

CITY OF HIGH POINT

AGENDA ITEM



Title: Kersey Valley Landfill Area 3 Site Study

From: Terry Houk – Public Services Director
Robby Stone – Asst. Director Public Services

Meeting Date: February 6, 2017

Public Hearing: N/A

Advertising Date: N/A
Advertised By: On-Call

Attachments: Attachment A – Scope of Services

PURPOSE:

The City budgets annually for future expansion and upgrades at the Kersey Valley Landfill. The proposed life expectancy of the landfill is anticipated to extend to 2035. In order to achieve this longevity, Area 3 (the area along Kersey Valley Road) will have to be developed which will merge the existing two landfill areas. The Site Study will assure compliance and acceptance to develop Area 3 while working with the NC Department of Environmental Quality Division of Waste Management (DWM).

BACKGROUND:

The professional engineering services to be provided for this project involve work associated with Socio-Economic and Alternative Site Study, Regional Characterization Study, Local Characterization Study, Site Hydrogeologic Report, and Proposed Facility Plan. These tasks are anticipated to take six months to complete.

BUDGET IMPACT:

Funds for the construction administration are in the Kersey Valley Landfill Solid Waste Funds.

RECOMMENDATION / ACTION REQUESTED:

The Public Services Department recommends approval and asks for the Council to award the professional engineering services to Smith Gardner, Inc. in the amount of \$127,900.00.

Kersey Valley Landfill



January 4, 2017

Mr. Robby Stone, P.E.
Assistant Director
City of High Point - Department of Public Services
211 South Hamilton Street
High Point, NC 27260

**RE: City of High Point - Solid Waste Management
Engineering & Environmental Services Proposal
Area 3 Site Study**

Dear Robby:

Smith Gardner, Inc. (S+G) is pleased to provide this proposal for engineering and environmental services pertaining to the performance of a site study for future Area 3 of the City's Kersey Valley Landfill. This proposal is based on our recent discussions as well as S+G's ongoing work at the project site.

The following presents our proposed scope, schedule, and budget to provide these services.

Note that it is possible that an environmental impact statement (EIS) will also be required for permitting Area 3. This will be determined through discussion with the NC Department of Environmental Quality Division of Waste Management (DWM). If required, S+G will prepare a separate scope and budget for this additional work, much of which will relate closely to the scope of work described herein.

SCOPE OF SERVICES

Our proposed Scope of Services is provided as **Attachment A**. This scope outlines S+G's approach in providing the required services. The Scope of Services is divided into tasks including:

- 1.0 Socio-Economic and Alternative Site Study (NCGS 160A-325)
- 2.0 Regional Characterization Study (Rule 15A NCAC 13B.1618)
- 3.0 Local Characterization Study (Rule .1618)
- 4.0 Site Hydrogeologic Report (Rule .1623)
- 5.0 Proposed Facility Plan (Rule .1618)
- 6.0 Review and Submittal of Site Study Report
- 7.0 Local Government Approval Assistance
- 8.0 Respond to Comments from the DWM.

Each task includes a description of the task objective, S+G activities, task deliverables, key understandings, planned meetings, and information and services provided by others.

SCHEDULE

S+G is prepared to begin work on the initial phase of work immediately upon the City's authorization. S+G estimates that the Site Study will take approximately 4 to 6 months to complete and be ready for submittal.

BUDGET

S+G proposes to undertake the above scope on a time and materials basis for a total not to exceed budget of \$127,900 as itemized below, which includes a 10% contingency factor. Please also refer to S+G's standard fee schedule provided as **Attachment B**. S+G will keep the City informed of our budget status and will not exceed the proposed budget without prior approval.

Task	Proposed Budget
1. Socio-Economic and Alternative Site Study	\$4,800
2. Regional Characterization Study	\$7,000
3. Local Characterization Study	\$8,500
4. Site Hydrogeologic Report (see Note 1)	\$54,000
5. Proposed Facility Plan	\$18,000
6. Review and Submittal of Site Study Report	\$7,000
7. Local Government Approval Assistance	\$9,500
8. Respond to Comments from the DWM	\$7,500
Subtotal:	\$116,300
Contingency (10%):	\$11,600
Total:	\$127,900

Note:

- The budget for the Site Hydrogeologic Report includes the following:
 - Drilling: \$15,000
 - Stream/Wetlands/Biological Site Review: \$2,500
 - Surveying (Borings/Misc.): \$2,500
 - Geotechnical Laboratory Testing: \$2,000
 - Obtaining Monthly Water Levels in Piezometers: \$9,000 (12 months)

Smith Gardner, Inc. is pleased to be of continued service to the City of High Point. If you have any questions, or require additional information, please contact us at your earliest convenience.

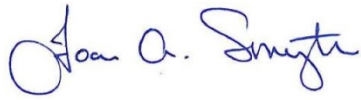
Mr. Robby Stone, P.E.

January 4, 2017

Page 3 of 3

Sincerely,

SMITH GARDNER, INC.

A handwritten signature in blue ink that reads "Joan A. Smyth". The signature is written in a cursive style with a large initial 'J'.

Joan A. Smyth, P.G.

Vice President, Senior Hydrogeologist

joan@smithgardnerinc.com

A handwritten signature in blue ink that reads "Pieter K. Scheer". The signature is written in a cursive style with a large initial 'P'.

Pieter K. Scheer, P.E.

Vice President, Senior Engineer

pieter@smithgardnerinc.com

Attachments: Attachment A - Scope of Services

Attachment B - S+G Fee Schedule

This page intentionally left blank.

Attachment A

Scope of Services

This page intentionally left blank.

A. Scope of Services

The following Scope of Services outlines S+G's approach in providing the proposed engineering, geological, environmental, and related services. This Scope of Services is divided into Tasks as follows. Rule numbers shown below refer to applicable State General Statutes or Solid Waste Rules enforced by the North Carolina Department of Environmental Quality, Division of Waste Management (DWM), Solid Waste Section.

- 1.0 Socio-Economic and Alternative Site Study (NCGS 160A-325)
- 2.0 Regional Characterization Study (Rule 15A NCAC 13B.1618)
- 3.0 Local Characterization Study (Rule .1618)
- 4.0 Site Hydrogeologic Report (Rule .1623)
- 5.0 Proposed Facility Plan (Rule .1618)
- 6.0 Review and Submittal of Site Study Report
- 7.0 Local Government Approval Assistance
- 8.0 Respond to Comments from the DWM.

1.0 Socio-Economic and Alternative Site Study

Objective: To perform an evaluation of the socio-economic impact of the proposed landfill site relative to other viable alternative properties in the City and surrounding areas. This is required by the "Toby Fitch" law (NCGS 160A-325).

S+G Activities: Prepare the Socio-Economic and Alternative Site Study encompassing the following:

- Perform a review of potential alternative sites in the City and surrounding areas based on USGS and available mapping information.
- Perform a review of each alternative site based on socio-economic factors such as ethnic, political, and/or economic bias.
- Provide a recommendation of best site(s).

Task Deliverables: Completed Socio-Economic and Alternative Site Study (to be included with the Site Study Report).

Key Understandings: The proposed site will be evaluated relative to other potential sites in the City and surrounding areas. Based on the prior study done in 2004 by S+G, the proposed site is expected to rank very highly due to site conditions and its proximity to existing solid waste infrastructure. However, other sites could potentially be favorable enough to warrant further study beyond the scope of this task before approval of the proposed site could be made.

Planned Meetings: Meetings will be incorporated into **Task 6.0** below.

Information and Services Provided by Others: Assistance from the City in obtaining City demographic information, tax maps, etc.

2.0 Regional Characterization Study (Rule .1618)

Objective:	To prepare a Regional Characterization Study for DWM approval. The study will include the area within a two mile radius from the proposed boundary of the landfill facility.
S+G Activities:	<p>Prepare the Regional Characterization Study encompassing the following information:</p> <ul style="list-style-type: none">• USGS Topographic Map, 7.5 Minute Series• Proposed landfill facility location• Public water supply wells, surface water intakes and service areas• Public use airports and runways• Residential subdivisions• Waste transportation routes.
Task Deliverables:	Completed Regional Characterization Study for submittal to the DWM.
Key Understandings:	Information contained in previous site submittals should help to minimize the work effort for this task.
Planned Meetings:	Meetings will be incorporated into Task 6.0 below.
Information and Services Provided by Others:	Assistance from the City as required (available mapping, utility information, etc.).

3.0 Local Characterization Study (Rule .1618)

Objective:	To prepare a Local Characterization Study for approval of the DWM. The study will include the landfill facility and a 2,000 foot perimeter from the proposed boundary of the landfill facility.
S+G Activities:	<p>Prepare a Local Characterization Study which will include a recent aerial photograph and map, both at a scale of at least one inch equals 400 feet. The Study will encompass the following information:</p> <ul style="list-style-type: none">• Property proposed for the disposal site and on-site easements• Existing land use and zoning• Location of commercial and industrial buildings and other potential sources of contamination• Location of potable wells and available documentation regarding well completion and production rate• Historic sites• Existing topography and features of the disposal site including: general surface water drainage patterns and watersheds, 100-year floodplains, wetlands, perennial and intermittent streams, rivers and lakes• Fracture trace analysis.

A. Scope of Services

Task Deliverables: Completed Local Characterization Study for submittal to the DWM.

Key

Understandings: Information contained in previous site submittals should help to minimize the work effort for this task.

It is assumed based on previous site work that no archaeological or historic sites exist which would require further study. If anything unexpected is discovered, a separate scope and budget will be prepared.

Planned Meetings: Meetings will be incorporated into **Task 6.0** below.

**Information and
Services Provided
by Others:**

Assistance from the City as required (available mapping, utility information, etc.).

4.0 Site Hydrogeologic Report (Rule .1623)

Objective: To prepare a Site Hydrogeologic Report for the DWM approval.

S+G Activities: Prepare a Site Hydrogeologic Report which will include the geologic and hydrogeologic characteristics of the proposed site to determine the suitability for solid waste management activities and the general ground water flow paths and rates for the uppermost aquifer. The report will encompass the following information:

- Report on local and regional geology and hydrogeology based on research of available literature for the area
- Discussion of field observations
- Topographic setting
- Springs, streams, drainage features, and wetlands
- Existing or abandoned wells
- Rock outcrops
- Other features that affect site suitability or the ability to effectively monitor the site
- Site test borings of adequate number to determine subsurface conditions and ground-water flow regime of the uppermost aquifer at the site (number, location and depths approved by the DWM)
- Testing program for the borings
 - Standard penetration-resistance
 - Particle size analysis
 - Soil classification and formation description
 - Saturated hydraulic conductivity, porosity and effective porosity for each lithologic unit of the uppermost aquifer
- Stratigraphic cross-sections identifying hydrogeologic and lithologic units, and stabilized water table elevations
- Presentation and analysis of water table information in accordance with Rule .1623(a)(7)
- Groundwater information
 - Horizontal and vertical dimensions of ground-water flow,

- including flow directions, rates and gradients
- Groundwater contour maps illustrating groundwater flow in the uppermost aquifer, the location of all borings and rock outcrops, and data used to generated the groundwater contours.
- Location restrictions report which demonstrates compliance with siting criteria including airport safety, floodplains, wetlands, fault areas, seismic impact zones, unstable areas, cultural resources, State nature and historic preserve, water supply watersheds and endangered species.

Task Deliverables: Completed Report for submittal to the DWM.

Key

Understandings: Information contained in previous site submittals should help to minimize the work effort for this task.

Although a site review is planned, it is assumed based on previous site work that no wetlands, streams, or biological habitats exist which would require further study. If anything unexpected is discovered, a separate scope and budget will be prepared.

S+G has assumed a budget for site investigation (borings, test pits, etc.). The actual site investigation program may require adjustments based on DWM input.

Planned Meetings: Meetings will be incorporated into **Task 6.0** below.

**Information and
Services Provided
by Others:**

Subcontract drilling and surveying services.

Carolina Ecosystems, Inc. will perform a site review of potential wetlands, streams, and biological habitats.

Assistance from City in excavation of test pits (if needed).

Access to staff files and available mapping.

5.0 Proposed Facility Plan (Rule .1618)

Objective: To prepare a Proposed Facility Plan for the DWM approval.

S+G Activities: Prepare a Proposed Facility Plan which will include the following information:

- Conceptual design plan, depicting
 - Landfill units and facility structures
 - Proposed waste stream, estimated site capacity, disposal rate and service area population
 - Summary of findings of the geologic and hydrogeologic report
 - Proposed environmental controls and monitoring systems
 - Survey locating all property boundaries for the proposed landfill facility

A. Scope of Services

Task Deliverables: Completed Proposed Facility Plan for submittal to the DWM.

Key Understandings: The Proposed Facility Plan will show the full development of Area 3, which is anticipated to take the facility to its maximum disposal capacity. Information contained in previous site submittals should help to minimize the work effort for this task.

Planned Meetings: Meetings will be incorporated into **Task 6.0** below.

Information and Services Provided by Others: Boundary survey by the City.

Access to staff files and available mapping.

6.0 Review and Submittal of Site Study Report

Objective: To prepare a Draft Site Study report for review by the City.

To submit the Site Study report to the DWM.

S+G Activities: Prepare a Draft Site Study report encompassing the following major components:

- Regional Characterization Study
- Local Characterization Study
- Site Hydrogeologic Report
- Proposed Facility Plan
- Socio-Economic and Alternative Site Study
- Local Government Approval Documentation.

Deliver copies of the Site Study report to the DWM.

Meet with the DWM staff to familiarize them with details of the Site Study.

Determine time frame for review and obtaining approval of the Site Study.

Task Deliverables: Copies of a Draft Site Study report will be prepared for the City.

Completed Site Study report for submittal to the DWM. S+G will track this submittal through approval by the DWM.

Key Understandings: The Site Study report will be submitted to the DWM after the Draft Site Study report has been reviewed by the City and review comments incorporated into the final document.

A. Scope of Services

Planned Meetings: One (1) meeting, one-half day duration, to review with City staff prior to submittal to the DWM. Two (2) meetings, one-half day duration each, to review with the DWM staff.

Information and Services Provided by Others: Review by City staff.

7.0 Local Government Approval Assistance

Objective: To assist the City and DWM with informing the public about the planned project and obtaining the necessary local government approvals.

S+G Activities: Assist the City and DWM, as necessary, with the following tasks:

- Preparation of project information for public inspection including facility plan information for adjacent property owners.
- Advertisement and documentation of the required public meeting (.1618(c)(5)).

Prepare and make a presentation at the required public meeting.

Assist the City with other required meetings related to annexation and re-zoning as needed.

Task Deliverables: Project data, maps, etc. from Site Study report.

Documentation of the required public meeting will become part of the Site Application submittal to DWM.

Key Understandings: Local government approval for proposed municipal solid waste landfills including a public meeting to inform the local community of the proposed activity must follow the format of .1618(c)(5), including the timing, advertisement, and documentation of the public meeting.

Planned Meetings: Four (4) meetings, one-half day duration, to prepare for and attend public meetings/hearings.

Information and Services Provided by Others: Public meeting preparation, advertisement, and coordination by City.

The DWM will provide project fact sheets and will advertise and document the public meetings and the public hearing.

8.0 Respond to Comments from the DWM

Objective: To respond to specific technical comments as discerned from the DWM's review of the Site Study report.

S+G Activities: Respond to technical issues raised by the DWM in their review of the Site Study report.

Revise Site Study report as deemed necessary to obtain approval.

Task Deliverables: Responses to DWM comments and report revisions as required.

Key Understandings: The City will review and comment on any response to DWM comments and revisions.

Depending on the nature and type of comments from the DWM, additional budget may be required by S+G for this task.

Planned Meetings: One (1) meeting, one-half day duration, to discuss Site Study technical issues with the DWM staff.

Information and Services Provided by Others: Review by City staff.

This page intentionally left blank.

Attachment B

S+G Fee Schedule

This page intentionally left blank.

2016 FEE SCHEDULE

Staff Professional

Hourly Billing Rates*

President , Senior Engineer - Stacey A. Smith, P.E.**	\$195/hour
Vice President , Senior Project Manager - John M. Gardner, P.E.**	\$183/hour
Vice President , Senior Engineer - Pieter K. Scheer, P.E.**	\$165/hour
Vice President , Senior Hydrogeologist - Joan A. Smyth, P.G.**	\$135/hour
Principal , Senior Project Engineer - Gregory G. Mills, P.E.**	\$117/hour
Principal , Senior Civil Designer - Christopher T. Jones**	\$110/hour
Project Manager, Senior Geologist - C. Kevin Anderson, P.G.**	\$135/hour
Senior Project Manager - W. Michael Brinchek, P.E.	\$135/hour
Project Manager, Senior Scientist - Matthew S. Lamb**	\$120/hour
Project Geologist - Bobby J. Wolf, P.G.	\$107/hour
Project Engineer – Kaitlen R. Drafts, P.E.	\$105/hour
Project Scientist - Tom E. Dickson, Ph.D.	\$100/hour
Project Geologist - Madeline M. German, P.G.**	\$95/hour
Project Manager, Project Scientist - Don M. Misenheimer** (AAI)	\$95/hour***
Staff Engineer - John R. Fearington, E.I.	\$87/hour
Project Manager - Britt P. Ransom** (AAI)	\$85/hour***
Project Manager - R. Chevis Strange	\$85/hour
Staff Engineer - Cybele M. Brockmann	\$85/hour
Civil Designer - Jared A. Lemaster	\$82/hour
Staff Engineer - Spencer W. Holloman, E.I.	\$80/hour
Field Services Manager - Byron S. Hackney**	\$75/hour
Civil Designer - Timothy R. Swartzfager	\$75/hour
Staff Technician	\$45/hour
Systems Administrator - Sam T. Spencer	\$100/hour
Clerical/Administrative Secretary	\$35/hour
Expert Witness/Legal Services	Negotiated

Expenses & Fees

Direct Project Expenses	Cost + 10%
-------------------------	------------

* Rates are subject to review annually.

**Employee Owner

***Accredited Asbestos Inspector (AAI) Services +\$15/hour to rate

This page intentionally left blank.