

A photograph of numerous blue rain barrels stacked in rows, filling the right side of the frame. The barrels are made of metal with a blue finish and have circular openings at the ends. The background is a dark blue gradient.

RAIN BARREL WORKSHOP

November 2023

Sustainability Conference

Keeping It Green

at the

Adams County Agricultural and Natural Resources Center

670 Old Harrisburg Road
Gettysburg, PA 17325



BMP #4- Rain Barrels

Showcasing and Promoting Practices and Techniques

to Protect Our Natural Resources

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and Environment Preservation.
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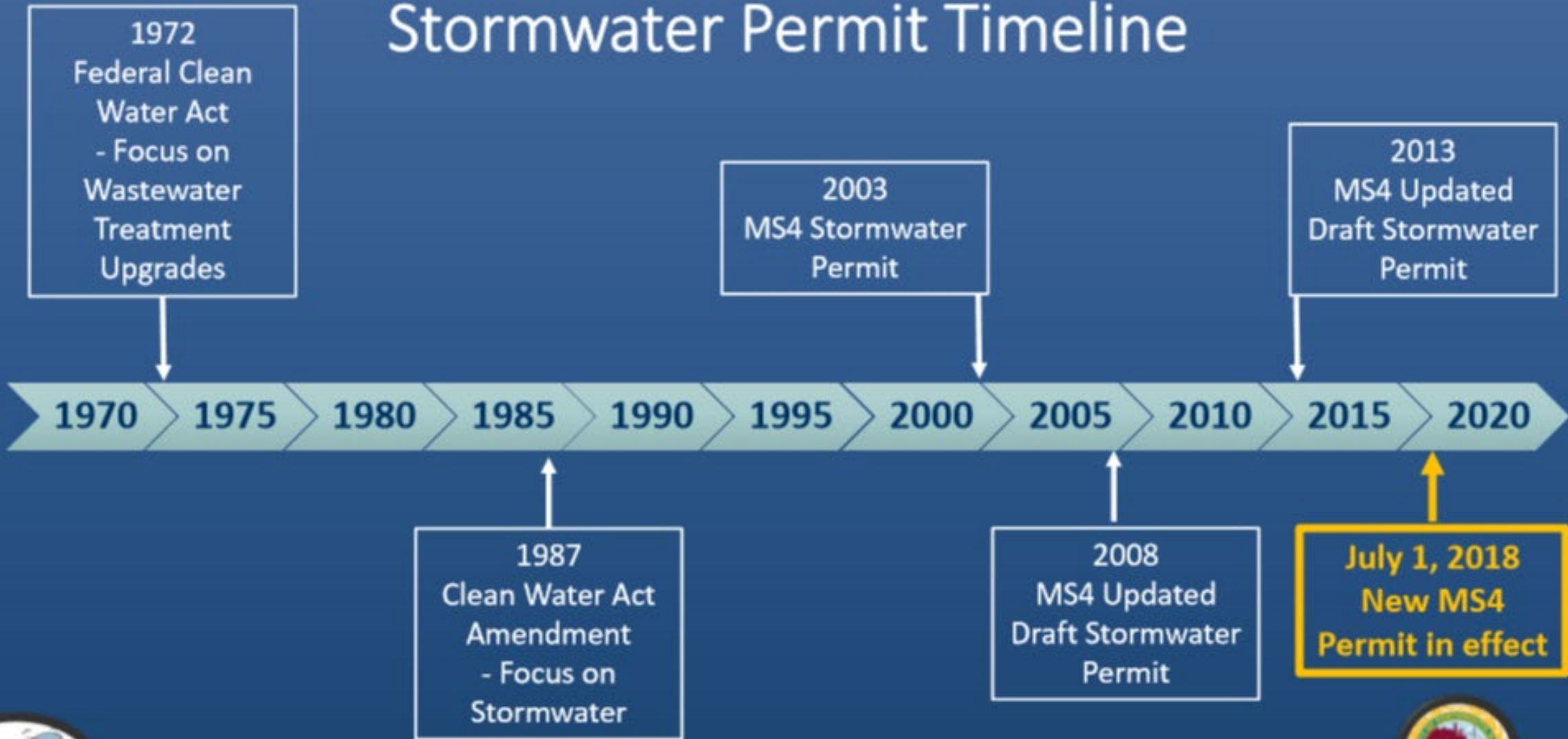
717-334-1160 ext 238

WHAT DOES MS4 STAND FOR??????



Municipal Separate Stormwater Sewer System (MS4) Permit

Stormwater Permit Timeline



City of Portsmouth's Stormwater System – Permit Requirements



DEP - MCMs

MCM 1: Public
Education

MCM 2: Public
Involvement

MCM 3: Illicit
Discharges

MCM 4: Construction
Stormwater

MCM 5: Post-
construction
Stormwater

MCM 6: Municipal
Operations



Produced by
Jodi Sulpizio
Natural Resources Educator



PennState Extension





Soak Up the Rain with Green Infrastructure

www.epa.gov/soakuptherain



Tree Canopy



Rain Barrel



Rain Garden



Green Roof



Tree Planter Box



Pervious Concrete

Learn more. Take Action.



Poster created by U.S. EPA Office of Wetlands, Oceans and Watersheds.

The overall take, not many residents are familiar with Ms4.

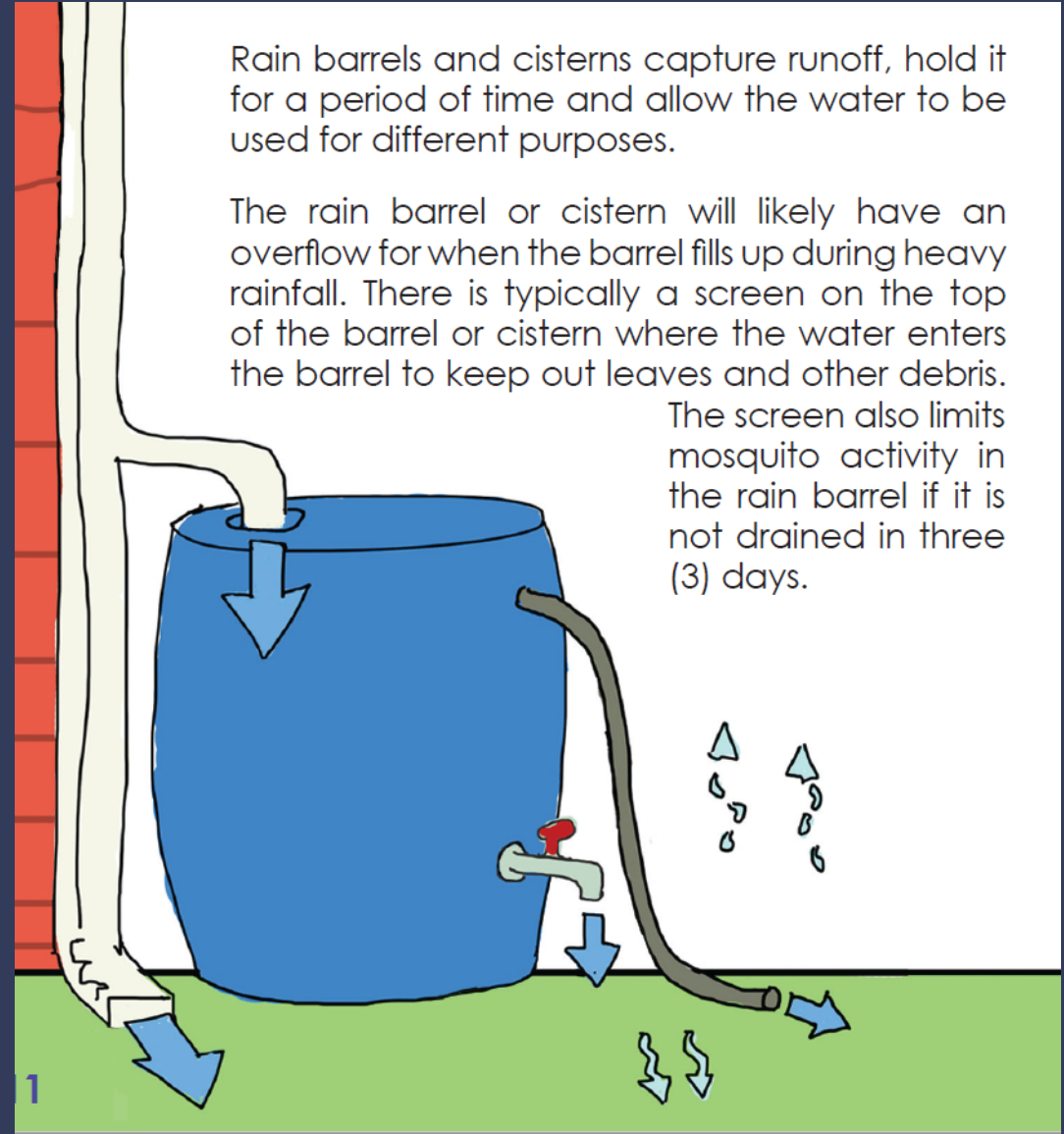
Part of our requirements for Stormwater is Public Outreach, Involvement and Education for our MCM#1 & #2 . Some ways would be articles, newsletters, website, social media and public events.

7 Awesome RAIN BARREL BENEFITS For You & Your Garden



Rain barrels are simple to install and produce BIG benefits.

- A standard American household uses more than 110,000 gallons of water each year. How, as stewards of our communities, do we conserve, promote and help our local ecosystems. One small item can do that, a RAIN BARREL! With just a few supplies and access to a rooftop downspout, you are in business.

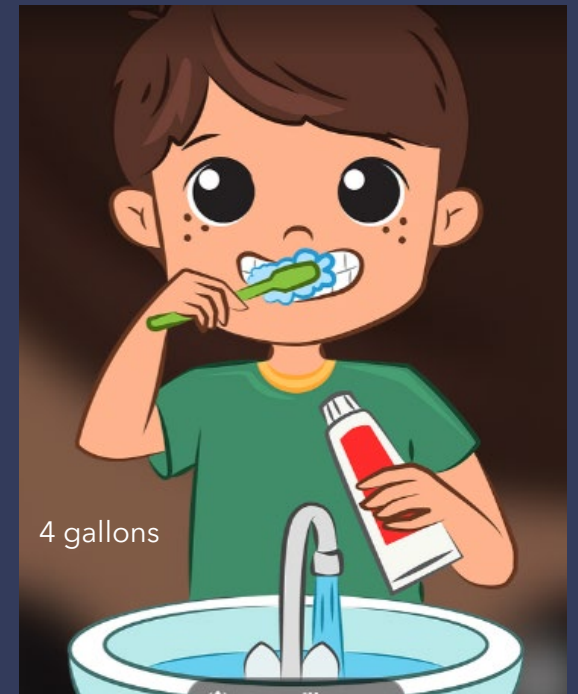




The average family of four (4) uses over 300 gallons of water per day with consumption rates ranging from 9,000-12,000 gallons of water per month. If your property has large outdoor gardens would increase consumption rates.

A leaky faucet, toilets, and appliance can amount to 18 gallons of water loss per day.

Droughts create stress and put stress on our water supplies. Everyone can play a part by adding a rain barrel or two to conserve water and lesson our carbon footprint by conserving our precious water resources.



How Much Water Do We Use?



Source: Water Research Foundation, Residential End Uses of Water, Version 2, 2016

How many gallons of water does your dishwasher use?

6 gallons

How many gallons of water does your laundry washing machine use?

41 gallons

How many gallons for a shower?

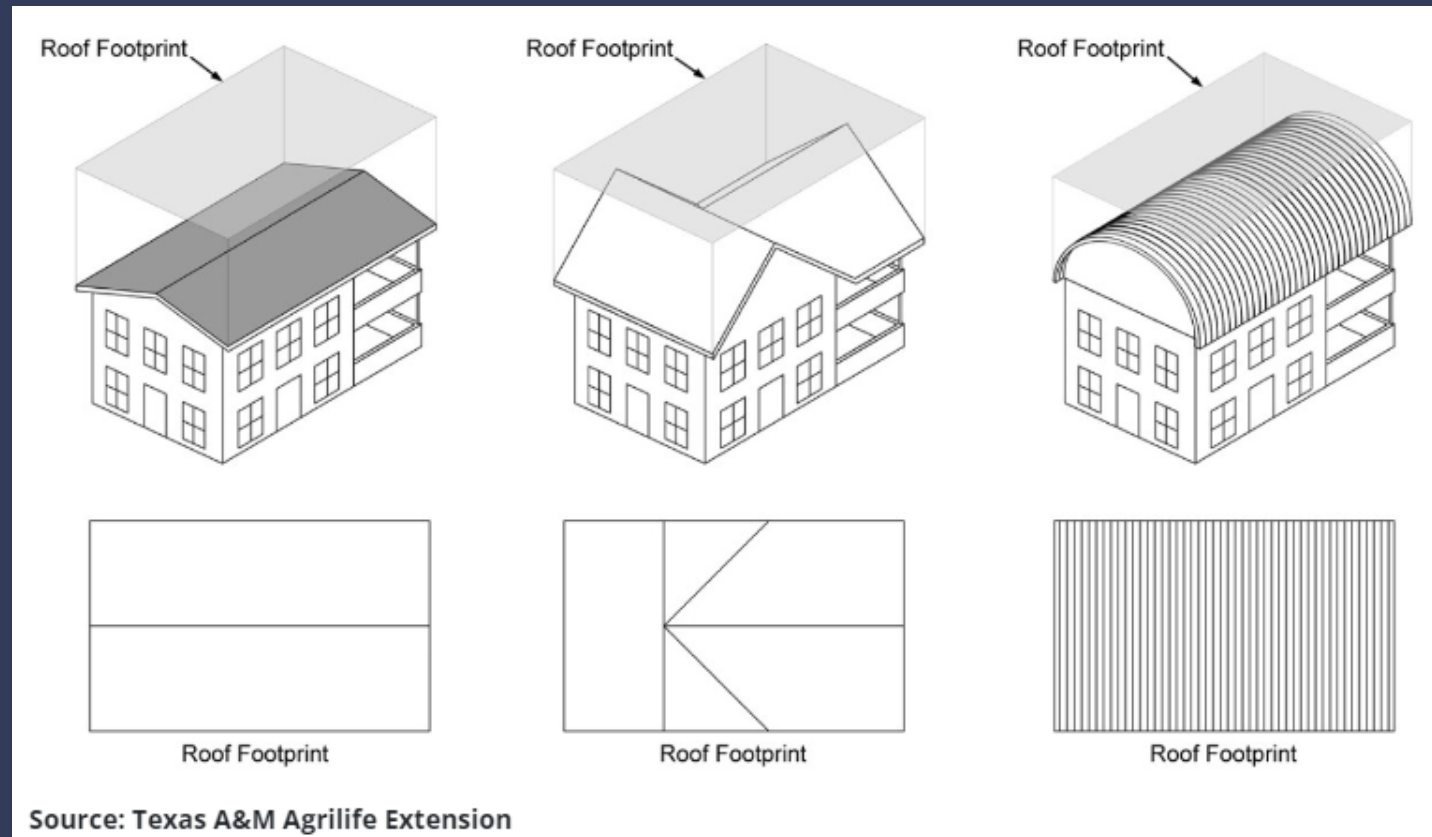
17.2 gallons

Brushing your teeth?

4 gallons

Easy formula to remember is Roof area (ft²) x precipitation amount (in) 0.623 = Amount Collected (gallons)

Easy formula: 1" of rain on 1,000 SF Roof will Yield 623 Gallons. In order to conserve that amount of water you would need 11 Rain barrels.



Why are we here? As a MS4 coordinator I am responsible for managing our stormwater program. Part of our mandated program is public education. I've struggled with this in order to meet TWO of our six MCM requirements for public outreach. MCM#1 Public Outreach, and MCM#2 Public Involvement and Participation.

- 1) How do we engage the public?
- 2) How can we meet this requirement while promoting SW BMP's?
- 3) How could this benefit our community?
- 4) How do we involve the public to participate in our program?
- 5) How do we get started?



There are many BMP's out there, BMPs are Best Management Practices and rain barrels fall under that category. Adams County Conservation District provides barrels for purchase and is successful with their sales. I thought adding an educational component for the public with a FREE rain barrel would draw residents in, while educating and promoting BMPS would be a good solid plan. We advertised the event on social media and our quarterly newsletter and it really took off . We have provided over 133 barrels conserving thousands of gallons of water in Adams County. Giving out FREE rain barrels helped!

How do we fund this event....



GRANTS... they are out there.



How do municipalities fund such projects with a limited budget. GRANTS... they are out there.....

South Mountain Partnership, Department of Environmental Protection (DEP) and other local environmental groups provide funding for education to include rain barrel workshops!!



133 Adams County residents signed up for our workshops. We had over overwhelming inquires about the class and future classes for water sustainability with a wait list.

- A 55 gallon rain barrel can conserve 1300 gallons of water per year. This reduces your treated water consumption, filters the water across vegetated surfaces vs. impervious roadways picking up oils and containments transporting them into our waterways for happy fish.



- Several handouts were provided, the below on harvesting with rain barrels (created by Adams County) and our MS4 pamphlet located on the Borough's website as well as a maintenance sheet on how to maintain your rain barrels.

What can I do to reduce NPS pollution?

Individuals can play an important role by changing certain everyday habits:

- Dispose of used oil, antifreeze, paints, and other household chemicals properly (do not pour down sink, into storm drain, or on the ground).
- Inspect septic system every couple years to ensure system is working properly.
- Keep litter, pet wastes, grass, leaves, and other debris out of street gutters and storm drains.
- Do not apply more than recommended amount of fertilizers and pesticides to your lawn and garden or, better yet, use a soil test kit.
- Use rain collection devices, like rain barrels, to harvest and store rain water.
- Install stormwater infiltration areas like the rain garden below.



10 Water Conservation Tips

1. Make sure your faucets are not leaking: A leaking faucet could waste up to 4,000 gal/year. Also, turn off the faucet when shaving or brushing your teeth.
2. Run the dishwasher and washing machine only when they are full.
3. Defrost food in the refrigerator instead of using running water: A running faucet uses about a gallon of water per minute.
4. Keep a container of water in the refrigerator rather than running the water until it is cold.
5. Test all toilets regularly for leaks: A leaking toilet could waste up to 100 gal/day.
6. Take shorter showers and replace old showerheads: Low flow showerheads can save 3 gal/min.
7. Limit grass areas and use trees, shrubs, and other plants that require less water to landscape your yard: Grass turf requires 30-50% more water.
8. Water during the coolest part of the day (preferably morning) and never water on windy days: As much as 30% of water used can be lost to evaporation.
9. Use a broom rather than a hose to clean decks, sidewalks, and other paved areas: 5 minutes of running the hose uses 25 gallons of water.
10. Cover pools to prevent evaporation: An average uncovered pool loses about an inch of water a week because of evaporation.

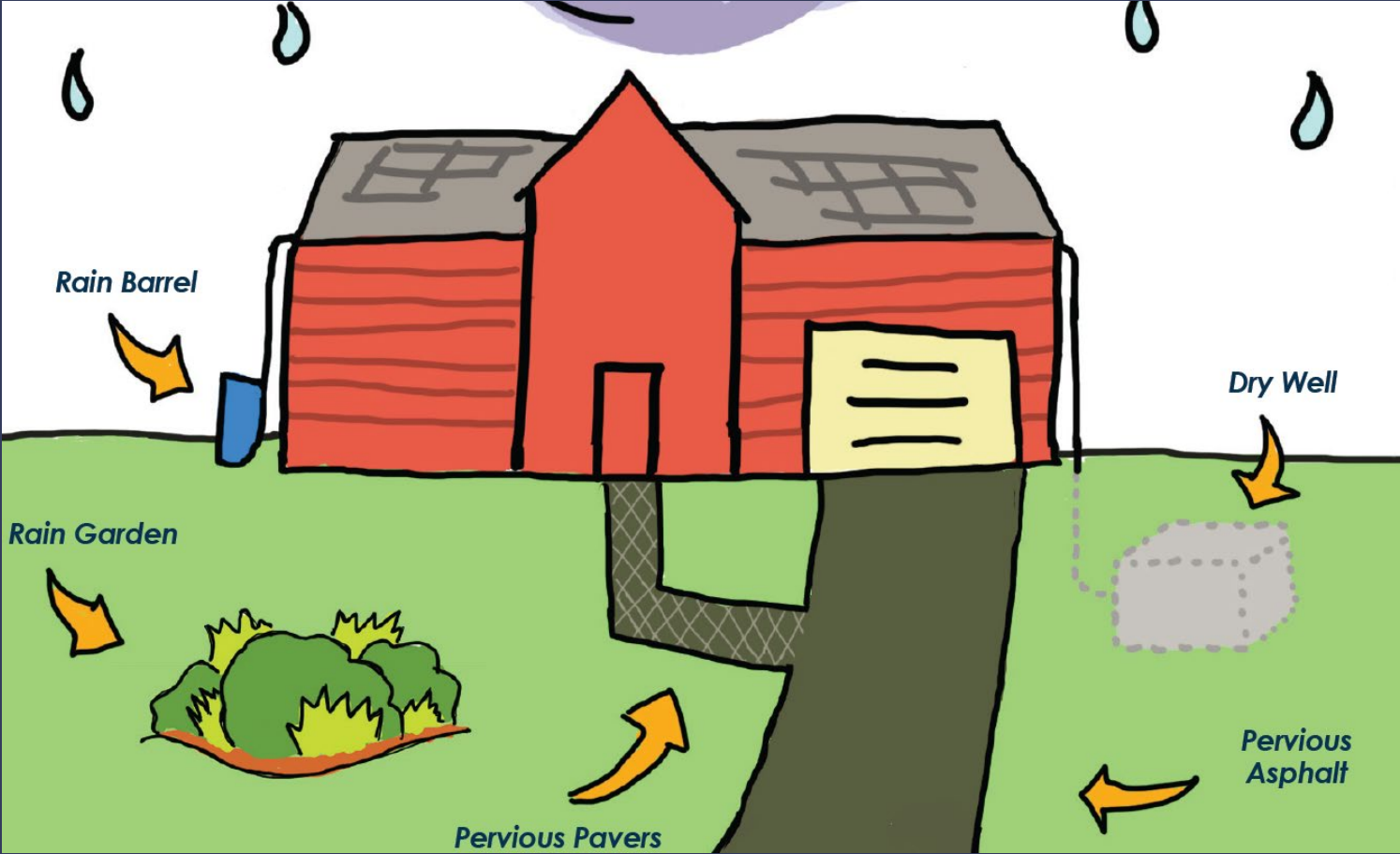


Water Harvesting with Rain Barrels

A Water Quality & Conservation Fact Sheet

Adams County Conservation District

670 Old Harrisburg Road, Suite 201
Gettysburg, PA 17325
www.adamscounty.us
717-334-0636





Here are a few of our local resident's enjoying the workshop. It was a GREAT family event and provides a benefit to the entire community and watershed. A win win.













Our happy rain barrel owners, some even purchased a 2nd overflow barrel!



Here are a few
installed in town.

Schoolhouse Alley

Go Gettysburg College!!

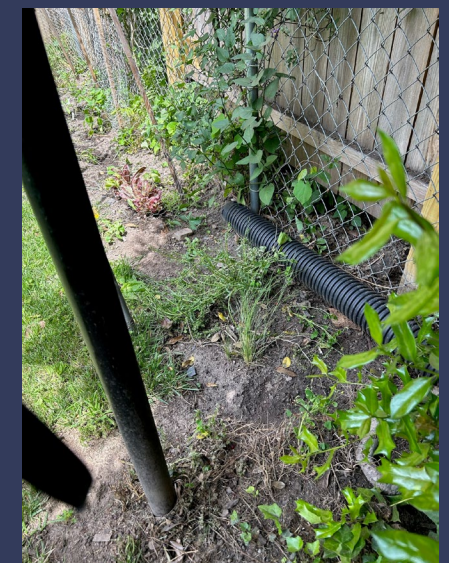
The owner noted
Saturday's rain filled the
barrel - that's 58 gallons
of water recycled at one
household!!!



38 N. Stratton Steet
Mr. Frank Marrone



38 N. Stratton Street



An extension pipe was added to the overflow to water the garden in the back yard.

N. Stratton Street



461 Baltimore Street

Painted to blend in with
the brick on the house,
NICE JOB!!



Springs Avenue



Our local Borough residents conserved 35,100 gallons of water yearly with our 27 rain barrel workshop.



Adams County residents outside the Borough purchased 24 barrels from the Adams County AG Center. Conserving an additional 31,200 gallons of water each year will be conserved from these class attendees. That's a grand total of 66,300 gallons of water. Excellent Team Effort!!!!

How to maintain and winterize your rain barrel:

Winterize

Before you drain your barrel to winterize it, take 1 cup of vinegar and add that to the water in the rain barrel let it sit overnight. This will clean and kill any mold that has accumulated inside the barrel. Drain this water over your grass to filter out impurities before entering our storm drains that drain to our tributaries and Chesapeake Bay. Then follow the winterization steps below.

Step 1: Drain your rain barrel by opening all spigots. Once drained turn the barrel upside down. The average rain barrel weighs 500 pounds when full and should be fully drained before attempting to move.



Step 2: Remove hoses and rain spout diverter and leave faucets open. Re-connect your downspout to run water away from your house as it functioned prior to installing your rain barrel.

Step 3: Clear debris from the barrel and the filter Screen. An empty barrel is a good opportunity to clear out the muck that can lead to mold and fungus growth. Take a toilet brush or the like and scrub the inside walls and rinse with a hose.

Step 4: How to store, if space is available store inside your garage if that is not an option move behind your home and place against your house to avoid it blowing away and store upside down to avoid collecting water that may freeze and crack the barrel.

To keep cycled clean water in your barrel – USE THIS WATER – water your lawn, your pets, your houseplants keep it moving. Moving water will not create algae vs stagnant water.

** Note if you are having issues with algae during the summer collection months, you can add a few table spoons of Apple Cider Vinegar (ACV) Mother Earth Organic to the water which is safe for birds to drink and watering your garden plants.

THE END

