

2 0 0 7 W I N T E R E D I T I O N

CYPRESS FOREST PUD *News*

PROVIDED AS A PUBLIC SERVICE FOR OUR RESIDENTS AND CUSTOMERS

District Sponsors Water Ed Program for KISD Students

Cypress Forest PUD has provided WATER IS LIFE coloring books for youngsters in Klein ISD to learn about the basics of where our water comes from and where it goes. The book is the “junior” version of *Journey to Pansophigus*, a new water conservation adventure book currently used in Klein and other local ISDs with fifth grade classes.

The education program features a trio of teenage “friends” from a tropical paradise who set off on an adventure to discover why their community’s water supply is diminishing and is being polluted.

The story has some unusual heroes and villains, and includes a strong messages for students about the importance of self reliance as well as the need to become good stewards of their environment. The story underscores how critical water is to survival as well as to sustained economic development and quality of life.

The WATER IS LIFE coloring book, developed at the request of science educators, introduces the *Journey* “kids” at a younger age. The author of these publications, Nikki Wynn, graduated from Klein High School before going on to Texas A&M where she earned her journalism degree.



Here's a Snapshot of our District...

- ◆ **1950 Customers** -- (Includes all residential & commercial users plus Irrigation)
- ◆ **24 Million Gallons delivered 12/8/06 - 1/9/07**
- ◆ **Water used in 2006: 490 Million Gallons**

PUD Joins Sponsor's Circle

A key component of the WATER IS LIFE education program is the Mobile Teaching Lab. The Lab, available for use by teachers on campus, features interactive exhibits that focus on where our water comes from, how we use it, how it must be protected from pollution, and how we can use it more efficiently in our daily lives.

Cypress Forest PUD is included in the list of Sponsors on this traveling exhibit, and has been congratulated for their participation by the North Harris County Regional Water Authority.



Do you use water wisely? Take this quiz to find out...

*How do your water conservation habits rate?
Check the things you currently do to curb your water
consumption...and then see how you rate at the end.*



IN THE BATHROOM

❑ **Regularly check toilets for leaks.** A leaky toilet can waste hundreds of gallons of water a day. To check, put a little food coloring in your toilet tank. Wait ten to 15 minutes. If, without flushing, the coloring begins to appear in the bowl, you have a leak. Adjust or replace the flush valve or call a plumber.

❑ **Don't use toilets as an ash-tray or wastebasket.** Every time you flush a cigarette butt, facial tissue or other small bit of trash down the toilet, you waste five to seven gallons of water.

❑ **Put a plastic bottle in your toilet tank.** Your toilet can probably flush just as efficiently with less water than it now uses. To cut down water waste, put an inch or two of sand or pebbles in a plastic quart bottle to weigh it down. Fill the bottle with water and then put it in your toilet tank, safely away from the operating mechanisms. In an average home, the bottle may displace 10 gallons or more of water a day. (Note: Never put a brick in the toilet. Bricks tend to disintegrate in the water and can damage plumbing.)

❑ **Take shorter showers.** Long, hot showers waste energy and five to ten gallons of water every minute. Limit your showers to the time it takes to soap up, wash down and rinse off.

❑ **Install water-saving shower heads or flow restrictors.** Most shower heads put out five to ten gallons of water per minute.

Your local hardware or plumbing supply store stocks inexpensive, water-saving shower heads that use less than 3 gallons per minute. Thanks to some new technology and design of the low flow shower heads, you won't even notice the difference - except on your water bill.

❑ **Turn off the water while you brush your teeth or shave.**

After you have wet your toothbrush and filled a glass for rinsing your mouth, there is no need to keep water pouring down the drain. Before shaving, partially fill the sink with a few inches of warm water. This will rinse your blade just as efficiently as running water, and far less wastefully.



IN THE KITCHEN OR LAUNDRY ROOM

❑ **Use your automatic dishwasher only for full loads.** Every time you run your dishwasher, you use about 25 gallons of water.

❑ **If you wash dishes by hand, don't leave the water running for rinsing.** If you have two sinks,

fill one with soapy water and one with rinse water. If you only have one sink, gather all the washed dishes in the dish rack and rinse them with an inexpensive spray device.

❑ **Don't let the faucet run while you clean vegetables.** Put a stopper in the sink and fill the sink with clean water.

❑ **Keep a bottle of drinking water in the refrigerator.** This ends the wasteful practice of running tap water to cool it off for drinking.

❑ **Use your automatic washing machine for full loads only.** Your automatic washer uses 30 to 35 gallons of water in a cycle. Most automatic washers have a water level regulator. To save water, use the appropriate setting.

YARD AND GARDEN

❑ **Plant drought-resistant trees and plants.** There are many beautiful trees and plants that thrive in Texas with far less watering than other species. (Visit our website for a list of informative sites.)

❑ **Put a layer of mulch around trees and plants.** A layer of mulch will slow the evaporation of moisture. Consider starting a compost pile. You'll be amazed at how your plants will thrive with the rich mixture...and less water, too.

❑ **Use a broom to clean driveways, sidewalks and steps.** Using a hose to push around a few

Continued on page 3

leaves and scraps of paper can waste hundreds of gallons of water.

❑ **Don't run the hose while washing your car.** Soap down your car with a pail of soapy water. Then use a hose just to rinse it off.



❑ **Water your lawn only when it needs it.** You don't have to water on a set schedule. Watering frequently can actually damage your lawn. A good way to see if your lawn needs watering is to step on some grass. If it springs back up, you don't need to water. If the footprint stays flat, it's time to water.

❑ **Deep-soak your lawn.** Don't sprinkle. A good soaking every five to seven days gets to the "root" of the problem and encourages deep, solid root growth. Don't allow water to run onto the sidewalk, driveway or street. If you have an irrigation system, set your timer conservatively. *Install a rain sensor so you don't water when it's raining.*

❑ **Properly position your sprinklers.** Direct the spray so that water lands on your lawn or garden, not on concrete where nothing grows. Avoid watering on windy days -- or mid-day -- when much of your water may be carried off or evaporated before it ever hits the ground.

❑ **Check for leaks in pipes, hoses, faucets and couplings.** Even a small drip can waste 50 or more gallons of water a day. Larger leaks can waste thousands of gallons. ■

How important is water conservation at YOUR home?

Your Score: _____

If you checked ...

18-20 - You're doing an excellent job saving water, energy and protecting our environment!

12-17 - You're doing a good job, but there's still room for improvement.

Less than 12 - It is time to take a good look your water usage habits and be alert to ways to conserve this precious resource!

Visit www.StopTheDrop.org for a wealth of water conservation information.

Could Your Hose Be Hazardous to Your HEALTH?

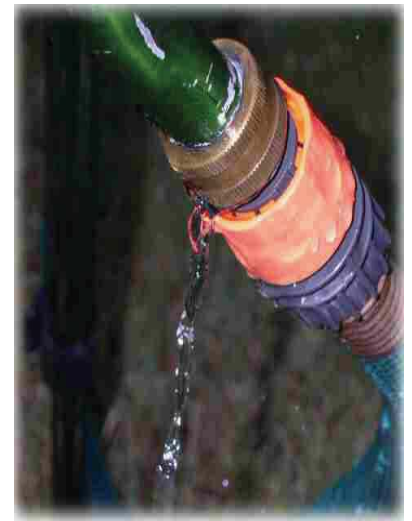
When water flows backwards through the water supply system, it is called **backsiphonage** or **backflow**. When the water is accidentally mixed with hazardous chemicals or bacteria, the results can be dangerous...even fatal!

The danger arises when the hose -- any hose -- is connected to a harmful substance, and if the pressure in the water main line drops while your hose is submerged in polluted or contaminated water, the water (and whatever is in it) could be sucked back into your pipes and your drinking water supply.

Water pressure drops can happen when firefighters battle a nearby blaze or when repairs are made to a broken water line. Some harmful substances you should be wary of are the chemicals used to fertilize and kill weeds on your lawn. The cleansers used in your kitchen and bathroom could be hazardous if swallowed, as could bacteria in the water from your pool or waterbed.

Fortunately, keeping your water safe from contaminants is easy. Take the following precautions to protect your drinking water:

- ◆ Never submerge hoses in buckets, pools, tubs or sinks.
- ◆ Always keep the end of the hose clear of possible contaminants.
- ◆ Do not use spray attachments without a backflow prevention device. The chemicals used on your lawn are toxic and can be fatal if ingested.
- ◆ Do buy and install inexpensive backflow prevention devices for all threaded faucets around your home. The devices are available at hardware stores and home improvement centers. ■



Effluent Reuse...Yesterday and Tomorrow

Scarcity of conventional sources of water is no longer limited to arid and semi-arid regions of the world. There is a global emphasis on finding alternative or additional options for increasing water supplies. Possible sources being discussed include, among others, deep groundwater and treated wastewater.

Deep groundwater is not always available and can be very costly to access. Saline water application to agricultural land results in limited agricultural yields and salt accumulation in the soil.

Wastewater, when treated, is a relatively stable water source that has uses in agriculture, industry, recreation, gardening, industrial-plant cooling, and recharge of groundwater.

Ancient Technology...

Most people are surprised to learn that wastewater transport and collection dates back thousands of years. Sargon the Great, an Assyrian king (1705 BC) in Babylon had bathrooms and toilets that emptied into a sewer. Excavations of palace ruins in Knossos in Crete revealed sewage systems from the ancient Minoan Culture from around 1700 BC.

The Roman palaces of Caesar, some 2000 years ago, had bathrooms, toilets and sewers.



Roman baths in Bath, England

The Roman conquest of Britain resulted in plumbing systems being established there. The early toilets were connected to cesspools (early septic tanks), or were drained into open sewers on the street. Later the systems were abandoned and sewage was taken in pipes to be dumped, untreated, into the nearest river. British colonialism took plumbing to all its colonies throughout the world.



Today's Options...

Cypress Forest PUD has retained the services of Nancy Blackwell, AEI Engineering, Inc., to work on a feasibility study to evaluate the requirements, options and costs associated with a potential project to utilize treated effluent from the Kleinwood Joint Powers Wastewater Treatment Plant on Squyres Road, to irrigate the pub-

lic esplanades along Cypresswood Drive and Champion Forest Drive, within the boundaries of the district.

At this date, the scope of the potential project being analyzed includes only the public esplanades, but may be expanded to include other potential users/projects in the future. The proposed reuse project currently being evaluated includes five components: filtration, storage, distribution, piping and irrigation system.

So what could a water reuse program mean for the residents of Cypress Forest PUD? First, a reuse program will reduce our overall consumption of groundwater within the District and save money on permitted pumpage. This helps to meet the Subsidence District's mandate to reduce groundwater consumption, so no extra fees have to be paid for non-compliance.

Help for Tomorrow...

Water districts throughout northwest Harris County will begin the phased conversion to surface water sources in 2010; reducing reliance on the groundwater we use today.

It is hoped that savings generated from use of treated effluent instead of surface-water, projected at a base cost in 2010 of \$1.80 plus taxes, may make this project a worthwhile, long term investment for our community and a savings to our residents.

Cypress Forest PUD Director Linn Smyth is responsible for this project. Please direct any questions or inquiries to her at 281-376-2150. 💧



H₂O ARTIFACTS



The first 'flush' toilet was installed 200 years ago in Sandringham palace, Queen Elizabeth's "country home" in England? (above)

The word 'plumber' comes from the Latin 'plumbus' (Pb) for lead. Lead was used to make the pipes for water that flowed in Caesar's palace for drinking and washing. Could drinking all that lead have anything to do with the fall of the Roman Empire? (right)



Would you like to know more about the Public Utility District that supplies your water?

Join us for the first in a series of Brown Bag Lunch meetings to explore critical issues relating to our current and future water supply and what each of us can do to use this precious natural resource more efficiently.

Make your reservation on our website, www.cyforest.com/contactus. We'll provide a light lunch, beverages, some important information...and a chance to discuss topics that might be on your mind.



Date: March 23, 2007

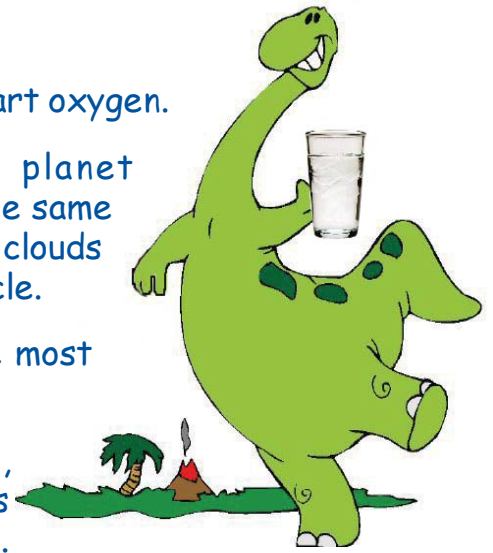
Time: 11:30 a.m.

Place: Cypress Forest PUD building, 16215 Champion Forest Drive

Topic: Utility District '101'

Some Amazing Things You Might Not Know About Water...

- ◆ H_2O -- water is made up of two parts hydrogen and one part oxygen.
- ◆ The overall amount of water on our planet has remained the same since the beginning of time. It's the same water the dinosaurs drank and it moves endlessly from sea to clouds to rain to Earth and back again. That's called the Water Cycle.
- ◆ Every living thing needs water to survive. Water is the most common substance found on Earth.
- ◆ A person can live without food for about a month, but only about a week without water. A healthy adult needs 2 quarts of water a day, but most people drink less than this.
- ◆ Water is the only substance on Earth that exists in all three forms -- solid (ice), liquid (water) and gas (steam).
- ◆ The Earth is called the water planet -- 80% of it is covered with water or ice, but only 2% of that water is drinkable.
- ◆ 4,000 glasses of tap water can be purchased for the same price of a six-pack of soft drink.
- ◆ About 6,800 gallons of water is required to grow a day's food for a family of four.
- ◆ The five Great Lakes form the largest fresh surface water system in the world. If all the water in the Great Lakes was spread evenly across the continental US, the ground would be covered with almost 10 feet of water.
- ◆ Americans use more than 400 billion gallons per day of both surface and ground water -- much of it consumed in and around the home. Two-thirds of the water used in an average home is used in the bathroom; much of it consumed by flushing the toilet. A 10-minute shower uses about 55 gallons of water.
- ◆ If every household in America had a faucet that dripped once each second, 928 million gallons of water a day would leak away down the drain!
- ◆ It takes almost 49 gallons of water to produce just one eight-ounce glass of milk. That includes water consumed by the cow and to grow the food she eats, plus water used to process the milk.



Now that you know...doesn't it make sense to use our precious water resources wisely?

PREPARING FOR A FLOOD

In the Houston area, flooding is a reality. Preparing for the possibility that a flood may affect you and/or your property, especially for those located in the floodplain, should be taken seriously.

How Do I Know if I'm in the Floodplain?

Following Tropical Storm Allison, FEMA re-evaluated flooding hazards* for our community and has now issued its final flood elevation determination for Harris County. Their new Digital Flood Insurance Rate Map (DFIRM) identifies elevations that have a 1 percent chance of being equaled or exceeded in any given year (base flood). This Rate Map will become effective on June 18, 2007. You can view and download the new floodplain maps on the TSARP website, www.tsarp.org, and use the Interactive Mapping Tool or the FEMA Preliminary Flood Insurance Rate Map Look up Tool. If you have questions, contact the TSARP hotline at 713-722-7227.

What Can I Do Today to Protect Myself and My Property?

- ◆ If you don't have flood insurance, talk to your insurance agent. Homeowner's insurance policies do not cover damage from floods. However, because Harris County participates in the National Flood Insurance Program (NFIP) you can purchase a separate flood insurance policy. This insurance is backed by the Federal government and is available to everyone, even for properties that have previously flooded.
- ◆ There is a 30-day waiting period before National Flood Insurance Program coverage takes effect, so ***don't wait for the next flood to buy insurance protection.***

*Tropical Storm Allison Recovery Project

Remember...it doesn't take a hurricane for flooding to occur! During the life of a 30-year mortgage, there is a 26% chance of experiencing a flood if a property is located in the floodplain; however, during Tropical Storm Allison, 80% of the damage occurred outside of the floodplain.

Standard property insurance does not cover flooding so Flood Insurance is recommended for all homes in Houston. Please see page 8 for the latest information about the National Flood Insurance program.

◆ Don't wait until severe weather is imminent. Find out what could happen to you and your family. Where will family members be when it floods? At work, school, daycare? How would you

find each other in an emergency or know if other family members were safe? Investigate disaster plans at work, at schools and/or daycare, and other places where your family spends time.

◆ Establish a family emergency plan and select a place to meet outside your neighborhood in the event you cannot return home. Everyone should know the address and phone number of this location. Designate a relative or friend out of the area to call to relay information to other family members if necessary.

◆ Make specific plans for your pets...most shelters do not allow animals.

◆ If you have experienced flooding at your home in the past, you may want to investigate some temporary property protection measures to avoid future problems. Sometimes retrofitting or modifications will help keep rising water out. Don't wait until the last minute if severe weather approaches. Take precautionary measures such as moving belongings to a safe location.



HELP! It's Flooding...



What Do I Do?

If you find yourself in the unfortunate situation of a flood, follow these steps to help ensure your safety:

◆ **Do not walk through flowing water.** Drowning is the number one cause of flood-related deaths, mostly during flash floods. Currents can be deceptive; in fact, six inches of moving water can knock you off your feet.

◆ **Do not drive through a flooded area.** More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out.

◆ **Stay away from power lines and electrical wires.** The number two flood killer (after drowning) is electrocution. Be sure to report downed power lines to the local Power Company or the Harris County Office of Emergency Management (HCOEM).

◆ **Have electricity turned off by the Power Company.** Some appliances, such as television sets, keep electrical charges even after being unplugged.

◆ **Look out for animals, especially snakes.** Small animals that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals.

◆ **Be alert for gas leaks.** Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flames unless you know the gas has been turned off and the area has been ventilated.

◆ **Stay informed.** In the event of severe weather, local radio and television stations KTRH (740 AM), KHOU (Channel 11), KPRC (Channel 2), KTRK (Channel 13) interrupt scheduled programming with a severe weather alert. If you have access to a computer, you may also log onto the Harris County Office of Emergency Management's website at www.hcoem.org.

IMPORTANT NEW NATIONAL FLOOD INSURANCE PROGRAM INFORMATION

When the official Flood Insurance Rate Maps become effective on June 18th, 2007, flood insurance requirements and/or costs may be affected. There are benefits to purchasing flood insurance NOW because the easiest way to qualify for what's called the "grandfathering provision" is to have a policy already in place when the new maps become effective. Remember there's a 30-day waiting period before a new policy is in effect, so don't wait until the last minute to apply for coverage.

For more information, please visit FEMA's special website, www.floodsmart.gov and call your insurance agent to apply for your policy. Check our website -- www.cyforestpud.com -- for more informative "flood" links.

Source: "Minimizing Flood Hazards in Your Community – June 2005"; Harris County Public Infrastructure Department Engineering Division – Permit Office



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