

# Sanitary Surveys

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# Overview

- Sanitary Surveys
  - ◆ Purpose/Usefulness
  - ◆ Specific Applications in MA
  - ◆ Steps involved
- Examples from MDPH Beaches Project
  - ◆ Willows Pier Beach in Salem
  - ◆ Wollaston Beach in Quincy
  - ◆ Ryder St. Beach in Provincetown

# Sanitary Survey for Beaches

- In-depth assessment of beach and surrounding area
- Used to quantify the relative health of beach, to identify sources of pollution, and provide recommendations
- Requirements vary by agency, program

# EPA Phase II Stormwater Rule

- EPA's stormwater program directs Phase I (large systems) and Phase II (other urban areas) municipal separate sewer systems (MS4s) to develop and implement BMPs for stormwater discharges
- BMPs must include several components, including one addressing illicit connections
- Since many MS4s discharge to waterbodies with beaches, can combine approach to further pollution prevention goals

# EPA Phase II

## Stormwater Rule (cont.)

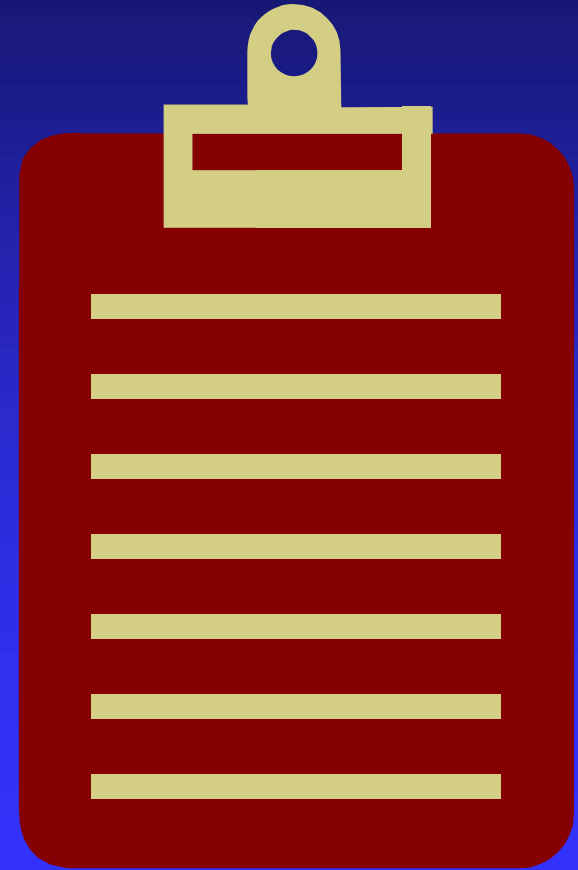
- May include conducting sanitary surveys and implementing recommended corrections as BMPs in stormwater plan
- Beach sampling may be included as measure of BMP effectiveness
- Beaches provide an excellent focus for increasing public awareness of stormwater issues

# Variations

- In MA, sanitary surveys can be used to apply for beach testing variance
  - ◆ Described in 105 CMR 445.000
  - ◆ BOH may grant variance for public/semi-public beach
  - ◆ MDPH may grant variance for state beach
  - ◆ BOH submits variance to MDPH for review
  - ◆ Variance reduces frequency of testing
  - ◆ Allows for possible redirection of funds to identify issues at other beaches

# 4 R's to Completing Sanitary Survey

1. Research/Review
2. Reconnaissance
3. Report
4. Recommendations

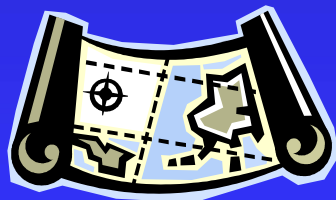
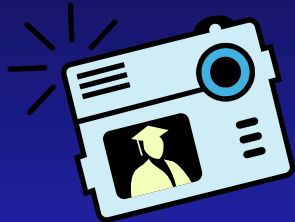


# Research/Review

- Previous reports on beach
- Maps (orthophoto, topographic, wetlands, sewer, stormwater)
- Historical environmental info (tides, currents, rainfall, etc)
- Historical public health info (bacteria sampling results)
- Contact local officials
  - ◆ Health, Public Works, Parks/Rec, Cons Comm



# Reconnaissance (Site Visit)



- Coordinate with local officials
- Walk length of beach
- Bring GPS, camera, maps, boots
- Consider multiple visits
  - ◆ Dry event/Wet event
  - ◆ Low tide/High tide

# Reconnaissance (cont.)

- People
  - ◆ Fishing, Swimming, Picnic
- Trash Bins
  - ◆ Covered, Full
- Outfall Pipes
  - ◆ Wet, dry
- Sanitary Facilities
  - ◆ Maintained
- Wildlife
  - ◆ Birds, sea life
- Wrack Line
  - ◆ Depth, length
- Odors



# Report

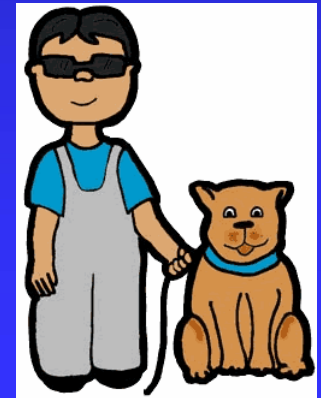
- Minimum MA Regulatory Requirements for Variance Application to BOH/MDPH:
  - ◆ Epidemiological data
  - ◆ Possible sources of bacterial/chemical contamination along tributary to beach (waste water discharges, CSO, animals, etc)
  - ◆ Volume and quality of diluting water
  - ◆ Water depth
  - ◆ Water surface area
  - ◆ Tides and confluence of tributaries
  - ◆ Water currents
  - ◆ Prevailing winds

# Report, cont.

- Additional requirements for Variance Application to MDPH include:
  - ◆ Adjacent beaches and # of exceedences in last year
  - ◆ Bather load
  - ◆ Are dogs allowed on beach

# Recommendations

- ◆ Change sampling frequency
- ◆ Propose dog-waste bylaw
- ◆ Provide trash receptacles
- ◆ “Don’t Feed Wildlife” Signs
- ◆ Provide sanitary facilities



Wollaston Beach in Quincy

Willows Pier Beach in Salem

Ryder St. Beach in Provincetown

# Flagship Beaches

- Have documented pollution issues
- Efforts have been made to resolve issues
- Environmental justice concerns

# Wollaston Beach

- Located in urban, coastal community
- Stretches for 3 miles along busy roads
- High visibility, popular
- Quincy, DCR, Boston Harbor Assoc., Wollaston Beach Task Force working together on improvements:
  - ◆ Sewer lines
  - ◆ Catch Basins
  - ◆ Benches



# Willows Pier Beach

- Located along Salem Harbor in Salem Willows Park
- Approximately 150 yards long
- Densely developed area
  - ◆ Residences
  - ◆ Salem Willows Amusement Park
- Salem awarded Coastal Nonpoint Source Grant for nearby beach
- Replaced sewer pipes



# Ryder St. Beach

- Located in main section of Provincetown
- Approximately 130 yards long
- Nearby residences, businesses, parking lot
- New municipal sewage treatment plant



[www.singlesourcephoto.com](http://www.singlesourcephoto.com)

# Research/Review

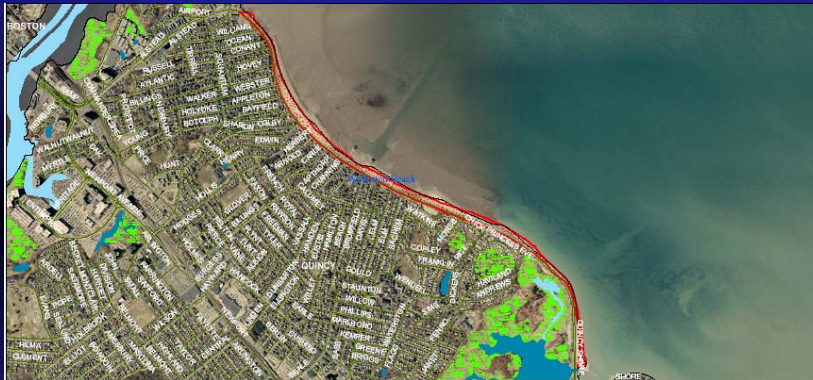
- Reports
  - ◆ Wollaston Beach Task Force
  - ◆ Salem Sound
  - ◆ EPA
  - ◆ Stormwater management plans
- Beach sampling data from prior years (MDPH website)
- Information from internet
  - ◆ Orthophotos, maps, newspaper articles

# Reconnaissance

- Visits to city offices to speak with officials, review documents
- Coordinated with officials on site visits to each beach
  - ◆ Maps
  - ◆ GPS
  - ◆ Digital camera

# Report

- Compiled info on tides, water depth, currents
- Created maps



- Identified several potential sources of contamination
  - ◆ Sewers, Trash, Dogs

# Report, cont.

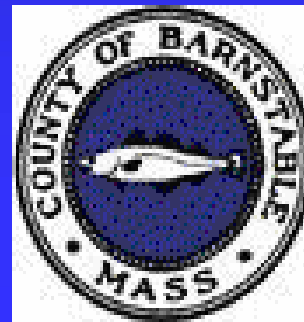
- Collect water samples near potential contamination sources under four conditions:
  - ◆ High tide, dry
  - ◆ High tide, wet
  - ◆ Low tide, dry
  - ◆ Low tide, wet
- In field analysis:
  - ◆ Salinity
  - ◆ Temperature
  - ◆ Wind
- Lab analysis:
  - ◆ Enterococcus

# Next Steps

- Sanitary Surveys are useful in identifying possible sources of contamination
- Sanitary Surveys can be used in conjunction with Phase II stormwater rule
- In MA, can be used to apply for variance
- MDPH Sanitary Survey forms available

# Thanks

- City of Salem
- City of Quincy
- Provincetown
- Barnstable County Dept. of Health and Environment
- EPA
- NEIWPCC



# Additional Information

- Handouts
- [www.mass.gov/dph/beha/beha.htm](http://www.mass.gov/dph/beha/beha.htm)
- Beaches Project: 617 624-5757
  - ◆ Guidance
  - ◆ Technical Assistance