

CRD Wastewater Treatment Project

Facility Siting and Assessment TCAC Workshop



29 August 2007

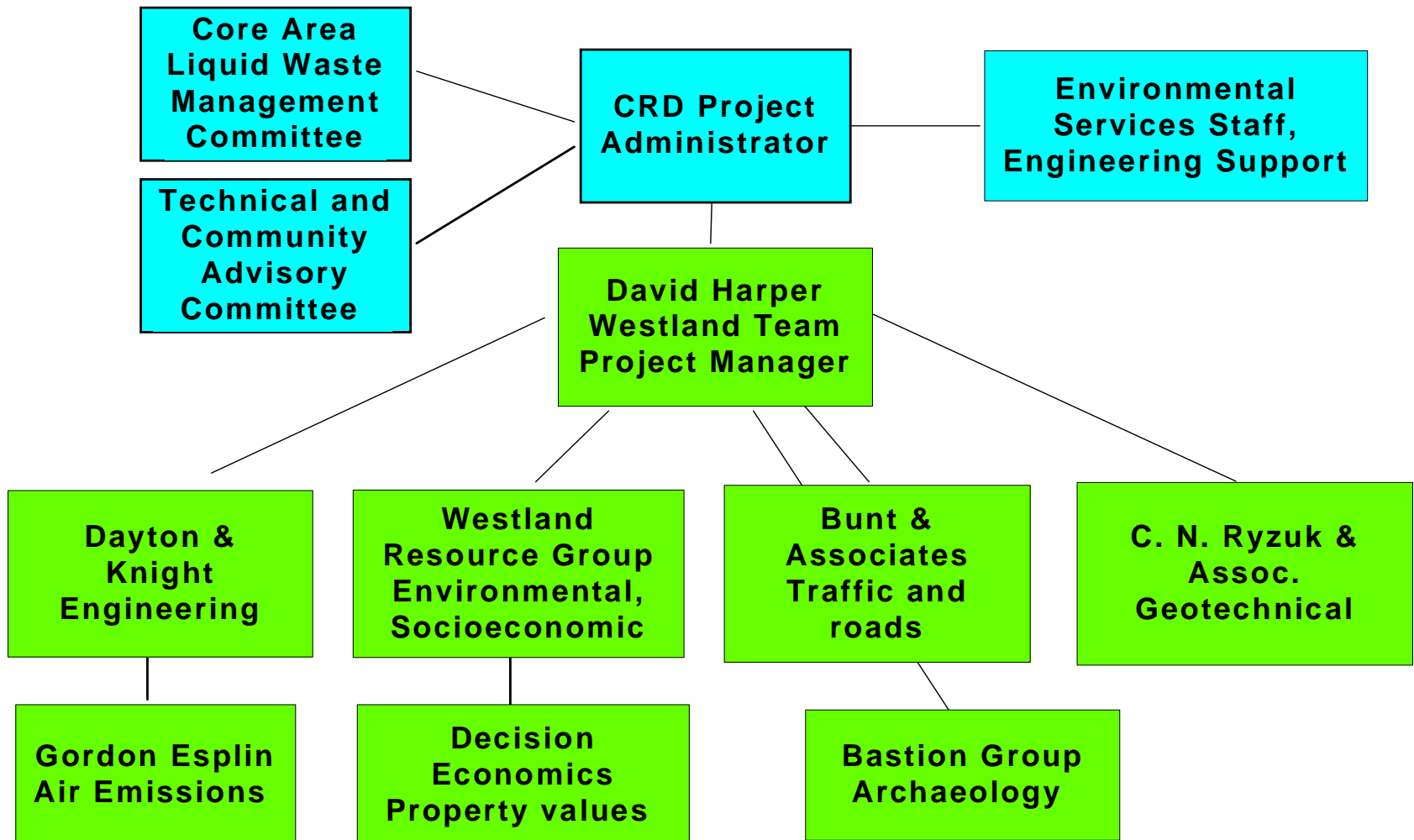
Purpose of the workshop

- **Describe the wastewater facility siting and assessment project**
- **Discuss and obtain input on:**
 - » **the siting criteria**
 - » **the Environmental and Social Review contents**

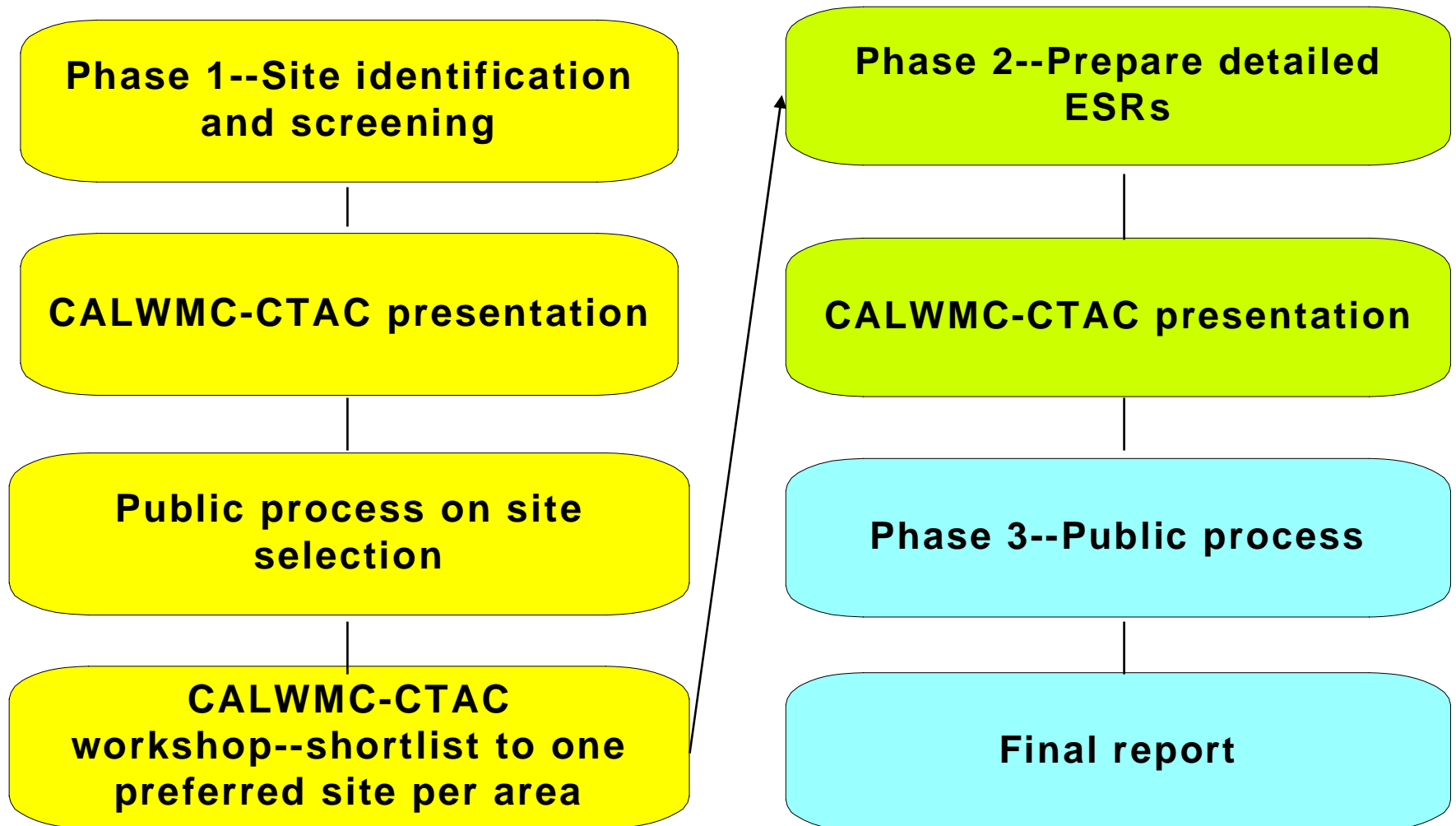
Project Purpose

- **Identify optimum sites for wastewater treatment facilities**
- **Assess potential impacts**
 - » operation
 - » construction
- **Recommend mitigation measures to avoid or reduce identified impacts**
- **Communicate information to the public**

Project organization



Project Phases





Phase 1

Site identification, screening ESRs

Project Task	Start Date	Finish Date	Duration (Weeks)	2007																																																							
				Jul							Aug							Sep							Oct							Nov							Dec							Jan							Feb						
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Phase 1--Site identification, screening level ESRs	6/21/07	1/17/08	30	▲-----▶																																																							
1. Initiate project	6/21/07	7/15/07	3	■																																																							
2. Facility specification and site requirement meeting	7/18/07			◆																																																							
3. Collect preliminary data and information	7/21/07	8/21/07	4	■																																																							
4. Develop preliminary siting criteria and ESR topics	8/5/07	8/21/07	2	■																																																							
5A. Confirm preliminary criteria, topics with committees	9/6/07			◆																																																							
5B. Public review of site selection criteria and ESR topics	9/7/07	10/12/07	5	■																																																							
5C. Initiate First Nations involvement	9/12/07	10/3/07	3	■																																																							
6. Update information and acquire baseline field data	9/15/07	10/27/07	6	■																																																							
7A. Preliminary data analysis	9/28/07	10/19/07	3	■																																																							
7B. Eliminate unsuitable areas	10/12/07	10/26/07	2	■																																																							
7C. Assess potentially suitable areas, prepare draft siting and ESR report	10/26/07	12/6/07	6	■																																																							
8A. Workshop with CALWMC and TCAC, revise Phase 1 report	12/14/07	1/10/08	4																													◆■																											
8B. Report results to the public	1/11/08	2/15/08	5	■																																																							
8C. First Nations presentations	1/16/08	2/6/08	3	■																																																							

Core Area Liquid Waste Management Study Areas for Wastewater Treatment Facilities

-  Site Selection and ESR Areas
-  Transportation and Service Study Area

Base mapping: Government of British Columbia;
Geopolitical Boundaries: Government of British Columbia 2005;
Parks and Protected Areas: CRD;

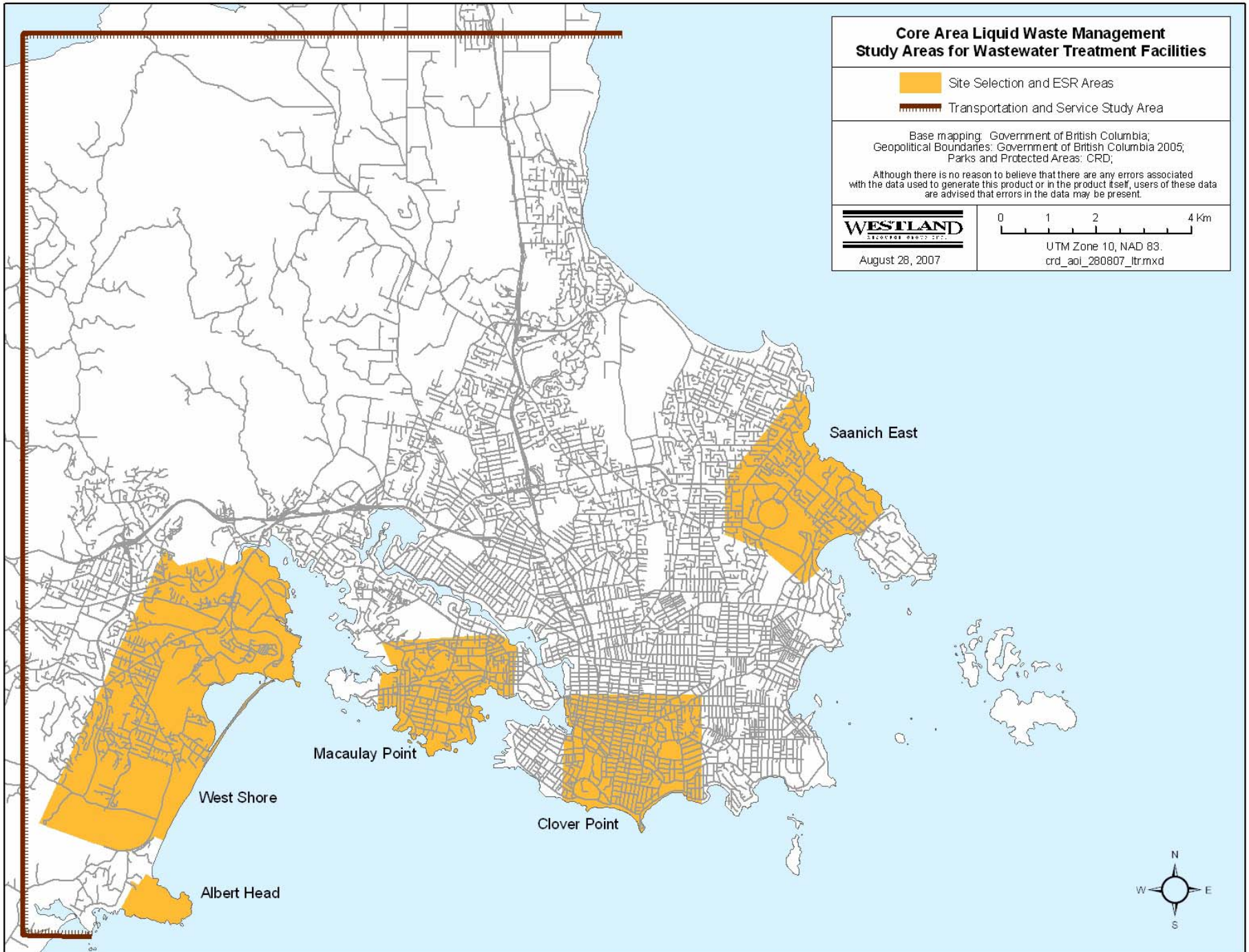
Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.

WESTLAND
SOLUTIONS GROUP

August 28, 2007

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UTM Zone 10, NAD 83
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Phase 1

Site identification, screening ESRs

- **Task 1 – Initiate Project and confirm work program**
 - » June-July, 2007
- **Task 2 – Facility specification and site requirement meeting**
- **Task 3 – Collect data and information**
- **Task 4 – Develop preliminary siting criteria and ESR screening topics**

Phase 1

Site identification, screening ESRs

- **Task 5a – Confirm criteria and ESR topics with CALWMC and TCAC**
 - » September 5, 2007
- **Task 5b – Public review of site selection criteria and ESR topics**
- **Task 5c – Initiate First Nations involvement**
- **Task 6 – Update collected information and acquire baseline field data**

Phase 1

Site identification, screening ESRs

- **Task 7a – First stage data analysis**
- **Task 7b – Eliminate unsuitable areas from further consideration**
- **Task 7c – Assess potentially suitable areas and prepare draft siting and ESR screening report**

Phase 1

Site identification, screening ESRs

- **Task 8a – Workshop with CALWMC and TCAC, and revise Phase 1 report**
 - » December 12, 2007
- **Task 8b – Report results to the public**
 - » January-February, 2008
- **Task 8c – First Nations presentations**

Phase 2

Prepare detailed ESRs

- **Task 9 – Develop detailed ESR topics**
- **Task 10 – Prepare detailed facility construction and operations plans**
- **Task 11 – Collect additional data**
- **Task 12 – Conduct site-specific analysis, assess impacts, and recommend mitigation measures**

Phase 2

Prepare detailed ESRs

- **Task 13 – Prepare draft ESR report**
- **Task 14a – Discuss draft ESR report with CALWMC and TCAC**
 - » **May 28, 2008**
- **Task 14b – Present draft ESR to First Nations**
- **Task 15 – Revise draft ESR report**

Phase 3

Public involvement, reporting

- **Task 16 – Discuss public involvement program with CRD staff**
- **Task 17 – Prepare public involvement materials**
- **Task 18 – Participate in CRD-sponsored open houses or other forms of public involvement**
 - » **July-September, 2008**

Phase 3

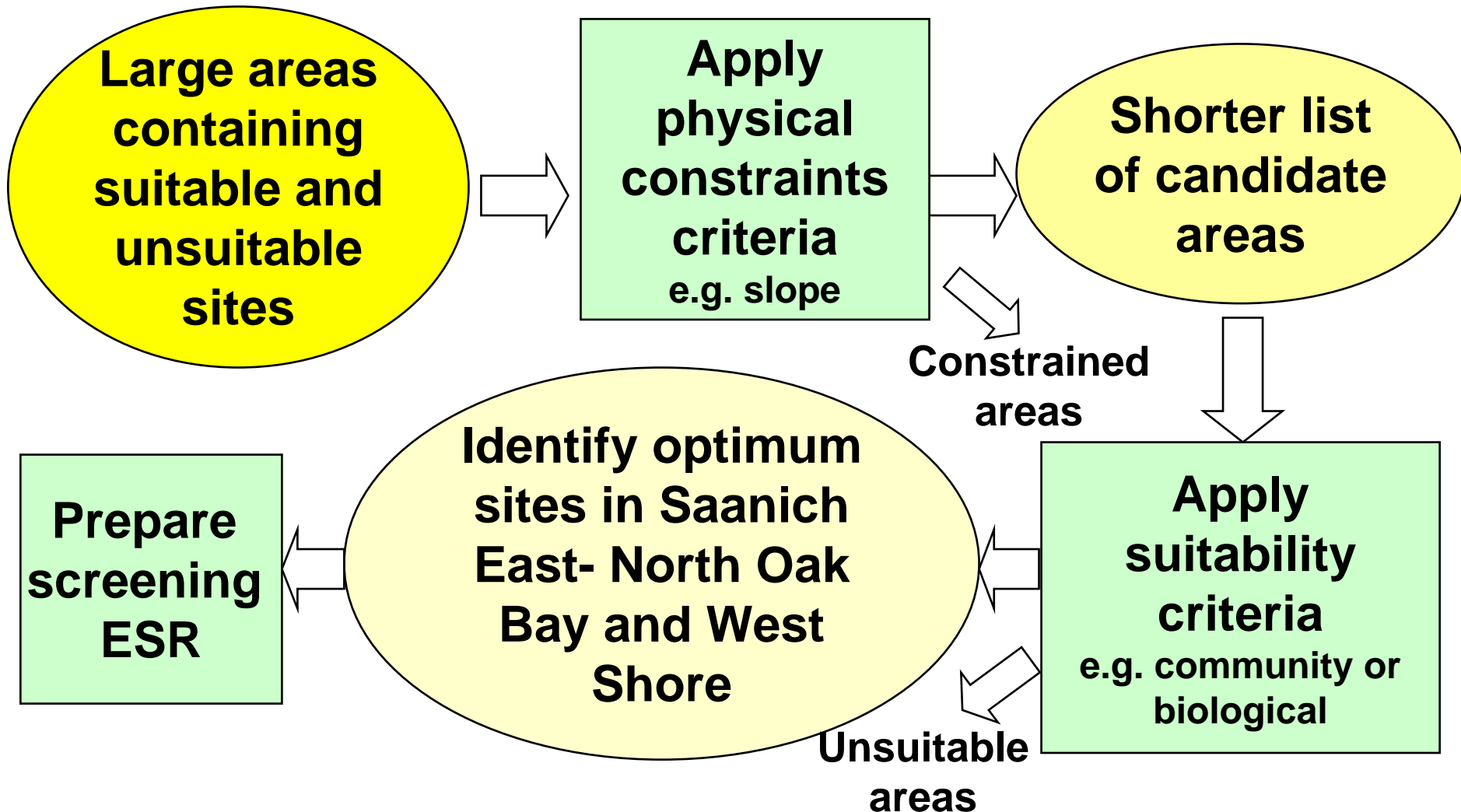
Public involvement, reporting

- **Task 19 – Refine the detailed ESR and siting report**
- **Task 20 – Hold CALWMC and TCAC workshop on draft final report**
 - » **October 22, 2008**
- **Task 21 – Submit final siting and detailed ESR report**
 - » **November 11, 2008**

Site Selection and Screening Assessment

- **Purpose:**
 - » **Identify optimum sites for treatment facilities at Saanich East-North Oak Bay and West Shore areas**
 - **Macaulay and Clover Point not included**
 - **Siting already determined**
 - **Will be included in Phase 2 detailed ESR**
- **Steps:**
 - » **Obtain published and field information**
 - » **Conduct spatial analysis**
 - » **Interpret results, select sites**
 - » **Prepare Screening Level ESR**

Identifying sites using a criteria-based process



Working Session #1

Site selection criteria

- **Purpose:**
 - » Review and comment on site selection criteria
- **Method:**
 - » Consider Table 1 contents:
 - **Topics** (general categories of information being considered)
 - **Criteria** (variables that will discriminate among sites)
 - **Indicators** (specific data sets or kinds of information to be collected)
 - **Ratings and scores** (site conditions that determine scores)

Stages in applying criteria

1. Physical Constraints Criteria

- » slope

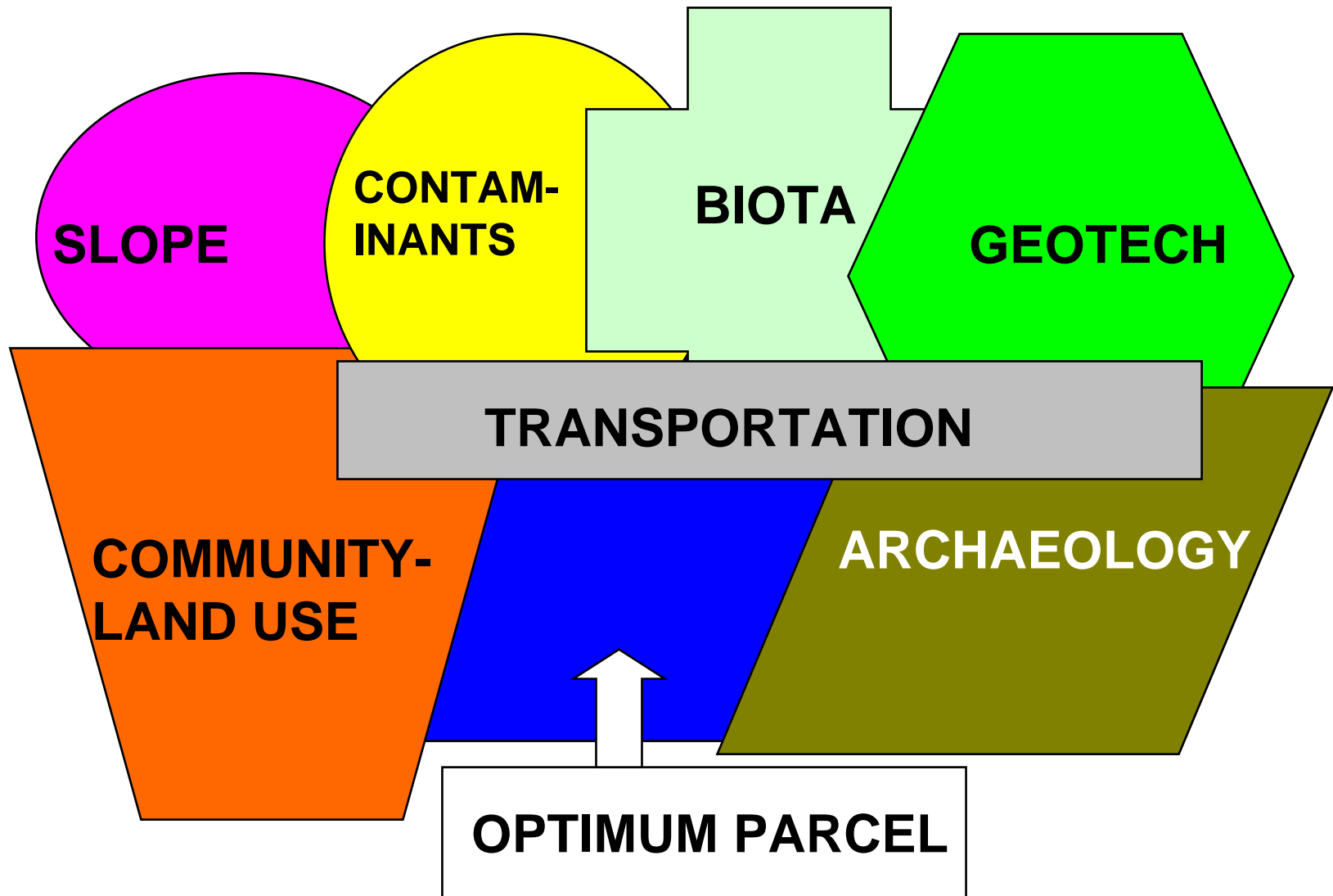
2. Suitability Criteria

- » biological
- » community, etc.

How the ratings work...

- **Ratings** assigned to each indicator:
 - » What constitutes a desirable or acceptable condition?
 - » What is a poor or unacceptable condition?
 - » Based on measurements or professional interpretation
- **Scores** allow analysis of sites
 - » 1 = bad for facility location
 - » 3 = good for facility location
 - » Scored like baseball, not golf

How the spatial analysis works...



Draft Siting Criteria

- **Biological Features**
 - » **Ecological integrity**
 - Extent of site disturbance
 - » **Ecological features**
 - Extent of sensitive ecosystems
 - Presence of important habitat
 - Rare species
 - » **Watercourse sensitivity**
 - Presence of important watercourses



Criteria (continued)

- **Community**

- » **Land use**

- Proximity to residential areas
- Proximity to commercial, light industrial, institutional uses
- Consistency with community plans and bylaws

- » **Local use**

- Level of informal community use
- Level of organized community use



Criteria (continued)

- **Archaeology and heritage**

- » **Archaeology**

- Density of registered sites
- Archaeological potential

- » **Traditional use**

- Level and importance of traditional use reported by First Nations

- » **Heritage structures**

- Presence of registered heritage structures



Criteria (continued)

- **Geotechnical**

- » **Foundation support conditions**

- Presence of fill
- Surface geology
- Site drainage

- » **Site stability**

- Slope stability
- Seismic risk
- Flood hazard



Criteria (continued)

- **Engineering**

- » **Slope**

- Site steepness

- » **Elevation**

- Elevation above sewer trunk
- Elevation above discharge point (sea level)

- » **Trunks**

- Proximity to existing sewer trunks

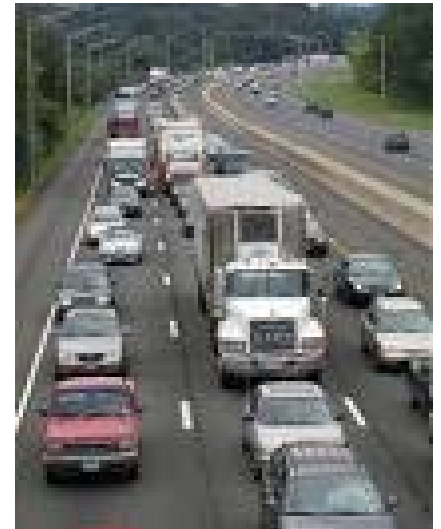
- » **Outfall location**

- Proximity to potentially suitable outfall locations



Criteria (6)

- **Existing contamination**
 - » **Known contamination**
 - Registered contaminated sites
- **Transportation**
 - » **Road adequacy**
 - Distance to arterial roads
 - Adequacy of local roads for facility traffic



What constitutes a good selection criterion?

- 1. Factual and defensible**
 - » Based on studies and field data
- 2. Discriminates among sites**
 - » Varies across the study area
- 3. Mapable**
 - » To support analysis
- 4. Understandable**
 - » ...with limited explanation
- 5. Important**
 - » Would results influence selection?



Working session #1 Questions

- **Are any topics, criteria, or indicators missing?**
- **Which criteria can be dropped?**
- **Provide “weights” for the criteria**
 - » **5 = Critically important**
 - » **1 = Unimportant**
- **Other comments or advice**
 - » **Criteria**
 - » **Site selection process**

Rules for Working Groups

- **Respect all opinions**
- **Express yourself**
 - » Be open and frank
- **Be brief—everyone needs a turn**
- **Cover all the topics**
 - » Do not get bogged down
- **Stick to the schedule**
- **Obey thy Facilitator**



Working Session #2

ESR Topics

- **Review the report's Draft Contents**
 - » **Consider only Phase 1 requirements**
 - » **Detailed ESR planned for Phase 2**
- **What topics should be added?**
- **What topics should be dropped?**
- **Other comments or suggestions for communicating results**
 - » **Mainly to public and decision makers**

Next steps

- **Assemble and analyze workshop results**
- **Revise criteria**
 - » **Circulate to CALWMC, TCAC**
- **Prepare public involvement materials**
- **Obtain results of public review**
- **Revise criteria**
- **Obtain CALWMC approval**
- **Conduct the siting study and ESR**

Thank you!

