



**Capital Regional District
Core Area and West Shore Sewage
Treatment
Decision Information Report**

Advisory Committee Meeting

January 25, 2007



Agenda

- The Proposed Decision Information Process
- Workshop No. 1
- Design Criteria
- Triple Bottom Line Criteria
- Next Steps



The Decision Information Process

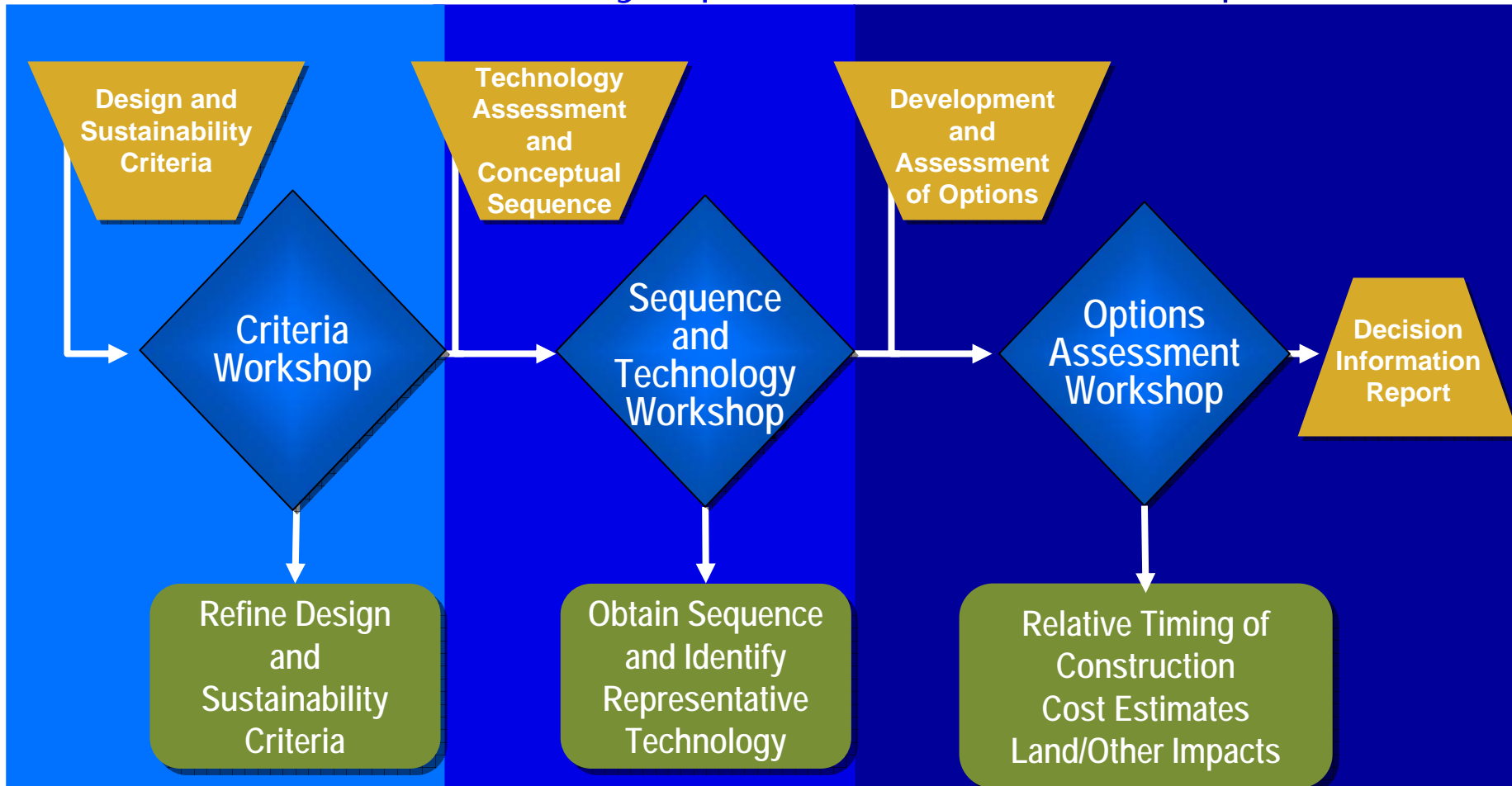
Not just a report – it's a collaborative process that integrates the provision of information with the Steering Committee decision process.

The Decision Information Process

Define Criteria

Identify Options

Assess Options



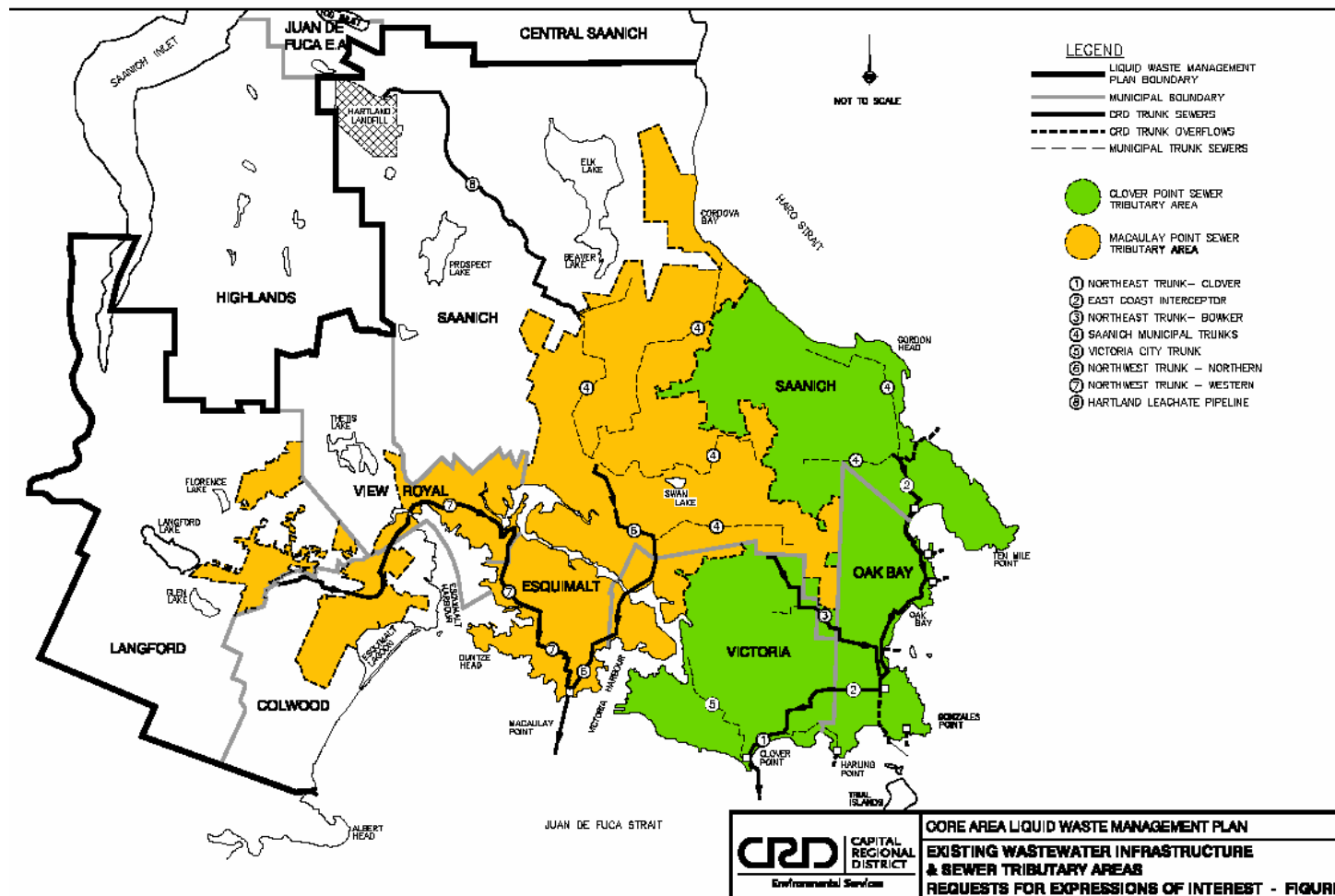
The Deliverables

- Discussion Papers Nos. 1 and 2
- Workshop No. 1 Minutes
- Discussion Papers Nos. 3 and 4
- Workshop No. 2 Minutes
- Discussion Papers Nos. 5, 6, 7 and 8
- Workshop No. 3 Minutes
- Draft Report
- Final Report

The Schedule

- Workshop No. 1 – December 13
- Workshop No. 2 – January 24
- Workshop No. 3 – March 10
- Report Review Meeting – April 11

Macaulay Point and Clover Point Sewerage Areas



Design Criteria

Key Criteria

- Population
- Wastewater Flows
- Wastewater Loads
- Treatment Criteria
- Odour and Noise Management

Design Criteria

Population

- 60 year planning horizon
- Equivalent population in 2005 was 358,000
- Projected equivalent population in 2065 is 610,000
- Population almost doubles in 60 years
- What if growth is higher or lower?

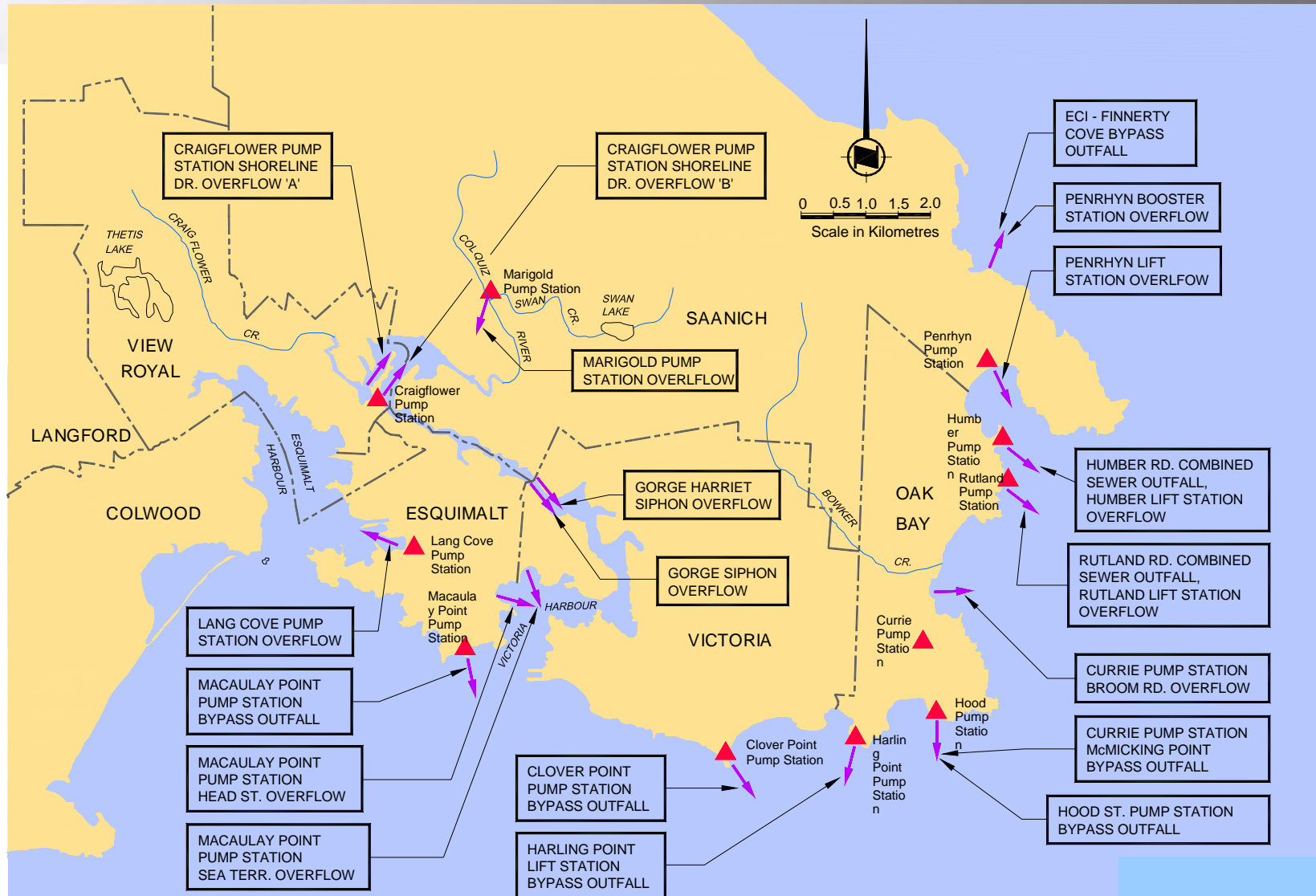
Design Criteria

Wastewater Flows

- The Average Dry Weather Flow (ADWF) – why it's important.
- Wet Weather Flow – is this the biggest issue?

Design Criteria

Existing Wastewater Overflows



Design Criteria

Wastewater Flows

- The Average Dry Weather Flow (ADWF) – why it's important.
- Wet Weather Flow – is this the biggest issue?
- Peaking Factor – the ratio of Peak Flow to ADWF

Design Criteria

Wastewater Flow – Year 2065

Sewerage Area	Average Dry Weather Flow (ML/d)	Peak Wet Weather Flow (ML/d)	Ratio of PWWF to ADWF
Macaulay Point	91	361	3.5
Clover Point	67	562	8.4

Design Criteria

Treatment Criteria

- LWMP versus Municipal Sewage Regulations
- MSR is prescriptive on wet weather flow management
- Ultimate goal – secondary treatment
- Regulated criteria for marine discharges – BOD₅ and Total Suspended Solids
- Disinfection – plan for it
- Wet weather flow management – an opportunity for innovation
- Water reuse – advanced treatment for unrestricted reuse

Design Criteria

Odour and Noise Management

- A critical part of wastewater management
- Utilize a fence line approach using “odour units”
- Be aggressive – 5 OUe/m³
- Noise – comply with local zoning requirements

Triple Bottom Line Criteria

The TBL criteria will guide the development of information and assessment of the options and the technology.



TBL Criteria

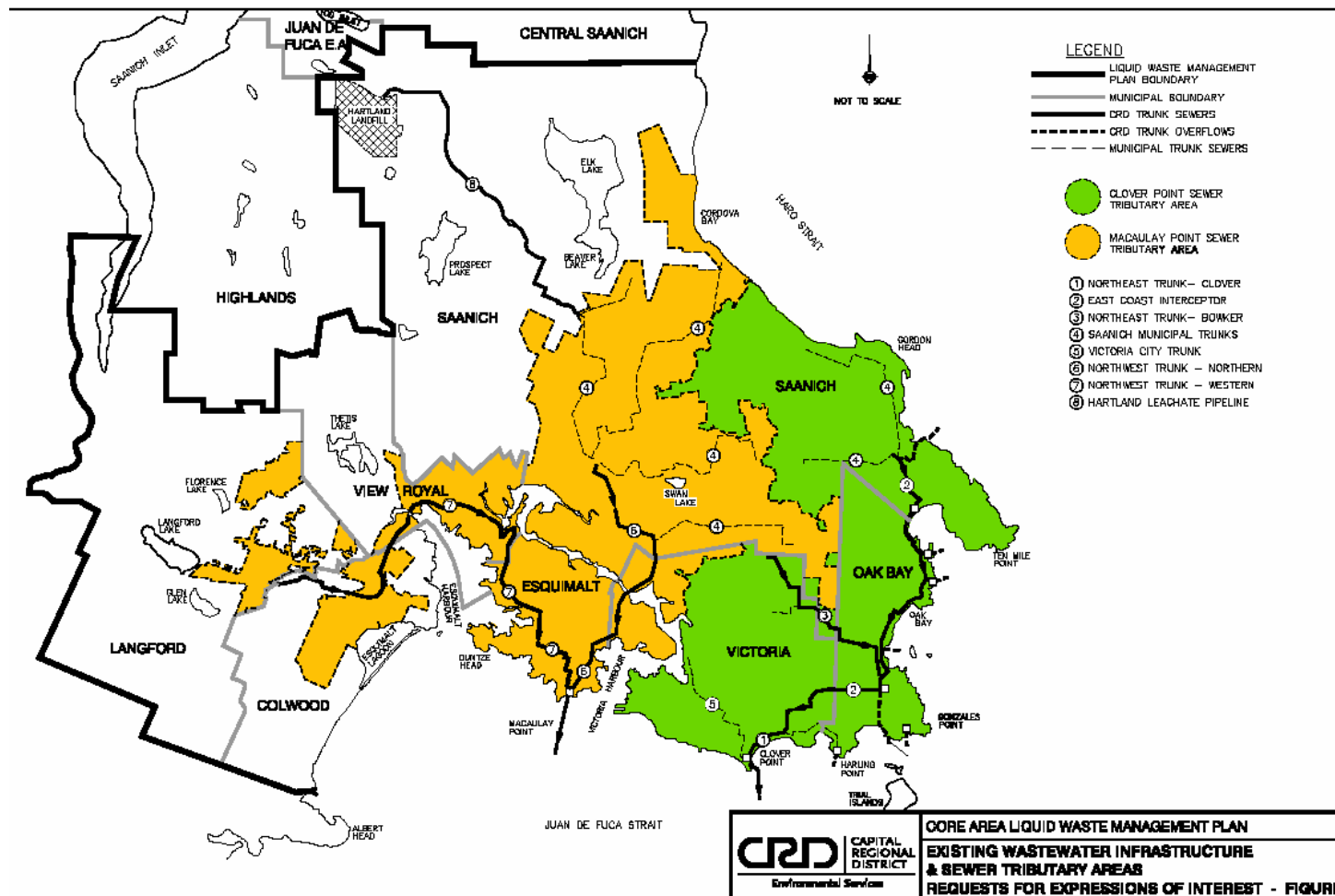
TBL Framework – What is it?

- It's an evaluation tool
- It can test the sensitivity of alternatives to individual criteria
- It's a guide – not a substitute for policy decisions

TBL Criteria Approach – The Three Steps

- Establish goals and criteria under social/community, economic and environmental categories
- Establish measurement scales
- Apply the criteria

Macaulay Point and Clover Point Sewerage Areas



Typical Land Area 100 ML/d Wastewater Treatment Plant

Process	Tankage Area (ha)	Site Area (ha)
Conventional Activated Sludge; UV; Biosolids Digestion & Dewatering	2.20	9.4
Biological Aerated Filters, UV; Biosolids Dewatering	0.94	3.8
Enhanced Primary Treatment; UV: Biosolids Dewatering	0.58	2.0
Enhanced Primary – Actiflo™	0.25	1.3
Primary – Ultra Fine Screening	0.12	1.1

Lulu Island WWTP

100 ML/d Plant Typical of Open Layout – 10 ha



Proposed Brightwater WWTP 200 ML/d Plant Typical of Compact Layout – 10 ha



Macaulay Point Site

Available Site Area – 3 ha



Clover Point Site

Available Site Area – 1.5 ha



Summary

- The Design Information Process
- Design Criteria
- TBL Criteria
- Next Steps