

# Watershed Update



Clark County Soil and Water Conservation District

Partners helping to make our project happen:

- > Clark/Jefferson/Scott County Health Departments
- > Oak Park Conservancy District
- > Jefferson and Scott County SWCDs
- > Oak Park Conservancy District
- > IDNR Division of Nature Preserves
- > Chicks on the Farm
- > Indiana State Department of Agriculture
- > Natural Resources Conservation Service

## Water, Water!

Between 1950 and 2000 the U.S. population nearly doubled, but during the same period, public demand for water more than tripled. The amount of water that was put on the earth when it was created is the same amount we have today. It is possible that we used the same water a dinosaur drank a million years ago. Nature has been recycling water since the beginning of time.

Did you know: 75% of the earth is covered by water. Nearly 97% of that water is salty or otherwise undrinkable. Another 2% is locked in glaciers. That leaves just 1% for all of humanity's needs.

Water regulates the earth's temperature. It also regulates the temperature of the human body, carries nutrients and oxygen to cells, cushions joints, protects organs and tissues, and removes wastes.

Here are some other interesting water facts:

- 66% of the human body is water; 75% of the human brain is water.
- Although a person can live without food for more than a month, a person can only live without water for approximately one week.
- The average person in the United States uses 80 to 100 gallons of water each day. During medieval times a person used only 5 gallons per day.
- It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.
- It takes about 1 gallon of water to process a quarter pound of hamburger.
- It takes 2,072 gallons of water to make four new tires.
- Water is the only substance found on the earth in three forms—solid, liquid, and gas.
- Ancient Egyptians treated water by siphoning water out of the top of huge jars after allowing the muddy water from the Nile River to settle.
- Golf courses used 55.6 billion gallons of water in 2005.
- It wasn't until the 1950's that scientists began to suspect that water might carry diseases. Until then, water treatment was mainly done to improve the taste, smell or looks of the water.
- The first United States water plant with filters was built in 1872 in Poughkeepsie, New York.
- A chicken is 75% water; an egg is 74% water.
- Water boils at 212° Fahrenheit or 100° Celsius.
- Water freezes at 32° Fahrenheit or 0° Celsius.



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### Top Ten Litter Items in the United States

In the 2001 International Coastal Cleanup, these items comprised 82% of all debris found in the U.S.

1. Cigarette butts/cigarette filters
2. Bags/food wrappers
3. Caps, lids
4. Beverage bottles (glass)
5. Beverage cans
6. Cups, plates, forks, knives, spoons
7. Beverage bottles (plastic) 2 liters or less
8. Straws, stirrers
9. Fast food Containers
10. Cigar tips

#### Annual Used Oil Collection Day

A **FREE** Service to Farmers and Homeowners

Tuesday, September 2, 2014  
8:30 A.M. to 4:00 P.M.

Clark County 4-H Center  
9608 Hwy. 62, Charlestown, IN

Used oils and petroleum products in any size container

*Acceptable Materials: Motor Oils, Gear Lubricants, Hydraulic Oils, Heating Oils, and Transmission Oils*

A special container will be available to accept used oil filters

## Aquatic Litter and Its Impact

Any manufactured or processed solid waste that enters the aquatic environment from any source is considered aquatic litter. In short, it



is our misplaced waste and trash. It is a highly pervasive and visible form of pollution that has harmful impacts on wildlife and human health.

Aquatic litter impacts: **Aquatic Habitat**—habitat destruction or harm is caused when submerged debris (for example, a piece of plastic sheeting) covers seagrass beds, or smothers bottom-dwelling species. Some debris can also cause physical damage.

**Water Quality**—debris can also affect the water quality by adding chemicals to the water. Con-

struction waste illegally dumped in a stream can include buckets that once held paints, solvents, and other chemicals that can enter the

water. Some littered items contain toxic chemicals that leach into the water.

#### **Aquatic Animals — Entanglement and Ingestion**

Aquatic debris can be particularly dangerous and often lethal to wildlife. Each year, more than 100,000 marine mammals die when they ingest debris or become entangled in ropes, fishing line, fishing nets, and other debris dumped into the ocean. Animals are curious by nature and will investigate unusual items in their environment. Once entangled, animals have trouble eating, breathing, finding food, escaping predators, or swimming, all of which can

have fatal results. Entanglement can also cause wounds that can become infected. Ingested items often give animals a false feeling of being full, and may die of starvation. Ingested items can also block the intestinal tract and prevent digestion.

**Human Health and Safety**—hazards include glass and metal left on the beach, or hospital needles and syringes that can carry disease. Fishermen and recreational boaters can also be endangered as nets and monofilament fishing line wrap around a boat's propeller. Plastic sheeting and bags can also block the cooling intakes on boats, which leads to costly repairs.

**Economic**—A tremendous amount of time, effort, and machinery is devoted to cleaning up litter on the land and in our waterways. Other economic impacts are harder to put a price on such as lost of tourist income, and decreased fish yield.

## Stream Sweep Scheduled

The Fourteen Mile Creek/Goose Creek Watersheds Improvement Project will be partnering with the Youth Group of First Christian Church Disciples of Christ, Jeffersonville, and the Oak Park Conservancy Dis-

trict (OPCD), to conduct a stream sweep of Lancassange Creek on August 9, 2014. The section of Lancassange to be "swept" runs along Middle Road directly behind the church.

The project will provide the youth volunteers with gloves and trash bags to remove litter and debris from the stream. They will also receive a Ohio River Sweep t-shirt to recognize their participation.

Other groups interested in sweeping a stream within the Fourteen Mile/Goose Creek watersheds, are welcome to call us at 256-2330, ext. 3. We would be happy to coordinate a sweep with you!

## High Schoolers Trained in Water Sampling

On May 28, 2014, twenty-four students from the Advanced Biology class at Jeffersonville High School joined us for some basic training in how to sample for benthic macroinvertebrates. These are animals that are big enough (macro) to be seen with the naked eye. They lack backbones (invertebrate) and live at least part of their lives in or on the bottom (benthos) of a body of water.

The training took place along Lancassange Creek near the intersection of Allison Lane and Middle Road in Jeffersonville. Sylvia Hotel, Water Monitoring Coordinator for our project and a certified Hoosier Riverwatch instructor, led the training; Bryan Wallace, Stormwater Coordinator for the City of

Jeffersonville, and Melanie Davis, Watershed Education Co-Coordinator, assisted.

Sylvia began by explaining how benthic macroinvertebrates (or "macros" as they are called in the water sampling community) can help determine water quality. Dependent on the amount of dissolved oxygen in the water to live, macro numbers decrease as pollutants eat up their oxygen supply.

Sylvia then demonstrated the use of kick seines to collect macros, and also how to identify macros that have made their homes under rocks.

Students then spent the next two hours wading the stream and recording the macros they discovered. They were

excited that several of the macros they found indicated that the quality of the water at that location was good. Sylvia ended the class with a demonstration and discussion of how to determine water flow.

Additional sampling events are being planned with the students when they return to school in the fall.



*Sylvia conducting macroinvertebrate sampling at a Hoosier Riverwatch training*

## Water Efficiency

The growing population and the demand for water consuming gadgets (hot tubs, Jacuzzi, family swimming pools) has put stress on water supplies. By using water more efficiently, we can help preserve water supplies for future generations, save money, and protect the environment. **Remember: Every drop counts!**

Using too much water also significantly contributes to "nonpoint source pollution" (NPS). NPS pollution is when water moves across the ground, collecting pollutants from various sources, and eventually depositing them into our water. Failing to use

water efficiently can hurt our water supply by:

- Altering stream flows due to excessive withdrawals
- Causing saltwater to intrude into freshwater aquifers due to excessive withdrawals (not a problem here but extremely important along our coastline)
- Increasing the amount of dirty runoff water that flows into natural water supplies. This runoff water carries sediment, nutrients, salts and other pollutants. Nutrients such as nitrogen, phosphorus, and potassium are naturally occurring, but habitats can be destroyed when excess amounts of any

one nutrient, especially phosphorus, are concentrated in the soil and water.

- Creating the need to build additional dams. Dams generate NPS pollution by trapping sediment and other pollutants. This concentrates pollutants, causes sediment in the river to pile up, decreases dissolved oxygen, and alters water temperatures.

Of course the biggest benefit of water efficiency is to save water. The average household spends as much as \$500 per year on its water bill. A few simple changes for efficiency, could save about \$170. Also, when we use water more efficiently, we reduce the need for costly water supply

infrastructure investments and new wastewater treatment facilities. We all know that it takes energy to make hot water, but supplying cold water requires a significant amount of energy too. Cutting our water use helps save public water companies electricity, which helps the environment. If we continue to deplete reservoirs and groundwater aquifers we are putting our health and environment at serious risk. Lower water levels can lead to higher concentrations of natural contaminants and chemical wastes. Using water more efficiently helps maintain supplies at safe levels protecting human health and the environment.

Clark County Soil and  
Water Conservation District

9608 Highway 62  
Charlestown, IN 47111  
812-256-2330, ext. 3  
Fax: 855-391-1921 (toll-free)

**BULK RATE**  
**U.S. Postage PAID**  
**Charlestown, IN**  
**Permit No. 6**

*For additional information or details on the Fourteen Mile Creek/Goose Creek Watersheds Improvement Project, contact Chelsea Tooley, Watershed Coordinator, at*

*[14mile.watershed.outreach@gmail.com](mailto:14mile.watershed.outreach@gmail.com)*

## Working In and Around the Waters of the State

If you have a pond, a creek, a stream, a wetland or other water holding/movement structure on your property, chances are, at some point you have considered doing some work to “improve” those sites. But, did you know, those water bodies, and others, are considered to be Waters of the State, and as such are regulated by at least three (3) different government agencies?

Typically, the three agencies with jurisdiction are the U.S. Army Corps of Engineers (USACE), the Indiana Department of Environmental Management (IDEM), and the Indiana Department of Natural Resources (IDNR). Locally, the County Drainage Board and the County Surveyor might also need to be consulted regarding projects.

So, what type of “improvement” projects might require one or more permits from one or more of these agencies or departments? Chances are good, that if you are considering any of the activities listed

here, you will need one or more permits.

\*Filling, dredging, or excavating within wetlands or any other water body for any purpose, including construction of buildings, roads, or leveling of property.

\*Construction in the floodway of a water body.

\*Mechanical clearing of vegetation, such as trees along a stream, creek or river or in a wetland.

\*Channeling, widening, or otherwise altering the flow or path of a stream, creek, ditch, or river.

\*Construction of any type of permanent or temporary dam, causeway, or other related structure.

\*Construction of a new seawall, seawall refacing, underwater beaches, boat wells, boat houses, and underwater fish attractors.

\*Ditch construction and/or reconstruction; tile drain installation and/or repair; and installation of pipeline having non-watertight joints.

\*Widening, deepening, or construction of

a pond or detention/retention basin within a river, stream, or wetland.

\*Bank armoring or other related practices, such as the placement of riprap or glacial stone, construction of a storm water outfall, or any other stream bank or shoreline armoring activities.

\*Removal of debris and logjams from streams, creeks or ditches depending on the method of removal.

\*Construction of any bridge or culvert crossing, (pedestrian or vehicular), or related structure over a wetland or water body.

\*Sand, gravel, peat, or other related mining activity within any water body.

And there may be more activities that require permits as this list is by no means complete.

For more information on regulations, it individuals may obtain a copy of “Waterways Permitting Handbook” available at [www.wetlands.IN.gov](http://www.wetlands.IN.gov) or by calling 800-451-6027 or 317-233-8488.