

WATER RESOURCES IN MCHENRY COUNTY

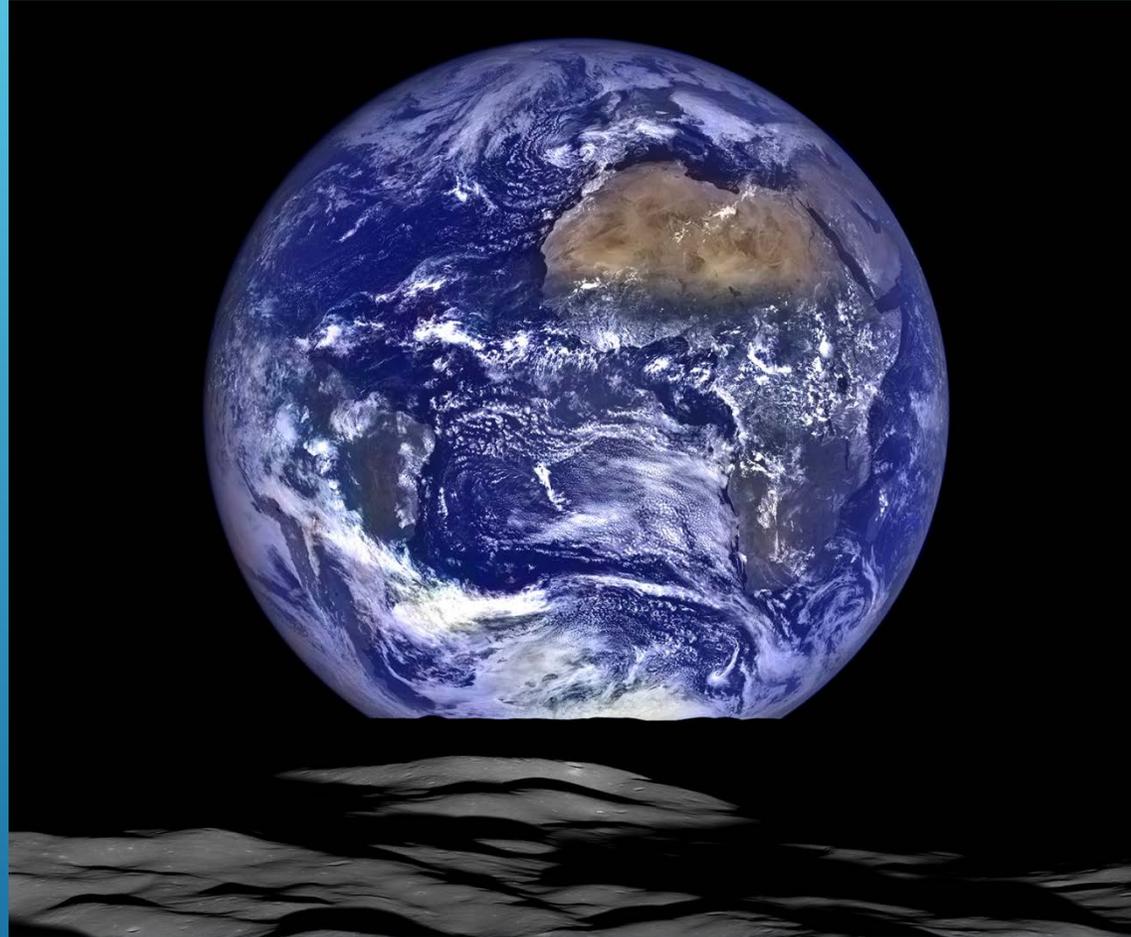


Scott Kuykendall

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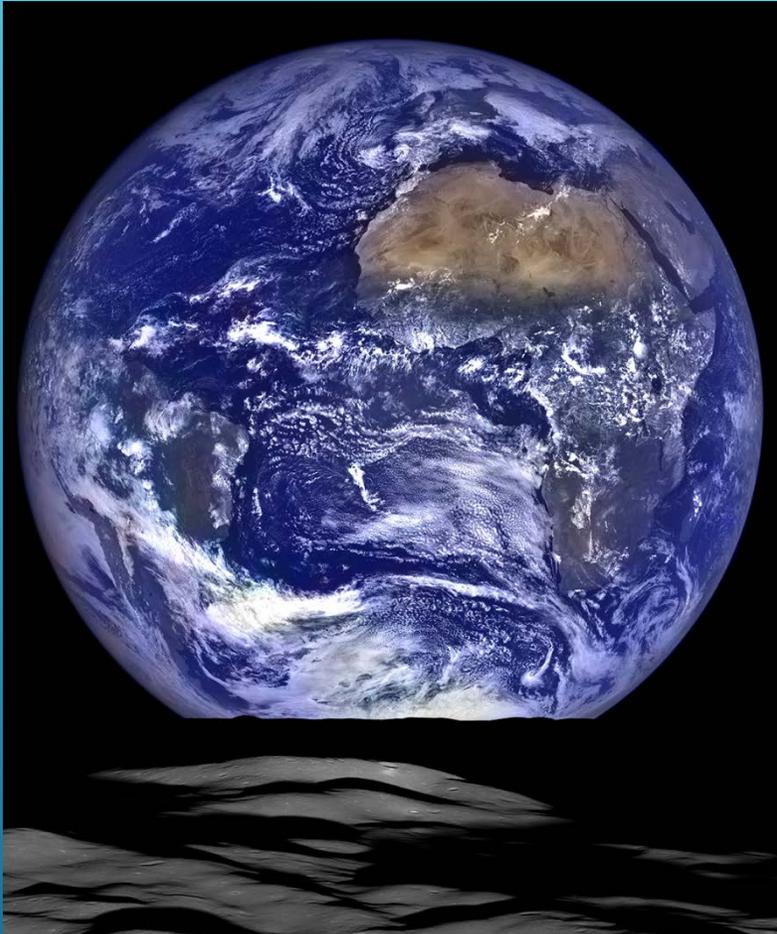
McHenry County Planning & Development

CONSIDER THIS...

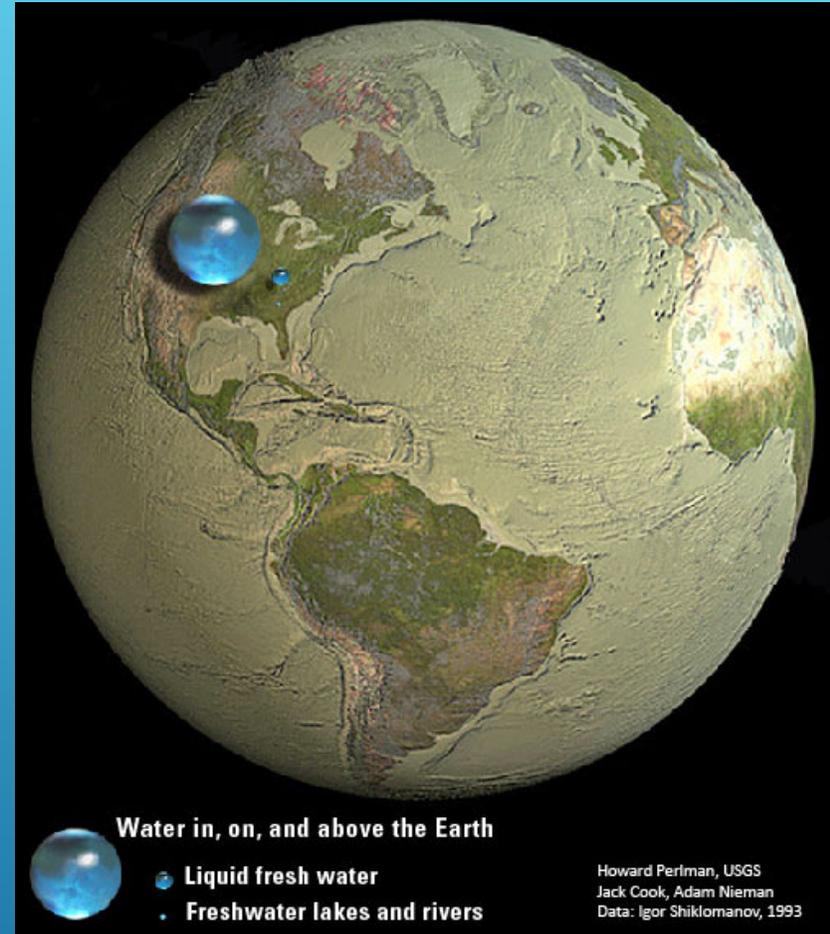


We live on a blue planet where about 75% of the Earth's surface is covered with water...

CONSIDER THIS...

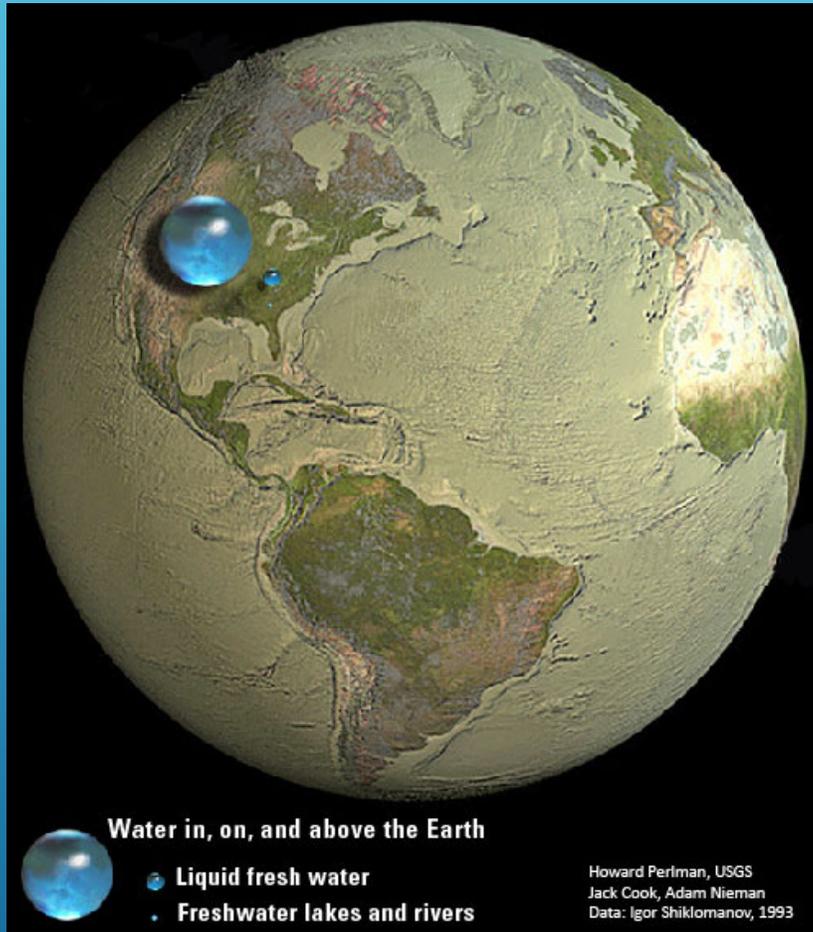


97.5% is ocean



only 2.5% is fresh water

CONSIDER THIS...



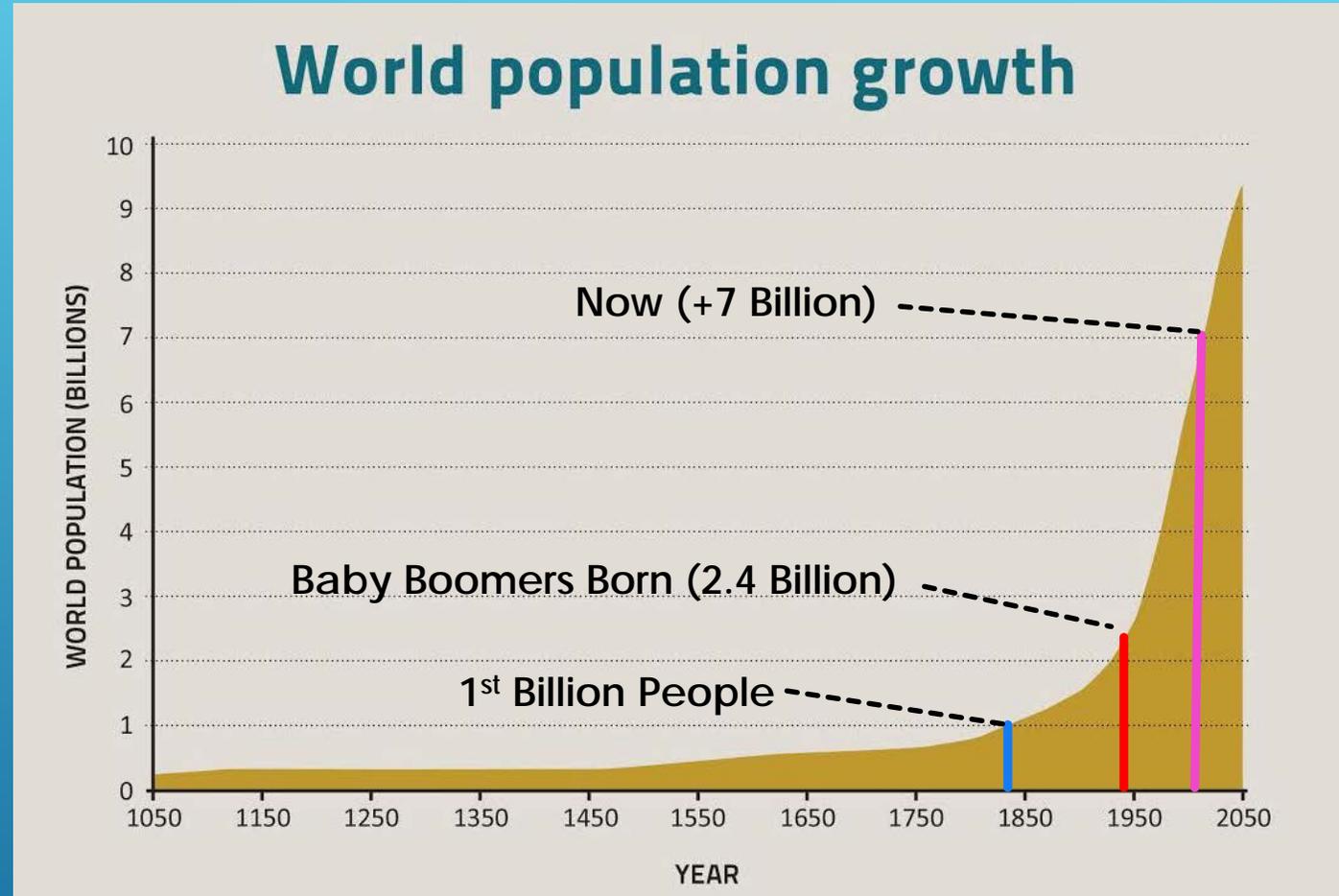
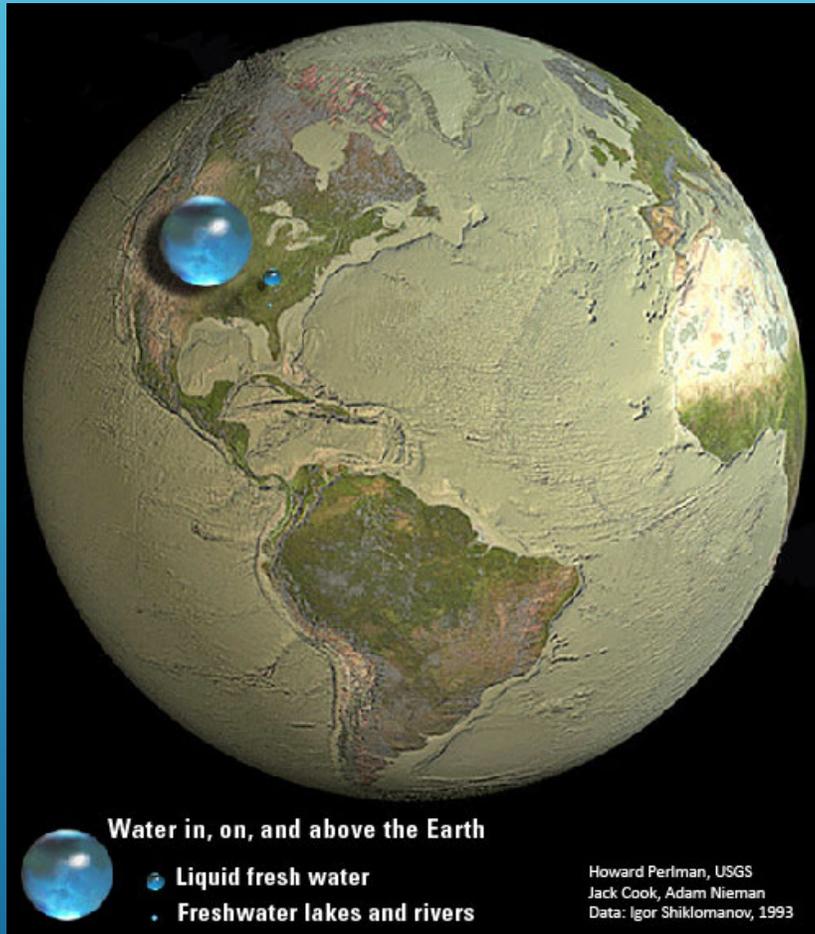
2.5% Fresh Water

- 70% of that is ice
- Only 1% is clean & accessible
 - 70% used for Irrigation
 - 22% used for Industry
 - 0.8% for domestic use



Only about 0.8 % of all the fresh water on the planet is available for domestic use

CONSIDER THIS...



200 thousand years for 1st billion people, only 200 years for the next 8 billion people

More people competing for the 0.8% of available fresh water

OUR ACTIONS ARE POLLUTING THE 0.8%





WATER IS NECESSARY
FOR ALL LIVING THINGS



WATER IS NECESSARY
FOR ALL ECONOMIC DEVELOPMENT

WATER IS SCARCE IN MUCH OF THE WORLD



- By 2025: 2/3 of worlds population under water stress
1.8 billion people in absolute water scarcity

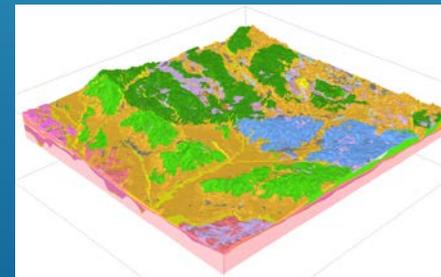
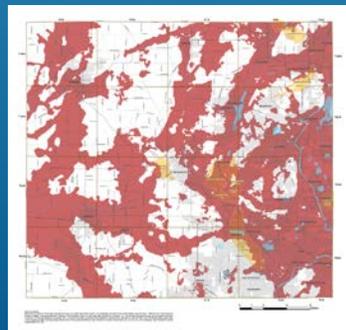
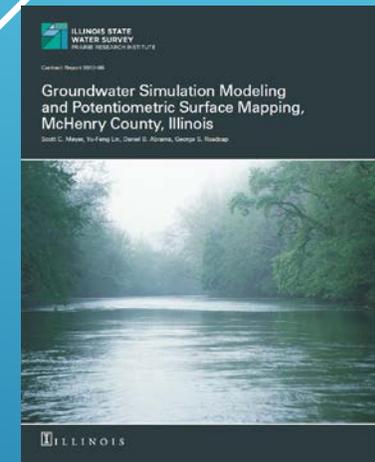
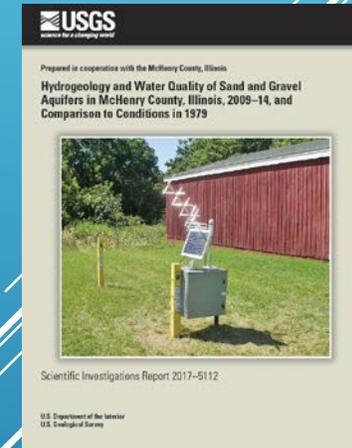
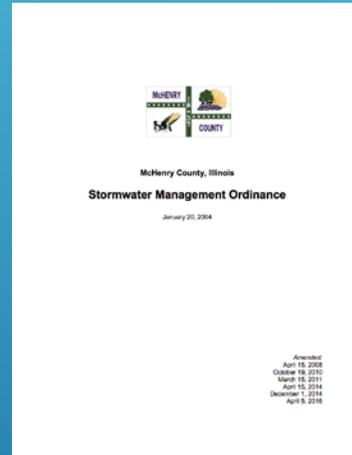
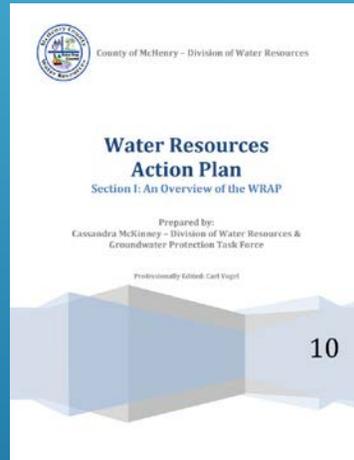
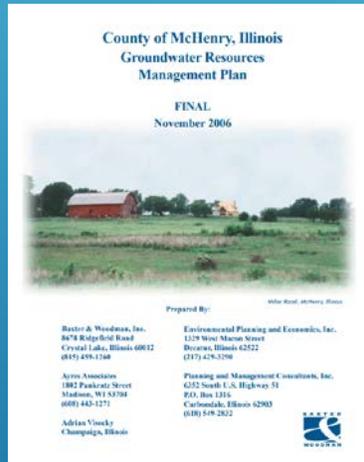
McHENRY COUNTY IS FORTUNATE TO
HAVE SAFE, SUSTAINABLE WATER...



ONLY IF WE PROTECT IT!

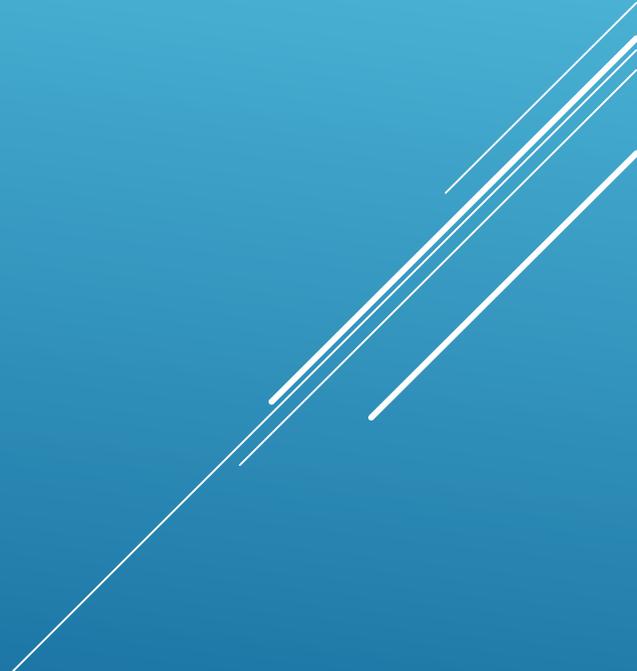
McHENRY COUNTY A LEADER IN PROTECTING WATER RESOURCES

Research - Plans - Practices - Ordinances - Education - Action



WATER RESOURCES ACTION PLAN (WRAP)

UPDATE

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

*** WRAP UPDATE ***

- Develop the WRAP as a Best Management Practice Manual
 - Design it to be functional and polished
 - Instruct stakeholders to use the water resource tools available
 - Raise awareness of water resources to support protection
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

INTRODUCTION

History of Water Resource Planning in McHenry County

McHenry County

Demographics

Geology

Land Cover

Climate

Environment

Watersheds

Land Uses

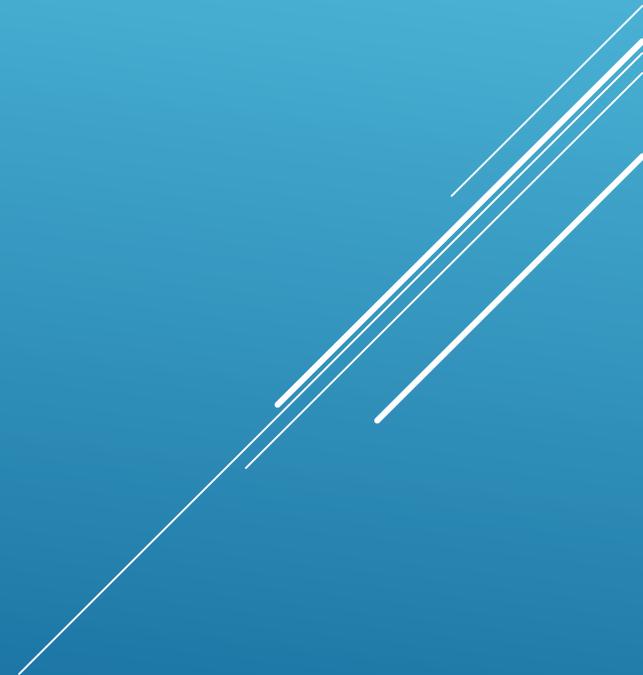
Residential

Commercial

Transportation

Agricultural

Natural Areas/Open Space



WATER RESOURCES

General Hydrology

Hydrologic Cycle

Surface Water

Groundwater

Natural vs Urbanized Hydrology

General Water

Biology

Health

Ecology/Environment

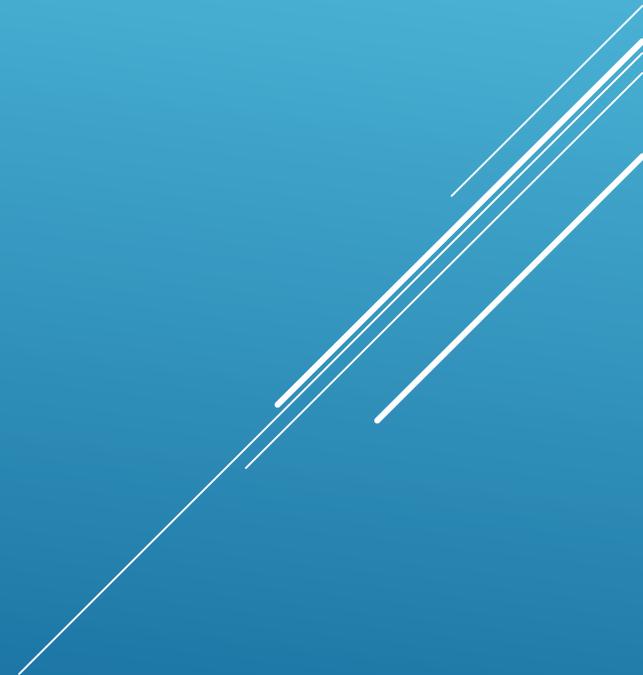
Economy

Threats (Contamination, Over-Use, Drought)

Regulation (Federal, State, Local)

Total Maximum Daily Load (TMDL)

One Water Concept



McHenry County Surface Water

Lakes, rivers, streams, wetlands

Watersheds

Stormwater

Floodplain

Water Quality

Water Quantity

Plans, Studies, Reports, Ordinances

McHenry County Ground Water

3 main types of drinking water aquifers

Shallow Aquifer – Sand and Gravel

Shallow Bedrock – Limestone

Deep Bedrock – Sandstone (2 main aquifers)

St. Peters Sandstone (upper)

Ironton Galesville Sandstone (lower)

Water Quality

Water Quantity

Supply and Demand

Scientific Studies and Technical Resources

MAJOR WATER ISSUES AND BEST MANAGEMENT PRACTICES

Climate Change

Water Infrastructure

Drinking Water

Waste Water

Storm Water

Water Reuse

Water Conservation

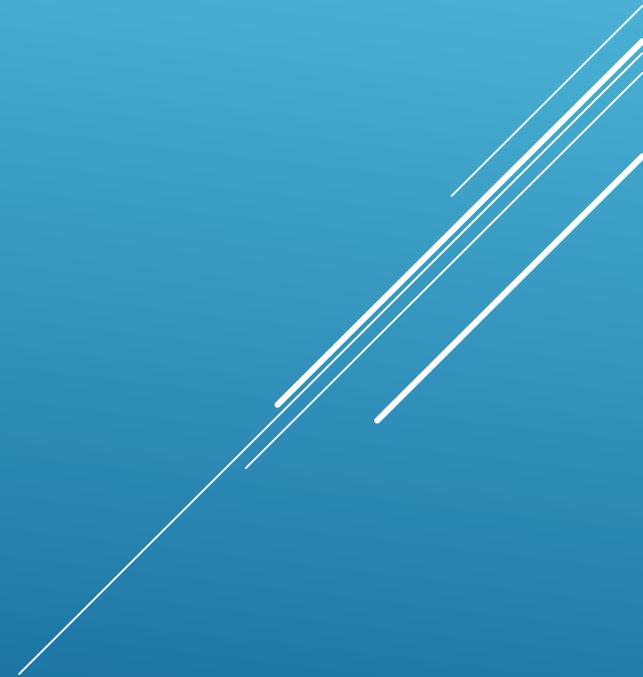
Municipal

Commercial/Business

Residential

Flooding

Drought Planning



LAND USES AFFECTING WATER AND BEST MANAGEMENT PRACTICES

Residential/Business Development

Industrial/Heavy Commercial Development

Transportation

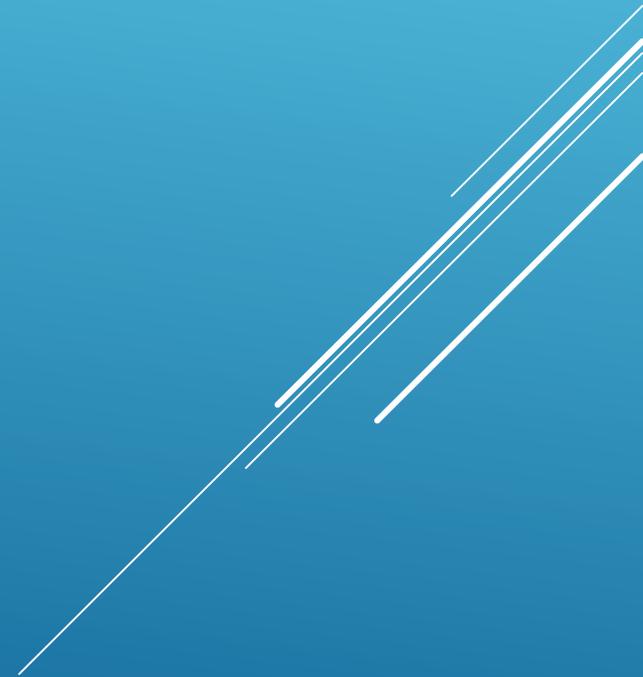
Gravel Pits

Agriculture

Golf Courses

Natural Areas/Open Space

Recreation And Health



LAND USES AFFECTING WATER AND BEST MANAGEMENT PRACTICES

Miscellaneous

Coal Tar Sealants

Lawn-Chemicals

Auto Salvage Yards

Improperly Abandoned Wells

Aboveground and underground Storage Tanks

Abandoned Landfills

Fly Dumping

EXAMPLES OF BEST MANAGEMENT PRACTICES



RESIDENTIAL/BUSINESS DEVELOPMENT BMP'S

*** PROMOTE NATURAL HYDROLOGY ***

Bio-Swales/Raingarden



Provides conveyance plus

- Promotes infiltration
- Improves water quality
- Flood storage
- Aesthetic beauty
- Provide wildlife habitat

Naturalized Detention



- Control flooding
- Improve water quality
- Create natural beauty
- Provide wildlife habitat

Permeable Paving



- Promote infiltration
- Water quality treatment
- Flood storage

WRAP UPDATE WORKPLAN AND TIMELINE

- March 2019 - Kick-Off Meeting
- April 2019 to March 2020 - 12 Task Force Meetings

Each Meeting Loosely in 3 parts

- 1st third = Formal presentations on specific topics
- 2nd third = Curated discussions on variety of topics
- 3rd third = Review and discussion on completed drafts

- Planning & Development: Principle Author with Input from Task Force
- Spring 2020 Completed WRAP for Adoption by County Board
- 2020 – 2021 Work with Municipalities to adapt and adopt WRAP



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