Baker Cove Watershed Committee Meeting

October 7, 2020

Maura Robie, Conservation Technician
Eastern Connecticut Conservation District
The Eastern Connecticut Conservation District, Inc.
A Not-For-Profit
Natural Resource Conservation Organization

Primary Activities:

1. Promote best management practices and implement projects to reduce pollution.
2. Research land use and water quality to develop management plans.
3. Engage residents & towns to raise awareness of natural resource concerns and present workshops on natural resource topics.
4. Assist town land use commissions with environmental reviews of development plans and provide technical assistance to residents.
5. Conduct projects that demonstrate or test new conservation methods.
Agenda

1. Eric T - Review BC WBP, document accomplishments, lessons learned, consideration of revision or update for the next 10 year period

2. Maura, Rick, Kate – GOAL 4 Design water quality monitoring program (historic monitoring plan/map handouts)

3. Committee Member progress reports
   i. Michelle / Maura - 'public-friendly' watershed map for handouts and social media posting
      a. Current version of map brochure (handouts)
      b. DABA – shellfish goals clarification
      c. Michelle – World River’s Day update
   ii. Maura – ppt educational slides for submittal to GATV
   iii. Michelle / Heidi - Review activities under GOAL 6 - Promote good housekeeping practices among municipalities and property owners
      a. Good housekeeping practices for businesses – Chamber of Commerce
      b. Other

4. Outstanding questions?
GOAL 4 - Design water quality monitoring program

- Sources of bacteria to surface waters include wastewater treatment plants, on-site septic, domestic & wild animal feces and stormwater runoff (dumpsters, street dirt)
- CT Water Quality Standard for E. coli:
  - FW recreational uses (not swimming) - Geometric Mean < 126 CFU/100ml; Single Sample Maximum 576 CFU/100ml
  - SW direct consumption shellfish - Geometric Mean < 14/100ml; 90% of Samples < 31/100ml

<table>
<thead>
<tr>
<th>Management Objective 6:</th>
<th>Implement on-going water quality monitoring program, especially in bacteria “hot spots”</th>
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<tbody>
<tr>
<td><strong>Actions/Milestones:</strong></td>
<td>• Identify locations for monitoring, based on bacteria “hot spots”</td>
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<tr>
<td></td>
<td>• Design water quality monitoring program</td>
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<tr>
<td></td>
<td>• Obtain funding for training and equipment</td>
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<td></td>
<td>• Recruit and train volunteers</td>
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<td></td>
<td>• Conduct site monitoring</td>
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<td></td>
<td>• Report water quality results</td>
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<td><strong>BMPs:</strong></td>
<td>Additional data necessary to narrow down sources of bacteria and other NPS</td>
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<tr>
<td><strong>Responsible Parties:</strong></td>
<td>ECCD, CT DEP, Municipalities, Groton Shellfish Commission</td>
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<td><strong>Anticipated Products:</strong></td>
<td>Water quality data, summary report</td>
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<td><strong>Evaluation:</strong></td>
<td># sites monitored, data submitted to appropriate agencies</td>
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<tr>
<td><strong>Timeline:</strong></td>
<td>2-5 yrs., ongoing thereafter</td>
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Bacterial “Hot spots”*

- OF 26 & 29 - drain residential neighborhoods on Shennecossett Road & Madison Place
- OF Leonard Drive - Groton Airport Business Park
- OF 3854C – Behind ‘Big Y’ plaza, Rt. 1
- SW discharges B & D, Groton-NL Airport
- DABA shellfish monitoring station 059-02.3 - adjacent to the Elks Club Marina

Some sites already being sampled

- Need to overlay GIS points to create one map
GOAL 4 - Design water quality monitoring program

Historic Sample locations from G.U.

- Outfall #’s / GIS points to overlay on hot spots map?
Historic Sample locations from G.U.

- Frequency of sampling
- Sampling conditions
- Sample locations
- Funding

**GOAL 4 - Design water quality monitoring program**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Possible sources</th>
<th>SOP for Sampling</th>
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<tbody>
<tr>
<td>Tier 1</td>
<td>Sources include waterfowl, unspecified urban stormwater, marina/boating sanitary discharges and unspecified contributions from residential districts</td>
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<tr>
<td>Fecal Coliform</td>
<td></td>
<td>Attachment B</td>
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<tr>
<td>Enterococcus</td>
<td></td>
<td>Attachment B</td>
</tr>
<tr>
<td>Tier 2</td>
<td>Sources include residential fertilizer use, agricultural use, and other land use, etc.</td>
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<tr>
<td>Nitrogen (Nitrate-N)</td>
<td></td>
<td>Attachment C</td>
</tr>
<tr>
<td>Phosphorus (Ortho-phosphate-P)</td>
<td></td>
<td>Attachment C</td>
</tr>
<tr>
<td>Metals &amp; Minerals</td>
<td>Including: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chlorides, Chromium, Copper, Lead, Iron, Manganese, Mercury, Selenium, Sodium, Thallium, Zinc</td>
<td></td>
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<tr>
<td>Tier 3 Physical</td>
<td>Sources include soil run-off and construction projects</td>
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<tr>
<td>Turbidity</td>
<td></td>
<td>Attachment E</td>
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<tr>
<td>Total Suspended Solids</td>
<td></td>
<td>Attachment E</td>
</tr>
<tr>
<td>Tier 4 Biological Assessment*</td>
<td>To provide an overview of broader health of the aquatic ecosystem</td>
<td></td>
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<tr>
<td>Biological Field Survey of benthic macroinvertebrates (aquatic insects, etc.)</td>
<td>Attachment F Also, see resources on EPA biological assessment protocols*</td>
<td></td>
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<tr>
<td>Temperature, pH &amp; Dissolved Oxygen</td>
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*Biological Assessment is an opportunity for college, university or Marine Magnet High School student research project. For more information, please see EPA Publication: Rapid Biological Assessment Protocols: An Introduction.*
‘Public-friendly’ Baker Cove watershed map

Final except for minor fixes:

- Marshes
- Shellfish classification
- Town beds?
- Date – shellfish Key
- MM - Other?
- Final reviewers
HELP CLEAN UP THE COVE

Map courtesy of The Baker Cove Watershed Committee, a volunteer group working to reduce "non-point source" pollution in the waters that drain into Baker Cove, Groton, CT.

The Cove is "impaired" (polluted), mostly due to fecal coliform, a bacteria found in the waste of geese, house pets, and people. This means shellfishermen have to do special cleaning before bringing their product to market. CLEAN UP THE COVE so our waters and shellfish are naturally clean!

Do you care about Baker Cove?
Do your part to help:

- Pick up your pet waste, even in a park or the woods, and dispose of it in the garbage
- Properly maintain your home's septic system. This means have it inspected regularly, don't use additives, & pump it out every 3-5 years
- Do not feed or encourage Canada geese or other wild waterfowl (the ones still here mid-march to mid-September)
- Use less fertilizer, pesticides, & weed killer by using organic lawn care or by replacing areas of lawn with pollinator-friendly or edible plantings
- Direct your building downsputs toward flat, well vegetated areas or to a rain garden, dry-well, or French drain instead of to paved areas

FOR MORE INFORMATION CONTACT
860-339-8807 • maureen.robie@comcast.net
ECCD: 238 West Town Street, Norwich, CT 06360
conservect.org/eastern/watershed-committees
portal.ct.gov/DEEP/Water/Watershed-Management

Ways that businesses, places of worship, & community groups can help:

- Install rain barrels & plant Rain Gardens to capture and slow rains' entry to waterways
- Plant suitable native plants near streams, ponds, & oceanfronts creating "Riparian buffers" to filter water & reduce nuisance waterfowl
- Sponsor/host a meeting on improving local watersheds or to take on an improvement project
- Reduce parking lot size or install pervious pavers, reinforced grassy parking or gravel driveways
- Plant trees to shade hot pavement- streams are sensitive to changes in runoff temperatures
- Reduce lawn size & chemical use, and use native plantings (which require fewer chemicals)
- Host or participate in a trash clean-up event - dispose of debris responsibly
- Follow good housekeeping practices with your trash bins and dumpsters
- Follow water quality 'best management practices' with boats or watercraft
- Support the City & Town of Groton's Directly Connected Impervious Area (DCIA) Disconnection program

Baker Cove Watershed stakeholders

- Airport Industrial Park
- Branford Manor Condos
- Cobblestone Run
- Country Glen Apartments
- Courtland Drive Condos
- Eastwood Crossing Gardens
- Groton Estates Condos
- Croton Towers
- Groton Townhouse Apts
- High Rock Landing
- Jupiter Point
- Kimmebrook Condos
- Laurel Hill
- The Ledges
- Long Hill
- Peppertree Garden Apts
- Pequot Village Apts
- Phoenix Apts
- Poquonnock Village Apts
- Sound Breeze Condos
- Tall Woods Condos
- Twin Hills

BAKER COVE WATERSHED COMMITTEE:
Eastern CT Conservation District (ECCD) Facilitator
CT Dept. of Energy & Environ. Protection (DEEP), Groton Open Space Association (GOSA), Groton Shellfish Commission, City of Groton, Groton-New London Airport, Ledge Light Health District, Town of Groton, Groton Utilities, CT Dept. of Agriculture/Bureau of Aquaculture (DA/BA), Avalonia Land Conservancy, UCONN Avery Point
MEMBERSHIP IS OPEN & INQUIRIES WELCOME.
Shellfish Goals

DABA comments

• re-open recreational shell fishing in Baker Cove includes:
  a) Reduce bacteria to safe levels
  b) Groton shellfish commission needs to do sampling - over-whelmed with existing program sampling responsibilities (hired consultant)
  c) Land use & restricted water circulation in Bake Cove creates numerous other water quality concerns of public health significance
  d) FDA approval - don’t like shell fishing near the Groton-NL Airport, think it attracts birds near runways

UPDATE:

• Baker Cove comprehensive survey in 2022 will probably not enable classification upgrade allowing for recreational shellfish program, could lead to angry public.

• Commercial Restricted Relay classification is the most likely positive outcome.

BC WBP & Bacwac’s goal is to improve water quality in Baker Cove to support designated recreational uses from CT IWQR, which include fishing and shell fishing. Town & City decision
Most recent Map from Alissa Dragan CT DABA

Classifications come from Nat’l Shellfish Sanitation Program (NSSP) – 500 page document!
An Invitation from the
Baker Cove Watershed Committee

The Baker Cove Watershed Committee or “Bacwac” is pleased to announce adoption of Resolutions by both Groton Town & City Councils endorsing a long-term plan to achieve improved water quality and possible restoration of shell fishing in Baker Cove.

“Bacwac” aims to reduce fecal coliform bacteria in Baker Cove to improve shellfish quality. Committee volunteers will use a Watershed-Based Plan to reduce or eliminate non-point source pollution with plantings, events, non-migratory Canada Geese controls, & more.

The group meets 6x a year and is made up of people who want to take control of improving Cove water quality. Members can be people from school & neighborhood groups, industry & commerce, the general public, government, or non-profits.

Please, join us! Want to learn more? Contact >>

Maura Robie, Eastern CT Conservation District
860-319-8807 Maura.robie@comcast.net
https://conservect.org/eastern/watershed-committees
Help us reduce bacteria in Baker Cove...

Groton's Resident Canada Geese are offspring of captive-bred geese who stay local to nest instead of migrating. They love to feed on our lawns and golf courses and enjoy easy access to water.

A Canada Goose can eat up to 4 pounds of grass a day and produce up to 2 pounds of poop a day!

DO NOT FEED WATERFOWL!! Geese and other wild birds can develop problems by eating bread...and where geese feed, there is more ‘poop’ to step in!

What Can you do?
Non-Lethal Methods include:
• Scare with noise/visual devices or specially trained dogs
• Chemical repellents on lawn
• Change the habitat by adding plantings or fencing

Lethal methods include:
• Egg oiling with GeesePeace™
• Hunting where allowed
• Depredation permit - USFWS
• Goose round-ups by USFWS

For more details contact: Maura Robie at (860) 319-8807

Canada Goose droppings are a potential source of bacteria contributing to shellfish bed closures at Baker Cove in Groton
## Bacwac work plan - Review activities under Goal 6

<table>
<thead>
<tr>
<th>Goal:</th>
<th>Promote good housekeeping practices among municipalities and property owners</th>
<th>6</th>
<th>Municipalities/DPW</th>
<th>3-5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities:</td>
<td>Review municipal Good housekeeping practices (GHP)</td>
<td>H</td>
<td>BaCWaC, municipalities/DPW</td>
<td>review these goals - Aug meeting</td>
</tr>
<tr>
<td></td>
<td>Adopt revised GHPs in priority areas as established by WBP</td>
<td>H</td>
<td>BaCWaC, municipalities/DPW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distribute information regarding GHPs in priority areas as established by WBP</td>
<td>H</td>
<td>BaCWaC, municipalities/DPW</td>
<td></td>
</tr>
</tbody>
</table>

### Management Objective 2: Promote good housekeeping practices among municipalities and property owners

**Actions/Milestones:**
- Review municipal housekeeping practices (GHP)
- Adopt revised GHPs in priority areas as established by WBP
- Distribute information regarding GHPs in priority areas as established by WBP

**BMPs:** Urban Bacteria/NPS Sources

**Responsible Parties:** Municipalities/DPW, stakeholders

**Timeline:** 1-3 yrs.

**Anticipated Products:** Revised municipal and property owner maintenance practices

**Evaluation:** Adoption of improved GHPs, # educational brochures distributed, reduction in measured bacteria levels

**Timeline:** 1-2 yrs.
GOAL 6 - Promote good housekeeping practices among municipalities and property owners

- Street sweeping/Parking lots
- Trash/dumpster
- Road salt application & Storage
- Roadway and bridge maintenance
- Storm drain system cleaning
- Landscaping/lawncare
- Illegal dumping
- Pest control
- Pet waste collection
- Septic system controls
- Automobile maintenance
- Used oil recycling
- Vehicle washing
Adopt revised GHP’s in priority areas listed in WBP & Distribute Information on GHP’s (Example)

<table>
<thead>
<tr>
<th>Management Measure</th>
<th>Reach, AoC Number</th>
<th>Location</th>
<th>Strategy</th>
<th>Priority</th>
<th>Responsible Entity</th>
<th>Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watershed Wide</td>
<td></td>
<td></td>
<td>Conduct good maintenance practices including biannual street sweeping and catch basin sump clean-out</td>
<td>High</td>
<td>City of Groton, Town of Groton DPWs &amp; State of Connecticut Highway Department</td>
<td>Sweeping: ($25-$45 mile/yr/pass), Cleanouts: ($250-$1000 per unit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Storm Drain Stenciling</td>
<td>Med</td>
<td>Town of Groton, City of Groton, Volunteers</td>
<td>$1500 Approx. 600 drains @ $2.50/drain</td>
</tr>
<tr>
<td>Urban Sources/Pet BMPS</td>
<td>West Branch Birch Plain Creek (BPC), Reach 4a, general</td>
<td>Washington Park, Meridian Street</td>
<td>Encourage park users to dispose of trash, pet waste in proper waste receptacles</td>
<td>Low to Med</td>
<td>City of Groton</td>
<td>Signs, posts and hardware @$20/unit, as necessary Waste Receptacles - $99-$699 per unit</td>
</tr>
<tr>
<td></td>
<td>BPC Reach 4, general</td>
<td>Kinnesbrook Condominiums, Meridian Street</td>
<td>Encourage pet owners to manage pet waste</td>
<td>High</td>
<td>Condominium association</td>
<td>$200 (100 educational brochures @$2/pc)</td>
</tr>
<tr>
<td></td>
<td>BPC Reach 4, general</td>
<td></td>
<td>Maintain dumpsters and dumpster area</td>
<td>High</td>
<td>Condominium association, City via Enforcement</td>
<td>Included in waste mgmt and grounds keeping services</td>
</tr>
<tr>
<td></td>
<td>BPC Reach 4, general</td>
<td></td>
<td>Adopt organic lawn care methods</td>
<td>Med</td>
<td>Condominium association</td>
<td>Comparable to current lawn service fees</td>
</tr>
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</table>
GOAL 6 - Promote good housekeeping practices among municipalities and property owners

Info from UCONN CLEAR & NEMO
http://nemo.uconn.edu/ms4/tasks/public-education.htm

General Stormwater Education Library
All MS4's are required to provide public education and outreach on pet waste, fertilizer, pesticides, and herbicides, impervious cover, and the impacts of illicit discharges. Samples for each topic can be found below and modified for use.

Pet Waste
- CT Seagrant – Animal waste and water quality
- Rhode Island Stormwater Solutions - Pet care
- Clean Water Campaign - Pet waste poster
- New Hampshire Department of Environmental Services - Pet waste campaign site
- CT DEEP - pet waste web page
- Mass DEP - Dog Waste and Surface Water Quality

Fertilizer, Pesticides, & Herbicides

Impervious Cover

Impacts of Illicit Discharges

Residential Stormwater Management
CBSM uses social psychology - sustainable behavior change most effective when involves direct contact with people - carried out at community level. Proven effective by many studies.

Most environmental orgs use information based campaigns (brochures, Ed. Matl’s) for convenience – BUT studies show information by itself has little/no effect on behavior!

5 STEPS:
1) Identify a specific, **indivisible, end-state** behavior you want to change
2) Identify Barriers & Benefits:
   - 4 key steps to identifying barriers and benefits to a behavior: research, observe, conduct focus group and conduct random-sample survey
3) Identify Behaviors & Benefits:
   - Developing strategy principles, important to (1) select tools based on barriers & benefits (2) scrutinize design with focus group feedback (3) pilot test strategy.
   - Behavior change - 7 areas of focus
     - ex. Social Norms, prompts
4) Pilot the Strategy (test run to make sure it works)
5) Broad Scale Implementation

Group call follow-up today:
Reducing fertilizer use/improving lawn care practices, Reducing contaminated stormwater runoff, Improving boating practices
Outstanding Questions?

What types of information or speakers are you interested in?
To Do’s for next meeting

▶ Share links
  
  • ECCD-Baker Cove Watershed Committee webpage  
    [https://conservect.org/eastern/watershed-committees/](https://conservect.org/eastern/watershed-committees/)
  
  • City of Groton Baker Cove Projects info webpage  

▶ Pick activity to work on and report on progress

Meeting dates for 2020:

Dec. 2 (10-11:30)