CHARLES RIVER POLLUTION CONTROL DISTRICT

Capital Improvement Plan

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Agenda

- Introduction
- Proposed 15-year Capital Improvement Plan (CIP)
- Implementation of the CIP
- Impact of CIP on Community Assessment

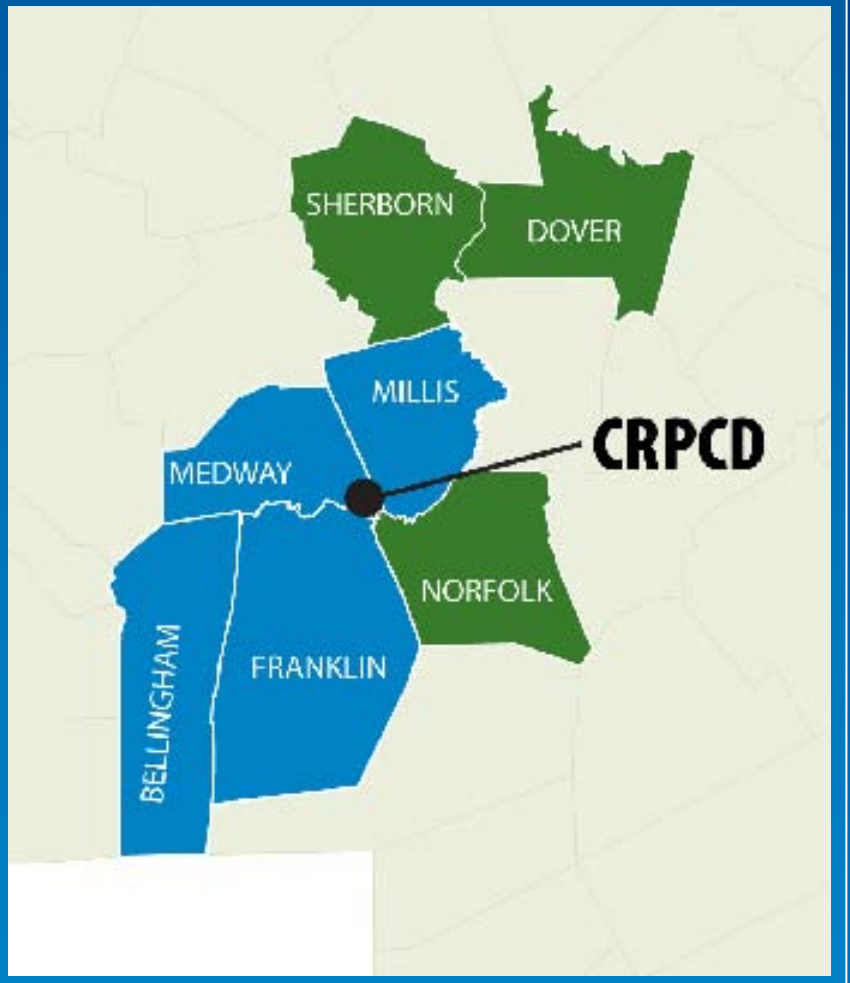
Charles River Pollution Control District – Introduction

- Existing facility constructed in the late 1970's
- Facility upgraded (in part) in the late 1990s
- Currently designed to treat an average annual flow of 5.7 mgd
- Currently Average Daily Flow 4.7 mgd
- Peak flows can exceed 15 mgd

CDM

Charles River Pollution Control District – Service Area

- 220 miles of sewers contribute to treatment facility
- Seven communities own capacity in treatment facility
  - Franklin ~ 3.1 mgd
  - Medway ~ 0.8 mgd
  - Millis ~ 0.3 mgd
  - Bellingham ~ 0.3 mgd
  - Septage from Norfolk, Dover, Sherborn
  - Also accept septage from four other communities



CDM

Charles River Pollution Control District – Treatment Processes

- Screening and grit removal
- Primary clarifications
- Single stage activated sludge system
- Cloth disk filters and sand filters
- Disinfection with gaseous chlorine
- Gravity belt thickeners
- Thickened sludge trucked off-site for disposal
- Effluent discharged to Charles River

Major Components and Cost of Proposed 2008 CIP

- NPDES Permit Compliance
- Landfill Closure
- Plant Facility Improvements
- Architectural Improvements

Major Components and Cost of Proposed 2008 CIP

• NPDES Permit Compliance	$7.1 million
• Landfill Closure	$1.9 million
• Plant Facility Improvements	$8.6 million
• Architectural Improvements	$1.8 million
Total	$19.4 million

Note: All figures were escalated cost with construction planned between 2010 and 2014

Implementation of the CIP

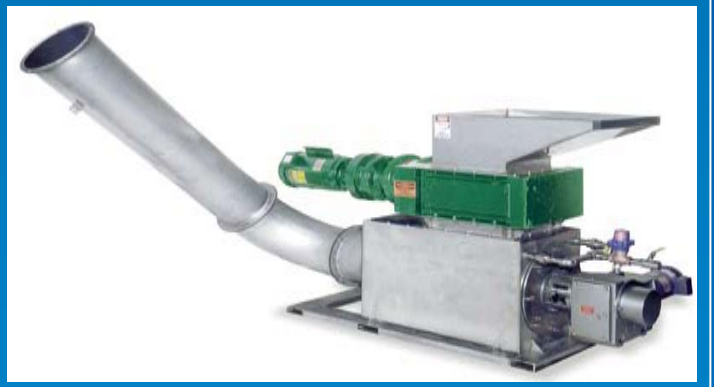
- State Revolving Fund Application submitted in September 2009 for CIP
  - 2% interest loan over 20 years
  - Total Request $17,890,000
  - Cost does not include planning and design services which is not eligible for SRF funding
- MassDEP added the CRPCD Project to the Intended Use Plan in July 2010

Implementation of CIP (cont'd)

- District decided to Phase project
  - Phase A – Facility Improvements to headworks and primary settling tanks
  - Phase B – Landfill closure
  - Phase C – Improvements to meet NPDES permit requirements and remaining facility and architectural improvements

Phase A – Headworks and Primary Treatment Improvements

- New washer/compactor for screenings
- New primary clarifier sludge collection mechanisms
- HVAC and lighting improvement
- New security gate at facility entrance



Phase A – Schedule

- Design Commenced – August 2010
- Design Completed – February 2011
- Project Bid – June 2011
- Construction ongoing
- Construction Completion expected – December 2012

Phase A – Budget

Phase A	Cost
Design	$ 225,400
Bidding	$ 26,500
Construction	$ 1,974,000
Engineering Services during Construction	$ 473,000
Total	$ 2,698,900

Phase B – Landfill Closure

- Located adjacent to plant, near parking lot, chlorine building and outfall
- 2.5 acres
- 1979 to 1989 dewatered sludge, grit and screenings
- 1989 to 2002 only grit and screenings
- Closed since 2005

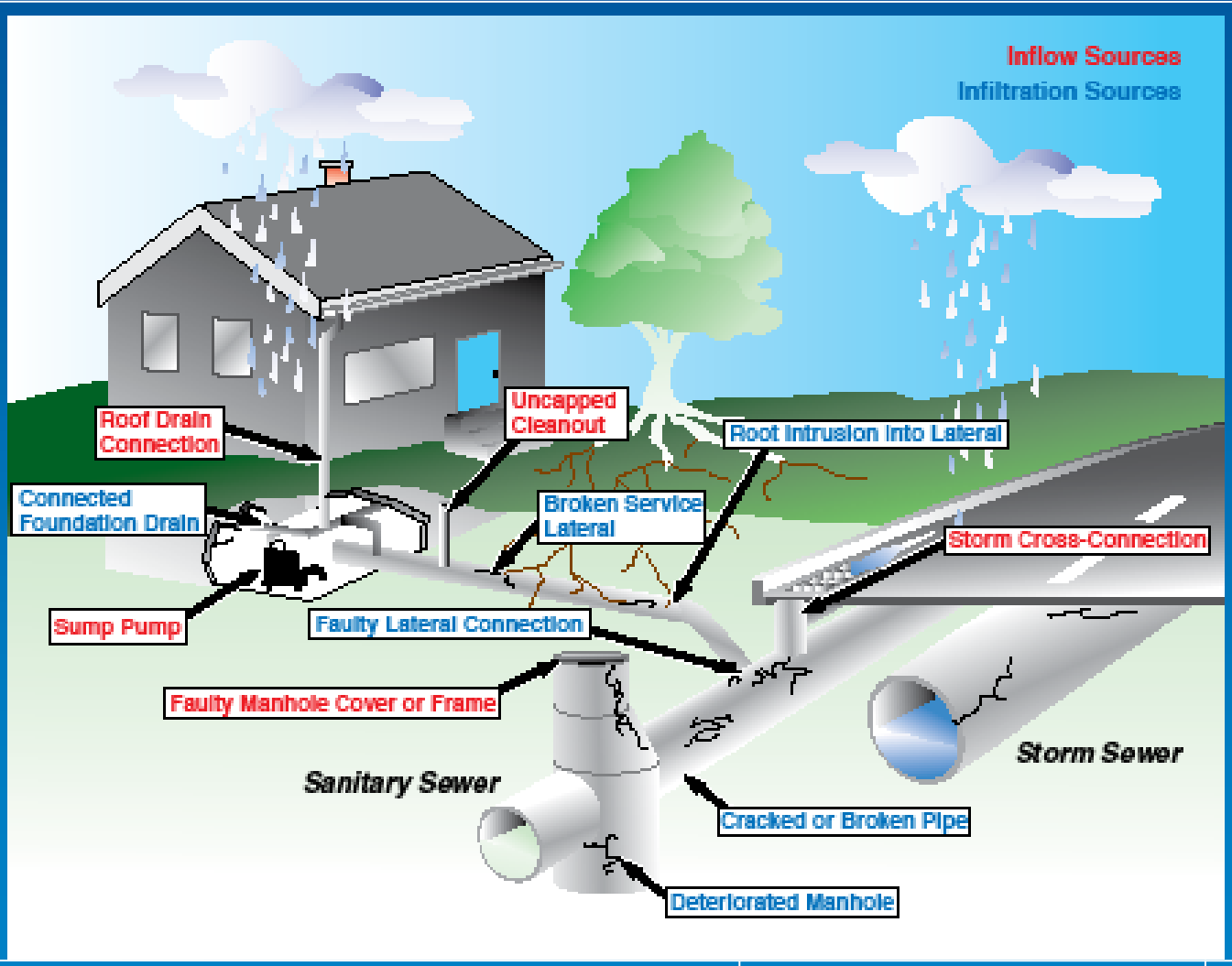
Phase B – Landfill Schedule

- Hydrogeologic Report – March 2011
- Design and Permitting – August 2011
- Project Bid – September 2011, award Imminent
- Construction completion expected – June 2012
- Closure Report – August 2012

Phase C – NPDES Permit Compliance and other Facility Improvements

- NPDES Permit Compliance
  - Evaluation of existing and future flows and loads
  - Inflow/infiltration (I/I) analysis
  - Geographic Information System (GIS) for District, member communities (in progress)
  - Phosphorus reduction evaluation
- Other Facility Improvements
  - Effluent disinfection upgrades
  - Sludge dewatering upgrades
- Architectural Improvements

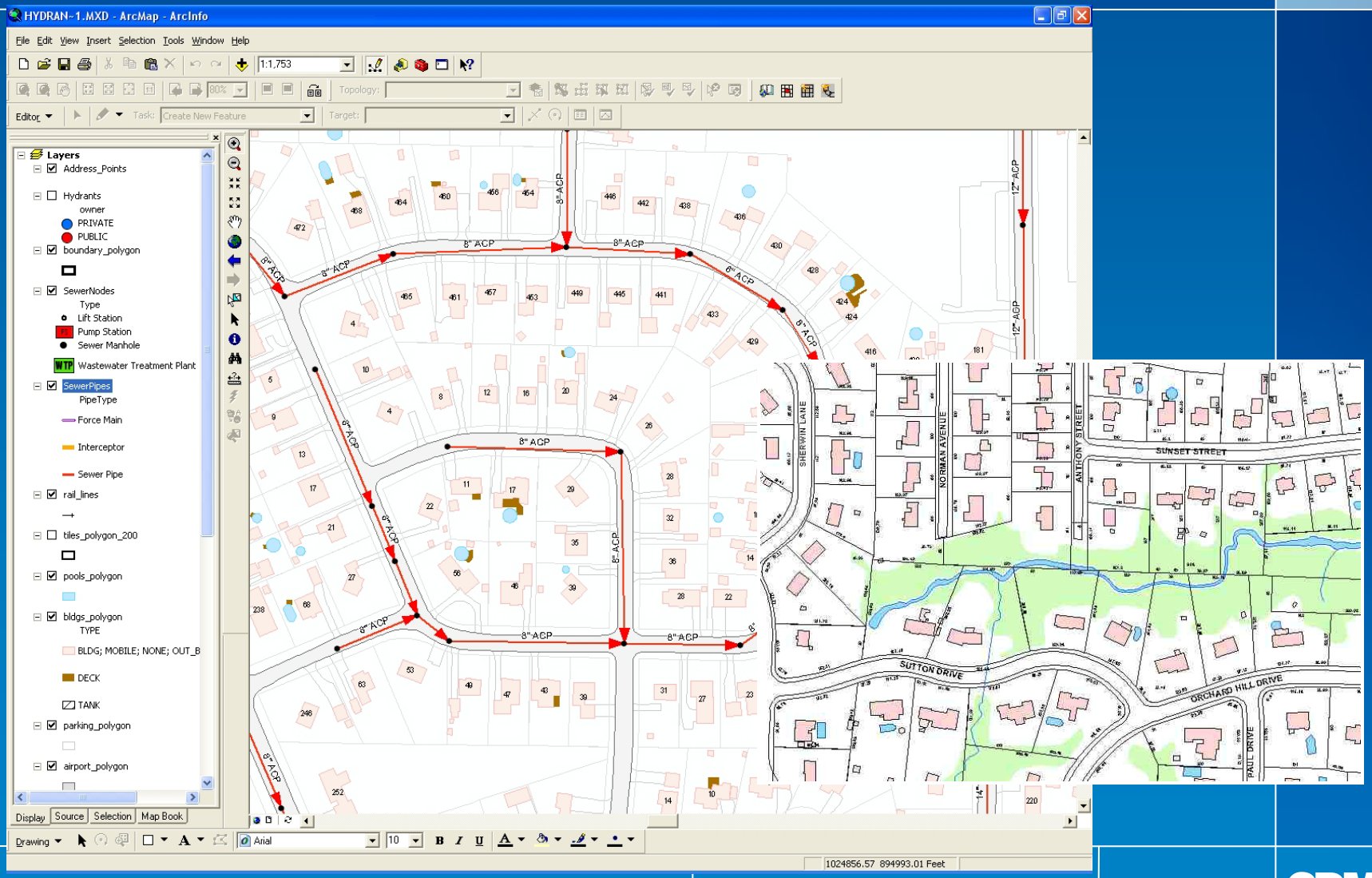
I/I Requirements (District and Communities)



District's I/I Requirements

- Map and description of inspection and maintenance activities/expenditures
- Map of areas for inspection and maintenance activities
- Calculation of annual average I/I and maximum month for previous year
- Report of I/I-related corrective actions, including unauthorized discharges
- Medfield's recent draft NPDES permit even more onerous in this regard

GIS Would Cover 220 Miles of Sewer



Phosphorus Effluent Limits

- Current
  - 0.2 mg/L (April 1st – October 31st)
  - Report (November 1st – March 31st)
- Proposed in Draft NPDES Permit
  - 0.12 mg/L (April 1st – October 31st)
  - 1 mg/L (November 1st – March 31st)
- Proposed in Final TMDL
  - 0.10 mg/L (April 1st – October 31st)
  - 0.30 mg/L (November 1st – March 31st)

Architectural Improvements - Exterior Building Restoration

- Brickwork: repair and replace
- Exterior doors: replace as needed
- Windows: reseal and weather-strip
- Exterior walkways and platforms: replace bricks where needed, refinish concrete
- Lime silo: recoat

Phase C – Schedule

- Project Evaluation Report – January 2012
- Design March 2012 – March 2013
- Bidding April 2013 – September 2013
- Construction September 2013 – September 2015

Phase C – Budget

Phase C	Cost
Planning	$ 361,000
Design and Permitting	$ 1,039,000
Bidding	$ 65,000
Construction	$ 12,303,500
Engineering Services during Construction	$ 1,800,000
Total	$ 15,568,500

Schedule

Total Cost

	Cost
Phase A	$2,698,500
Phase B	$1,032,500
Phase C	$15,568,400
Total (rounded)	$19,300,000

Member Community Assessment

• Franklin	63.9%
• Medway	16.75%
• Millis	11.0%
• Bellingham	6.6%
• Norfolk	0.85%
• Dover	0.45%
• Sherborn	0.45%

Impact of CIP on Millis

- 11% assessment of plant capacity
- 2012 no additional assessment
- 2013 through 2032 – additional assessment of approximately $126,000 per year

Conclusions

- District is proactively addressing issues at wastewater treatment facility
- CIP will improve facility's :
  - Reliability
  - Efficiency
  - Life expectancy
  - Safety
  - Environmental Compliance

Discussion and Questions