Connecticut Department of Public Health
Source Protection Laws & Practices

Presented By
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Drinking Water Section
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Overview

• What is Drinking Water Source Protection
• What is the public health history & intent
• What are some of the laws & their importance
• How are they implemented
• When do you need to send information or apply to DPH for permit
• How you can help protect sources
Common Acronyms Used

- PWS  • Public Water System
- DPH  • Department of Public Health
- DWS  • Drinking Water Section
- CGS  • Connecticut General Statute
- RCSA • Regulations of Connecticut State Agencies “The Regs”
Drinking Water Source Protection

• A group of laws to protect and preserve drinking water quality
• A group of practices to prevent contamination
Connecticut’s Source Water Protection Areas

- 150 Reservoir Watersheds – 17.4%
- 122 Aquifer Protection Areas – 3.7%
- 3,300 Source Water Areas – 2.4%

Total 23.5%

3.5 million State Population
2.8 million people – 580 community public water systems
3,400 public water systems
Connecticut's Public Drinking Water Sources

169 Towns

Features:
- Source Water Area
- Aquifer Protection Area
- Water Supply Watershed
Connecticut Challenges
Drinking Water Source Areas

• Expansion of higher density development in source water areas is challenging traditional source water protection

• Drinking water quality and the protection of public health are taken for granted

• Issues concerning small community systems

• Uphold high standards and expectations

• Upcoming Groundwater Rule
Source Water Protection Implementation

- Multi-Barrier Approach - Tools
  - Regulatory
    - Statutes & Regulations
    - Sanitary Surveys & Source Siting
    - Planning – Local, Regional & State
  - Non-Regulatory
    - C&D Policies
    - SWAP
    - Education/Training
    - Management Planning
    - Partnership/Communication/Collaboration
Road Map – Strategic Plan

implement protection for public water sources

Agents

• Local
• Public Water System
• State

Components

• Regulatory
• Watershed Approach – water quality plans
• Partnerships/Collaboration/Leveraging - targets
• Training & Education
• Assessment & Assistance
History
Public Health & Sanitation of Watersheds

CT Board of Health -
• Earliest record – 1886 drinking water testing
• New Britain & Torrington – water related disease outbreaks
• Original 19-13-B32 Regulation 1920s
• Set minimal separating distances & 19-13-B102(b)
1977 Update - B32

- Reaction to the housing boom of the 1950’s & 60’s
- 1976 Public Hearing “...give protection equally to all watershed lands including those that water utilities happen to own”
- Present version effective August 2, 1977
- Updated link to B102(b) & B98 – watershed survey violations & water company land
B32 - Intent

• Protect and Preserve drinking water sources
• Prevent disease outbreak
• Regulations apply to land & watercourses tributary to a public water supply
• Public water supplies include both surface and ground water sources
• Broaden scope due to population growth and new threats
Regulation Section 19-13-B32
Sanitation of Public Water Supplies

- Applies to land and watercourses tributary to a public water supply including surface and groundwater sources
- Prohibits:
  - accumulation of animal wastes
  - sewage discharges to surface and groundwater
  - disposal of toxic metals, gasoline, oils & pesticides
- Regulates:
  - stormwater drainage facilities, road salt and fertilizer applications
B32(a) - Definitions

• **Sewage** – B20(a) – B103

• **Toxic Metals** – arsenic, barium, cadmium, chromium, lead, mercury, and silver and the salts thereof

• **High Water Mark** – upper limit of any land area which water may cover, either standing or flowing, at any time during the year

• **Watershed** – land which drains by natural or man-made causes to a public drinking water supply intake
B32(b-e)

- (b) No sewage disposal system within 100 feet of HWM of reservoir, nor 50 feet of HWM of watercourse
- (c) No sewage disposal system unless properly constructed
- (d) No discharge of sewage on the land surface
- (e) Animal waste 100/50 HWM, structure oversight anywhere on watershed
Preventing Contamination

- Regulatory Protections
  - B32
  - B102(b) surveys
  - B51d source of pollution
  - Sanitary surveys
  - Local Health Departments

- Dr Griffiths Rule #1: “Keep the poop out”
Importance
Source Water Protection & Multiple Barriers

• 1993 Milwaukee –
  – Cryptosporidium, 400,000 sick, 100 deaths
• 1998 Sidney Australia –
  – Cryptosporidium
• 1998 Wyoming –
  – E.coli, 64 sick
• 1999 New York Washington County Fair –
  – E.coli, hundreds sick, 2 deaths
• 2000 Walkerton –
  – E.coli, thousands sick, 7 deaths
B32(f) – Toxic Metals, gasoline, oil or any pesticide

• Shall not be disposed of as a waste
  – into any watercourse,
  – or to any ground water identified as supplying a public water supply well

• Intent - Establish Guidelines for the use of such chemicals

• Aquatic Pesticide Applications
  – MOA with DEP
B32(g) – Fertilizer nitrate nitrogen

- If nitrate nitrogen exceeds 8 mg/l, then
  - Guidelines shall be followed
  - Prevent exceeding 10.0 mg/l for nitrite plus nitrate nitrogen
  - 5 mg/l is the action level for PWS

- Guidance -
  - DEP 1993 BMP Guide
  - Farm Bureau, DOA
B32(h) - Sodium

- If Sodium occurs in excess of 15 mg/l, then:
  - No sodium chlorine shall be used within source water area except under application rates approved by the DPH Commissioner
  - Prevent sodium from exceeding 20 mg/l

- DOT – use of sodium
B32(i) – Storm water

- Design of storm water facilities
  - Minimize soil erosion
  - Maximize absorption of pollutants by the soil
- Drain pipes to terminate at least 100 feet
  - If impractical, then seek approval from DPH Commissioner:
    - Dissipate flow energy
    - Minimize the possibility of soil erosion
    - Lesser distance is advantageous to stream quality
- Special protections shall be taken to protect stream quality during construction
Water Company-owned Land

• Sale, lease or change of use is regulated by Connecticut General Statute (CGS) 25-32(b)

• An application to dispose of or change the use of water company-owned land is required under CGS 25-37d
RCSA 25-37c-d
Establishment of Criteria & Performance Standards for Classifications of Water Company Lands

- 25-37c-1 Definitions
- 25-37c-2 Establishment of criteria for classification of WC owned land
- 25-37d-1 Application for a permit
- 25-37d-2 Standards for review of application
- 25-37d-3 Summary ruling on proposed actions without significant adverse impact
Sale of Water Company, Water Company Land, and Sources

• For ensuring purity and adequacy of public drinking water sources
• CGS 25-32a Definition of water company
• CGS 25-32b, RCSA Sections 25-37c-1 and 25-37d-1
• Sale of WC also involves other laws (RCSA 25-32-7a-14 documentation of Certified Operator)
• CGS Section 25-33l: Sale of source, potential source or abandoned source of water supply
Recreational Activities on Water Company Lands

- Another assurance or purity and adequacy of public drinking water sources
- DPH to review and issue permits authorizing water companies to have recreational activities on water company owned lands
- CGS Section 25-43c
- Passive recreation, no body contact with water
You may need a permit if….

- Project within 200 feet of a community well
- Activities on Class I & II lands- “breaking ground” or creating impervious surface
- Recreation on watershed lands
- Selling community water system
- Considering disposing of watershed lands/sources

When in doubt, call us
Drinking Water Quality Management Planning

- Grass Roots Community Based Planning
- Implementation at local level
- Empower local government
- Bring together water company and local land use decision makers
- Groton, Saugatuck, East Lyme
Linking Protection to Local Decision Makers

- State Plan of Conservation & Development
- Public Act 85-279
  - Linked public drinking water source protection to local planning process (CGS 8-2 & 8-23)
  - Provided DPH authorities (CGS 25-32f & g)
- Public Act 89-301
  - Linked public water systems to local decisions
  - Modified CGS 8-3i & 22a-42f
Public Act 06-53 Intent

- DPH Bill – modify CGS 8-3i & 22a-42f
- Support
- Added DPH to existing notification
- Water companies have been required to be notified since 1989, & DPH has had authority to comment
- Both Planning & Zoning, & Inland Wetland Commissions
- Watershed areas & Aquifer Protection Areas
- Web based notification
Public Act 06-53

Notification Process

for any project located within a public water supply aquifer protection area or watershed area.
Well Siting Process Overview

• PWS/Certified Operator must sign all required applications

• If applications are complete DPH will:
  – Schedule a site visit: local health director involved
  – DPH will verify, per RCSA 19-13-B51d and 19-13-B102(d), required setback distances, proximity to high water mark, 100-year flood level, and sources of pollution
### Required Separation Distances For Well Siting Per RCSA Section 19-13-B51d

<table>
<thead>
<tr>
<th>Pollution Source</th>
<th>Separating Distance in Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10 gpm</td>
</tr>
<tr>
<td>Subsurface Sewage System</td>
<td>75</td>
</tr>
<tr>
<td>Sanitary Sewer</td>
<td>75/25</td>
</tr>
<tr>
<td>Storm Drain</td>
<td>25</td>
</tr>
<tr>
<td>Foundation, Floor Drain</td>
<td>25</td>
</tr>
<tr>
<td>Dry Well</td>
<td>50</td>
</tr>
<tr>
<td>Annual High Water Mark (surface water body)</td>
<td>25</td>
</tr>
<tr>
<td>Liquid Fuel Storage Tanks &amp; Piping</td>
<td>75</td>
</tr>
<tr>
<td>Underground Gaseous Fuel Storage Tanks &amp; Piping</td>
<td>25</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
Well Site Application: What is Necessary?

- A completed General Application Form
- Two copies of detailed scaled maps sealed by a P.E. or L.S.
- GPS point for well location
- MUST address potential sources of contamination outside of sanitary radius and special concerns for proposed wells within GA impaired area
- Land ownership/easement must be in place
- Public Water System owner must be involved in process
## Application for a Public Water System Well Site Approval

### Applicant Information
- **Applicant Name:** [Name]
- **Public Water System (PWS) Name:** [Name]
- **Address:** [Address]
- **Phone Number:** [Number]

### Well Information
1. **Name of Licensed Well Driller (must be licensed in CT):** [Name]
2. **CT License Number:** [Number]
3. **Address:** [Address]
4. **Purpose of New Well (check one):**
   - [ ] New Source
   - [ ] Replacement Well
   - [ ] Supplemental Well
   - [ ] Back-up Well
5. **Name of Proposed Well:** [Name]
6. **Desired Yield (check one):**
   - [ ] <10 gallons per minute (gpm)
   - [ ] 10-50 gpm
   - [ ] >50 gpm
7. **Type:** [Type]
8. **Drilled:** [Drilled]
9. **Proximity to the proposed site (if yes, a statement):**
10. **Proposed well size:** [Size]
11. **Drilled:** [Drilled]
12. **North arrow:**

### Well Site Selection
- **Distance to Source:** [Distance]
- **Drilled:** [Drilled]

### Well Site Requirements
- **Well Site:** [Site]
- **Drilled:** [Drilled]
- **Drilled:** [Drilled]
- **Drilled:** [Drilled]
- **Drilled:** [Drilled]
- **Drilled:** [Drilled]

### Approval Process
- **Date Approved:** [Date]
- **Date:** [Date]

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**DPH Drinking Water Section**
Other Information To Know

- Well location – annual high water mark and 100 year flood line
- Make sure the well drilling rig can access the site
- Well Site Suitability Certification sent is for well site only- not well use
- Sara will cover where those forms are
- Do not move the well site as that point only is approved
- If well not drilled in 6 month window before permit expires, need to reapply before drilling
Other Source Protection Issues

• Phase 1-A approvals- Certificate of Public Convenience & Necessity
• State Plan of Conservation and Development
• CEPA, Siting Council, ERT Reviews
• DOT, DEP projects and DEP Water Diversion Permits
What you can do

• Work with neighboring property owners/land use decision makers/Planners/other Utilities & Public Water Systems in your town
• Educate yourself: DPH webpage, DPH Trainings and Events
• Work with other Stakeholders
• Contact us with questions
Parting Shots

What is notable about this scenery?
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