Southern Alberta Energy from Waste Association Project Development Plan: Siting Process Plan

May 2014

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

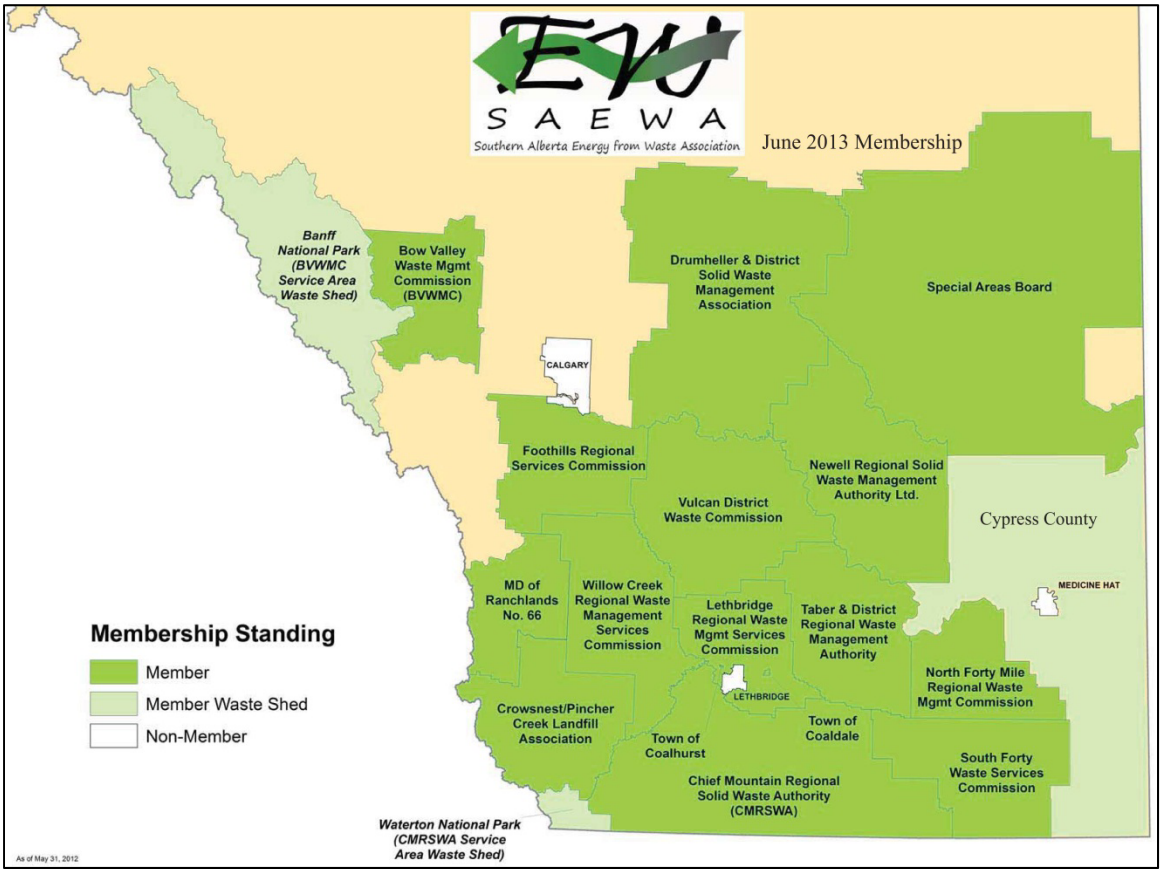
LIST OF APPENDICES

1.0 INTRODUCTION

The Southern Alberta Energy from Waste Association (SAEWA) is a coalition of waste management jurisdictions with an interest in implementing technologies to recover energy from residual waste and reduce long-term reliance on landfill disposal.

With membership totalling 62 municipalities, encompassing 12 waste authorities and waste commissions, SAEWA represents a large portion of the population of Southern Alberta outside of the greater Calgary area.

Figure 1: SAEWA Membership Map



In 2011/2012 SAEWA completed a research study confirming the feasibility of establishing an energy from waste facility for Southern Alberta. The research study reports are available on-line at www.saewa.ca.

Subsequent to completion of the research study, SAEWA completed a Request for Expressions of Interest (REOI) process targeting:

- Potential host communities for an energy from waste facility;
- Potential energy from waste project developers/technology vendors; and,
- Potential energy hosts/customers.

Responses to the REOI demonstrated that there is a strong base of positive interest and support for a Southern Alberta energy from waste facility among numerous potential host communities and technology vendors. The REOI also provided valuable information to help shape SAEWA's plans moving forward.

Proceeding with the next-stage in decision-making, SAEWA is preparing a plan to map-out the steps, information needs, resources, schedule and budgets that would be required to move forward with development of an energy from waste facility for Southern Alberta. The project development plan is made up of the following four sub-plans:

- Regulatory Requirements Plan
- Siting Process Plan;
- Communications Plan; and,
- Procurement Process Plan.

This report presents the Siting Process Plan component of SAEWA's project development plan. The purpose of the Siting Process Plan is to provide a methodology to screen, identify and evaluate potential candidate sites in order to determine a preferred site for an energy from waste facility. The following sections provide an overview of siting in general, explain the rationale for SAEWA to proceed with a siting process, and outline the steps, activities, resources, costs and schedule to complete the recommended siting process.

2.0 GENERAL PRINCIPLES OF SITE SELECTION

Locating a suitable host site is an important early step in the process of developing an energy from waste facility. Preliminary discussions with Provincial regulators confirm that SAEWA will be required to produce an Environmental Impact Assessment (EIA) report (described in more detail in the Regulatory Requirements Plan) should it proceed with developing an energy from waste facility. Inherent in the EIA process is the need to identify and assess potential impacts of the proposed undertaking, including consideration of a number of factors related to the location and the site chosen for the facility.

Selection of a preferred site is a matter that is also closely related to and impacts on the ability of SAEWA to proceed with procurement activities in development of an energy from waste facility.

Site selection is commonly conducted as a multi-step process which relies on:

- Assembly and synthesis of reliable information on site needs and characteristics;
- Constructive input from engaged stakeholders; and,
- Collaborative analysis and evaluation leading to informed decision-making.

To ensure thorough consideration of alternatives, typically the preferred site is selected by comparing the characteristics of a number of potential sites, taking into account the needs of the planned facility and a number of key criteria and priorities.

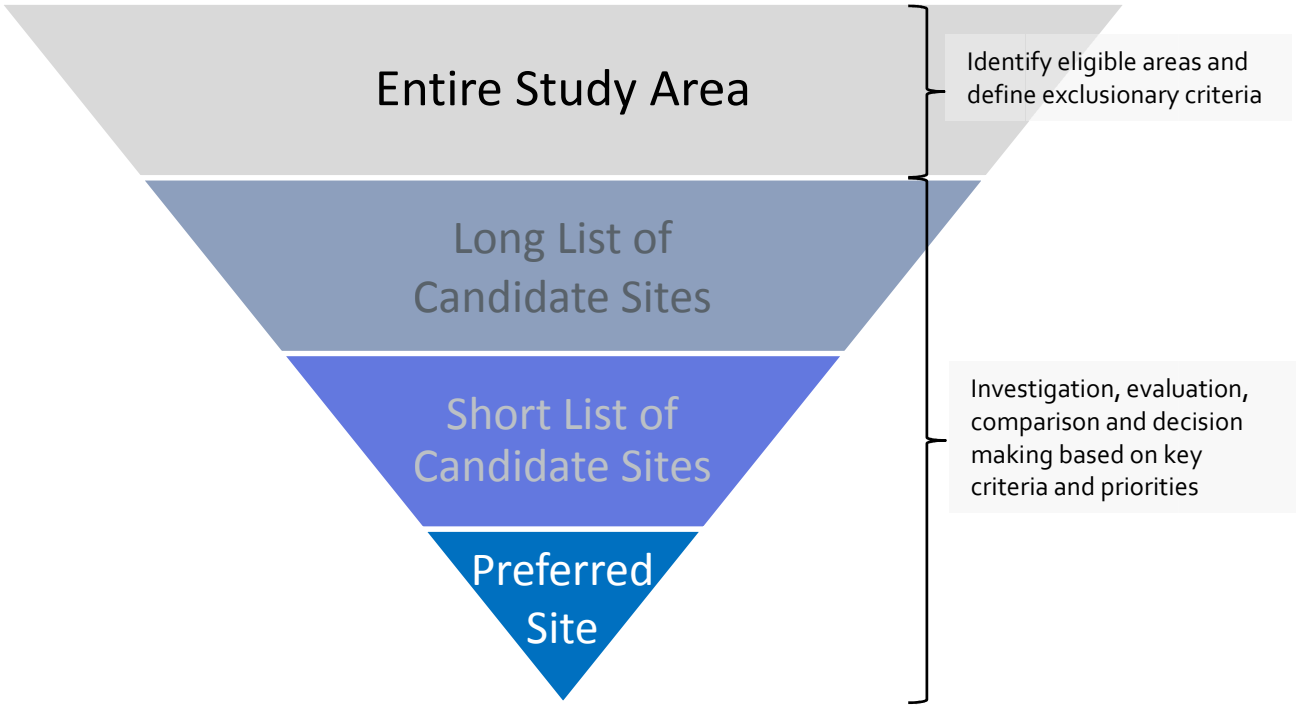
A carefully designed siting plan fulfils the need to obtain, evaluate and compare reliable information on site characteristics, while meeting the objective of identifying a preferred site in a timely and cost-effective manner. Stakeholder input is used to shape and influence decision-making in the site evaluation and selection process.

In general terms, a typical siting process begins by broadly identifying suitable areas within which a site may be located and eliminating any unsuitable areas. The process then examines and assesses the characteristics of potential candidate sites in a step-wise fashion, comparing and ranking sites until a preferred site is identified.

Commencing initially using basic information that is generally readily available, each step in the process requires additional, more detailed and more reliable information as the process progresses. This approach allows for consideration of a broad range of potential areas and candidate sites, while maximizing the efficiency of the site selection process by focusing investment of time and resources on those candidate sites which best align with the anticipated siting needs for a facility.

The general progression of a typical siting process is shown in Figure 2. To progress through each of the steps, candidate areas and sites are evaluated based on project-specific criteria, initially eliminating the least suitable sites and later in the process comparing and ranking among the most suitable and preferred sites. It is important that information and data gathered during the siting process supports analysis and selection of a site that is consistent with the environmental, technical, social/community and economic priorities for subsequent project development. That is to say the siting process should not only choose the preferred site out of several candidate sites, it should also adequately determine suitability of the preferred site for subsequent project development stages.

Figure 2: Typical Siting Approach



Embedded within this process of screening, elimination, evaluation and comparison of sites is the process of defining the key criteria and priorities to guide decision-making. Stakeholder consultation is a core element of establishing the siting criteria and priorities. Section 3.0 outlines a recommended siting process for development of SAEWA's energy from waste facility that is based on a typical, traditional site selection approach.

Following the recommended siting process plan using a recognized and sound decision-making process will provide SAEWA with a number of benefits including:

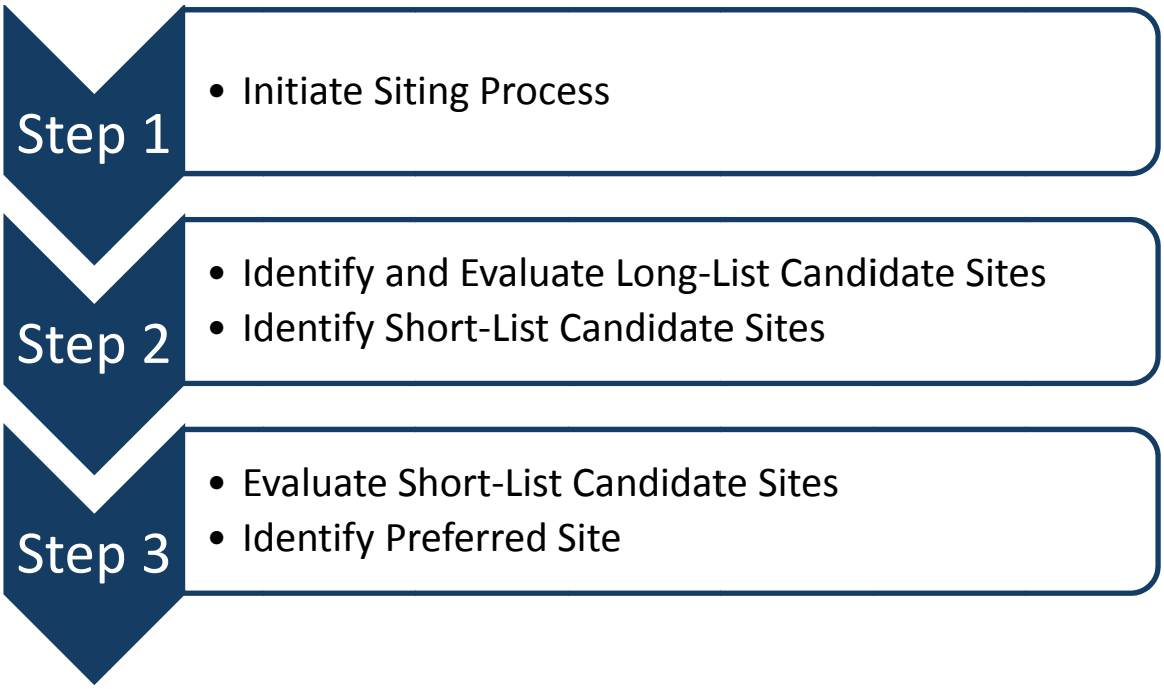
- Build and maintain credibility with key project stakeholders including:
  - The public
  - Potential host communities
  - Potential technology vendors
  - Potential project partners and funding organizations, and
  - The SAEWA membership
- Meet regulator expectations;
- Efficiently maximize the field of potential sites considered; and,
- Achieve a degree of informed confidence that the preferred site is suitable prior to investing in undertaking project development work.

3.0 SITING PROCESS PLAN

3.1 STEPS AND ACTIVITIES

The recommended siting process follows the stepwise progression outlined in Figure 2. The steps detailed in Figure 3 provide a basis to consider several potential candidate sites taking into account the anticipated facility development needs.

Figure 3: Siting Process Steps



The recommended site selection approach seeks to achieve an appropriate balance of the following needs:

- Consideration of a range of potential site locations and characteristics;
- The importance of obtaining and analyzing reliable information appropriate to meet the requirements for informed decision-making at each step, beginning at a high-level and progressively utilizing more detailed and comprehensive information as the process advances;
- Receive and respond to stakeholder input to shape the decision-making process; and,
- Timely, cost-effective and efficient utilization of resources in coordination with other elements of the project development plan.

A preliminary work break-down schedule for the steps and activities involved in the siting process plan is presented in Appendix A. The following subsections provide details for carrying out the work required by the steps shown in Figure 3. Because some aspects of the recommended siting process plan relate closely to other project development activities explained in other plan documents, the four project plan documents should to be considered in their entirety as a whole.

3.1.1 Step 1: Initiate Siting Process

Siting process initiation should begin as soon as possible after SAEWA confirms its decision to proceed with development of an energy from waste project. During the siting initiation step, the siting process plan and schedule contained in Appendix A should be reviewed and refined to identify key dates and coordinate the related regulatory, procurement and communications activities.

As an initial step in the siting process, high-level site specifications should be developed to define minimum site requirements to meet the project's objectives. Examples of several high-level site specification criteria that should be considered include:

- The site footprint area;
- Requirements for availability of an adequate water supply;
- Proximity to necessary transportation routes;
- Capacity for establishment of an adequate electrical interconnection; and
- Separation distance from incompatible land uses.

Additional important site characteristics can also be considered and incorporated into the high-level site specifications however, caution should be exercised to avoid defining the site requirements too tightly at this early stage in the process, as this could result in eliminating potentially suitable sites from consideration.

SAEWA will also need to define the areas that should be considered eligible for hosting a facility. To do this, the following questions will need to be answered:

- Would SAEWA prefer a facility located within its member communities, or would SAEWA like to consider other areas as well?
- Are there any specific areas that should not be considered and what are the criteria for exclusion of those areas?

Detailed answers to the above questions will allow for definition of the limits of areas within which potential candidate sites may be considered and identification of any exclusionary

criteria. Regulatory or local development constraints may exclude conservation lands, protected lands, lands zoned for other incompatible uses (i.e. residential areas), and any other areas that cannot be considered due to federal, provincial, and/or municipal regulations. Applicable regulations are identified in the Regulatory Plan.

The recommended next step is to conduct consultation to obtain stakeholder input on the site eligibility criteria, exclusionary criteria and high-level site specifications. The consultation process is described in more detail in the Communications Plan. Following stakeholder consultation, the high-level site specifications, exclusionary criteria and screening area boundaries will be refined and finalized.

Step 1 is summarized in the following Table.

Step 1 Summary	
Objective	• To initiate the siting process
Timeline	• To commence upon approval to proceed with siting process • Estimated duration: 6 to 8 weeks
Desired Outcomes	• Update siting plan and schedule • Develop high-level site specifications • Define eligible siting areas and exclusionary criteria • Receive stakeholder input

3.1.2 Step 2: Identify and Evaluate Long-List Candidate Sites

The following outlines a process for SAEWA to solicit nomination of specific candidate sites and to evaluate those candidate sites from among:

- Willing host communities already identified through the 2012 REOI process;
- Publicly owned land holdings; and,
- Privately owned lands.

In order to identify the broadest possible range of candidate sites, SAEWA should solicit candidate site nominations from both the public and private sector. Nominations received in response to SAEWA's site solicitations will form the "long-list" of candidate sites. The long-list of candidate sites should then be evaluated to eliminate the least desirable sites and create a "short-list" of sites for more detailed evaluation and comparison.

The first activity in Step 2 is to develop the preliminary evaluation criteria. Establishing evaluation criteria prior to soliciting candidate sites ensures that nominations contain the necessary information for evaluation and comparison. Table 1 lists several examples of criteria

and anticipated corresponding information submission requirements that candidate sites would be required to meet for nomination.

Table 1: Examples of Preliminary Evaluation Criteria

Preliminary Evaluation Criteria	Candidate Site Nomination Information Requirements
Eligibility	• Documentation required to demonstrate compliance with the eligibility criteria as well as avoidance of exclusionary criteria
Site Size and Configuration	• A map showing site area, surveyed site dimensions and any potential development constraints
Availability of Utilities	• Availability and cost of water license allocation • Location, distance from site and available capacity of the nearest connection to water, sewer, electric and natural gas utilities
Transportation Considerations	• Shortest heavy truck route(s) and distance to major arterial roadways
Proximity to Incompatible Areas	• Distance to nearest residential housing development and sensitive receptors such as schools and hospitals
Historical/Current Site Use	• Description of current site uses, recent site activities, and neighboring land uses
Federal EA Triggers	• Disclosure of any known or potential conditions at the site and surrounding areas which could trigger a federal EA process
Other	• Other important matters as may be defined

The finalized criteria and information requirements for the long-list of candidate sites should focus on examination of the key issues that are critical to the potential suitability of a site. It is important to remember that later steps in the siting process will provide opportunities for more detailed consideration and relative comparison of a wider range of criteria to refine ranking among the candidate sites.

A call document to solicit nomination of candidate sites should be prepared and include the following, as a minimum:

- A brief overview of SAEWA, its project, objectives and anticipated timelines;
- A summary of the high-level site specifications and long-list evaluation criteria;
- A list of specific information required to be submitted for nomination of a candidate site;
- An outline of the process for evaluation and ranking of nominated candidate sites; and,
- Various legal matters including:
    - Requirement for respondents to provide an affidavit of reliability of the information submitted;

- Disclosure of details of property ownership and the Owner's authorization for nomination of the site; and,
- Acknowledgement and permission to allow the candidate site to be considered further in the site selection process.

Candidate sites for an energy from waste facility may be publically or privately owned, and it is important that SAEWA be as inclusive as practically possible in its solicitation of nominations of candidate sites. It is recommended that SAEWA solicit candidate site nominations from willing host communities already identified in the 2012 REOI, other public agencies with real estate holdings, and private sector land owners. The solicitation process should target each of these groups to generate the optimal responses. Table 2 provides the proposed solicitation approach for each group.

Table 2: Approach to Solicit Candidate Site Nominations

Sector	Solicitation Approach
Willing host communities identified in the REOI	Facilitate meetings with municipalities that responded to the 2012 REOI to formally request candidate site nominations and where provided, confirm sites already identified are still available for consideration.
Other Public Agencies	Mail request for candidate site nominations to public agencies with real estate holdings located in eligible areas.
Private Sector Land Owners	Advertise request for candidate site nominations through print media including an advanced notice and a notice of the call for site nominations.

Beyond the positive responses received from prospective host communities in the 2012 REOI, it cannot be predicted how many candidate sites may be nominated. The focus of the solicitation process should be on receiving sufficient high-quality submissions to support short-listing from a good cross-section of siting alternatives.

As a due diligence check, site nominations received will first be reviewed to confirm proper submission of the information required. Respondents submitting materially non-compliant nominations should be contacted and given a brief period (i.e. 48 hours) to submit the information required after which, they may be eliminated from further consideration. Next, the compliant nominations should be reviewed and scored based on the long-list evaluation criteria. The nominations should then be ranked based on their scores and the top ranked candidate sites should be carried forward for further evaluation. There is no prescribed

maximum or minimum number of sites that should be short-listed. From the perspective of managing the work required to review and evaluate sites, it would be preferred if a short list containing as many as 8 suitable candidate sites could be developed, however fewer might also be acceptable. The precise number will be dependent on the nature of the candidate sites and their alignment with the high-level site specifications. For the purpose of developing budgetary estimates it has been assumed that 5 candidate sites will be included on the short-list for further consideration. Step 2 is summarized in the following Table.

Step 2 Summary	
Objectives	• Establish long-list evaluation criteria and information needs • Solicit nominations of candidate sites to obtain a long-list of potential candidate sites • Evaluate long-list of potential candidate sites based on information included in site nominations • Identify short-list candidate sites
Timeline	• Estimated duration: 12 to 16 weeks
Desired Outcomes	• Short-list of top ranked potential candidate sites

3.1.3 Step 3: Evaluate Short-List Candidate Sites

Selection of a preferred site is closely related to the EIA study, procurement process, and subsequent construction and operation of an energy from waste facility. Though Step 2 is well-suited to identify the top few candidate sites while cost-effectively conserving SAEWA's resources, identifying a preferred site to move forward into project development requires investment in more detailed investigations and evaluation. Conducting a two-step site evaluation process efficiently focuses SAEWA's resources on the top candidate sites most likely to meet SAEWA's needs. Step 3 involves:

- Confirming and finalizing evaluation criteria and weighting for evaluating short-list candidate sites;
- Stakeholder consultations (explained further in the Communications Plan);
- Identifying data, investigations and developing scopes of work for technical reviews required for evaluation of short-list candidate sites;
- Conducting technical reviews to collect and develop required data (both desktop and field-based reviews);
- Evaluating short-list candidate sites; and,
- Identifying a preferred site.

The short-list evaluation criteria and criteria weighting will be developed with input from the public and other key stakeholders. Generally speaking, short-list evaluation criteria are expected to fall into the following categories for consideration:

- Economic;
- Legal;
- Public Health and Safety;
- The Natural Environment;
- Social, Cultural and Community; and
- Technical;

Both desktop and field-based technical reviews should be conducted for each site to obtain and develop the information needed for evaluation of short-listed sites. Table 3 provides a brief description of the minimum technical reviews that are recommended for each of the short-listed sites. It is important to note that these technical reviews, while highly focussed in scope to examine only those key issues that are pertinent to evaluation of the short-listed sites, are intended to complement and contribute to more detailed and comprehensive studies for the preferred site that will be needed later in the project to complete elements of the Regulatory Requirements Plan.

Table 3: Step 3 Technical Reviews

Technical Review	Description	Primary Purpose
Desktop Reviews		
Preliminary Traffic Review	Desktop study of potential impacts to surrounding transportation routes including traffic volume impacts and traffic pattern changes.	Identify major traffic considerations for each short-listed site including consideration of the potential for rail-haul options.
Local Air Quality Review	Desktop review of existing local air quality data[1] and potential receptors.	Preliminary identification of existing and potential local air quality issues in the vicinity of each short-listed site.
Land Use Review	Review of land uses of neighboring properties including agricultural uses, utility demands, social and aesthetic considerations.	Determine if there are land use or zoning issues in the vicinity of each candidate site that might result in issues or concerns during facility construction and operation.

[1] Alberta Ambient Air Data Management System (AAADMS) CASA data warehouse and other available sources.

Technical Review	Description	Primary Purpose
Servicing Review	Review of existing utilities and infrastructure available at/near the site	Identification of any gaps/needs for development of the site
Topographic review	Mapping review of topography of site and surrounding areas	Identification of major constraints and/or substantive earthworks requirements which can impact site development and any topographic features which could influence emissions dispersion
Economic Review	Review of financial implications of developing a facility at the proposed sites including estimated land purchase costs, legal costs, site development costs, and transportation costs.	Develop a high-level understanding of the economic implications of development for each short-listed site.
Field-Based Reviews		
Water Quality, Terrestrial, Aquatic and Ecological Review	Preliminary review of surface and groundwater quality, aquatic environments, wildlife and vegetation, and overall site ecology. Review to include brief desktop study and preliminary site walk-through.	Develop high-level understanding of any major water quality, terrestrial, aquatic, or ecological issues in the vicinity of each short-listed site that may need to be addressed in later project development.
Preliminary Geotechnical Screening	A screening-level geotechnical review utilizing data from local geological and geotechnical records and a limited on-site geotechnical drilling program. The drilling program for this study would be limited to 3 boreholes per site.	Screen each short-listed site for major geotechnical issues or concerns that may effect facility construction.
Archaeological Review	A preliminary assessment of each site's potential for the presence of archaeological resources limited to a background study and property inspection.	Screen each short-listed site to determine if there are archaeological considerations that may effect facility construction.

The technical reviews identified above serve to:

- Provide information for comparison between sites to support evaluation and selection of a preferred site;
- Establish a basic level of confidence that the preferred site is suitable to proceed forward in project development;

- Mesh with and provide information to contribute to the subsequent studies that will be required to obtain regulatory approval of the preferred site (See Regulatory Requirements Plan); and,
- Contribute key information on the preferred site for use in development of procurement documents to engage project developers/vendors (See Procurement Process Plan).

It should be noted that the list and detailed scope of technical reviews will be finalized once the short-list evaluation criteria are established and may be adjusted to include matters in addition to those noted above.

Following completion of the technical reviews, the results will be analyzed, evaluated and the short-list candidate sites will be compared and ranked according to the evaluation criteria and weighting to identify a preferred site.

Step 3 is summarized in the following table.

Step 3 Summary	
Objectives	• Conduct technical reviews on short-list sites • Evaluate short-list candidate sites to identify a preferred site
Timeline	• 4 to 6 months (depending on availability and seasonality of data required)
Desired Outcomes	• Various technical studies • Identification of preferred site

3.2 RESOURCES

Several different resources will be required to complete the Siting Process Plan. Carrying out the work described requires an experienced project leadership group working in collaboration with a diverse group of specialists and subject-matter experts. To provide effective leadership of the overall project development plan and contribute to the siting program, it is recommended that SAEWA designate the following key role from among its representatives:

SAEWA's project steering group:

- Liaison between SAEWA membership and the project team;
- Guides implementation of the project development plan;
- Provides direction to the project team and expedites day-to-day decisions on behalf of SAEWA as necessary to advance the project;

The following table summarizes the credentials recommended for the members of the regulatory team.

Several different resources will be required to effectively execute the Siting Plan. Carrying out the work described in Section 3.1 requires an experienced project leadership group working in collaboration with a diverse group of subject-matter experts. The project management team will coordinate activities, provide project direction, contribute to and guide analyses and evaluations, and respond to issues that may arise. Subject-matter experts are needed to collect, develop, and analyze information related to their specific disciplines (i.e. economics, air quality, land-use, traffic, etc.) that will contribute to and be used in the evaluation process. Table 4 provides an overview of the resources required to carry out the work described in Section 3.1.

Table 4: Siting Process Team

Siting Step	Required Resources	
	Description	Minimum Credentials
Step 1: Initiate Siting Process	SAEWA's project steering group	—Designated and authorized by SAEWA —Experience in management of municipal capital works
	Project Management Lead (spans all activities)	Minimum 10 years experience in: —Development and approvals for large waste management projects in Canada —Energy from waste facility design, engineering, specifications, construction and operation —Procurement, public consultation, and project management
Step 2: Identify and Evaluate Long-List Candidate Sites	SAEWA's project steering group	As above
	Project Management Lead	As above
	Legal Advisor	Minimum 10 years experience in contract and procurement law in Canada
Step 4: Evaluate Short-List Candidate Sites	SAEWA's project steering group Project Management Lead supported by subject matter experts for various disciplines including:	As above As above
	Traffic Review	Professional Engineer licensed in Alberta with minimum 10 years experience in transportation planning & engineering
	Air Quality Review	Environmental scientist with minimum 10 years experience air quality

Siting Step	Required Resources	
	Description	Minimum Credentials
		monitoring and assessments
	Land Use Review	Professional planner with minimum 10 years experience in land use planning and development
	Servicing Review	Professional Planner or Engineer licensed in Alberta with minimum 10 years experience in site servicing, development and infrastructure development
	Topographic Review	Professional Engineer licensed in Alberta with minimum 10 years experience in site development
	Economic Review	Economist with minimum 10 years experience assessing economic impacts of large capital works projects in the industrial and municipal sectors
	Water Quality, Terrestrial, Aquatic and Ecological Review	Professional ecologists and scientists with minimum 10 years experience performing water quality, terrestrial, aquatic, and ecological assessments in Alberta
	Preliminary Geotechnical Screening	Professional Engineer licensed in Alberta with minimum 10 years experience in geotechnical engineering
	Archaeological Review	Professional archaeologist with minimum 10 years experience performing surveys in Alberta

Each of the above described subject matter experts will need to be supported by a team (of varying sizes) to cost effectively deliver the required services.

3.3 BUDGET

The costs to execute the siting plan can be influenced by a number of factors including:

- The number and quality of nominations received for potential candidate sites;
- Characteristics and settings of the nominated candidate sites;
- Number of short-list sites evaluated;
- Outcomes of stakeholder consultations;
- Availability of required resources and specific scope requirements of technical reviews; and,

- Scheduling and coordination needs.

Bearing in mind that siting process costs vary based on the factors mentioned above and recognizing that there remain a number of areas of uncertainty and potential for change, an initial budget estimate for the siting plan is presented in Table 5. It should be recognized that this budget estimate is approximate and cannot reasonably address all eventualities that may occur. It is recommended that project budgets be periodically reviewed and revised to address changes in the work plan that occur as the project proceeds.

Table 5: Preliminary Siting Process Budget

Task	Description	Units	Qty	Unit Price	Task Totals	Step Totals
	Step 1: Initiate Siting Process					***$ 291,000***
1.1	Siting Process Plan Management and Coordination	%	10	NA	$ 196,000	
1.2	Review and Refine Siting Plan and Schedule	LS	1	$ 20,000	$ 20,000	
1.3	Develop High-Level Site Specifications	LS	1	$ 50,000	$ 50,000	
1.4	Define Eligbility and Exclusionary Criteria	LS	1	$ 25,000	$ 25,000	
1.5	Stakeholder Consultation on High-Level Site Specifications, Eligibility and Exclusionary Criteria	Included in Communication Plan				
	Step 2: Identify and Evaluate Long-List Candidate Sites					***$ 241,000***
3.1	Develop Preliminary Evaluation Criteria	LS	1	$ 50,000	$ 50,000	
3.2	Prepare Call-documents to Solicit Nominations of Candidate Sites	LS	1	$ 56,000	$ 56,000	
3.3	Solict Nominations of Candidate Sites	LS	1	$ 70,000	$ 70,000	
3.4	Compliance Review of Nominations of Candidate Sites	LS	1	$ 15,000	$ 15,000	
3.5	Evaluation of Nominations of Candidate Sites	LS	1	$ 50,000	$ 50,000	
	Step 3: Evaluate Short-List Candidate Sites					***$ 1,430,000***
3.1	Confirm and Finalize Short-List Evaluation Criteria and Weighting	LS	1	$ 15,000	$ 15,000	
3.2	Stakeholder Consultation on Short-List Evaluation Criteria and Weighting	Included in Communication Plan				
3.3	Finalize Short-List Evaluation Criteria and Weighting	LS	1	$ 15,000	$ 15,000	
3.4	Scope and Coordinate Technical Reviews	LS	1	$ 150,000	$ 150,000	
3.5	Conduct Preliminary Traffic Reviews (per site)	Per site	5	$ 30,000	$ 150,000	
3.6	Conduct Local Air Quality Reviews (per site)	Per site	5	$ 30,000	$ 150,000	
3.7	Conduct Land Use Reviews (per site)	Per site	5	$ 25,000	$ 125,000	
3.8	Conduct Servicing Reviews (per site)	Per site	5	$ 25,000	$ 125,000	
3.9	Conduct Topographic Reviews (per site)	Per site	5	$ 15,000	$ 75,000	
3.10	Conduct Economic Reviews (per site)	Per site	5	$ 30,000	$ 150,000	
3.11	Conduct Water Quality, Terrestrial, Aquatic and Ecological Reviews (per site)	Per site	5	$ 40,000	$ 200,000	
3.12	Conduct Preliminary Geotechnical Screenings (per site)	Per site	5	$ 20,000	$ 100,000	
3.13	Conduct Archaeological Reviews (per site)	Per site	5	$ 15,000	$ 75,000	
3.14	Analysis and Evaluation of Short-List Candidate Sites	LS	1	$ 100,000	$ 100,000	
				Recommended Contingency (10%)		**$ 196,200**
				Siting Plan Total		**$ 2,158,200**

3.4 SCHEDULE

A preliminary schedule for the activities involved in this Siting Plan has been developed and is presented in Appendix A. The schedule presented has been designed to correspond with other elements of SAEWA's project development plan. Some of activities may be carried out in

parallel with others and some may be carried out concurrently with activities identified in the other Project Development Plan reports. There remains some uncertainty as to the details of some of the specific elements of the work program and as such the schedules presented are preliminary. It is recommended that schedules be periodically reviewed and revised to address changes in the work plans that occur as the project proceeds.

4.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

This report presents the Siting Process Plan component of SAEWA's project development plan. The preceding sections include an overview of siting processes and the rationale behind executing a siting process; a proposed methodology to screen, identify and evaluate potential candidate sites in order to select a preferred site; identification of resources required to carry out the proposed siting process; a budgetary estimate and schedule for SAEWA to execute the proposed siting process plan.

Though no specific guidelines for siting of an energy from waste facility exist in Alberta, the regulatory EIA process that is anticipated to be required will take into consideration the site selection process followed. Ultimately, the proponent of a proposed project needs to be able to demonstrate that the preferred site was selected taking into consideration the alternatives available and provide a sound, scientific rationale supporting the selection.

The siting process methodology recommended for SAEWA follows a traditional siting approach whereby a series of screening and evaluation events progressively narrow the field of potential areas and sites, to eventually select the preferred site. This recommended methodology seeks to balance the needs of obtaining and evaluating reliable information, with the timing and costs for doing so. The need and content for initial technical studies necessary to guide the selection of a preferred site has been coordinated to contribute in part, to some of the subsequent needs for technical information required to complete the regulatory EIA study.

The proposed siting methodology presented in this report consists of 3 steps:

1. **Initiate Siting Process** – begin the siting process and finalize a siting methodology, develop high-level site specifications, define eligibility and exclusionary criteria, and receive stakeholder input;
2. **Identify and Evaluate Long-List Candidate Sites** – develop evaluation criteria, solicit offers of candidate sites within the suitable area, evaluate site offers (long-list) and identify top ranked sites (short-list); and,

3. **Evaluate Short-List Candidate Sites** – conduct technical reviews and further evaluate short-list sites to identify the preferred site.

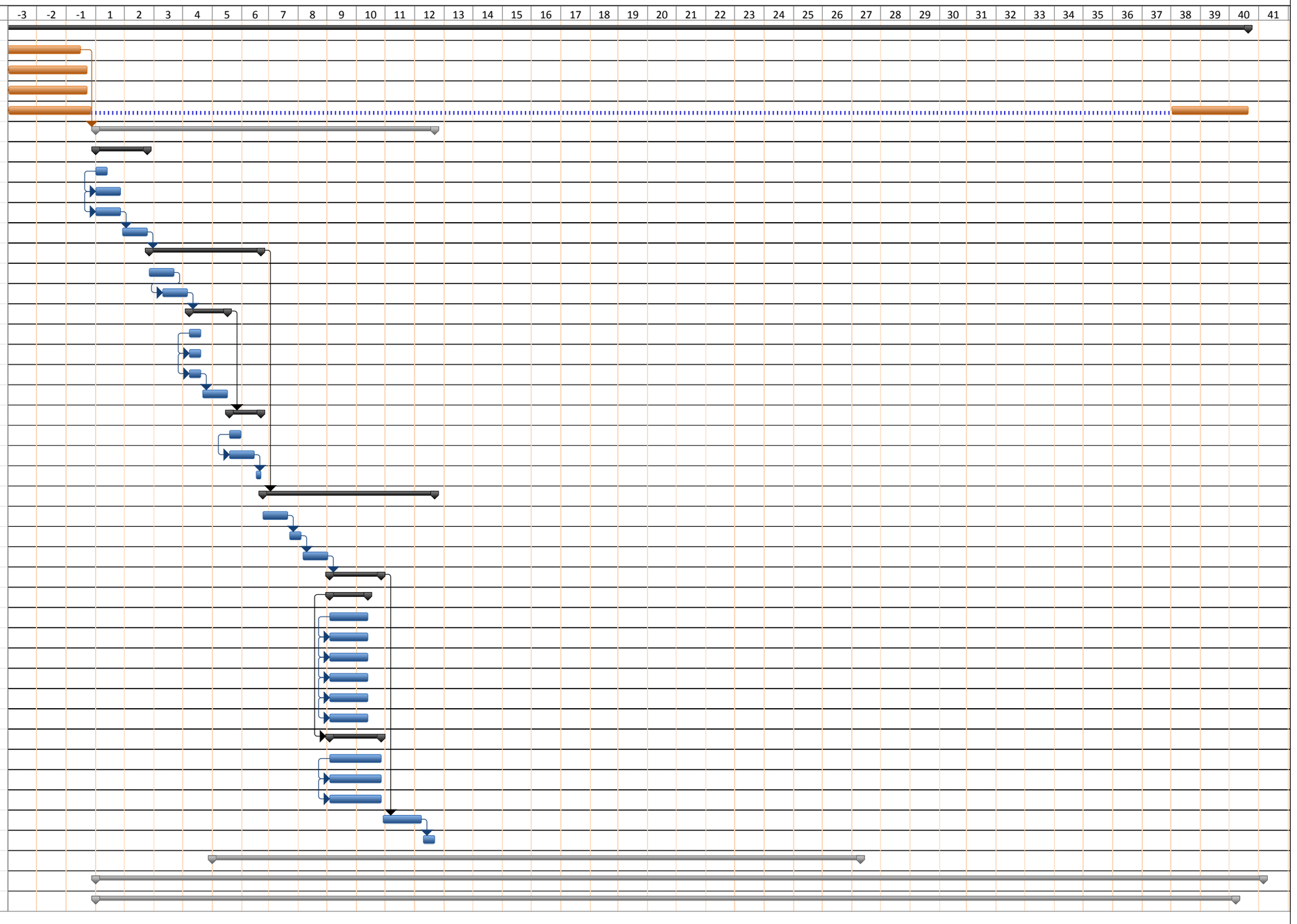
To complete the work involved in the proposed siting process plan, SAEWA will need to retain several resources including a project management lead and a number of subject matter technical experts.

To complete the work involved in the recommended siting process plan, SAEWA will need to establish its own project steering group as well as retain several resources including a project management lead, a number of subject matter technical experts.

APPENDIX A
PRELIMINARY SITING PLAN SCHEDULE

SAEWA Project Development Plan
DRAFT PRELIMINARY SCHEDULE - SITING

ID	Task Name
1	**Pre-Development Organizational Tasks**
2	Governance Structure
3	Secure Waste Supply and Conduct Waste Stream Analysis
4	Establish Funding for Early Project Development Activities
5	Establish Mechanisms for Financing Facility Capital and Operating Costs
6	**Siting**
1	**Initiate Siting Process**
2	Update Siting Process Plan
3	Develop High Level Site Specifications
4	Develop Elegibility and Exlusionary Criteria
5	Receive Stakeholder Input (Communications Plan)
6	**Identify and Evaluate Long-list Candidate Sites**
7	Develop Evaluation Criteria
8	Prepare Site Solicitation Documents
9	**Solicit Formal Nomination of Candidate Sites**
10	Meet with 2012 REOI Willing Host Communities
11	Mail Site Solicitation Documents to Landholding Public Agencies
12	Advertise Request for Nomination of Private Sector Candidate Sites
13	Receive Nominations of Candidate Sites
14	**Evaluate Long-list Candidate Sites**
15	Due Diligence Compliance Checks
16	Review and Rank Compliant Candidate Sites
17	Identify Top Ranked Sites (Short-list)
18	**Evaluate Short-list Candidate Sites**
19	Review and Finalize Evaluation Criteria and Weighting
20	Receive Stakeholder Input (Communications Plan)
21	Identify Data Needs and Scope for Technical Reviews
22	**Conduct Technical Reviews of Short-list Candidate Sites**
23	**Desktop Reviews**
24	Preliminary Traffic Review
25	Local Air Quality Review
26	Land Use Review
27	Servicing Review
28	Topographic Review
29	Economic Review
30	**Field-Based Reviews**
31	Water Quality, Terrestrial, Aquatic and Ecological Review
32	Preliminary Geotechnical Screening
33	Archaeological Review
34	Analyze Technical Reviews, Compare and Evaluate Short-list Candidate Sites
35	Identify the Preferred Site
7	**Procurement**
8	**Regulatory**
9	**Communications**



HDR

100 YORK BOULEVARD
SUITE 300
RICHMOND HILL, ON L4B 1J8
www.hdrinc.com