



Ward 1/8 NPA
October 10, 2018, 6:30-9:00pm
McClure Lobby Conference Room, UVM Medical Center
Provisional Agenda

7.00 p.m.: Welcome and Introductions

7.05: Speak Out

7.15: City Council Updates: Cllrs Bushor, Deane, Roof

7.35: State Representatives Barbara Rachelson (Chitt 6:6), Selene Colburn (6:4), Brian Cina (6.:4) are seeking re-election. They are invited to make a brief opening statement and answer a question or two.

8.00: BHS \$70M Bond ballot item: Martine Gulick, School Commissioner Ward 4, will present the rationale behind the "Reinvisioning BHS" initiative and the resultant bond item for a reinvention of the BHS Campus.

8.30: DPW: City Wastewater & Stormwater Infrastructure: Megan Moir, Ass't Director for Water Resources, Chapin Spencer, DPW Director, Mayor Weinberger will advocate for the Election Day ballot item regarding the "Clean Water Resiliency Plan" bond. (Hopefully there will also be a confirmation of the timing of the Pedestrian Signalization installation at Barrett, Colchester & Riverside.)

9.00: Close

Steering Committee
Anne Brena, Ward 8 NPA
Cindy Cook, Ward 1
Richard Hillyard, Ward 1.

There will be free on-site parking in the McClure Garage, thanks to UVM MC.

Wards 1 & 8 Meeting
UVM Medical Center, McClure Conference Room
October 10th, 2018
Meeting Start 7:04 PM

Steering Committee present: Richard Hillyard Ward 1, Anne Brena Ward 8

Speak Out

- Party at Schmanska Park to celebrate renovations on Saturday, 1PM-3 PM
- Sierra Club Burlington reps: Ready for 100 campaign, which focuses on Burlington moving to 100% renewable energy in all sector.
- Maria McLellan from UVM Med Center: design charette for sound barriers last week, got lots of good input. Barrier is to be built on top of the hill on East Ave, on Mary Fletcher Drive. 12 ft high, 50 feet long fabric simulation of wall will go up in next week or two. Unpaved paths near East Ave will no longer be accessible. maria.mclellan@uvmhealth.org for more info
- Disappointed over lack of progress with mall.
- Alternate street parking on Colchester from Kampus Kitchen on down. Hoping that the new plan will consider the lack of space going down the hill.
- Miro: Mall developers have requested changed to agreement, have not yet pulled permit.
- Miro: general obligation debt is focus of recent debt policy conversations. When school bond is drawn down, we will be at \$190 million of “overlapping” debt. Acceptable level of debt. In 7-10 years, chunks of debt will be “retired”

City Council Update

-Richard Deane:

-School bond and revenue bond for wastewater to be discussed later. Will vote for both.

-Proposed improvements to crossing infrastructure at Barret St and Colchester Ave.

Director of DPW will discuss later tonight. Board of Finance will look at funding for improvements. City Council will vote Monday evening. Crosswalks should be in place this year, also a possibility there will be mid-block crossing at Chase Street. Other improvements to that intersection in the future.

-Regarding development of mall downtown: developer is private property owner, does not have to share updates with city. Jeffery Glassberg is direct liaison with him, should give us better information. Disappointing to see pace of construction. City’s interest in project is the streets: St. Paul and Pine St will be improved.

-Seeking re-election as East district City Councilor.

-Sharon Bushor:

-Schmanska Park dedication is important event. Lots of history to the park.

-Attended design charette. Hoped for more feedback and weigh-in from neighborhood.

Liked committee that hospital put together. Looking for another opportunity to weigh in. Lots of people will be disappointed in losing unpaved hill path.

-Wrote article in North Avenue news. Spoke about both bonds, supported both. Hoping that people will read about these two ballot items and support them..

-Member of Ordinance Committee. There are two form districts (5& 6), and a few properties considered that did not get put forward. Planning commission has moved request to

Ordinance Committee. Thought we would wait longer to see how form-based code worked- there are still unfamiliar aspects. We should pay attention to its implementation, as the city of Burlington will likely move to form-based code as a whole.

-Intersection of Riverside and Colchester Ave at Winooski Bridge: pedestrian crossing discussed at Barrett. Needs to be acted upon sooner rather than later. Collectively, representatives know that this is a priority. Eventually looking for total re-design of intersection.

State Representatives

-Selena Colburn

- Seeking re-election.
- Former City Councillor for Ward 1, former library commissioner for Fletcher Free.
- Just finished first term as State legislator. Grateful for support and feedback.
- Looking to create healthy economy (livable wages, affordable housing, paid family leave.) Economic development that works for the state
- Also interested in climate work: clerk of Climate Solutions Caucus.
- Serves on Judiciary Committee. Has worked on criminal justice reform extensively. VT spends a lot of money on criminal justice- wants to look at structural changes to system.

-Brian Cina

- Seeking re-election.
- Has lived in Burlington for 20 years.
- Motivated by experience in clinical social work.
- On the Healthcare Committee, trying to protect Vermonters from federal policy. Passed universal primary care bill in state through committee as first step towards reforming VT healthcare. Looking to make pharmaceuticals for affordable for Vermonters.
- On the Artificial Intelligence Task Force as social worker with expertise in human rights/ ethics. Will update on benefits/risks of AI as far as Vermont's economy, public safety, etc.
- Displeased with Governor's response to education, which pitted local districts against one another.

-Barbara Rachelson

- Seeking re-election for fourth term.
- Former social worker, worked in policy part of social work. Director (CEO) of non-profit.
- Similar interests to Brian and Selene- hearing lots of concern about affordability in Burlington, especially retirees.
- Looking to examine state budget. Vermont pays more for corrections than it does education. Paying a lot without making rehabilitative progress.
- Passionate about consumer protection, towing laws.
- Trying to get labeling on food re: humanely slaughtered meat, free-range chickens, etc.
- Concerned about law enforcement's use of technology re: privacy.
- Serving on Education Committee has made it clear that very few people at state level can explain how school financing works. Ways & Means committee has looked hard at finding new funding avenues- property tax burden is high.

BHS School Commission:

- BHS is in need of some improvements, has been for decades.
- Unreasonable accessibility routes, buildings are highly separated
 - New BHS would be one building, eliminating accessibility issues
- School is not secure: several entrances/exits, hard to keep safe.
- Maintenance issues have been piling up over the years, need to be taken care of.
 - Maintenance money in the future would come from state general education fund.
 - The intent is to budget money towards maintenance/repairs each year
- 3 upcoming tours (Oct 17th at 6 PM , Oct 23rd at 5:30 PM). 23rd will have architect available to answer questions. If these dates do not work, email superintendent who will set up tour.
 - This is a “big ask” of the community. MOU between Mayor, School Board, and community ensures that there will be consistency over the years in implementation.
 - Seven Days article and superintendent’s letter in response to article: how exactly will citizens be taxed per year?
 - BHS is asking for authority to borrow. Borrowing will happen starting in FY20.
 - Debt has already been incurred from smaller projects, BHS will add to that.
 - Impact to taxpayers is sum of those two debts
 - At it’s peak, \$302/year for those with \$250k home.
- Expected completion: 2023.

DPW, Miro Weinberger:

-2018 Clean Water Resiliency Plan

-(http://burlingtonvt.gov/sites/default/files/TownHall%20Presentation_9-27-18_0.pdf)

- Proposed work is vital, will help us be better stewards of the lake.
- Proposal has been worked on for numerous years. Product of third-party independent research reports, sophisticated modeling of existing systems.
- The investment covers a lot of different areas, continues some recent trends (green infrastructure)
- Plan is intended to be affordable. City has worked hard to mitigate cost.
- Will take 4-5 years to complete. Projected cost \$5/month to average water consumer.
 - Burlington has 140 miles of pipes underground. 110 of potable water pipes. There used to be no proactive capital funding for repairs, city is now relining 3 miles of water system. Current plan will cover 13 miles, highest priority pipes (high consequence for failure areas). Renewing 13 miles will be significant.
- There is now funding for curbing (1/2 mile- 1 mile per year.) Will help take burden off of greenbelts.
- Plan does not address odor at waterfront.
- Tour of plant, next Thursday Oct 18th, 5 PM, at main water treatment plant at bottom of Maple St.
- “Integrated planning” approach- seeks to coordinate reinvestment in wastewater and stormwater.
- DPW has looked at containment, will continue to keep it in mind. First priority is current project. \$100,000 has been appropriated to examine each plant.

Meeting End 9:20 PM

Minutes taken by Hannah Carpino-CEDO intern



Neighborhood Planning Assembly Attendees

NPA (choose one)	Wards 1 & 8	Wards 2 & 3	Wards 4 & 7	Ward 5	Ward 6
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Date of Assembly : 10-10-18 Location: Medical Center

Please return to your convenor, Phet Keomanyvanh
or email to cedofd@burlingtonvt.gov

- | | |
|-------------------------------------|----------------------------|
| 1 Richard Hulliard Ward 1. | 21 Tom DEREATH |
| 2 DAVID Carney Ward 1 | 22 Joe Speidel |
| 3 Sophie Quest | 23 Weiwei Wang |
| 4 Helaine Lainey Rappaport Ward 7 | 24 Selene Colburn (Ward 7) |
| 5 Hunter Grosvenor Ward 6 | 25 Barbara Rodelsen Ward 6 |
| 6 Linda Sheehy Ward 1 | 26 |
| 7 Maria McClellan ^{UVM} MC | 27 |
| 8 Wayne Senutic | 28 |
| 9 Sandy Wymal | 29 |
| 10 RICHARD DEANE | 30 |
| 11 Sharon Busher | 31 |
| 12 Carol Livingston | 32 |
| 13 Lisa Kingsbury UVM | 33 |
| 14 Jim Burr OEEU | 34 |
| 15 Anne Breña | 35 |
| 16 Maria Chubb | 36 |
| 17 Gryn Long Ward 1 | 37 |
| 18 BRIAN CINA | 38 |
| 19 Emily Roland - Ward 5 | 39 |
| 20 Jack Hanson - Ward 1 | 40 |

Celebrate Schmanska!

Saturday, October 13, 1-3pm

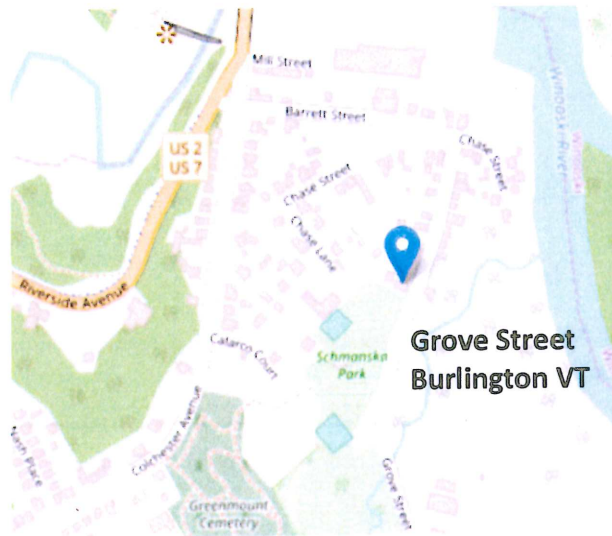
Old East Enders and fans of Schmanska, join us to
celebrate all the completed work in the park!



There will be lawn games, free snacks, demonstrations and workshops
takraw (cane ball) and pickleball. We will also have tours of the Barn

Check out the newly reconstructed courts (tennis/pickleball, cane ball and
basketball), added stormwater infrastructure, new signage, pathways,
timber retaining wall and improved landscaping.

**This neighborhood park project was funded by
Penny for Parks and the City of Burlington Sustainable Infrastructure Bond**



**BURLINGTON
PARKS
RECREATION**



@btvpa
enjoyburlington.c
(802) 264-0



Cleaner, cheaper, healthier energy is here. It's time for leaders across the U.S. to commit to 100% clean and renewable energy for all. We are your local Action & Policy group, who are eager to learn more about how you see Burlington furthering its green energy initiatives.

How do you envision our city improving upon its sustainability agenda?

Please reach out if you would like to stay updated or to get involved with the transition!

Respectfully,

Emily -- mle.roland@gmail.com

Hunter -- hunter.grosvenor@gmail.com

Katelyn -- katelyn.ellermann@gmail.com

History

From 2013-2015 a committee of teachers, administrators, parents, and community members assessed the needs of the BHS community with activities including:

- Visioning and information gathering from community
- Accessibility walk-through
- Workshops with teachers and staff

In May 2017 Superintendent Obeng formed the "ReEnvisioning Committee" comprised of community members who:

- Held outreach to the community
- Three community input sessions
- Presentations at all NPAs
- Presentations at principal/parent coffees, PTO meetings, student community sessions
- Created a video showcasing some of the inadequacies of BHS
- Analyzed community input data and explored three resulting three options.

In April 2018, the School Board accepted the ReEnvisioning Committee's recommendation to the superintendent of expansion and renovation with partial demolition.

In August 2018, the School Board passed a resolution asking City Council to place a bond question on the Nov. 2018 ballot for \$70 million to complete the project. City Council approved this bond question request 11-1.

Vote November 6th

Find Your Polling Place

Don't know what ward you are located in?
Visit www.burlingtonvt.gov for a Ward Map.

Ward 1

Mater Christi School
100 Mansfield Avenue

Ward 2

H.O. Wheeler School
6 Archibald Street

Ward 3

Lawrence Barnes Elementary School
123 North Street

Ward 4

Saint Mark's Youth Center
1271 North Avenue

Ward 5

Burlington Electric Department
585 Pine Street

Ward 6

Edmunds Middle School
275 Main Street

Ward 7

Robert Miller Recreation Center
130 Gosse Court

Ward 8

Fletcher Free Library
235 College Street

"It is a severe concern that I have, that our building is inaccessible for students with mobility issues, that it takes an inordinate amount of effort and time to get places, to take classes that would provide an equitable education." Tracy Racicot, BTC Director

ReEnvisioning Burlington High School



Visit

www.bsdrv.org/bhs-renovations
to learn more and get involved today!



With Partial Demolition

Aging and outdated learning spaces:

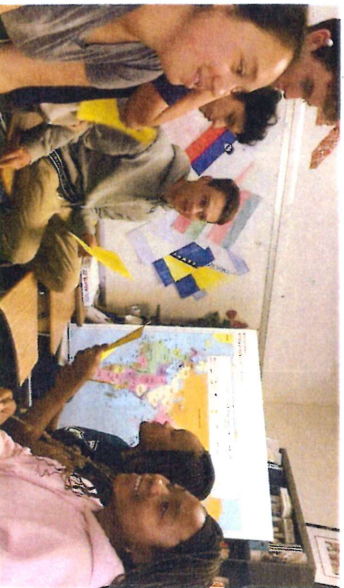
- Does not meet "Collaborative High Performance Standards"
- 1960s classrooms, rigid and inflexible
- Science labs too small
- STEM equipment needs replaced

Over \$30 million already needed for deferred maintenance:

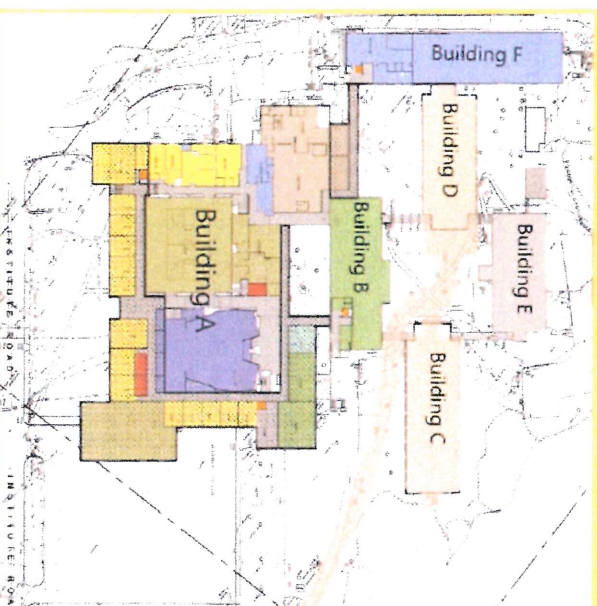
- Crumbling infrastructure
- Outdated plumbing, electrical, heating, and ventilation systems
- Insufficient insulation and windows
- Outdated tech infrastructure

Accessibility does not meet current standards:

- Comprised of six academic buildings with unheated, outdoor walkways
- Seven stories from top to bottom
- Elevators outdated and in undesirable locations

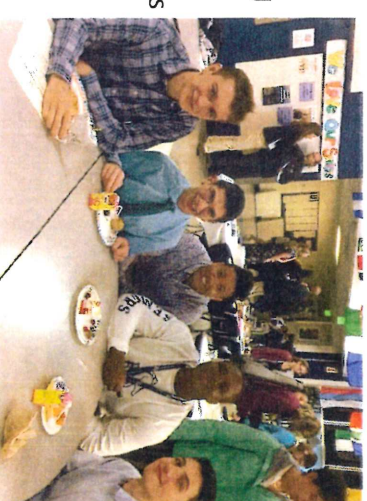


"I use crutches to get around, and for me to travel from band to physics involves three elevators, an outside path, and building connectors." Seamus Stein, BHS senior



What does the plan look like?

- Renovate & build new construction around A & B buildings
- Demolish C and D buildings, repurpose or demolish E
- Fully accessible, ADA compliant
- 21st Century Learning Spaces
- Flexible layout for Personalized Learning Programming
- Reduced travel distance and time between classes
- Robust safety & security upgrades
- Community multi-use meeting spaces, athletic facilities
- Better technology integration
- Infused electromagnetic spectrum of colors and light for learning stimulation
- Adaptive, inclusive classrooms
- Welcoming exterior facade with entry access control
- Improve energy/environmental efficiency with new mechanical, electrical, plumbing and thermal envelope
- 1st "CHPS" Certified school in VT, meeting high standards for energy efficiency & learning environment design



To learn more go to:

www.bsdyt.org/bhs-renovating



2018
CLEAN WATER
RESILIENCY PLAN

AGENDA

- Overview Bond Proposal
- Summer Infrastructure Issues
- BTV Water Quality Progress
- Detailed Bond Proposal: Infrastructure Stabilization & Modernization
- Rate Impact & Affordability Strategies
- Questions/Resources

CITYWIDE REINVESTMENT & CONTINUED LAKE STEWARDSHIP

- Stabilize and modernize aging infrastructure
- Continuing a Citywide Legacy of natural resource protection
- The Clean Water Resiliency Plan is result of years of careful risk-based capital planning
- **\$30 M Plan**
 - \$19.9 M for Wastewater
 - \$10.1 M for Stormwater
- **\$5.36/month** increase for typical single family property owner
- Bond Vote **November 6**



Increased Capital Planning in Recent Years

Burlington Wastewater **2017**
20 Year Engineering Evaluation,
10 Year Capital Plan and
Consulting Engineering Report

Prepared For:
Burlington Department of Public Works
Burlington, Vermont 05401

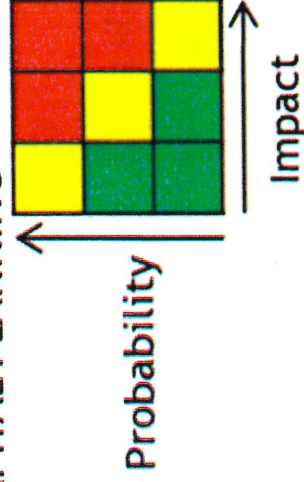


**DuBois
& King**

City of Burlington March 1st, 2017

- Wastewater 20 year engineering evaluation and 10 Year Capital Plan (2017)
- Asset Management /Risk based decision making (since 2013)
- Stormwater Outfall Assessment (2014-2017)
- First Phase Sewer Pipe Assessment (2017-2018)
- Integrated Planning (Long Term Planning to meet new regulatory obligations)

**FOCUS ON RISK BASED
CAPITAL PLANNING**



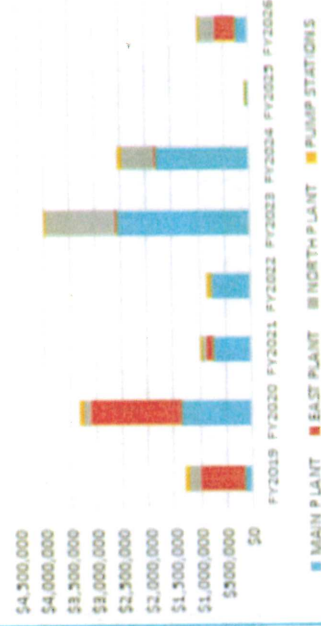
Known Need Was on Near Term Horizon

Looking ahead to FY 20 and beyond

Challenges

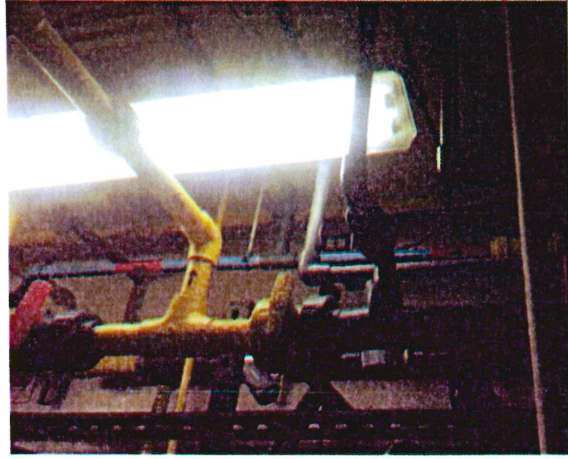
- **Water Debt**
 - Important to maintain or increase Moody's A1 rating
 - Maintain required 1.25 Debt Coverage Ratio
- **Future Water Resources Borrowing to meet Capital Deficits**
 - Water:
 - Water Bond authorization will only replace/rehabilitate ~8-10 miles of our 110 mile distribution system
 - High Service Tanks: At a minimum, Redstone Storage tank maintenance (~\$500k) due in FY2021 (likely sooner); UVM tank maintenance (\$1M) in FY27
 - Wastewater:
 - ★ Replacement of existing treatment system components at WWTPs and pump stations (\$8-10M)
 - ★ Collection System capital needs (~\$1M/year for 5 years)
 - Lake Champlain TMDL possible plant upgrades
 - Biosolids management
 - Stormwater
 - ★ Collection System capital needs (~\$1M/year for 5 years)
 - ★ Outfall Repair (\$3 M to fix top 11 worst outfalls)
 - Lake Champlain TMDL impervious retrofits
 - Combined Sewer Overflow Management
- **Revenue**
 - Conservation/Water efficiency
 - Lose rest of Hadley Road in FY2020 (\$110K)

WASTEWATER PLANT & PUMP STATION
CAPITAL ROLLUP BY FISCAL YEAR



No comprehensive upgrades have been made to the **Wastewater Plants** since 1994.

Following are a number of examples of the impacts of underinvestment



Disinfection system pipes: Multiple repairs (different color pipes)



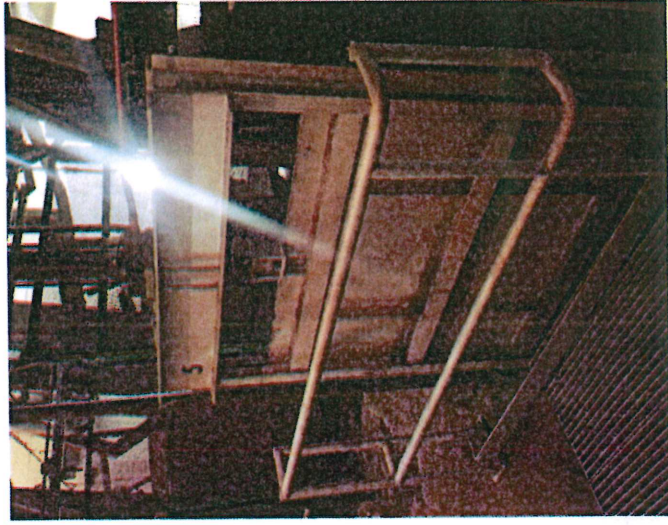
Disinfection system control panel: only one switch (hand-off-auto) works. Other control panels have obsolete parts that we cannot



Bromine pumps: 24 years old; critical to disinfection of wet weather

No comprehensive upgrades have been made to the **Wastewater Plants** since 1994.

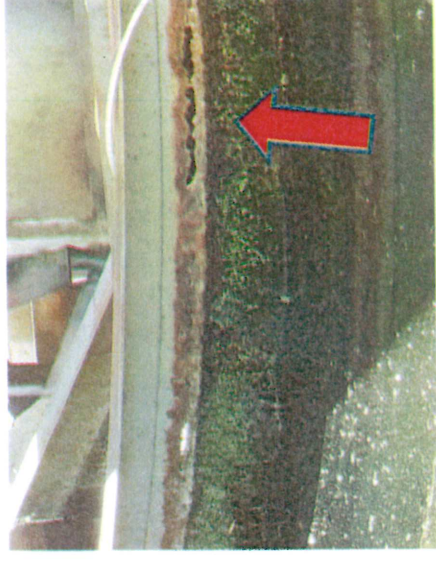
Following are a number of examples of the impacts of underinvestment



Headworks: Automatic gate that is no longer automatic



Corroded metal components: Full of bandaids and patches or not easily repairable.

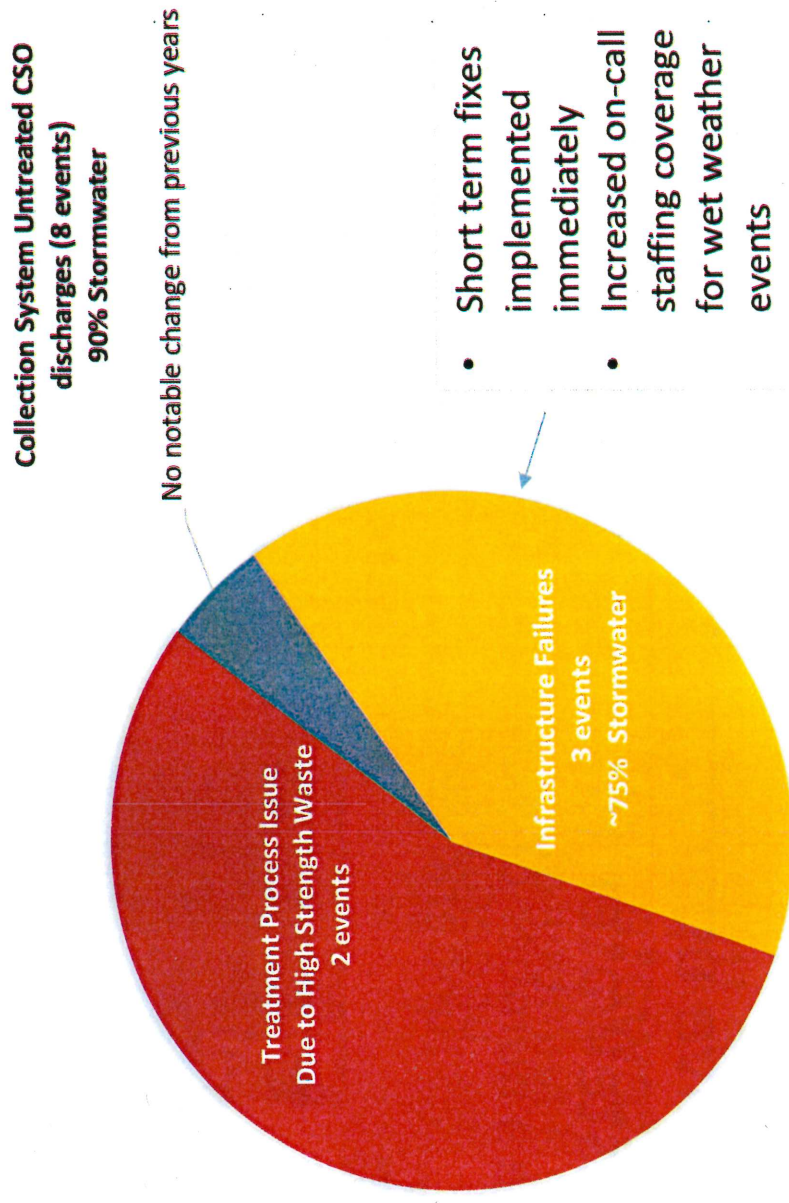


ACTING NOW

2018 Permit Violations and Beach Closures

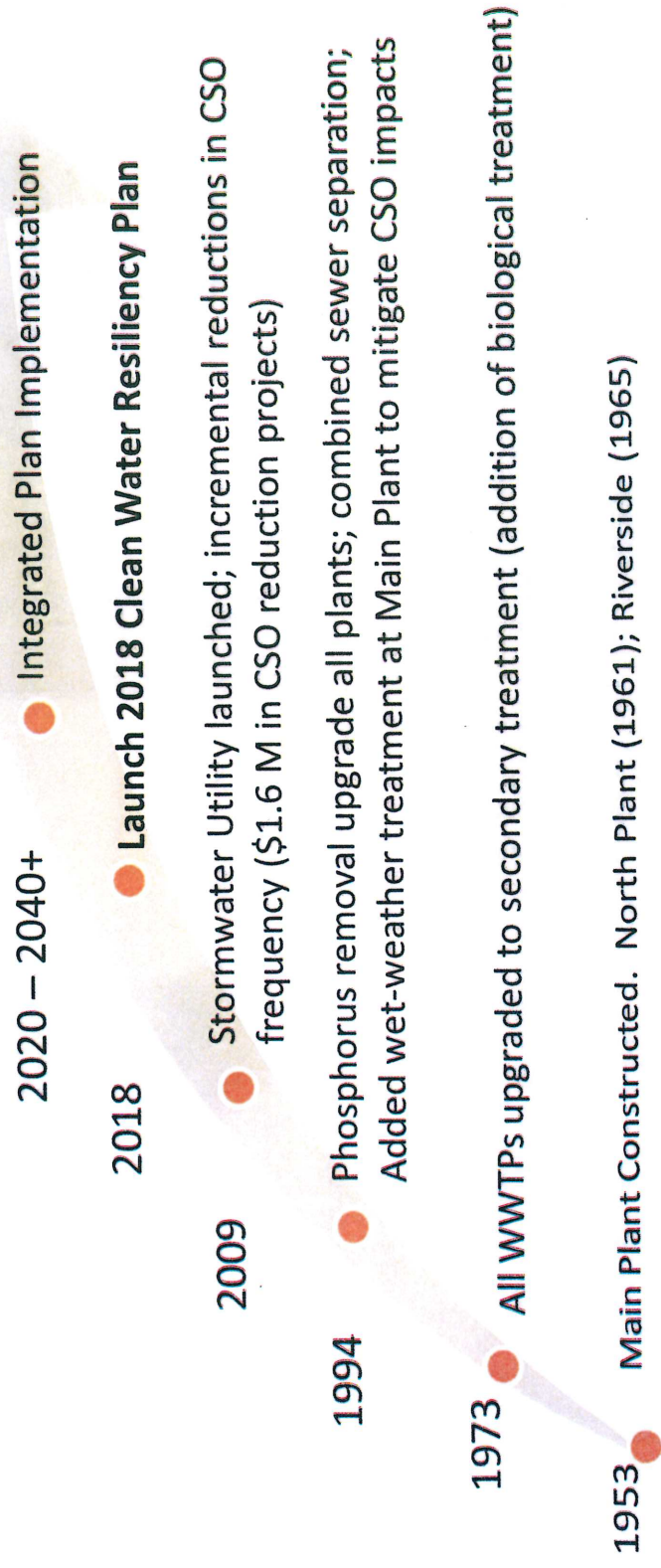
CAUSES OF UNDISINFECTED DISCHARGES 2018

TOTAL = 13 MG

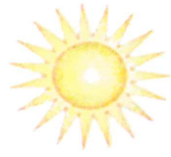


Clear Progress on Clean Water

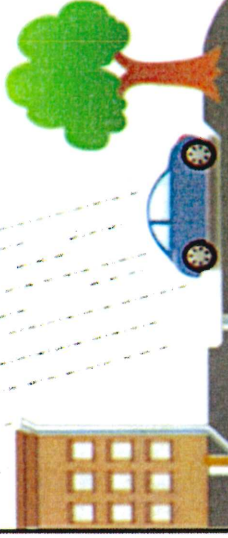
See <http://bit.ly/WaterResHist>
for the history of Burlington Water Resources



An Inherited Challenge: Our Combined Sewers



Under normal conditions, wastewater goes directly to the wastewater treatment plant



When a large rain event occurs, stormwater joins wastewater and excess flows get discharged into nearby streams

This prevents sewage backups into properties and onto roadways/sidewalks

Before 1994: Large Volumes of Combined Sewer Overflow Discharged Annually into Lake Champlain

Prior to 1994 more than 170 Million Gallons of an untreated mixture of stormwater and sewage discharged annually into Lake Champlain, Englesby Brook, Winooski River



Up until early 1990s – 11+ CSO

Gazo Ave

Manhattan @ Park St

Manhattan @ N Champlain St

Colchester Ave (not ID'ed until 2010)

Pine St @ Lakeside (not ID'ed until 2015)

Bottom of Maple St

Bottom of College St

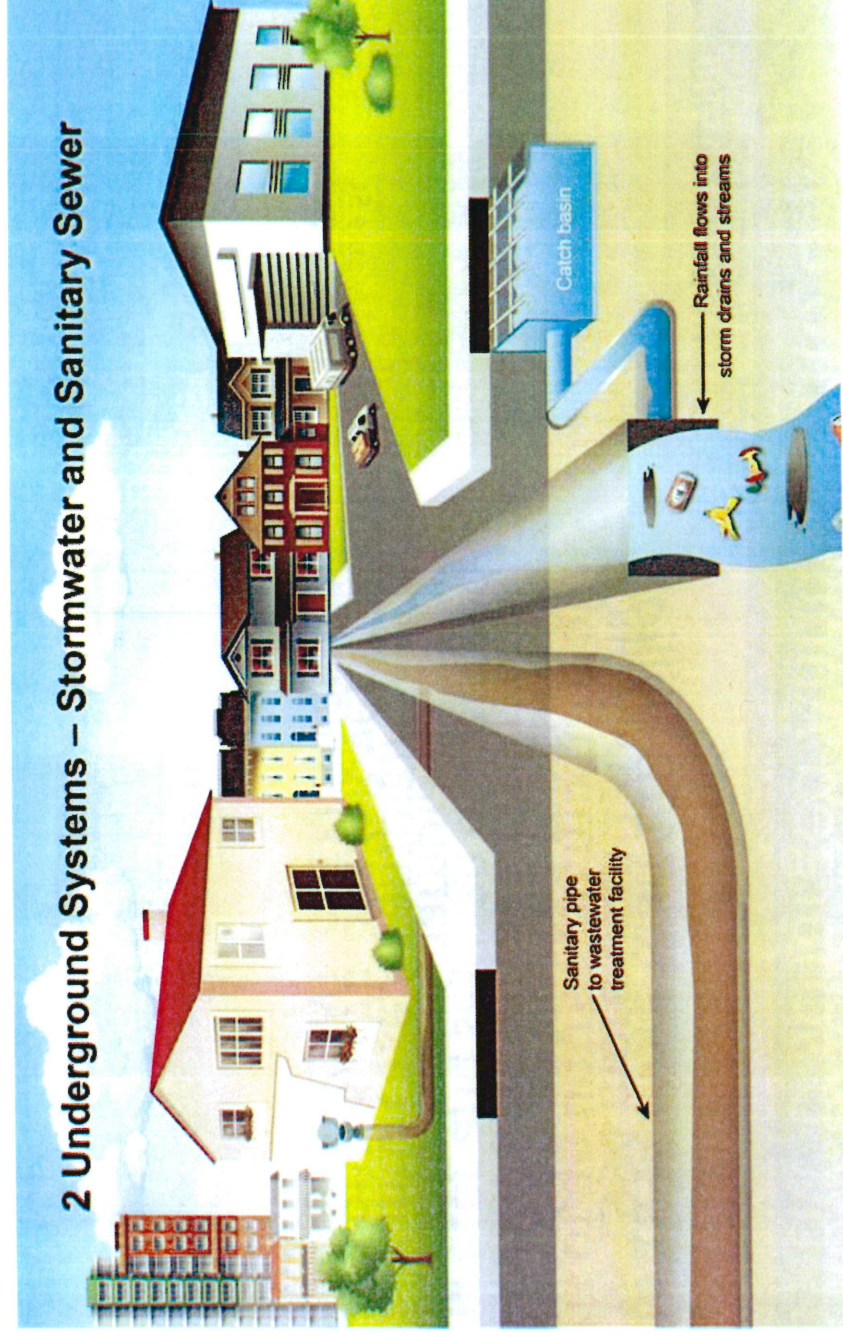
Howard St

Marble Ave

Englesby Brook (multiple points)

Main WWTP (shoreline discharge with no treatment or disinfection)

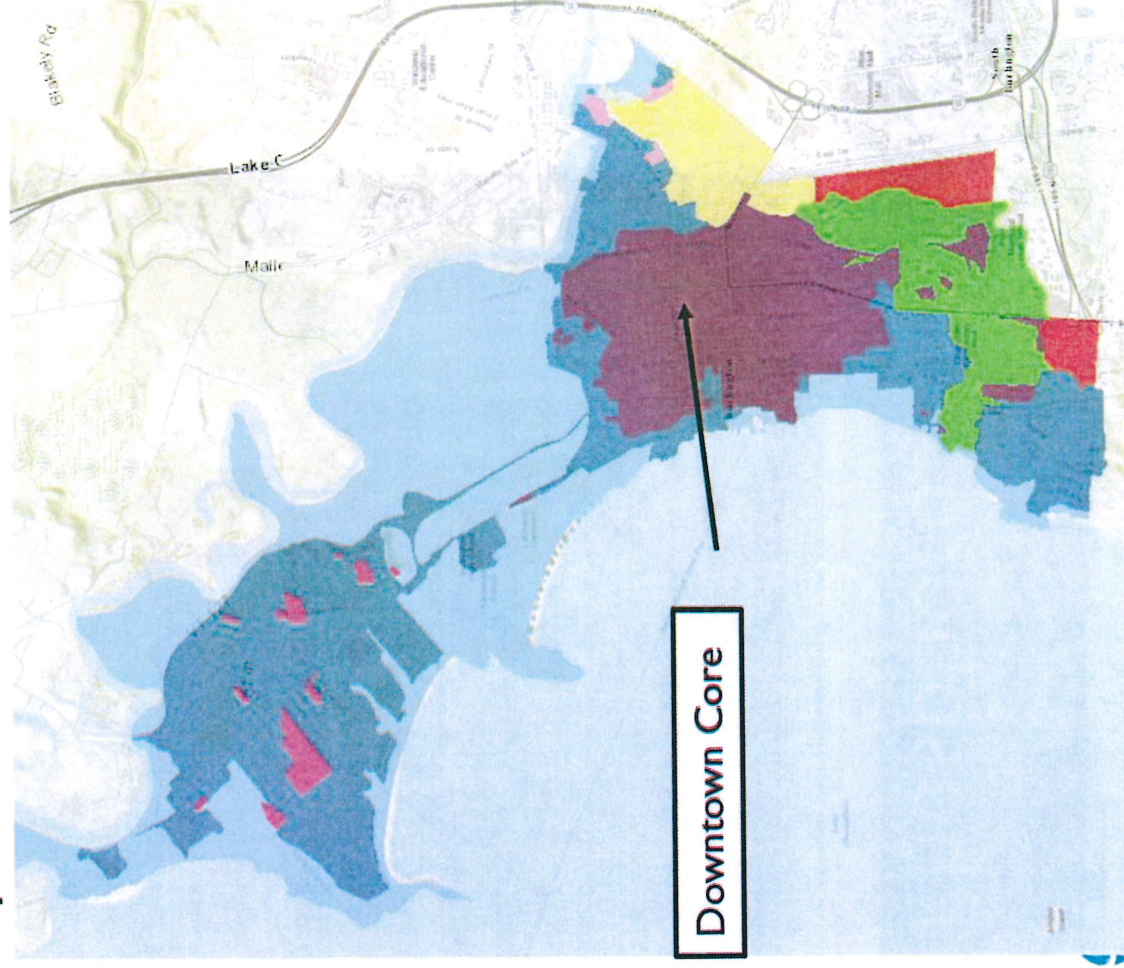
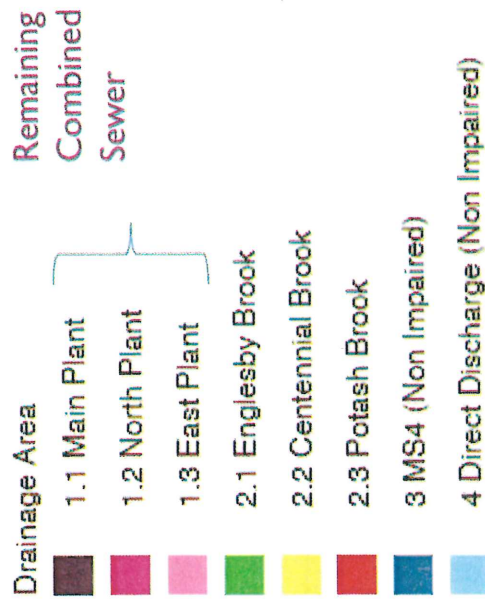
1994 \$52M Improvements: Collection System – CSO Elimination *Through sewer separation (unfortunately without treatment)*



Unfortunately we now know that untreated stormwater runoff can have long term chronic impacts such as nutrient loading and

Complete Separation Not Deemed Feasible/Cost Effective, Particularly in the Downtown Core and Because Of Likely Long-Term Water Quality Impacts

Impacts



- 26% of sewer land area is served by a **combined sewer**
 - Main WWTP Plant
- Combined Sewer Area has **very high %** imperviousness (~57%)

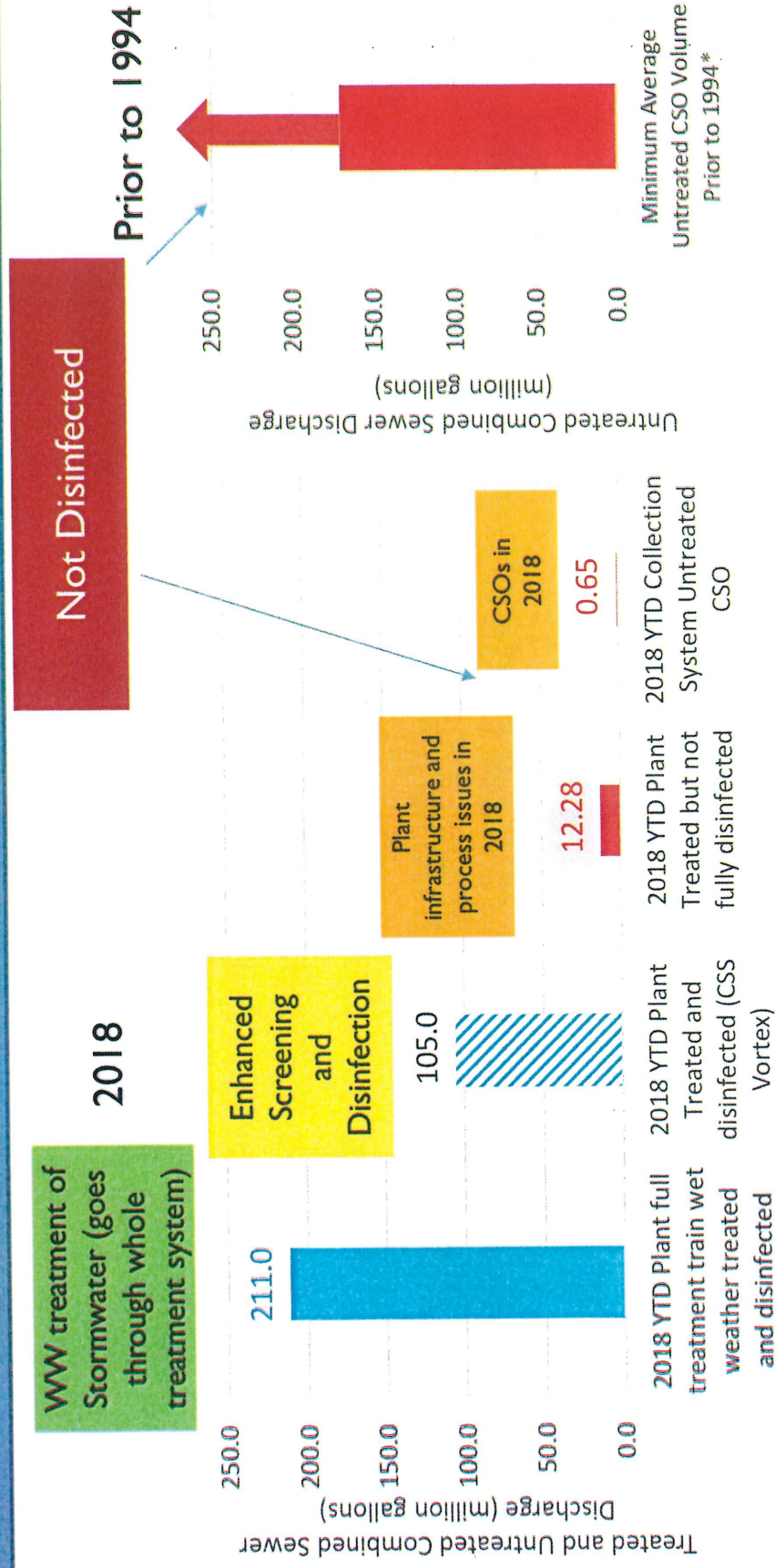
1994 \$52 M Bond: Phosphorus Removal and CSO Treatment



- Installed a CSO screening and disinfection system "The Vortex"
 - treats combined sewer flow that reaches the plant but exceeds the capacity of the overall plant
 - Screens solids and sends them to the plant for treatment
 - Uses quick acting disinfection agent to bring discharges well within Vermont WQ Standards.

Main Wastewater Plant

Comparison of Combined Sewer Discharges from Pre 1994 to 2018 (through 9/26/18)



- Wastewater and a large volume of stormwater receive premium treatment at the Main Facility
- Overall, the volume and frequency of untreated collection system combined sewer overflows is significantly decreased from the 1990s and has decreased further since 2009

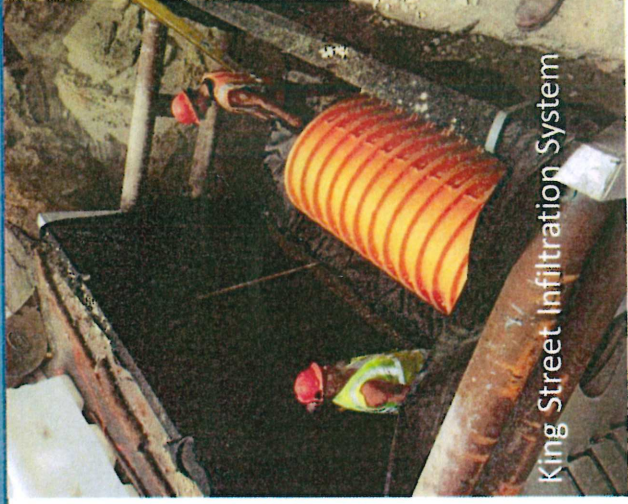
Since 2009: Improved Stormwater & Wet Weather Management

- Launched Stormwater utility in 2009 – 2nd in state
- Increased regulatory review of development projects (Chapter 26 of City Ordinance)
 - Required to manage at least 50% of existing impervious
 - Required to manage 100% of new impervious
 - Large projects required to take additional SW off Combined Sewer system to offset their projected WW flows (Cambrian Rise, City Place Burlington, etc.)

Recent Wet Weather Mitigation Projects



Grant Street Infiltration System



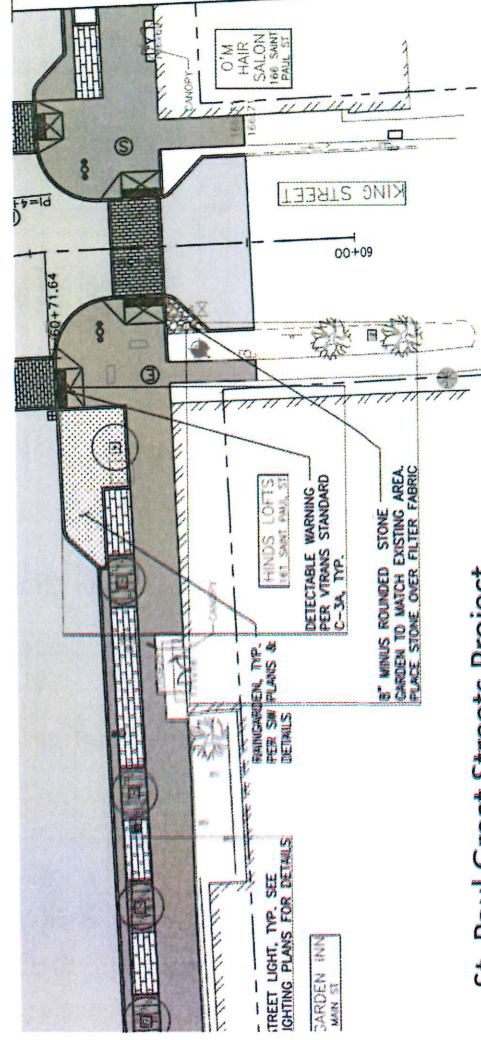
King Street Infiltration System



Upper North Infiltration Bumpouts

Additional Implementation:

- Hyde Street Bioretention
- S. Winooski SW Sidewalk
- Park Street Infiltration System
- Russell Street Infiltration System
- North Ave Infiltration System
- Allen Street Infiltration System
- Booth Street Bumpouts
- Possible Separate SW Outfall for Railway Enterprise Project



Collection System – Improving Untreated CSO Trends

Frequency of Untreated CSOs 2005 through 9/26/18

Year	N. Champlain	Park	Gazo	Colchester	Pine Street	Notes
2005	3	12	1	UNK	UNK	
2006	1	11	3	UNK	UNK	
2007	3	8	2	UNK	UNK	
2008	2	13	?	UNK	UNK	
2009	4	8-9	?	UNK	UNK	
2010	0	5	?	2	UNK	Colchester Ave CSO discovered through mapping/outfall visits
2011	1	9	1	3	UNK	Gazo, North Champlain and Park frequency and Volume
2012	1	6	1	9	UNK	reduced by ARRA projects 2010-2012
2013	4	6	2	10 - 13	UNK	Wet year
2014	0	1	1	2	UNK	Colchester CSO improved through pipe cleaning downstream
2015	0	3	1	0	8	Pine Street Discovered through mapping
2016	0	1	0	0	5	
2017	0	1	1	0	8	
2018 YTD	1	1	0	1	8	

Note: Frequency data do not show decreases in duration or volume, particularly for Park and Gazo; nor adjust for the impact of wet/intense rainfall years such as 2011 and 2013.

Recent installations of flow meters at Pine, Park, Gazo are now providing volumetric data

UNK = Previously unidentified CSO point, no data available
 ? = data not easily available, still researching
 Range provided when unclear or multiple events on one day

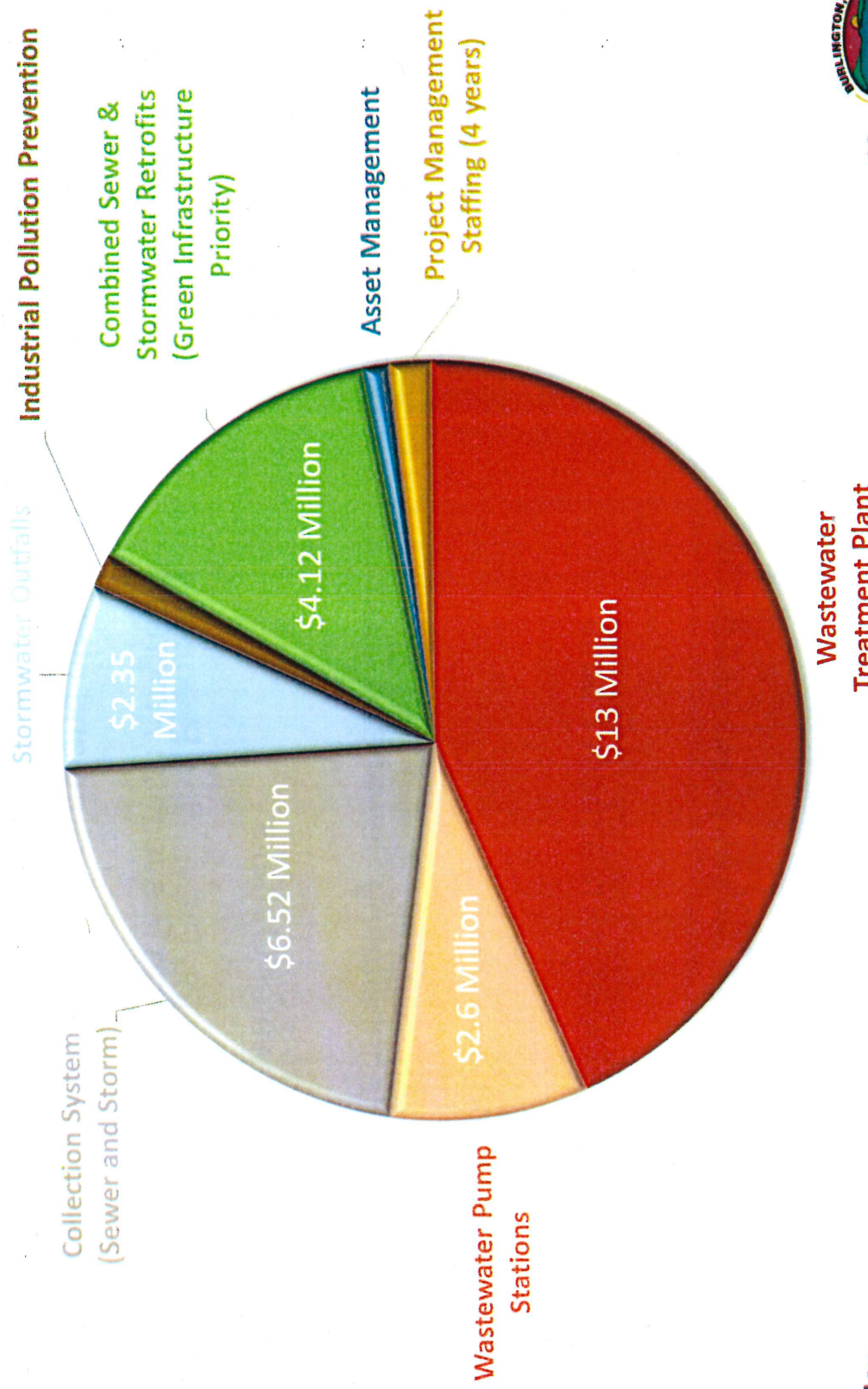
Clean Water Resiliency Plan and Bond

7 Points to Stabilize and Upgrade

1. Investing in Wastewater Treatment Plants
2. Updating Pump Stations
3. Relining and Rehabilitating Sewer and Stormwater Pipes
4. Repairing Stormwater Outfalls
5. Implementing Pollution Prevention Programs
6. Constructing Green Infrastructure and other Retrofits for Combined Sewer and Separate Stormwater Management
7. Completing Integrated Planning

\$30 M Clean Water Resiliency Bond

Portfolio of Investments over next 4 – 5 years

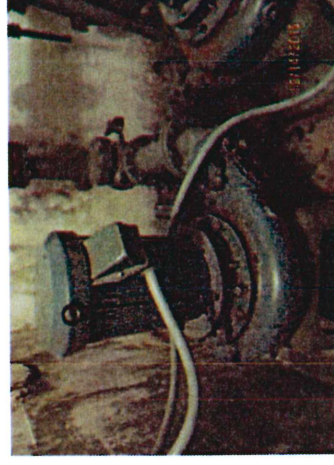


Wastewater Treatment Plant Investment Highlights

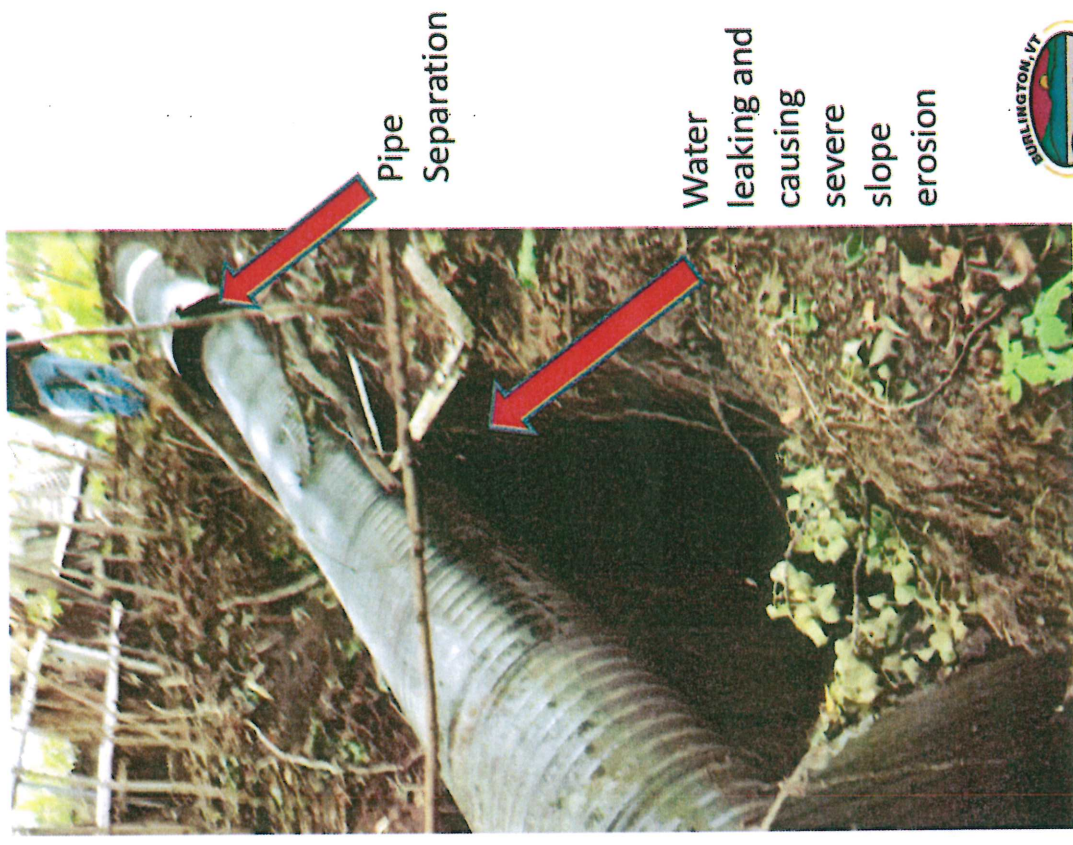
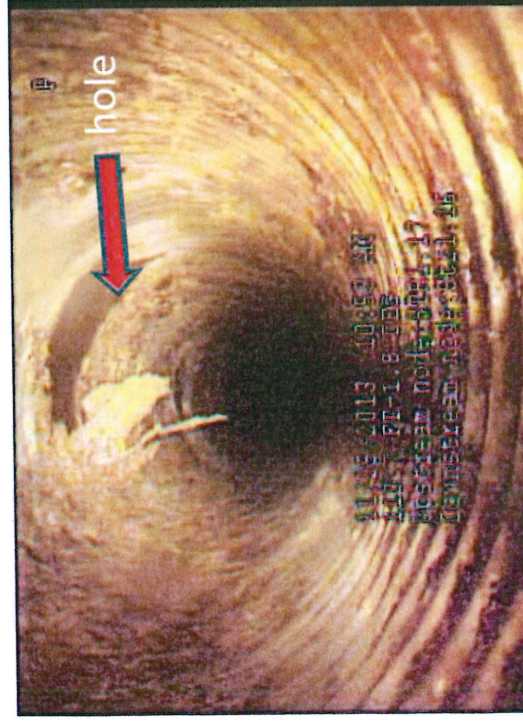
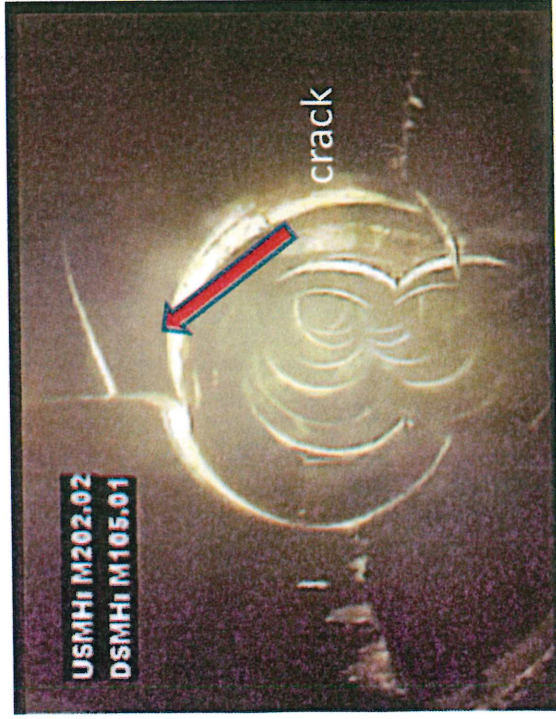
- Disinfection Systems (completion early – mid 2019)
 - Computerized Controls (SCADA and PLCs)
 - Mechanicals (pumps, valves, piping)
- Screening/Grit Systems
- Aeration System (supports biological treatment)
 - membranes
 - upgraded blowers
- Clarifiers (settles out solids)

11 Critical Pump Stations

- 4 of high priority pump stations were built in 1960s and have not had wholesale upgrades
- Several have original pumps, valves and piping
- Corroded metal
- Safety issues – control location require confined space entry
- Do not meet VT requirements for on-site storage

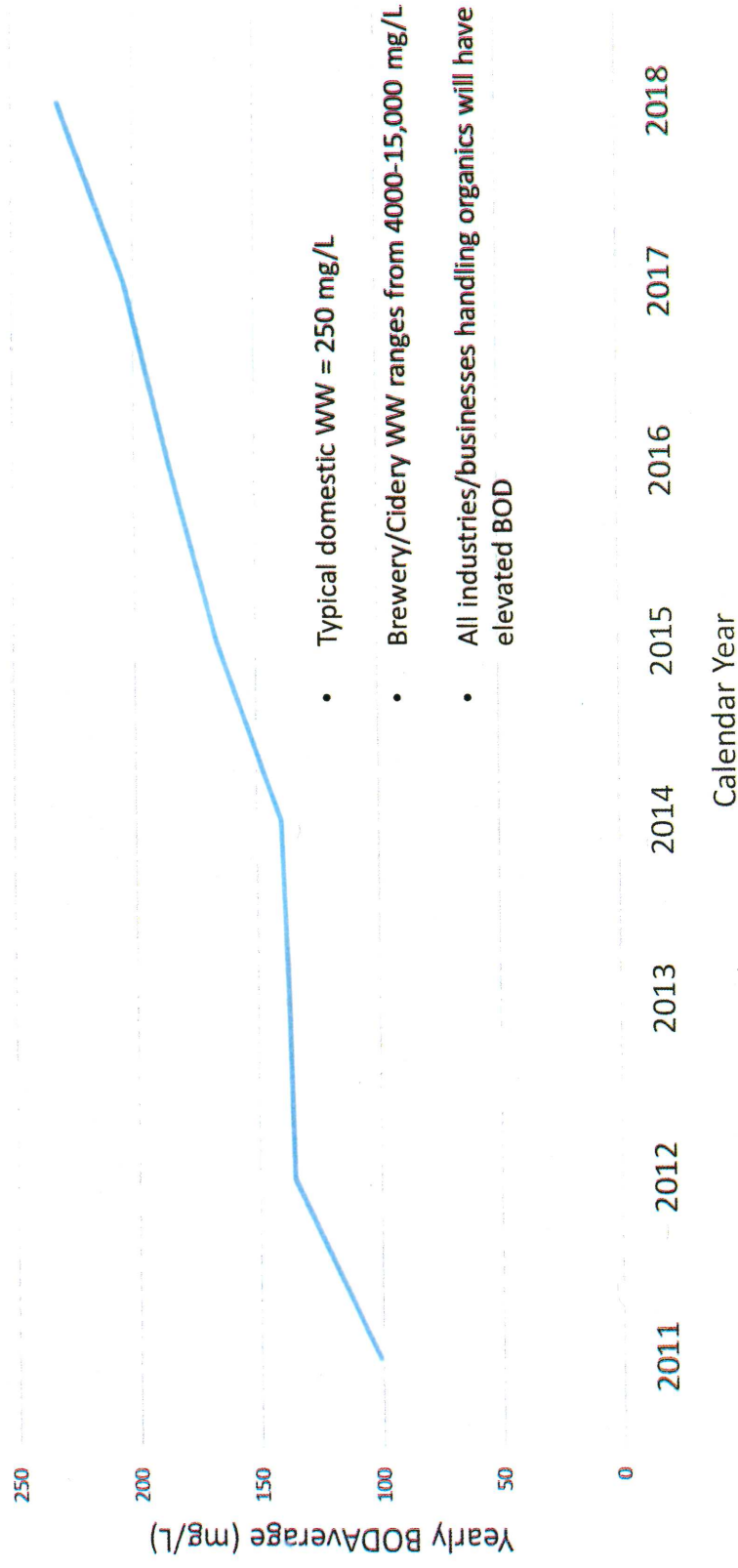


13 miles of Collection System Pipes & 5 Stormwater Outfalls



Implementation of Multi-Tiered Industrial Pollution Prevention Program to Address Increasing Strength of Wastewater

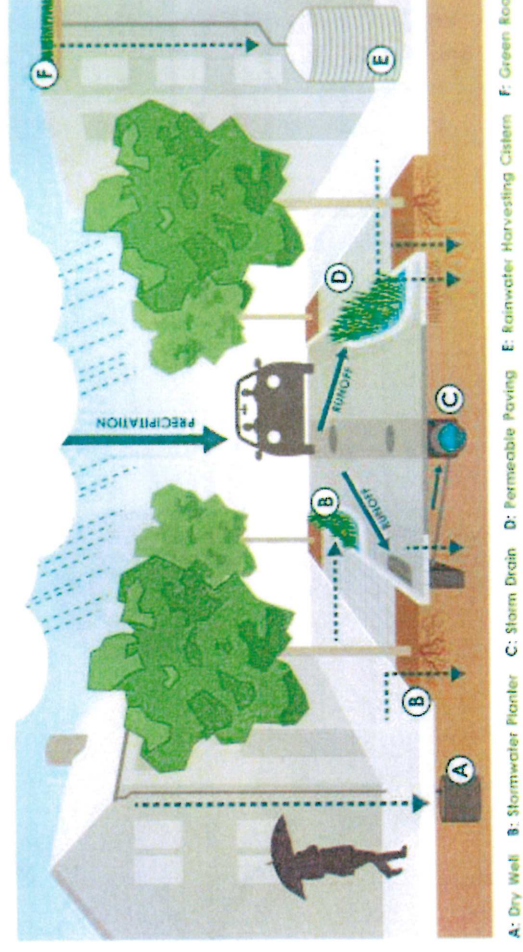
Biological Oxygen Demand of Main Plant Flow Entering Biological Reactors



- Develop robust industrial wastewater pollution prevention program
- Tiered approach to address larger discharges as well as cumulative impact of smaller businesses

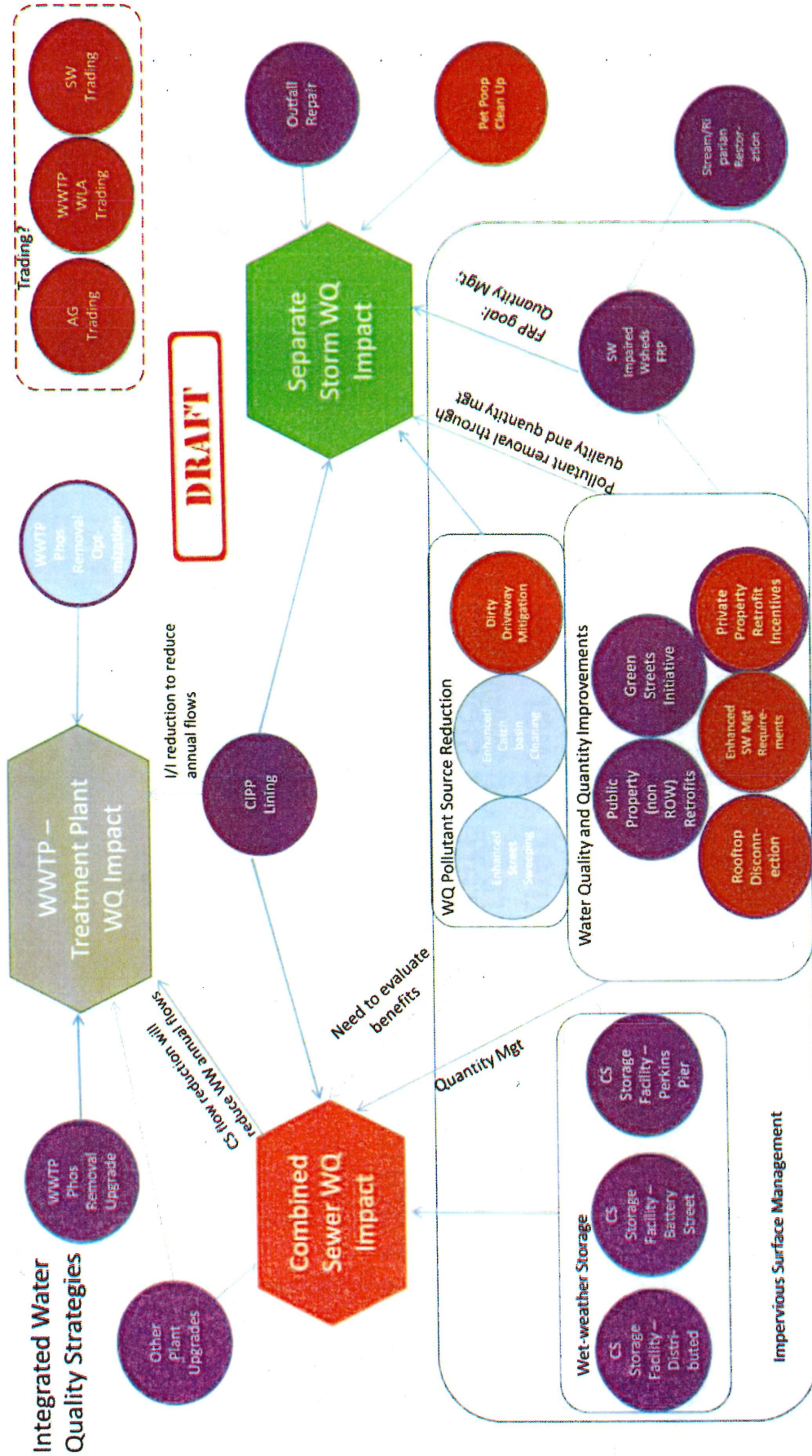
Continue Progress on Combined Sewer Mitigation and Stormwater Treatment Retrofits (~10-12 impervious acres)

- Mitigate impact of untreated collection system combined sewer overflows and combined sewer flows to Main Plant
 - Capture and infiltrate or slow down storm events
 - Prioritize Green Stormwater Infrastructure



- Pine Street CSO: Evaluate feasibility of disinfection station to reduce bacteria inputs

CONTINUE INTEGRATED PLANNING WHAT SOLUTIONS WILL HAVE THE MOST COST EFFECTIVE IMPACT ON LONG TERM WATER QUALITY?



Mitigating the impact of the proposed \$30 M bond

Overall ~40% mitigation of rate payers cost

- Utilize Clean Water State Revolving Fund (SRF) Loans
 - 2% admin fee vs. 3.9%+ municipal bond interest
 - Deferred Pay back on planning/design \$ until after construction
 - 1 year deferred pay back on construction
 - 30 year payback eligible on longer term assets (collection system)
 - Higher administrative burden (approval process, Davis Bacon, Buy America Iron/Steel)
- \$8.18M in interest savings over life of loan (\$37M vs \$45M total payback)
- Single family savings = ~\$19.44/year
- Use existing PayGo Capital to offset some debt service costs
 - Maintain sufficient amount for unplanned and/or smaller capital needs
 - Maintain sufficient amount to re-purpose for improved staffing resiliency
- Funds ~\$13.3M of total \$37.4M in total debt service costs
- Approximately 30% of new bonding will be paid for by existing revenues
- Typical single family savings = ~\$26.40/year



Summary of Ratepayer Costs and Cost Mitigation

- Overall costs:
 - No bond driven rate impact until FY21
 - Maximum bond-driven rate impact for typical residential customer after 5 years =
 - \$64.32/year or \$5.36/month for WW and SW portion of bill
 - Rate mitigation strategies save rate payers approximately 40%
 - Use of Vermont Clean Water State Revolving Fund (2% admin fee v.s 3.9% bond rate)
 - Leverage existing capital line in annual budget to pay some of debt service.
 - Additional State grants may be available to further mitigate costs
 - Evaluation of alternative rate structures and affordability programs by FY21

Summary of Bond Benefits

- Minimize permit violations and beach closures
- Upgrade disinfection systems in all three plants
- Major rehabilitation of all other critical clean water systems
- More green infrastructure and stormwater runoff reductions in combined sewer system and separate stormwater system

Additional Investments Are Needed

- **Beyond 2022**
 - **Capital needs driven by outcome of Integrated Plan and other regulatory requirements**
 - Phosphorus upgrades at WW Plants
 - Combined sewer reduction projects (large and small scale)
 - Separate stormwater runoff management
 - Additional investment in remaining high risk collection system and stormwater outfalls
- **Drinking Water not included in this bond proposal**
 - additional \$ money will likely be needed for continued work on distribution system and newly identified challenges at both high service water tanks
- **Staff Assessment due for completion mid November**
 - ensure proper operations (including emergent situations) and permit compliance
 - fully implement increased capital investment
 - Keep pace of coordination with public and private infrastructure projects
- **Anticipate requesting BOF/CC approval (~November 2018) of amendments to Integrated Planning Study scope and existing SRF planning loan**

Addressing Common Questions

- There HAS been clear progress in reducing our footprint on the Lake over time.
- We have > 1 million gallons of sewage processing capacity at our plants
 - However, reducing stormwater peak flows at the plant does help improve the treatment of stormwater and reduce phosphorus output
- Collection System CSOs (a legacy of our old city) are caused by intense rainstorms
- CSO volume are typically more than 90% stormwater
- 2018 unpermitted discharges and CSOs are not a key driver of Cyanobacteria

Resources

Chapin Spencer, Director, cspencer@burlingtonvt.gov
Megan Moir, Assistant Director – WR, mmoir@burlingtonvt.gov
Rob Goulding, Public Information Mgr, rgoulding@burlingtonvt.gov

Visit the Clean Water Resiliency Plan web page:

<http://burlingtonvt.gov/DPW/cwrp>