



# PBMI Annual Water Quality Report

## 2017

PALA BAND OF MISSION INDIANS [PBMI] – 2017 CONSUMER CONFIDENCE REPORT

IN THIS ISSUE

## How Do You Know Pala’s Water Is Safe to Drink?

by Pala Environmental Department [**published: June 11, 2018**]

This report is a snapshot of your water quality. Every year, the Pala Band of Mission Indians provides their Annual Water Quality Report, with all of the previous year’s data.

Included are details about:

- **WHERE** your water comes from,
- **WHAT** it contains
- **HOW** it compares to standards set by regulatory agencies.

Pala is committed to providing you with this information because informed customers are our best allies....and you have the right to know what you are drinking.

The US Environmental Protection Agency (USEPA) sets standards on the levels of each contaminant allowed in your drinking water. They also determine at what levels these contaminants may cause your water to be unsafe. The Pala Utilities Department (PUD) works very hard to make sure that your water meets these standards, and is ultimately safe for everyone to drink.

Some of the ways that Pala ensures the safety of your water includes:

- PUD chlorinates the water and maintains the wells, storage tanks, pipelines, and distribution systems.
- Pala Environmental Department (PED) staff helps test the water quality every month to make sure that the water is free from harmful bacteria & other contaminants.

Finally, Pala Environmental Department makes sure that our water complies with all Federal USEPA laws & regulations. Our staff have also done a number of different reports to protect our groundwater source:

- Source Water Assessment Report & Protection Plan
- Pala Water Conservation Guidelines
- Pala Well & Septic System Guidelines

So let’s learn about the quality of your water, in these easy-to-read charts. Pala Environmental Department is happy to share our 2016 Drinking Water Quality Report with you, which complies with the Safe Drinking Water Act (SDWA).



### Where Does My Water Come From

Learn about where the water that you drink every day comes from. We get our water from a pretty unique source, different from most of the rest of the County.

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### Water Quality Charts

Learn about what we sampled for each year, and how our water quality measures up to the standards in our easy-to-read charts.

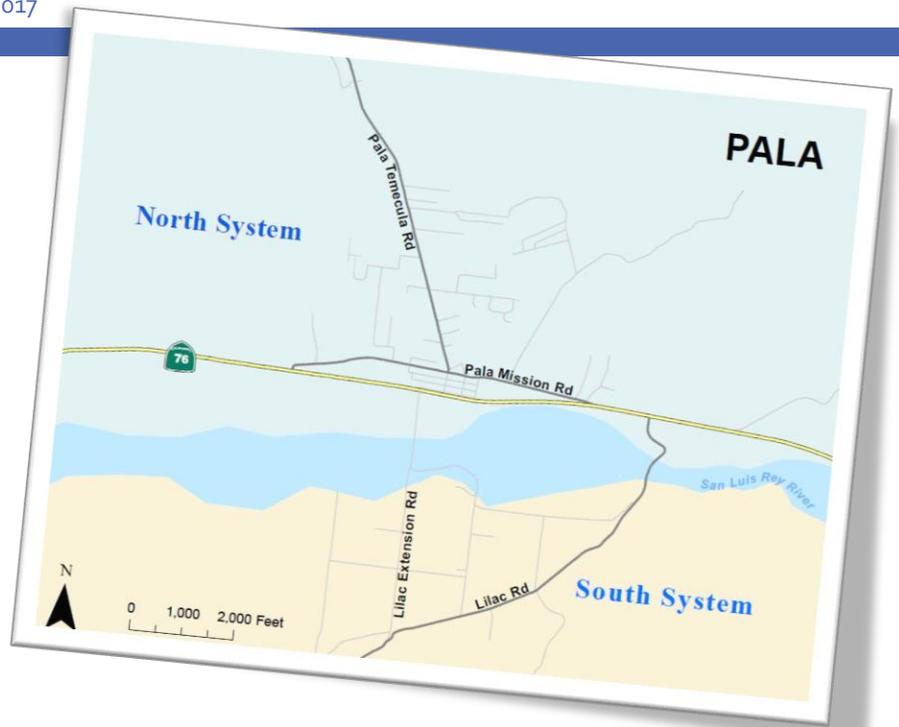
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# Where Does My Water Come From?

Pala's drinking water comes from groundwater pulled from the Pala Groundwater Basin. This basin lies directly underneath the San Luis Rey River & the Pala village area. It is replenished by rain events & surface water flows from local creeks and rivers. During our current drought, it is very important to conserve our groundwater resources, since we have not had the rains that would normally fill the basin up.

Pala's two different water distribution systems are separated by the San Luis Rey River, which flows east to west through the center of the reservation. All residents living north of the SLR River, belong to the [NORTH Public Water System](#). There are 5 wells in this system, which pull water up from the groundwater basin, and stores it in large storage tanks. All water is treated with chlorine to kill any bacteria and gravity-fed down from the storage tanks to your tap.

All residents living south of the SLR River, belong to the [South Public Water System](#), which is fed by 3 wells.



## PALA NORTH WATER SYSTEM

- All residents & Pala Casino Patrons/Employees living NORTH of the San Luis Rey River
- 5 wells
- NORTH PWS ID# 0605153

## PALA SOUTH WATER SYSTEM

- All residents living SOUTH of the San Luis Rey River
- 3 wells
- SOUTH PWS ID# 0600144

# Do I Need To Take Special Precautions?

*IF you would like to learn more about drinking water contaminants & potential health effects, you can call:*

**US EPA's Safe Drinking Water Hotline  
(800-426-4791)**

All drinking water from the tap, and even bottled water, is expected to contain at least a small amount of certain contaminants. This does not automatically mean that the water is unsafe to drink.

However, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can all be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. The US Environmental Protection Agency (US EPA) and the Centers for Disease Control (CDC) have guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants, which are all available from the Safe Drinking Water Hotline (800-426-4791).

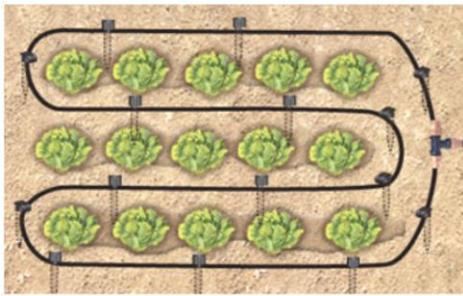


WATER CONSERVATION FACTS



Water-Wise Landscaping

By reducing the amount of water-thirsty grass in your yard, and replacing it with water-wise landscaping, you can reduce the amount of water you use, AND help bring in hummingbirds & butterflies to your yard.



Drip Irrigation

Drip Irrigation is a great way to save water. Not only does it reduce outdoor water use by only watering plants where they need it, it is also easier to manage than traditional landscaping irrigation practices.

DROUGHT FACTS

70%

This is how much of the state of California that is still in an Abnormally Dry/ Drought level. Pala is affected by low groundwater levels. [source: US Drought Monitor]

80%

This is the chance that we will have a mega drought before the end of the century. The last one was during the middle ages! [source: NASA]

FOR MORE INFORMATION

Want to learn more about how to conserve? Check out this local San Diego County resource.

<http://www.watersmartsd.org/>



*Contaminants can be found in all types of water, which is why we test our water. Often, those contaminant levels are lower than what might be harmful for you.*

# Why Are There Contaminants In My Drinking Water?

Drinking water, as well as bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants & potential health effects can be obtained by calling the US Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791).

The sources of drinking water (both tap & bottled water) include: rivers, lakes, streams, ponds, reservoirs, springs, and groundwater. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or human activity, including:

- Microbial Contaminants
  - viruses & bacteria
  - source: sewage treatment plants, septic systems, agricultural livestock operations, wildlife
- Organic Chemical Contaminants
  - synthetic & volatile organic chemicals (VOC's)
  - source: by-products of industrial processes & petroleum production; gas stations, urban stormwater runoff, & septic systems
- Inorganic Contaminants
  - salts & metals
  - source: naturally occurring or from urban stormwater, industrial or domestic wastewater, oil & gas production, mining, farming
- Pesticides & Herbicides
  - source: agriculture, urban stormwater runoff, residential uses
- Radioactive Contaminants
  - source: naturally occurring or the result of oil & gas production, mining activities

In order to ensure that tap water is safe to drink, the USEPA sets regulations that limit the amount of certain contaminants in water provided by Public Water Systems. Food & Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

# Pala's Water Quality Tables

The tables on the next few pages list all of the drinking water contaminants detected during the 2017 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables are from testing done in the calendar year of the report. The US EPA requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Results for the **NORTH PUBLIC WATER SYSTEM** are in **BLUE**. Results for the **SOUTH PUBLIC WATER SYSTEM** are in **YELLOW**.

	<u>Sampling Requirements</u>	<u>Sampling Conducted (months)</u>	<u>Total E.Coli Positives</u>	<u>Assessment Triggers</u>	<u>Assessments Conducted</u>	<u>Typical Sources in Drinking Water</u>
<b>Microbiological Contaminants</b>						tested in 2017
<b>North PWS# 0605153</b>	15 samples / monthly	12 out of 12	0	1	1	(total coliform) naturally present in the environment; (fecal coliform/e.coli) human & animal waste
<b>South PWS# 0600144</b>	2 samples / monthly	12 out of 12	0	0	0	

We are required to test your water regularly for signs of microbial contamination. Positive test results could lead to follow-up investigations called **assessments** and potentially the issuance of public health advisories. **Assessments** could lead to required corrective actions. The information above summarizes the results of those tests. During 2017, we were required to conduct one Level 1 Assessment, which was completed in good standing.

**Units: ppm** = parts per million, or milligrams per liter (mg/L)

**N/A** = Not Applicable

**Units: ppb** = parts per billion, or microgram per liter (ug/L)

**ND** = Not Detected

**TT** = Treatment Technique: required process intended to reduce the level of a contaminant in drinking water

## A NOTE ON MICROBIOLOGICAL CONTAMINANTS / COLIFORM DATA

Coliforms are bacteria that are naturally present in the environment & are used as an indicator that other (potentially harmful) waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. Coliforms were found, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we conduct a Level 1 Assessment.

**Positive samples** = positive samples/year: the # of positive coliform samples taken that year.

Positive test results could lead to follow-up investigations, called **Assessments**.

**Assessment Triggers** = the number of Assessment Reports / Public Health Advisories conducted this year.

	<u>Violation</u>	<u>Units</u>	<u>MCL Goal (MCLG)</u>	<u>Maximum Contaminant Level (MCL)</u>	<b>North PWS# 0605153</b>		<b>South PWS# 0600144</b>		<u>Typical Sources in Drinking Water</u>
					<u>Your Water</u>	<u>Range</u>	<u>Your Water</u>	<u>Range</u>	
<b>Disinfection By-Products</b>									
tested in 2017									
5 Haloacetic Acids (HAA5s)	No	ppb	n/a	60	1.8	n/a	3.1	n/a	by-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	No	ppb	n/a	80	4.5	n/a	12	n/a	

## A NOTE ON DISINFECTION BY-PRODUCTS

Chlorine was first used to treat drinking water in 1850 (to counter a cholera epidemic in London), and is still the most widely used treatment technique to remove waterborne diseases. It can sometimes react within the distribution network, forming disinfection by-products, which is why we monitor this parameter at community households every year.

# Inorganics & Radiological Contaminants

During 2017, Pala Utilities Department sampled for inorganic and radiological contaminants, as required by the Safe Drinking Water Act (SDWA), on an annual basis. The items listed below are just a few of the items sampled. Sampling requirements are determined by the USEPA.

	Violation	Units	MCL Goal (MCLG)	Maximum Contaminant Level (MCL)	North PWS# 0605153		South PWS# 0600144		Typical Sources in Drinking Water
					Your Water	Range	Your Water	Range	
<b>Inorganics</b> <span style="float: right;">tested in 2017</span>									
Barium	No	ppm	2	2	0.037	n/a	0.04	0.019-0.04	Discharge of oil drilling wastes & metal refineries; erosion of natural deposits
Fluoride	No	ppm	4	4	0.32	n/a	0.22	0.21 - 0.22	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories
Nitrate (as Nitrogen)	No	ppm	10	10	4.9	2.1 - 4.9	1.2	1.1 - 1.2	runoff/leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	No	ppb	50	50	4.2	n/a	8.4	4.8 - 8.4	Discharge - petroleum, glass, metal refineries; natural deposit erosion; discharge - mines/chemical manufacturers; runoff
Sodium	n/a	ppm	n/a	n/a	45	n/a	48	37 - 48	Erosion of natural deposits; salt water intrusion
<b>Radiological Contaminants</b> <span style="float: right;">tested in 2017</span>									
Adjusted Gross Alpha (excl. radon/uranium)	No	pCi/L	0	15	6.21	ND - 6.21	1.2	0.54 - 1.87	erosion of natural deposits
Uranium (combined)	No	ppb	0	30	6.3	ND - 6.25	1.8	ND - 1.78	

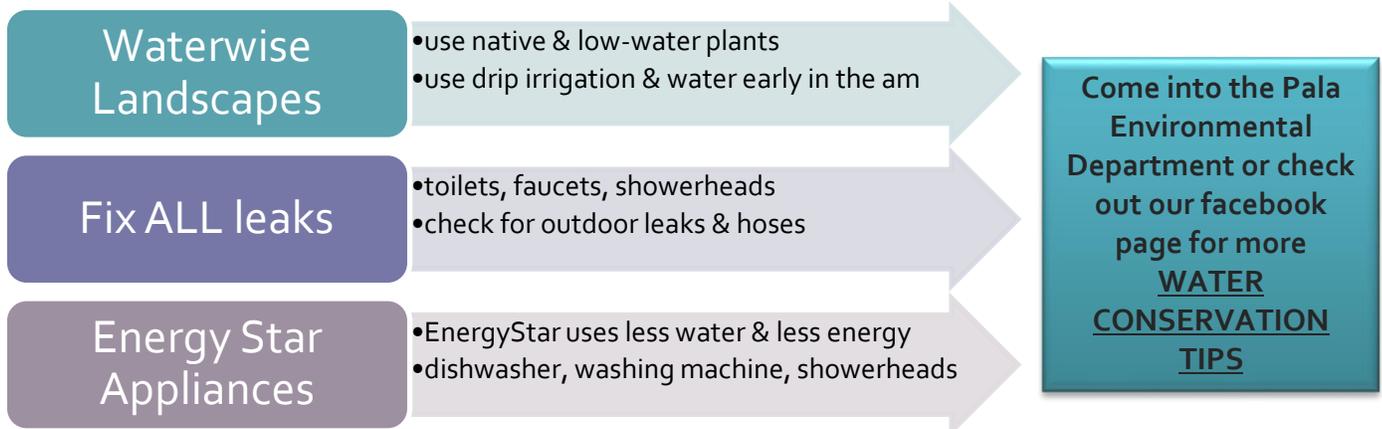
**Units: ppm** = parts per million, or milligrams per liter (mg/L)  
**Units: ppb** = parts per billion, or microgram per liter (ug/L)  
**Units: pCi/L** = picoCuries per liter (pCi/L)(unit of radioactivity)

**N/A** = Not Applicable  
**ND** = Not Detected  
**NR** = Monitoring not required, but recommended

## DEFINITIONS

**MCL = Maximum Contaminant Level:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MCLG = Maximum Contaminant Level Goal:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.



# Creating a Low-Water Garden

## Creating a Waterwise Garden

Goal

How to Achieve Your Goal

### Goal: Create Healthy Soils

### Step-by-Step Guide

<b>Healthy Soil</b>	Soil with good bugs & lots of nutrients	Test your soil to see what nutrients you might be missing (so you can add them)
	Soil with air circulation & room for deep roots	Till your soil to a depth of 6" to break up compacted soil
	Soil that can hold moisture	Add organic materials, compost, & shredded leaves after tilling it
	Correct balance of nutrients	Add soil amendments & missing nutrients (eg: bat guano, seaweed, etc)

### Goal: Finding the Right Plants

### Step-by-Step Guide

<b>Plants</b>	Use plants native to our area	These plants are disease-resistant & attract all of our local pollinators
	Use low-water plants	These are colorful, attract wildlife, & don't take a lot of water or maintenance
	Create interesting looking landscapes	Mixing succulents & flowers/grasses can add interest & movement in your yard
	Consider the size of the plants & their watering needs	Mixing together plants of all different sizes can create visual interest
	Plant trees to shade the hottest parts of your house & your air conditioner	Plant trees along west/northwest to provide mid-afternoon shade

### Goal: Setting Up Your Irrigation

### Step-by-Step Guide

<b>Irrigation</b>	Use	Use drip irrigation
	Don't overwater your landscape	Arrange plants with similar water needs together on the same waterline
	Turn OFF irrigation when it rains	Use an automated irrigation system with real-time weather sensors
	No surface runoff to roads/walkways	Consider breaking up your watering schedule to allow water to soak in
	Don't waste water	Fix any wayward sprinklers. Water in the early morning

### Goal: Maintaining Your Garden

### Step-by-Step Guide

<b>Maintenance</b>	Reduce Weeds	Put down 3-5" of mulch; replenish yearly
	Rain water harvesting - use more of Mother Nature's free water	Rain Barrels/Cisterns, Rain Gardens
	Keep plants blooming longer	Deadhead (cut off dead blooms) & pruning will keep your plant blooming
	Check your irrigation yearly	Check for leaks & fix promptly
	Designate Your Garden a Certified Wildlife Habitat	<a href="https://www.nwf.org/Garden-for-Wildlife/Certify">https://www.nwf.org/Garden-for-Wildlife/Certify</a>



# Lead & Copper

Are you concerned about lead and copper in your water? If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

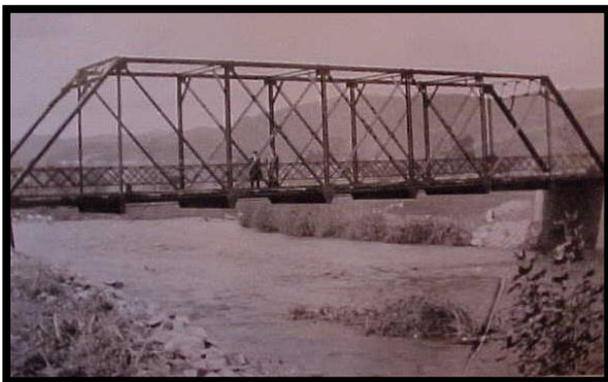
Public Water Systems are responsible for providing high quality drinking water, but they cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds – 2 minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, & steps you can take to minimize exposure is available from the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or <http://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water>

	Violation	Units	MCL Goal (MCLG)	Action Level (AL)	North PWS# 0605153		South PWS# 0600144		Typical Sources in Drinking Water
					Your Water	Range	Your Water	Range	
<b>Lead &amp; Copper Rule (90th Percentile)</b>									
									tested in 2015
Lead	No	ppb	0	15	0 sites over Action Level	2.2	0 sites over Action Level	0	corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper	No	ppm	1.3	1.3	1 site over Action Level	0.99	0 sites over Action Level	0.28	

Definition: **AL = Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Here are the results for Pala’s most recent Lead & Copper sampling, in summer 2015. We had no violations for Lead and Copper in our drinking water. If you are interested in having your home tested during our next round of Lead & Copper sampling, contact the Pala Environmental Department office to get on our list (760-891-3510). Our next round of sampling for Lead and Copper will be Summer 2018.



San Luis Rey River (early 20<sup>th</sup> century, above)



**Do you want to have your home tested for Lead & Copper?**

Do you want to see if you have lead and copper issues at your home? Do you live on the Pala Reservation? Well, the Pala Environmental Department (PED) will be sampling again in the summer of 2018.

- To see if your home qualifies for a free test, contact: Heidi Brow, PED (760) 891-3514 [hbrow@PalaTribe.com](mailto:hbrow@PalaTribe.com)

## Do you have weather stories about Pala?

The tribe is working on ways to help us adapt to climate change & we need YOUR INPUT & STORIES about past Pala.

Do you have photos or stories you can share about past flooding or heat waves in Pala, or just what the weather used to be like when you were younger? Or even from recent events – we need it all!

**Send photos to:**

[hbrow@palatribe.com](mailto:hbrow@palatribe.com)

**Or take our quick survey to be entered into a drawing for an amazon giftcard:**

<http://ped.palatribe.com/pala-climate-adaptation-plan-survey/>



Aerial View of Pala, early 20<sup>th</sup> Century

### **FOR MORE INFORMATION (OR TRANSLATED REPORT IN ANOTHER LANGUAGE)**

For more information, contact the Heidi Brow / Pala Environmental Department [35008 Pala Temecula Road, PMB 50, Pala, CA 92059][fax: 760-742-3189].

[HBROW@PALATRIBE.COM](mailto:HBROW@PALATRIBE.COM)

760-891-3514

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12196 Pala Mission Road  
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Pala's Annual Drinking Water Quality Report