

PHASE I: Subsurface Sewage Disposal Certification

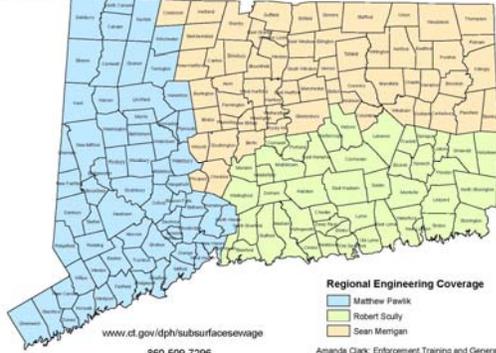

 Connecticut Department of Public Health
Keeping Connecticut Healthy


* Presented by:


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Website

- * www.ct.gov/dph/subsurfacesewage
- * Training Section
 - * Download Phase I presentations, class work, homework and handouts.
- * Information on Operation and Maintenance, Regulations and Technical Standards, Design Manual, Circular Letters and more.

*** Purpose / Scope**

- * Prepare for local health agent certification
 - * Subsurface Sewage Disposal Systems, also known as, Septic System.
<https://www.youtube.com/watch?v=JNqF07Cx4A&feature=youtu.be>
- * Phase I Sewage Disposal Certification
- * Step 1 (You are HERE)
 - * Overview of regulations
 - * Installer plan review
 - * Investigation
 - * Inspection
 - * Design practices pertaining to subsurface sewage disposal system (septic systems)
 - * Soils information

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*** Purpose / Scope**

- * Step 2 (after you are hired by a local health department)
 - * Phase II Subsurface Sewage Disposal Certification
 - * Provided every November
 - * Only offered to individuals currently working for the health department or municipality in the capacity of subsurface sewage disposal system inspector.
 - * Field training and minimum experience required

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 **Phase I Certification Eligibility**

Approval of Agents by Commissioner of Public Health
19-13-B103e (b)

- * The Commissioner of Public Health shall approve agents of the local director of health whose qualifications to investigate, inspect and approve plans relating to subsurface sewage disposal systems have been established by attending training courses and passing examinations given by the Department of Public Health.

 **Phase I Certification Eligibility**

- * Attendance is mandatory
- * Emergencies aside, you are expected to arrive on-time and be ready to learn
- * Completion of all in class and homework assignments is mandatory
 - * 4-5 hour of homework
- * Participate in class
- * Receive a 70 or better on the exam

 **Who Regulates**

- * Department of Public Health
 - * Subsurface sewage disposal systems over 7500 gallons per day (GPD)
- * Department of Energy and Environmental Protection (DEEP) formally DEP
 - * Municipal wastewater - sewers
 - * Onsite- subsurface sewage disposal
 - * Advanced or alternative treatment, community systems and conventional systems with flows over 7500 gallons per day (GPD)
- * Local Health Departments
 - * Enforce Public Health Code
- * Environmental Protection Agency (EPA)
 - * Advisory and funds several DPH and DEEP programs and staff

 **London 1800s**

- * In the mid 1800s, people didn't have running water or modern toilets in their homes. They used town wells and communal pumps to get the water they used for drinking, cooking and washing.
- * Septic systems were primitive and dumped untreated sewage and animal waste directly into the Thames River. Water companies often bottled water from the Thames and delivered it to pubs, breweries and other businesses.

 **London 1800s**

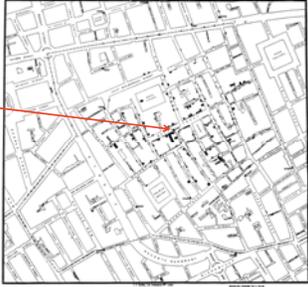
- * The first cases of cholera in England were reported in 1831.
- * Cholera is spread mostly by unsafe water and food that has been contaminated with human feces.
- * 1835 act passed to prohibit the dumping of excrement into the Thames river.
- * Between 1831 and 1854, tens of thousands of people in England died of cholera.

 **London 1800s**

- * On August 31, 1854, Soho, London, was hit by a terrible outbreak of cholera.
- * Over three days, 127 people on or near Broad Street died. By September 10, 500 people had died. By the end of the outbreak, 616 people had died.
- * This outbreak is best known for the physician John Snow's study of the outbreak and his hypothesis that contaminated water, not air, spread cholera.

DPH * **London 1800s**

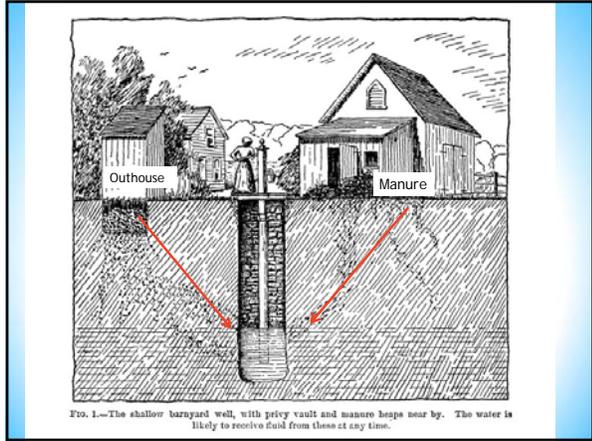
* Snow used a map to illustrate how cases of cholera were centered on the pump. He also used statistics to illustrate the connection between the quality of the source of water and cholera cases.



DPH * **London 1800s**

* There was one significant anomaly - none of the workers in the nearby Broad Street brewery contracted cholera.

* They were given a daily allowance of beer, and did not consume water from the nearby well.

DPH * **These are still in use in some parts of the US**



DPH * **Connecticut 1917**

* State Health Department created

* Enabling legislation for the first Sanitary Code

PUBLIC ACTS
PASSED BY THE GENERAL ASSEMBLY
OF THE
State of Connecticut
IN THE YEAR 1917

[Substitute for Senate Bill No. 573.]
CHAPTER 391.
An Act creating a State Department of Health.
Be it enacted by the Senate and House of Representatives in General Assembly convened:

SECTION 1. A department of health is created which shall have the authority and perform the duties conferred upon the state board of health. Such department shall consist of a commissioner of health and a public health council, with such directors of bureaus and officials as are hereinafter provided.

First
8834
G1
1918
locked

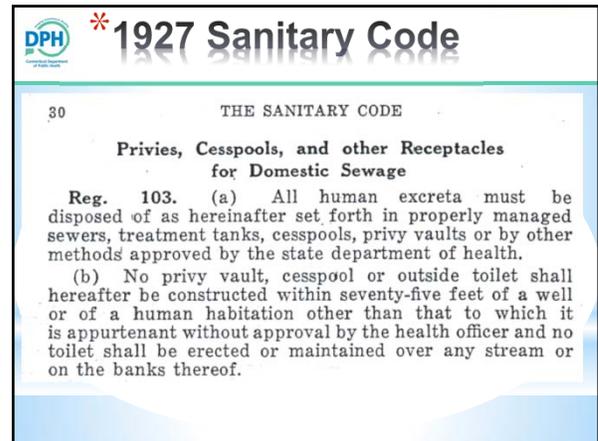
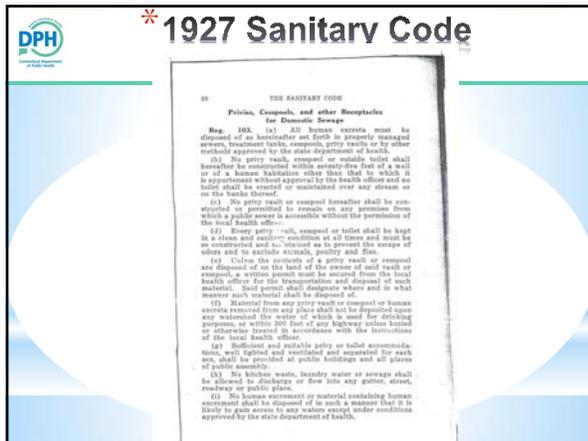
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LIBRARY

The Sanitary Code
of the
State of Connecticut

CHAPTER I
COMMUNICABLE DISEASES



MARCH 1, 1918



DPH * 1927 Sanitary Code

- * Privies, Cesspools, and other Receptacles for Domestic Sewage: Reg. 103.
- * All Human waste must be disposed in properly managed sewers, cesspools, treatment tanks or privy vaults.
- * No sewage disposal system such as a cesspool, or privy vault can be built within seventy five feet of a well or water source without health officer approval.

DPH * 1927 Sanitary Code

- * All sewage disposal systems must be maintained to prevent the escape of any odors in order to keep animals and insects away.
- * No toilet can be maintained over a stream or the banks of a stream.
- * If the waste from the cesspool, or privy system is not disposed of on the owners land. A permit will have to be obtained to determine where and how the materials should be disposed.

DPH * CT Sewage Disposal

- * 1917 Creation of the State Health Department, enabling legislation to appoint Commissioner of Health and publish regulations
- * 1918- First Sanitary Code
- * 1925- State Senate Water Commission established
- * 1940 to 1951- Addition of Septic Tanks to code
- * 1952- Major changes to sanitary code
 - * minimum separating distance from the bottom of a leaching system above ground water established – 18 inches

DPH * CT Sewage Disposal

- * 1960's DPH Sanitary Code prohibited local health officials from sewage disposal systems within 50 feet of a well.
- * National Environmental Policy Act (NEPA) was signed in January 1970.
- * December 1970, the Environmental Protection Agency (EPA) was created to unite all pollution-control programs related to air, water, and solid wastes.

 *** CT Sewage Disposal**

- * 1970- Minimum 1000 gallon septic tanks
- * 1971- CT Department of Environmental Protection was created
- * Mid 1970's requirements of reserve area
- * 1974- Installers and Cleaners licensed by a board
- * 1976- Regulation B100 was established

 *** CT Sewage Disposal**

- * Late 1970s DEP delegation to DPH
 - * DEP required to delegate their water pollution control authority to DPH for household and small commercial subsurface disposal systems of 5,000 gallons per day or less (increased to 7,500 in 2017).
 - * DPH establishes minimum disposal system requirements and procedures for the issuance of permits or approvals by the local director of health.
 - * DEP implements Clean Water Act
 - * DPH implements Safe Drinking Water Act

 *** DEEP Delegation to DPH**

- * Commissioner of Public Health has the authority to issue permits or approvals for small less than 5000 gallons per day sewage disposal systems and publish regulation.
- * Registered Sanitarian or Local Health Director
 - * Issue permits that meet the minimum requirements for household and small commercial subsurface disposal systems

 *** CT Sewage Disposal**

- * 1982- Regulation 19-13-B103
- * DPH Regulations for Subsurface Sewage Disposal Systems
 - * 5,000 gallons per day and under (increased to 7,500 by a public act in 2017).
 - * Natural soils only
 - * State Health Department to approve well, central system and easement exceptions
 - * Systems over 2,000 gallons per day to be approved by both local and state health
 - * Local health official approval
 - * Require RS or director of health issue permits

 *** CT Sewage Disposal**

- * 1982- DPH licenses installers and cleaners
- * 1984- The design manual of subsurface sewage disposal systems for households and small commercial buildings was created.
- * 1994- Minimum Leaching System Spread

 *** CT Sewage Disposal**

- * 1998- 19-13-B100 was replaced with 19-13-B100a
- * 1998- Design Manual revised
- * 2000- Two compartment tanks and effluent filters required
- * 2003- Wastewater Management District Legislation

DPH * **CT Sewage Disposal**

- *2007- Connecticut General Assembly enacted delegation of authority over ATS with capacities of 5,000 gpd or less to DPH. No transfer has taken place, yet.
- *2012- CT senate passes Sewage Right to Know Act (SB 88) requires notification to the public whenever sewage overflows contaminate water ways. (public sewer spills)
- *2017 – DPH Jurisdiction increases from 5,000 to 7,500 gallons per day
- *2018 – Delegation of Water Treatment Wastewater Systems

DPH **Environmental Engineering Program**

- *Environmental Engineering Program
- *3 Engineers and 1 Environmental Analyst
- *On-site Sewage Disposal
- *Dead Body Structures

Introduction
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DPH * **Regulations**

- *19-13-B100a Building Conversions, Change in use, Additions (effective August 3, 1998)
- *19-13-B103 Discharges 5000 Gallons Per Day or less (effective August 16, 1982)

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CONNECTICUT PUBLIC HEALTH CODE
On-site Sewage Disposal Regulations and Technical Standards for Subsurface Sewage Disposal Systems

PHC Section 19-13-B100a (Building Conversions, Change in Use, Building Additions)
Effective August 3, 1998

PHC Section 19-13-B100b through 19-13-B100f (Design Flow: 1,000 Gallons per Day or Less)
Effective August 16, 1982

Technical Standards for Subsurface Sewage Disposal Systems
Effective August 16, 1982

Revised January 1, 2018

PHC Section 19-13-B100a through 19-13-B100d (Design Flow: Greater than 1,000 Gallons per Day)
Effective August 16, 1982

*Note: The 7,500 gallons per day jurisdictional design flow was increased to 5,000 gallons per day by Public Act No. 13-16, Session 16 (effective July 1, 2013)

State of Connecticut
Department of Public Health
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Hartford, Connecticut 06114
DPH-19-13-2018
www.ct.gov/dph/subsurface

January 2018

DPH * **Technical Standards**

Enforceable as a regulation.

- *Latest revision January 1, 2018
- *Code Advisory Committee
 - *COWRA
 - *CEHA
 - *CADH
 - *Home Builders
 - *DEEP
 - *Soil Scientist
 - *DPH
 - *Professional Engineers

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DPH **Design Manual**

- *Design Manual

Subsurface Sewage Disposal Systems for Households and Small Commercial Buildings. July, 1998

Guidelines- acceptable practices in CT

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Design Manual Scope and Purpose

- *Guidance for engineers, installers and local health officials in the design and construction of subsurface sewage disposal systems for households and small business
- *Design considerations and practical solutions for overcoming specific installation problems

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*Required Reading

- *Regulations and Technical Standards for Subsurface Sewage Disposal Systems (red cover)
 - *Review regulations and TS by next class
- *Design Manual (yellow cover) Chapters 1-17 and 26-32
 - *Read chapters 1-11 by next class
 - *Read chapters 26-32 by day 3
 - *Read chapters 12-17 by day 4

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