

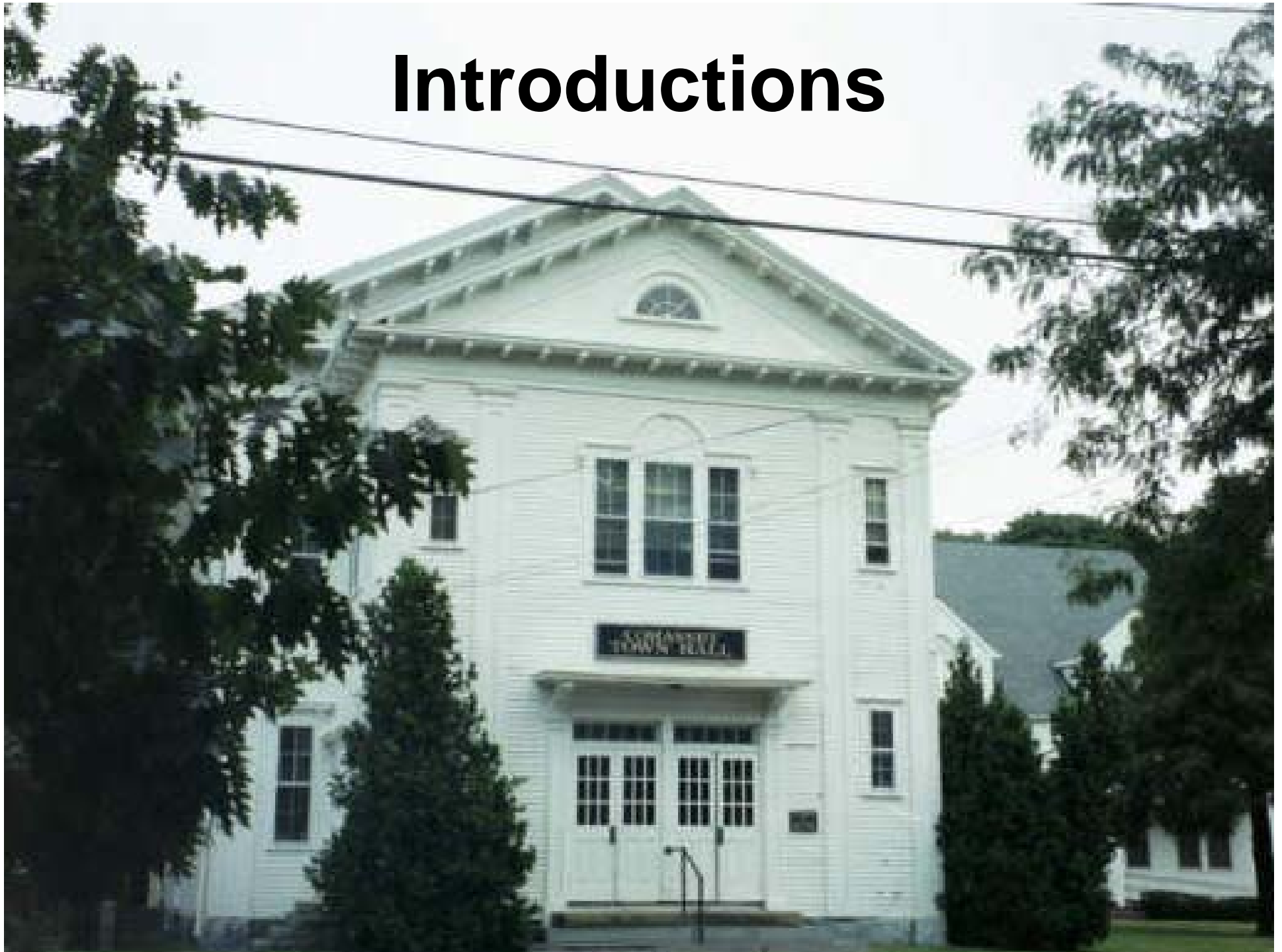
Town of Cohasset  
Flood Control Master Plan  
Treat's Pond Watershed

*Prepared by*



**COUGHLIN ENVIRONMENTAL SERVICES, LLC**  
**62 Montvale Avenue, Stoneham, MA 02180-3637**  
**Tel. 781-832-1002, Fax 781-438-9654**

# Introductions



# STUDY GOALS

- Conduct comprehensive “watershed” based evaluations of local flooding.
- Identify conditions “promoting” local flooding
- Devise remediation strategies to “help” abate flooding
- Develop a prioritized implementation plan for the Town to reduce flooding
- Salt Marsh Reclamation is not a primary goal

# STUDY SCOPE

- **Compile drainage system mapping and data**
- **Utilize existing GIS mapping as available**
- **Analyze and Evaluate Drainage System**
- **Conduct hydrologic and hydraulic evaluations**
- **Evaluate drainage system under various conditions**
- **Identify system deficiencies**
- **Evaluate potential remediation measures**
- **Solicit Public input**
- **Conduct cost benefit analyses**
- **Develop final recommendations**
- **Develop a phase implementation plan**

# Compile drainage system mapping and data (Treat's Pond Watershed)

- Recent Army Corps of Engineers evaluations
- Past utility work (water & sewer)
- Proposed drainage work in area
- Supplemental survey and key structure logging
- Field GPS location surveys (remote systems)
- Archived Plans and DPW general knowledge
- Historical deed/property plans (as available)

# Utilize existing GIS mapping (As available)

- 1986 Town Aerial Mapping
- Aerial and field mapping for utility projects (Sewer & Water)(1995-2002) (Only portion of Town)
- Board of Health storm drain outfall and CB mapping (Utilized previous aerial maps)
- Recent Water Department GIS mapping (Utilized previous aerial maps)
- Low Altitude Photogrametry (MassGIS, Internet based applications)

**Conduct hydrologic and hydraulic evaluations to assess existing conditions, identify deficiencies and evaluate potential remediation measures**

*TOOLS UTILIZED:*

- **Culvert analysis FHWA (HY8 and HDS5)**
- **Hydraflow Hydrographs by Intelisolve**
- **AutoCAD LDT TR-55**
- **WinTR-20 from Natural Resource Conservation Service (NRCS)**
- **CivilStorm Watershed Software by Bentley**



# TREATS POND AND ATLANTIC AVENUE FLOODING



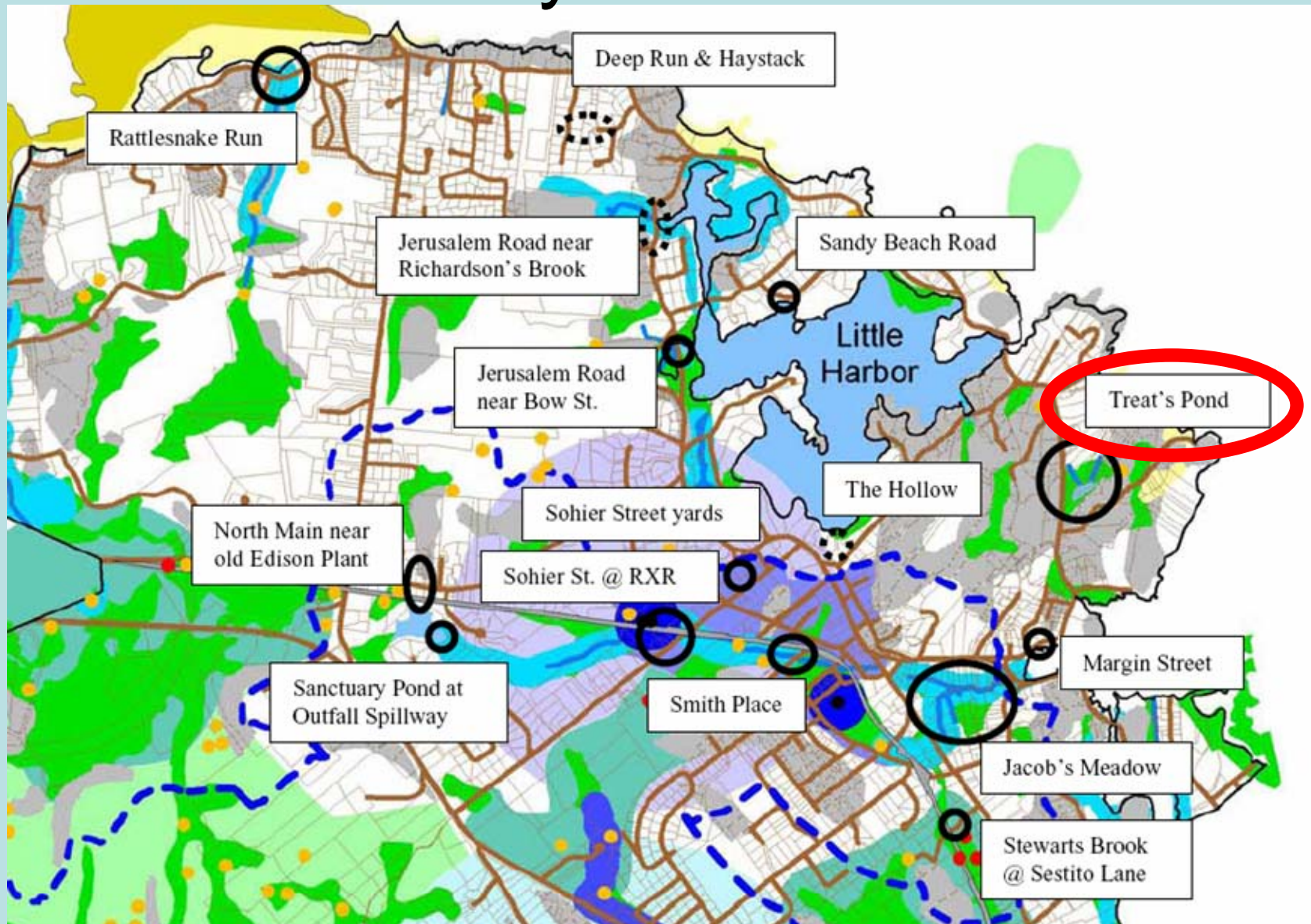
# Emergency Access Public Health and Safety



**PROPERTY LOSSES & PUBLIC HEALTH AND SAFETY CONCERNS**

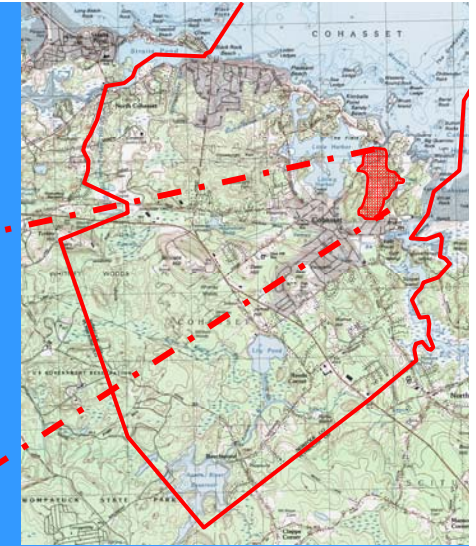
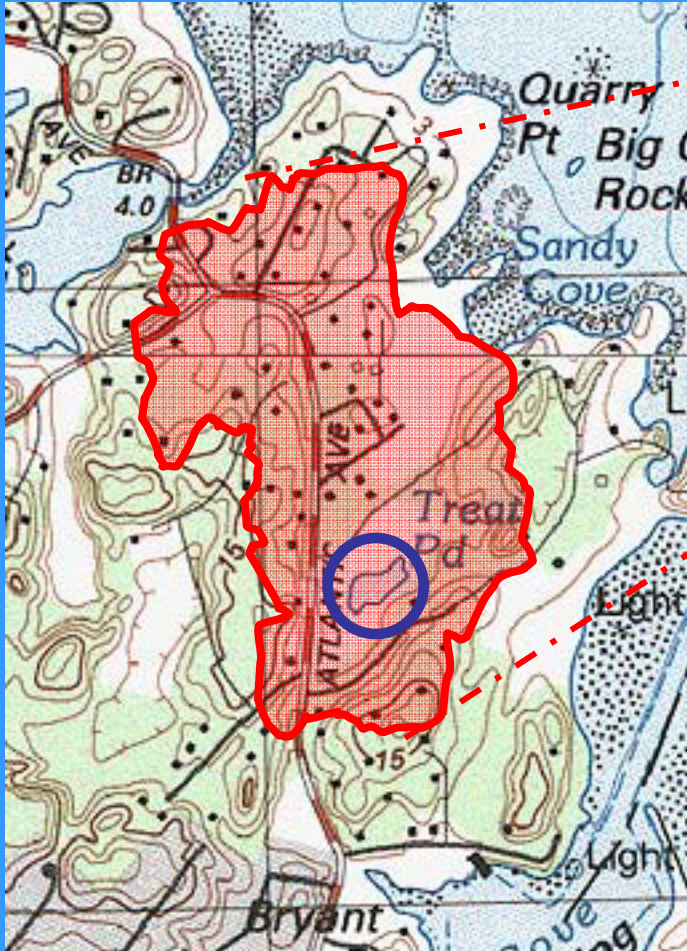


# 2008 Annual Town Meeting Preliminary Problem Areas



Tonight's focus:

Treat's Pond Watershed Area 69 Acres  $\pm$



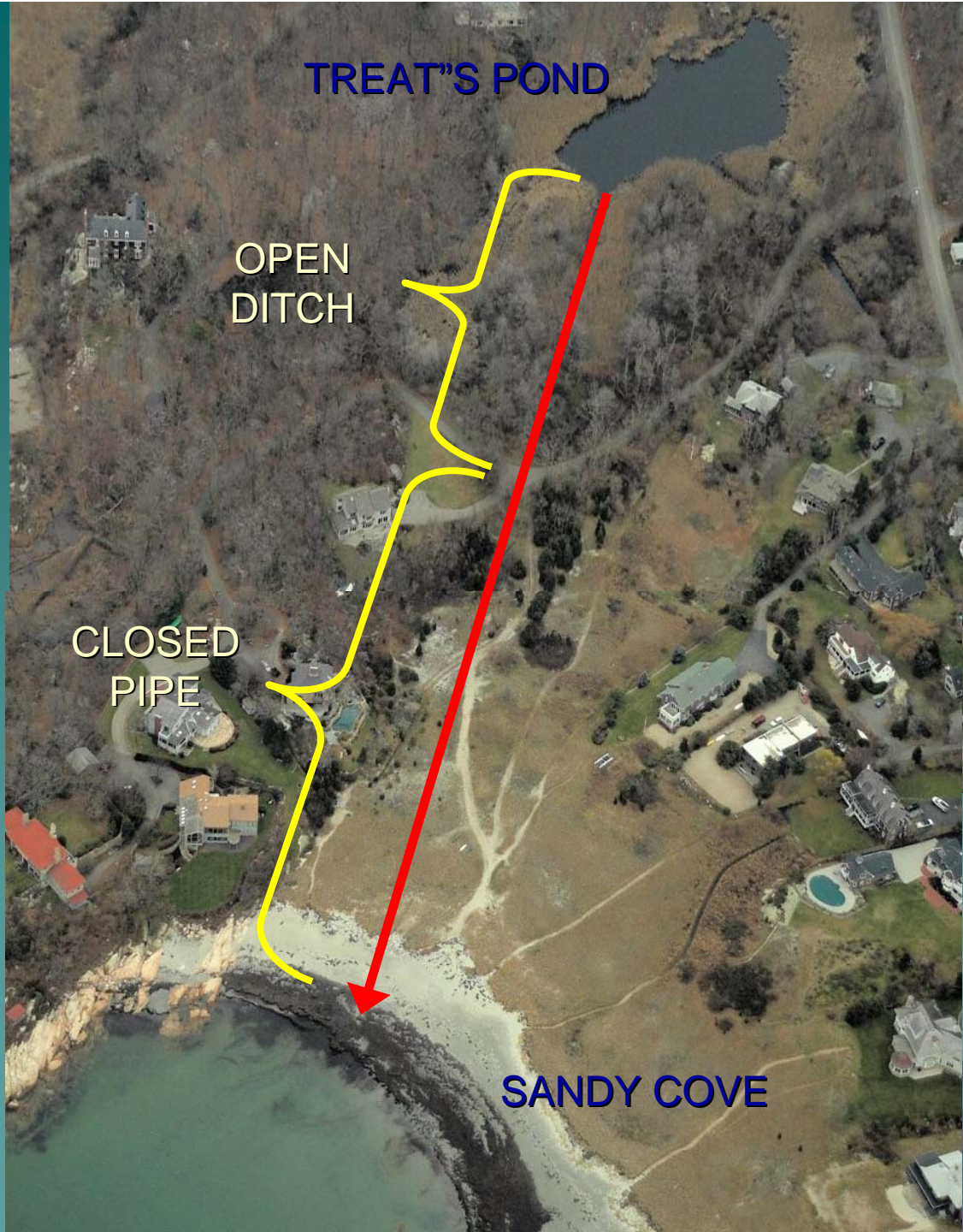
Cohasset, MA

- Includes significant portion of the low lying coastal areas of the Town
- Subject to significant access limitations
- Watershed has severe outfall restrictions
- **NOT just a private property issue**

# TREAT'S POND DISCHARGE AT SANDY COVE



**FLOODING IS WELL DOCUMENTED OVER SEVERAL DECADES AND HISTORICALLY ATTRIBUTED TO INSUFFICIENT OUTFLOW CAPABILITIES INCLUDING AN OFTEN BURIED 24" DISCHARGE PIPE AT SANDY COVE**



TREAT'S POND

OPEN  
DITCH

CLOSED  
PIPE

SANDY COVE