

WALLY'S

20 days of at-home  
summer activities  
perfect for kids and  
the whole family!

WATER  
CONSERVATION  
CAMP



WATER CONSERVATION

ENVIRONMENTAL STEWARDSHIP

WATER AWARENESS

**FUN!**



# A Message From Wally

DEAR FRIENDS,

I AM SO EXCITED TO WELCOME YOU TO MY WATER CONSERVATION CAMP! ME AND MY FRIENDS AT THE INLAND EMPIRE UTILITIES AGENCY (IEUA), A REGIONAL WASTEWATER TREATMENT AGENCY AND WHOLESALE WATER PROVIDER, HAVE WORKED TOGETHER TO BRING YOU THIS BOOKLET FILLED WITH MY FAVORITE CAMP ACTIVITIES TO HELP YOU BECOME A WATER-WISE, ENVIRONMENTAL STEWARD, JUST LIKE ME!

I HOPE THIS CAMP WILL ENCOURAGE YOU TO GET UP, BE ACTIVE AND LEARN SOMETHING NEW.

I'D LOVE TO SEE ALL OF YOUR AWESOME CAMPSITES AND ACTIVITY RE-CREATIONS, SO BE SURE TO SHARE YOUR PHOTOS WITH ME ON SOCIAL MEDIA BY SENDING MY FRIENDS @IEUAWATER A MESSAGE WITH THE #WWCC.

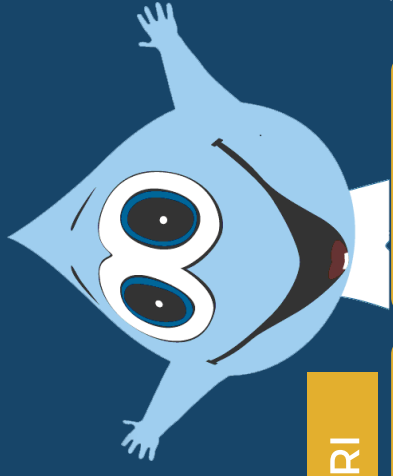
TALK TO YOU ALL SOON!



YOUR FRIEND,

WALLY

# Camp Calendar



SUN	MON	TUES	WED	THURS	FRI	SAT
WEEK 1 BEGINS	SUMMER SUNRISE	BUILD YOUR OWN BIRD FEEDER	WATER AUDIT WEDNESDAY	TREAT THURSDAY	ECO ART	REST
WEEK 2 BEGINS	S'MORE MONDAY	NATURE NIGHT	WATER-WISE GARDEN	DIY FLOWER BOUQUET	SALT DOUGH STARFISH	REST
WEEK 3 BEGINS	MOVE MONDAY	PLAN A PICNIC DAY	WETLANDS WEDNESDAY	NATURE PRINT BANNER	FREE DAY! (PICK YOUR FAVORITE ACTIVITY)	REST
WEEK 4 BEGINS	SNOW CONE SOCIAL	SKETCH DAY	WATER PROFESSIONAL WEDNESDAY	T-SHIRT THURSDAY	SUMMER SUNSET	REST

WEEK 1 | DAY 1

# SUMMER SUNRISE

What better way to kick off summer camp than by watching the sunrise! Take a trip to the Chino Creek Wetlands and Educational Park or set up in your own yard with friends, family members and pets to take in the beautiful view. You can even prepare some treats the night before to snack on while you watch. Feel free to explore the park after, too!

15975 El Prado Road, Chino, California 91708



## WALLY'S WATER WISDOM:

The Observation Tower at the Chino Creek Wetlands is my favorite place to watch the sunrise! It gives you the best view of the entire 22-acre park.



## WEEK 1 | DAY 2



To build your own bird feeder, you'll need:

- Popsicle sticks
- Glue
- Bird seed (or sunflower seeds)
- String

Glue your popsicle sticks together to construct your bird feeder. Make sure you have a strong base to hold the bird seed! You can use paint, markers or stickers to give your bird feeder a fun design. Use string to hang your bird feeder, or place it on a flat surface. For a quicker alternative, carefully poke 3 holes equally spaced along the edges of a paper bowl, fill with bird seed and hang with string.

Throughout the summer, try to identify the birds that come to your feeder!



California Songbird



Oak Titmouse



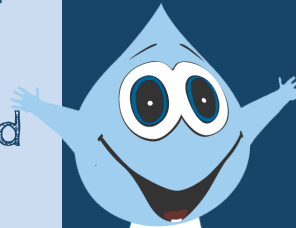
House Finch



Sparrow

### WALLY'S WATER WISDOM:

The Chino Creek Wetlands and Educational Park is home to a diverse variety of local and migratory birds. Throughout the park are bird boxes to house sparrows who help control the insect population in the park.



This is a form of biocontrol.



WEEK 1 | DAY 3

# WATER AUDIT WEDNESDAY

How much water do you use in one day? Spend the day tracking your household's water habits and think about the changes you can implement to use water more efficiently!

TASK	TIMES PER DAY	APPROX. NUMBER OF GALLONS USED	DAILY TOTAL
Shower 5 Minutes Or Fewer		x 10 gallons	
Shower Longer Than 5 Minutes		x 25 gallons	
Brush Teeth (running water off)		x 1 gallon	
Brush Teeth (running water on)		x 5 gallons	
Wash Dishes In The Sink (running water off)		x 5 gallons	
Wash Dishes In The Sink (running water on)		x 27 gallons	
Run Full Load In The Dishwasher		x 5 gallons	
GRAND TOTAL			GALLONS

**WALLY'S WATER WISDOM:**

According to US Geological Survey, the average person uses 80-100 gallons of water each day. Even though water comes out of your faucet at home, water is a limited resource so it's important we use it wisely!

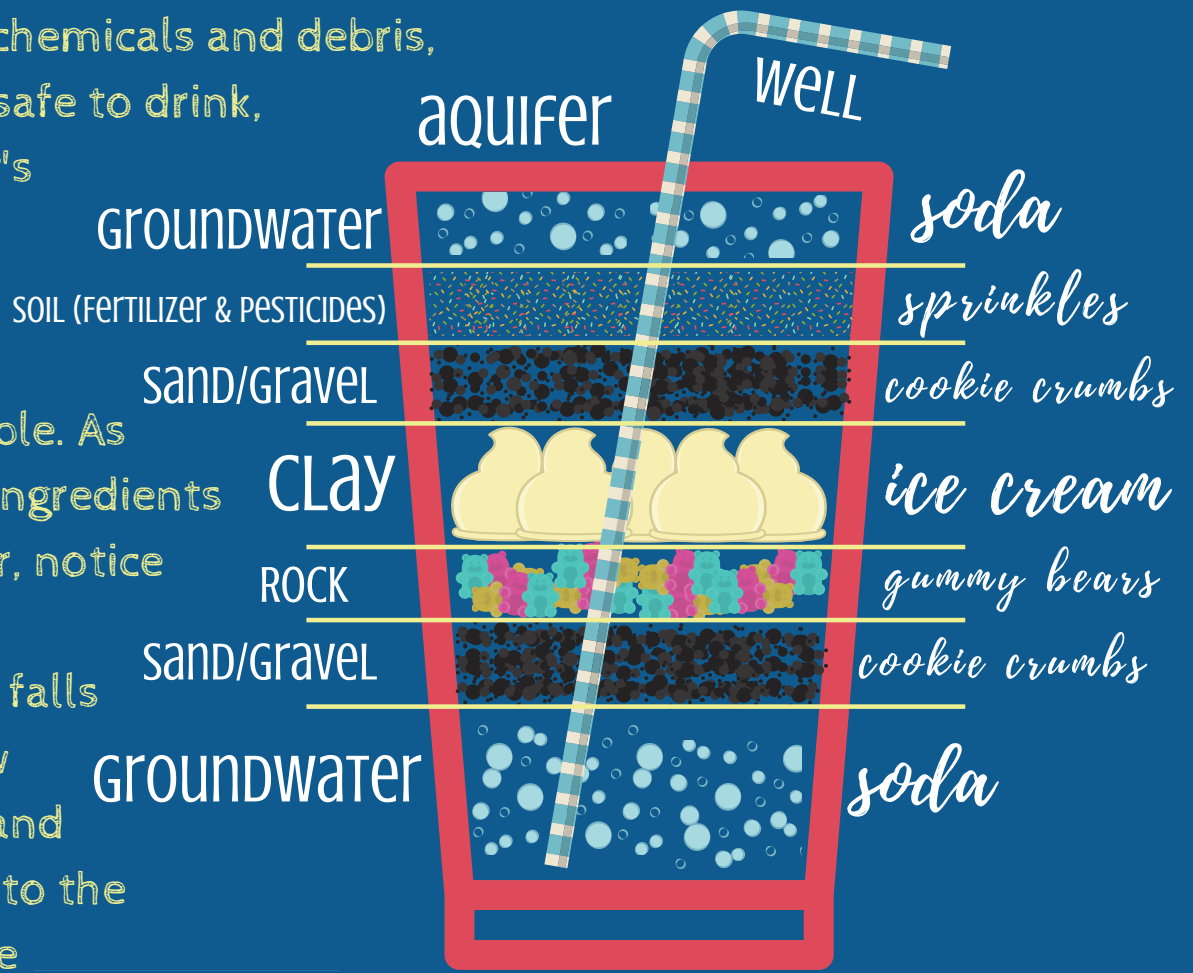


WEEK 1 | DAY 4

# TREAT THURSDAY

This edible aquifer is my favorite treat on a hot day! Aquifers are very important because they provide us with clean groundwater to drink. When our groundwater becomes polluted with chemicals and debris,

it is no longer safe to drink, which is why it's important to reduce pollution as much as possible. As you add your ingredients to your aquifer, notice how the water table rises and falls when each new item is added and what happens to the water when the well is pumped by sucking on the straw.

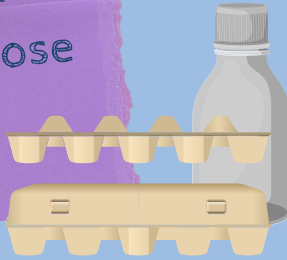


### WALLY'S WATER WISDOM:

Swap soda for apple juice, cookie crumbs for graham cracker crumbs, gummy bears for berries, ice cream for yogurt and sprinkles for granola to enjoy a healthier alternative!

# ECO ART

Turn your trash into treasure! Head outside or look for items around your house to repurpose and turn into a masterpiece.



## WALLY'S WATER WISDOM:

Did you know water can also be repurposed in a process called the recycled water cycle? In fact, IEUA owns and operates four water recycling facilities that clean wastewater for distribution throughout the region.



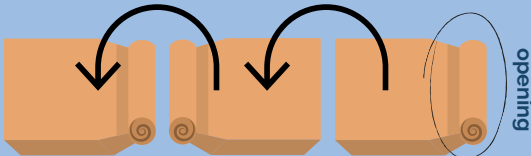
Follow these directions for a DIY Brown Bag Notebook!

1



Gather 3 brown bags.

2



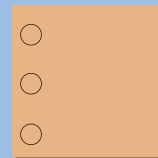
Stack them flat on top of each other, alternating the direction of the opening.

3



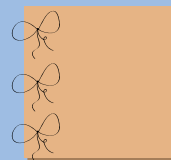
Fold all the bags in half.

4



Punch 3 evenly spaced holes through the spine of the notebook.

5



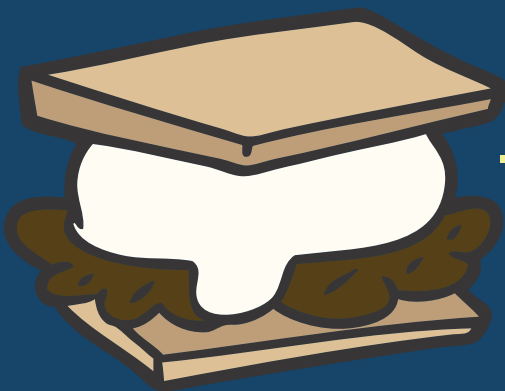
Use string to tie a knot through each hole, securing the book together. Don't forget to decorate it!



WEEK 2 | DAY 1

# S'MORE MONDAY

Have you ever thought about how much water it takes to produce some of your favorite foods and beverages? Let's find out how much water is in one of my favorite snacks... a s'more!



0.2 g

Wheat flour is a main ingredient in graham crackers. Water helps wheat grow.

1.2 g

Water is one of the primary ingredients in marshmallows along with sugar and gelatin.

450 gal.

The Cocoa tree, which provides the main ingredient of chocolate, requires water to grow.

0.2 g

## WALLY'S WATER WISDOM:

Solar panels create power by using energy from the sun and can be a great tool for saving energy. In fact, IEUA has solar panels installed at many of our facilities! The Chino Creek Wetlands has a great view of the solar panels installed at our Regional Water Recycling Plant No. 5.



## Solar S'mores

- Cardboard box
- Plastic wrap
- Foil
- Tape
- Marshmallows
- Graham crackers
- Chocolate

1) Line the inside of a cardboard box with foil. A shoebox works perfectly!

2) Assemble your s'mores and place on top of the foil. Cover the top of the box with plastic wrap and tape it down.

3) Carefully move your box and place in direct sunlight for 1-2 hours or until done. The sunlight will warm the box and cook your s'mores for you!

WEEK 2 | DAY 2

# NATURE NIGHT

You can't say you've been to summer camp without spending a night outdoors! Set up camp in your backyard and spend the night making s'mores, watching movies and learning about IEUA of course!

Wally's Video Recommendations:

• [Inland Empire Regional Composting Facility](#)



• [IEUA Regional Water Recycling Plant No. 5 Tour](#)



• [IEUA Renewable Energy Initiatives](#)



## DIY Projector



You'll need: • Cardboard box • Magnifying glass • Scissors • Hot glue • Phone or tablet

- 1) Pop the lens out of your magnifying glass and trace it on one of the shorter sides of your box. A black or dark box works best!
- 2) Using your outline as a guide, carefully cut out a hole slightly smaller than the size of your outline.
- 3) Carefully hot glue your magnifying glass lens on top of the hole you just cut out. You may need to ask your parent or guardian for help!
- 4) You're done! Make sure to place your phone or tablet in the box with the video playing upside-down for it to project properly onto your wall.



WEEK 2 | DAY 3

# WATER-WISE GARDEN

Today let's head outside and plant our very own water-wise garden! Water-wise gardens are perfect for our hot California summers since they require little to no water. Plus, they are beautiful additions to any landscape. Grab your gardening tools and get planting!

## WALLY'S WATER WISDOM:

Water your garden in the early morning before the sun comes up or at night after the sun goes down to reduce evaporation.



## Water-Wise Plants



Rose



Lavender



Sage



Poppy



Kale



Tomato



Peppers



Okra



Eggplant



## Plantable Seed Tape



- 1) Measure out 12 in. of toilet paper and cut it in half lengthwise. You can measure out more or less depending on the size of your garden.
- 2) Read the directions of your seed packet to see how far apart each seed should be planted, then use a marker and ruler to mark each spot on your toilet paper where a seed should go.
- 3) Start gluing your seeds to the toilet paper to make your seed tape!
- 4) Once the glue has dried completely, roll your seed tape back onto the toilet paper tube and store in a cool, dry place until ready to plant.
- 5) To plant, roll out the seed tape onto a soil surface and cover with the recommended amount of soil. Water with a fine nozzle.

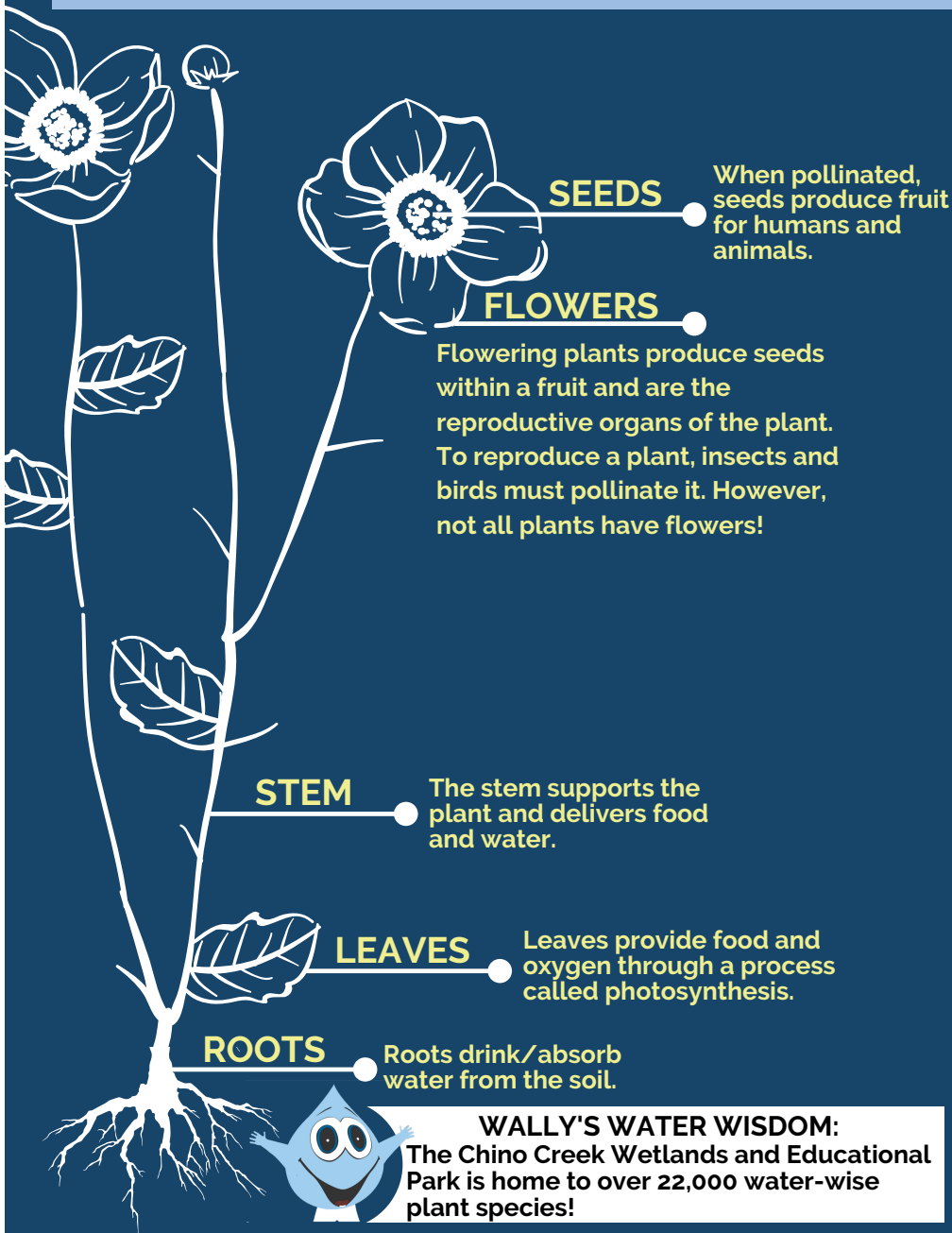
## What You'll Need:

- Ruler
- Marker
- Toilet paper
- Glue
- Seeds
- Toilet paper tube

WEEK 2 | DAY 4

# DIY FLOWER BOUQUET

While our water-wise garden grows, let's create a bouquet of our own! Here's what you'll need: • Coffee filters • Washable markers • Clear glass • Water • Green pipe cleaners



## SEEDS

When pollinated, seeds produce fruit for humans and animals.

## FLOWERS

Flowering plants produce seeds within a fruit and are the reproductive organs of the plant. To reproduce a plant, insects and birds must pollinate it. However, not all plants have flowers!

## STEM

The stem supports the plant and delivers food and water.

## LEAVES

Leaves provide food and oxygen through a process called photosynthesis.

## ROOTS

Roots drink/absorb water from the soil.



**WALLY'S WATER WISDOM:**  
The Chino Creek Wetlands and Educational Park is home to over 22,000 water-wise plant species!

## Chromatography Flower Bouquet

1. Flatten out some coffee filters and create a circle or simple line design in the middle using your markers. (Secondary or tertiary colors work best.)
2. Fold your coffee filters and place them in a glass with about one inch of water. Watch as the colors start spreading and separating as the water travels through the filter. What colors came out of the ones you started with?
3. Once the filters are completely dry, bundle them into flower-like shapes and create a twist at the bottom. This will be the attachment point for the stem.
4. Create the stem by attaching a green pipe cleaner to the bottom of the coffee filter by wrapping it around the twist.





WEEK 2 | DAY 5



# SALT DOUGH STARFISH



Did you know all the trash and debris on your street can make its way to the ocean via underground storm drain pipes? This is called **pollution**. There are two different types of pollution- **point-source pollution**, which comes from a single place, and **nonpoint-source pollution** which can come from many places. By recycling, picking up after our pets and using reusable items such as bags and straws, we can contribute to a cleaner, healthier ocean for ourselves and all of our oceanic friends...like the starfish!



## Salt Dough Starfish\*

- 2 cups flour
- 1 cup salt
- 1 cup water
- baking pan
- toothpick
- paint (optional)

1. Preheat oven to 250° F. Make sure you ask your parent or guardian for help!
2. In a large mixing bowl, combine flour, salt and water. Mix well.
3. Roll your dough into a small ball, break it into 5 equal pieces and roll them into log shapes.
4. Stick the 5 log shaped pieces together to form your starfish.
5. Use a toothpick to make a line on each star arm and poke dots around the lines.
6. Bake for 2 hours or let it air-dry.
7. Don't forget to paint it! Many starfish are brightly colored.

\*not edible

## WALLY'S WATER WISDOM:

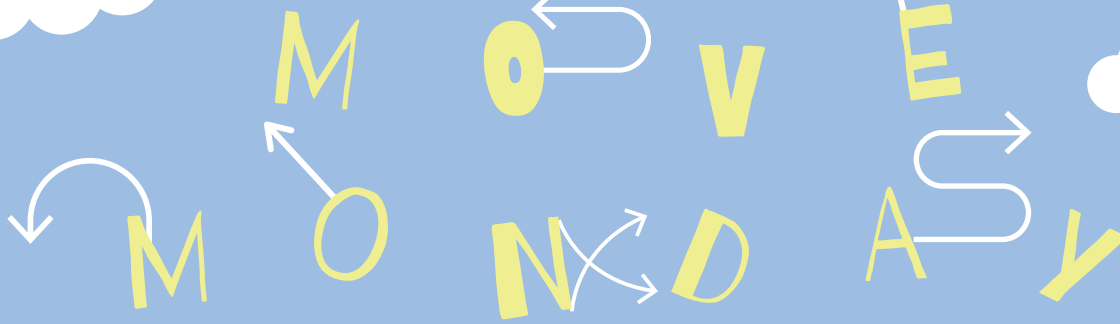
If you see a plastic bag on the street, do you think it's considered point-source pollution or nonpoint-source pollution?

It's nonpoint-source pollution because we can't identify exactly where or who the bag came from!





## WEEK 3 | DAY 1



Today is all about getting active and stepping outside. Grab a friend, a family member or a pet and hop on your bikes or go for a walk. Don't forget to bring water! While you're out, see if you can spot any of the following items:

1

**A Purple Pipe.** A purple pipe indicates recycled water. This means it is water that has been treated and cleaned through the wastewater treatment process for irrigation at parks, soccer fields and even at our Chino Creek Wetlands!

2

**Anyone Watering Their Lawn.** Take note of what time you see people watering their lawns. The best time to water your lawn is in the early morning before the sun comes up or at night after the sun goes down since the heat from the sun won't cause the water to evaporate as quickly.

3

**Trash Or Animal Waste.** If you see any trash or animal waste on the sidewalk, pick it up and properly dispose of it in a trash can or recycling bin with a parent or guardian's help. By doing so, you'll be reducing the amount of pollution that ends up in our oceans. The starfish and sea turtles will thank you!

4

**Sewer Openings.** Pay attention to how many sewer openings you can spot. All those openings lead directly to our ocean, so it's important to make sure water is the only thing passing through!

5

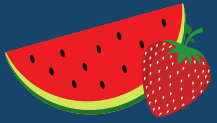
**Beautiful Lawns.** How many nice gardens or lawns do you see? The best way to get a beautiful lawn is by forgoing harsh chemicals such as pesticides and fertilizer since rainfall can spread it through pipes into our oceans. Utilizing natural items such as compost to help your plants grow, or ladybugs to help keep pests away are great alternatives!



### WALLY'S WATER WISDOM:

Just as the sparrows in our wetlands control our insect population, using ladybugs to combat the aphids that eat your plants is another form of bio control.

WEEK 3 | DAY 2



PLAN A





PICNIC DAY

It's time for a picnic! Set up in your own yard with a blanket and some treats or head over to the Chino Creek Wetlands. Sitting under the shade at the amphitheater is my favorite place to enjoy a picnic!

### Picnic Treat Ideas


**Fruit Skewers** (~127 gal. of water)

- 1) Gather your favorite fruits. I like to use strawberries, bananas and blueberries. 
- 2) Carefully cut the fruit into bite-sized pieces if they aren't already.
- 3) Slide them onto a skewer.

**Apple Sandwiches** (~81 gal. of water) 

- 1) Carefully core an apple and cut it horizontally to make flat, circular slices.
- 2) Stick two apple slices together with the filling of your choice to create a sandwich. My favorite is peanut butter!

**Mini Sandwich Squares** (~140+ gal. of water depending on ingredients)

- 1) Carefully cut a slice of bread vertically and horizontally through the center to create four equal squares.
- 2) Gather the sandwich ingredients of your choice and carefully cut into four equal squares.
- 3) Assemble your sandwich with your desired condiments and enjoy! 

How much water is used to produce these summer picnic favorites?



10 gal.



4.7 gal.



33 gal.



42 gal.



14 gal.



87 gal.



5 gal.



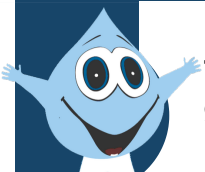
33 gal.



34 gal.

### WALLY'S WATER WISDOM:

Take into consideration the amount of water that goes into your favorite picnic foods and drinks. We have California's water to thank for them!



WEEK 3 | DAY 3

# WETLANDS WEDNESDAY

Our beautiful Chino Creek Wetlands has over 22 acres and 1.7 miles of walking trails. Have you explored it yet? If not, today's the day!

Look for these items throughout the park:



Bird Box



Ito Tree Carving



Mammoth Tusk



California Black Walnut Tree



Watershed Bridge



Picnic Tables



Mallard



Willow Tree



Sycamore Tree



Ito Tree Bench

## WALLY'S WATER WISDOM:

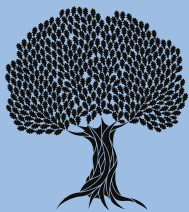
Notice anything green floating on top of the ponds? That is a small aquatic plant called duckweed! Duckweed is really important to our wetlands. Not only does it help purify the water, but it's also a yummy treat for our ducks and birds.





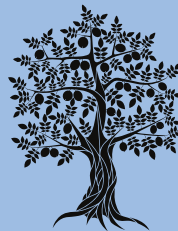
# NATURE PRINT BANNER

Trees make beautiful outdoor scenery, but have you ever thought of using the leaves that naturally fall off trees as decoration indoors?



Valley Oak

- Develops male and female flowers
- Can grow up to 105 ft. tall
- Hosts several species of butterflies, pigeons, deer and acorn woodpeckers



CA Black Walnut

- Develops male and female flowers that develop into walnuts
- Can grow up to 150 ft. tall
- Wood was once used for airplane propellers



Willow

- Develops large strings of flowers that look like cotton
- Can grow up to 60 ft. tall
- Native bees love to visit this tree for pollen and nectar



Western Sycamore

- Develops little balls of red flowers
- Can grow up to 105 ft. tall
- Leaves are fuzzy on one side

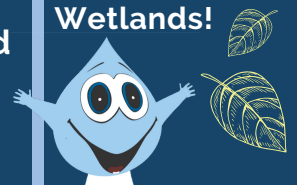
## Nature Print Banner

- Paper
- String
- Tape
- Scissors
- Crayons without wrappers
- Leaves that have fallen off trees

- 1) Carefully cut a piece of paper through the center vertically and horizontally to make 4 equal squares.
- 2) Cut the 2 corners off at the bottom of each square.
- 3) Gather a few leaves that have already fallen off of trees outside your house or in your neighborhood. Be sure not to pull them off!
- 4) Place one leaf on a flat surface with one of the pieces of paper on top. Use the side of an unwrapped crayon to gently shade on the paper, revealing the outline of the leaf. Repeat on the other pieces of paper.
- 5) Cut one piece of string to the width of all of your pieces of paper and tape the tops of each paper to the string to form your banner. Now you're ready to hang it in your desired location!

### WALLY'S WATER WISDOM:

All four of these trees are deciduous, meaning that they shed their leaves in the winter. You can find all four species (and more) at our Wetlands!



WEEK 3 | DAY 5

# FREE DAY

Only one more week left of camp and you deserve a reward!  
Flip through the book and pick your favorite activity to do today  
or fill out this water saving checklist!



Take shorter showers.



Remind your parents to do laundry only when the hamper is full!



Turn the faucet off while brushing your teeth.



Throw ice cubes you accidentally dropped in a plant instead of the sink!



Become a leak detective! Check all of your faucets for leaks.



Collect rainwater to water your garden.



Give your pet a bath outside on a patch of grass that needs water!



Wash fruits and vegetables in a bowl instead of under running water!

## WALLY'S WATER WISDOM:

Remember to message your camp photos to @IEUAWater on social media and use the #WWCC! I can't wait to see how much fun you're having and all that you've learned!



WEEK 4 | DAY 1

# SNOW CONE SOCIAL

Are you familiar with the water cycle? If not, today's the perfect day to learn and enjoy a sweet treat while you're at it.

Water falls from clouds during a process called precipitation, also known as rain. Where does it travel from there?



If the rain falls in the mountains, it may run off and become drinking water or recharge bodies of water, but it may also solidify from a liquid and become snow depending on the temperature.

SOLID STATE



- Cup
- Your favorite juice
- Large bowl or baking tin
- Fork

Fill a baking tin or bowl halfway with the juice of your choice. My favorite is pineapple juice!

LIQUID STATE

When it hits the ground, it can become groundwater that is pumped for drinking, a source of water for plants and animals or recharge our lakes, rivers, oceans and wetlands!

LIQUID STATE

Once you've filled your bowl or tin, place it in the freezer. Every 45 minutes, check on it and use a fork to break it up into small snow cone chunks. Once it reaches your desired consistency, scoop it into a cup and enjoy!

SOLID STATE

In warmer temperatures, the sun will cause water to transform from a liquid state to a gaseous state. The gaseous molecules group together forming clouds. This is called condensation. As the gas cools, it transforms back into a liquid and the cycle repeats!

GASEOUS STATE

Just as water transforms from a liquid state to a gaseous state in the water cycle, when enjoying your snow cone in hotter temperatures, the heat can melt your snow cone and evaporation can occur which is when a liquid transforms to a gas. So make sure to enjoy your snow cone quickly!

GASEOUS STATE

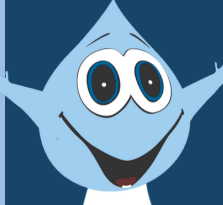
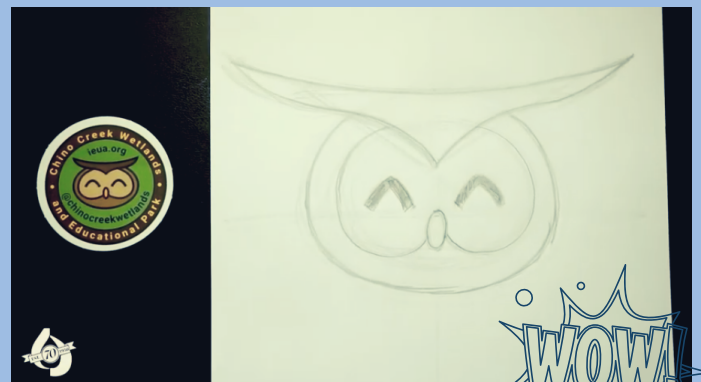
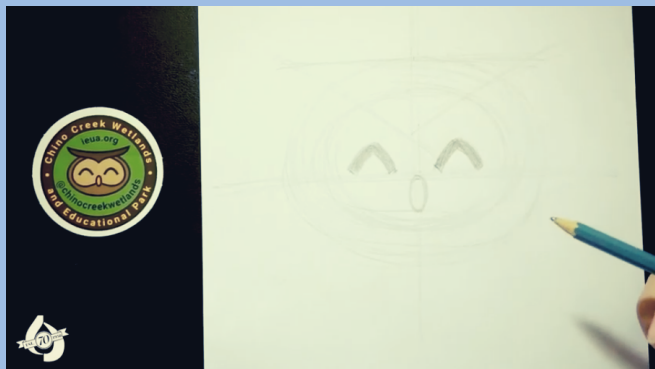
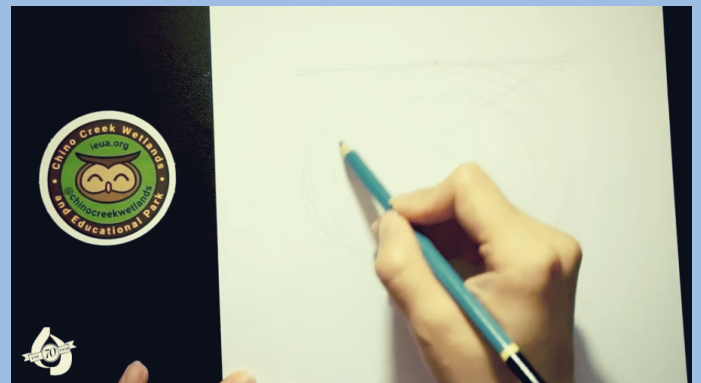


WEEK 4 | DAY 2

# SKETCH DAY



Learn how to draw my good friend and Chino Creek Wetlands' mascot, Owlie the Owl, in just a few simple steps! Grab a pencil and paper and check out IEUA's YouTube channel @IEUAWater for the full video. Don't forget to post your masterpieces for me to see!



**WALLY'S WATER WISDOM:**  
Start with light sketch lines and darken at the end for a cleaner drawing!



WEEK 4 | DAY 3

# WATER PROFESSIONAL WEDNESDAY

What does a water professional do? Let's meet two of IEUA's very own water professionals and get a glimpse at a day in their life!



**Jesse Pompa, Manager of Grants**

I've worked at IEUA for ten years. When I started, I was responsible for the Agency's air quality compliance, then I moved into recycled water and energy planning, followed by engineering and finally I moved into our Grants Department. In order to fund some of our water infrastructure projects, IEUA applies for grants from government agencies. I manage a group of people that make sure we meet the grant requirements and also apply for new grants to get more funding in the future. I never truly appreciated the value of water conservation until I worked in the water industry. Even though about 70 percent of Earth is made up of water, less than one percent of all the water on Earth can be used for drinking water. Water is and always will be an extremely valuable resource. I love that I can help address water needs in my community and contribute to keeping our community healthy.

I've been working with IEUA for 9 months. I started as an intern and later was given an opportunity to join the Agency full-time. I am mainly responsible for collecting water samples from our various monitoring wells. These monitoring wells help us determine the water quality of the groundwater. Some of the things I test for include pH levels, total dissolved solids (TDS), conductivity and dissolved oxygen. When working in the water industry, you never stop learning. There are so many aspects to the water industry that there is always room for improvement. I love being able to learn something new each day and that I am contributing to providing clean water to the community.



**Daisy Puga, RW/Groundwater Recharge Maintenance Technician**

WEEK 4 | DAY 4

# T-SHIRT THURSDAY

Only one more day left in our at-home summer camp and today is going to be a good one! What have you learned during summer camp this month? Let's get creative and document it on a t-shirt!

How did your nature print banner turn out? Do you know which trees you used leaves from?

We can't forget to add stars in honor of our salt dough starfish! Do you remember the two different types of pollution?

Draw a bird in honor of your bird feeder! Can you identify all the birds that came?

Cut out stencils and place them on your shirt. Use paint to paint over them for a fun design. Make sure the paint is dry before peeling off the stencils!

How is your water-wise garden doing? Which water-wise plants did you plant?

This is a perfect opportunity to show off your Owlie sketch skills!

## WALLY'S WATER WISDOM:

What were your favorite activities to do this summer? Make sure to add them on your shirt!



WEEK 4 | DAY 5

# SUMMER SUNSET



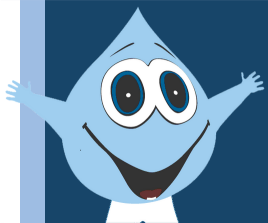
Let's end the summer the way we started. Visit the Chino Creek Wetlands or set up in your own yard to watch the sunset tonight. Congratulations on a successful Water Conservation Camp!



Fun Fact: This photo was taken at the Chino Creek Wetlands by an IEUA employee!

## WALLY'S WATER WISDOM:

The Chino Creek Wetlands and Educational Park is open daily from sunrise to sunset, so make sure you follow the rules by arriving and leaving on time!





# CERTIFICATE OF WATER STEWARDSHIP

THIS CERTIFIES THAT

\_\_\_\_\_ has successfully completed  
Wally's Water Conservation Camp.

*Shivaji Deshmukh*

**SHIVAJI DESHMUKH, P.E.**  
IEUA General Manager

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