APPENDIX K – Water Conservation Materials for School Outreach

ATTENTION
SAN BENITO COUNTY TEACHERS!

THE WATER RESOURCES ASSOCIATION OF SAN BENITO COUNTY ANNOUNCES FREE EDUCATIONAL PROGRAMS FOR YOUR STUDENTS

- Have a Water Conservation Specialist visit your class for a presentation on our local water supply, the Water Cycle and water resource protection
- Take a field trip to the Hollister Reclamation Plant and the Hollister/Sunnyslope Water Treatment Plant
- Learn about the challenges facing our county
- Educational material for your students
- Learn about careers in water
- All presentations can be tailored to meet the needs of your students and/or current curriculum

Water Resources Association
San Benito County
www.wrasbc.org

A locally-based agency focused on water resource management in San Benito County, representing the City of Hollister, the City of San Juan Bautista, Sunnyslope County Water District and San Benito County Water District

Call: 831.637.4378

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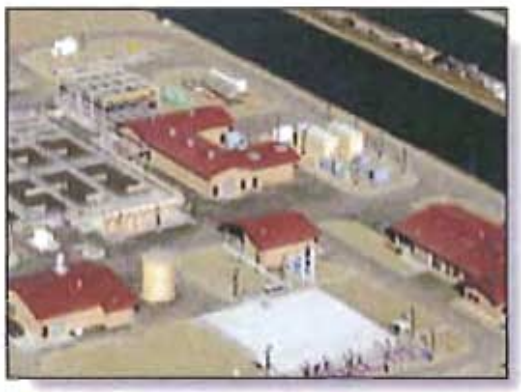

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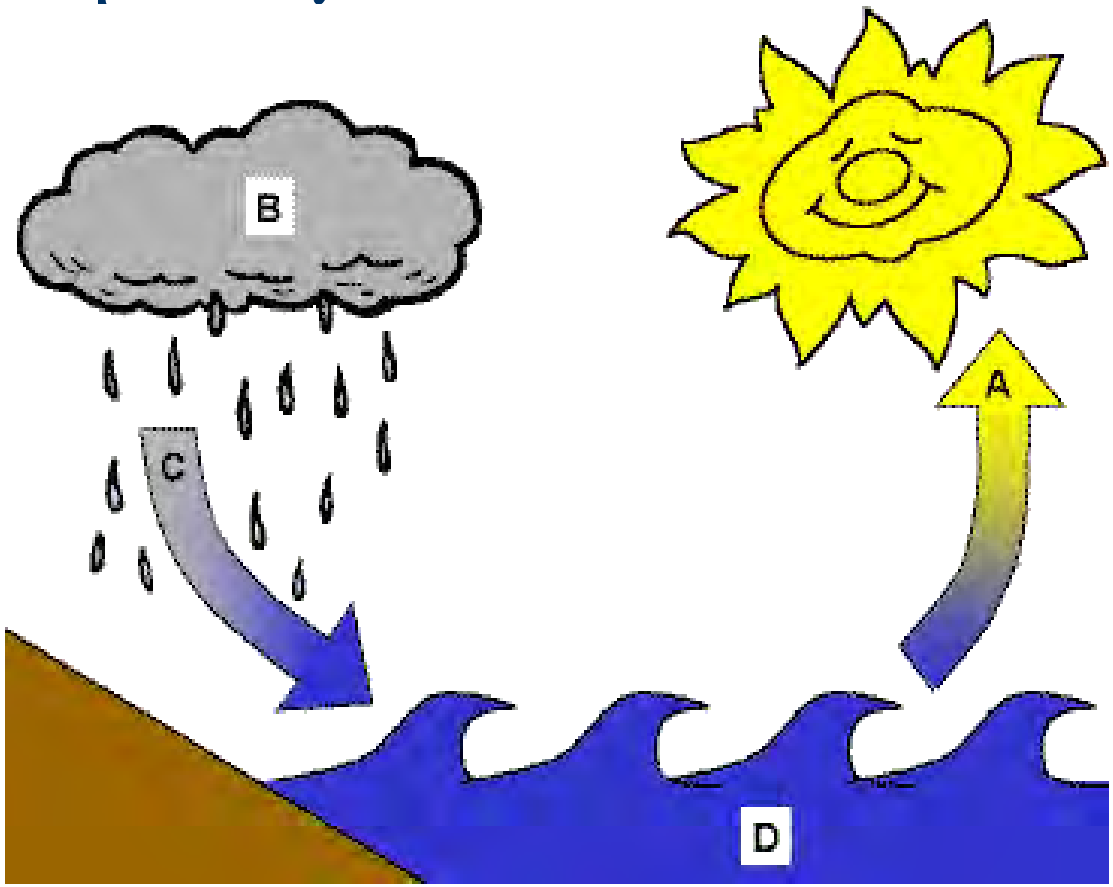
WATER RESOURCES ASSOCIATION of SAN BENITO COUNTY

Every Drop Counts!

Water covers more than two-thirds of the earth, but less than one percent is fresh water that we use for drinking, agriculture, manufacturing, food processing, recreation, sanitation, and similar needs. The other 99 percent is in oceans and polar ice caps, generally inaccessible, unsuitable for human and animal needs.

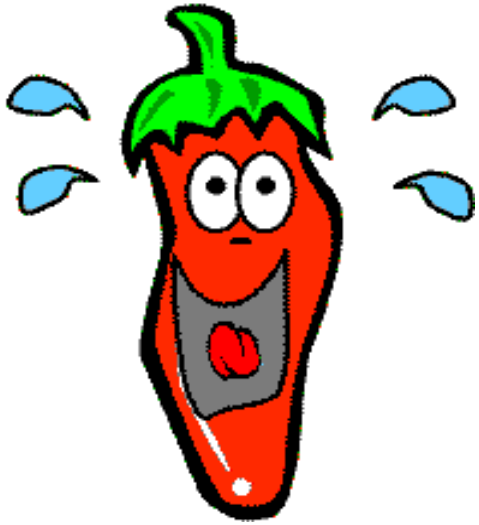
This small amount of water goes around and around in what we call the "Water Cycle". This cycle is made up of a few main parts:

- evaporation (and transpiration) -A
- condensation - B
- precipitation- C
- collection - D



Evaporation: Evaporation is when the sun heats up water in rivers or lakes or the ocean and turns it into vapor or steam. The water vapor or steam leaves the river, lake or ocean and goes into the air.

Do plants sweat?



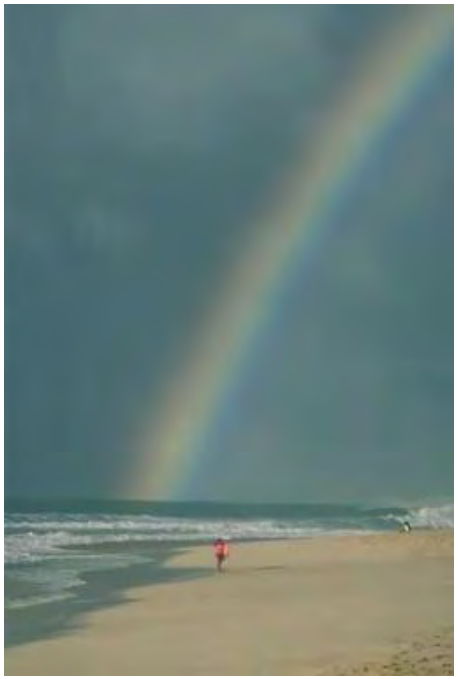
Well, sort of.... people perspire (sweat) and plants transpire. **Transpiration** is the process by which plants lose water out of their leaves. Transpiration gives evaporation a bit of a hand in getting the water vapor back up into the air.

Condensation:

Water vapor in the air gets cold and changes back into liquid, forming clouds. This is called condensation.

You can see the same sort of thing at home... pour a glass of cold water on a hot day and watch what happens. Water forms on the outside of the glass. That water didn't somehow leak through the glass! It actually came from the air. Water vapor in the warm air, turns back into liquid when it touches the cold glass.

Precipitation: Precipitation occurs when so much water has condensed that the air cannot hold it anymore. The clouds get heavy and water falls back to the earth in the form of rain, hail, sleet or snow.

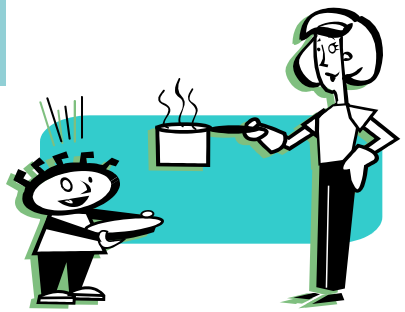


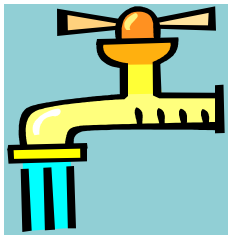
Collection: When water falls back to earth as precipitation, it may fall back in the oceans, lakes or rivers or it may end up on land. When it ends up on land, it will either soak into the earth and become part of the "ground water" that plants and animals use to drink or it may run over the surface of the soil (surface water) and collect in the oceans, lakes or rivers where the cycle starts…

all over again.

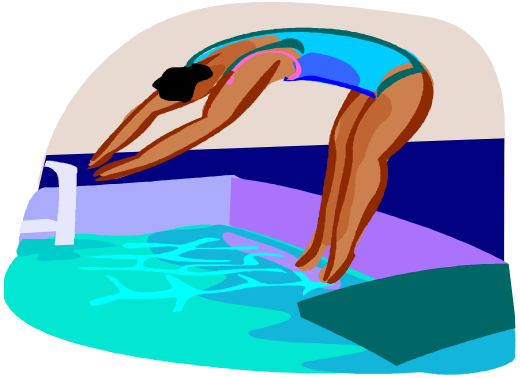
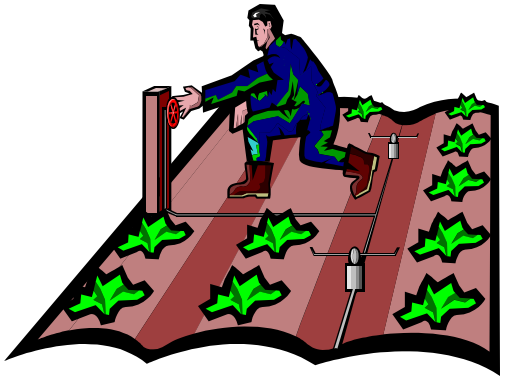
Surface water is water that comes from streams, rivers or runoff. Water on the “surface” of the earth.

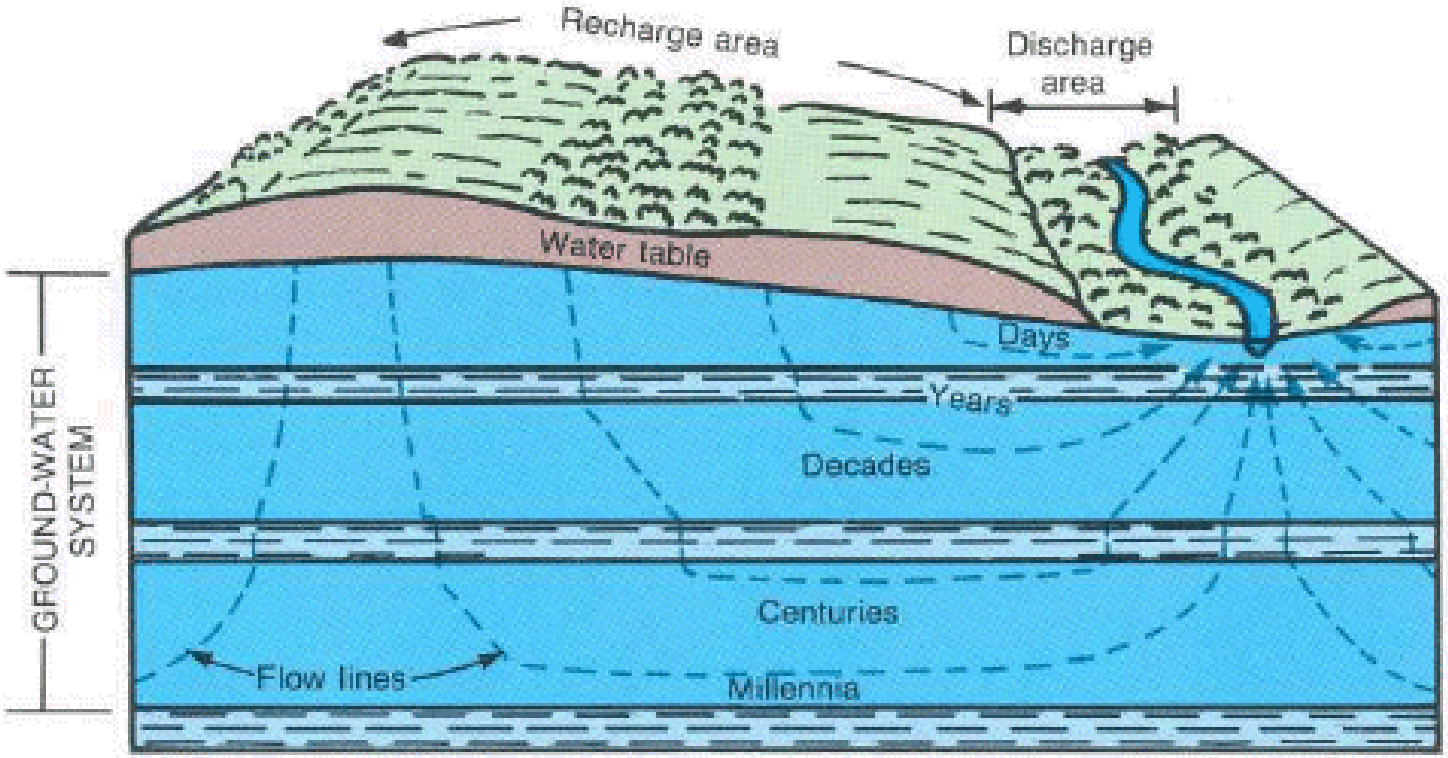
This water is collected and stored in dams or reservoirs for later use.





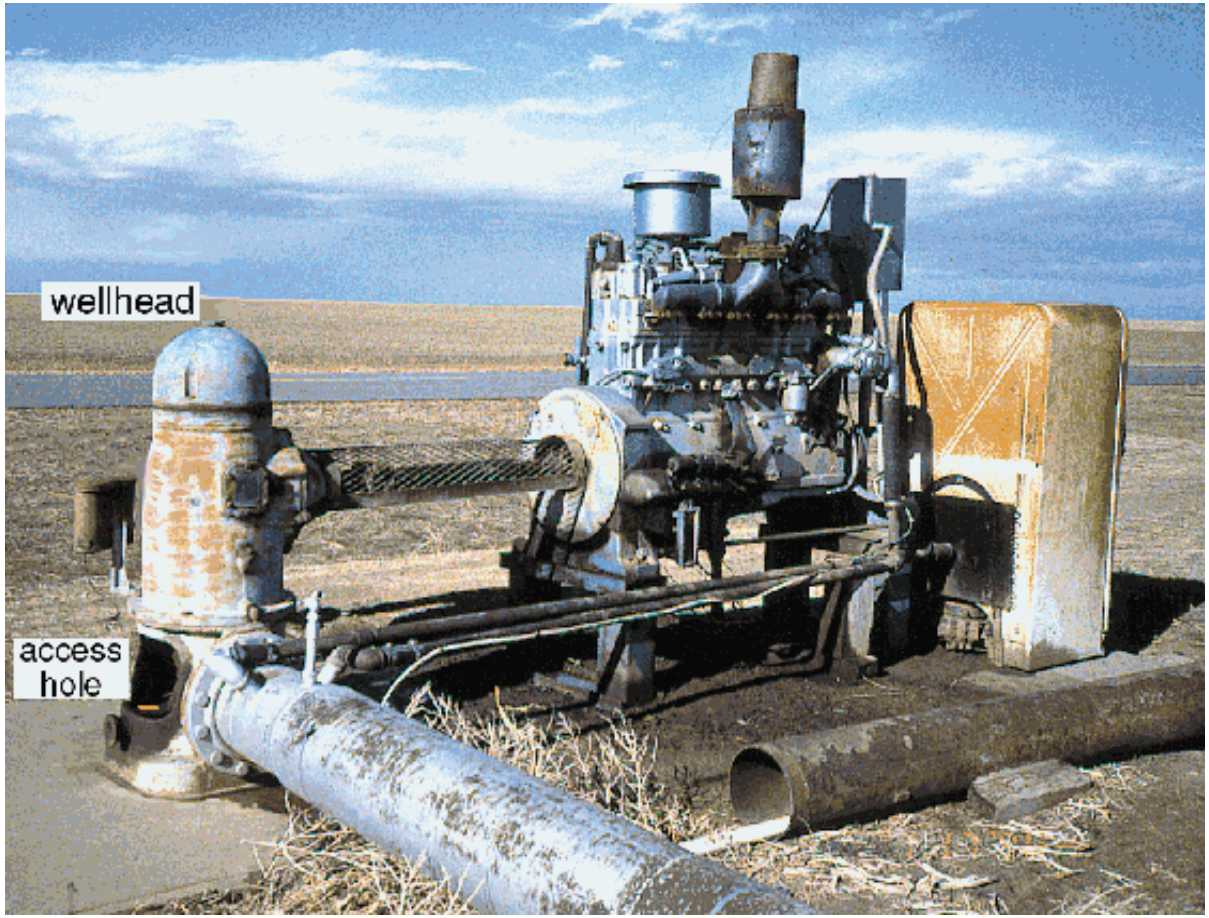
Where does the water come from that we use in San Benito County?



Most of the water that we use in our homes in San Benito County comes from groundwater. This is water that finds it way underground to spaces in rocks, sand or dirt where it is stored.

A drill is used to get below the surface where water is stored within the ground.



A pump is used to bring this water to the surface.

Once the water is pumped to the surface it is either used directly or put in to a water tank to store it for later use.

San Benito County uses surface water to "recharge" or replenish the groundwater supply during dry periods. This surface water comes from the Central Valley Project.

Hollister

The Central Valley is a large valley that runs through the center of our state.

The CVP uses the water of the Sacramento River basin in the north for the benefit of the San Francisco Bay Area, the farmlands of the San Joaquin Valley, and other metropolitan areas in the south.

The Central Valley Project

(CVP)

Facts about the Central Valley Project (Source: Bureau of Reclamation)

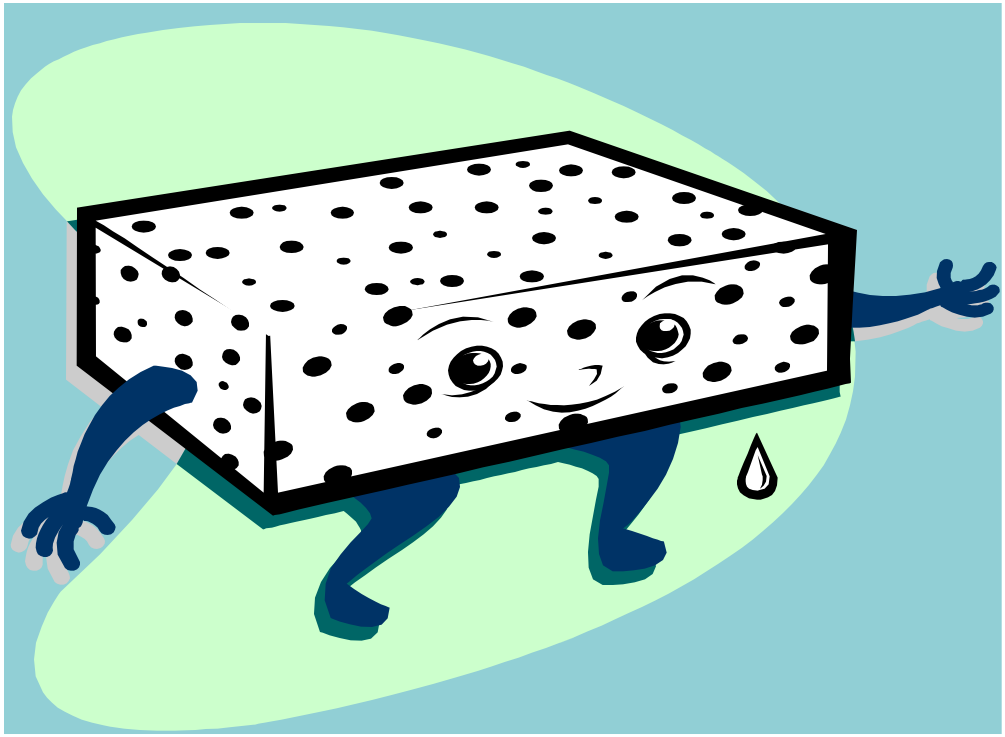
- 0: Federal water projects in the U.S. that are LARGER than the CVP
- 11: Power plants that operate as part of the CVP
- 20: Dams and reservoirs in the CVP system
- 251: Water and Irrigation Districts that contract for CVP water
- 500: Miles of major canals and aqueducts in the CVP system
- 2,000,000: Urban residents receiving water from the CVP
- 3,000,000: Acres of farmland irrigated with CVP water
- 2,282,000,000,000: Gallons of water conveyed in CVP every year (equivalent to 7 million acre-feet or enough water to supply every family in the state of New York for a year)

Some of this CVP water is stored at the San Luis Reservoir.

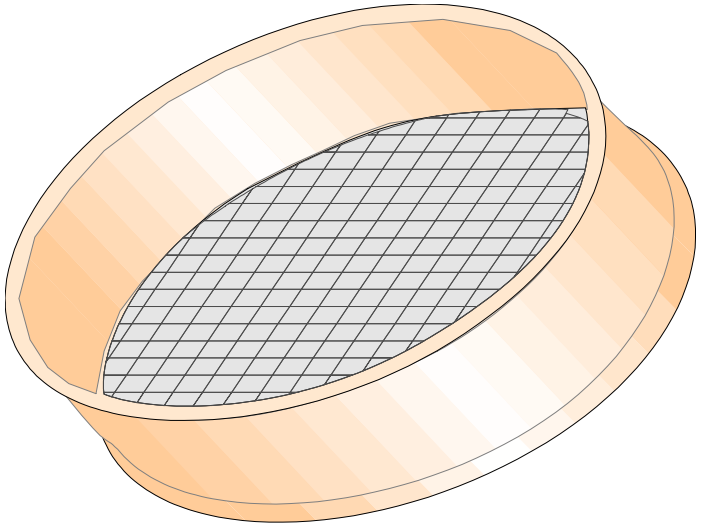
The San Benito County Water District pumps water over the hills from the San Luis Reservoir. The series of pipes and pumps that brings the water over the hill is called the San Felipe Water Project.

The water that is pumped through these pipes is called “Raw Water”. Raw water has not been treated or cleaned.

Some of this water is used to replenish the groundwater supply.



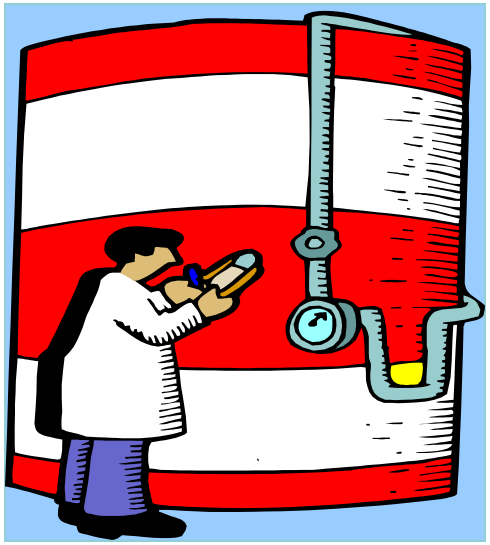
The ground acts as a big sponge. Water is stored in the ground in underground holes and spaces. This is called percolation.



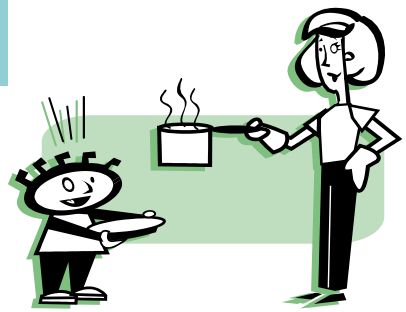
Some of the water goes to the LESSALT plant. The water is processed here so it is safe to use in your house.

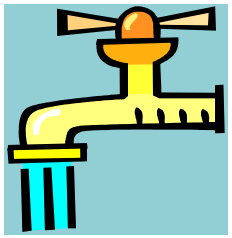
First, the “Raw Water” goes through a strainer to get rid of large particles, like trash or rocks.

Next, the raw water is put through a membrane filter. This is a series of very small filters.

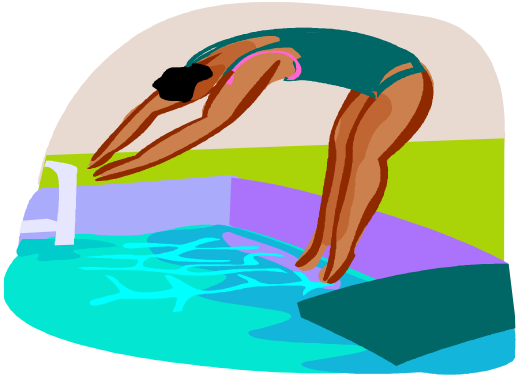
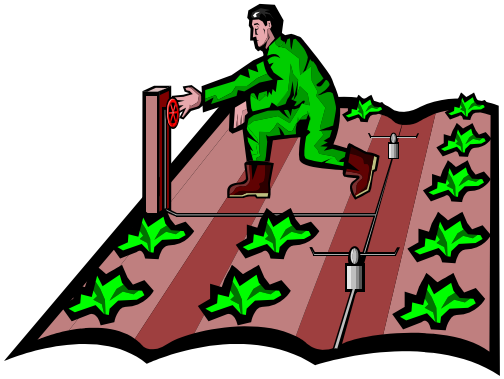


After the water is filtered, chlorine is added. The chlorine kills any germs in the water. Now the "Raw Water" is "Treated Water". This water is mixed with groundwater and sent to Sunnyslope County Water District and the City of Hollister. They deliver this water to their customers.





Think about all the ways you use water at home…

CONTACT INFORMATION:

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Hollister, CA 95023

(831) 637-4378

http://www.wrasbc.org/

Jug #_____ Name:_____

Water and Money Down The Drain

Measurement #1 _____milliliter per minute

Measurement #2_____ milliliter per minute

Measurement #3_____ milliliter per minute

Total _____/ 3 = Average drip per minute_____(milliliters)

Average drip per minute x 60 = _____Average drips per hour (milliliters)

Average drips per hour (ml) / 3785 milliliters =_____ Gallons per hour

Gallons per hour x 24 = _____gallons per day down the drain

Gallons per day x 7 =_____ gallons per week down the drain

Gallons per week x .30 (price for water per gallon) =

_____money down the drain per week

_____ x 4 = money down the drain per month

_____ x 12= money down the drain per year!!!!!!