Dayton’s Water Quality History

1870- First Public Drinking Water Well Installed

1890- First Paved Road - Separate Storm & Sanitary Sewers

1913- The Great Flood
Hydromodifications
Levees and Dams
1929 - Wastewater Treatment Plant begins operation

1970s - River Bikeways constructed

1980s - Complete plugging of sanitary/storm connections

1988 - Source Water Protection Ordinance adopted
1997 - Municipal Separate Storm Sewer (MS4) NPDES Permit issued

1997 - Dayton Storm Water Ordinance adopted

2000 - Riverscape attraction downtown

2007 – Dayton Source Water Protection Ordinance Revised

2008 – Dayton Storm Water Ordinance Revised
What is a Watershed?

A watershed is all the land area that drains to a given body of water.

WE ALL LIVE IN A WATERSHED
Ohio’s Great Miami River Watershed

• About 4,000 square miles
• Approx. 1.5 million residents
• 15 counties
• Dayton = largest city
• Major tributaries
  – Stillwater River
  – Mad River
  – Wolf Creek
  – Twin Creek
Why do we care?

- Community Health
- Drinking water
- Recreation
  - Fishing, canoeing, trail
- Wildlife habitat
- Scenic beauty
- Flood events
Great Miami Buried Valley Aquifer

- Sustainable Asset
- Phenomenal Recharge
- Sole Source Aquifer
- ~1.5 Trillion Gallons
- Principal Water Source For 1.6 Million People
- Yields > 2,000 GPM
- Constant 56°F - Geothermal
Goal: Provide quality drinking water – meeting Ohio EPA & SDWA standards
Dayton Drinking Water

Two Water Treatment plants with capacity of over 90 million gallons/day

Provider of drinking water to over 400,000 in Montgomery County
Pollution Prevention

Source Water Protection Program

Ground Water Sensitive Areas Delineated in Well Field Protection Program

1988-90 WFPP Adopted by: Dayton, Riverside, Harrison Township, Huber Heights, Vandalia, WPAFB

Groundwater Knows No Political Boundaries
Municipal Separate Storm Sewer Systems

Wastewater Treatment Plant

MS4

NPDES Permitting
Dayton Water Assets

- Over 21,000 catch basins
- Water Reclamation Facility capacity to treat over 70 million gallons/day of wastewater
- 600 miles of storm sewer pipes
- 700 miles of sanitary sewer pipes
- Over 550 outfalls along the 4 major rivers
Wastewater Treatment

River discharge meets EPA permit & CWA water quality standards
Municipal Separate Storm Sewer Systems

Wastewater Treatment Plant

MS4 MS4 MS4
Goal: Meet Ohio EPA & CWA Water Quality Standards for Fishable & Swimmable Waters

Pollution Prevention Program
When it Rains…
Dayton Drains
Litter can clog drains, restrict storm flow, and pollute river.
Dayton’s Storm Sewer System

- Carries billions of gallons of water each year
- Has 400 miles of pipe, 20,000 catch basins, & 13 pump stations
- Discharges to rivers & streams at over 500 locations
- Great Miami River, Mad River, Stillwater River, Wolf Creek, Eastwood Park, Little Beavercreek
Storm Drainage
Delineation and Monitoring
>550 Outfalls

River discharges meet EPA permit & CWA water quality standards
University of Dayton
Campus Drainage Area Map
Illicit Discharge

Outfall

Monitoring Discharges

Storm Water Sampling

River
Visual Observations

- Color
  - cloudy, opaque, solids
- Clarity
  - cloudy, opaque, solids
- Floatables
  - sheen, trash, foam, sewage
- Animal
  - fish, amphibian, crustacean
- Biological
  - algae, mosquito, bacteria
- Deposits
  - oily, sediment
- Structure
  - cracking, corrosion
Emergency Response
SWPP and Storm Water

• Illegal Dumping
• Abandoned Drums
• Roadway Accidents
• Business Releases
• River Spills
• Vandalism
• Chemical Contamination
Tools of the Trade

- Trimble GPS
- Hach Portable colorimeter
- Hach Sension
Camera Truck
Possible Sources?
Storm Drainage
Delineation and Monitoring
>500 Outfalls

River discharges meet EPA permit & CWA water quality standards
Storm Sewer Investigations

- Narrow area of investigation
- Conduct facility inspections
- Report to OEPA

PLEASE BE CAREFUL OF US WHILE WE ARE WORKING IN THE STREET!
Best Management Practices
Storm Water Runoff From City Hall Drains to the Great Miami River
Dayton City Hall
(Ludlow & W. Third St.)

Installed
June 13, 2009

- Storm water BMP
- Reduces heat island effect
- Energy savings
Public Awareness Tools

- Dump no waste signs
- Children’s Water Festival
- Classroom presentations
- School Career Days

- Catch basin stencils & curb markers increase awareness

- Doggy mitts (mounted in parks) encourage residents to pick up pet waste
Meet the Newest Members of the Water Dept Family!

Errand bikes have been loaned to us through the Life Enrichment Center Errand Bike Program. Use us to get to meetings! Or to go to lunch. Or on a break. Happy Biking!
Take Back the Tap
Use Refillable Water Containers

• Save money - bottled water is more costly than gasoline. **Dayton Water is the best deal!**
  - $7.49 - 1 gallon bottled water ($0.99/bottle)
  - $3.50 - 1 gallon gasoline
  - $0.0048 - 1 gallon Dayton tap water

• We pitch 38 billion water bottles/year into landfills ~ $1 billion worth of plastic
• 24% of the bottled water we buy is tap water anyway
Hybrid and Electric Vehicles

Ford Escape Hybrid

Chevrolet Volt
Recycling

10,000 roll-out 96 gallon containers

100% increase in 3 years!
Recycle Dayton
It’s So Easy & Saves Money

Single stream curbside recycling

Solid waste disposal $38.25 per ton
Vs
Recycling - FREE!!
(After reaching 500 tons per month)

By increasing the waste stream diversion (solid waste to recycling) the City will save money and GHG emissions!!
RECYCLE DAYTON

The City of Dayton will accept:

• Magazines and catalogs
• Plastic containers #1 - #7
• Telephone books
• Aluminum cans
• Steel containers (food cans)
• Glass bottles, jars and containers
• Newspapers

...RINSE containers
...REMOVE caps and lids

Recycling has a water connection!
Montgomery County Environmental Services

Tire Buyback Event

Sunday, September 21, 11:00 a.m. to 4:00 p.m.
Montgomery County Solid Waste Transfer Station
3001 Enoree Lane
Moraine, OH 45439

Earn $2 / Tire!*

*Maximum 10 per vehicle. No truck, farm equipment, or other oversized tires accepted.

Open to all Montgomery County residents. Proof of residency required. Maximum of 10 tires per vehicle allowed. Please be aware that hauling more than 10 scrap tires at a time without an approved state registration is a felony.

Call (937) 225-4699 for more information.

Montgomery County Environmental Services

Task Force

(937) 225-HELP
WWW.MCOHIO.ORG/ENVIROC RIMES
How UD Students Can Help!!!

✓ Be Part of the Solution...

At home AND at school

Recycle, conserve energy, protect our water resources

✓ Visit and utilize our scenic waterways

✓ Report storm sewer problems or when river looks unusual

✓ Prevent litter from entering the storm sewers
Clean Sweep – River Cleanup

July 17, 2015
9 am - 12 pm
GET INVOLVED!!

2015 of the GREAT MIAMI RIVER WATERSHED
Children’s Water Festival Volunteers

Wednesday May 6th on UD Campus
Call for Artists!

ONLY RAIN
down the Storm Drain
Value Our Water Resources

Dayton’s Drinking Water Meets and Exceeds Safe Drinking Water Act Standards

“Tastes Great”

Dayton’s Waterways Meet Surface Water Quality Standards

“Visit Them”
Division of Environmental Management
937-333-3725