

Core Area Liquid Waste Management

Committee Orientation

January 7, 2015





- Session One (January 7, 2015)
 - Governance Framework
 - Liquid Waste Management Planning & Programs
 - Overview of Core Area Conveyance & Disposal System
 - Municipal Inputs & Trunk Flows
 - Current Conveyance System Funding
 - CRD Staff Support



- Session Two (February 4, 2015)
 - Provincial & Federal Regulatory Requirements
 - Wastewater Treatment Program Funding
 - Program Plan, Status & Outlook

A photograph showing two construction workers in safety gear (hard hats, high-visibility vests) working in a trench. They are installing a large, light blue pipe. The background shows a dirt embankment.

Governance Framework – CALWM Service

- CRD Board – Chair Jensen
- Core Area Liquid Waste Management Committee – Standing Committee of CRD Board – Chair Jensen
 - Technical Community and Advisory Committee – Chair Jensen
 - Westside Wastewater Treatment & Resource Recovery Select Committee – Co-Chair Desjardins & Co-Chair Hamilton
- Core Area Wastewater Treatment Commission – Chair Eaton
 - Program implementation – procurement, construction, outcomes

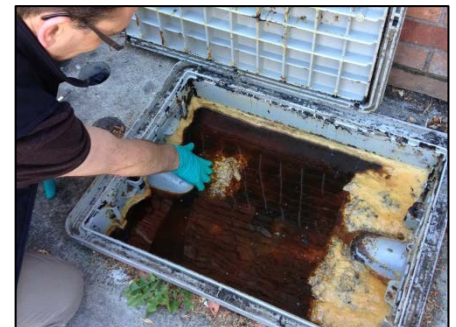


Liquid Waste Management Planning

- Core Area Liquid Waste Management Plan – Established July 2000
 - Sets out liquid waste management strategy and CRD and municipal commitments for 25 years
 - Most recent Plan Amendment No. 9 – Approved July 2014
- Saanich Peninsula Liquid Waste Management Plan – Established 1996
- Electoral Areas – Five CRD Wastewater Treatment Plants operated under *Municipal Sewage Regulation*
- District of Sooke – Manages stand alone Liquid Waste Management Plan

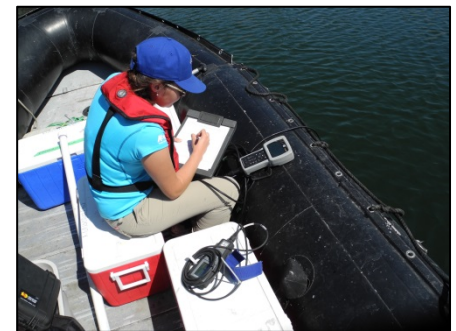
Core Area Liquid Waste Management Plan Programs

- Inflow & Infiltration Program
- Wastewater & Marine Environment Program
- Regional Source Control Program



Core Area Liquid Waste Management Plan Programs

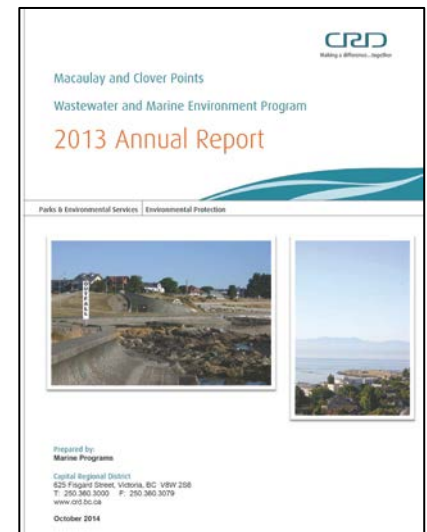
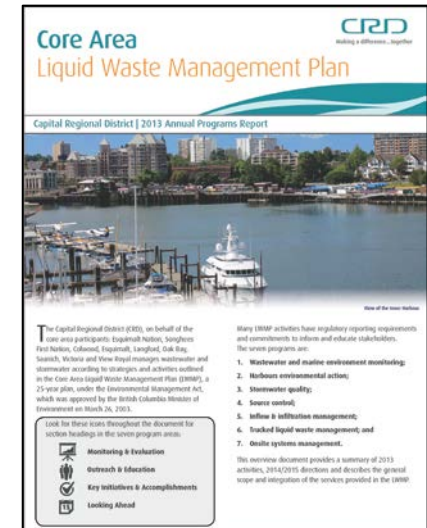
- Trucked Liquid Waste Management
- Onsite Systems Program
- Stormwater Quality Management
- Harbours Environmental Action Program



Liquid Waste Annual Reports

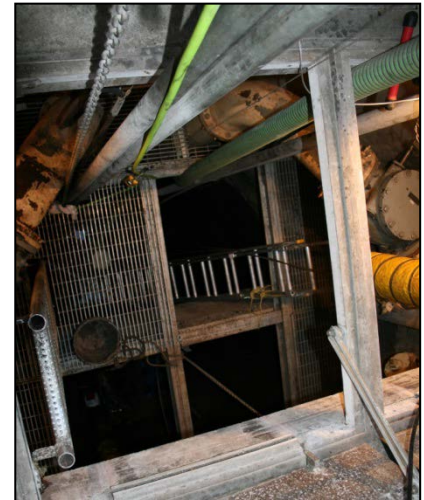
- Core Area Liquid Waste Management Plan 2013 Annual Programs Report
- Macaulay and Clover Points Wastewater and Marine Environment Program 2013 Annual Report

www.crd.bc.ca/project/wastewater-planning/calwmp



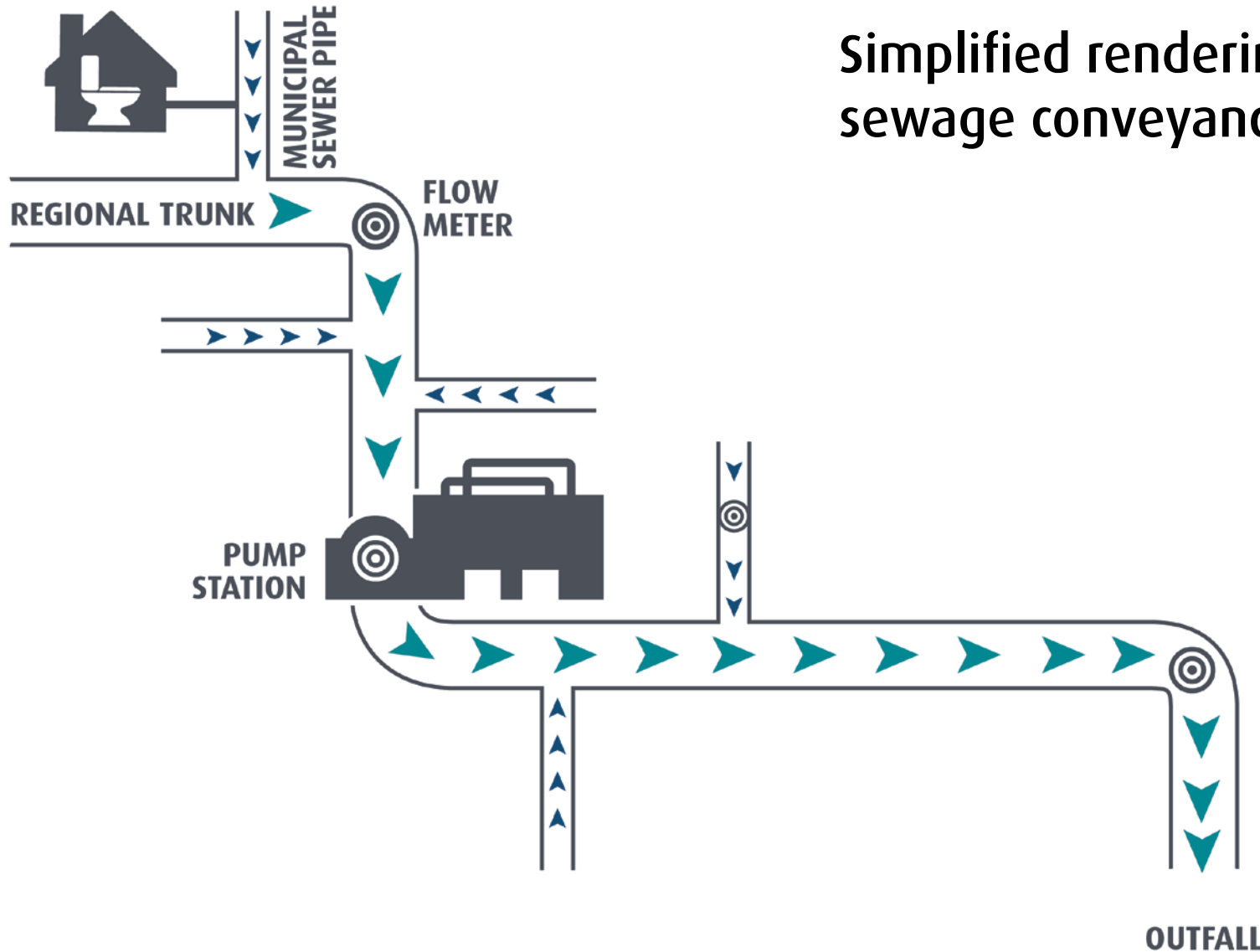
Operations & Engineering

- Operation, maintenance, engineering and capital project delivery for the Core Area Wastewater System
- Conveyance system is comprised of four trunks that make up the western and eastern systems:
 - Eastern System: East Coast Interceptor, Northeast Trunk – Clover, Northeast Trunk – Bowker
 - Western System: Northwest Trunk



Conveyance System

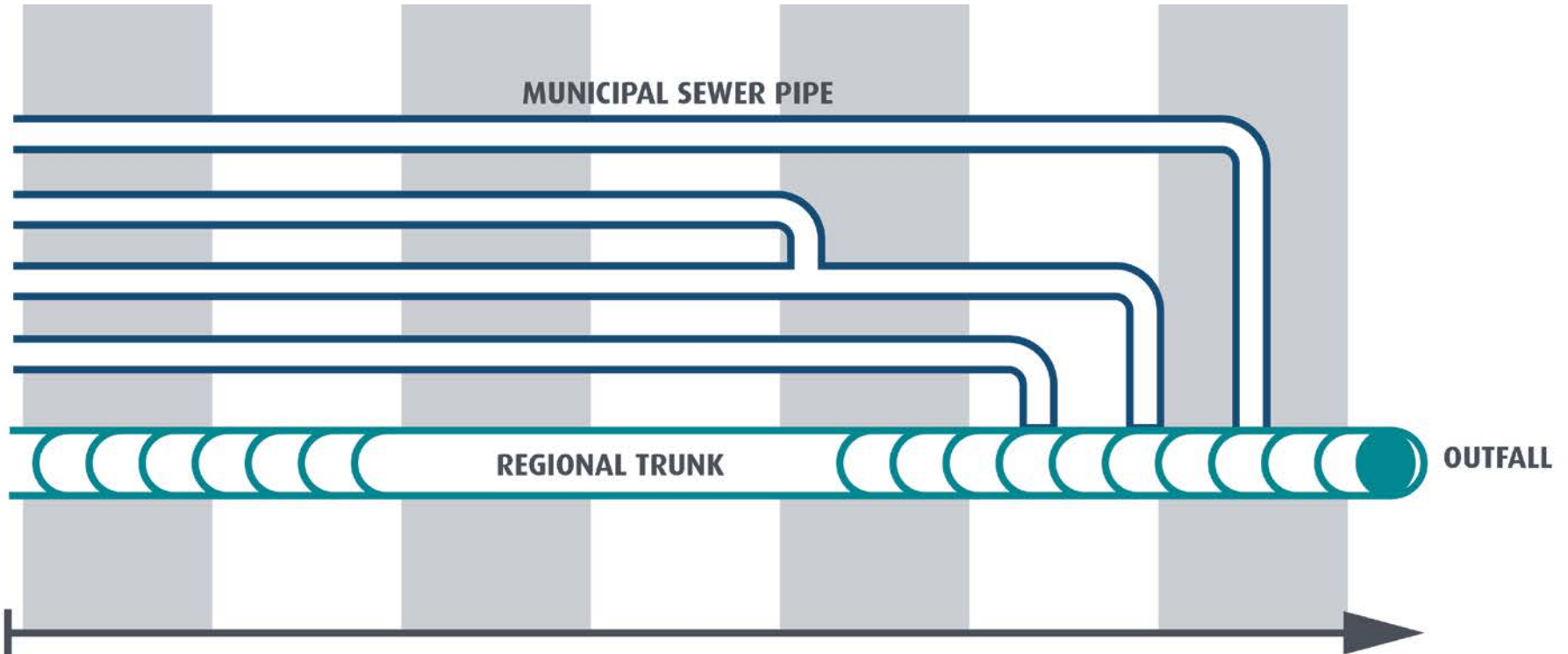
CRD



Simplified rendering of a
sewage conveyance system

Conveyance System

CRD



Conveyance System

CRD

MUNICIPAL SEWER PIPE



8 INCHES



REGIONAL TRUNK



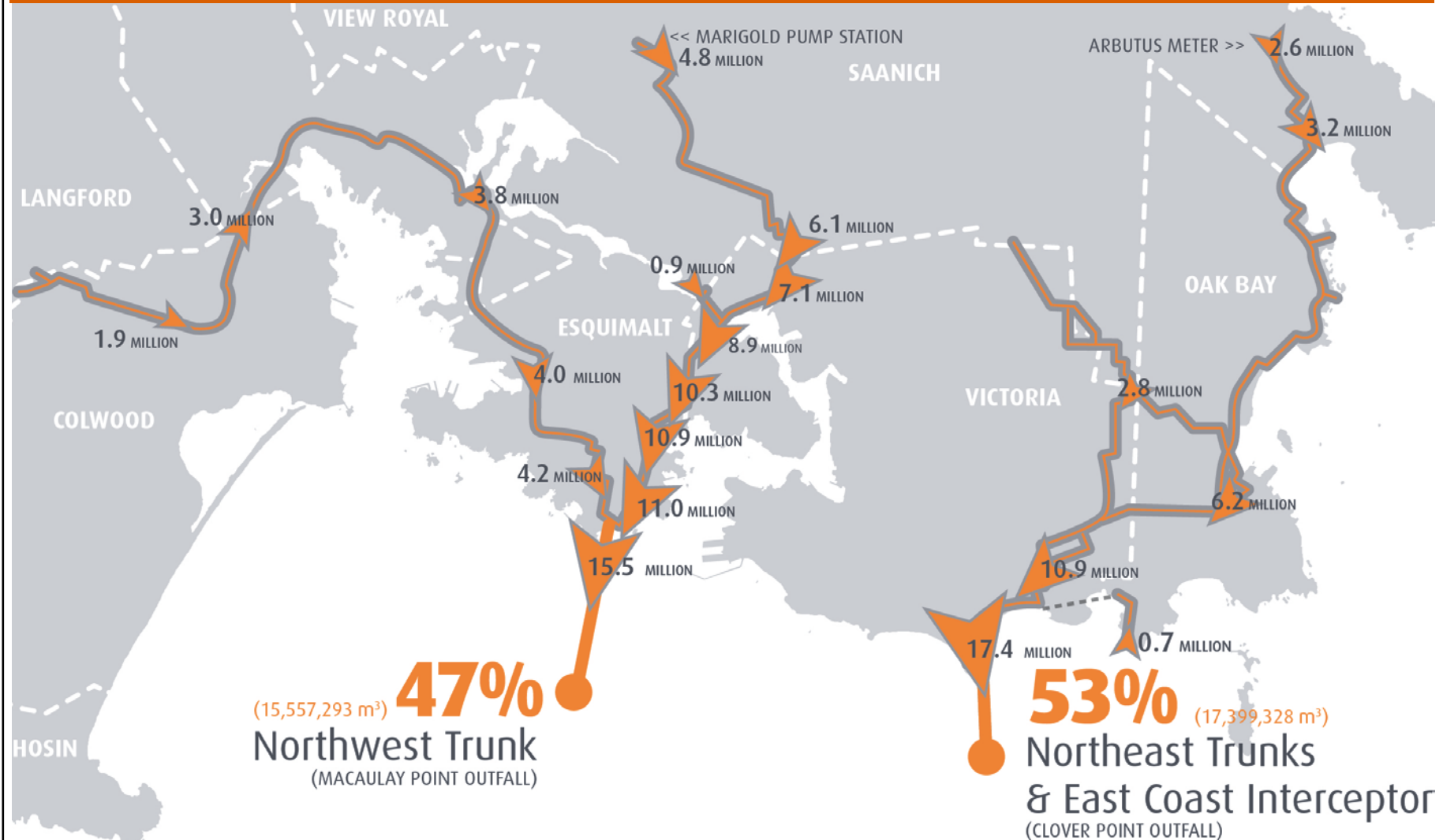
5 FEET



Core Area System Flow Map

CRD

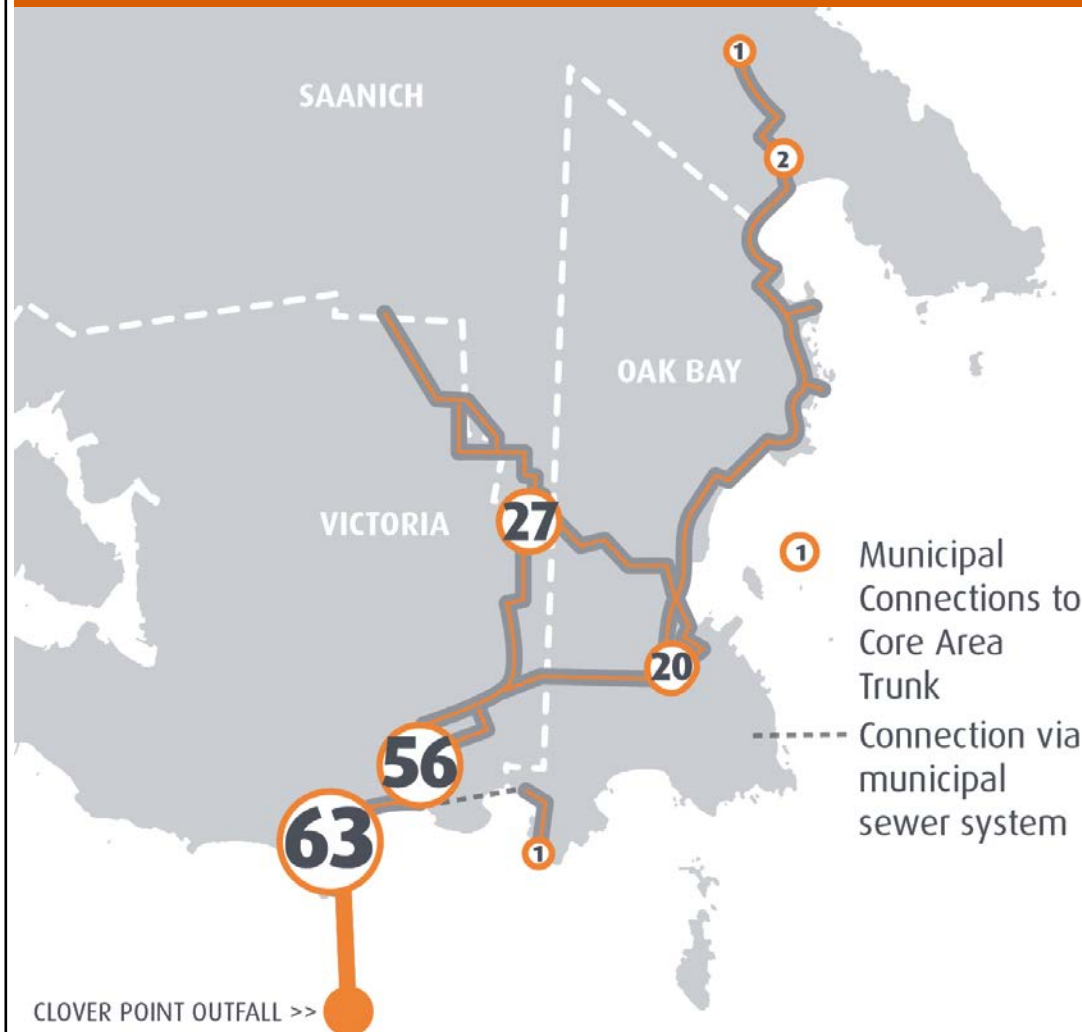
Core Area System (106 CONNECTIONS – 32,956,621 m³ annual flow)



Core Area – Eastern System

CRD

Northeast Trunks & East Coast Interceptor (63 CONNECTIONS – 17,399,328 m³ annual flow)



64.4% Victoria

11,202,459 m³ (total annual flow of 13,455,282 m³)

19.4% Saanich

3,372,847 m³ (total annual flow of 10,439,905 m³)

16.2% Oak Bay

2,824,022 m³

Core Area – Western System

CRD

Northwest Trunk (43 CONNECTIONS – 15,557,293 m³ annual flow)



45% Saanich

7,067,057 m³ (total annual flow of 10,439,905 m³)

15.5% Esquimalt

2,447,502 m³ (including DND)

14% Victoria

2,252,823 m³ (total annual flow of 13,455,282 m³)

12% Langford

1,912,140 m³

7% Colwood

1,092,703 m³

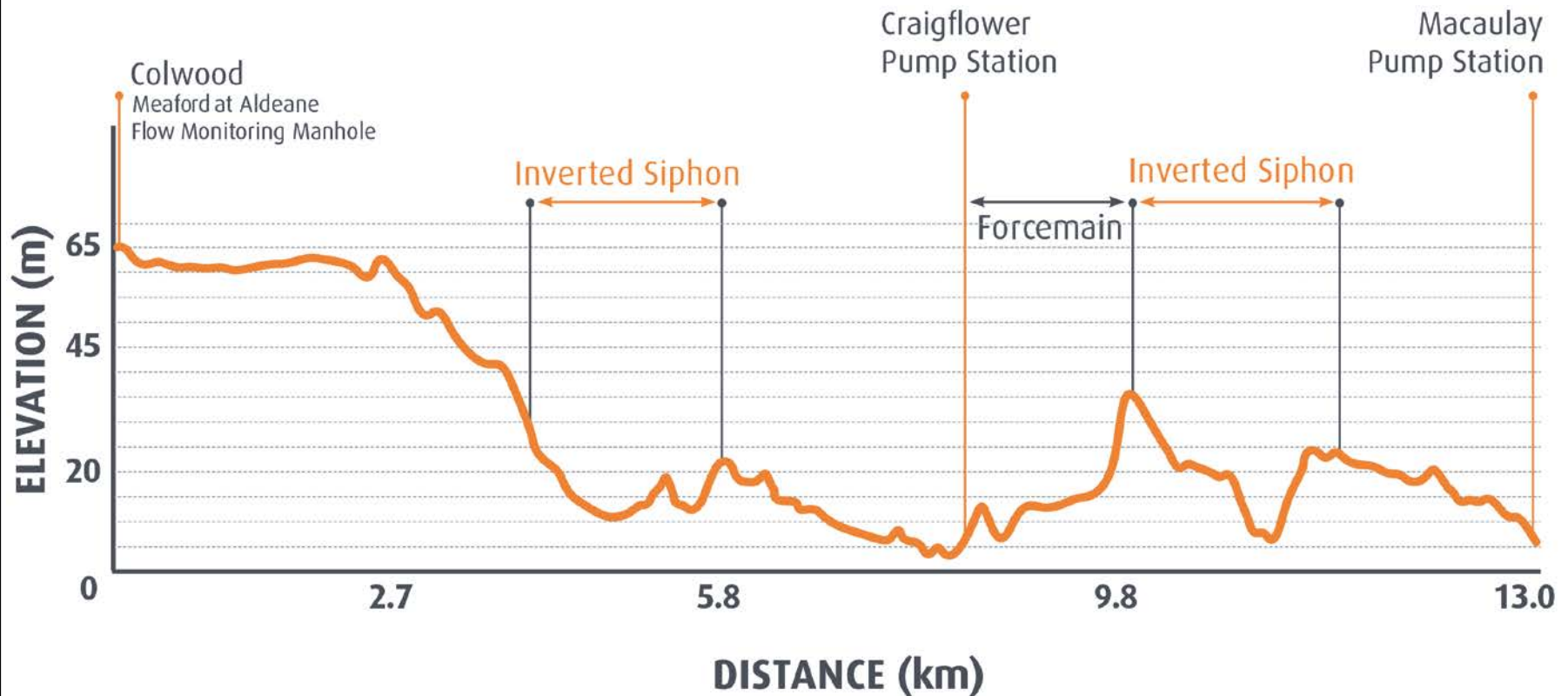
3.7% View Royal

570,489 m³

1.4% First Nations

214,579 m³

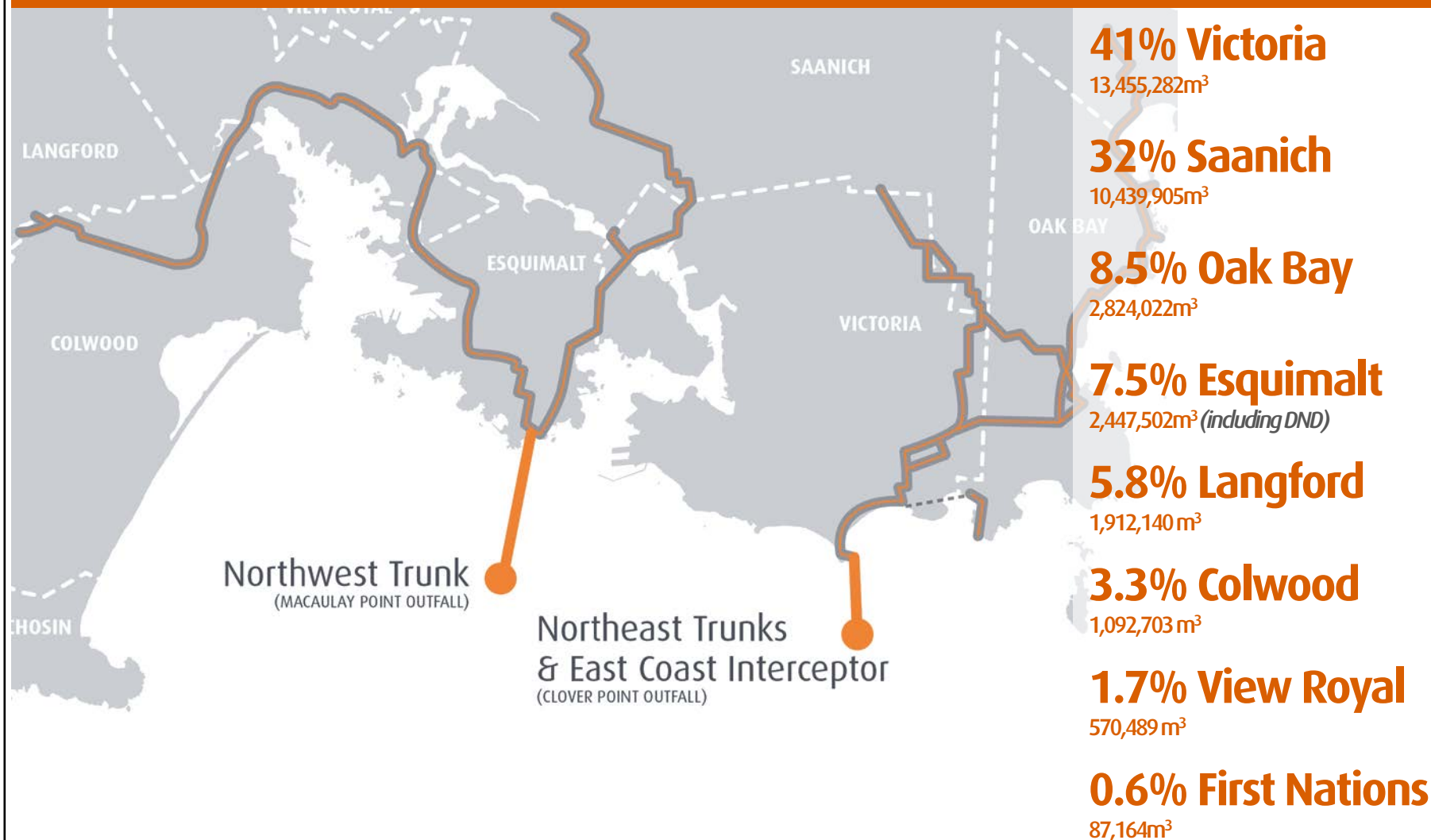
Example: Northwest Trunk (Western Section) Ground Surface Profile



Core Area System by Municipality



Core Area System (106 CONNECTIONS – 32,956,621m³ annual flow)



Core Area System by Municipality

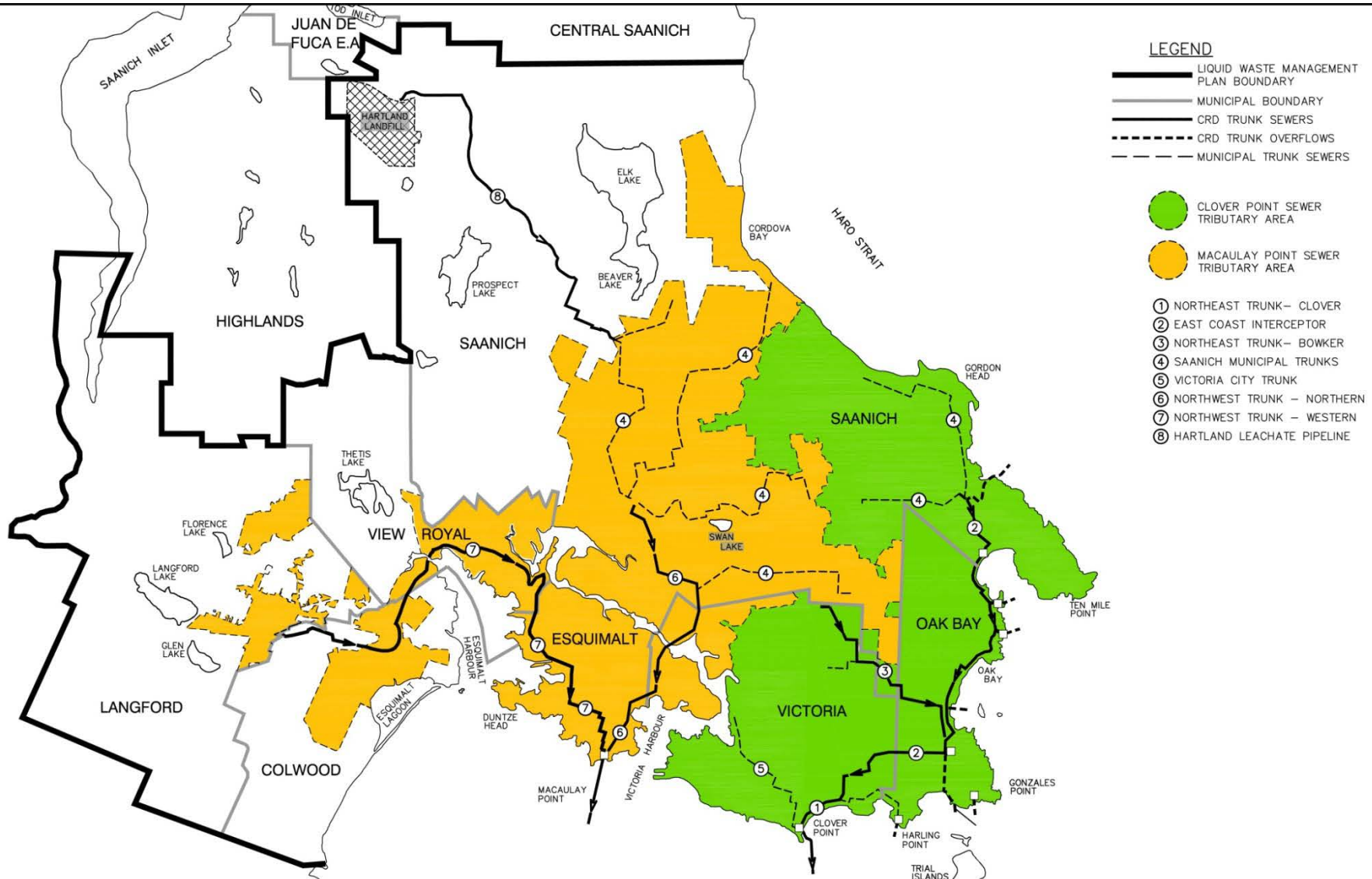


	Actual Annual Flow 2013* (m ³ /year)	Actual Use 2012* (ML/day)	Requested Capacity* (ML/day)	% of Total	Allocated Design Capacity* (ML/day)
Colwood	1,092,703	2.3	4.1	4.35%	4.70
Esquimalt (DND included)	2,447,501	5.9	6.2	6.57%	7.10
Langford	1,912,140	4.4	12.4	13.08%	14.12
Oak Bay	2,824,022	5.9	5.8	6.13%	6.62
Saanich	10,439,905	26.8	28.8	30.45%	32.89
Victoria	13,455,282	33.4	33.5	35.46%	38.30
View Royal	570,489	2.3	3.1	3.28%	3.54
First Nations	214,579	0.6	0.6	0.68%	0.73
TOTAL	32,956,621	81.6	94.5	100.00%	108.00

Outfall Catchment Areas

CRD

DWG. No. 13-S153-1 DATE: OCTOBER 2, 2006



Current Conveyance System Funding

- Operating costs:
 - Based on municipal flow inputs
 - Each trunk sewer has distinct budget - requisitioned annually
 - Total 2015 Trunk Operating Budget: \$6.2 M
 - Total 2015 Trunk Debt Budget: \$3.1 M
- Operating Budget Context:

– Corporate Service Expenses	11%
– LWMP & Environmental Programs	27%
– Operating & Engineering Labour	37%
– Repair & Maintenance Expenses	4%
– Maintenance Reserve & ERF	3%
– Residuals Disposal Expenses	3%
– Regulatory Permit Fees	6%
– Electrical & Other Utilities	<u>9%</u>
	100%



Current Conveyance System Funding

- Capital costs:
 - apportioned on basis of **design capacity benefit** (i.e. additional conveyance capacity to each participant); or
 - where no capacity increase, apportioned on basis of **maximum allocated capacity** of each participant in the 'facility'
 - Each project funded through reserves or debt – debt servicing is requisitioned annually



The background image for the slide shows a person wearing a red jacket and blue pants, kneeling on a sandy or muddy ground. They are wearing blue gloves and are working with a black plastic container. The person is holding a white plastic bottle and appears to be pouring liquid from it into the container. The background is a blurred natural setting with trees and water.

Core Area Liquid Waste Staff Support

- CRD Administration and Finance
 - Bob Lapham, CAO
 - Diana Lokken, GM, Finance & Technology
- Core Area Wastewater System Operations, Engineering & Committee Support
 - Ted Robbins, GM, Integrated Water Services
- Regulatory, Scientific and Technical Programs & Committee Support
 - Larisa Hutcheson, GM, Parks & Environmental Services
- Seaterra Program
 - Albert Sweetnam, Program Director

Questions?