



DISTRICT OF SQUAMISH

LIQUID WASTE MANAGEMENT PLAN

**LWMP Stage 2-3 Report: Committee of the Whole
August 19, 2014**

Committee of the Whole – Discussion

- Purpose: To review and summarize the process and outcomes of the Liquid Waste Management Plan.
- Approach: Discussion of presentation materials including Q&A.
- Desired Outcome: Council input on the key findings and recommendations to allow project team to return in Fall 2014 for report approval.

Overview

- LWMP Background
 - Engagement Process and Messages
- Levels of Service Summary
 - Treatment
 - Stormwater
 - Wastewater Flows
- Implementation
 - Outreach
 - Summary of Programs and Projects
 - Cost Recovery
- Next Steps

LWMP Background

- Authority comes from the “Environmental Management Act” (BC)
 - Interim guidelines in 2011 (update)
- Approval from Minister (MoE)
- Two Primary Objectives
 - Protect public health and environment
 - Effectively consult with public



Why a LWMP?

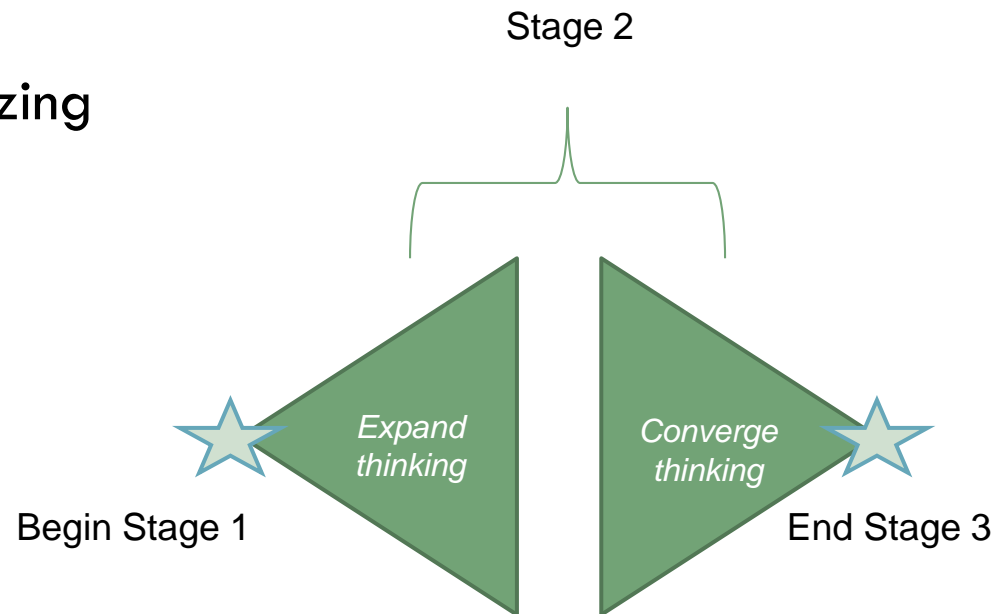
- Engage the public and experts to confirm direction
- Focus servicing and investments towards defined objectives
 - 20 year plan
- Design your game plan
 - Road map to meet treatment standards and growth
 - Operating Certificate
- Adopt a community supported financial plan
 - Borrow and finance based on confirmed priorities

Process Background

- Define Issues and Problems
- Identify feasible solutions
- Evaluate options and select the preferred
- Enacted by Bylaw – legal document
- Implement without further approvals

LWMP Process

- Stage 1 “Identify”
 - Issues and Options
 - Priorities
- Stage 2 “Evaluate”
 - Analysis, costing, prioritizing
- Stage 3 “Adopt”
 - Define plan



The Committee

□ Steering Committee

- District Staff w/ Urban support
- Stage 1 report submitted to Council in December 2012

□ Combined Committee

- Technical Committee + Local Committee
 - Represent science; Represent the community
 - Senior government representation
 - Local advisory groups and environmental associations
 - Business

Public Feedback

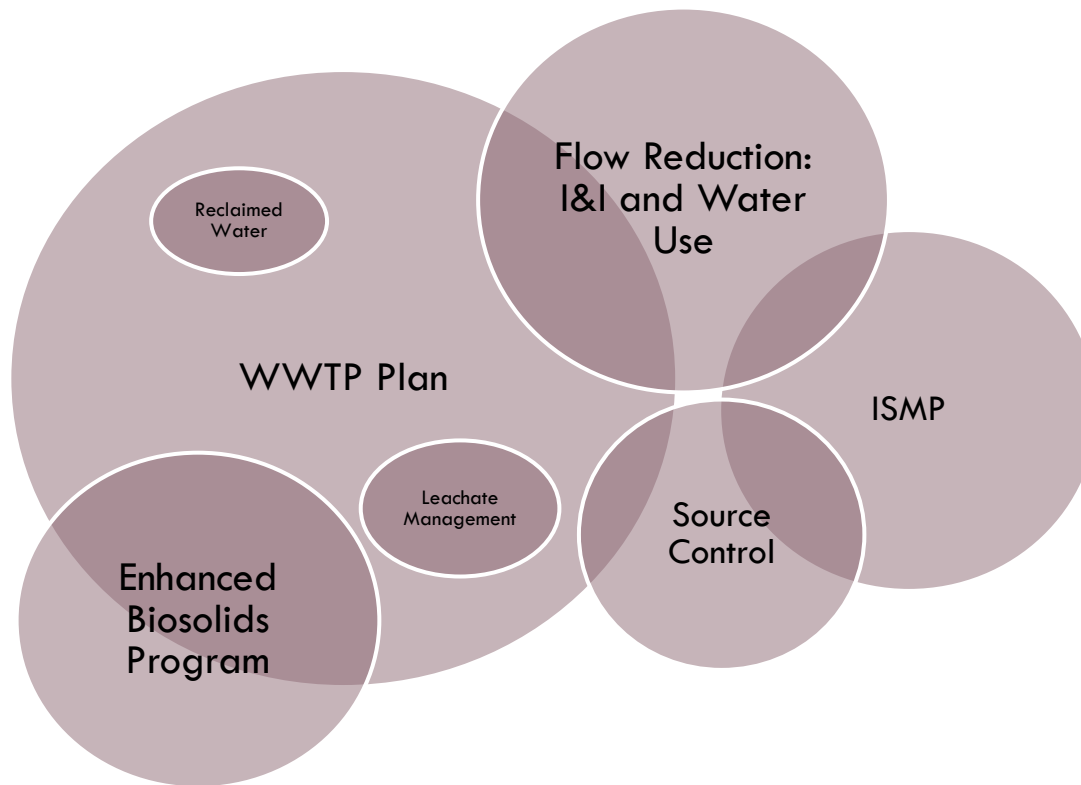
- Protect and Enhance Creeks/Rivers
- Create green infrastructure where possible
 - Energy recovery
- Address odours
- Sustainable biosolids
- Water conservation okay ✓

Levels of Service Review: Objectives

- Accommodate growth
 - Leader in WW treatment and enviro health.
 - Comply with MWR in the long-term
- Fiscally responsible
 - Allocate costs and propose revenues
 - Tie into AM.
- Pursue waste-to-resource
 - Where feasible and where public interest
- Public involved and committee endorsed
 - Excellent feedback to date

LOS: How Topics Connect

- District emphasis and public interest align



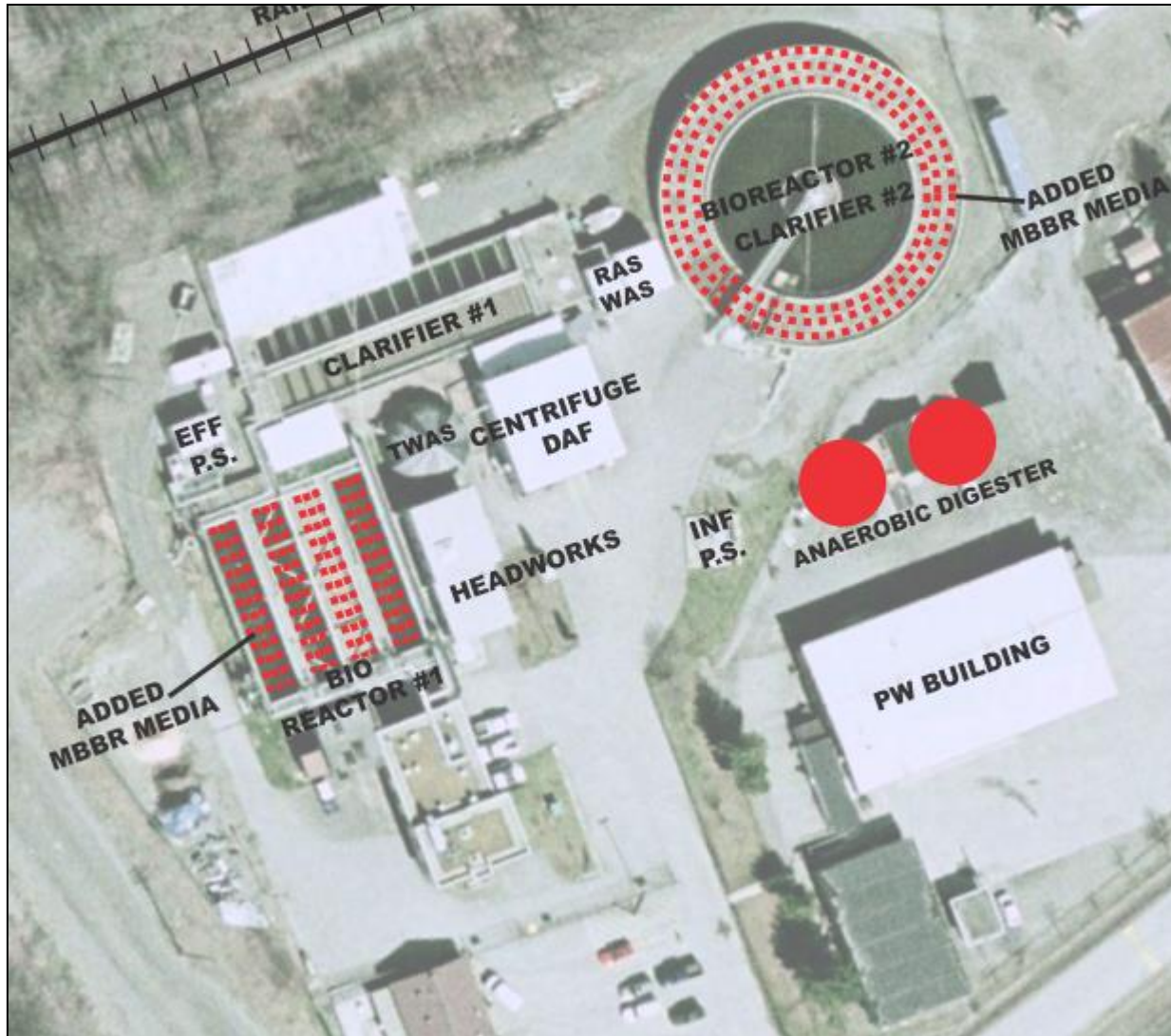
LOS: Treatment

- WWTP updated and expanded in 2006
- Environmental Impact Study 2013
 - ▣ Disinfection needed; MoE direction – recreation/habitat
- Consider triggers for increasing LOS
 - ▣ Compliance: new regulations MWR
 - ▣ Condition: aging assets and renewal
 - ▣ Capacity: growth and increasing flows
 - ▣ Community: public/environmental suasion

LOS: Treatment

- Three Options for Capacity, Compliance, Condition
 - Community input incorporated into long-term
- UV to protect water quality in Squamish River
- **Preferred Option**: Convert to MBBR
 - Plastic media for organisms → density of solids
 - Other upgrades required: screens, centrifuge, digest
 - Achieve compliance at lowest cost; first priority
 - Reduce odours in long-run; monitor and implement capital solutions later

Option 3: Convert to MBBR



LOS: Biosolids

- LWMP biosolids priorities
 - Reduce cost and footprint of trucking
 - Develop long-term security
 - Ensure final product is environmentally safe
- Options
 - Status quo - Whistler
 - Partner-private local processing
 - District-led local processing



...Excerpt from Report...

LOS: Biosolids

- Recommendations – *minimal change at this time...*
 1. **Create agreement with Whistler**
 - Aligned with Provincial objectives currently
 - Operational requirements (by DoS) are low
 - Thorough review of fees (additional costs may arise)
 - Only build new DoS program (option 2 or 3) if current approach fizzles
 2. **Optimize Trucking**
 - Minimize water
 - Study fleet optimization

LOS: Stormwater

- Source of Pollutants
 - Can be on par with Treated Effluent
 - Why it's part of liquid waste management
- Ministry focus → e.g. MetroVan
- Strong interest from public to enhance creeks/rivers
- Integrated Stormwater Management Planning
 - Policy shift; organizational response: *cross-functional*
 - Drainage and environment: *capital programs more comprehensive*
 - Development < eco-footprint: *new tools*
 - fish-habitat focus → performance: *monitoring and decision-making*

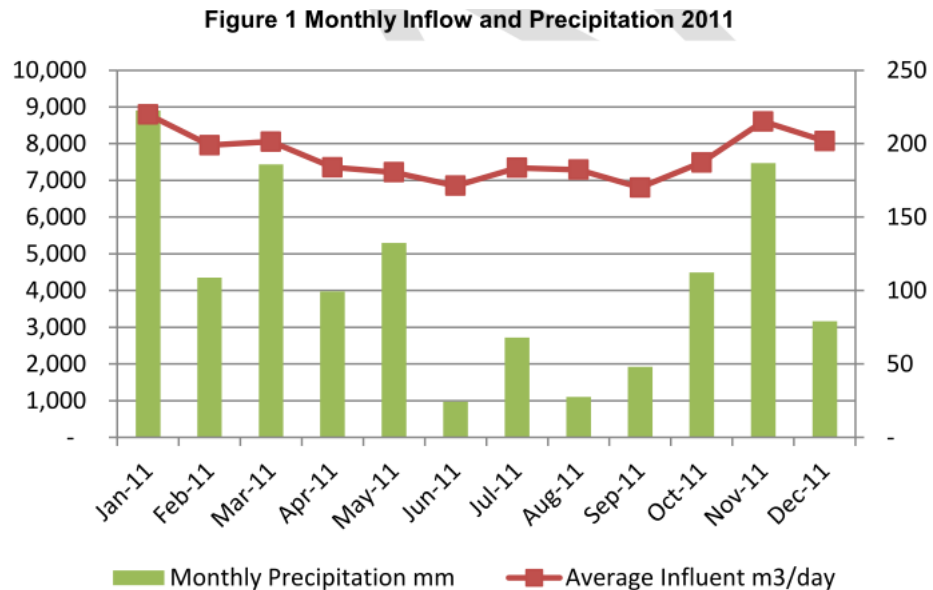
LOS: Integrated Stormwater

Phases and key outcomes



LOS: Wastewater Flows

- Reduce Inflow and Infiltration
 - Conduct assessment of pipe condition every 10 years
 - Commission flow monitoring stations: 4 locations over 4 years
 - Capacity upgrades soon – save \$\$
- Indoor water conservation focus
 - Follow Living Water Smart
 - Technology-hardware
- Save operating and capital costs



Implementation-Outreach-Finance

- Engaged the public and MoE → *20 year plan of action*
- Outreach
 - Ongoing need to connect services with customers/residents
 - On-site stormwater, foreign materials, odours
- Costs and Cost-Recovery
 - Enhanced LOS has a cost → gradual, leverage funds
 - Consider dedicated storm/flood funding
- Adopt a community supported financial plan
 - Finance based on confirmed priorities

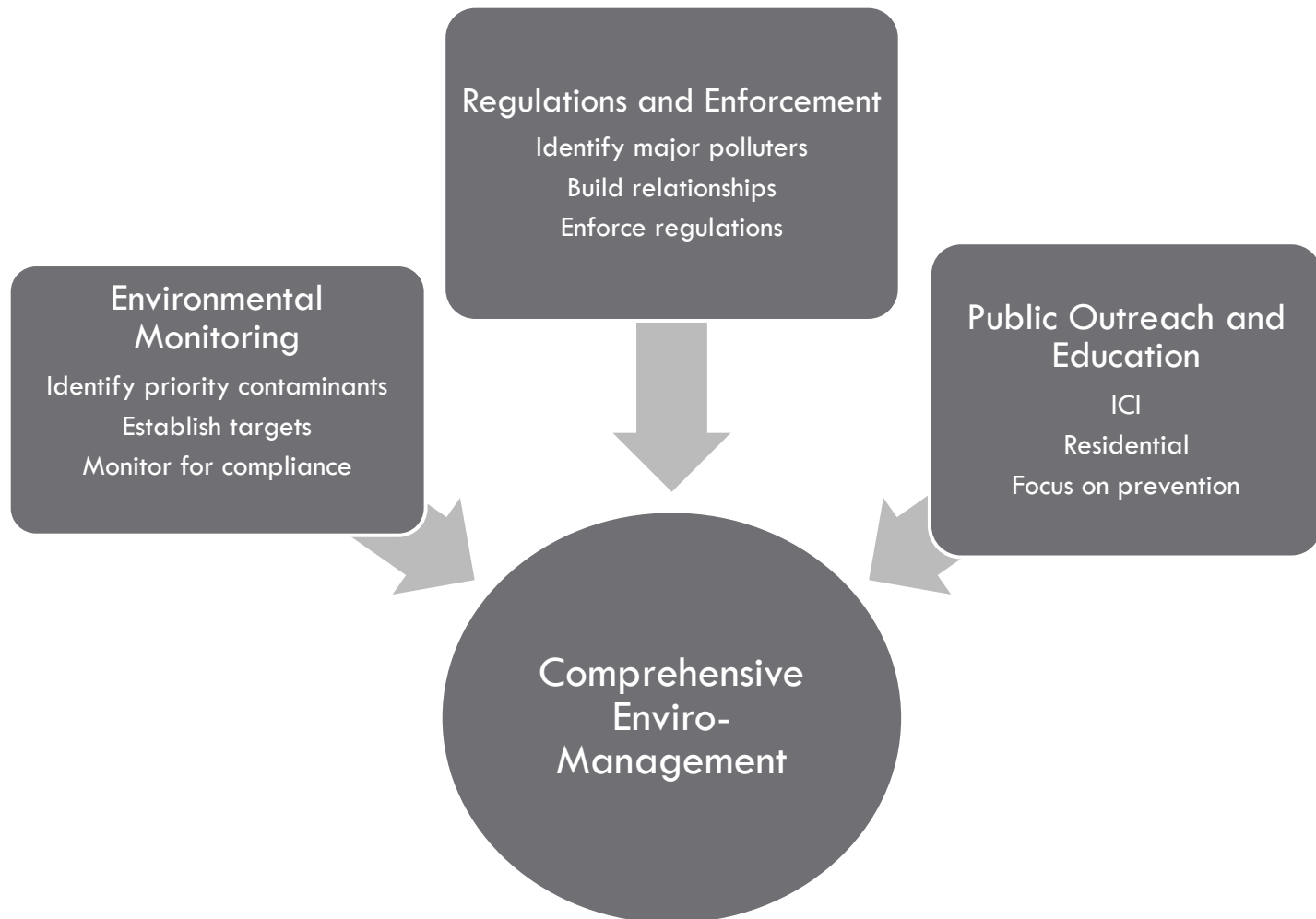
Outreach

- Source Control Program(s)
 - Inflow and infiltration
 - Water conservation
 - Foreign materials → Bylaw
 - Stormwater

- Embrace public interest in water quality and conservation

- Report out on obstacles and successes

LWMP Outreach



Summary of Programs and Projects

□ LOS: Treatment

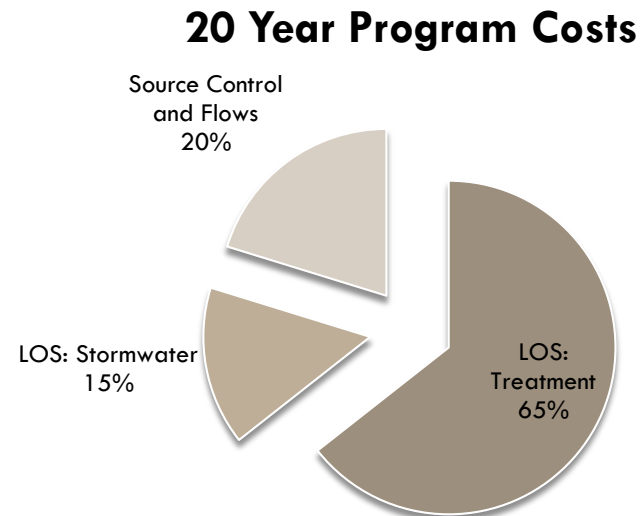
- \$11.2 million total (including capital)
- \$19.5M to ~ \$6M to \$8m
- 50:50 capital to operating

□ LOS: Stormwater

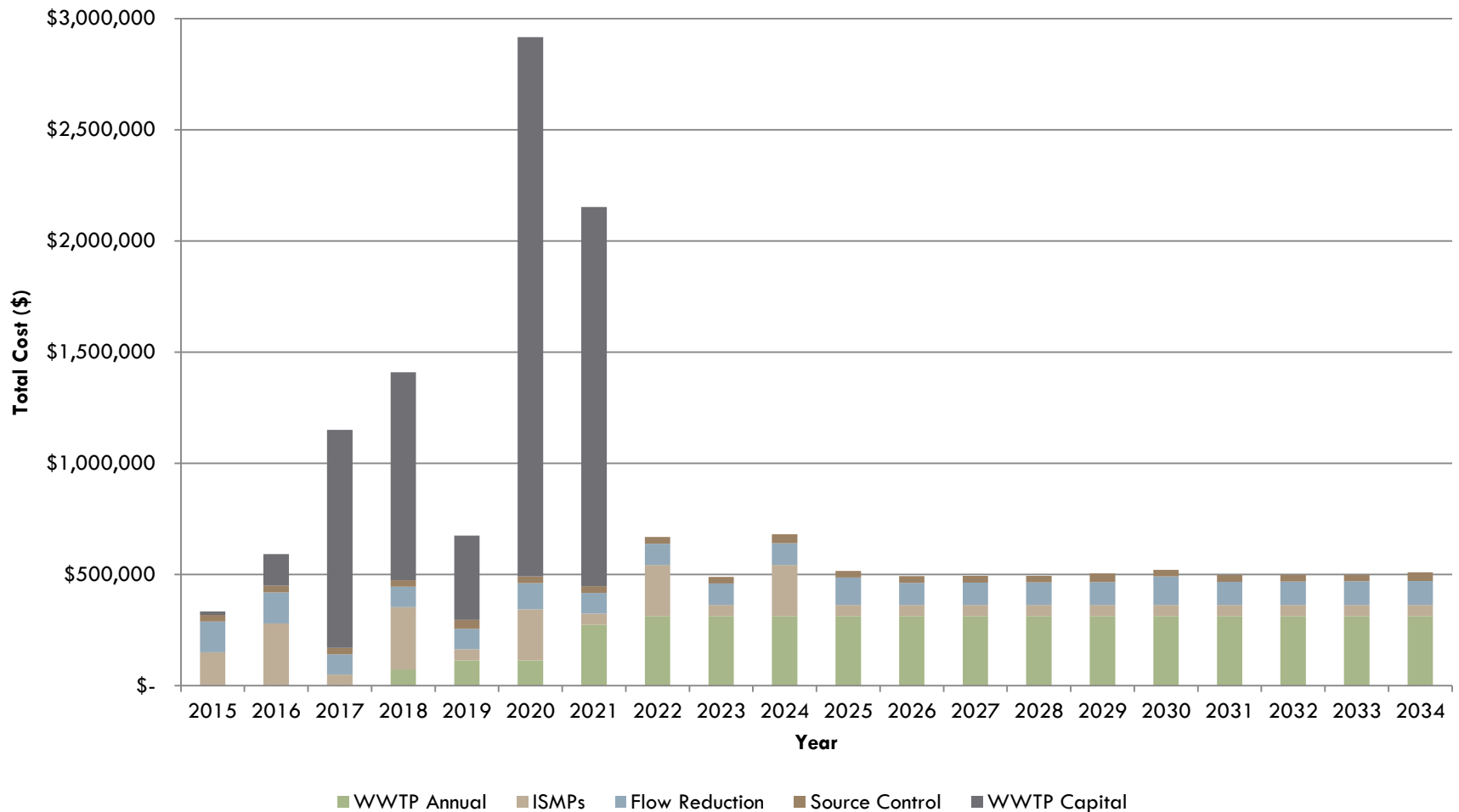
- \$2.12 million total
- Program costs (*capital costs later*)

□ Source Control and Flows

- \$2.77 million total
- Monitoring, outreach, assessments, reporting, enforcement



Summary of Programs and Projects



Cost Recovery

□ Utility Fees

- Cover operating and maintenance
- Reserves to fund initial compliance projects
- Consistent with +10% rates in 2015 (as part of District's plan)

□ DCCs

- Update charge accordingly – add'l incomes to avoid full exhaustion
- Utilize DCC reserves to fund projects for capacity

□ General Taxation

- Integrated stormwater AND enforcement for source control

□ Consider alternative revenues

- Dedicated storm/flood revenues
- Development finance alternatives for 'green' infrastructure

Closing Out LWMP

- Incorporate Feedback from Council
 - Committee

- Submit to Ministry of Environment
 - Adjust plan where feasible
 - Create operating certificate

- Return to Council in Fall/Winter – Minister Feedback

- Develop DoS business plan - Implement
 - Consider grants for regulatory changes

Thank You

Questions?

