BURLINGTON PUBLIC WORKS

FY2016 PROPOSED BUDGETS

Water, Wastewater & Stormwater

Water Resources

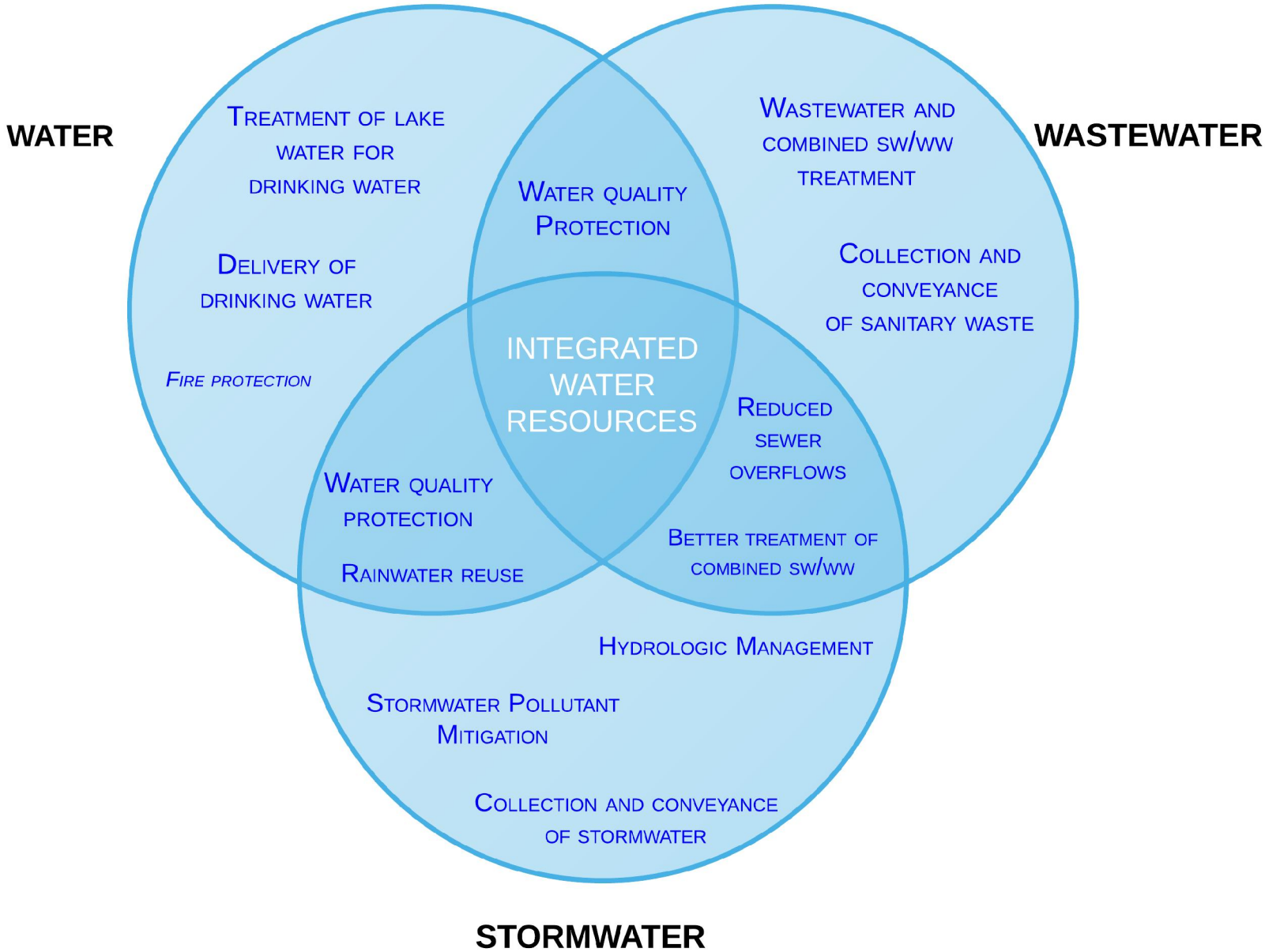
BURLINGTON, VT PUBLIC WORKS

DPW MISSION STATEMENT

- We steward Burlington's infrastructure and environment by delivering efficient, effective and equitable public services.

Water Resources

BURLINGTON, VT PUBLIC WORKS



Water Resources

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Water Resources

- Water Supply
  - Treatment of water from Lake Champlain for drinking water
  - Distribution of water to homes, businesses and fire hydrants
  - Maintenance of water distribution system including valves, water mains & services, fire hydrants, elevated storage tanks and reservoirs
- Wastewater (Sanitary)
  - Treatment of sewage from homes and business before discharge to the Winooski River and Lake Champlain
  - Treatment of combined stormwater/wastewater to maximum extent practicable before discharge
  - Maintenance of collection system, three treatment plants, 25 pump stations
- Stormwater Management
  - Collection of stormwater runoff in combined and separate storm sewers
  - Regulatory review of increases in impervious surface or earth disturbances to mitigate (Chapter 26)
  - Watershed Planning and Retrofit design to mitigate stormwater runoff volumes and treat pollutants before discharge to waterways

Water Resources

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Water Resources, by the Numbers

- 1 water plant
- 110 miles of water mains
- 3 Wastewater Treatment Plants
- 49 miles of sanitary sewer
- 45 miles of combined sanitary / storm sewer
- 37 miles of storm sewer
- 25 pump stations
- 102 storm water outfalls
- 2,000+ catch basins
- 900 fire hydrants
- 2 post-closure landfills
- 1 methane powered generating station

Water Resources

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Water Resource FY 16 Budget Principles

- Fair
  - Water Meter Replacement Initiative
  - Sustainable Rate Structure (reducing infrastructure deficit)
- Factual
  - Develop key performance Indicators for evaluating FY'16 performance
- Forward
  - Water Resources Infrastructure Reinvestment
  - Asset Management Planning
  - Development of Fund Balance Policy
  - Implementation of Key Initiatives for Water Resources

Water Resources

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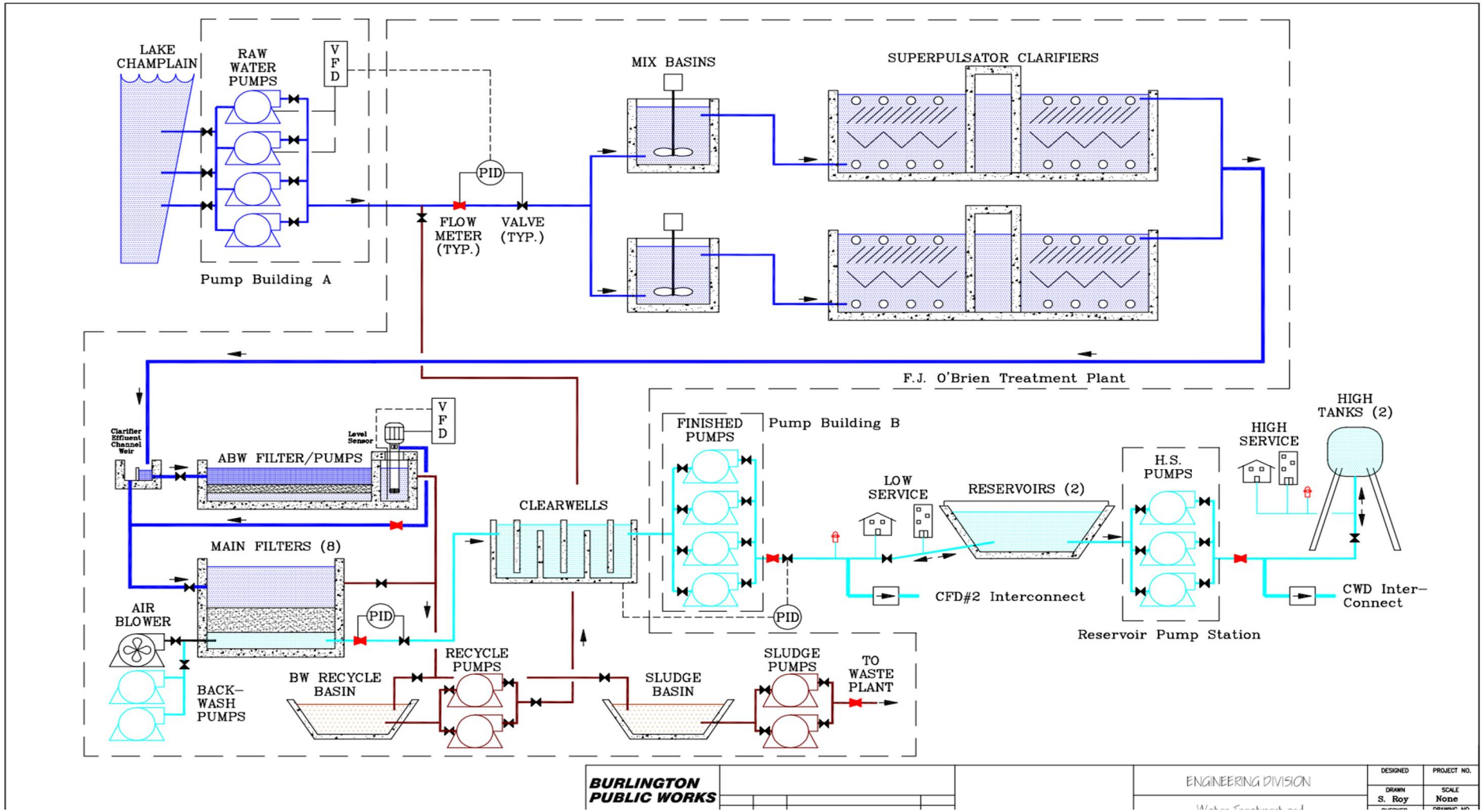
Water Resource FY 16 GOALS

- Water Resources Infrastructure Reinvestment
  - Fully fund Water Capital needs (for the first time)

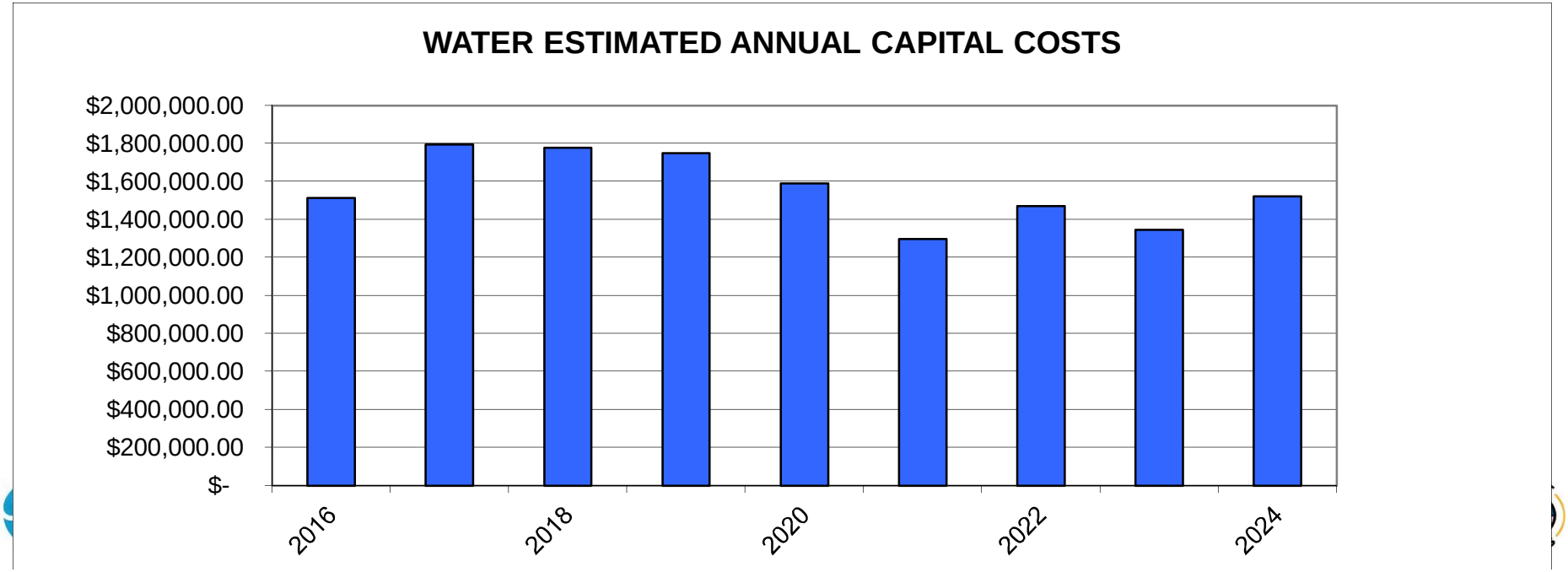


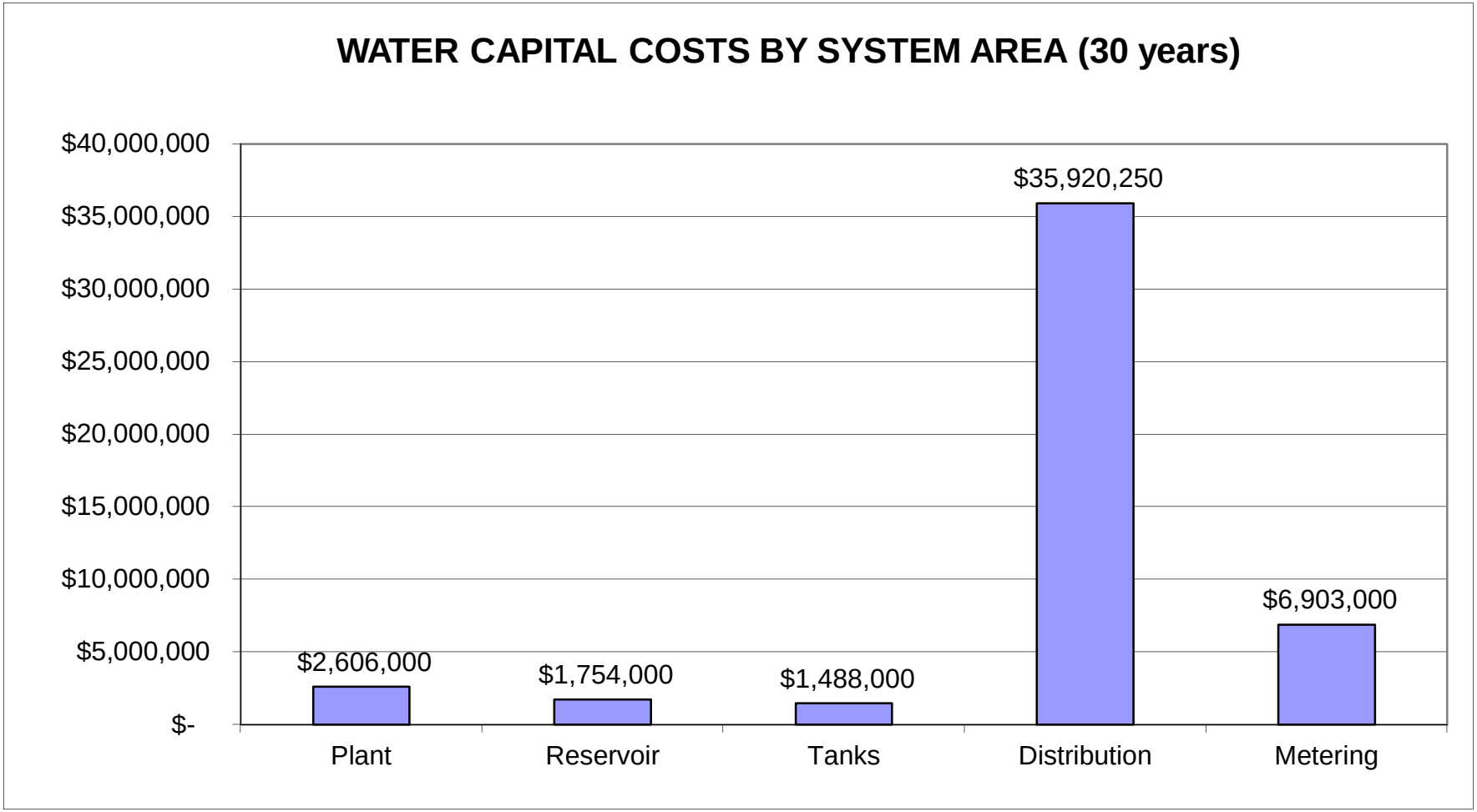
Water system aging infrastructure 2014-15

Water Resources

Water Capital Plan

BURLINGTON PUBLIC WORKS				DRAFT	btv_water_capital_2014.xls		
WATER DIVISION				Original Date:	2/12/2008		
				Revised Date:	2/17/2015		
WATER CAPITAL PLAN						ADJUSTED	
			EST. CAPITAL	PROBABILITY	TREATMENT OR	PROBABILISTIC	
			COST (2014 $)	OF FAILURE [P]	SUPPLY RISK [R]	RISK ASSESS-	ASSESSMENT
DEFICIENCY DESCRIPTION	AREA	SUBAREA	ENR = 9870	(1 high to 5 low)	(1 high to 6 low)	MENT [P X R]	COMMENTS
Repair HWS&R line insulation across alley	Plant	HVAC	$ 1,000	1	1	1	Heat loss wastes energy.
Reservoir Interior Relining (North & South)	Reservoir	Storage	$ 450,000	1	1	1	Leakage = water loss. Proposal using XR3-PW liner.
Oakland Terrace - replace 6" w/8" to hydrants, 2" around.	**Distribution**	**Mains**	**$ 45,000**	**1**	**1**	**1**	**Replacment before Street Capital Program.**
Morgan Street - Replace 2" galvanized with CTS.	**Distribution**	**Mains**	**$ 20,000**	**1**	**1**	**1**	**Replacment before Street Capital Program.**
Pine Street - Howard to Lakeside (before Champlain Parkway)	**Distribution**	**Mains**	**$ 530,000**	**1**	**2**	**2**	**Replacement based upon break history and planned street upgrade.**
Replace roof over office, lab, and control room	Plant	Main Building	$ 64,000	1	2	2	Potential damage to equipment if not replaced.
So. Cove Rd - ALL	**Distribution**	**Mains**	**$ 293,250**	**2**	**1**	**2**	**Replacement based upon break history.**
Replace drain valves and operators	Plant	Filtration	$ 83,000	2	1	2	Most valves 20+ years old.
Replace air valves and operators	Plant	Filtration	$ 75,000	2	1	2	Most valves 20+ years old.
Replace single boiler/pump with dual boiler/pump system	Plant	HVAC	$ 52,000	2	1	2	Resize to a smaller, high efficiency boiler.
Austin Drive - Redrocks to Home	**Distribution**	**Mains**	**$ 140,000**	**1**	**3**	**3**	**Replacement based upon break history and planned street upgrade.**





Water Resources

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Water Resource FY 16 GOALS

- Water Resources Infrastructure Reinvestment
  - Fully fund Water Capital needs (for the first time)
  - Maintain Wastewater Capital spending until Wastewater Capital Plan is complete

Water Resources

BURLINGTON, VT PUBLIC WORKS

Wastewater Infrastructure Needs

Water Resources

Water Resource FY 16 GOALS

- Water Resources Infrastructure Reinvestment
  - Fully fund Water Capital needs (for the first time)
  - Maintain Wastewater Capital spending until Wastewater Capital Plan is complete
  - Move towards more sustainable Stormwater capital spending
    - based on known capital deficiencies and
    - to provide match $ for stormwater improvements during other City general fund projects

Water Resources

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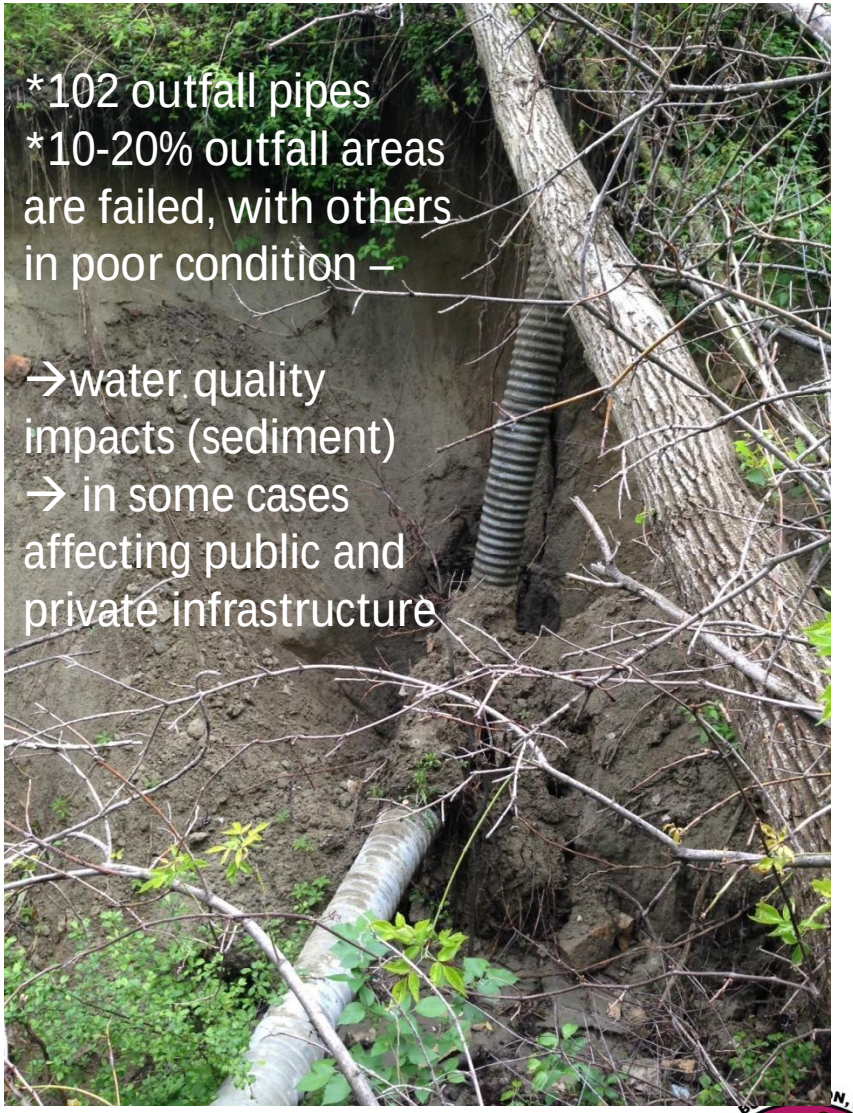
Stormwater Capital Reinvestment Needs: Corrugated Metal Pipe and SW Outfalls

~53,000 linear feet of CMP (~10 miles)



*102 outfall pipes
*10-20% outfall areas are failed, with others in poor condition –

→water quality impacts (sediment)
→ in some cases affecting public and private infrastructure

Stormwater Capital Plan Development and Implementation

- Utilize Clean Water State Revolving Fund Loans to develop components of Stormwater Capital Plan and fund long term implementation
- Proposed projects
  - Stormwater pipe filming, prioritization and lining
  - Outfall damage assessment/prioritization, design and construction
  - Stormwater improvements integrated master planning and implementation
    - Regulatory requirements (Improvements for Streams and Lake Champlain and CSO abatement)
    - Flooding improvements

Water Resources

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Water Resource FY 16 GOALS

- Use Water Resource maintenance and capital $ as efficiently as possible
  - Improved in field data collection with ArcGIS
  - Asset Management Planning
    - Scoping study in early FY 16
    - Begin development of written asset management plan in late FY 16
      - Levels of Service/Performance indicators
      - Likely acquisition of a computerized maintenance management system
      - Enhance capital planning through improved condition assessment

Water Resources

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Water Resource FY 16 GOALS

- Increase organizational capacity to address and manage capital needs
  - Transfer of PW Engineer to Water Resources
  - Additional Engineer/Project Manager
  - Reorganization of Water Resources staff in FY 16
    - Projected to be budget neutral

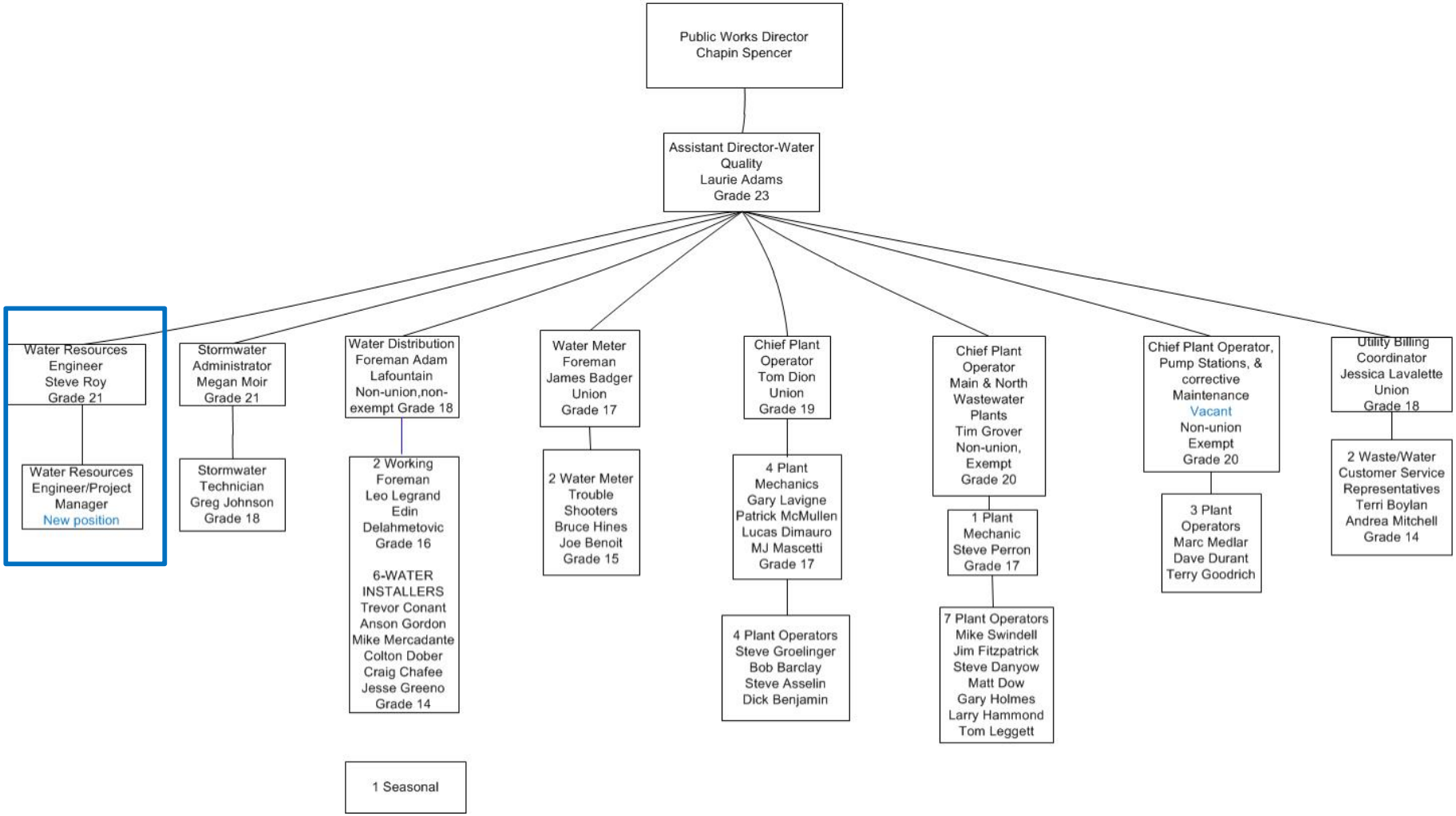
Water Resources

BURLINGTON, VT PUBLIC WORKS

Department of Public Works

FY16 Organizational Chart

May, 2015



Water Resources

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Water Resource FY 16 GOALS/DRIVERS

- Work towards sustainable rate structure
  - Minimal, modest increases more consistently vs. substantial intermittent increases
  - Ensure that future rate payers are not unfairly burdened by ever increasing infrastructure deficit
  - Develop budgets that adequately fund a sufficient reserve for emergencies
    - Develop Enterprise Fund Reserve Policy specific to the nature of revenue and expense volatility

Water Resources

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FY 16 Water Resources Enterprise Budgets

Water			
	FY'15 Budget	FY'16 Budget	Change
Revenues	$5,976,088	$6,545,746	$569,658
Expenses	$5,965,605	$6,479,743	$514,138
Net	$10,483	$66,003	$55,520
Wastewater			
	FY'15 Budget	FY'16 Budget	Change
Revenues	$7,966,862	$8,035,048	$68,186
Expenses	$7,559,367	$7,737,637	$178,270
Net	$407,495	$297,411	-$110,084.00
Stormwater			
	FY'15 Budget	FY'16 Budget	Change
Revenues	$1,156,139	$1,273,213	$117,074
Expenses	$1,156,139	$1,256,273	$100,134
Net	$0	$16,940	$16,940

Water Resources

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Water Resources Utilities Rate Background

Fiscal Year	Rate/100 cf Water	Rate/100 cf Wastewater	Flat Fee/month Stormwater	ISU (1000 s.f.) Stormwater
2011	$3.17	$4.71	$3.00	$1.17
2012	$3.17	$5.18	$3.00	$1.17
2013	$3.33	$5.44	$3.00	$1.17
2014	$3.50	$5.44	$4.50	$1.69
2015	$3.50	$5.44	$4.50	$1.69
2016	$4.00	$5.55	$5.21	$1.95

Water Resources

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Proposed FY 16 Rates

	FY 2015		FY 2016			
Utility	Existing FY15 Rate	FY 15 Monthly Cost for Average Home Owner	Proposed FY16 Rate	FY16 Monthly Cost for the Average Home Owner	% Increase	Monthly Increase for Home Owner
Stormwater	$4.50 per month for residential units	$4.50	$5.21 per month for residential units	$5.21	15.78%	$0.71
Wastewater	$5.44 per 100 cubic feet	$36.36	$5.55 per 100 cubic feet	$37.10	2.00%	$0.74
Water	$3.50 per 100 cubic feet	$23.40	$4.00 per 100 cubic feet	$26.74	14.28%	$3.34
Total Utility		$64.26		$69.05	7.45%	$4.79

Water Resources

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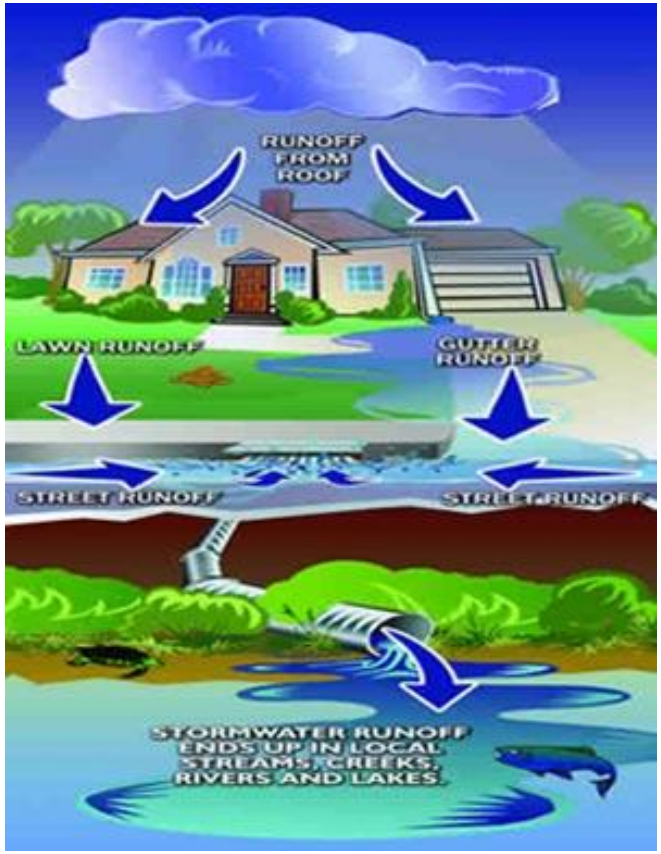

Questions ?

Water Resources

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