Welcome to the Downers Grove Rain Garden Workshop

Hosted by:
Village of Downers Grove, The Conservation Foundation, Downers Grove Park District, School District 58, School District 99 and Downers Grove Park District

Tonight's Agenda

- Welcome
- Jim Kleinwachter – The Conservation Foundation
- Karen Daulton Lange – Village of Downers Grove
- Q & A
- Adjourn

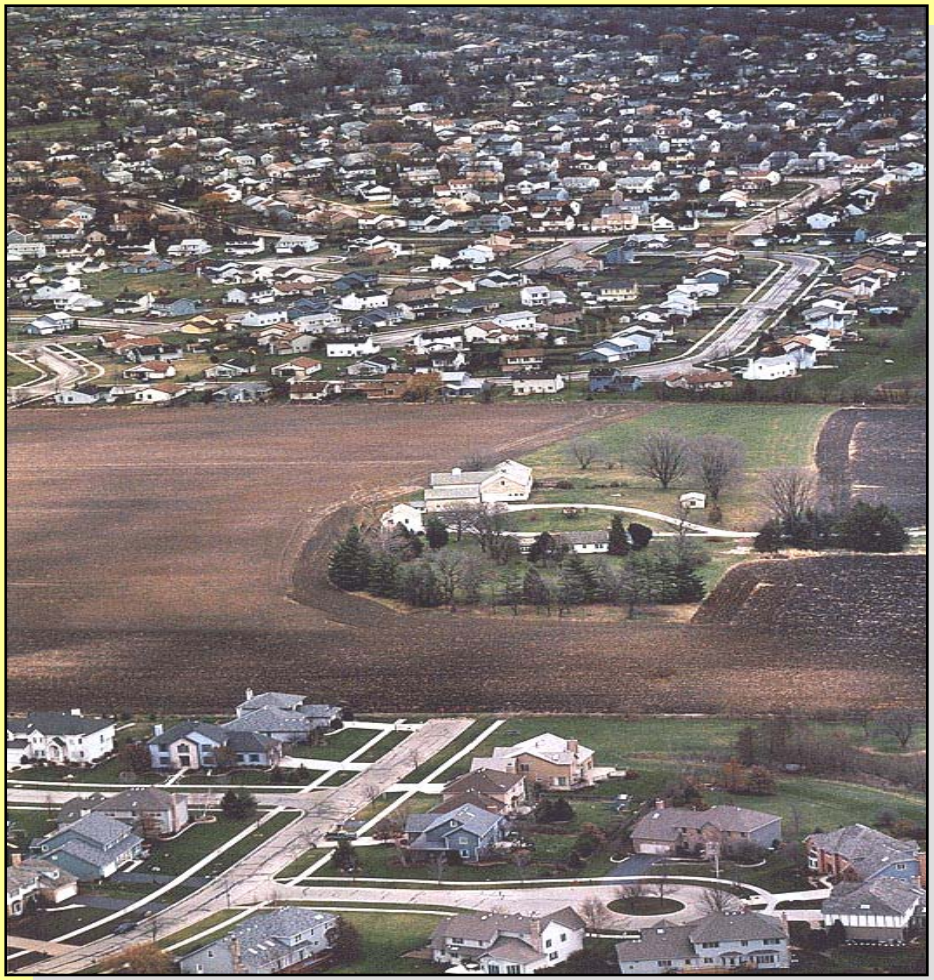
The Conservation Foundation

Founded 1972

A private, member supported , not-for-profit organization serving northeastern Illinois

The McDonald Farm

- 60 acres total
- 49 agricultural acres
- Butterfly garden
- Water garden
- Native prairie
- Organic garden
- Tree nursery
- Wetland area



What we do!

- Education – all ages!
- Environmental Stewardship
- Land preservation
- River and Watershed activities

  (cleaning,monitoring,restoring stenciling)
- Sustainable Development
- Conservation@Home

CONSERVATION@HOME
The Conservation@Home program recognizes this property for its environmentally-friendly landscape.
Water conservation practices and the protection and restoration of native plant and wildlife communities will improve the quality of our environment.
THE CONSERVATION FOUNDATION
The Conservation Foundation
(630) 428-4500
www.theconservationfoundation.org
32811-66580
VOSS SIGNS, LLC. MANLIUS, NY 13104-0553 1-800-473-0698 www.vosssigns.com

Landscape as if life depended on it…….

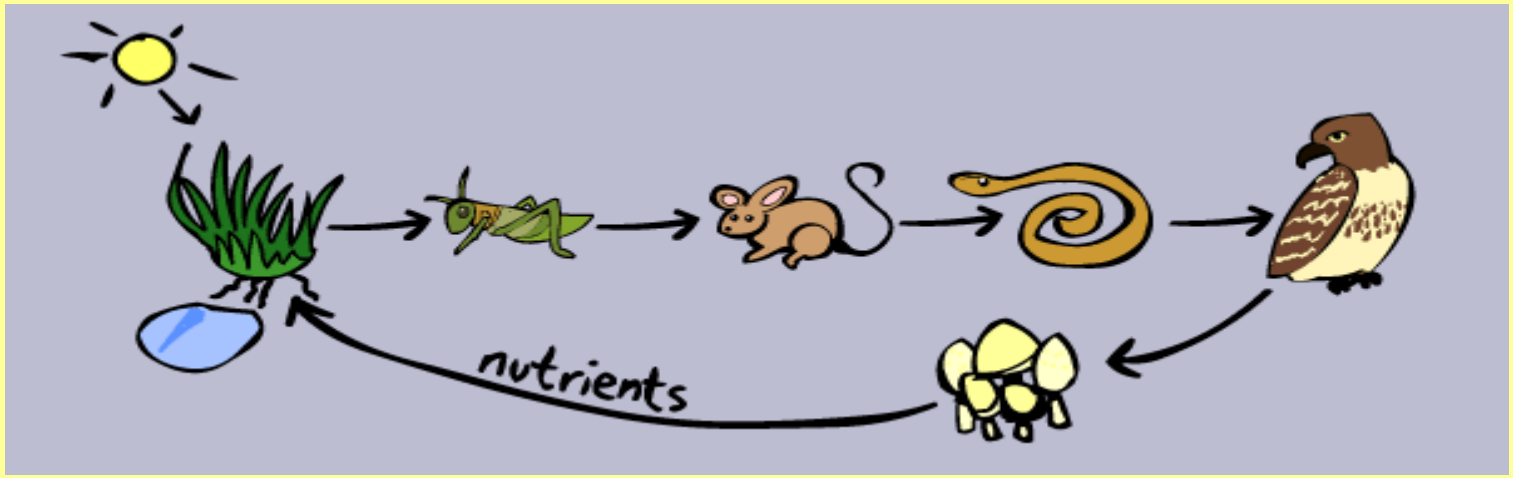
Plants are a key piece of a functional landscape. Water quality in our rivers and our wildlife need us to keep the environment healthy.

River Sweep Engaging people and the land

You have to know it- to love it!

Plants are not just Décor !

- The energy that flows through our ecosystems is obtained from the sun.

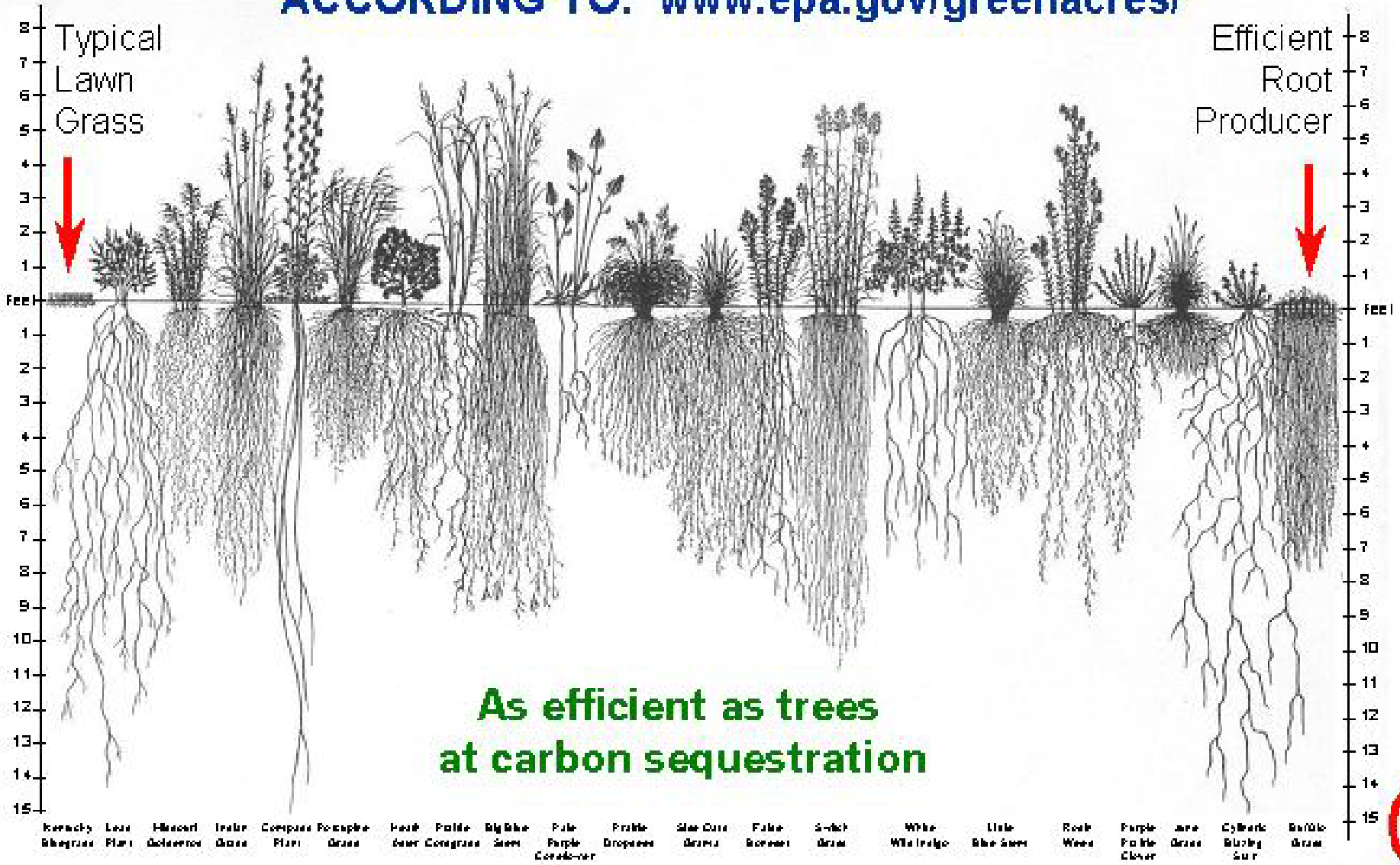


Plants convert sun to usable energy….

Deep-Rooted Species

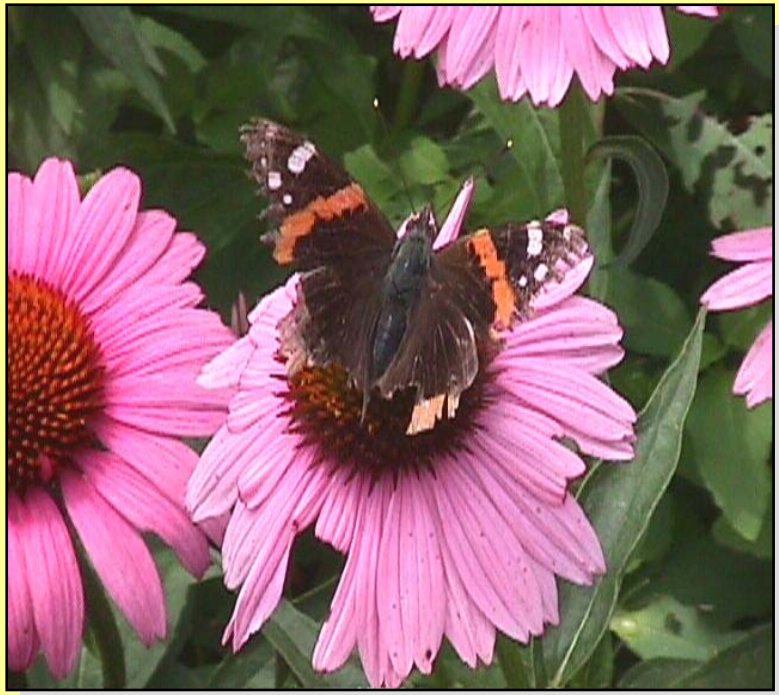
Atlantic Richfield Company
A BP affiliated co

ACCORDING TO: www.epa.gov/greenacres/

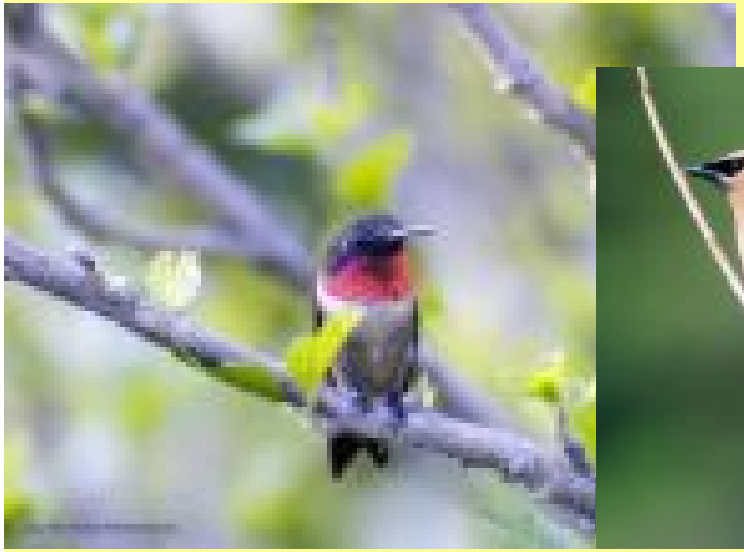


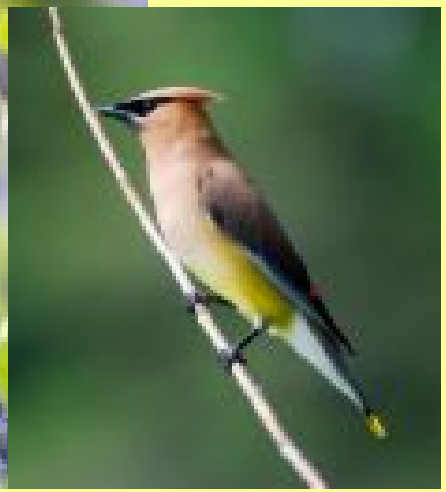
Native Plants

- Less maintenance
- Need less water
- Allow rainwater to soak deeper
- Attract wildlife
- Reduce mowing area -
  less time, noise and air pollution
- Add rich organic material
  to the soil.



Interested in these visitors?

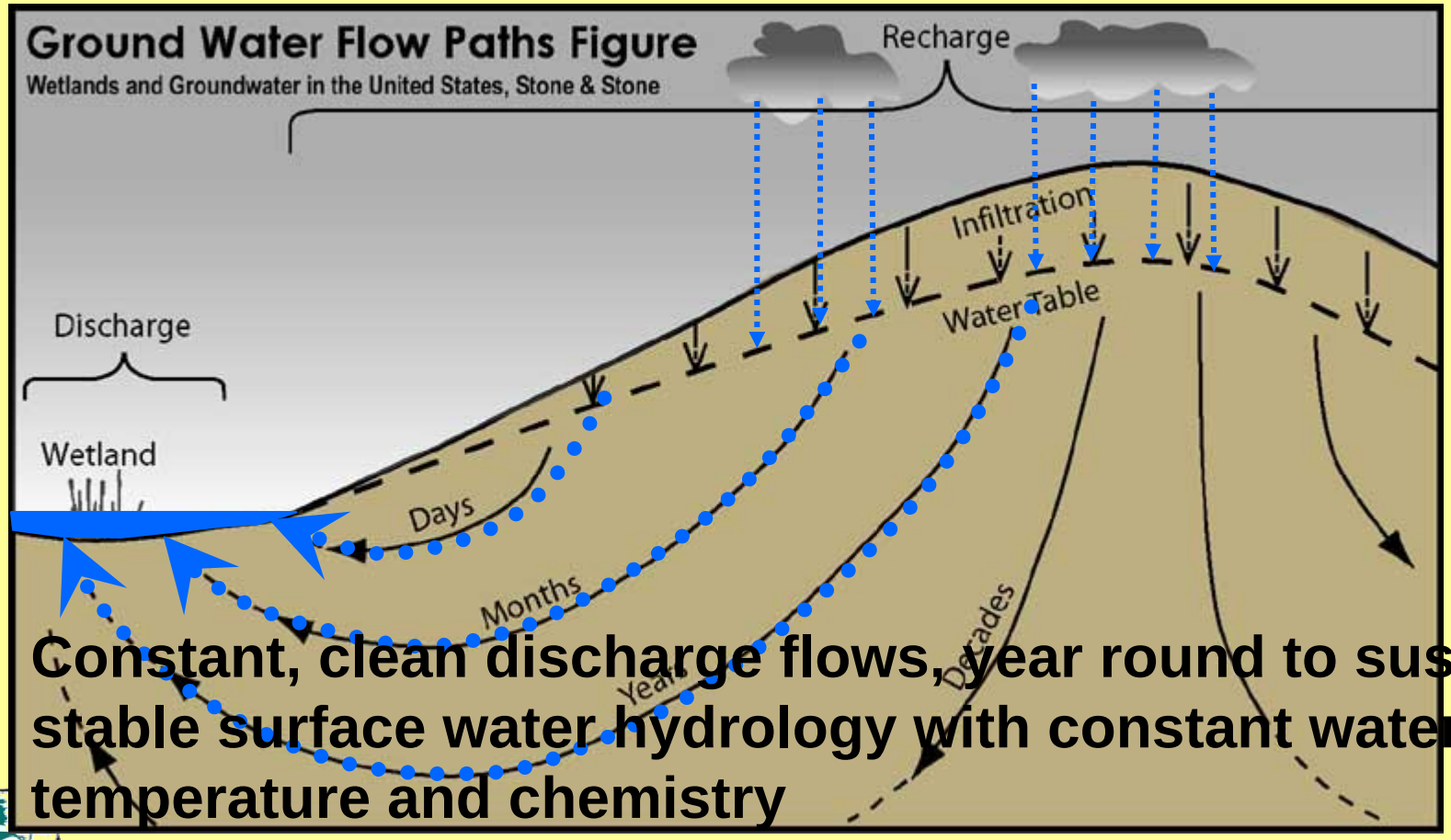




Historical Patterns of Hydrology

Recharge Zone: Uplands

Discharge Zones: Lowlands- rivers, streams, ponds, wetlands

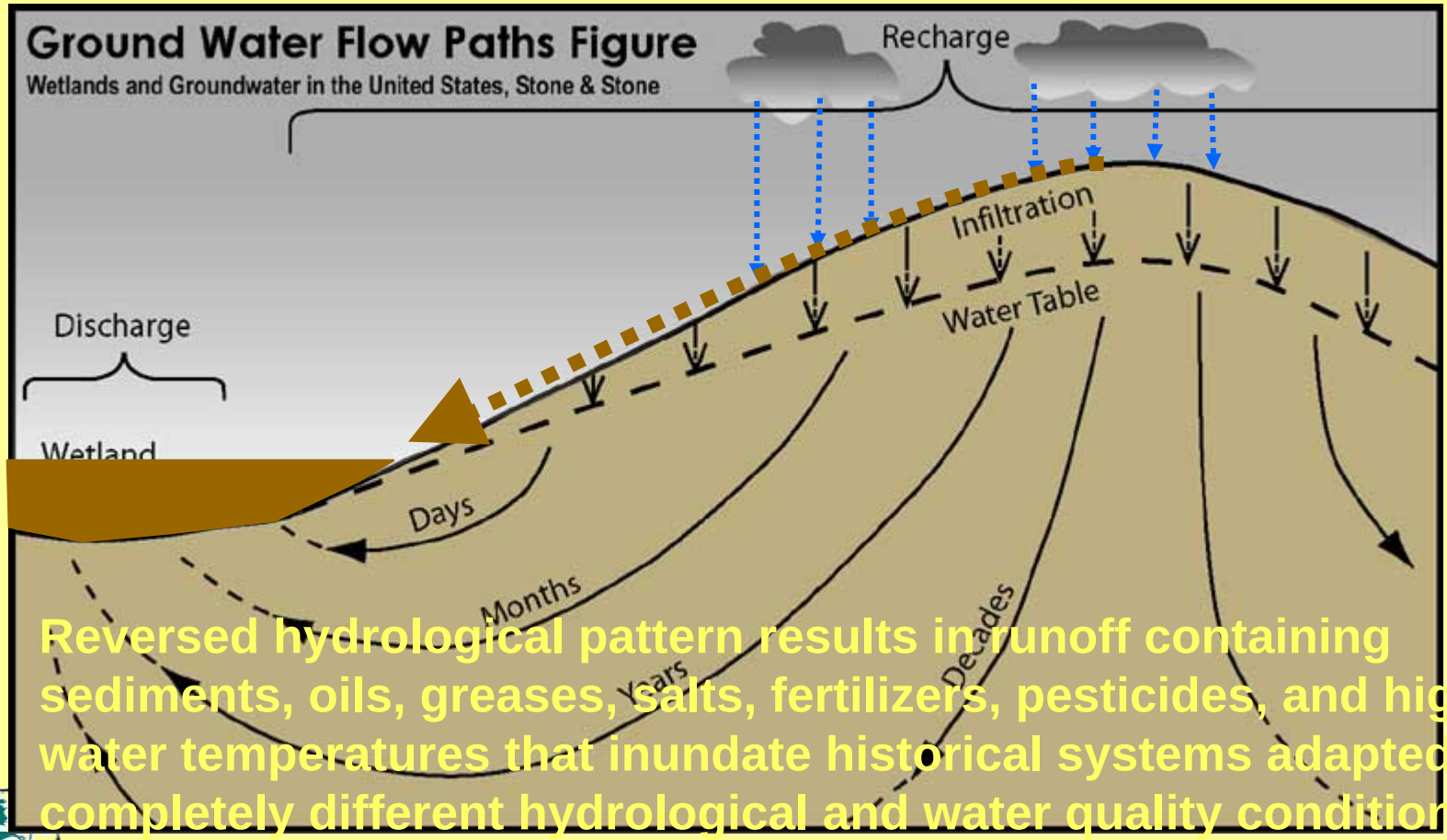


Constant, clean discharge flows, year round to sustain stable surface water hydrology with constant water temperature and chemistry

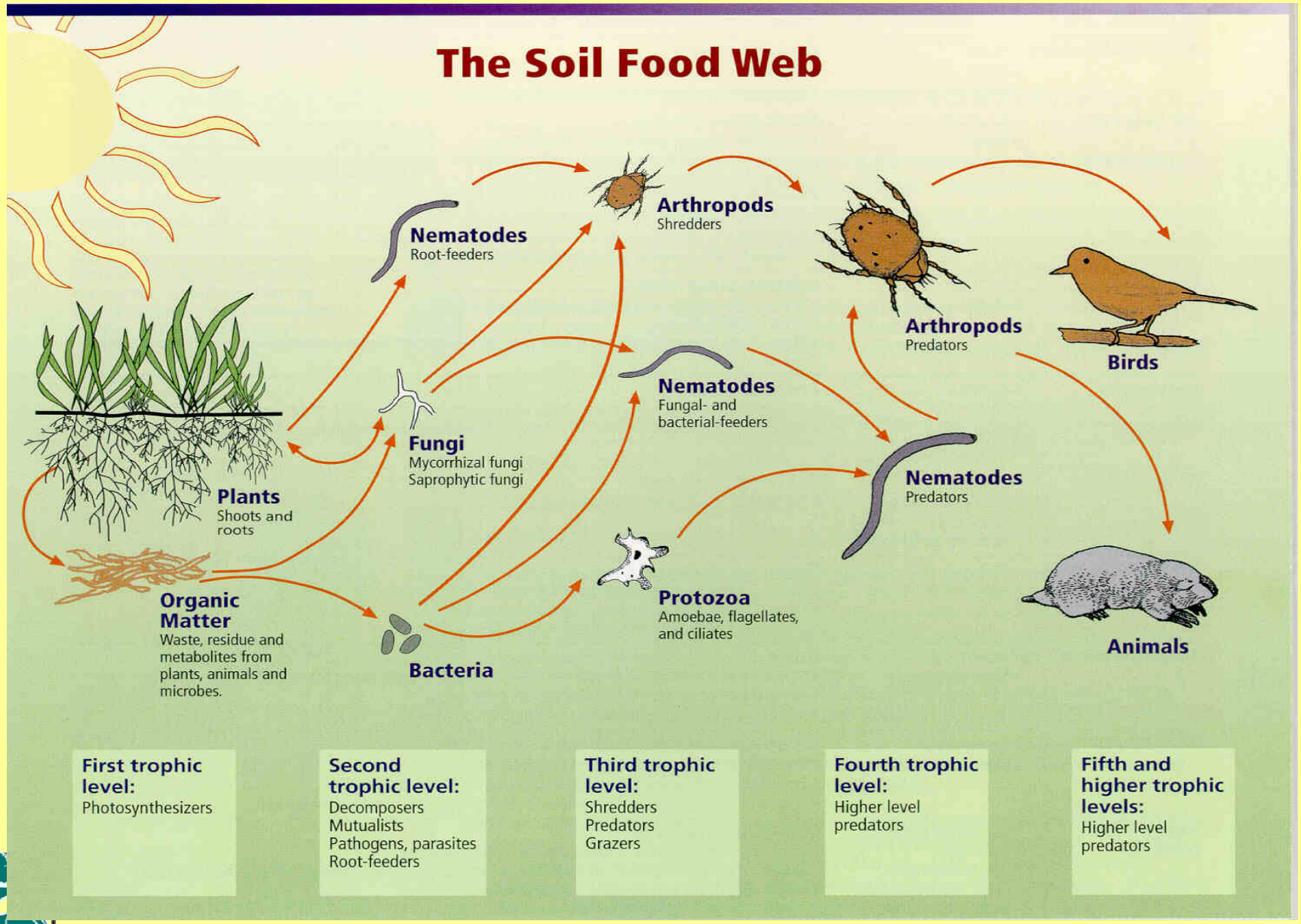
Contemporary Hydrology

Upland becomes discharge zone

Natural wetlands are expected to function as recharge zones



Reversed hydrological pattern results in runoff containing sediments, oils, greases, salts, fertilizers, pesticides, and higher water temperatures that inundate historical systems adapted to completely different hydrological and water quality conditions


The Soil Food Web
Nematodes
Root-feeders
Arthropods
Shredders
Arthropods
Predators
Birds
Nematodes
Fungal- and bacterial-feeders
Fungi
Mycorrhizal fungi
Saprophytic fungi
Nematodes
Predators
Plants
Shoots and roots
Organic Matter
Waste, residue and metabolites from plants, animals and microbes.
Bacteria
Protozoa
Amoebae, flagellates, and ciliates
Animals
First trophic level:
Photosynthesizers
Second trophic level:
Decomposers
Mutualists
Pathogens, parasites
Root-feeders
Third trophic level:
Shredders
Predators
Grazers
Fourth trophic level:
Higher level predators
Fifth and higher trophic levels:
Higher level predators

“Feel the Force”

Yoda

Welcome!

Beyond the

No grass to cut….

Make the landscape work!

Hold that water!

Water Quality issues…

Eutrophication
(Excess nutrients)

Phosphorus & Nitrogen

Water issues – related to landscape changes

- Nitrogen/Phosphorus levels elevated from fertilizer – primarily lawns…. (Agriculture)
- Salt – Road use, Our diet, water softners
- PAH Coal tar used as driveway sealant
- Channelization to help building
- Dams (Some **had** a function)
- Erosion Shoreline choices, runoff

Quantity issues too…

Bust

The beauty of our landscapes can be breathtaking!

Rain Garden

True Value

Rain garden

Just add water!

Non-point source – Water / runoff that reaches a waterway over land.

N.P Pollution - runoff that flows along the ground, picks up soil contaminants including, but not limited to petroleum, pesticides, or fertilizers and reaches a waterway

- **Benefits of Rain Gardens**
- *Basically, rain gardens are an inexpensive, simple to implement and environmentally sound solution to urban stormwater runoff.*
- A Rain Garden will:
- Filter runoff pollution
- Recharge local groundwater
- Conserve water
- Improve water quality
- Protect rivers and streams
- Remove standing water in your yard
- Reduce mosquito breeding
- Increase beneficial insects that eliminate pest insects
- Reduce potential of home flooding
- Create habitat for birds & butterflies
- Survive drought seasons
- Reduce garden maintenance
- Increase garden enjoyment

Utilize the resource!

If you build it, they will come!

Impervious surfaces include roof tops, driveways, sidewalks and even turf grass

Functional Landscapes!

Monarda

(Bergamot or Bee Balm)

Coreopsis

(Tick Seed)

Silphium (s)
“Clay busters”

- Compass plant
- Prairie Dock
- Cup Plant
- Rosinweed

Dalea purpurea
purple prairie clover

B/E Susan Bottle Gentian

The Conservation Foundation We Save Land. We Save Rivers.

Beardtongue

Turtlehead

Well drained

© The Conservation Foundation We Save Land. We Save Rivers.

WhiteTurtlehead
Chelone glabra

The Conservation Foundation

Liatris spicata
Marsh Blazing Star

Asclepius Incarnata
Swamp Milkweed

Blue Vervain Blue Flag

Blue Lobelia
Cardinal Flower

Filipendula rubra
Queen of the prairie

Carex sp.
Sedges

The Tale of Two Ponds #1

Its up to you!

The Conservation Foundation We Save Land. We Save Rivers.

#2

Weedy Prairie?
07.07.2006

Moderate Density Residential

Conventional

Turf grass drainage swale designed for conveyance.

Conservation

Drainage swale with native vegetation designed to slow down runoff and retain as much as possible.

Stream Corridor

Conventional

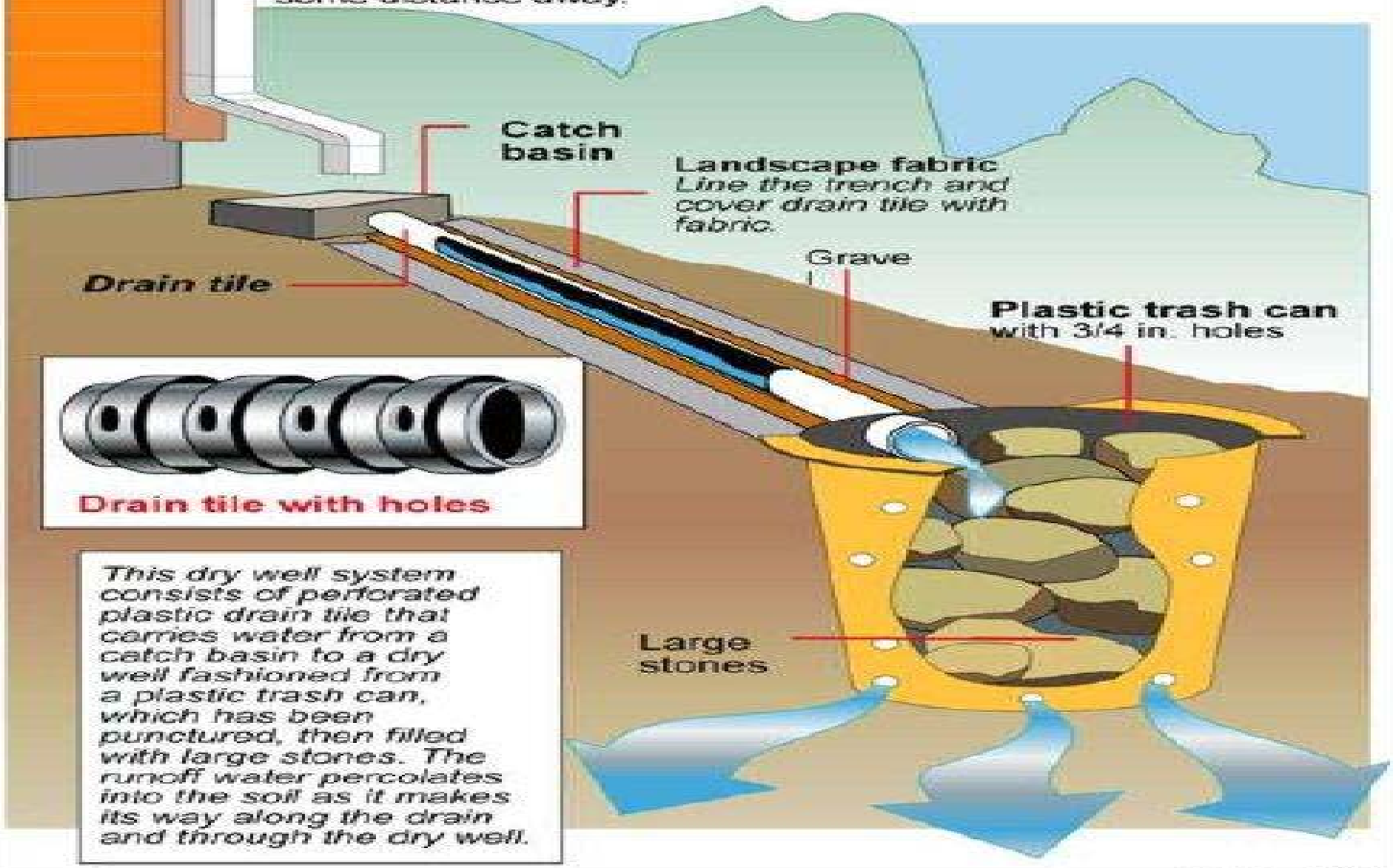
Excessive bank erosion; non-native vegetation with poor root system along banks.

Conservation

Little bank erosion – natural vegetation with deep root system to resist scour/undercutting.

Drain water away from home with a dry well

A dry well system typically consists of buried drain tile running from a catch basin to a collection container. This allows water to disperse and be absorbed slowly into the surrounding soil some distance away.



This dry well system consists of perforated plastic drain tile that carries water from a catch basin to a dry well fashioned from a plastic trash can, which has been punctured, then filled with large stones. The runoff water percolates into the soil as it makes its way along the drain and through the dry well.

A P/Stan Kohler

Plain or fancy they work!

- Re-purposed barrels
- Food grade plastic
- Overflows
- Mosquito proof
- Can connect together
- Easy to install
- Delivery and install available
- Rain better for plants

Have fun with decorations!

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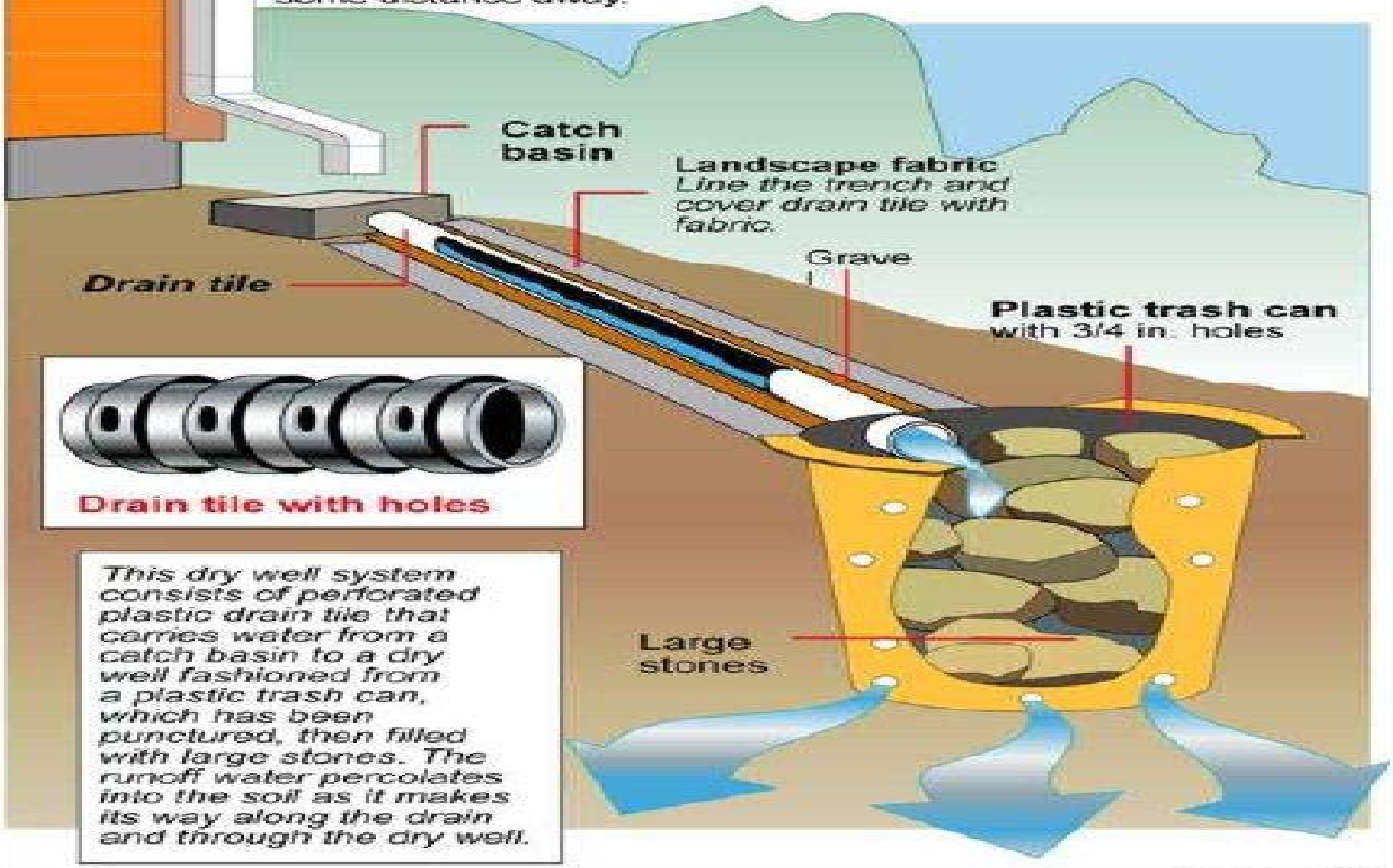

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Where there is a will – there is a way!

The Conservation Foundation We Save Land. We Save Rivers.

8000 sold to date!
“Upcycled” Re-purposed barrels!

Municipal programs!

- Geneva
- Lisle
- Elgin
- Downers Grove
- ST Charles
- Plainfield
- Wheaton

Aurora
Naperville
Roselle
Yorkville
Woodridge
Elmhurst
Batavia

Corporate Programs!

- McDonalds Corp
- DuPage County employees
- Ball Horitcultural
- Lewis University employees
- Burke Engineering

Your place of employment?

Rainwater Harvesting Concept

Rain Water harvesting – residential size! 750 gallon capacity

Storm Drain Stencil Program!

The Conservation Foundation We Save Land. We Save Rivers.

Join the C@H effort!

- Over 1000 Homeowners enrolled
- Libraries, Schools, Churches, Dental office, Nature Centers !
- Subdivisions Also Certified
- Franchise started – C@H Trademark!
- There ARE things you can do to help the environment!

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