



North Harris County Regional Water Authority

WATERLINES

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Authority Getting Ready for Initial Conversion to Surface Water in 2010

When the North Harris County Regional Water Authority was created by the Texas Legislature in 1999 and confirmed by a public vote in January 2000, the Harris-Galveston Subsidence District's mandate to begin reducing our reliance on groundwater in 2010 seemed far in the future. Since that first board meeting held in February 2000, significant progress has been made toward the initial goals, and a number of water supply problems have also been solved in the process.

According to Jimmie Schindewolf, P. E., the Authority's General Manager, "Thanks to the outstanding cooperation and support of the many utility districts within the NHCRWA boundaries, we are right on target and under budget in the construction of an entirely new infrastructure to begin the process of delivering surface water to the districts in 2010. Each month, at our Board of Directors meeting, we hear updates on this progress. To date, we have constructed 29 miles of new water lines throughout the area. This system is currently being utilized in the Groundwater Transfer Program, sharing water among districts with water quality or quantity problems."

"The Groundwater Reduction Plan (GRP) we submitted to the Subsidence District in 2003 outlines all the details about how we will manage the conversion to surface water," Schindewolf continued. "As part of our annual budget process, our engineering team submits a two-year Capital Improvement Plan. We estimate that it will cost in the neighborhood of \$222.7 million to accomplish the 2007-2008 Plan. This work includes acquiring required sites and easements; designing and initiating construction on all the infrastructure needed to complete the 2010 system and secure property to help implement the 2020 system."

"This is an amazingly complex process," the General Manager said. "We are constructing an entirely new water delivery infrastructure system, while the current system -- all of the utility district groundwater wells -- remain operational and intact. In the future, those wells can serve as a backup system of sorts, should we ever need it. We are carefully researching area growth and population trends to meet present and future water demands. The important thing for our neighbors to understand is that the days of cheap and plentiful water are now behind us. Water will cost more in the future, so we are also asking residents to embrace water conservation to help extend our current resources."

(For more information on these construction efforts, please read "The Rising Cost of Water" on page 2.)



Building a New Water Infrastructure...

During the past two and a half years, the North Harris County Regional Water Authority has installed almost 29 miles of new water lines throughout our community that will deliver surface water to our neighborhoods for the first time in 2010.

This extensive construction is being undertaken to comply with the Harris-Galveston Subsidence District's mandate to reduce dependence on groundwater in order to arrest subsidence and to allow our aquifers to recharge.

The Evangeline Aquifer -- from which we get a significant amount of our groundwater -- recorded a 100-foot decline over a recent 20-year period. Reducing the amount of groundwater pumped from an aquifer can make a significant difference. In fact, the aquifers have begun to rebound and subsidence has stopped in other areas where the Subsidence District's mandate has been accomplished.

The Texas Water Development Board has warned in its report, WATER FOR TEXAS, that the state's days of cheap and plentiful water supplies are coming to an end. With the depletion of critical aquifers, groundwater resources that we have relied on for decades may be insufficient to meet future needs. Surface water, which is renewable,

will help meet the increasing demand, but much of the state's supply is not always readily accessible and is costly to deliver to population centers where it is needed.

Water Will Cost More in the Future...

There is no question that water will cost more in the future -- to acquire, secure and deliver. From the outset, it has been the Authority's strategy that all water users pay their fair share of the costs for construction and for surface water. An excellent long-term water supply contract, negotiated with the City of Houston, supports this "fairness policy".



The Authority is committed to operating cost-effectively, and will remain alert to opportunities to obtain necessary water line easements and property for plants while land is still available and relatively affordable -- compared to what it will cost in the future when the area is more fully developed.

Last year, for example, the Authority partnered with the City of Houston to construct a major transmission line that will bring surface water from the City's Northeast Water Purification Plant close to the site of the Authority's planned 2010 pumping and storage facility. Constructing this line ahead of schedule has resulted in millions of dollars in savings.

Serving the Needs of a Growing Population...

Our community is growing rapidly. All these new residents will need water, which is driving demand projections -- and costs -- upward. Each year, the Authority's board of directors approves a Capital Improvement Plan. This careful long-range planning process helps to maximize potential cost savings on construction projects.

On October 1, 2006, the Authority increased the groundwater pumpage fee that appears on most utility district water bills. For an average household that uses 10,000 gallons of water a month, the increase will amount to approximately \$2.50. This modest increase is necessary to continue construction of water delivery infrastructure as efficiently and cost-effectively as possible in order to comply with the nonnegotiable conversion to surface water. ♦

Be careful about what you throw away... Greasy food scraps can come back to haunt you!



Families just seem to gather in the kitchen during holidays when tempting aromas beckon and there are lots of tasty tidbits to sample. When the scrumptious meals are over, however, everything from breakfast scraps to the more bulky “feast” leftovers get scraped into the disposal in the kitchen sink. It is not quite so appetizing to think of all those shredded greasy food scraps sliding down the drain where, once they begin to accumulate in the pipes, some serious blockage can occur.

Some foods and cooking ingredients are potentially more troublesome than others. Discarded substances like cooking oil, bacon grease, mayonnaise, poultry skin, and pasta can stagnate in underground plumbing lines and get even messier when joined by dinner roll scraps, gravy and mashed potatoes. Then sometime later, when the meal is long forgotten, the sewer system becomes blocked sufficiently to cause a backup inside the house and the plumber reaps the benefits of costly remedies and repairs.

While most homeowners may not be aware that commercial establishments and restaurants are required to install “grease traps” or interceptors and have them cleaned regularly, there are no such requirements for private homes. It is up to the homeowner to make sure that their pipes aren’t clogged up with discarded food.

According to the Texas Commission on Environmental Quality (TCEQ), most sewer backups occur between the house and the main sewer lines. This means that it is the resident’s responsibility to correct the problem. In even more complicated situations, grease blockages in the main lines can cause chain events --sanitary sewer overflows lead to pollution of nearby lakes and streams which create potential health threats for people and wildlife.

Disposal of cooking grease into storm drains has the potential to cause more havoc. The storm drains lead directly to streams and creeks, so discarded grease can also pollute the nearest water source. Remember, any substance poured onto the ground can end up in groundwater. Take the time to dispose of greasy substances properly...recycle as much as possible and pour cooking oils, lards, and grease into closeable containers for disposal. Or consider mixing with dry kitty litter until the oil is absorbed and then place in a zipped top bag for disposal.



Here are some additional tips for the disposal of grease and leftovers from TCEQ...

- Place grease and used cooking oils in covered collection containers. Let them solidify on the counter or in the refrigerator before placing them in the garbage.
- Scrape food scraps into trash cans or garbage bags; minimize the use of the disposal. Non-meat and dairy food items may be placed in a compost pile.
- Remove oil or grease from dishes, pans and griddles by using a rubber spatula or paper towel to absorb it instead of rinsing it down the sink.
- Prewash greasy dishes and pans with cold water -- not hot -- before going into the dishwasher.
- Do NOT pour cooking oil and grease down the drain...ever.
- Overall, be careful what you scrape into the disposal. Once the walls of the pipes begin to clog up, all kinds of discarded scraps can exacerbate the problem.
- Don’t run hot water over dishes, pans, fryers or griddles to wash oil and grease down the drain. 💧



Sprinkler Systems CAN save \$\$. . . Unless

By Michael Murr, Public Member, TCEQ Irrigation Advisory Committee

There's an old saying, "you get what you pay for." That is indeed a true statement...most of the time. It has occurred to me recently, however, that irrigation systems we have, or plan to have, aren't in "spec" to save water, and these days that means saving money. Water bills continue to go up. The amount of money it takes to run your household for utilities and water, is steadily creeping up there with the cost of everything else. It is true that we won't be able to rely on groundwater as we did in the past; we are going to be relying on surface water before long.

In Northwest Houston neighborhoods, many homeowners are fortunate to have automatic sprinklers (or irrigation systems). They offer convenience and control in protecting your landscape investments.

Sprinkler systems help us enjoy our yard. They keep it healthy and beautiful; however, most homeowners tend to over-water their lawn or waste water through inefficient habits. Just because you install a sprinkler system doesn't automatically mean you are conserving water. Adopting water-savvy habits is essential to maintaining and extending our community's water supply, especially during peak use.

The key to efficient outdoor irrigation is applying just enough water...only when necessary. Irrigation systems can help with this. Water-wise habits combined with a well designed and installed system, that is *programmed effectively*, will result in a healthier lawn and landscape. In addition to conserving water, you'll reduce your water bill, as well. In the future, the real chal-

lenge will be to keep the bill from increasing.

Licensing?

If you or someone you know is thinking of installing an irrigation system at home, it is important to be aware that to perform irrigation work, an individual must be licensed by the Texas Commission on Environmental Quality (TCEQ). The TCEQ does not license businesses or companies, only individuals, so don't be fooled -- ask for the irrigator's license number. The most recent figures shows 55% of "irrigators" across the state of Texas are unlicensed.



Where to start?

Get several estimates for the work to be done and ask for a design. Some licensed irrigators might charge extra for a design, but it will be worth it in the long run. Make sure that you end up with a basic contract with the date, warranty, what is being done, license number, and total cost for your proposed irrigation system. Make sure your design has been signed and sealed by the licensed irrigator. Don't pay cash, and get your irrigator to provide documentation such as proof of appropriate insurance and his or her license.

If you have questions about companies or individuals, contact The Houston Gulf Coast Irrigation Association (HGICIA, website: www.hgicia.org). The initial design of your irrigation system can make all of the difference in the dispersion of water on your lawn and ensure you are getting what you are paying for. It also protects all of our water system.

The Program

The State of Texas provides a licensing program directly aimed at testing irrigators in every aspect of design and installation. Applicants for the license are thoroughly tested in the areas of back-flow prevention devices, hydraulics (proper sizing of components), economical efficient head spacing and other important aspects concerning the system.

The successful applicant is then certified and issued a license and is required by state law to display the license number on all contractual documents and on his/her work vehicle. In addition, the licensed irrigator is required to provide the customer with a written statement of guarantees for materials and workmanship.

The Houston Gulf Coast Irrigation Association, the Texas Turf Irrigation Association (TTIA's website: www.ttia.us), and the TCEQ aggressively support the use of Texas State Licensed Irrigators who are well-informed about state and local codes and regulation concerning sprinkler system installation.

What We Gain

The savings add up. Here are some tips on how to conserve water with irrigation systems:

- ◆ Do not water every day

◆ Use a water sensor and make sure it's clean and working properly... ***too many people are watering in the rain!***

◆ Check your timer to see if it is set properly...an electrical outage may reset the system or change the timer

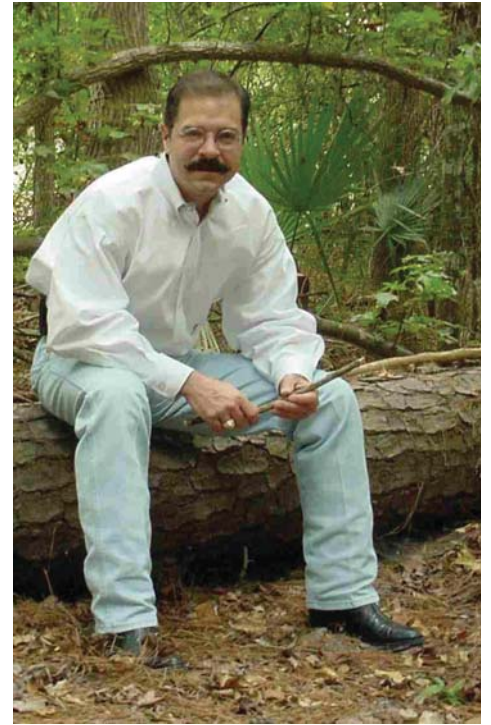
◆ Use a soaker cycle...watering for 5-10 minutes twice per night may avoid runoff, and

◆ Have your system checked annually by a licensed professional.

Too many systems are being installed by unlicensed irrigators who do not have the experience or expertise in irrigation systems. Using unlicensed and inexperienced irrigators may not only end up costing you more money, but their practices may cause damage to our water systems, as well.

The bottom line here is to protect the health, safety and welfare of people by NOT contaminating our water, and to provide efficient watering systems that do not waste water.

Michael Murr is President of Murr Incorporated, a firm specializing in Land Use Planning, Preservation, Master Planning and Feasibility Studies for development of property and Parks with the environment in mind. He holds a Bachelor of Landscape Architecture degree from Texas Tech University and has over 20 years experience in managing land use harmoniously with the progressing future. He currently serves as Public Member of the Irrigation Advisory Committee to the TCEQ.



Michael Murr

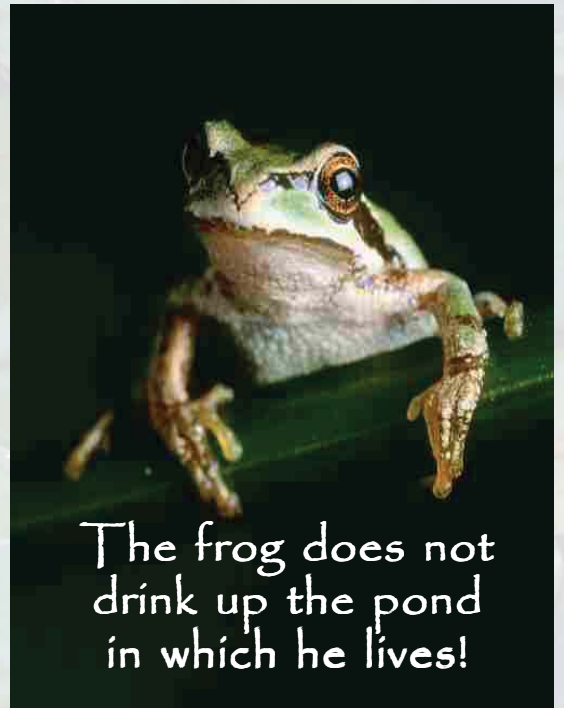
Lets Talk About Water...

Let's face it...haven't we all taken our precious water supplies for granted at one time or another? We're used to turning on the faucet and having the water be there when we need it.

Unfortunately, the days of cheap and plentiful water are now behind us and each of us has a responsibility to use this precious natural resource more efficiently. Water is not only essential to life, but to our lifestyle, as well. It is a topic that deserves our attention.

Let's Talk About Water! We have experts available to make comprehensive presentations to your organization on a variety of topics...schedule one today.

Call or e-mail the Authority's Community Relations department today to schedule a speaker for your group or organization.



The frog does not drink up the pond in which he lives!

281-440-3924 ~ info@nhcrwa.com
Visit our water conservation website:
www.StopTheDrop.org

The Scoop on Composting...

Ah, those first crisp autumn breezes that send yellow elm and crunchy brown oak leaves swirling on driveways...squirrels chase each other through the trees, and -- if you listen carefully -- you'll hear the migrating geese honking overhead. The days are shorter, the shadows longer. It is the favorite time of year for many Houstonians, who are eager for it to be cool enough to participate in outdoor activities.

With the grass growing-season coming to an end, there's still lots to do in the yard and garden to get it ready for spring. One of the most productive of these activities is to start a composting program. Take advantage of all those leaves and pine straw and "cook up" a batch of mulch that will give your flower beds and landscape areas a real boost. It isn't difficult and the payoff can be spectacular.

Not only is it great for your lawn and garden, but composting also helps with one of the nation's most critical environmental problems. The U.S. Environmental Protection Agency estimates that grass clippings, leaves, and tree or shrub prunings account for almost 20 percent of "household trash" and perhaps as much as 50 percent in Summer and Fall months. Landfill sites are rapidly filling up, and an increasing number of people across the country have made the commitment to recycle just about everything... aluminum, paper, plastic, household scraps, and yard debris.



In addition to helping with the landfill crisis, composting offers another very practical benefit. When rich compost mulch is used in flower beds and landscape areas, it holds in the moisture and **cuts down on the amount of water needed to keep the plants healthy**. Compost also breaks up clay soils, serving as a safeguard against erosion. And it adds structure and moisture to sandy soils, which can allow landscaping of otherwise undesirable planting areas.

Compost improves soil aeration, which enables vital oxygen to boost soil productivity. Finally, virtually all plants grown in compost-enriched soils are healthier and are better prepared to fight off assaults from insects and diseases. So, with all these benefits and with the cost of water going up, composting can save both water and money!

How does it work?

Very simply, composting is nature's way of transforming organic waste into usable fertilizer through the interaction of microorganisms, water and air. The human element is responsible for organizing all the ingredients for the "recipe" and Mother Nature does all the rest. Making compost imitates nature's cycle of life and death and accelerates the process of decomposition -- the breakdown of raw organic materials. This has been taking place in nature since life first appeared on the planet. Man has been attempting to control and utilize the process for hundreds of years, with varying degrees of success. Today, composting can be accomplished on a small scale in your own backyard, or commercially for an entire county or municipality.

Composting is a science... involving a complex "food chain" of bacteria, fungi, worms, beetles, mites and lots of other beneficial organisms that "eat up" organic materials and produce humus. Bacteria carry the heavy load in composting, especially in "hot" compost when they populate quickly. All these "bugs" need is a mass of organic materials that contain a balanced diet of nutrients -- carbon and nitrogen -- along with adequate moisture and oxygen.

Mix plenty of "green" materials (food scraps, grass clippings, and manure) with high carbon "brown" materials (dry pine straw, hay, dead leaves, wood chips or shavings, broken up twigs) and you're on the way. The balance is important, though...too much "green" may harbor pests and lose nitrogen in the form of ammonia, which can create odor problems. Too much "brown" breaks down too slowly because it won't support a large enough population of organisms to do the job correctly.



Living things are basically made up of nitrogen (proteins) and carbon (sugars, starches and fiber). While alive, they are “green” and have a high nitrogen content. Once they start to die, the decomposing process begins, when the airborne bacteria consumes the protein-rich tissues first, and then becomes part of the “brown” material -- bug droppings, dead bacteria, and other by-products. New generations of bacteria consume the high-carbon plant fibers and the recycling is complete.



Balance is key...

Early in the composting process, it is often difficult to maintain the right amount of moisture in all the materials you’ve accumulated into a well-mixed pile. Too much moisture leaves no air spaces, and too much ventilation dries it out. Later, when everything starts to break down into a more compact mass, the biggest challenge might become keeping it adequately aerated with fresh air.

“Hot” composting can deplete the oxygen in a pile very quickly, even early in the process. Remember, the “balance” is the key to success here. Experts warn that a pile of dry organic materials can “shed water like a duck” so constant monitoring is critical. If it does get too dry, you can turn it, pull it apart and re-stack it, or you can mix in fine-particle absorbent materials, like manure. If it keeps getting too dry, try covering it with a tarp or a plastic sheet.



If the pile is too wet, you can turn it, mix it and add dry coarse materials like dead leaves or straw into it to absorb the moisture.

Most “brown” materials are coarse, stiff and angular, so they tend to create air spaces in the pile that help it to stay aerated. “Green” materials, on the other hand, are most often pliable and moist, and they clump together into an “anaerobic” (lacking oxygen) mass.

The “best” level of moisture for a compost pile, the experts suggest, is as much moisture as the materials can contain without filling the air pockets -- like a completely damp, well-squeezed sponge.

Composting “happens” when moist organic materials are exposed to air. When materials break into smaller particles, there is more exposed surface area for the hungry organisms to attack, so it makes sense to crumble, crush or otherwise pulverize large objects before adding them to the pile. This is a case where size does make a difference -- aerobic composting works best and fastest when everything is reduced to small pieces and thoroughly mixed together...giving the decomposing organisms access to the critical carbon, nitrogen, and water. Chunks of wood and other pockets of



of wood and other pockets of

“brown” material create “nitrogen-poor zones” with too much air space.

The best way to tell if your compost pile is “healthy” is to take its temperature. The most efficient composting occurs when the pile’s temperature rises to between 120 and 160 degrees Fahrenheit...and stays there. Composting can happen at lower temperatures, it just takes a lot longer.



Growing and housing the compost pile...

Let’s face it, most compost piles aren’t aesthetic masterpieces, so it makes sense to locate them away from highly visible areas in your yard. You’ll need a source of water nearby, and you’ll probably want to put it in a partially shaded area to keep it from drying out too fast and too often. Remember, as you’re adding material, the taller it becomes, the more difficult it will be to turn. You don’t have to have an expensive container to compost successfully; but you do need a dedicated area to house it. There is a variety of inexpensive options -- including one using recycled wood pallets -- to create a structure to hold the materials. ♣



“Every year more than five million tons of yard trimmings and other organic materials end up in Texas landfills instead of building up the soil. Disposing of all this organic matter in landfills costs more than \$150 million a year!”

What is Nonpoint Source Pollution and Why Should It Concern Us?

The really dramatic stories about Earth's environmental problems tend to focus on big, recognizable targets such as smoking industrial facilities, leaking toxic waste dumps, and messy oil spills. As a result, people often forget about water pollution caused by smaller *nonpoint* sources -- including pollution at the household level.

The fact is, however, that nonpoint source (NPS) pollution is a leading source of water quality degradation. Although individual homes might contribute only minor amounts of NPS pollution, the combined effect of an entire neighborhood can be significant. Homeowners can learn about the causes of NPS pollution, and take the necessary, and often money-saving, actions to tackle the problem.

Here are some frequently asked questions about this important topic:

Q. What is polluted runoff?

A. Water from rain and melting snow either seeps into the ground or “runs off” to lower areas, making its way into streams, lakes and other bodies of water. On its way, runoff water can pick up and carry many substances that pollute water. Some of these substances -- like pesticides, fertilizers, oil and soap -- can be harmful even in small quantities. Others (sediment from construction, bare soil, or agricultural land, or pet waste, grass clippings and leaves) can harm creeks, rivers and lakes when they are present in sufficient quantities.

In addition to stormwater runoff, various human activities like lawn watering, car washing, and malfunctioning septic tanks can also put water onto the land surface where it runs off and carries pollutants to creeks, rivers and lakes. The *quantity* of stormwater is also a problem. When stormwater falls on hard surfaces like roads, roofs, driveways and parking lots, it cannot seep into the ground, so it runs off to lower areas. To give you an idea of the difference a hard surface makes, consider the difference between one inch of rain falling onto a meadow and the same amount onto a parking lot. *The parking lot sheds 16 times the amount of water that a meadow does!*

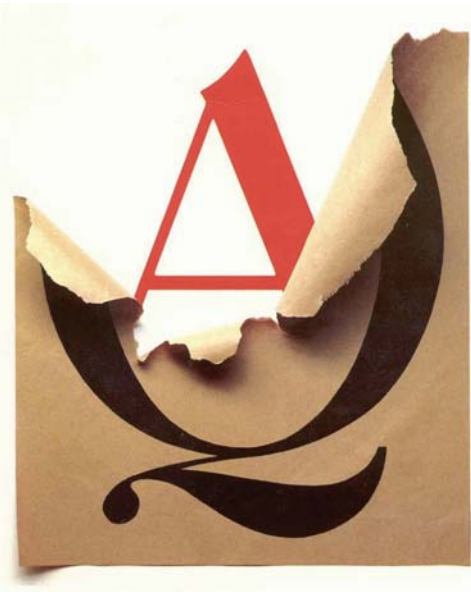
Because more water runs off hard surfaces, developed areas can experience local flooding. The high volume of water also causes stream banks to erode and washes the wildlife that live there downstream.

Q. What is Nonpoint Source Pollution?

A. This is another term for polluted runoff and other sources of water pollution that are hard to pinpoint. The term “nonpoint source pollution” comes from the federal Clean Water Act of 1987 where it is used to describe pollution situations in which the “point source” is not identified as discharge from wastewater plants or industries.

Q. What causes polluted stormwater runoff?

A. Most people are unaware of how they impact water quality, and are seriously surprised to learn that folks going about their daily lives are *the number one source of stormwater pollutants*. Some common examples include over-fertilizing lawns, excessive pesticide use, not picking up pet waste, letting oil drip out of their vehicles, and littering. Developed areas in



general, with their increased runoff, concentrated numbers of people and animals, construction and other activities, are a major contributor to NPS pollution, as are agricultural activities. Other contributors include forest harvesting activities, roadways, and malfunctioning septic systems.

Q. Why does this kind of pollution happen more in developed areas?

A. Urban and suburban landscapes are covered by paved surfaces like sidewalks, parking lots, roads, and driveways. They prevent water from percolating down into the ground, cause runoff to accumulate, and funnel into storm drains at high speeds. When quickly flowing runoff empties into receiving waters, it can severely erode streambanks. Paved surfaces also transfer heat to runoff, thereby increasing the temperature of receiving waters. Native species of fish and other aquatic life cannot survive in these warmer waters.

One way to help limit NPS pollution from paved surfaces involves substituting alternatives to areas traditionally covered by nonporous surfaces. Grasses and natural ground cover, for example, can be attractive and practical substitutes for paved driveways, walkways, and patios. Some homes effectively incorporate a system of natural grasses, trees, and mulch to limit continuous impervious surface area. Wooden decks, gravel or brick paths, and rock gardens keep the natural ground cover intact and allow rainwater to slowly seep into the ground.

Q. Does it really matter about what I plant in my yard?

A. Altering the natural contours of yards during landscaping and planting with non-native plants that need fertilizer and extra water can increase the potential for higher runoff volumes, increase erosion, and introduce chemicals into the path of runoff. In contrast, xeriscape landscaping provides households with a framework that can dramatically reduce the potential for NPS pollution.

Xeriscape incorporates many environmental factors into landscape design—soil type, use of native plants, practical turf areas, proper irrigation, mulches, and appropriate maintenance schedules. By using native plants that are well-suited to a region's climate and pests, xeriscape drastically reduces the need for irrigation and chemical applications. Less irrigation results in less runoff, while less chemical application keeps runoff clean.

Q. What do I need to know about proper chemical use, storage, and disposal?

A. As a rule, household cleaners, grease, oil, plastics, and some food or paper products should NEVER be flushed down drains or washed down the street. Over time, chemicals can corrode septic system pipes and might not be completely removed during the filtration process. Chemicals poured down the drain can also interfere with the chemical and biological breakdown of the wastes in the septic tank.

On household lawns and gardens, homeowners can try natural alternatives to chemical fertilizers and pesticides and apply no more than the recommended amounts. Natural predators like insects and bats, composting, and use of native plants can reduce or entirely negate the need for chemicals. Xeriscape can limit chemical applications to lawns and gardens. If chemicals are needed around the home, they should be stored properly to prevent leaks and access by children. Most cities have designated sites for the proper disposal of used chemicals.





Q. Why do we need to manage stormwater and polluted runoff?

A. As the saying goes, “We all live downstream.” Communities that use surface water for their drinking supply must pay much more to clean up water with contaminants than clean water. In the majority of cases, stormwater either does not receive any treatment before it enters our waterways or it is inadequately treated.

Polluted water creates numerous costs to the public and causes damage to wildlife in creeks, streams, rivers and lakes. Dirt from erosion (also called sediment) covers up fish habitats, and fertilizers can cause too much algae to grow, which also hurts wildlife by using up the oxygen they need to survive. Soaps hurt fish gills and fish skin, and other chemicals damage plants and animals when they enter the water.

Q. If it only affects streams and creeks, why should I care?

A. Streams and creeks feed into rivers, lakes and the ocean. We all drink water, so we are all affected when our water is polluted.

- When water treatment costs rise, the price of drinking water goes up.

- If you like to fish, swim or boat, you may have heard about or been affected by advisories warning you not to swim, fish or boat in a certain area because of unhealthy water or too much algae.

- Shellfish like clams and oysters cannot be harvested from polluted waters, so anyone who enjoys these foods or makes a living from the shellfish industry is affected.

- Money made from tourism and water recreation can also be impacted, as are businesses and homes flooded by stormwater runoff.

The bottom line is that when our water is polluted, everyone is affected!

Q. What can I do to reduce the amount of stormwater pollution I contribute?

A. ■ If you own a car, maintain it so it does not leak oil or other fluids.

- Be sure to wash it on the grass or at a car wash so the dirt and soap do not flow down the driveway and into the nearest storm drain.

- If you own a yard, do not over fertilize your grass. Never apply fertilizers or pesticides before a heavy rain. If fertilizer falls onto driveways or sidewalks, sweep it up instead of hosing it away.

- Mulch or compost leaves and grass clippings if possible; if not, place bagged leaves in the yard at the curb, not in the street. Doing this keeps leaves out of the gutter, where they can wash into the nearest storm drain.

- Turn your gutter downspouts away from hard surfaces, seed bare spots in your yard to avoid erosion and consider building a rain garden in low-lying areas of your lawn.

- Pet owners should pick up after their pets and dispose of pet waste in the garbage.

- Keep lawn and household chemicals tightly sealed and in a place where rain cannot reach them.

- Dispose of old or unwanted chemicals at household hazardous waste collections sites or events.

- Never put anything in a storm drain.

- Don't litter.



For more information about Stormwater Runoff Pollution and how you can help, visit www.cleanwaterclearchoice.org

Teaching Kids to Conserve Precious Water Resources

Late last year, the North Harris County Regional Water Authority unveiled the new **WATER IS LIFE!** program developed for area students. The process began in 2004 when Authority representatives met with Superintendents from six Independent School Districts and initiated a dialogue on ways to promote water conservation. The initial outreach effort involved working with the school Facility Managers to demonstrate on-campus leak detection methods. Since our schools use millions of gallons of water each year, eliminating wasteful leaks saves tax dollars from going down the drain!

This year the program progressed to the classroom activities, which included the student adventure book, "Journey to Pansophigus," the use of the Mobile Teaching Lab, and the new coloring book for the younger set. Several workshops were held with educators in advance of the Lab visits, that highlighted the various exhibits, interactive computer programs, and conservation materials available to the students. At each session, Al Rendl, NHCRWA president, talked with the participants about a wide range of water issues and answered questions about where our water will come from in the future, the Authority's construction projects, and the importance of water conservation in the years to come.

The Authority's water conservation website -- www.StopTheDrop.org -- was also introduced this year. Visitors can access a wealth of information on this important topic and can view a "kid-to-kids" video on conservation around the house and another on doing a "water cycle experiment." Additional video messages will be added periodically. The newest one -- about conservation in the yard and garden, composting and irrigation -- will be posted soon.

One of the favorite components of the Mobile Teaching Lab is the Water Cycle interactive program. This allows students to "enter" the water cycle and to learn about each step in the never-ending process. There are many "factoids" included that make the experience even more informative and interesting.

In April 2006, these programs were recognized by the Water Environment Association of Texas and the Texas Section of the American Water Works Association with their WATERMARK AWARD for communications excellence.

For information about ordering the Water Cycle CD, the "Journey" book and its Reader's Guide, and/or the WATER IS LIFE coloring book, please visit the Authority's site -- www.StopTheDrop.org.

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Educator and Master Gardner Carol Fraser demonstrates composting techniques to NHCRWA board member, Jim Pulliam, and participants in the recent Compost Day in the Garden, co-sponsored by the Authority and Harris County WCID 132.



Goodson Middle School students work with exhibits in the Mobile Teaching Lab during its visit to Cy-Fair campuses this fall.



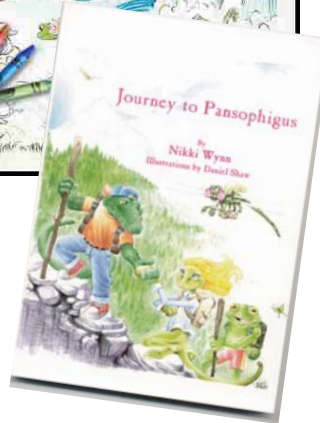
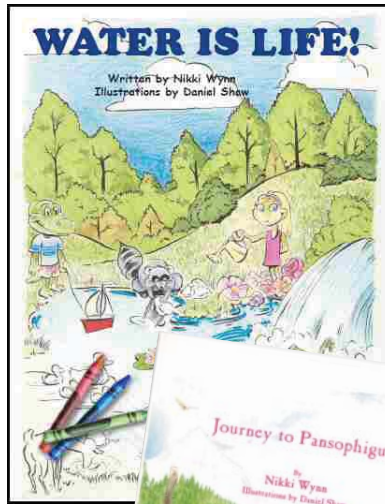
The Mobile Teaching Lab and Pansophigus also made visits to local utility district events throughout the community.

*"I want you to know how successful and exciting it has been for our students and teachers to have the **Pansophigus** books. We have every 5th grade science student reading the book and doing activities with the curriculum.*

I have heard wonderful comments... We are integrating science and language arts/reading to do this unit and are pleased with the results...

Thank you so much for making it available to use with our students."

*Teresa B. Green,
Director of Science,
Spring ISD*



These **MAJOR SPONSORS** have generously underwritten the cost of providing books and coloring books for students...

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