Town of Ashland
MASSACHUSETTS

Stormwater Advisory Committee

Agenda

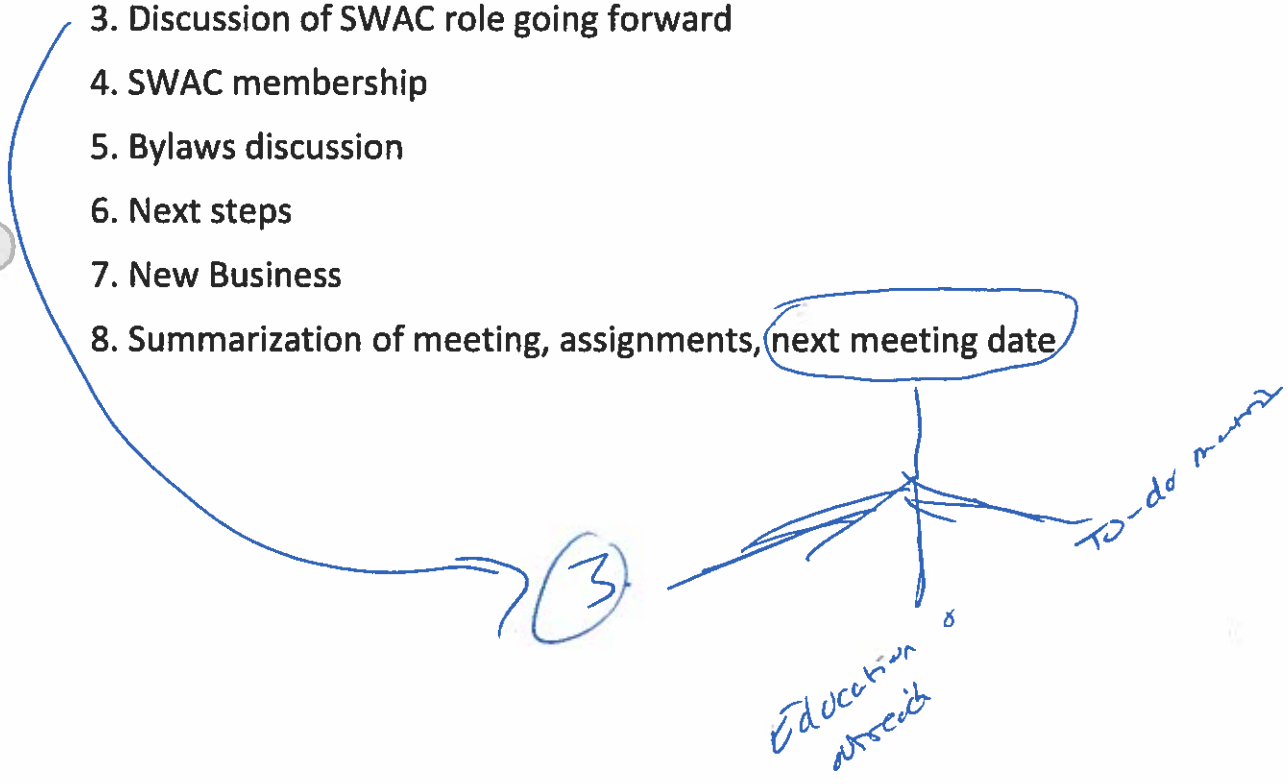
Thursday, October 4, 2018

7:00 PM

Meeting Room A

Town Hall, 101 Main St, Ashland, MA 01721

1. Review of 7/24/2018 Meeting Minutes
2. Updates of current activity: NOI, Town Meeting, SWMP
3. Discussion of SWAC role going forward
4. SWAC membership
5. Bylaws discussion
6. Next steps
7. New Business
8. Summarization of meeting, assignments, next meeting date



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Stormwater Advisory Committee
DRAFT Minutes of 6/26 Meeting
Location: Town Hall, 101 Main Street, Meeting Room A

Members Present: Robert St. Germain, Chair; Meghan Selby, Vice Chair; Hillary Waite, Secretary; Jeanne Walker; Maeghan Dos Anjos (ex-officio)
Non-members present: None
Absent: Rajitha Purimetla (ex-officio)

Minutes

- Meeting opened at 7:10
- Agenda #1: Review and Approve May 22, 2018 Meeting Minutes as amended: 3/0/1
- Agenda #2: Administrative – reaffirm Election of Officers

  Upon a motion duly made and seconded, the committee voted to elect Hillary Waite Secretary. 4/0/1

  Upon a motion duly made and seconded, the committee voted to elect Robert St. Germain Chair. 4/0/1

- Agenda #3:. Stormwater FAQ Document- updates

Maeghan Dos Anjos posited that the goal of the document is outreach and needs to be a lower barrier to entry into the stormwater conversation. As is, the document is too long to expect most residents to read the full contents. The committee generally agreed. Maeghan Dos Anjos, Meghan Selby, and Robert St Germain expressed that a one-page document (or one double sided page) may be more effective for the general public, but that a longer version would still be valuable as an online resource.

The committee identified the "top" questions an abridged document should be sure to answer, including: how stormwater is different from the sanitary sewer, how residents can help address the stormwater problem, what the Town's plan is, and how it affects the individual resident.

The committee agreed to read through the document individually and identify the most important questions within it, with the goal of narrowing down a top 5-10 questions.

- Agenda #4: Reports on current activity

  4a. Farmer's market report: Jeanne and Hillary attended the Farmer's Market. There were lots of smaller demonstrations of the Enviroscape and quick chats with residents and children.

  4b. News articles: Ashland Directions will print one more issue. Robert St Germain is also working on an article for the Ashland Local Town Pages for

August, the subject of which will be "SWAC wears 2 hats" (as taxpayers and as committee members responsible for stormwater management).
4c. Moved to agenda item #7

- Agenda Item #5: Ex-officio reports
  5a. Current status 2016 NOI filing: The town's Notice of Intent is being prepared by Kleinfelder and will be signed by the Board of Selectmen. Robert St. Germain suggested a report to the Board of Selectmen, possibly at the same meeting at which the NOI would be signed. Meghan Selby stressed the importance of separating the discussion of the NOI and the discussion of the committee's report. Maeghan Dos Anjos will follow up with the committee on the expected date of NOI submission.
  5b. MS4 implementation plan for FY19: Fuss & O'Neill are contracted for the Stormwater Management Plan and Illicit Discharge Detection and Elimination Plan. Both of these documents are critical to first-year permit responsibilities. Both are already paid for.
  5c. Additional Stormwater Management Bylaws required for 2016 permit: Maeghan Dos Anjos reported that DPW will need to spearhead an update of town stormwater regulations, as it will be responsible for enforcement. She went over the new ordinances that will be required under the new permit, which include more stringent standards for runoff capture and treatment. She noted that the town's authority to prevent illicit discharges should also be more explicit. Hillary Waite suggested reviewing the sewer regulation and bylaw to check for IDDE-related language.

- Agenda Item #6: Stormwater Management Budget and funding update. Proposal to report to BOS: Robert St. Germain discussed that the stormwater fee should be added to tax bills rather than water and sewer so as not to create 'extra' work in billing septic and well water customers. The Town already adds fees to the tax bill, so billing for stormwater this way would create the least amount of administrative burden.

  [Tier and budget system info: Rob please summarize here]

  The committee agreed that a fee is favorable over using the general fund, because the town would likely need a Proposition 2 ½ override regularly. The budget for some years increases as additional stormwater management activities become required in the permit.

  The proposed budget considers a flat fee for Tier 1 (residential single family) customers and [Rob please elaborate] for Tier 2 (commercial and large apartment) customers. Hillary Waite suggested more explicitly defining which properties fall under which tier using zoning codes.

Discussion followed about equity in the fee, especially for renters. Hillary Waite questioned whether it may be possible that renters would actually pay higher fees than homeowners based on the fee calculation, which would be unfair.

Jeanne Walker also suggested consideration of fee abatements for seniors and how the abatements might be factored into the budget calculation. Robert St Germain agreed to look into how senior abatements work for the trash fee and dog licenses in order to estimate how many seniors might take advantage of available abatements.

The committee agreed to further discuss equity for seniors and low income residents at the next meeting before the suggested budget and fee structure would be reported to the Selectmen.

- Agenda #7: Stakeholder Management next steps

  7a. The committee agreed that the next meeting should focus on coming to agreement on the fee structure and recommendation to the Board of Selectmen and the contents of the report to the Board.

  Rob St Germain and Maeghan Dos Anjos agreed to connect with Town Officials [Brittany ? and Rob Scherer] on a fee vs. general fund structure.

  Jeanne Walker reminded the committee that the BOS report should include the committee's request to have a non-Board of Health member as its fifth member, because the Board of Health meets at the same time as the committee and the committee has had trouble filling the seat.

  7b. The committee agreed to continue planned meetings with target audiences.

- Meeting adjourned at 9:50pm.

- Next meeting will be July 24, 2018.
- Documents reviewed: May 22 2018 meeting minutes, Stormwater FAQ document, [Budget documents]

Stormwater Advisory Committee
DRAFT Minutes of 7/24/2018 Meeting
Location: Town Hall, 101 Main Street, Meeting Room A

Members Present: Robert St. Germain, Chair; Meghan Selby, Vice Chair; Hillary Waite, Secretary; Jeanne Walker; Maeghan Dos Anjos (ex-officio); Doug Small (ex-officio)
Non-members present: None
Absent: None

Minutes

- Meeting opened at 7:09

Robert St. Germain opened the meeting by moving to write a letter on behalf of the Committee to express gratitude and best wishes to Rajitha Purimetla, who has departed the Town of Ashland. Upon a motion duly made and seconded, the Committee voted in the affirmative. 4/0/0

- Agenda #1: Minutes review. Committee went over the procedure to review and post meeting minutes. Upon a motion duly made and seconded, the Committee voted to accept the minutes of the June 26th, 2018 meeting as amended.
- Agenda #2:
  - A. News articles. Robert St. Germain updated the Committee on planned news articles. Ashland Local will publish articles in August, September, and October. Potential topics for September include the rate structure of the fee and a comparison of Minimum Control Measures described in the permit. Potential topic for ~~October~~ was a review of the Committee's process and decisions leading up to recommending a stormwater fee.
  - B. Town personnel. Robert St. Germain met with Assistant Town Manager ~~[NAME]~~ and is hoping to schedule a meeting with Town Manager Michael Herbert before presenting before the Board of Selectmen. Doug Small reported that Rajitha Purimetla presented to the Planning Board. Per Doug, Rajitha said that emphasizing the fact that the new permit is mandatory was an effective strategy.
  - C. Sustainability Committee and Ashland Business Association. Robert St. Germain and Maeghan Dos Anjos will plan to meet with the Sustainability Committee when possible. The Sustainability Committee may also wish to recommend a stormwater fee. Robert St. Germain is also scheduled to present to the Ashland Business Association on September 4, 2018.
- Agenda #3.
  - A. A new "top line" budget was generated based on a refined cost estimate from Kleinfelder. The Committee agreed that the tax bill is still a good "location" for the stormwater fee to simplify the billing process.
  - B. Senior abatement. A potential estimate could be generated by using the amount of seniors who take advantage of the trash fee abatement. The

Committee agreed that the full ratepayers would need to absorb the potential costs of offering abatement.

- General fee discussion. Hillary Waite suggested using property type classification codes (provided by state) to classify properties and thereby set their rates. Meghan Selby noted the budget would be negative in Year 1. Robert St. Germain clarified that this estimate is correct. Because the Town Manager indicated that he expected an additional funding request from DPW in Year 1 to meet permit requirements, the budget would break even. Hillary Waite encouraged the budget to consider additional capital borrowing.

Maeghan Dos Anjos noted that the Finance Committee is likely to request that the stormwater fee also account for low income housing. Robert St. Germain said that an abatement cost might be calculated by passing through other data about low-income housing that is already available. Jeanne Walker also pointed out that some low-income residents may be renting, and the owners of the rental properties might not be low-income; in those cases, no abatement would be required.

Upon a motion duly made and seconded, the Committee voted to accept the fee schedule and recommend it to the Board of Selectmen. 4/0/0

- C. Review of report to Board of Selectmen. Doug Small reported that an asset management grant is potentially available to help cover future capital costs. He also noted that sewer infiltraton/inflow is challenging for the Town but doable and stormwater can hopefully be the same.

Upon a motion duly made and seconded, the Committee voted to approve the report and authorize Rob to make report to the Board of Selectmen. 4/0/0

- Agenda #4: Maeghan Dos Anjos will revisit and edit the Q&A document and edit the Town website. Hillary Waite offered information and outreach documents from the Town of Milton for Maeghan to use. Meghan Selby also offered her assistance.

- Agenda #5. Maeghan Dos Anjos reported that an IDDE bylaw will be necessary to achieve full permit compliance, and that the Town sewer bylaw may have some provisions that would apply. In addition, she will move forward on changes in construction and development bylaws related to stormwater. ~~As Conservation Agent,~~ those bylaws are already within her purview and she will spearhead revisions. Robert St. Germain asked whether the Committee should notify the Conservation Commission of their responsibility to pursue new bylaws for permit compliance. Maeghan Dos Anjos planned to do so as Conservation Agent. Doug Small suggested that stormwater permit fees be collected.
- Agenda #6. The Committee will await instruction from the Board of Selectmen before deciding on future steps.

- Agenda #7. No new business.
- Agenda #8. Next meeting set for August 23, 2018 at 7pm at Town Hall.

495/MetroWest Partnership

Leaders for Regional Prosperity

WATER RESOURCES COMMITTEE

THURSDAY, OCTOBER 4, 2018

8:30 - 10:00 AM

2ND FLOOR CONFERENCE ROOM, 200 FRIBERG PARKWAY

WESTBOROUGH, MA 01581

I. WELCOME AND INTRODUCTIONS

- **Jessica Strunkin**, Partnership's Deputy Director
- **Gerry Preble**, Private Sector Co-Chair, Beals + Thomas

II. THINK BLUE MASSACHUSTTS

- **Kerry Reed, P.E., LEED AP Senior Stormwater & Environment Engineer for Framingham DPW**
- **Robin Craver, Town Administrator, Charlton and Chair of the Massachusetts Statewide Municipal Stormwater Coalition**

III. DISCUSSION OF EMERGING ISSUES AND NEXT STEPS

- **Jessica Strunkin**, Partnership's Deputy Director
    - o October 10 - Imagine a Day without Water
    - o Supplemental Budget & Funding for MA Clean Water Trust
    - o Potential Meeting Topics

IV. CLOSING COMMENTS

- Jessica Strunkin, Partnership's Deputy Director

Water Infrastructure Alliance
c/o The Engineering Center
One Walnut Street
Boston, MA 02108

October 1, 2018

Honorable Jeffrey Sanchez, Chairman
House Committee on Ways and Means
State House, Room 243
Boston, Massachusetts 02133

Dear Chairman Sanchez:

On behalf of the Water Infrastructure Alliance, we write in strong support of the additional appropriation for the Massachusetts Clean Water Trust's contract assistance line-item (1599-0093) contained in the Governor's supplemental budget (HB4758). This appropriation will help address our water infrastructure financing gap by providing an additional $30 million so that the Massachusetts Clean Water Trust can continue to help municipalities and regional water authorities invest in their water infrastructure.

As you know, the 2012 report of the Massachusetts Water Infrastructure Finance Commission and a 2017 report from the Office of the Auditor found that the Commonwealth and its municipalities have a $18 billion to $21 billion funding gap in meeting their drinking and wastewater infrastructure needs. This not only potentially presents significant public health and environmental concerns, but directly impacts the Commonwealth's ability to create meaningful economic development opportunities. Recognizing the need to assist municipalities and regional water authorities in addressing this problem, the Massachusetts legislature has given greater flexibility to the Massachusetts Clean Water Trust (CWT) in recent years to provide additional financial assistance for eligible projects that have met a series of reasonable best management practices (i.e. development of an asset management plan, etc.).

This additional funding will allow the CWT to provide the support necessary to incent our municipalities and regional water authorities to address critical maintenance needs, develop long term plans and incorporate important water management reforms today, as part of the overall effort to save on long term costs, sustain economic development and manage systems more efficiently. (Note: contract assistance does not directly fund projects; it addresses the difference between borrower repayments and amounts owed on debt service.) An increase in this line-item will allow the CWT to provide greater incentives for municipalities and regional authorities to address their water infrastructure more affordably today.

Investing in our water infrastructure not only protects our environment and public health, but directly contributes to increased revenue for the Commonwealth through direct and indirect job creation. As reported by the Edward J. Collins, Jr. Center for Public Management at UMASS-Boston, every $1 invested in water/wastewater infrastructure generates almost $15 of private investment, leverages $2 of other public funds and adds $14 to the local property tax base. This represents common sense employment opportunities that lead directly to a safer, cleaner and growth oriented Commonwealth.

This one time appropriation will encourage municipal investment in our shared water infrastructure. With these additional funds, greater progress can be made today to ensure a safer, cleaner and more reliable water infrastructure system tomorrow. We appreciate your attention to this important matter.

Imagine a Day Without Water

October 10, 2018

(/)

Imagine:

No water to drink, or even to make coffee with. No water to shower, flush the toilet, or do laundry. Hospitals would close without water. Firefighters couldn't put out fires and farmers couldn't water their crops.

Some communities in America already know how

impossible it is to try to go a day without our most precious resource: Water. But many Americans take water for granted every day. Imagine a Day Without Water 2018 is the fourth annual day to raise awareness and educate America about the value of water.

Last year, over 750 organizations came **together**. Will you join us this year?

Sign Up (/signup)

How to participate

For Imagine a Day Without Water we invite everyone with a water story to tell to join in the effort. Participating organizations can host events, promote social media campaigns, pass a resolution with your mayor or city council, or do whatever you think best educates and engages the public and stakeholders about how water is essential, invaluable, and worthy of investment.

Consider partnering with another local organization who cares about water. Breweries, schools, aquariums, car washes, Chambers of Commerce, city councils, and more have all raised their hand and said they care about their local water supply and service and want to raise awareness about the often invisible challenges plaguing our water infrastructure. Learn more about how to be part of Imagine a Day Without Water and

Pivot Bio Gets $70M, Led by Bill Gates's Fund, to Replace Fertilizer

Frank Vinluan
October 2nd, 2018

Xconomy San Francisco —

Applying fertilizers to fields has been a standard farming practice for generations. The problem with these chemicals is that they end up in the air or in water runoff. Scientists at agriculture startup **Pivot Bio** say the key to delivering an important nutrient to crops has been at the plants' roots all along—and the company is now preparing to offer farmers an alternative to fertilizer.

Pivot has developed microbes that it says can supply the nitrogen that plants need to grow. The San Francisco startup is preparing to launch its first product, a microbial treatment for corn, in the 2019 growing season. To support commercialization in the U.S, and eventually, other geographic regions, Pivot announced today it has raised $70 million in new financing.

The investment, a Series B funding round, was led by Breakthrough Energy Ventures, the **$1 billion fund** steered by chair of the board Bill Gates that invests in technologies that reduce greenhouse gas emissions. The investment comes as a growing number of companies are researching and commercializing different microbial products intended to help plants in various ways, such as improving nutrient uptake, or making them hardier against the stresses posed by drought or pests.

Pivot's focus is nitrogen, which plants need for photosynthesis. Air supplies plenty of nitrogen, but plants need the gas converted into a usable form. Some crops, such as peas, beans, and soybeans, grow with bacteria on their roots that perform this process, called nitrogen fixation. Cereal crops, such as corn, don't have nitrogen-fixing bacteria, which is

one reason why these crops are rotated with legumes, such as soy. The residual nitrogen left by soy provides the nutrient to corn plants in the following season.

Corn and other cereal crops, such as barley and wheat, already have microbes that can perform nitrogen fixation, but they don't do this because the genes for this function have been "turned off," says Sarah Bloch, lead scientist and strain optimization lead for Pivot. The microbes evolved this way as a response to the fertilizer that has been applied to fields for years. Nitrogen fixation takes so much energy that if any nitrogen is available to the microbes, such as the nitrogen supplied by synthetic fertilizers, a microbe's nitrogen fixation genes switch off, Bloch says.

The Pivot microbes come from soils in many U.S. locations were corn is grown. Pivot maps the soil microbiome to identify the microorganisms that have a relationship with corn and also have the genetic potential for nitrogen fixation. The company then applies its genetic engineering techniques to the microbial DNA, to "reawaken" the ability to perform nitrogen fixation.

"We take the genes that are naturally there but we fine-tune the way that they are expressed to make sure that these genes are turned on," Bloch says.

Pivot's approach sounds plausible, says Megan Andrews, project manager at the **Plant Soil Microbial Consortium** at North Carolina State University. A microbial product for nitrogen fixation would not necessarily need to attach to the root to work; it could be introduced into the soil and still provide nutrients to the plant, she says. Andrews was unfamiliar with Pivot, but she added that using microbes that are native to the corn plant's microbiome makes it more likely that they won't disrupt the microbial community. However, she cautioned that it's still possible the Pivot microbes would cause unforeseen effects.

"There is always a concern about how it will impact the native microbial community—whether it will displace an existing [microbe], or change the function of the group," Andrews says.

Bloch says Pivot has tested its microbes in field studies across many different U.S. locations, assessing whether the microbes attached to the plant roots, and whether the

nitrogen fixation genes were turned on. Of particular interest to farmers, the tests also showed that crops treated with the Pivot product had higher yields than untreated plants, Bloch says. She added that scientists are still gathering data on the broader effects of the microbial treatment but so far, Pivot has not observed any negative effects on the overall plant microbiome.

A number of large ag companies and startups are pouring hundreds of millions of dollars into microbial R&D. Boston-based Indigo Ag has raised more than $650 million since its 2014 inception, and has commercialized 19 microbial products across five crops to date. CEO David Perry has described Indigo's approach as screening the plant microbiome for promising microbes, and then using software to predict and understand how the microbes help the plant. Drought tolerance was Indigo's first target. When the company **closed its most recent investment last month, a $250 million Series E round**, Perry reiterated that nitrogen fixation was still among his company's research programs.

Nitrogen fixation is the first target for **Joyn, an alliance between Bayer and Boston-based Ginkgo Bioworks**, another heavily funded startup. Working from a library of microbes supplied by Bayer, Joyn aims to use Ginkgo's synthetic biology technology to engineer nitrogen-fixing microorganisms.

Pivot got its start in 2011 with a **grant** from the Bill & Melinda Gates Foundation. The goal at the time was to develop a way to transfer nitrogen-fixing genes from bacteria into plants. But Bloch says Pivot's co-founders, CEO Karsten Temme and chief scientific officer Alvin Tamsir, soon realized that this approach was decades away from becoming viable. Alternatively, developing nitrogen-fixing microbes is "something that can have a real world impact on a much shorter time scale," she says.

The Pivot microbial product, which it has named Proven, is meant to be sprayed onto seeds when they are planted. Bloch says the liquid can be added to spraying equipment farmers already have, so it fits into existing farming practices. But she adds that the company is developing a new version that would be offered as a coating on seeds, which would make the product easier for more farmers to adopt. Pivot is also researching applications of its technology to other crops, such as wheat and rice.

Though the U.S. Department of Agriculture has approved Pivot's microbial product for corn, it also needs approval in each state where it will be used. Pivot says it has approval in several corn-producing Midwestern states and additional approvals are expected later this year and early next year. Pivot plans to sell directly to farmers, a path that Indigo has taken with its microbial products. The San Francisco company has not yet disclosed what it will charge for its microbes, but Bloch says the value goes beyond a dollar for dollar comparison to fertilizer. If the Pivot product can produce enough nitrogen to last the growing season, a farm would save on labor and equipment costs associated with extra applications of fertilizers to fields.

Other investors in Pivot Bio include Data Collective, Monsanto Growth Ventures, Prelude Ventures, and Spruce Capital Partners. Besides the Gates Foundation, Pivot's early financial support came from the National Science Foundation and the Defense Advanced Research Projects Agency (DARPA).

*Photo by Flickr user **Christian Reimer** via a Creative Commons **license**. Photo has been cropped to fit Xconomy publishing system standards.*

Frank Vinluan is editor of Xconomy Raleigh-Durham, based in Research Triangle Park. You can reach him at fvinluan [at] xconomy.com

Polluted runoff threatens the health of Massachusetts water. You can do your part at home, at work and at play to help keep our streams clear of pollution after rain and snow melt.

For more tips and information visit www.thinkbluemassachusetts.org.

Scoop it! Pet waste is gross and can make you sick. Bag and dispose of solid pet waste in trash cans.

Close it! Rain water running off of trash cans sends waste into nearby streams. Close your trash can lids, cover dumpsters, and properly dispose of trash to keep pollution locked away.

Stop it! Stormwater pollution often begins at construction sites, but it doesn't have to. Take steps on your job site to prevent dirt from washing into nearby streams, roads and storm drains.

Catch it! Industries and businesses can keep oil, gas, and grease from washing into streams. Use drip pans to catch fluids. Keep absorbent materials close by to clean up small spills. Fix leaks and clean up spills quickly.

Learn more at www.ThinkBlueMassachusetts.org

Do *YOUR* Part! Keep our Ponds, Rivers and Drinking Water Clean!

Trash the Poop

Pet waste that's left on sidewalks, driveways, streets, or even lawns gets washed into storm drains and is a major source of water pollution—and a health hazard to humans.

It's important to always pick up after your pet, and put the waste in a trash can.

Never put pet waste (or anything else!) down a storm drain. Storm drains are NOT trashcans.

Take Care With Chemicals

Household chemicals can be toxic to fish and people. Keep them away from paved areas and storm drains.

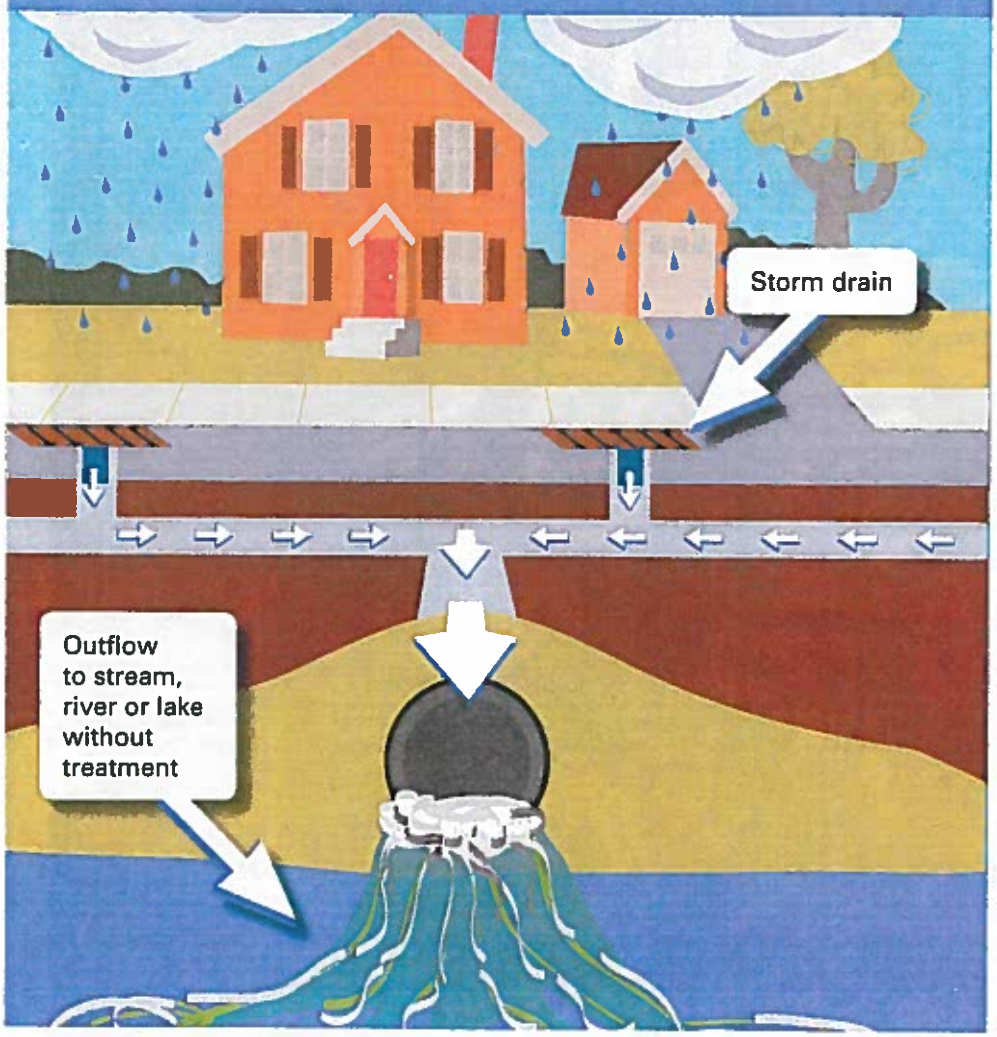
- Bring leftover medications and other chemicals to your Town's Household Hazardous Waste Day.
- Return used motor oil to the store where you bought it.
- Wash your car in a spot where soapy runoff will drain into the grass, not into storm drains.
- Never drain chlorinated swimming pools into the street.

Fertilize Responsibly

Excessive fertilizer use causes fish kills and toxic algae blooms, which threaten public health.

- Never apply *phosphorus* fertilizer without a soil test. Its the law!
- Keep fertilizer away from paved areas and clean spills.
- Choose "slow-release" fertilizer.
- Follow product guidelines and never apply more fertilizer than required.
- Keep leaves and grass clippings off paved areas.

Never Put Anything Down a Storm Drain!



Learn More. Take Action.

Call the regional stormwater hotline to ask a question or report storm drain dumping. (781) 575-0354 x300

www.YourCleanWater.org

neponset stormwater partnership

*Brought to you by your Town and the **Neponset Stormwater Partshership**, a regional effo protect your water and reduce flooding.*

Members include Canton, Foxborough, Stoughton, Dedham, Medfield, Milton, Norwood, Quincy, Sharon, Westwood, the Neponset River Watershed Association and the Metropolitan Area Planning Council.

neponset river watershed association

MAPC

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Storm Drains Go Straight to Our Streams!