWD to serve east side of the District.
- TWRF possible recycled water-line expansion:
"TWRF applies state-of-the-art technology to transform wastewater into high quality recycled water that is used to irrigate public and commercial landscaping such as golf courses, school grounds, highway medians and parks."
-LVMWD

Challenges:

- Recycled water unavailable (City of Thousand Oaks); no known future of recycled water in Thousand Oaks. The treated wastewater from the City's Hill Canyon Treatment Plant is discharged into Calleguas Creek where it is sold to Camrosa Water District where it is reused downstream for primarily crop irrigation in the Oxnard plain.
"Water recycling has been a great success in our watershed. Mid-summer, every drop of the 9-million gallons of recycled water available daily is used to irrigate public landscapes."
-LVMWD

5. CREATE A PROCEDURE FOR RESIDENTS TO REPORT BROKEN SPRINKLERS AT AGENCY PARKS

*Agencies with a convenient (and after hours) system for residents to report broken sprinklers in public parks, including overflowing or ponding water in the street, can save water from being wasted.*⁶

Current Practice:

- The District staff and public report leaks, breaks and faulty irrigation via telephone and the Do Report Irrigation Problems (DRIP) program. Phone calls and emails from DRIP are received from park patrons and interfaced to grounds staff. This system allows real time reporting during operating hours.

Objectives:

- Completed.

Challenges:

- Completed.

6. DEVELOP A DESIGN CRITERIA TO REDUCE RUNOFF AND PROMOTE GROUNDWATER RECHARGE

This practice is sometimes referred to as Low-Impact Development (LID.) Examples include permeable asphalt and drains (or swales).⁷

Current Practice:

- District park sites are designed to absorb storm water
- New parks are being outfitted with bioswales and older parks are beginning to be retrofitted with bioswales intended to capture, slow, and filter storm water.

Objectives:

- Utilize EPA MS4 guidelines that allow park sites to accept and treat municipal storm water runoff through the creation of bio swales. In this program developers and local municipalities can divert runoff from conventional storm drains into bio swales that will treat and diffuse storm water.

Bio-swales are landscape elements designed to remove silt and pollution from surface runoff water. They consist of a drainage course with gently sloped sides and filled with vegetation.

(Source: en.wikipedia.org/wiki/Bioswale)

This program will utilize LID^{7.1} guidelines as outlined by the EPA.

To expand on this, all future parks and park retrofits will utilize these design practices as outlined in the California Building Code, which requires LEED^{7.2} standards.

Challenges:

- As the District is nearing build out, opportunities to incorporate this design in new parks are dwindling; thus, the vast majority of opportunities are for retrofitting existing parks. Retrofitting existing parks require severe financial challenges.

7. DEVELOP BUILDING STANDARDS THAT INCLUDE WATER EFFICIENCY REQUIREMENTS FOR NEW CONSTRUCTION

These include water efficient devices and appliances.⁸

Current Practice:

- In order to apply the least amount of water necessary to keep our park landscaping healthy, District staff has been methodically replacing old irrigation controllers with iCentral Controllers. These controllers monitor the weather in real-time via the Internet and adjust watering times and volumes accordingly. If it rains or the humidity is high enough, these controllers will simply shut the irrigation system off altogether. Approximately 85 percent of the 10,000 irrigation heads within the Park District are now operated by these iCentral Controllers. (District Mandatory Water Conservation Practices, July 2009)

Objectives:

- Install flow sensors and high-efficiency, low water use, irrigation heads throughout all large parks.
- Create a District-wide standard for all future construction and retrofits and reference California building code¹³
- Follow Water Conservation Leadership Guide.¹⁴

Challenges:

- Implementing these on construction jobs where contractors are retrofitting or modifying existing landscaped areas or developing new parks.

8. CONDUCT WATER AUDITS FOR AGENCY PROPERTIES

Implementing an audit's recommendations to install low flow toilets, showerheads and other plumbing fixtures can sometimes be combined with other upgrades that may be necessary, potentially saving time and money.⁹

Current Practice:

- Grounds and maintenance staff, including a certified landscape irrigation auditor, check each system at least twice a month for leaks and spray accuracy. (District Mandatory Water Conservation Practices, July 2009)

Objectives:

- Conduct annual auditor's report which includes auditing facilities water use in addition to the existing landscape irrigation audit. These two reports will help track progress and assist in planning efforts by providing real-time data on each park and the District as a whole.

Challenges:

- The current system is extremely labor intensive and manually analyzed and implemented.

9. INSTALL WATER CONSERVATION DEVICES IN EXISTING BUILDINGS

The number of existing buildings far exceeds the number of new and planned construction; the potential to conserve water from existing structures and properties is significant.¹⁰

Current Practice:

- The District participates in the Edison low energy retrofit program and has been able to replace items such as A/C systems that use water for cooling.

Objectives:

- Take inventory of current facilities and noting where improvement is needed.

Challenges:

- Implementing policy and funding availability.

End Notes

1. 20X2020 Water Conservation Plan, February 2010 (Chapter 1, Page 1)
2. Water Conservation Leadership Guide (Page 2)
3. Water Conservation Leadership Guide (Page 3.1)
4. Water Conservation Leadership Guide (Page 3.2)
5. Water Conservation Leadership Guide (Page 4.1)
6. Water Conservation Leadership Guide (Page 4.2)
7. Water Conservation Leadership Guide (Page 5.2)
- 8.1 CA Storm Water Quality Association LID Guidelines
<http://www.casqa.org/LID/SoCalLID/tabid/218/Default.aspx>
- 8.2 LEED Standards
<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988>
8. Water Conservation Leadership Guide (Page 6.2)
9. Water Conservation Leadership Guide (Page 7.1)
10. Water Conservation Leadership Guide (Page 7.2)
11. Bureau of Reclamation Challenge Grant Program Fact Sheet
12. Environmental Protection Agency LID Factsheet
13. CA Building Code 2011 → CAL Green Standards (January 2011)
14. Water Conservation Leadership Guide (Whole Document)

References

1. **ILG Water Conservation Leadership Guide: Issues for Local Officials to Consider:**
<http://www.ca-ilg.org/WaterConservation#Efficiency>
2. **California Water Association:**
<http://www.calwaterassn.com/>
3. **CRPD District Mandatory Water Conservation Practices.**
4. **California Storm water Quality Association:**
<http://www.casqa.org/LID/SoCalLID/tabid/218/Default.aspx>
5. **Las Virgenes Municipal Water District:**
<http://www.lvmwd.com/index.aspx?page=61>
6. **Wunderground Weather**
<http://www.wunderground.com/history/airport/KCMA/2011/7/1/MonthlyHistory.html>
7. **CRPD Five-Year Strategic Plan (2013-2017): 2.9**