



Understanding Water Conservation

Forever Green Patch Program



California is in the middle of a very serious drought and it is up to us, as stewards of our land, to make every effort to conserve water and help educate others to do the same!



This patch program has been designed to educate the participants about water conservation, exploring your water footprint, how water is treated, water runoff, and to save money reducing unnecessary water usage.

You will explore and investigate your local water district through printed materials and links found within this patch program. Learn how to test your local water source and compare results. Visit locally suggested water sources, water bodies, creeks, and beaches to gain a better understanding of your watershed.

With guided instructions you'll learn how to reach out to communities and help spread the word about water conservation. By reducing wasteful water practices you'll save money on your water bill. Within this patch program, you'll learn which county has a water rebate program for customers being proactive about water conservation.

To earn this patch, please complete the following number of items from each section:

| | Discover | Connect | Take Action |
|------------|----------|---------|-------------|
| Daisy | 1 | 1 | 1 |
| Brownie | 2 | 1 | 1 |
| Junior | 2 | 2 | 1 |
| Cadette | 2 | 2 | 2 |
| Senior | 3 | 2 | 2 |
| Ambassador | 3 | 3 | 2 |



1. Get to know your H₂O!

1. **Discover:** Investigate your local water district online & through printed materials [Attachment A]

- **Santa Cruz Municipal Utilities Office (SCMU)**
 - [Santa Cruz County Water District Home Page](#)
 - [Santa Cruz County Water District Map](#)

- **San Benito County Water District**
 - [San Benito County Water District Home Page](#)
 - [San Benito County Water District Map](#)

- **Monterey Peninsula Water Management District**
 - [Monterey County Water Home Page](#)
 - [Monterey County Water District Map](#)

- **San Luis Obispo County Water Resources**
 - [San Luis Obispo County Water Home Page](#)
 - [San Luis Obispo County Water District Map](#)

- **Santa Barbara Public Works**
 - [Santa Barbara County Water District Home Page](#)
 - [Santa Barbara County Water District Map](#)

- **Ventura Water**
 - [Ventura County Water District Home Page](#)
 - [Ventura County Water District Map](#)

2. **Connect:** Make an appointment to take a field trip to your local water district headquarters

- [Santa Cruz Water District Contact Information](#)
- [San Benito Water District Contact Information](#)
- [Monterey Water District Contact Information](#)
- [San Luis Obispo Water District Contact Information](#)
- [Santa Barbara Water District Contact Information](#)
- [Ventura Water District Contact Information](#)



3. Connect: Test your water source! Compare the results from your water testing kit to the water quality or consumer confidence reports for your local district. Here are some places where you can purchase a water testing kit:


- Water testing kits
 - Amazon (prices may vary)
[Amazon.com](https://www.amazon.com)
 - Lowes (\$30.00)
[Lowe's Water testing kit](#)
 - Home Depot (\$10.00)
[Home Depot Water testing kit](#)

- Water Quality Reports
 - [Santa Cruz County Reports](#)
 - [San Benito County Reports](#)
 - [Monterey County Reports](#)
 - [San Luis Obispo County Reports](#)
 - [Santa Barbara County Reports](#)
 - [Ventura County Reports](#)

4. Discover: Visit your local body of water (lake, river, beach, reservoir, etc.)

- See Attachment B
- Suggested Bodies of Water
 - Santa Cruz
 - Bridge Creek
 - Natural Bridges State Beach
 - Santa Cruz Harbor Beach
 - San Lorenzo River
 - Corcoran Lagoon
 - Cowell's Beach
 - San Benito (bodies of water in surrounding cities included)
 - Anzar Lake
 - Paicines Reservoir
 - San Felipe Lake
 - Dry Lake
 - Quarry Lake
 - McAlpine Lake & Park



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- Monterey
 - Monterey Bay
 - Garrapata Beach
 - Big Sur River
 - Lake Nacimiento
 - Salinas River
 - Lake San Antonio

 - San Luis Obispo
 - Moonstone Beach
 - Santa Margarita Lake
 - Piedras Blancas
 - Lopez Lake
 - William Randolph Hearst Memorial Beach

 - Santa Barbara
 - Lake Cachuma
 - Santa Barbara Deep Sea
 - San Pablo Reservoir
 - Arroyo Burro County Beach Park
 - Thousand Steps Beach
 - East Beach

 - Ventura
 - Lake Casitas Recreation Area
 - Ventura Pier and Promenade
 - Emma Wood State Beach
 - Santa Clara River
 - Ventura River
 - Calleguas Creek

2. Explore your water footprint!

1. **Discover:** Do a home water usage survey
 - [Hunter Water - Water Usage Calculator](#)
 - [Home Water Works - Water Usage Calculator](#)
 - [CSG Network - Water Usage Calculator](#)
 - [National Geographic - Water Footprint Calculator](#)
 - [South Florida Water Management District Calculator](#)
 - [Water Conservation School - Water Usage Calculator](#)
 - [National Geographic - Change the Course](#)



2. **Discover:** **Examine your household water bill.** Which periods/months have the most usage? The least? Why do you think this is so? How does your water usage compare with other households of a similar size? *Did you know?* The average American family of four uses 400 gallons of water per day!

3. **Connect:** **Try the 4 L challenge.** (Was it difficult? Easy? Why?) *Did you know?* 750 million people don't have clean water available to them. Millions of children and women are affected because of this and spend a tremendous amount of time collecting water. Check out this website and click on the different regions to educate yourself.
 - [Water Crisis Facts](#)

 - You've been challenged to survive off of 4 liters of water for a week. Can you do it? Watch this video to learn more information.
 - [YouTube - 4 Liters Challenge](#)

4. **Discover:** **Investigate the "hidden water" in your everyday life.** *Did you know?* Nearly 95 percent of your water footprint is hidden in the food you eat, energy you use, products you buy, and services you rely on!
 - [National Geographic - The Hidden Water We Use](#)
 - [Angela Morelli - Virtual Water](#)
 - [Waterfootprint.org](#) (Check out the agricultural water footprint!)
 - [Kemira - Water Footprint](#)
 - [Waterfootprint.org – National Water Footprint](#)
 - [Grace Water Footprint Calculator](#)

5. **Discover:** **Do you qualify for a rebate program? Check out the rebate programs for your household**
 - Rebate Program Information
 - [Santa Cruz - Rebate Program Information](#)
 - [San Benito - Rebate Program Information](#)
 - [Monterey - Rebate Program Information](#)
 - [San Luis Obispo - Rebate Program Information](#)
 - [Santa Barbara - Rebate Program Information](#)
 - [Ventura - Rebate Program Information](#)

 - Additional Information
 - [Rebate Finder](#)

6. **Connect:** Be a detective and solve this mystery!
 - [EPA - Detective Mystery](#)
7. **Discover:** Find the largest source of water (river, lake, groundwater, etc.) for your utility. Now identify other users (cities, farms, ecosystems) that extract from and discharge into the same source.

3. Discover: Abracadabra! Oh no, where'd the water go?

1. **Connect:** Make an appointment and visit a local water treatment (or recycling) plant
 - San Luis Obispo County
 - [San Luis Obispo - Wastewater Treatment Site](#)
 - [San Luis Obispo - Wastewater Treatment Contact Information](#)
 - Santa Cruz
 - [Santa Cruz - Wastewater Treatment Facility & Contact Information](#)
 - Ventura
 - [Ventura Regional Sanitation District](#)
 - [Ventura - Regional Sanitation District Contact Information](#)
 - Monterey
 - [Monterey - Regional Water Pollution Control Agency](#)
 - [Monterey - Regional Water Pollution Control Agency Contact Information](#)
 - San Benito
 - [San Benito - Integrated Waste Management Department & Contact Information](#)
 - Santa Barbara
 - [Santa Barbara - El Estero Wastewater Treatment Plant & Contact Information](#)
2. **Discover:** Explore more information about what urban runoff is and why is it a problem? Find ways that you can reduce urban runoff in your own household, and talk with your school administrators about how they are dealing with the situation. Determine where urban runoff empties into the ocean and look at the water quality reports near those locations. Is there a correlation between urban runoff and poor water quality? Why? *Did you know?* Urban runoff is the largest source of pollution in Southern California's coastal waters. Due to an increasing trend of coastal towns and cities runoff from these rapidly growing urban areas will continue to degrade coastal waters.
 - [Surfrider Foundation - The Problem: Urban Runoff](#)
 - [Heal the Bay - Urban runoff](#)



3. **Connect:** Contact your local watershed district and find out more about where water goes after it is “used” – find out about how reducing water usage helps the watershed overall (benefit to habitat, wild animals and plants)

- [Santa Cruz Watershed](#)
- [San Benito Watershed](#)
- [Monterey Watershed](#)
- [San Luis Obispo Watershed](#)
- [Santa Barbara Watershed](#)
- [Ventura Watershed](#)

- Additional Information
 - [EPA - Watershed Finder](#)

4. Connect: Remove it! Consume it! Conserve it!

1. **Take Action:** Identify the heaviest uses of water usage in your household, and with your parents’ help, devise and implement ways to cut back. Such as reducing sprinkler times, adjusting the schedule to run in the early morning when there will be less evaporation, get a cover for your pool, take shorter showers, and only run full loads of clothes or dishes.
2. **Take Action:** Contact your local water district to see if there are any free devices or testing kits that they offer their customers to help reduce water consumption, and install these devices in your home. (These may include leak detectors, low-flow shower heads, hose nozzles, and more. Refer to your local water district homepage for more information.)
 - [Calwater.com - Conservation Kit](#)
 - [Water Education Foundation - Conservation Kit](#)
3. **Take Action:** Identify behaviors that can lead to wasting of water and develop procedures to decrease your water consumption. For example, letting water run while you brush your teeth, taking long showers, or washing clothes or dishes when there is not a full load can waste gallons of water. However, using a timer in the bathroom to remind you to take short showers, using a sticker in the bathroom to remind you to shut off the water while you brush, or using a bucket in the shower to catch cold water as the water heats up for a bath or shower can lead to a more water conscious lifestyle.
4. **Discover:** Check out conservation tips and games!
 - [Saveourwater.com - What You Can Do!](#)



- [Ecokids - Water Conservation Around the House](#)
 - [Wateruseitwisely.com - Conservation Guide](#)
 - [Nwwater.com - Conservation Games](#) (Plug in required to play)
5. **Take Action:** Use a calendar to track your water usage for 30 days! Challenge yourself to do it again, but use some of the conservation tips you've learned to consume less water for the next 30 days!
 6. **Take Action:** Create a food diary! For one week keep track of how much hidden water you consume. The following week try to start on your quest to reducing your daily water usage!
 - [National Geographic - Hidden Water](#)

5. Tell the World!

1. **Take Action:** Host a water conservation seminar or event for fellow Girl Scouts, or at your school, or as part of a community fair or festival.
 - Water Conservation Topics
 - [Kids.net.au](#)
2. **Take Action:** Make a flyer listing different ways that homeowners can reduce their water usage, and some of the facts that you have learned by doing the activities above, and hand them out in your community.
3. **Take Action:** With an adult's help, start a campaign in your community to get others to take the 4L Challenge.
4. **Take Action:** Meet with administrators at your school or schedule a meeting place to find out how they are conserving water and reducing urban runoff. Assist them in developing a campaign to educate students (or church members, community members, etc) on water conservation.
5. **Take Action:** Create a video to upload to a social media site on how you conserved water and what you could do with the water you conserved (e.g. YouTube, Facebook, Instagram, Twitter) and hashtag it #HowMuchWater.
6. **Take Action:** Check out the Water Risk Atlas! Is someone you know out of water or at high risk? Analyze your location in comparison to someone across the world.
 - [Aqueduct - Water Risk Atlas](#)



Water District Questionnaire

(Attachment A)

What water district¹ are you located in?

Where does the water for that district come from?

When was your water district established²?

By who was your water district established?

What is the population³ for the district?

What are some fun facts about your water district?

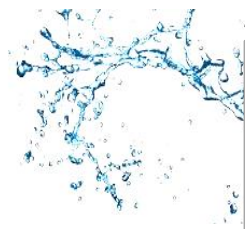
Definitions

*Need help
understanding a
word?*

Water district¹ – a special district given the task of supplying water and sewer needs to a community

Established² – to bring into existence or cause to exist; to found

Population³ – the whole number of people living in a region



A Day at the...

(Attachment B)

What type of body of water is it?

What is this body of water used for?

Is it safe to enter this body of water? Why or why not?

Describe the body of water. What does it look like?

How do humans interact with the water?

What types of organisms are present if any? (Draw what you see)

Don't Forget to Bring Me:

- Sunblock
- Hat
- Sun glasses
- Pen
- Attachment B worksheet
- Binocular
- Camera
- Towel

Optional:

- Change of clothes
- Snack
- First aid kit

ADULTS: Please remember to refer to Safety Activity Checkpoints and follow all guidelines when visiting your chosen body of water.