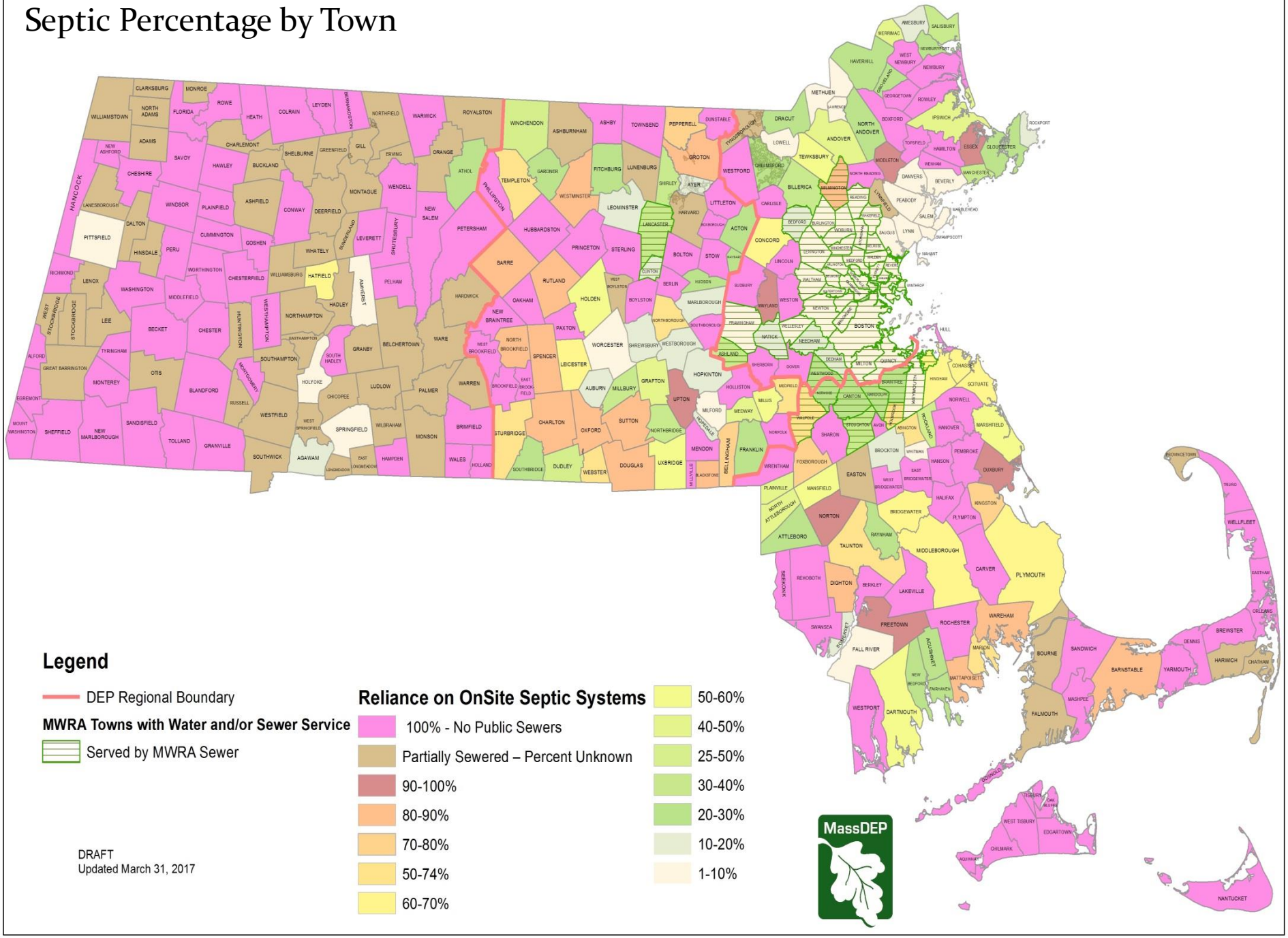
EO562 Regulatory Review Stakeholder Group for Title 5 (310 CMR 15.000) & Groundwater Discharge Permits (314 CMR 5.00)

April 11, 2017

First Stakeholder Group Meeting Agenda

- Welcome
- Participant Introductions
- Brief Title 5 & GW Discharge Permit Background
- Review of Comments Received and Initial Group Discussion
- Next Steps

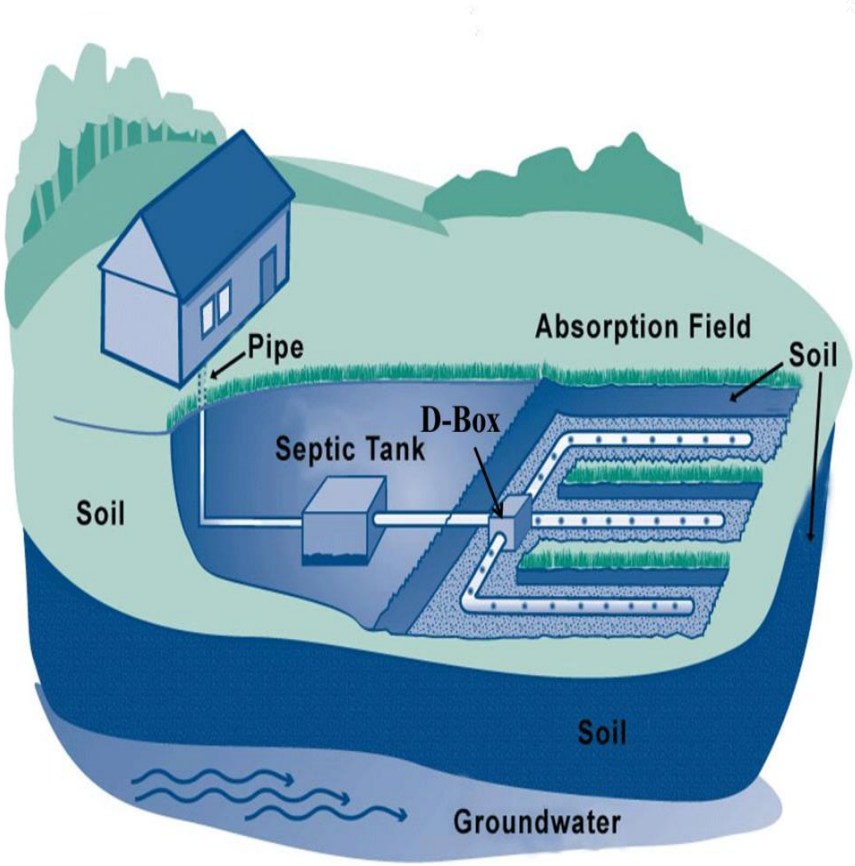
Septic Percentage by Town



Background of Sewage Treatment & Disposal

BEFORE:

AFTER:



Background of Sewage Treatment & Disposal

Overview MA Laws & Regulations:

Purpose & Authority

Protection of public health and the environment

MA General Laws

MGL Ch 21A Section 13 authorizes Mass DEP to develop regulations related to onsite wastewater systems

MGL Ch 111 Section 31 authorizes local BOHs to develop reasonable regulations but not less stringent then Title 5

MGL Ch 40R Smart Growth Zoning Statute & Starter Home Legislation Section 48 of Chapter 219 of the Acts of 2016

Regulations

310 CMR 15.000 Onsite Sewage Treatment and Disposal Systems

314 CMR 5.00 Groundwater Discharge Permit Program

Background of Sewage Treatment & Disposal

1978	DEQE (now MassDEP) promulgates Title 5 Regulations (310 CMR 15.000)
1983	MassDEP promulgates Groundwater Discharge Permit Regulations (314 CMR 5.00)
1995	MassDEP promulgates revised Title 5 and Groundwater Discharge regulations
2009	Groundwater Regulations revised to include Zone II limitations, nutrient loading provisions, seasonal loading provision
2016	Assisted Living Facility Flows evaluated -Title 5 revised to include an Assisted Living Flow of 150 gpd/bed
2016	Starter Home Regulations are in process

Background of Sewage Treatment & Disposal

Significant Changes to Title 5 in 1995:

Lowered threshold for GWD Permit from 15,000 gpd to 10,000 gpd
Standardized deep hole and percolation tests
-Allowed 30-60 minutes/inch perc rate
Long-term acceptance rates for SAS based on soil types
-Required soil evaluation of site by Soil Evaluator
-Certification of Soil Evaluators
Standardized Inspection Criteria and Failure Criteria
-Inspection triggered by property transfer
-Certification of System Inspectors
Implemented Innovative/Alternative (I/A) Technology Program
Established nitrogen loading limits for new systems in sensitive area
-440 gpd/acre or use enhanced treatment or land credit
Expanded Local Upgrade Approvals & Variance Process
-Maximum Feasible Compliance
-School Variance

Background of Sewage Treatment & Disposal

MassDEP's role in Title 5:

Establish comprehensive standard requirements

Act as Local Approving Authority for Federal, State Facilities,
Large Systems, and on a case-by-case basis

Provide technical assistance to Boards of Health

Provide regulatory clarification and technical assistance to the public

Review and approve:
- Innovative/Alternative Technologies
- School Variances
- Septic System Additives
- Alternative Flows for Non-residential facilities
- Non-sanitary flow

Suggested Revisions from External Stakeholders

For Review/Discussion of Each External Comment Received:

- Brief explanation of external comment received
- Reasons to pursue requested change
- Concerns and questions about the requested change
- Information needed for further evaluation

Suggested Revisions from External Stakeholders

Establish Starter Home Zoning

- Legislation would provide communities the opportunity to establish "Starter Home" zoning districts.
- Starter Home would be a single family home of not less than 3 bedrooms
- Allowed density would be 6-8 units per buildable acre; none less than 4 units per acre
- Starter Homes would be exempt from local BOH or Conservation Commission regulation that exceeds Title 5 or Wetlands Regulations
- *Public comments to:* *DHCD, Attn: Lorraine Nessar*
  100 Cambridge St./Suite 300
  Boston, MA 02114

Or electronically to Lorraine.nessar@state.ma.us

Public Comment Period closes May 1, 2017

Suggested Revisions from External Stakeholders

Establish a Uniform State Code

- Individual towns are stricter than Title 5, adding costs and negative impacts.
- Recommend a uniform code with DEP approval required for any local regulations that are more strict than the uniform code, based on submitted data.

Suggested Revisions from External Stakeholders

Review/Revise Design Flow Rates for Residential Facilities

- Daily flow rates are incomplete and outdated for current uses and plumbing devices (last update was 1978).
- Flows need to be reviewed and revised.
- Make revisions to system sewage flow design criteria (15.203) and/or expand variances – like the variances for schools at 15.416 – to include multi-family and single family homes.
- This will reduce the high cost of septic systems and the Infiltration and Inflow requirements on commercial and multi-family projects in the MWRA service area.

Suggested Revisions from External Stakeholders

Reduce Groundwater Separation for New Construction

- There is a significant fiscal and environmental cost to constructing mounded or filled systems.

- Allowing a reduction in GW offsets for new construction (similar to repairs) when using alternative technologies (secondary treatment) will provide enhanced effluent secondary benefits.

Suggested Revisions from External Stakeholders

Create a New "Large Reporting Systems" Category

- Systems would range from 7,500-30,000 gpd.
- Require use of approved I/A technologies and Nitrogen Sensitive Zone requirements.
- Require new standardized conditions for effluent limits, monitoring and reporting, restrictions, O&M, staffing, and financial assurance mechanisms.
- Site monitoring to be performed by the BOH.
- Model oversight after existing programs that utilize private, on-site professionals to oversee reporting and to resolve issues, similar to GWD permit program and the 21E Licensed Site Professionals.
- Municipalities and MassDEP could levy annual fees to help defray the cost of the regulatory oversight.

Suggested Revisions from External Stakeholders

Increase Design Threshold above 10,000 gpd

- Increase design flow from 10,000 gpd (which currently triggers GW discharge permit).
- The 10,000 gpd threshold limits developments to 90 bedrooms and is arbitrary.
- GW discharge treatment plants are very costly
  - costing $1M for design and construction (8 to 20 times more than septic); $100,000/year for O&M (100 times more than septic).
  - GWDTP costs are too high for 30-35 unit residential projects.
  - Developments >10,000 gpd are economically infeasible until the unit density increases to 120-180 units or more.
- This inhibits clustered and dense residential development.

Suggested Revisions from External Stakeholders

Use Holding Tanks for Peak Flows

- GWD plants (>10,000 gpd) are required to be designed to accommodate maximum peak flows (which rarely occur).
- GWD plants are typically required to have equalization or holding tanks to manage peak flows.
- Rare peak flow conditions are redundantly designed
- Allow use of holding tanks to address rare peak flow conditions, thereby reducing treatment plant design capacity or increase the 10,000 gpd threshold if holding tanks are used.

Suggested Revisions from External Stakeholders

Allow Utilization of "Wasted Capacity"

- Allow additional tie-ins to currently permitted GWD facilities (314 CMR 5.00) to utilize additional un-used design capacity in the following situation.
  - Existing groundwater treatment facility has a permitted design flow. Property has reached the proposed buildout, but design flow has not been reached (according to actual flow data). As a result, the permittee requests an additional tie-in thereby adding additional flow to the treatment facility.
- MassDEP regulations and policies prohibit additional housing from tying into and utilizing the wasted capacity

Suggested Revisions from External Stakeholders

Designation of Nitrogen Sensitive Areas

- MassDEP authorized under Title 5 to identify nitrogen sensitive areas (NSAs)
- Current regulations limit systems in NSAs to 440 gpd/acre
- Allow the Department to designate NSAs without the need for regulatory change to Title 5
- For future designated NSAs, consider additional requirements such as enhanced treatment to address nitrogen concerns

Suggested Revisions from External Stakeholders

Review Seasonal Campground Design Flows & Thresholds

- Current regulations do not sufficiently account for:
  - The lower environmental impacts of septic systems that are used for less than 6 months of the year
  - The positive role played by property size in lessening environmental impacts not acknowledged
- Evaluate the following options:
  - Removal of camp properties from the 10,000 gpd system design threshold, or
  - Consider seasonal use and property size to raise the cap for these systems prior to triggering GWDP

Suggested Revisions from External Stakeholders

Allow Moldering Privies for Backcountry Campsites

- Current Title 5 regulations do not include provisions for backcountry sanitation for campsites restricted to tent camping and backpackers
- Current regulations only include approvals for composting toilets for homes, commercial or public facilities and plumbing approvals.
- Title 5 does address campgrounds but only front country campgrounds, not backcountry settings

Suggested Revisions from External Stakeholders

Allow Reuse of Composting Toilet Leachate

- Presently known as liquid by-product, it is required to be disposed of in one of two ways:
  - In a septic tank, or
  - At a sewage treatment plant.
- Either disposal method creates water pollution.
- The liquid by-product (compost leachate) from composting toilets is high in soluble inorganic nitrogen which is a nutrient resource for plants, trees, and other land-based vegetation.
- The ability to recycle and reuse this resource would be a great benefit as a natural fertilizer.

Stakeholder Group Next Steps

- Original text of external comments received can be viewed online at: http://www.mass.gov/eea/agencies/massdep/water/regulations/310-cmr-15-00-septic-systems-title-5.html

- Send additional information for further evaluation by May 2nd to Marybeth Chubb at: Marybeth.Chubb@state.ma.us.

  (Additional information will be posted online at the URL above.)

- Next meeting to be planned for June