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## **DOVE LAKE – A WORKING RESERVOIR**

As displayed in the banner for our monthly newsletter, Dove Lake is a picturesque location in our local community. The reality is that Dove Lake is a year round working reservoir for the District. The water from the lake is used to supplement the recycled water system. It is through the use of this additional source of water that the District is able to keep recycled water rates low and meet its recycled water demands, and as such, we like to revisit this topic annually.

Common sense dictates that a diverse investment portfolio is extremely important to a secure financial future. It is no different for water purveyors. The District's water portfolio is comprised of a variety of water sources to meet different types of needs. These sources include imported drinking water supplies, local groundwater supplies (or well water), recycled water, and urban runoff water. Collectively, these different water sources ensure service reliability to our customers.

Historically, the District has made a practice of using recycled water for the purpose of irrigation whenever possible. The truth about recycled water, or purple pipe water, is that it is produced from sewage. The Robinson Ranch Wastewater Treatment Plant (WWTP) provides treatment to the sewage that is collected from all the residential communities located on the upper Plano in the District's service area.

Once the sewage influent is treated in compliance with Title 22 Regulations of the Health and Safety Code of the State of California, the recycled water is stored in the Recycled Water Reservoir at the WWTP. This water is then used for the irrigation of the green belts, street medians, and various parks in the District, as well as the Dove Canyon golf course. Sometimes though, the demand for

recycled water can be so great that the WWTP's recycled water production alone is insufficient. In order to supplement the demand of recycled water throughout the year, the District owns and uses the urban and storm water runoff in Dove Lake, which is located in the Dove Canyon community. Dove Lake is a man-made lake with over five hundred acre-feet of water storage capacity. The District acquired ownership of Dove Lake in the early 1990's.

When additional recycled water is needed during the warm season, the District pumps Dove Lake water to the Recycled Water Reservoir at the WWTP for distribution to the recycled water users. The District actively monitors Dove Lake's water quality through the routine tests of the water's dissolved oxygen levels, and collection of water samples from Dove Lake to assess the overall water quality.

The District preserves the water quality in Dove Lake through two different methods. The first method is accomplished through a series of air diffusers which are strategically located throughout the lake. Although significantly larger in size, these air diffusers are designed similarly to the type of sandstones that are used in aquariums. The air diffusers are powered by air compressors that aerate the lake water by pumping compressed air into the water. The pumped air helps to mix and maintain the water's dissolved oxygen levels, which can prevent the growth of algae and other waterborne nuisances.

The second method used to maintain the water quality of Dove Lake is through the application of the two Solar Bee devices. Dove Canyon residents and Dove Lake visitors will notice the two devices floating on the lake surface. The Solar Bee devices are solar-powered mixers which are designed to evenly mix the oxygenated water

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at a slow rate throughout the entire lake. These devices have an adjustable uptake tube that can be extended to twenty feet below the lake surface. This design allows the District to successfully aerate the lake water to a greater depth, which in turn allows the potential for recycling more water without the risk of depleting oxygen levels.

In total, TCWD processes an average of one hundred acre feet per year from Dove Lake, which represents about fifteen percent of the total amount of recycled water used annually for irrigation by District customers. By augmenting the recycled water system with water from Dove Lake, TCWD is able to keep recycled water rates lower for homeowner associations and other recycled water users in our service area. Additionally, it is through these recycling efforts that TCWD can effectively stay within our annual drinking water allocation from Metropolitan Water District of Southern California.

## THE IMPACT OF HOLIDAY MEALS

With the holidays fast approaching, many of us plan to cook special meals to share with families and friends. There is a potential hidden danger to the both the residential sewer pipes and District's sanitary sewer infrastructure in these meal preparations. This hidden danger is grease.

It is important that grease is handled carefully all year round, but especially this time of year. Typically, it is the larger quantities of grease created by cooking a turkey, ham, or roast which can result in problems within your home's sewer pipes, as well as within your neighborhood, if not disposed of properly. The District's Wastewater Operators use a "Vactor Truck" to routinely clean District sewer main lines as preventative maintenance.

Never pour grease down your sink drain, toilet, or garbage disposal unit. Instead, pour the grease waste into a can and refrigerate or freeze until solid, and then dispose of it on trash day. An empty soup can works well for everyday cooking. However, you may want to save an empty coffee can to hold the grease waste for larger holiday meals.

Finally, when cleaning up after the meal, wipe the excess grease from pots, pans, and utensils with paper towels before washing. Grease poured down kitchen sinks and other drains can be a great contributor to odors, residential sewage blockages, as well as larger sewage spills. These few simple steps can make a difference in helping the District protect the environment by preventing sewer spills.

### 2013 HOLIDAY SCHEDULE

Please be advised that the District's Main Office is scheduled to be closed in observance of the following holidays:

Veteran's Day - November 11

Thanksgiving - November 28 & 29

Christmas Holiday - December 24 & 25

New Year's Eve - December 31

New Year's Day - January 1, 2014

In the event you would like to make a payment on a District-observed holiday, please use TCWD's online bill pay method at https://www.tcwdonlinebilling.org.

#### **BOARD OF DIRECTORS MEETING**

The Board of Directors Regular Meeting is scheduled to be held on the third Wednesday of each month at 7:00 p.m. at the District's office located at 32003 Dove Canyon Drive, Trabuco Canyon. The public is encouraged to attend.

# REGULAR BOARD MEETING HIGHLIGHTS

The Regular Board Meeting for September was held on September 18, 2013, and the following items are highlights from the meeting:

- Status update on District Website Upgrade Project.
- Approval of Limited Use License Agreement with Dove Canyon Master Association.
- Approval of Disposal of Surplus District Property per District Policy
- Status update on Alternate Raw Water Transmission Line Project
- Status update on Baker Regional Water Treatment Facility Project.
- Status update on Shadow Rock Detention Basin Facility Project.
- Received nominations for the Association of California Water Agencies (ACWA) Region 10 Board Election for the 2014/2015 Term
- Status update on Independent Special Districts of Orange County (ISDOC) Bylaws Update.

**ON TAP** is published and distributed by Trabuco Canyon Water District. We welcome your comments, suggestions and questions.

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