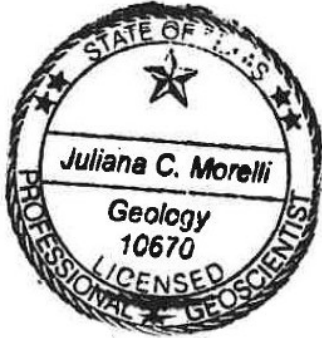


MUNICIPAL SOLID WASTE PERMIT
MAJOR AMENDMENT

Part II Application for Permit Amendment
(TAC Title 30 Rule §330.61)



Julie Morelli 9/15/2023



NAME OF PROJECT: Beck Landfill

MSW PERMIT APPLICATION NO.: 1848A

OWNER: Nido, LTD (CN603075011)

OPERATOR: Beck Landfill (RN102310968)

CITY, COUNTY: Schertz, Guadalupe County

Major Amendment: September 2023



Prepared by:

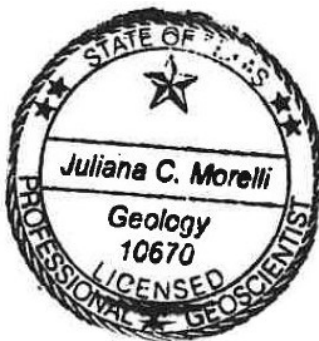


PROJECT NUMBER: 150051.05.01
PROJECT CONTACT: Julie Morelli
EMAIL: Julie.Morelli@powereng.com
PHONE: 210-951-6424

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Julia Morelli 9/15/2023



9-15-23

TCEQ Form 20885 Application for MSW Permit, Part II



Texas Commission on Environmental Quality Part II Application Form for New Permit or Permit Amendment for a Municipal Solid Waste Landfill Facility

I. Application Information

1. Facility Name:
2. Permittee Name:
3. MSW Authorization #:
4. Initial Submittal Date:

II. Existing Conditions Summary - 30 TAC §330.61(a)

Provide information to address any site-specific conditions that require special design considerations and possible mitigation of conditions as follows.

1. Provide a summary describing the existing conditions at the site and within the areas surrounding the site, which may include discussions of any additional land-use, environmental, or special issues related to the facility.

2. Provide brief descriptions of all site-specific conditions at the facility that require special design considerations.

3. Indicate that reports of site-specific conditions that require special design considerations and mitigation of such conditions are provided under Sections VIII – XVI below with regard to (a) facility impacts on surrounding areas; (b) transportation; (c) general geology and soils; (d) groundwater and surface water; (e) existing and abandoned oil and water wells; (f) floodplains and wetlands; (g) endangered or threatened species impacts; and (h) compliance with the Texas Natural Resources Code, Chapter 191 (Texas Antiquities Code).

III. Waste Acceptance Plan - 30 TAC §330.61(b)

1. If this application is for a Type I or Type IAE MSW landfill facility, attach completed Form No. TCEQ-20873. Attachment No.:
2. If this application is for a Type IV or Type IVAE MSW landfill facility, attach completed Form No. TCEQ-20890. Attachment No.:

IV. General Location Maps - 30 TAC §330.61(c)

Provide General Location Maps that accurately show the features listed below. Provide all General Location Maps in a single attachment and include the drawing number in the space provided. Include notes on each map, as needed, to describe information pertaining to the map.

1. The prevailing wind direction with a wind rose.
2. All known water wells within 500 feet of the proposed permit boundary with the state well numbering system designation for Water Development Board "located wells."
3. All structures and inhabitable buildings within 500 feet of the proposed facility.
4. (i) Schools, (ii) licensed day-care facilities, (iii) churches, (iv) hospitals, (v) cemeteries, (vi) ponds, (vii) lakes, and (viii) residential, (ix) commercial, and (x) recreational areas within one mile of the facility.
5. The location and surface type of all roads within one mile of the facility that will normally be used by the owner or operator for entering or leaving the facility.
6. Latitudes and longitudes.
7. Area streams.
8. Airports within six miles of the facility.
9. The property boundary of the facility.
10. (i) Drainage, (ii) pipeline, and (iii) utility easements within or adjacent to the facility.
11. (i) Facility access control features.
12. (i) Archaeological sites, (ii) historical sites, and (iii) sites with exceptional aesthetic qualities adjacent to the facility.

V. Facility Layout Maps - 30 TAC §330.61(d)

Provide the Facility Layout Map(s) as a single attachment, and include drawing number(s) in the space provided. Include notes on each map, as needed, to describe information on the map.

Provide a map or set of maps of the facility layout showing:

1. The outline of the units;
2. General locations of main interior facility roadways;
3. Locations of monitor wells;
4. Locations of buildings;

5. Any other graphic representations or marginal explanatory notes necessary to communicate the proposed construction sequence;
6. Fencing;
7. Provisions for the maintenance of any natural windbreaks, such as greenbelts, where they will improve the appearance and operation of the facility and, where appropriate, plans for screening the facility from public view;
8. All site entrance roads from public access roads;
9. General locations of main interior facility roadways that can be used to provide access to fill areas;
10. Sectors with appropriate notations to communicate the types of wastes to be disposed of in individual sectors;
11. The general sequence of filling operations;
12. Sequence of excavations and filling;
13. Dimensions of cells or trenches; and
14. Maximum waste elevations and final cover.

VI. General Topographic Maps - 30 TAC §330.61(e)

1. Provide general topographic map(s) consisting of United States Geological Survey 7 ½-minute quadrangle sheets or equivalent for the facility.
Map No(s).
2. At least one of the general topographic maps provided is at a scale of one-inch equals 2,000 feet.
 Yes

VII. Aerial Photograph - 30 TAC §330.61(f)

Provide an aerial photograph approximately 9" x 9" with a scale within a range of one-inch equals 1,667 feet to one-inch equals 3,334 feet and showing the area within at least one-mile radius of the site boundaries. Mark the site boundaries and fill areas on the aerial photograph(s). A series of aerial photographs can be used to show growth trends.
Attachment No.(s):

VIII. Land-Use Map - 30 TAC §330.61(g)

Provide a constructed map of the facility showing the following land-use features (list the map number(s) in the space provided):

1. The boundary of the facility;
2. Existing zoning on or surrounding the property ;
3. Actual uses (e.g., agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility.
4. Drainage, pipeline, and utility easements within the facility;
5. Access roads serving the facility;

6. Check the following facilities if they are within one mile of the facility boundary and indicate on map.
- (a) residences;
 - (b) commercial establishments;
 - (c) schools;
 - (d) licensed day-care facilities;
 - (e) churches;
 - (f) cemeteries;
 - (g) ponds or lakes; and
 - (h) recreational areas.

IX. Impact on Surrounding Area - 30 TAC §330.61(h)

Address the facility's impacts on cities, communities, groups of property owners, or individuals and describe mitigation of conditions as required. Attach additional pages as necessary. If a land use compatibility analysis report prepared by a qualified professional is provided, indicate the location within the application. Attachment No.:

1. **Impacts to Surrounding Areas:**

(a) Provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest; and

(b) Describe any special design considerations and possible mitigation of potential impacts, as necessary.

Published Zoning Map: If available, provide a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located.

2. **Special or Nonconforming Use Permit:**

(a) Does the site require approval as a nonconforming use or a special permit from the local government having jurisdiction? Yes No

(b) If yes, provide a copy of such approval. Attachment No.:

3. **Character of Surrounding Land Use:** Describe the character of the surrounding land uses within one mile of the proposed facility.

4. **Growth Trends and Directions of Major Development:**

(a) Provide information about growth trends within five miles of the facility.

(b) Describe the directions of major development.

5. **Number of and Proximity to Residences and Other Uses:** Indicate the approximate number and proximity of residences and other uses within one mile of the facility as follows. Population density and proximity to residences and other uses may be considered in the assessment.

(a) Number of, distance, and directions to residences:

(i) Indicate the distance to the nearest residences: feet

(ii) Provide directions to the nearest residences:

(b) Number of, distance, and directions to commercial establishments:

(i) Indicate the distance to the nearest commercial establishments: feet

(ii) Provide directions to the nearest commercial establishments:

(c) Number of, distance, and directions to schools:

(d) Number of, distance, and directions to churches:

(e) Number of, distance, and directions to cemeteries:

(f) Number of, distance, and directions to historic structures and sites:

(g) Number of, distance, and directions to archaeologically significant sites:

(h) Number of, distance, and directions to sites having exceptional aesthetic quality:

6. **Known Wells.** Provide information and discussion of all known wells within 500 ft. of the proposed facility. Provide the well information using Table VIII-1 below. If site has more than 5 wells within the radius, include wells information as an attachment.

Table VIII-1. Well Information

Wells Within 500 ft. Radius of the Proposed Facility							
Well Locator	Well ID No.	Depth (ft.)	Completion Date	Completion Formation	Well Use	Longitude	Latitude

X. Transportation and Airport Safety - 30 TAC §330.61(i) and §330.545

1. **Transportation:** Attach completed Transportation Data and Coordination Report Form for Municipal Solid Waste Type I Landfills, TCEQ-20719. Attachment No.:
2. **Airport Safety:**
 - (a) Is the facility located, or will be located, within 10,000 feet of any airport runway end used by turbojet aircraft? Yes No
 - (b) Is the facility located, or will be located, within 5,000 feet of any airport runway end used by only piston-type aircraft? Yes No
 - (i) If the answer is "Yes" to either (a) or (b) above, indicate the distance of the facility from the nearest airport runway end used by only turbojet aircraft: feet or piston-type aircraft: feet; and
 - (ii) Provide required demonstration to show that the municipal solid waste facility units are or will be designed and operated so as not to pose a bird hazard to aircraft.
 - (c) Is the facility located, or will be located, within a six-mile radius of any small general service airport runway end used by turbojet or piston-type aircraft? Yes No
 - (d) Is the facility located, or will be located, within a five-mile radius of any large general public airport runway end used by turbojet or piston-type aircraft? Yes No
 - (i) If the answer to either of subsection (c) or (d) above is "Yes," has the applicant notified the affected airport as required?
 Yes No. Explain:
 - (ii) Also, has the applicant notified the Federal Aviation Administration as required?
 Yes No. Explain:

(iii) Provide copies of the notifications to the affected airport and to FAA.

(iv) All landfill facilities within a six-mile radius of any small general service airport runway or within a five-mile radius of any large general public commercial airport runway shall be critically evaluated to determine if an incompatibility exists. Include any coordination received from the affected airport and from the FAA concerning compatibility.

(e) Will the subject landfill accept waste streams that include putrescible waste?
 Yes No.

(i) If the answer to subsection (e) is "Yes," address the potential for the facility to attract birds and cause significant hazards to low-flying aircraft. Guidelines regarding location of landfills near airports can be found in Federal Aviation Administration Order 5200.5(A), January 31, 1990 (or the replacement active orders, notices, and advisory circular guidelines from the FAA can be used).

XI. General Geology and Soils Statement and Location Restrictions - 30 TAC §330.61(j) and §§ 330.555 - 330.559

1. Discuss in general terms the geology and soils of the proposed site.

2. Fault Areas

(a) Will the municipal solid waste landfill units at the facility or a lateral expansion of the facility be located within 200 feet of a fault that has had displacement in Holocene time?
 Yes No

If the answer is "Yes," provide demonstration to show that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the landfill unit and will be protective of human health and the environment. Attachment No.:

(b) Is the facility located within areas that may be subject to differential subsidence or active geological faulting? Yes No

If the answer is "Yes," provide a detailed fault study. Attachment No.:

(c) Is an active fault known to exist within 1/2 mile of the site? Yes No

If the answer is "Yes," investigate the site for unknown faults and discuss its results. Attachment No.:

(d) Is the facility located in areas experiencing withdrawal of crude oil, natural gas, sulfur, etc., or significant amounts of groundwater? Yes No

If the answer is "Yes," investigate the site in detail for the possibility of differential subsidence or faulting that could adversely affect the integrity of landfill liners and discuss the site investigation and its results. Attachment No.:

(e) If conducted, were the studies of differential subsidence or faulting conducted under the direct supervision of a licensed professional engineer experienced in geotechnical engineering or a licensed professional geoscientist qualified to evaluate conditions of differential subsidence or faulting? Yes No. Explain

(f) If conducted, do the studies of differential subsidence or faulting establish the limits (both upthrown and downthrown) of the zones of influence of all active faulted areas within the site vicinity? Yes No. Explain

(g) If conducted, do the studies of differential subsidence include information or data addressing the following shown below, as applicable:

Table X-1. Information included in Fault Area Studies

Information to be included, as applicable:	Yes	Not Applicable
(i) structural damage to constructed facilities (roadways, railways, and buildings);	<input type="checkbox"/>	<input type="checkbox"/>
(ii) scarps in natural ground;	<input type="checkbox"/>	<input type="checkbox"/>
(iii) presence of surface depressions (sag ponds and ponded water);	<input type="checkbox"/>	<input type="checkbox"/>
(iv) lineation's noted on aerial maps and topographic sheets;	<input type="checkbox"/>	<input type="checkbox"/>
(v) structural control of natural streams;	<input type="checkbox"/>	<input type="checkbox"/>
(vi) vegetation changes;	<input type="checkbox"/>	<input type="checkbox"/>
(vii) crude oil and natural gas accumulations;	<input type="checkbox"/>	<input type="checkbox"/>
(viii) electrical spontaneous potential and resistivity logs (correlation of subsurface strata to check for stratigraphic offsets);	<input type="checkbox"/>	<input type="checkbox"/>
(ix) earth electrical resistivity surveys (indications of anomalies that may represent fault planes);	<input type="checkbox"/>	<input type="checkbox"/>
(x) open cell excavations (visual examinations to detect changes in subsoil texturing and/or weathering indicating stratigraphic offsets);	<input type="checkbox"/>	<input type="checkbox"/>
(xi) changes in elevations of established benchmarks; and	<input type="checkbox"/>	<input type="checkbox"/>
(xii) references to published geological literature pertaining to area conditions.	<input type="checkbox"/>	<input type="checkbox"/>

(h) If the site is or will be located within a zone of influence of active geological faulting or differential subsidence, does the application provide substantial evidence that the zone of influence will not affect the site?
Yes No Attachment No.:

Address the following statement:

3. No solid waste disposal shall be accomplished within a zone of influence of active geological faulting or differential subsidence because active faulting results in slippage along failure planes, thus creating preferred seepage paths for liquids.

4. Seismic Impact Zones

(a) Is the proposed facility located in a seismic impact zone, as defined in 30 TAC §330.557?
Yes No

Provide information to support response. Attachment No.:

(b) For facilities located in a seismic impact zone, provide a detailed demonstration showing that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. Attachment No.:

5. Unstable Areas

(a) Is the facility located in an unstable area, as defined in 30 TAC §330.559?

Yes No Explain: _____

(b) If the facility is located in an unstable area, provide a demonstration that engineering measures have been incorporated into the landfill unit's design to ensure that the integrity of the structural components of the landfill unit will not be disrupted.

Attachment No.:

The demonstration considered at least the following factors:

(i) on-site or local soil conditions that may result in significant differential settling;

Yes No

(ii) on-site or local geologic or geomorphologic features; Yes No and

(iii) on-site or local human-made features or events (both surface and subsurface).

Yes No

XII. Groundwater and Surface Water - 30 TAC §330.61(k) and §330.549

1. Groundwater

Provide an attachment containing data about the site-specific groundwater conditions at and near the site, from published and open-file sources, including:

- Aquifer names and their association with geologic units described in the General Geology and Soils Statement;
- Groundwater quality, including, if available, typical values or value ranges for total dissolved solids content; and
- Present use(s) of groundwater withdrawn from aquifers at and near the site, if available.

Attachment No.:

Address the following as applicable:

(a) Is the facility located over the Edwards Aquifer recharge zone, as defined in 30 TAC §330.549? Yes No.

If yes, discuss how the facility will comply with the applicable requirements in 30 TAC Chapter 213 (relating to Edwards Aquifer).

(b) A Type I or Type IAE landfill is prohibited on the recharge zone of the Edwards Aquifer; the applicant will not locate a Type I or Type IAE landfill on the recharge zone of the Edwards Aquifer. Select either statement that applies:

(i) The facility is not or will not be located over the Edwards Aquifer Recharge Zone.

(ii) The facility is not a Type I or Type IAE landfill.

(c) A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 non-hazardous industrial solid waste may not be located in areas described in 30 TAC § 335.584(b)(1) and (2) (relating to Location Restrictions), unless the Executive Director (ED) approves an engineered design that the applicant has demonstrated will provide equal or greater protection to human health and the environment:

- (i) Does the application propose Class 1 nonhazardous industrial solid waste cells or units at the subject facility? Yes No
- (ii) If yes, discuss how the facility would comply with the location restriction requirements under 30 TAC §335.584(b)(1) and (2). Include any applicable equivalency demonstration that would provide equivalent or greater protection to human health and the environment. Attachment No.:

2. Surface Water

- (a) Provide data on surface water at and near the site (including lakes, ponds, creeks, streams, rivers, or similar water bodies).
Attachment Nos.:
- (b) Provide information demonstrating how the municipal solid waste facility will comply with applicable Texas Pollutant Discharge Elimination System (TPDES) storm water permitting requirements and the Clean Water Act, §402, as amended
 - (i) The facility has obtained TPDES permit coverage under the following individual wastewater permit(s) (list permit number(s)): _____ . A copy of the permit(s) is provided in Attachment No.: _____ , or
 - (ii) A certification statement indicating that the applicant will obtain the appropriate TPDES permit coverage when required.
Yes No. Explain

XIII. Abandoned Oil and Water Wells - 30 TAC §330.61(I)

1. Water Wells

- (a) Are there any existing or abandoned water wells within the facility? Yes No
 - (i) If no, move to Item No. 2 below.
 - (ii) If yes, address the following:
 - (1) Provide a map showing the water well locations, identity, status, and use. Attachment No.:
 - (2) Will all the water wells be capped, plugged, and closed prior to construction at the facility? Yes No.
 - (3) If yes, provide written certification that all such wells will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency within 30 days prior to construction at the facility. Attachment No.:
 - (4) If no, identify and describe the water wells that will be capped, plugged, and closed in accordance with all applicable rules and regulations of TCEQ or other state agency. Attachment No.:
 - (5) Also, identify the wells necessary for use, and that will remain in use, for supply for operations at the facility. Attachment No.:
 - (6) Are the water wells that will remain in use for supply for operations at the facility located outside of the groundwater monitoring well network and not subject to impact from landfill operations? Yes No. If no, explain
 - (7) The water wells that will remain in use for supply for operations at the facility and that are located inside of the groundwater monitoring network, but outside the landfill unit boundary, are identified in Attachment No.: _____ for ED approval.

2. Oil and Gas Wells

(a) Are there any existing or abandoned on-site crude oil, natural gas, or other wells associated with mineral recovery under the jurisdiction of the Railroad Commission of Texas?

Yes No

(i) If yes, address the following items:

(1) Provide a map showing well locations, identity, type, and status.

Attachment No.:

(2) Identify and annotate the oil or natural gas wells that are producing and will remain in their current state, provided such wells do not affect or hamper landfill operations.

(3) Provide written certification that all the oil and natural gas wells, other than the producing wells approved for retention, have been properly capped, plugged, and closed at the time of application in accordance with all applicable rules and regulations of the Railroad Commission of Texas.

Attachment No.:

XIV. Floodplains - 30 TAC §330.61(m)(1) and §330.547

1. Describe the location of the facility with respect to floodplains.

2. Provide a copy of the Federal Emergency Management Administration (FEMA) flood map for the area to show the facility boundary and to illustrate the information described in Section 1 above. Attachment No.:

3. For construction of levees or other improvements associated with flood control on the proposed facility, provide data on floodplains in accordance with 30 TAC Chapter 301 Subchapter C (relating to Approval of Levees and Other Improvements).

4. Address the following requirements with regard to the location of the facility:

(a) Provisions to ensure that no solid waste disposal operation is conducted within the facility in areas that are located in a 100-year floodway as defined by FEMA.

(b) Designs that demonstrate that municipal solid waste management units, including storage and processing facilities, located in 100-year floodplains will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment.

(c) Demonstrate MSW storage and processing facilities shall be located outside of the 100-year floodplain unless the owner or operator demonstrates that the facility is designed and will operate to prevent washout during a 100-year storm event, or obtains a conditional letter of map amendment from FEMA.

- (d) If applicable, provide a copy of the conditional letter of map amendment (or other applicable FEMA approval) from the FEMA administrator for development within a floodplain.
- (e) References to provisions, designs, and narratives regarding floodplains in Part III of the application.

XV. Wetlands - 30 TAC §330.61(m)(2) and §330.553

1. Provide a wetlands determination under applicable federal, state, and local laws and discuss wetlands in accordance with 30 TAC §330.553. Demonstration can be made by providing evidence that the facility has a Corps of Engineers permit for the use of any wetlands area. Attachment No.:
 - (a) If applicable, provide a copy of any Corps of Engineers permit issued to the applicant for the use of any wetlands area within the facility. Attachment No.:
2. Identify wetlands located within the facility boundary, attach necessary maps and drawings.
3. Where new municipal solid waste landfill units, lateral expansions, material recovery operations from a landfill, and storage or processing units are to be located in wetlands, discuss the identified wetlands considering the following:
 - (a) Locating the landfill units, lateral expansions, material recovery operation from a landfill, and storage or processing units away from the identified wetlands.
 - (b) Steps taken to avoid impacts to wetlands to the maximum extent practicable to achieve no net loss of wetlands (as defined by acreage and function).
 - (c) For unavoidable impacts:
 - (i) Clearly rebut the presumption that a practicable alternative to the proposed facility or recovery operation is available that does not involve wetlands.
 - (ii) Demonstrate that the construction and operation of the municipal solid waste landfill unit, material recovery operation from a landfill, and storage or processing units will not:
 - (1) cause or contribute to violations of any applicable state water quality standard;
 - (2) violate any applicable toxic effluent standard or prohibition under the Clean Water Act;
 - (3) jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; or
 - (4) violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

- (iii) Demonstrate the integrity of the landfill unit and its ability to protect ecological resources by addressing the following factors showing that the municipal solid waste landfill unit or recovery operation will not cause or contribute to significant degradation of wetlands:
 - (1) erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the landfill unit;
 - (2) erosion, stability, and migration potential of dredged and fill materials used to support the landfill unit;
 - (3) the volume and chemical nature of the waste managed in the landfill unit;
 - (4) impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;
 - (5) the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and
 - (6) any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.
- (iv) Demonstrate steps taken to minimize unavoidable impacts to wetlands to the maximum extent practicable.
- (v) Demonstrate offsetting of remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands).

XVI. Endangered or Threatened Species - 30 TAC §330.61(n) and §330.551

1. Provide Endangered Species Act compliance demonstrations as required under applicable state and federal laws. Attachment No.:
2. Determine and discuss whether the facility is in the range of endangered or threatened species.
3. If the facility is located in the range of endangered or threatened species, provide a biological assessment prepared by a qualified biologist in accordance with standard procedures of the United States Fish and Wildlife Service (USFW) and the Texas Parks and Wildlife Department (TPWD) to determine the effect of the facility on the endangered or threatened species. Where a previous biological assessment has been made for another project in the general vicinity, a copy of that assessment may be submitted for evaluation. Attachment No.:
4. Provide coordination correspondence with and responses from the USFW and the TPWD concerning locations and specific data relating to endangered and threatened species in Texas.
5. Describe how the facility will comply with recommendations from the TPWD and USFW regarding protection of endangered and threatened species.
6. Discuss the impact of the solid waste disposal facility upon endangered or threatened species:

7. Describe how the facility design, construction, and operation will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.

XVII. Texas Historical Commission Review 30 TAC §330.61(o)

1. Provide correspondence to and a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.
Attachment No.:

XVIII. Council of Governments 30 TAC §330.61(p)

1. Provide documentation that Parts I and II of the application were submitted to the applicable council of governments for compliance with regional solid waste plans. Also provide a review letter if received from the applicable council of governments.
Attachment No.:
2. Provide documentation that a review letter was requested from any local governments as appropriate for compliance with local solid waste plans.
Attachment No.:

XIX. Easement Protections 30 TAC §330.543(a)

1. Will the applicant design and operate the facility such that no solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the facility? Yes
2. Will the applicant design and operate the facility such that no solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement but no closer than the easement? Yes
3. Will the applicant clearly mark all pipeline and utility easements with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet?
Yes

XX. Buffer Zones 30 TAC §330.543(b)

1. Provide the buffer zone distance (i.e. 50 feet for Arid Exempt and Type IV landfills, 125 feet for Type I landfills) at the facility to demonstrate compliance with 30 TAC §330.543(b).
2. Provide references for the application drawings and maps that clearly show the buffer zones around the facility. Attachment(s) No.:

XXI. Coastal Areas 30 TAC §330.561

1. A new landfill cell or an aerial expansion of an existing landfill cell managing Class 1 industrial solid waste (other than waste which is Class 1 because of asbestos content) may not be located in areas:
 - (a) On a barrier island or peninsula.
 - (b) Within 1,000 feet of an area subject to active coastal shoreline erosion, if the area is protected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4).
 - (c) Within 5,000 feet of coastal shorelines that are subject to active shoreline erosion and which are unprotected by a barrier island or peninsula, except as allowed under 30 TAC §335.584(b)(4).
2. Describe the location of the facility with regard to distance to coastal shoreline subject to active shoreline erosion.

XXII. Type I and Type IV Landfill Permit Issuance Prohibited – 30 TAC §330.563

Address the following statements.

1. The commission may not issue a permit for a Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.122, Denial of Certain Landfill Permits. Is the proposed facility a Type IV landfill located in the area subject to the referenced statute?
Yes No Explain
2. The commission may not issue a permit for a Type I or Type IV landfill that is subject to the conditions specified in Texas Health and Safety Code, §361.123, Limitation on Locations of Municipal Solid Waste Landfills. Is the proposed facility a Type I or Type IV landfill located in the area subject to the referenced statute?
Yes No Explain

Attachments

Table Att-1. Required Attachments

Attachments	Attachment No.
Existing Conditions Summary	
Waste Acceptance Plan Form	
General Location Maps	
Facility Layout Maps	
General Topographic Maps	
Aerial Photographs	
Land Use Map	
Transportation and Airport Safety Form	
Federal Aviation Administration Coordination Letters, if applicable	
Entity Exercising Maintenance Resp. of Public Roadway, if applicable	
Fault Lines, if applicable	
Seismic Impact Zones, if applicable	
Unstable areas, if applicable	
Site Specific Groundwater Conditions	
Site Specific Surface Water Conditions	
Texas Pollutant Discharge Elimination System (TPDES)	
Abandoned Oil and Water Wells, if applicable	
FEMA Map	
Facility Design Demonstration for Flood Map, or Conditional Letter of Map Amendment from FEMA, if applicable	
Wetland Documentation, if applicable	
Endangered or Threatened Species Documents, if applicable	
Texas Historical Commission Letter(s)	
Council of Governments/Local Governments Review Request Coordination Letter(s)	
Buffer Zones	
Others (describe):	
Others (describe):	
Others (describe):	
Confidential Documents, if applicable	

Attachment A Existing Conditions Summary (§330.61(a))

Beck Landfill is an existing Type IV landfill that is in operation at 550 FM 78 in Schertz, Guadalupe County, Texas. This facility was initially authorized in 1989 by the Texas Department of Health (TDH) in accordance with the design standards of the Municipal Solid Waste Management Regulations adopted in December 1986. The original Site Development Plan (hard copy only) includes the solid waste and design data required by Section 325.74, Technical Information Required for Landfill Sites Serving 5000 Persons or More. The TCEQ (formerly the Texas Natural Resource Conservation Commission (TNRCC)) took jurisdiction over Type IV Landfills in Texas in October 1993. Revisions to MSW regulations have occurred over time, the most significant of which occurred in 2006. Part IV of MSW Permit No. 1848A was modified to conform with relevant regulatory updates.

Necessary revisions to MSW Permit No. 1848A have occurred over time, and as a result, the applicant and TCEQ acknowledge that a formal update to the format of the permit will be useful for the successful operation and compliance tracking for the facility. We further acknowledge that this existing facility was constructed prior to the current site selection and design criteria. To the extent practicable, this application conforms with 30 TAC 330.61, as applicable.

At the time of the 1989 application to the TDH, the applicant documented that waste disposal was taking place “in the southwest end of the site, and in the northwest portion of the site. These areas contain the ancient fill from Randolph Air Force Base, and part of the fill which has been placed while operating under the "Grandfather Status" set out in the compliance letter from the Texas Department of Health Bureau of Solid Waste Management dated October 16, 1985.

Attachment B

Waste Acceptance Plan



Texas Commission on Environmental Quality Waste Acceptance Plan Form Type IV & Type IV AE Landfill Facilities

This form is designed to address the requirements for Waste Acceptance Plans in Part II of an application, as required by Title 30 Texas Administrative Code, Chapter 330, §330.61(b)(1). Rules are from Chapter 330 unless otherwise specified. If more space is needed for a line item or table item, include the information on a separate sheet and reference the line or table item. If you have any questions, contact the Municipal Solid Waste Permits Section at mswper@tceq.texas.gov or at (512) 239-2335.

A. Applicant Information

1. Facility Name: _____
2. MSW Permit No.: _____

B. Waste Generation Areas and Population Estimates [§330.61(b)(1)(A)]

Table 1. Areas contributing waste to the facility and estimate of population or population equivalent served by the facility. Values are estimates, not permit limits.

Waste Generation Area	Estimate of Population or Population Equivalent Served in each Area

Estimated population or population equivalent served by the facility.

C. General Sources and Types of Waste to be Accepted at the Facility [§330.61(b)(1) and (1)(A)]

1. General sources of waste to be received (household, commercial, industrial, etc.).

2. Types of Waste to be Accepted for **Disposal** at the Facility

a. Indicate whether the following wastes will be accepted for **disposal** (check "Yes" for will accept or "No" for will not accept).

- i. Yes No Construction or demolition waste [30 TAC §330.3(33)]
- ii. Yes No Brush [30 TAC §330.3(18)]
- iii. Yes No Rubbish [30 TAC §330.3(136)]
- iv. Yes No Tires that have been processed (such as by splitting, shredding, quartering or sidewall removal) in a manner acceptable to the executive director. [30 TAC §330.3(136); 30 TAC §330.15(e)(4) prohibits whole tire disposal]
- v. Yes No Class 2 industrial solid waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(22) and 30 TAC §330.173(i)]
- vi. Yes No Class 3 industrial solid waste. [30 TAC §330.3(23) and 30 TAC §330.173(j)]

b. Indicate whether the following Special Wastes will be accepted for disposal.

- i. Yes No Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers that have been triple-rinsed before receipt at the landfill, are rendered unusable before receipt or on arrival, and are covered by the end of the same working day they are received. [30 TAC §330.171(c)(5)]
- ii. Yes No Non-regulated asbestos-containing material (non-RACM). [40 CFR 261, 30 TAC §330.171(c)(4) and 30 TAC §330.3(95)]
- iii. Yes No Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(P)]
- iv. Yes No Other special waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(154)]
- v. Yes No Industrial waste or waste from oil, gas, and geothermal activities that were generated outside the boundaries of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(Q)]
- vi. Specify any wastes to be accepted for disposal that are not listed above.

D. Waste Prohibited from Disposal [§330.61(b)(1)]

The following wastes are prohibited from **disposal**.

- Wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.5(a)(2)]
- Putrescible waste. [30 TAC §330.3(122)]

- Untreated medical waste. Please note that this prohibition may be superseded by the executive director in writing when a situation exists that requires disposal of untreated medical waste to protect human health and the environment from the effects of a natural or man-made disaster. [30 TAC §330.171(c)(1)]
- Lead-acid storage batteries. [30 TAC §330.15(e)(1)]
- Do-it-yourself used motor vehicle oil. [30 TAC §330.15(e)(2)]
- Used oil filters from internal combustion engines. [30 TAC §330.15(e)(3)]
- Whole used or scrap tires. [30 TAC §330.15(e)(4)]
- Items containing chlorinated fluorocarbon (CFC) that have not been handled in accordance with 40 CFR §82.156(f). [30 TAC §330.15(e)(5)]
- Waste material that contains free liquids by the Paint Filter Test, EPA Method 9095. [30 TAC §330.15(e)(6)]
- Regulated hazardous waste. [30 TAC §330.15(e)(7), 40 CFR §261.3]
- Waste that exhibits the characteristics for hazardous waste [40 CFR §261.3] from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas. [30 TAC §330.15(e)(7)]
- Polychlorinated biphenyl wastes (PCBs). [30 TAC §330.15(e)(8), 40 CFR §761]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for disposal above, including those for which "No" has been indicated.

Specify any wastes to be prohibited for disposal that are not listed above.

E. Material Recovery [§330.61(b)(1)(A)]

Will the facility recover materials from incoming waste? Yes No

If yes, provide a descriptive narrative describing the percentage of incoming waste, if applicable, that must be recovered and its intended use.

F. Estimated Maximum Annual Waste Acceptance Rate Projected for Five Years [§330.61(b)(1)(C)]

Provide **estimated** maximum annual waste acceptance rates at the facility, projected for five years. These rates are not permit limitations.

Table 1. Five-Year Projection for Waste Acceptance.

Year	Estimated Maximum Annual Waste Acceptance Rate

G. Storage and Processing Units [§330.61(b)(1)]

Indicate units that will store or process waste at the facility. Describe the wastes that will be stored or processed in these units. Provide the final disposition or use (e.g., landfill disposal, composting) of the processed materials. **Waste storage and processing authorized separately (such as a registered transfer station within the permit boundary of a landfill) should not be included on this form.**

Storage and processing units must be illustrated (or locations described) on site layout figures in Part II of the application.

Examples:

1. Unit: liquid stabilization unit, Purpose: process, Waste Type: liquid waste, Disposition: solidified material to be disposed in a properly authorized landfill; or
2. Unit: grease separation and dewatering unit, Purpose: process, Disposition: water to WWTP and grease to composter or Type I landfill.

Table 3. Waste storage and processing units

Unit	Purpose	Waste Type Stored or Processed	Final Disposition or Use
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		
	<input type="checkbox"/> Store <input type="checkbox"/> Process		

H. Prohibited from Processing [§330.61(b)(1)]

The following wastes are prohibited from **processing**.

- Any wastes not authorized for processing above.
- Lead-acid storage batteries may not be incinerated. [30 TAC §330.15(e)(1)]
- Used motor vehicle oil may not be incinerated. [30 TAC §330.15(e)(2)]
- Regulated hazardous waste. [40 CFR §261.3]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC §330.15(e)(9)]
- All wastes not authorized for processing above, including those for which “No” has been indicated.

Specify any other wastes to be prohibited for storage or processing (specify):

I. Special Waste Acceptance Plan [30 TAC §330.171(b)(2)]

Yes No Does this application include a Special Waste Acceptance Plan? If so, please specify its location in the application. _____

J. Limiting Parameters [30 TAC §330.61(b)(1)]

Municipal construction or demolition waste, brush, and rubbish are categorical. Constituent sampling is not required for these wastes and there are no associated limiting parameters for waste disposal or processing. [30 TAC §330.5(a)(2)]

1. Type IV and IV AE Landfill Limitations

MSW Type IV and IV AE landfills may not accept wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.3(33), 30 TAC §330.3(18) and 30 TAC §330.3(136)] The presence of waste not fitting these categories, including but not limited to putrescible waste, is a limiting parameter for waste disposal. [30 TAC §330.5(a)(2)]

2. Regulated Hazardous Waste

MSW landfills may not accept regulated hazardous waste [§330.3(133)] for processing or disposal. The presence or characteristic of any material meeting the definition of a regulated hazardous waste is a limiting parameter for waste disposal or processing.

3. Free Liquids

The presence of free liquids, as defined by the Paint Filter Test, EPA Method 9095, in waste, but not household waste and not liquid in containers similar in size to those found in household waste, is a limiting parameter for waste disposal. [§330.15(e)(6), §330.3(83)]

4. PCBs

The presence of polychlorinated biphenyls (PCB) wastes [40 CFR Part 761] unless authorized by the United States Environmental Protection Agency is a limiting parameter for waste disposal or processing. [§330.15(e)(8)]

5. Radioactive Materials

The presence of radioactive materials [Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services, is a limiting parameter for waste disposal or processing. [§330.15(e)(9)]

6. Class 1 Solid Waste

For all Type IV and Type IV AE landfills, 1,500 mg/kg total petroleum hydrocarbons (TPH) and the concentrations in 30 TAC §335.521(a)(1) are limiting parameters for waste disposal.

7. Other Limitations:

Attachment C Maps

General Location Maps (§330.61(c))

















A General Location Map has been prepared and are included as **Attachment C, Figures 2-1 through 2-8** of Part II of the application. These General Location Maps are provided in addition to those provided in Part I of the application and accurately show the following surrounding features:

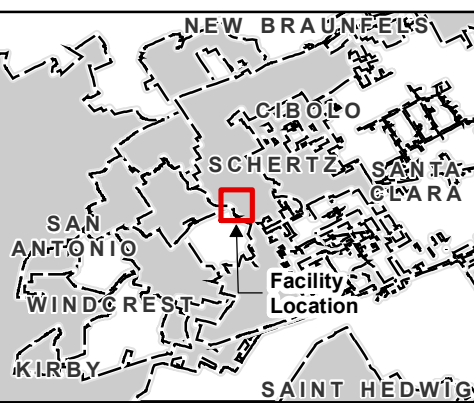
- the prevailing wind direction with a wind rose;
- all known water wells within 500 feet of the proposed permit boundary with the state well numbering system designation for Water Development Board "located wells";
- all structures and inhabitable buildings within 500 feet of the proposed facility;
- schools, licensed day-care facilities, churches, hospitals, cemeteries, ponds, lakes, and residential, commercial, and recreational areas within one mile of the facility;
- the location and surface type of all roads within one mile of the facility that will normally be used by the owner or operator for entering or leaving the facility;
- latitudes and longitudes;
- area streams;
- airports within six miles of the facility;
- the property boundary of the facility;
- drainage, pipeline, and utility easements within or adjacent to the facility;
- facility access control features; and
- archaeological sites, historical sites, and sites with exceptional aesthetic qualities adjacent to the facility.

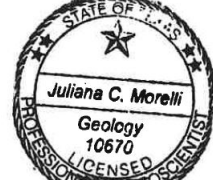
**FIGURE 2-1:
FACILITY LAYOUT**

SCHERTZ, GUADALUPE
COUNTY, TEXAS

Legend

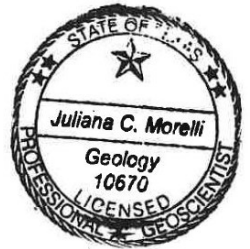
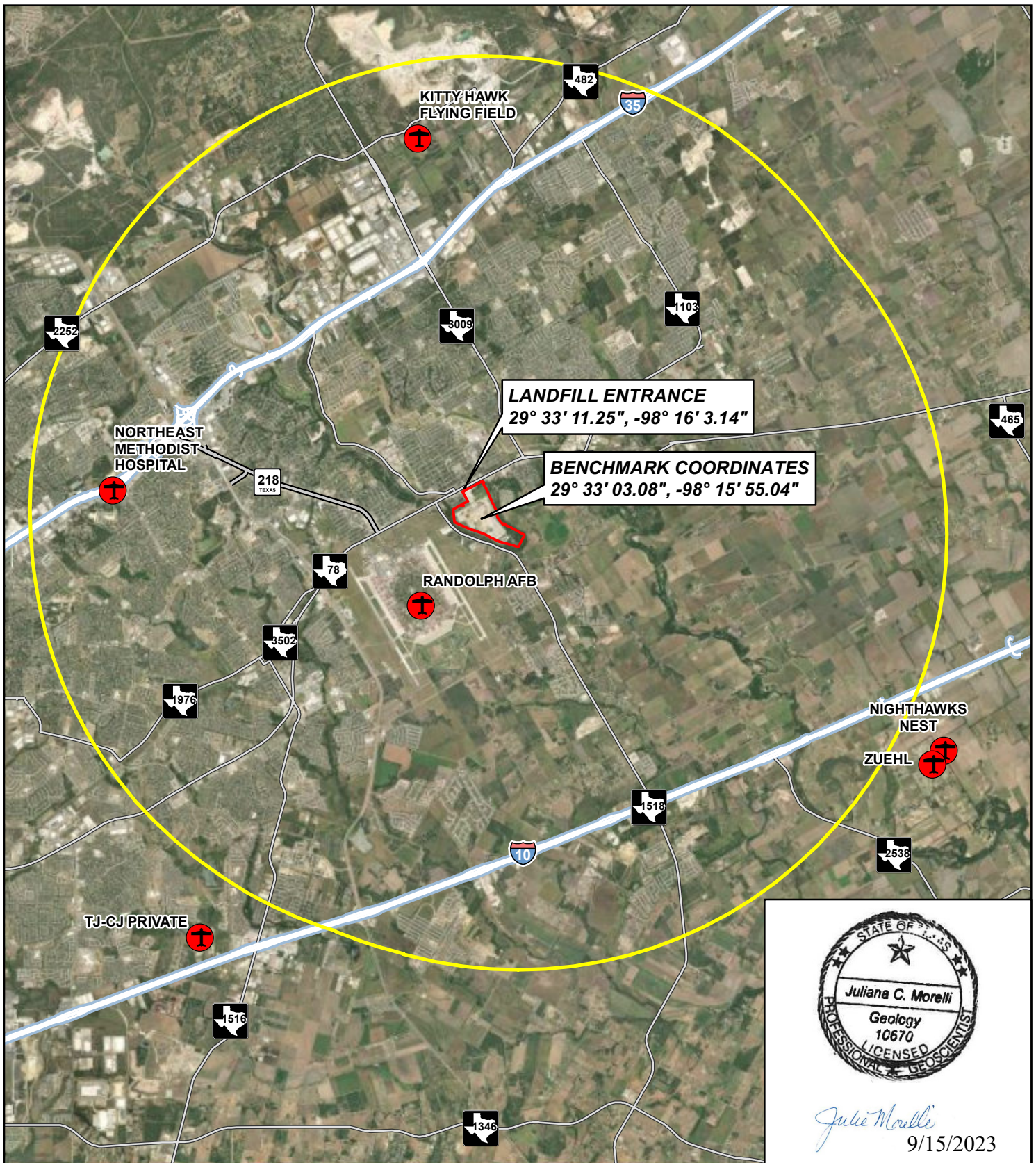
-  Permit Boundary
-  On Site Well
-  Fuel Island
-  Landfill Office
-  Scale House
-  Storage Building
-  Roll Off Storage
-  Screening Area
-  Access Road
-  Haul Road
-  Perimeter Road
-  Facility Fence
-  Contour
-  River/Stream
-  Retention Pond
-  Grid




 Juliana C. Morelli
 3-17-2023



Date: 3/9/2023
Rev. 0



Julia Morelli
9/15/2023

Legend

- FAA Facilities
 - Permit Boundary
 - 6 Mile Radius
- Miles



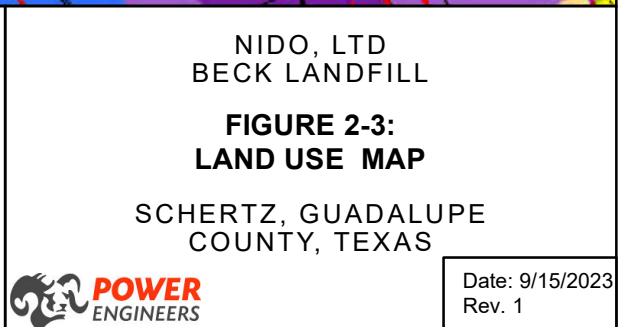
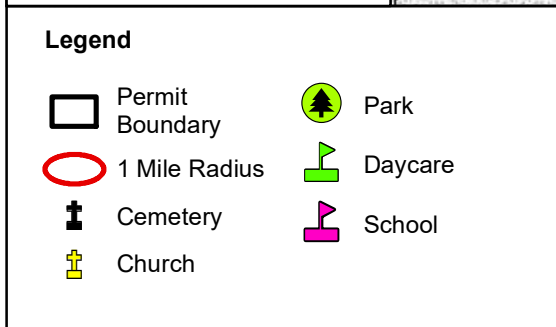
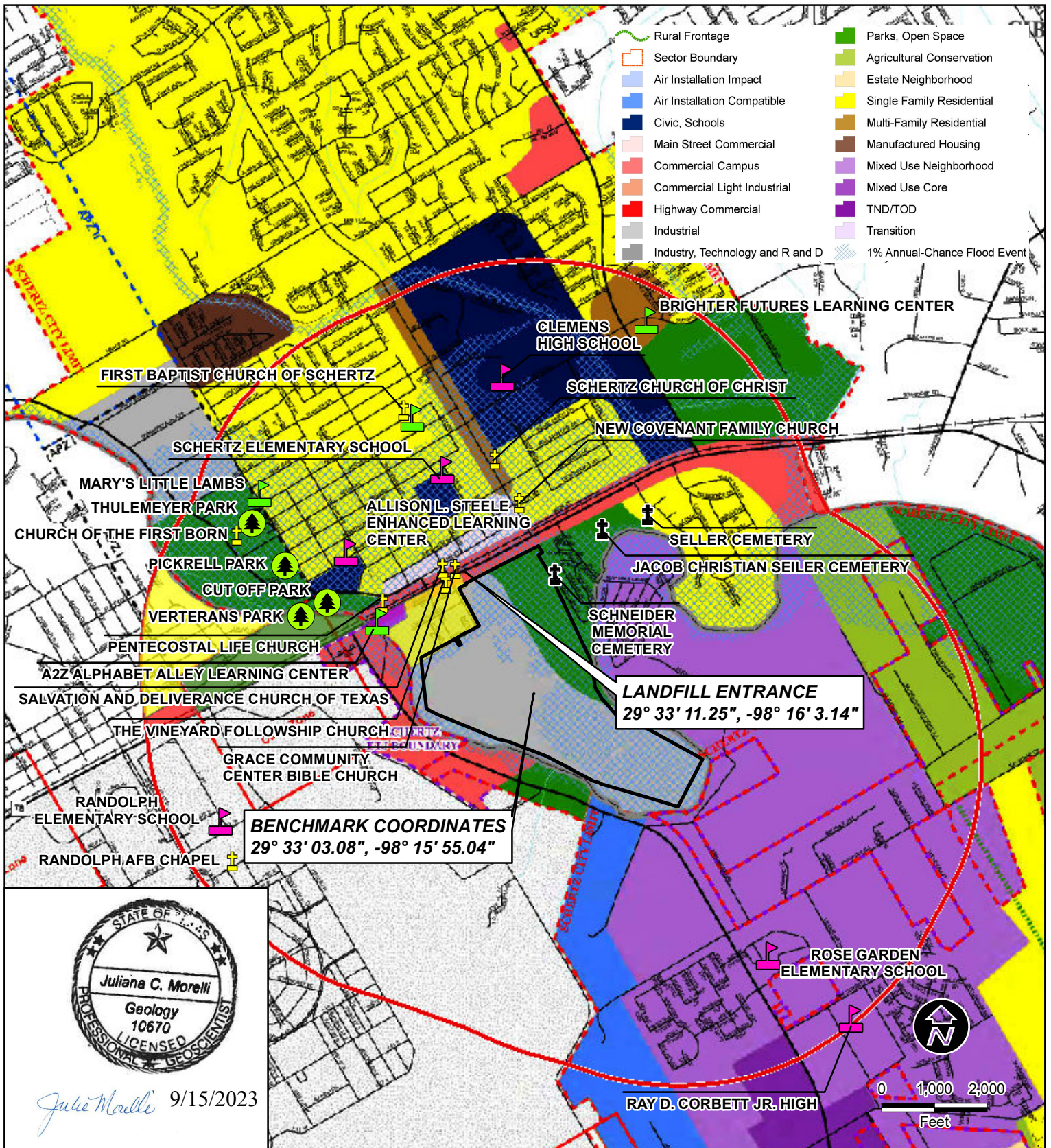
NIDO, LTD
BECK LANDFILL

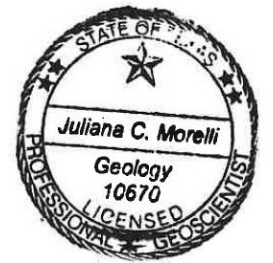
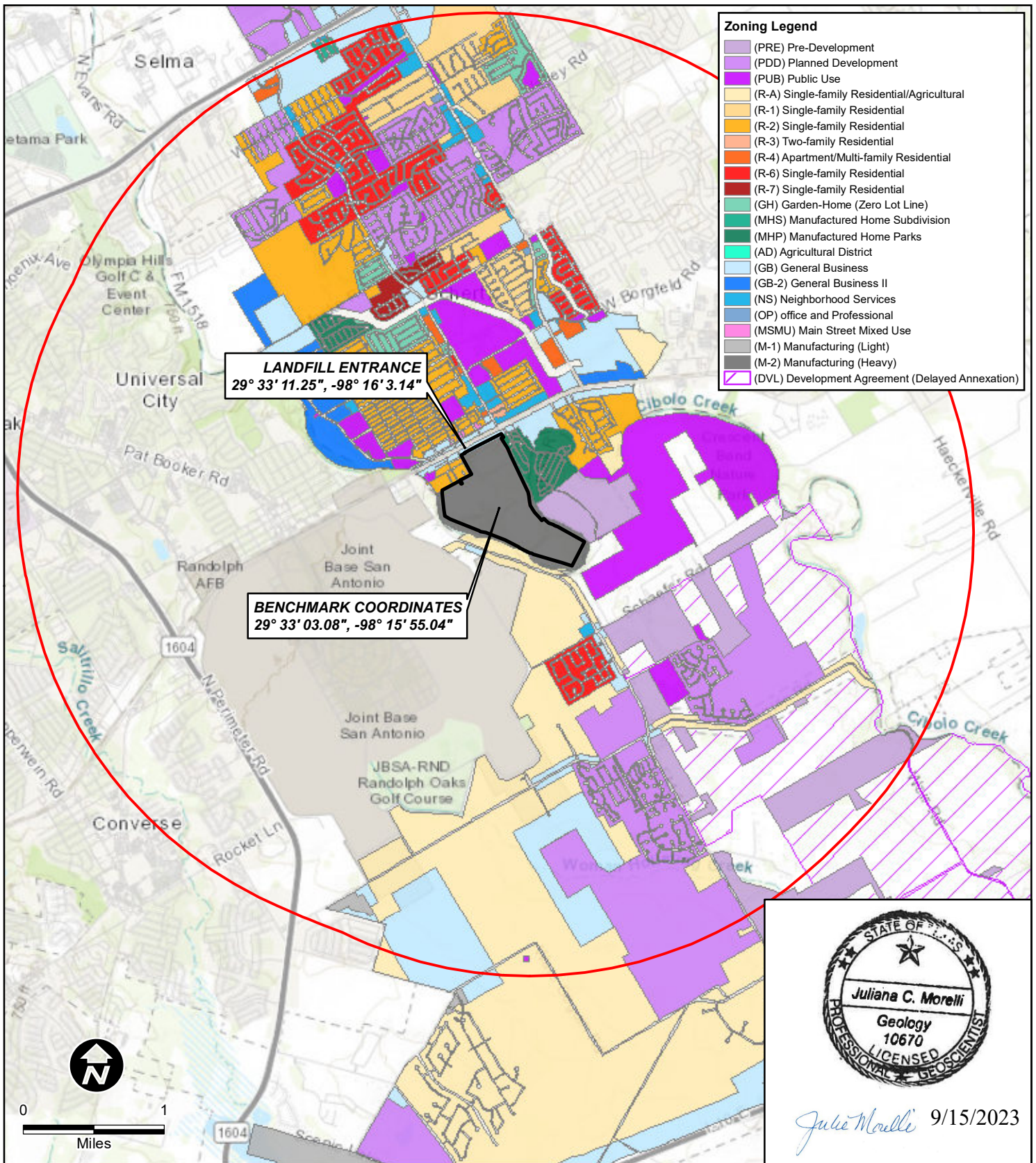
**FIGURE 2-2:
AIRPORT LOCATION MAP**

SCHERTZ, GUADALUPE
COUNTY, TEXAS



Date: 9/15/2023
Rev. 1





Julie Morelli 9/15/2023

Legend

- Permit Boundary
- 3 Mile Radius



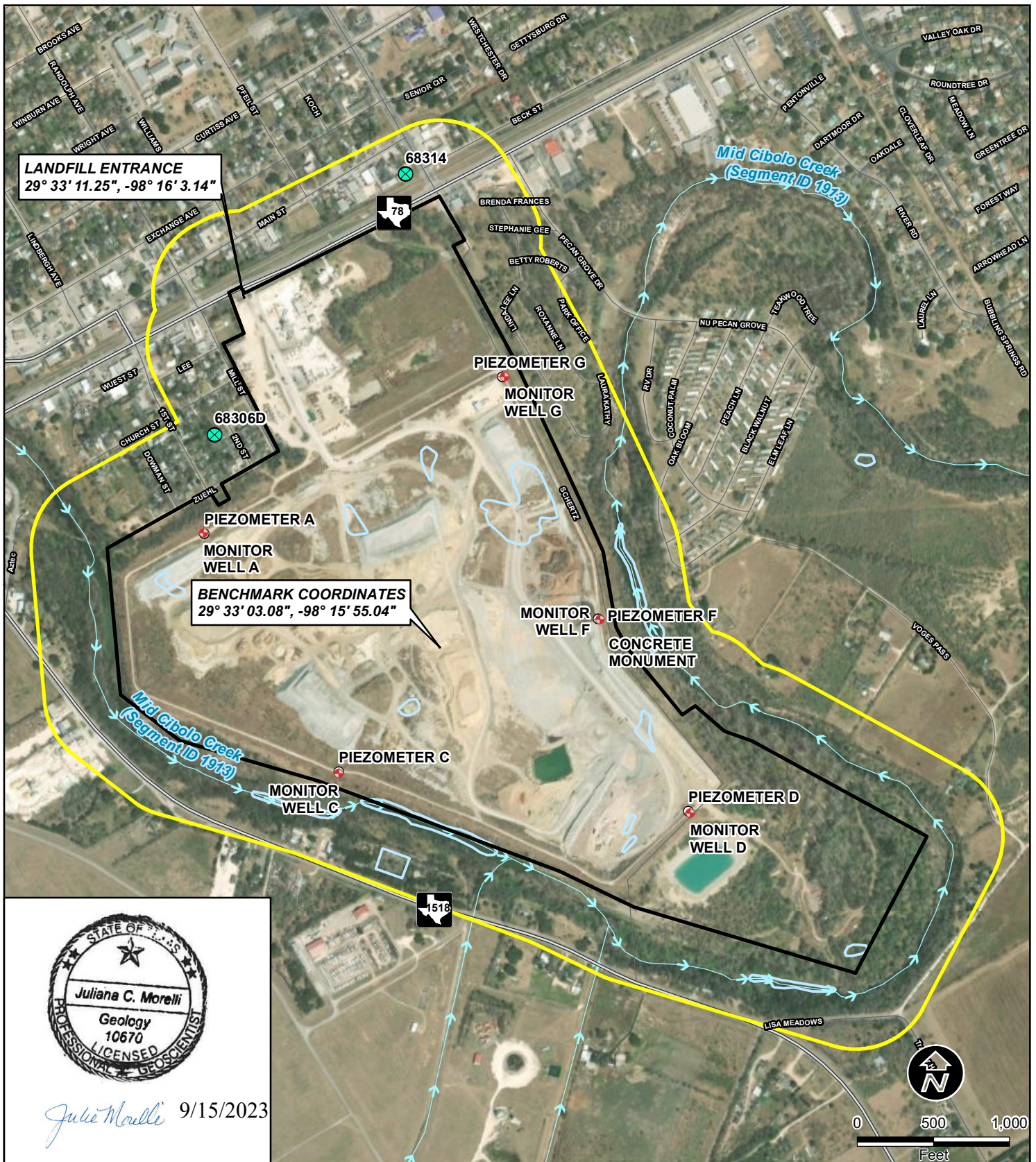
NIDO, LTD
BECK LANDFILL

**FIGURE 2-4
ZONING MAP**

SCHERTZ, GUADALUPE
COUNTY, TEXAS

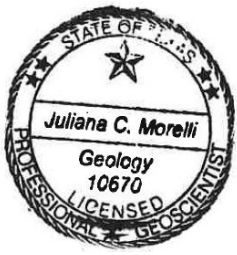


Date: 9/15/2023
Rev. 1



LANDFILL ENTRANCE
 29° 33' 11.25", -98° 16' 3.14"

BENCHMARK COORDINATES
 29° 33' 03.08", -98° 15' 55.04"



Julie Morelli 9/15/2023

Legend

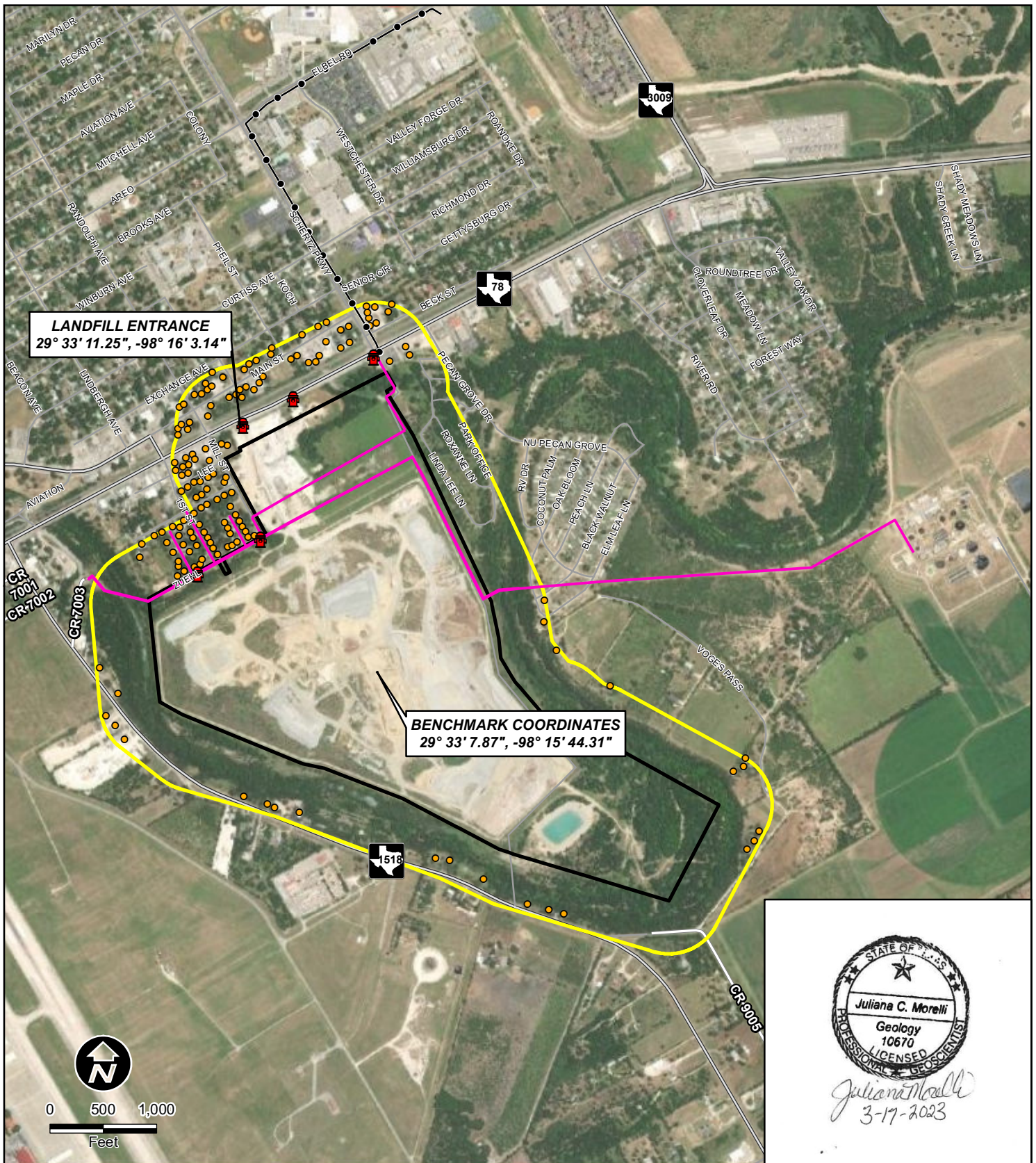
- Facility Boundary
- 500ft Radius
- NHD River
- TWDB Groundwater Well
- Monitoring Well
- Piezometer



NIDO, LTD
 BECK LANDFILL
**FIGURE 2-5:
 WATER WELL MAP**
 SCHERTZ, GUADALUPE
 COUNTY, TEXAS

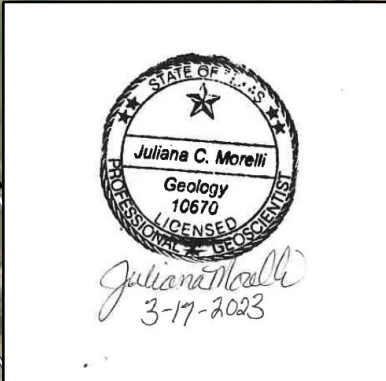


Date: 9/15/2023
 Rev. 1



LANDFILL ENTRANCE
 29° 33' 11.25", -98° 16' 3.14"

BENCHMARK COORDINATES
 29° 33' 7.87", -98° 15' 44.31"



Legend

- Permit Boundary
- Fire Hydrant
- Structures within 500'
- Sewer Main Line
- Transmission Line
- 500' Radius

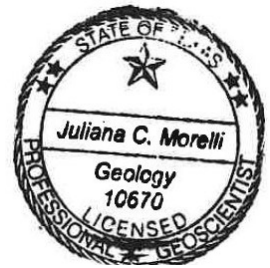
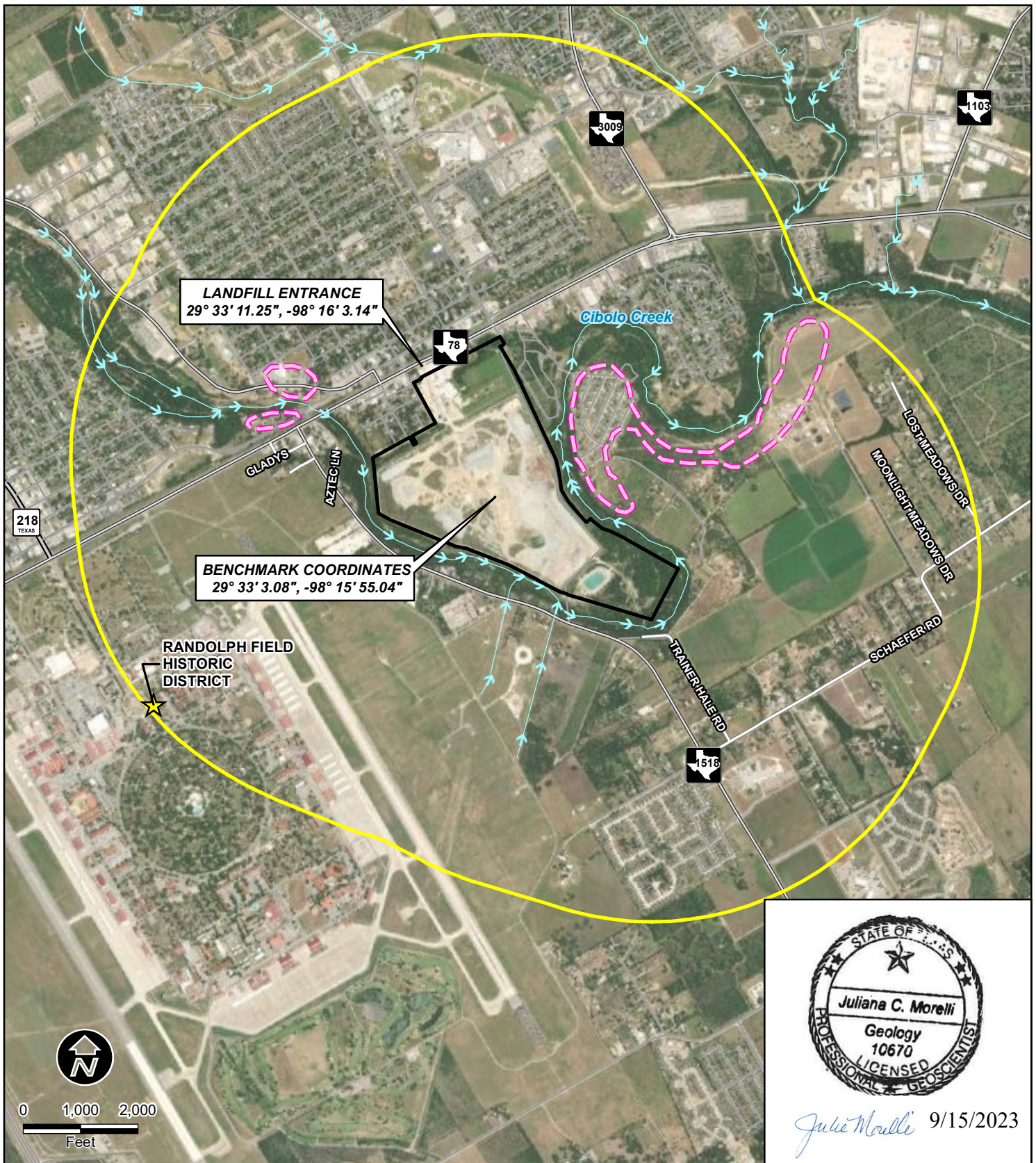


NIDO, LTD
 BECK LANDFILL
FIGURE 2-6:
**ADJACENT UTILITIES &
 STRUCTURES WITHIN 500 FEET**
 SCHERTZ, GUADALUPE
 COUNTY, TEXAS



Date: 3/9/2023
 Rev. 0

Map Sources: ESRI World Imagery 2021; Aerial Review; City of Schertz Utility
 G:\Projects\0_Beck\150051 Landfill GIS_Maps_TypeIV_Landfill2_6_Uilities_Structures.mxd



Julia Morelli 9/15/2023

Legend

- Permit Boundary
- National Register of Historical Places
- Existing Archeological Site
- Stream
- 1-Mile Radius

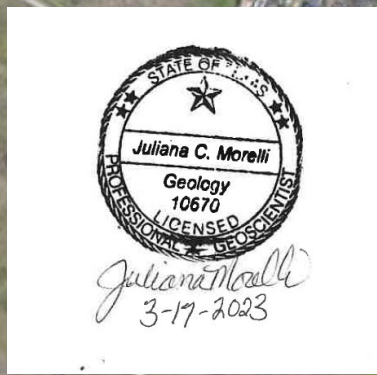


**NIDO, LTD
BECK LANDFILL
FIGURE 2-7:
CULTURAL RESOURCES**

SCHERTZ, GUADALUPE COUNTY, TEXAS



Date: 9/15/2023
Rev. 0



Legend

- Permit Boundary
- NRCS Soil Type**
 - BaA
 - Bo
 - SuA
 - SuC3

0 1,000
 Feet



NIDO, LTD
 BECK LANDFILL

**FIGURE 2-8:
 SOILS SURVEY**

SCHERTZ, GUADALUPE
 COUNTY, TEXAS

POWER ENGINEERS

Date: 3/9/2023

Map Sources: Natural Resources Conservation Service; USDA, Google Earth Imagery Basemap
 Path: G:\Projects\0_Beck\150051 Landfill GIS_Maps_TypeIV_Landfill\2_8_Soils.mxd

Facility Layout Maps (§330.61(d))

Facility Layout Maps have been prepared and are included **Part III, Attachment D-1** of the application. A more general Facility Layout Map is provided as Figure 2-1 of this Section. These Facility Layout Maps accurately show the following surrounding features:

- the outline of the units;
- general locations of main interior facility roadways, and for landfill units, the general locations of main interior facility roadways that can be used to provide access to fill areas;
- locations of monitor wells;
- locations of buildings;
- any other graphic representations or marginal explanatory notes necessary to communicate the proposed construction sequence of the facility;
- fencing;
- provisions for the maintenance of any natural windbreaks, such as greenbelts, where they will improve the appearance and operation of the facility and, where appropriate, plans for screening the facility from public view;
- all site entrance roads from public access roads; and
- for landfill units:
 - sectors with appropriate notations to communicate the types of wastes to be disposed of in individual sectors;
 - the general sequence of filling operations;
 - sequence of excavations and filling;
 - dimensions of cells or trenches; and
 - maximum waste elevations and final cover.

General Topo Maps (§330.61(e))

A General Topographic Map has is included as **Part I, Attachment 3, Figure 1-1B** of the application. This map is excerpted from a United States Geological Survey 7 1/2-minute quadrangle sheets or equivalent for the facility. The scale is at least one inch equals 2,000 feet.

Aerial Photography (§330.61(f))

An Aerial Photograph is included in **Part I, Attachment 3, Figure 1-1C** of the application. This map is excerpted an aerial photograph approximately nine inches by nine inches with a scale within a range of one inch equals 1,667 feet to one inch equals 3,334 feet and showing the area within at least a one-mile radius of the site boundaries. The site boundaries and actual fill areas are marked.

Land-Use Map (§330.61(g))

A Land-Use Map depicting the actual land-use within the facility and those properties within one-mile of the facility is included as **Part II, Attachment C, Figure 2-3**. As shown on the land-use map, Cibolo Creek flows roughly parallel to the southwestern, southeastern and a portion of the northeastern property line, and at some locations crosses into the facility property.

Samuel Clemens High School and Schertz Elementary School are shown to be located approximately 0.61 miles and 0.33 miles north of the facility, respectively. The Allison L. Steele Enhanced Learning Center, a drop-out prevention high school, is located approximately 0.42 miles northwest of the facility. Randolph Elementary School (Randolph Airforce Base), in Bexar County, is 0.78 miles southwest of the facility. Rose Garden Elementary School is located slightly southeast of the facility property boundary, approximately 0.51 miles.

Three cemeteries are located within one mile of the facility. Schneider Memorial Cemetery is the closest and abuts the northern portion of the northeastern facility property line. The Jacob Christian Seiler Cemetery and Seiler Cemetery are family cemeteries located approximately 0.17 and 0.42 miles, respectively, northeast of the northern portion of the facility. Five parks, Palm (0.18 miles) Cut Off (0.30 miles), Veterans (0.32 miles), Pickrell (0.49 miles) and Thulemeyer (0.72 miles), are located north and northwest of the facility. Randolph Airforce Base is located approximately 0.6 miles southwest of the facility boundary at its nearest point.

Nine church/chapel buildings were found to be located within one mile of the facility boundaries. Seven are located north of the facility, one to the northwest, and one lies to the southwest on Randolph Airforce Base. **Table C-1** listed the names of these churches/chapels, distance from the facility boundaries, and compass direction from the facility.

TABLE C-1 COMMUNITY FEATURES WITHIN ONE MILE OF THE FACILITY BOUNDARY

CHURCH NAME	DISTANCE FROM FACILITY BOUNDARY IN MILES	COMPASS DIRECTION FROM FACILITY
Church of the First Born	0.70	Northwest
First Baptist Church of Schertz	0.42	North
Grace Community Center Bible Church	0.06	Southwest
New Covenant Family Church	0.40	North
Pentecostal Life Church	0.2	North
Randolph AFB Chapel	0.96	Southwest
Salvation and Deliverance Church of Texas	0.14	North
Schertz Church of Christ	0.27	North
The Vineyard Fellowship Church	0.19	North

Four licensed daycare facilities are located within one mile of the landfill facility. These four day-cares are the First Baptist Church of Schertz listed in Table 2-1 above; the Brighter Futures Learning Center located approximately 0.95 miles northeast of the landfill facility; Mary's Little Lambs situated approximately 0.91 miles to the northwest, and A2Z Alphabet Alley Learning Center located approximately 0.19 miles northwest of the facility boundary.

Attachment D Facility Impact and Existing Conditions (§330.61(h))

Beck Landfill operates the existing facility to avoid adverse impacts to human health or the environment. The following sections demonstrate both historical and forward-thinking information regarding likely impacts of the facility on cities, communities, groups or property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest.

Zoning and Governing Jurisdiction

The facility is in Guadalupe County adjacent to the county line shared with Bexar County, parts of which are within two miles of the facility. The facility property is now located entirely within the City of Schertz corporate limits which has local authoritative jurisdiction over the facility. Other than the City of Schertz, portions of the cities of Universal City and Cibolo are also located within two miles of the facility boundary.

The site was originally authorized by the Texas Department of Health in 1989. At that time, the Landfill was totally within Guadalupe County and the service area of the Cibolo Creek Municipal Authority. The site was only partially within the City of Schertz, Texas. The additional political boundaries of Bexar County and the partial corporate limits of Universal City and Cibolo were within one mile of the original Landfill boundary, as well as a large portion of Randolph Air Force Base. The City of Schertz was however the only local municipality having an authoritative jurisdiction relevant to the site.

The City of Schertz enacted zoning, in the form of “use districts”, in the 1960's. Major revisions of the use districts have subsequently occurred in the 1970's and 1980's as corporate limits were extended. The Landfill, in general, was predominately zoned pre-development. A portion of the access road to this site was zoned general business. The balance of the site was not within the City of Schertz' city limits, and therefore, was not zoned. None of the above conditions restricted the site's use as a landfill.

As shown on the Schertz zoning map below, the facility property is zoned for heavy manufacturing (M-2). The frontage along FM-78, zoned “General Business” (GB) has been excluded from the permit boundary. Most of the properties within the City of Schertz located north of the landfill facility are zoned for residential, planned development or public uses. Some commercial use and pre-development zoned properties are interspersed with the residential zoned areas, but most are located along or near the corporate limits shared with Universal City, along Highway 78, F.M. 3009. Properties located within the City of Schertz corporate limits that lie south, east and west of the facility property are zoned mainly as residential, public use and pre-development with intermingled commercial zoned properties and non-zoned unincorporated properties. A large portion of a military installation, Randolph Air Force Base, falls within two miles of the western side of the facility property. A published zoning map for the base is not available.

Figure 2-3 City of Schertz Zoning Map (2022)



1 City of Schertz Zoning Map

(<https://schertz.maps.arcgis.com/apps/webappviewer/index.html?id=1750bcfcad3642eeac482bddcbad3d91>).

Zoned properties located within the corporate limits of the City of Cibolo lie within two miles east of the landfill facility. Most of the Cibolo properties are zoned for residential use. Much of the commercial and industrial zoned properties are located along Highway 78 between Borgfeld Road and E. Schaefer Road. Some agricultural zoned land is present south of E. Schaefer Road and adjoins Cibolo Creek. Those properties that lie within the corporate limits of Universal City and two mile west of the landfill facility are mostly zoned for residential use and open spaces. Commercial zoned properties are located mainly along FM 218 and Universal City Boulevard.

Character of Surrounding Land Use within One Mile

The current character of the surrounding land use within one mile of the facility property can be described as follows:

- Land located north of Highway 78, which borders the northern most facility property line, is mainly use for residential purposes, parks/open spaces and civic services (e.g., schools, police department, fire department).

¹ [The City of Schertz \(arcgis.com\)](https://schertz.maps.arcgis.com/apps/webappviewer/index.html?id=1750bcfcad3642eeac482bddcbad3d91)

- South of Highway 78, the land is used mainly for agriculture and military (Randolph Airforce Base) uses with scattered residential and civic (school) uses.

Growth Trends within Five Miles

The area within five miles of the facility boundary extends beyond the northern and western county lines of Guadalupe County into Bexar and Comal counties. Population growth projections specific to this five-mile coverage area are not available. Therefore, census data for the cities of Schertz, Cibolo and Universal City and the three referenced counties, as well as growth projections from a 2021 regional water plan were used to represent the potential population growth trend for the coverage area.

Census data for the years 2010 and 2020 and percent population increase for the cities of Schertz, Cibolo and Universal City and the counties of Guadalupe, Bexar and Comal are listed below in **Table D-1**. As shown on this table, the population within the three cities and all three counties did increase with the highest percent increase occurring with the City of Cibolo.

TABLE D-1 2010 AND 2020 POPULATION

CITY OR COUNTY	2010 POPULATION	2020 POPULATION	PERCENT INCREASE
Schertz	31,465	42,002	33.5
Cibolo	15,349	32,276	110.3
Universal City	18,530	19,720	6.4
Bexar	1,714,773	2,009,324	17.2
Comal	109,472	161,501	47.5
Guadalupe	131,533	172,706	31.3

Population growth projections for Guadalupe, Bexar and Comal counties were obtained from the Texas Water Development Board (TWDB) 2021 South Central Texas Regional Water Plan. The population projections for these three counties are listed below in **Table D-2**. The projected population data listed in Table 2-3 indicates that a positive growth can be expected within the five-mile coverage area through the Year 2070.

TABLE D-2 POPULATION PROJECTIONS

COUNTY	PROJECTED POPULATION BY DECADE				
	2030	2040	2050	2060	2070
Bexar	2,231,550	2,468,254	2,695,668	2,904,319	3,094,726
Comal	193,188	234,515	276,239	317,682	357,464
Guadalupe	235,318	276,064	315,934	356,480	396,261

Residential and Other Uses within One Mile of the Facility

Beck Landfill is an existing facility. The online mapping and screening tool, EJScreen, which is maintained by the US Environmental Protection Agency (USEPA) was used obtain information regarding the of residences within a one-mile radius of the facility. Based on that information, there are approximately 4,014 housing units within a mile of the facility. The nearest residence abuts the western

side of the facility boundary near the entrance to the facility off Highway 78. The population density within the coverage radius is approximately 1,340 per square mile. Numerous commercial establishments are also present within one mile of the facility boundary. The nearest commercial business is the CEMEX Concrete Plant which is located at the northern portion of the facility property (co-located). Other land uses (e.g., schools, cemeteries, churches) within the one-mile coverage radius and the proximity of the closest specific uses are as follows:

- Five schools of the Schertz-Cibolo-Universal City Independent School District are located within one mile of the landfill facility. The closest of these schools is Schertz Elementary School located approximately 0.33 miles north of the facility property. Other land uses (e.g., schools, cemeteries, parks) within the one-mile coverage radius and the closest
- Three family cemeteries are within one mile of the landfill facility. Schneider Memorial Cemetery is the closest and abuts the northern portion of the northeastern facility property line.
- Five parks are located to the north and northwest of the facility. The closest is Palm Park, a city park, that is within approximately 0.18 miles of the landfill boundary.
- A large area of Randolph Airforce Base is located approximately 0.6 miles southwest of the facility boundary at its nearest point. Most on the runway on the eastern side of the base is within the one-mile land use radius.
- Nine church/chapel buildings were identified to be present within one mile of the facility boundaries. Eight of the nine are located north of Highway 78. The ninth lies to the southwest on Randolph Airforce Base. The closest of these church buildings is Grace Community Center Bible Church, located approximately 0.06 miles southwest of the northern leg of the facility property.
- Four licensed daycare facilities were identified within one mile of the landfill facility. The closest day-care facility to the landfill is A2Z Alphabet Alley Learning Center, which lies approximately 0.19 miles to the northwest.

Wells Within 500 feet

The online TWDB Groundwater Data Viewer and Texas Commission on Environmental Quality (TCEQ) Water Well Report Viewer were reviewed for information pertaining to existing water wells within 500 feet of the facility boundary. Two water wells were found to be within 500 feet of the facility boundaries. These wells are identified as 75’ feet and 55’ deep, respectively, for domestic water supply, in the Leona Formation, as noted in **Table D-3**, below.

TABLE D-3 WATER WELLS WITHIN ONE MILE OF THE BECK LANDFILL BOUNDARIES

TWDB WELL REPORT NUMBER	LOCATION	BORE DEPTH (FT.)	USE	AQUIFER NAME
68306D	29.550645° -98.268163°	75	Domestic	Leona
68314	29.555336° -98.264186°	55	Domestic	Leona

Attachment E TXDOT Coordination (§330.61(i)(4))

As an existing facility served by existing roadway infrastructure, the Beck Landfill does not anticipate the need for roadway improvements to FM-78 as part of this permit amendment. The Beck Landfill's management has coordinated with TxDOT and the City of Schertz regarding traffic and location restrictions for the facility and that no roadway improvements will be requested. Documentation of coordination with TxDOT and the City of Schertz are included with this submittal as **Attachment E**.

Attachment F Airport Impacts and Coordination with FAA (§330.61(i)(5))

Beck Landfill re-evaluated the potential need for coordination and construction constraints with the United States Department of Transportation (DOT), Federal Aviation Administration (FAA) for the proposed alteration described in the 2020 Amendment. Airspace Designations are “A” to “G” where “A” is most restrictive. The nearest airspace to Beck Landfill is Randolph Air Force Base which has an Airspace “D” Designation, as noted in the Air Traffic Organization Policy, Subj: Airspace Designations and Reporting Points Order J.O. 7400-11C (Last Updated: August 13, 2018):

ASW TX D San Antonio, Randolph AFB, TX
San Antonio, Randolph AFB, TX
(lat. 29°31'47"N., long. 98°16'44"W.)

That airspace extending upward from the surface to and including 3,300 feet MSL within a 4.4-mile radius of Randolph AFB excluding that airspace within the San Antonio International Airport, TX, Class C airspace area. This Class D airspace area is effective during the specific dates and times established by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

AMENDMENTS 06/23/94 59 FR 24344 (Revised)

https://www.faa.gov/documentLibrary/media/Order/JO_7400.11C.pdf

Additional information regarding Class D Airspace was reviewed in Title 14 Chapter I Subchapter E Part 71 Subpart D—Class D Airspace:

§71.61 Class D airspace.

The Class D airspace areas listed in subpart D of FAA Order 7400.11C (incorporated by reference, see §71.1) consist of specified airspace within which all aircraft operators are subject to operating rules and equipment requirements specified in part 91 of this chapter. Each Class D airspace area designated for an airport in subpart D of FAA Order 7400.11C (incorporated by reference, see §71.1) contains at least one primary airport around which the airspace is designated.

An Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) is required for proposed off-airport construction or alteration to promote air safety and efficient use of the navigable airspace. The affecting regulations included 14 CFR Part 77, Advisory Circular 70/7460-1L Change 2 (re: obstruction marking and lighting), and Forms 7460-1 and 7460-2. Forms will be submitted electronically through this website: [NEW USER REGISTRATION](#)

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc., In accordance with [14 CFR Part 77.9](#), Beck Landfill filed notice with the FAA on June 21, 2022. Aeronautical Study Number(s) (ASN): 2022-ASW-13343-OE, 2022-ASW-13344-OE, 2022-ASW-13345-OE, and 2022-ASW-13342-O have been assigned. An approved FAA study is required for construction of surface extending outward and upward at any of the following slopes:

- 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in 14 CFR 77.9(d) with its longest runway more than 3,200 ft. in actual length, excluding heliports
- 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in 14 CFR 77.9(d) with its longest runway no more than 3,200 ft. in actual length, excluding heliports
- 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in 14 CFR 77.9(d)

Beck Landfill has conducted an in-person interview with Randolph Air Force Base and obtained site-specific constraint requirements and will conform with these requirements. A figure depicting the FAA constraints is provided as **Attachment F**.

NOTE: An online tool is available to facilitate an initial review of potential to obstruct. Based on the following inputs, our project would require analysis and coordination with FAA.

The tool below will assist in applying Part 77 Notice Criteria.

Latitude:	29	Deg	33	M	7.87	S	N	▼
Longitude:	98	Deg	15	M	44.3	S	W	▼
Horizontal Datum:	NAD83 ▼							
Site Elevation (SE):	703	(nearest foot)						
Structure Height :	800	(nearest foot)						
Traverseway:	No Traverseway ▼ <small>(Additional height is added to certain structures under 77.9(c)) User can increase the default height adjustment for Traverseway, Private Roadway and Waterway</small>							
Is structure on airport:	<input checked="" type="radio"/> No <input type="radio"/> Yes							
Submit								

Results

You exceed the following Notice Criteria:

Your proposed structure is in proximity to a navigation facility and may impact the assurance of navigation signal reception. The FAA, in accordance with 77.9, requests that you file.

77.9(a) by 600 ft.

77.9(b) by 706 ft. The nearest airport is RND, and the nearest runway is 15L/33R.

The FAA requests that you file

NOTE: Following the Analysis of the potential to obstruct airspace for the offsite airport construction, coordinate with the FAA representative of their state and region. Randolph AFB is in the Central Texas Region and the contacts provided by FAA (<https://oeaaa.faa.gov/oeaaa/external/public/aorMap.jsp>) are below:

Air Traffic State Contacts for Texas - Central - Internet Explorer
https://oeaaa.faa.gov/oeaaa/external/public/aorDetails.jsp?aorID=66

Air Traffic Contacts for Texas - Central			
Position	Name	Email	Telephone
Technician	Patterson, Kenneth	kenneth.ctr.patterson@faa.gov	(817) 222-5935
Specialist	Shoulders, Chris	chris.shoulders@faa.gov	(817) 222-5929
Crane Specialist	Shoulders, Chris	chris.shoulders@faa.gov	(817) 222-5929

Air Traffic Wind Turbine Contacts for Texas - Central			
Position	Name	Email	Telephone
Technician	Rosgen, Tracy	tracy.rosgen@faa.gov	(424) 405-7644
Specialist	Kieffer, Bill	bill.kieffer@faa.gov	(816) 329-2526
Backup Technician	Rosgen, Tracy	tracy.rosgen@faa.gov	(424) 405-7644

As a facility located within 10,000 feet of an airport runway end utilized by turbojet aircraft, the Beck Landfill maintains operations such that bird hazards to arriving and departing aircraft are not created. The waste accepted for disposal at the Beck Landfill is Type IV, non-putrescible waste only. No putrescible wastes that may serve to attract birds to the facility are accepted for disposal at the Beck Landfill. Putrescible wastes including general plant trash and lunch wastes that are generated on-site are managed through the strict requirement for employees to dispose of such wastes in covered and regularly emptied waste receptacles for off-site disposal. Employees are provided regular training on good housekeeping practices, including the proper management of wastes on-site. The Beck Landfill provide notice of the proposed vertical expansion to all airports within a six-mile radius as indicated on **Part II, Attachment C, Figure 2-2.**

Attachment G General Geology and Soil Statement (§330.61(j))

General geology and soils were originally discussed in several sections of the Snowden, 1989 permit application, including the Geotechnical Investigation in Attachment 11 and Soils Section (Snowden, 1989). Attachment 11 is included in **Part III, Attachment E** of this amendment application. Supplemental geotechnical borings were drilled at the southern and northern ends of the landfill site during two separate investigations in 2020 (see **Part III, Attachment D5- Geotechnical Reports**). The principal findings of these investigations regarding site geology, soil stratigraphy, and soil properties are summarized below.

General Geology

A review of historical and supplemental geotechnical information identified strata having characteristics matching the Pleistocene-age fluvial terrace deposits overlying the undivided Cretaceous-age Navarro Group and Marlbrook Marl strata. Several of the geotechnical borings also penetrated discontinuous strata that may be Leona Formation deposits, or possibly basal terrace deposit beds.

The general area encompassing the project site is situated upon an alluvial deposit overlying shale of the Navarro and Taylor Formations. According to the Geologic Database of Texas, the Beck Landfill is wholly situated on an outcrop of Pleistocene Series fluvial terrace deposits (Qt)². These terrace deposits are comprised of gravel, sand, silt, and clay that were laid down as point bars, oxbows, and abandoned channel segments in low terrace deposits mainly above flood level along entrenched streams. The Pleistocene Series terrace deposits overlie the older Pleistocene Series Leona Formation, which outcrops adjacent to the terrace deposits near the landfill site. Calcareous silt that grades down into coarse gravel make up the Leona Formation. Where the Leona Formation was removed by erosion prior to fluvial terrace deposition, the terrace deposits directly overlie the undivided Cretaceous Series Navarro Group and Marlbrook Marl (upper Taylor Group). The Navarro Group and Marlbrook Marl strata are comprised of marl, clay, sandstone, and siltstone. The undivided Navarro and Marlbrook outcrop several miles south, east and west of the landfill site (See **Part III, Attachment E – Geology Report Figure 3-1**).

The stratigraphy is extremely variable within the Alluvial Deposit and somewhat variable in the Navarro and Taylor Deposits due to historic erosion of Cibolo Creek. The lithologies and corresponding formations initially encountered at the Beck Landfill site are as follows. The sand and gravel deposits are removed at the time of this application and waste placement has occurred within the active permit footprint of the landfill.

Formation or Group Name	Depth Range in Feet ³	Lithology
Pleistocene Series Fluvial Terrace Deposits	0 to 38	High Plasticity Clay, Low Plasticity Clay and Sandy Clay, Clayey Sand and Clayey Gravel
Pleistocene Series Leona Formation	20 to 35	Clayey Gravel

² USGS, Texas Geology Web Map Viewer. Accessed online at txpub.usgs.gov/txgeology/ on June 5, 2020.

³ Below ground surface

Formation or Group Name	Depth Range in Feet ³	Lithology
Cretaceous Series Navarro Group and Marlbrook Marl	0 to 50+	High Plasticity Clay, Low Plasticity Clay and Clay-Shale

Soil Information

The landfill sits within Black Land Prairie which is the beginning of the Coastal Plains that extend from Mexico into New England. According to the Web Soil Survey of the Natural Resources Conservation Service (NRCS), soils underlying the landfill include the following:

- Sunev loam 0 to 1 percent slopes – the majority of the landfill was underlain by these soils, though nearly all removed as result of operations.
- Barbarosa silty clay, 0 to 1 percent slopes – located north of the landfill embankment dike.

The following soils are primarily located adjacent to the Cibolo Creek.

- Lewisville silty clay, 0 to 1 percent slopes
- Patrick soils, 1 to 3 percent slopes, rarely flooded
- Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded
- Bosque and Seguin soils, frequently flooded

The National Hydric Soil List and Web Soil Survey identifies the soil map unit Bosque and Seguin soils, frequently flooded (BO) as having the potential to contain hydric soil components. This soil map unit is mapped in association with an NHD-mapped stream adjacent to and within the Cibolo Creek. **Figure 2-8** contains a graphic representation of the soils mapped with the permit boundary.

Geologic Fault Assessment

The Beck Landfill site is located along the extreme southeastern edge of the northeast trending Balcones Fault Zone. The Balcones Fault Zone is generally comprised of a series of slip-drip normal faults with downward displacements to the southeast. Movement along these faults has displaced the Cretaceous-age strata outcrops within the general area of the Beck Landfill site. Movement along Balcones faults occurred primarily during the Miocene Epoch.

According to the Bureau of Economic Geology San Antonio Sheet, no mapped Balcones faults are located within or within 200 feet of the Beck Landfill. The nearest mapped fault is located approximately 1.5 miles to the northwest with a northeast-southwest trend. However, a fault located about 3 miles northeast of the landfill site does trend towards the southern end of the Beck Landfill. The southwestern extent of this fault has not been mapped due to the deposition of Quaternary-age sediments over the faulted Cretaceous formations covering any surficial evidence of fault line (see **Part III, Attachment E**,

Figure 3-4). A review of the USGS Quaternary Fault and Fold Database⁴ using the agency’s Quaternary Faults Web Application found no reported Holocene displacement of faults within the Balcones Fault System.

A geologic fault assessment was performed at the initial permitting action and again in 2023 for the landfill site to conform with 30 TAC 330.555 of the Municipal Solid Waste Management Regulations. The work involved during the conduct of this study includes the following elements:

1. Review of geologic literature documenting surface fault evidence;
2. Analysis of topographic and subsurface structure contour maps for geomorphic features which are resultant of the manifestation of fault activity;
3. Site general area reconnaissance to locate physical evidence of distress which may be caused by fault activity; and
4. Preparation of a report presenting our findings and opinions based on the data obtained above (Snowden Attachment 11).

As any faulting would be associated with the inactive Balcones System, no movement associated with faults should be anticipated in the area of the landfill site. A joint trend as theorized in Snowden’s Attachment 11 and as described therein would likewise have no effect upon the landfill substructure.

Analysis

The topographic map (one-foot contour) was analyzed to identify geomorphic features often associated with faulting. These features include minor topographic scarps, aligned drainage, or aligned natural ponds. None of these features were recognized within and surrounding the project site due to the overlying mantle of Alluvial Deposits.

A reconnaissance of the proposed Type IV landfill site and the surrounding area was performed to document physical evidence of possible geologic fault activity. Area roads were examined for pavement breaks. Building structures were examined for structural damage, and drainage ditches and area streams were examined for features which might be fault-related. No evidence of surface displacements which could be related to fault activity were identified within the site or the immediate surrounding area.

Conclusion

Assessment of this site based on our professional evaluation, geologic data gathered and experience with fault related features, indicates general geologic conditions favorable to development as a landfill site. Along with the proposed slurry trench design the site should be capable of development into an adequate Type IV Landfill. The geologic evaluations rendered in this report meet the standard of care of our profession. No other warranty or representation, either expressed or implied, is included or intended.

⁴ USGS Quaternary Faults Web Application accessed online at usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf on April 13, 2021

Seismic Impact Zones (§330.557)

30 TAC 330.557 defines a seismic impact zone as an area with a 10% or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years. A review of the 2018 National Seismic Hazard Model for the conterminous United States found that the Beck Landfill site is not located in an area having a 10% or greater probability that the peak horizontal acceleration will exceed 0.10g. Additionally, the Beck Landfill is located within an area of the State where Holocene displacement of faults has not occurred.

The image below depicts the Federal Emergency Management Agency (FEMA) Earthquake Hazard Map of the Western United States, include Guadalupe County. The Beck Landfill is located within Zone A with a “very small probability of experiencing damaging earthquake effects”, as noted by the blue triangle below. See **Part III, Attachment G, Figure 3-8** for the FEMA National Risk Index Map for earthquakes.

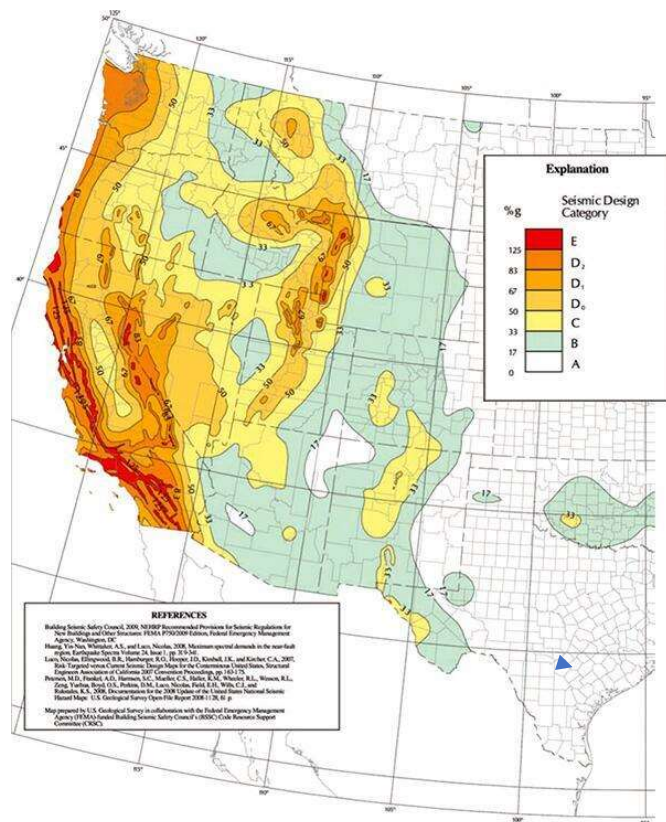
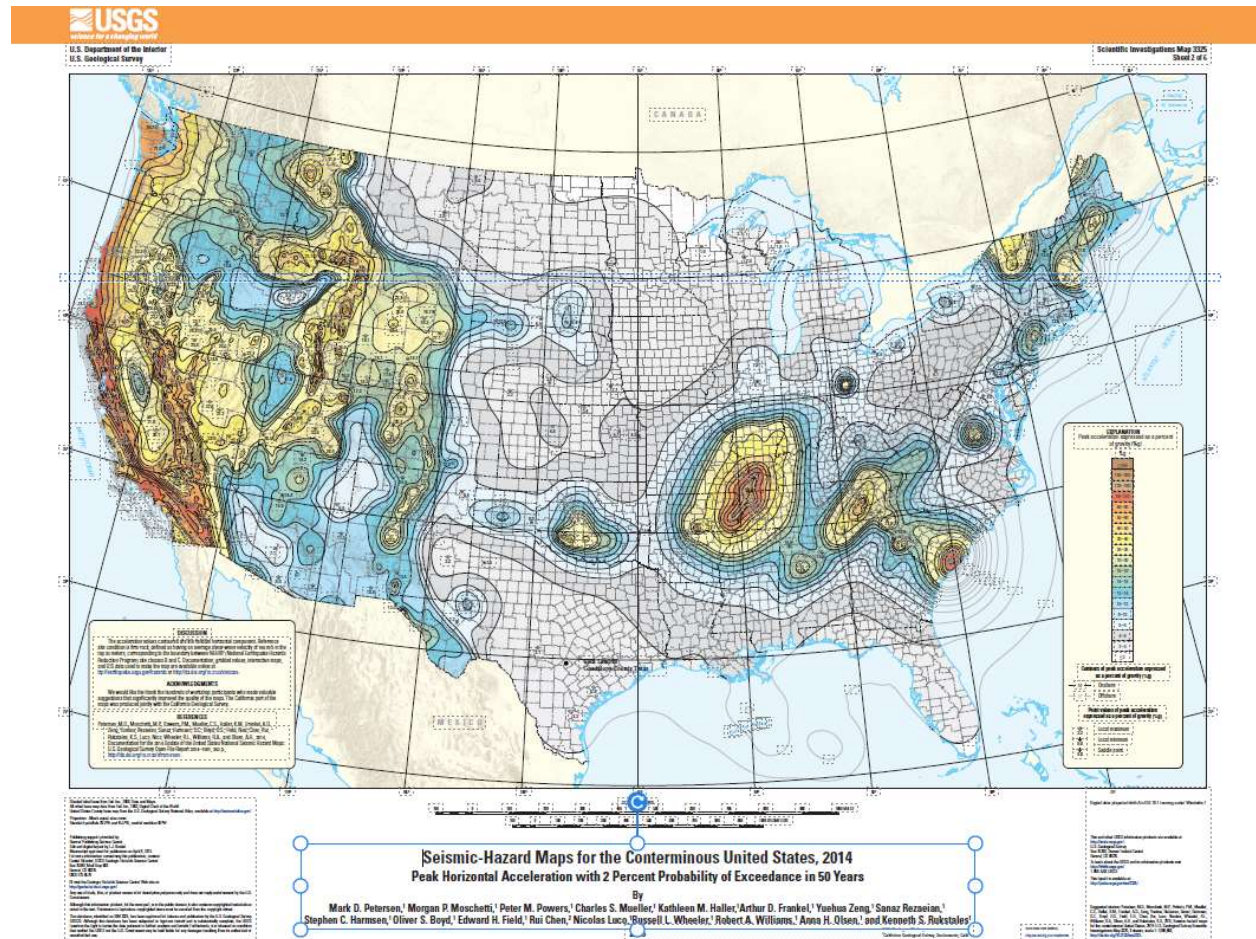


Image from “[fema_hazard_maps_western-map_graphic.jpg \(600×744\)](#)”

In addition, the USGS Seismic Hazard Maps for the Conterminous United States depict the probabilistic seismic-hazard from 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.02 and 1.0-second periods with probabilities of exceedance of 2 percent in 50 years and 2 percent in 50 years. Based on Sheet SIM3325-sheet 2⁵ (image below) the Beck Landfill is mapped in a

⁵ [Seismic-Hazard Maps for the Conterminous United States, 2014 Peak Horizontal Acceleration with 2 Percent Probability of Exceedance in 50 years \(usgs.gov\)](#)

peak horizontal acceleration zone of 2-4% within the Horizontal Acceleration with 2% probability exceedance in 50 years. Therefore, the Beck Landfill does not appear to be at seismic risk.



Data on Unstable Areas (§330.559)

30 TAC 330.559 defines an unstable area as a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of a landfill's structural components responsible for preventing releases from the landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movement, and karst terrains. The owner or operator shall consider the following factors, at a minimum, when determining whether an area is unstable:

- (1) on-site or local soil conditions that may result in significant differential settling;
- (2) on-site or local geologic or geomorphologic features; and
- (3) on-site or local human-made features or events (both surface and subsurface).

The Beck Landfill excavates through Pleistocene-age terrace deposits (clay, sand and gravel) and into the undivided Cretaceous-age Navarro Group and Marlbrook Marl, which consist of clay and shale material (impermeable). No on-site geologic or geomorphologic features have been observed. No on-site or local

human-made features or events are observed to have created unstable conditions. The Beck Landfill does not appear to meet the definition of an “unstable area”.

Attachment H Groundwater and Surface Water (§330.61(k))

Site Specific Groundwater Conditions

The uppermost groundwater-bearing unit at The Beck Landfill is encountered within the Pleistocene Series Leona Formation. The undivided Cretaceous Series Marlbrook Marl and Navarro Group are not known to produce groundwater within Guadalupe County (see **Part III, Attachment E - Geology Report**). Groundwater Detection monitoring events have been conducted in accordance with the requirements of MSW Permit No. 1848A since August 2000. Based on a review of the historical detection monitoring water level measurement record and water level observations recorded on landfill geotechnical boring logs, it appears that the uppermost groundwater-bearing unit is in an unconfined condition. Evaluation of the historical detection monitoring water level measurements and historical rainfall events found that groundwater levels in the uppermost unit are highly influenced by rainfall amounts and the fluctuation of water levels within the adjacent Cibolo Creek. This finding strongly suggests that the uppermost unit is hydraulically connected to the creek and that Cibolo Creek may receive discharge from the uppermost groundwater-bearing unit (effluent stream).

Generally, groundwater flow is from the northwest to southeast towards Cibolo Creek further supporting the likelihood that groundwater from the uppermost unit discharges to the creek. Five monitor wells (MW) are installed at Beck Landfill. Due to the southerly groundwater flow direction and depth to groundwater being shallowest at MW-A and deepest at MW-F, annual detection monitoring events begin at MW-A, moving counterclockwise around the Landfill (MW-C, MW-D, MW-F, and MW-G). Monitor wells are depicted in **Part III, Attachment D1, Figure D1.1 Site Layout Plan**. Average historical well readings from the five monitor wells indicate that the average saturated thickness within the groundwater-bearing unit at the monitor wells ranges from approximately 5 feet to approximately 11 feet. Monitor wells MW-F and MW-G typically purge “dry” before three well volumes can be removed. However, recharge occurs within 24 hours such that sample volumes are typically obtained as required. This slow recharge rate suggests that the hydraulic conductivity of the uppermost unit variable across the site and possibly low. Historical water-level elevations at the Beck Landfill are presented in **Part III, Attachment F** of this application.

Surface Water at or near the Site

The Beck Landfill is surrounded to the west, south, and east by the Mid Cibolo Creek (TCEQ Stream Segment ID. No. 1913). The Mid Cibolo Creek flows from a point 100 meters (110 yards) downstream of IH-10 in Bexar/Guadalupe County to the Missouri-Pacific Railroad bridge west of Bracken in Comal County. This perennial, freshwater stream is not listed as impaired on the EPA-approved 2020 Texas Integrated Report Index of Surface Water Quality. Aquatic life use (ALU) is defined as “limited”.

TPDES Stormwater Permits

The Beck Landfill has an active Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) that authorizes discharges of stormwater associated with industrial activities. A

site-specific Stormwater Pollution Prevention Plan (SWPPP) has been written and is implemented at the Facility. Sector-specific compliance practices are described for Sector L (Activity Code LF: Landfill) and Sector J (SIC Code 1442: construction sand and gravel). The Permit No. is **TXR05AW45**. Upon expiration, Beck Landfill will renew its authorization by submitting required documentation to the TCEQ. Copies of the SWPPP and permit correspondence are maintained at the Landfill and are available upon request.

Stormwater that comes in contact with solid waste will be treated as contaminated water and will be retained on-site. This water may be used as dust suppression on within the landfill working face but will not be applied in areas where solid waste is not exposed.

Stormwater that falls within the future excavations, outside of the dikes below the active waste, will be treated as uncontaminated stormwater and be diverted to site drainage systems and ultimately used for dust control on areas of the site where solid waste is not exposed, such as haul roads and within the sand and gravel mining operation footprint.

This permit amendment represents a vertical change within the existing landfill footprint on-site and no exceedances of state water quality standards, applicable effluent limitations, or non-compliances under the Clean Water Act are anticipated.

Attachment I Abandoned Oil and Water Wells (§330.61(I))

As noted in the original application for this permit, the Texas Department of Health (TDH) guidelines for drinking water protection stated that water wells located within 500 feet of actual disposal areas should be evaluated to show that adequate protection to drinking water sources is provided. Texas Water Commission records indicate there are two (2) water wells known to have been located within 500 feet of the proposed disposal site: Well No. 683006D and Well No. 683014.

Well No. 683006D was drilled May 1, 1965 for Mack Kardys of 308 2nd Street, Schertz, Texas. The well bore was 8.5 inches to a total depth of 75 feet into blue shale. Casing was set to 56 feet and perforated casing from 28-52 feet by Kutscher Drilling Company, Registration No. 635. This well produced 35 gallons per minute for personal use.

Well No. 683014 was drilled March 21, 1986 for H.J. Herb of Rt. 3, Box 147 J, Cibolo, Texas. The well bore up to 6.75 inches to a total depth of 45 feet into clay. Casing was set to 45 feet and perforated casing from 29 to 45 feet by Deharde's W.W. Service, Registration No. 2328. This well produced 15 gallons per minute for domestic use. No records of plugging or abandonment have been found.

At the time of initial permitting, two recorded water wells Kx 68 - 30 6A and Kx 68 - 30 - 9A were known to be completed in Alluvial Aquifers similar to that anticipated at this site but each were located on the opposite side of Cibolo Creek which creates a hydraulic divide within the aquifer water system. Water wells within approximate 1000-foot radius at the time of application included Kx 68 - 30 - 603 completed in September 1956 producing from the Edwards Aquifer at depths of 535 to 550 feet.

Interconnection with the Edwards Aquifer is precluded by the Navarro/Taylor shales. The review of other water wells within a one-mile radius of the site indicates one additional alluvial well and several municipal Edwards wells. The landfill operation is not expected to endanger the water supplies of any existing wells due to the differing aquifers and the divide created by Cibolo Creek.

The municipal waters for each of the surrounding Municipalities, including Randolph Air Force Base, are derived from Edwards Aquifer wells. All of the municipal wells with the exception of Randolph's wells, are in excess of three miles upgradient from the landfill site. Randolph's wells are located just beyond a one-mile radius in an upgradient segment of the Edwards Aquifer. The intake of surface waters intended for human consumption does not occur within any reasonable proximity to the site. The nearest application of surface waters for such purposes occurs at New Braunfels and Seguin each approximately 15 miles from the site along the Guadalupe River.

Sources of drinking water should thus in no way be impacted by the landfill development. The Alluvial Aquifer is further considered adequately protected by naturally occurring characteristics and the application of the slurry trench wall.

On-Site Oil or Water Wells

The locations of all existing and abandoned wells have been re-evaluated for this amendment application. A current list of identified existing and abandoned wells near the Beck Landfill is depicted in **Table I-1** below. The on-site wells are utilized for groundwater quality monitoring in accordance with the existing MSW permit. No other active or historical wells within the Beck Landfill facility are depicted on the Texas Water Development Board (TWDB) Groundwater Data Viewer (TWDB, accessed June 8, 2020).

TABLE I-1 – WATER WELLS AT THE BECK LANDFILL

WELL	USE	LATITUDE AND LONGITUDE
MW-A	Groundwater monitoring of perched aquifer outside of landfill dike-line.	29.548880°, -98.268411°
MW-C	Groundwater monitoring of perched aquifer outside of landfill dike-line.	29.544524°, -98.265643°
MW-D	Groundwater monitoring of perched aquifer outside of landfill dike-line.	29.543768°, -98.258393°
MW-F	Groundwater monitoring of perched aquifer outside of landfill dike-line.	29.547263°, -98.260227°
MW-G	Groundwater monitoring of perched aquifer outside of landfill dike-line.	29.551674°, -98.262166°
Piezometer A	Groundwater monitoring of leachate inside of the landfill dike-line	29.548868°, -98.268394°
Piezometer C	Groundwater monitoring of leachate inside of the landfill dike-line	29.544557°, -98.265645°
Piezometer D	Groundwater monitoring of leachate inside of the landfill dike-line	29.543796°, -98.258427°
Piezometer F	Groundwater monitoring of leachate inside of the landfill dike-line	29.547273°, -98.260264°
Piezometer G	Groundwater monitoring of leachate inside of the landfill dike-line	29.551662°, -98.262213°

No existing or abandoned on-site crude oil, natural gas wells, or other mineral recovery infrastructure regulated by the Railroad Commission of Texas (TXRRC) are present on-site (TRRC Public GIS Viewer, accessed June 8, 2022).

Attachment J

Floodplains and Wetland Statement (§330.61(m))

At the time of application, the minimum required separating distance of 50 feet to be maintained between disposal operations and the boundary of the site to allow area for visual screening (it needed), surface drainage facilities, flood protection facilities, and a safety margin for methane gas and leachate monitoring will, in most cases, actually be exceeded due to the location of the flood protection levees. Upon completion of the landfill, the access roads will be widened, it necessary, onto completed portions of landfill. A minimum 3.5-foot tall barbed wire fence, or higher barrier marking the site perimeter, will be installed and maintained by the landfill supervisor, after construction of the dike.

A buffer zone of 200 feet, from the center line of the dike, is used parallel to Zuehl Street. This zone is deemed adequate as the 100-year flood plain dike to be constructed and the existing vegetation will totally screen the operation. In addition, the area in question is the area of long existing fill which the department is requiring be encapsulated and protected by the trench. It seems therefore reasonable that as fill already exists at a distance of less than 300 yards and prevents construction of the encapsulation trench and dike any further from Zuehl Street, a variance needs to be granted waving the required 300 yard buffer set out in the regulations, Section 325.42(4), and is so requested of the TDH (*excerpted from "Buffer Zones" (Snowden, 1989).*

Buffer Zones

No solid waste unloading, storage, disposal, or processing operations are anticipated to impact buffer zones, easements, or rights-of-way on-site. This permit amendment represents a vertical change within an existing landfill footprint on-site that does not cross these features. All on-site landfill activities will continue to be conducted within the existing landfill footprint.

Floodplains

Data associated with floodplains in accordance with Chapter 301, Subchapter C of this title (relating to Approval of Levees and Other Improvements are reviewed and addressed in **Part III, Attachment C-2** of this Application.

Attachment K Wetlands

An on-site field investigation to identify surface waters and wetlands and to assess their potential for regulation as waters of the United States (WOTUS), was conducted on September 27 and 28, 2021. No impacts to wetlands or WOTUS regulated by the U.S. Army Corps of Engineers (USACE) are anticipated as a result of this vertical expansion and permit modification. Results of a literature review and field survey are included in **Attachment L** to this Part.

Attachment L Endangered or Threatened Species (§330.61(n))

As noted in the original application (“*Protection of Endangered Species*” (Snowden, 1989), the existence of any listed or proposed endangered species in the general area of the landfill is not anticipated. Migratory fowl and other animals utilizing the creek system as a habitat corridor are however occasionally reported in the proximity of the site. The development of the proposed landfill is not anticipated to have any adverse effect on the existing wildlife.

A review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation was (IPaC) tool was performed on December 29, 2021. An on-site field investigation by qualified biologists was conducted on September 27 and 28, 2021. Based on the background literature review and the on-site field investigation, suitable habitat for federally listed species was observed for one species: the monarch butterfly. As a candidate species, the monarch butterfly does not currently have protections under the Endangered Species Act. The Project occurs within the primary migration corridor for the whooping crane, however, suitable habitat for the whooping crane, as well as other federally-listed bird species, was not observed during the on-site investigation. The ability of federally-listed birds to migrate through the Project Area is possible, however, these species are not anticipated in the Project Area due to the lack of suitable habitat.

No impacts listed threatened or endangered species nor their habitat are anticipated as a result of this vertical expansion (permit modification). See **Attachment L** to this Part for the full report.



POWER ENGINEERS, INC.
85 N.E. LOOP 410
SUITE 207
SAN ANTONIO, TX 78216 USA
PHONE 210-446-1071

January 31, 2022

Mr. Ben Davis
President
Beck Companies
122 East Turbo Drive
San Antonio, TX 78216

Subject: Municipal Solid Waste Permit – Major Amendment
Environmental Supporting Documentation
Beck Companies Landfill
Guadalupe County, Texas

Dear Mr. Davis:

POWER Engineers, Inc. (POWER) was retained by Beck Companies (Beck) to perform an environmental and cultural resources assessment of the undeveloped portions of the Beck Landfill (Landfill) located in western Guadalupe County, Texas. The Landfill is located at 550 John E. Peterson Boulevard/Farm to Market Road 78, Schertz, Texas 78154 (Attachment A, Figure 1). The assessment will include a waters of the United States (WOTUS) delineation, a threatened and endangered species evaluation, and a cultural resource investigation in order to support a Major Amendment to the Landfill's Municipal Solid Waste Permit and ensure compliance under Texas Administrative Code (TAC) Title 30, Rules §330.551, §330.553, and §330.61. For the purposes of this report, the Project Area is defined as the undeveloped portions (i.e., not located within the active Landfill) of the approximately 266-acre Landfill.

This report and the results presented herein are meant to provide Beck with documentation to support any reporting under:

- the Clean Water Act (CWA), as regulated by the United States Army Corps of Engineers (USACE);
- the Endangered Species Act as regulated by the United States Fish and Wildlife Service (USFWS);
- the National Historic Preservation Act as regulated by the Texas Historical Commission; and
- the Title 30 of the TAC as regulated by the Texas Commission on Environmental Quality.

BACKGROUND LITERATURE REVIEW

Prior to the on-site field investigation, POWER performed a background literature review of the Project Area for potential WOTUS, including wetlands, and threatened and endangered species. The background review included an examination of the following resources:

- United States Geological Survey (USGS) 7.5-minute (1:24,000 quadrangle) Topographic Map Identification
- USFWS National Wetlands Inventory

- National Hydrography Dataset (NHD)
- Natural Resources Conservation Service (NRCS) National Hydric Soil List and Web Soil Survey
- Federal Emergency Management Agency
- National Oceanic and Atmospheric Administration Precipitation Analysis
- United States Drought Monitor
- Texas Parks and Wildlife Department (TPWD) Texas Ecosystem Analytical Mapper
- TPWD Texas Natural Diversity Database (TXNDD)
- USFWS Information for Planning and Consultation (IPaC)
- USACE Fort Worth District List of Section 10 Waterbodies
- Texas General Land Office (GLO) land ownership database

Interpretation of the USGS 7.5-minute topographic maps (Schertz, Texas) and NHD data identified Cibolo Creek adjacent to and within the Project Area (USGS 2022).

The USFWS National Wetlands Inventory review identified four forested riparian wetlands (PFO1A) associated with Cibolo Creek previously mapped adjacent to the Project Area (Attachment A, Figure 2) (USFWS 2022a).

According to the NRCS's National Hydric Soil List and Web Soil Survey, the soil map unit Bosque and Seguin soils, frequently flooded (BO), has the potential to contain hydric soil components. This soil map unit is mapped in association with an NHD-mapped stream adjacent to and within the Project Area, namely Cibolo Creek. Hydric soils are a technical parameter for wetland determination and when mapped by the soil survey, there is a general likelihood hydric soils will be found within the given area. Not all areas mapped as hydric soils are found to be hydric in the field (NRCS 2022).

Examination of Federal Emergency Management Agency floodplain maps indicated the entirety of the Project Area occurs within the 100-year floodplain (Zones AO and AE; FIRMette 48187C0220F; Attachment A, Figure 2) (FEMA 2022).

According to the National Oceanic and Atmospheric Administration Precipitation Analysis, the Project Area had 0.06 inch of precipitation during the seven days prior to the on-site field investigation (NOAA 2022). According to the United States Drought Monitor, the vicinity of the Project Area was not experiencing drought conditions at the time of the on-site field investigation (US Drought Monitor 2022).

Data from TPWD's Texas Ecosystem Analytical Mapper is generally consistent with the literature findings which defines the proposed Project as primarily occurring in the Texas Blackland Prairies Ecoregion (TPWD 2022a). The Texas Ecosystem Analytical Mapper data indicated the following ecological systems mapped within the Project Area:

- Urban Low Intensity; Barren;
- Blackland Prairie: Disturbance or Tame Grassland;
- Urban High Intensity;
- Central Texas: Floodplain Hardwood Forest;
- Central Texas: Floodplain Deciduous Shrubland;
- Central Texas: Floodplain Herbaceous Vegetation;
- Native Invasive: Deciduous Woodland; and
- Native Invasive: Huisache Woodland or Shrubland.

POWER conducted a review on December 29, 2021 of the USFWS' IPaC (USFWS 2022b) and TPWD's TXNDD (TPWD 2022b) for existing records regarding threatened and endangered species and sensitive vegetation communities known or suspected to occur within the Project Area. According to the IPaC review, nine federally listed threatened or endangered species have the potential to occur within the Project Area (see Table 3) (USFWS 2022b). Review of the TXNDD did not identify any previously mapped records for federally listed species or sensitive vegetation communities within the Project Area (TPWD 2022b).

A review of the USACE – Fort Worth District list of Section 10 waterbodies did not identify any potential Section 10 surface waters within the Project Area.

Available data from the Texas GLO did not indicate the presence of any state-owned lands within the Project Area (Texas GLO 2022).

ON-SITE FIELD INVESTIGATION

Following the background review, POWER conducted an on-site field investigation of the Project Area on September 27 and 28, 2021 to identify surface waters, wetlands, and threatened and endangered species habitat. Any waterbodies and wetlands identified within the Project Area were further assessed for their potential to be subject to the jurisdiction of the USACE – Fort Worth District. The scope of the on-site field investigation included:

- Identification of potential WOTUS (including wetlands) within the proposed Project that may be subject to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The evaluation included assessments for ephemeral, intermittent, and perennial stream features; navigable and non-navigable waterways; deep-water habitats; wetlands; and any other special aquatic sites.
 - Streams are determined to be WOTUS if they exhibit a defined plane of ordinary high-water mark that is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural lines impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas.
 - In the case of non-navigable tributaries (to traditional navigable waters) that are not relatively permanent, the USACE will apply the “significant nexus” standard to assess flow characteristics and functions of the tributary and any adjacent wetlands to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters (United States Environmental Protection Agency – USACE, *2008 CWA Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*).
 - As required by existing regulations, potential jurisdictional wetlands, were evaluated based on the presence of hydrophytic vegetation, wetland hydrology, and hydric soils (USACE, *1987 Wetland Delineation Manual*, and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region [Version 2.0]*).
- Identification of potential suitable habitat for federally listed threatened or endangered species and sensitive vegetation communities, as identified by the USFWS' IPaC and TPWD's TXNDD data for the Project Area.

Hydrology

Within the Great Plains Region, precipitation has the most substantial influence on establishing and maintaining wetland hydrology in locations exhibiting a low degree of slope and natural impoundments. During the on-site investigation, drainages and depressional areas within the Project Area were investigated for hydrologic indicators including, but not limited to, surface water, high water table, saturation, inundation visible on aerial imagery, aquatic fauna, and geomorphic position. Hydrology indicators for wetlands within the Project Area included saturated soils, high water table, surface water, drift deposits, and drainage patterns. Hydrology indicators observed for mapped wetlands included drainage patterns, FAC neutral test, inundation on aerial imagery, sparsely vegetated concave surface, surface soil cracks, and geomorphic position.

Soils

According to the NRCS Web Soil Survey (NRCS 2022), one potentially hydric soil map unit (Bosque and Seguin soils, frequently flooded [BO]) occurs in association with Cibolo Creek adjacent to and within the Project Area. The NRCS data was generally consistent with the soils observed during the on-site investigation. Hydric soils were observed in field mapped streams and wetlands (Tables 1 and 2). Hydric soil indicators for wetlands within the Project Area included redox dark surface.

Vegetation

The Project Area is the undeveloped portions of the Beck Landfill and is dominated by upland hardwood forests, upland shrublands, and upland herbaceous vegetation. During the on-site investigation, hydrophytic vegetation species were only observed within or adjacent to mapped streams and wetlands. Refer to Attachment B for representative photographs.

Common upland vegetation generally observed within the Project Area included:

- Bermudagrass (*Cynodon dactylon*);
- Johnsongrass (*Sorghum halepense*);
- Rooseveltweed (*Baccharis neglecta*);
- Virginia wildrye (*Elymus virginicus*);
- curly-mesquite (*Hilaria belangeri*);
- Indian woodoats (*Chasmanthium latifolium*);
- Texas croton (*Croton texensis*);
- spiny chloracantha (*Chloracantha spinosa*);
- velvet leaf senna (*Senna lindheimeriana*);
- southern dewberry (*Rubus trivialis*);
- saw greenbrier (*Smilax bona-nox*);
- Texas pricklypear (*Opuntia engelmannii* var. *lindheimeri*);
- Jerusalem thorn (*Parkinsonia aculeata*);
- sweet acacia (*Vachellia farnesiana*);
- cedar elm (*Ulmus crassifolia*);
- Chinese tallow (*Triadica sebifera*);
- sugarberry (*Celtis laevigata*);
- Texas ash (*Fraxinus albicans*); and
- Chinaberrytree (*Melia azedarach*).

Common vegetation generally observed along the banks of mapped stream features included:

- Bermudagrass;
- Johnsongrass;
- southwestern bristlegrass (*Setaria scheelei*);
- giant reed (*Arundo donax*);
- coral vine (*Antigonon leptopus*);
- green flatsedge (*Cyperus virens*);
- rough cocklebur (*Xanthium strumarium*);
- annual marsh elder (*Iva annua*);
- wax mallow (*Malvaviscus arboreus* var. *drummondii*);
- Indian woodoats;
- swamp smartweed (*Persicaria hydropiperoides*);
- southern dewberry;
- poison ivy (*Toxicodendron radicans*);
- common buttonbush (*Cephalanthus occidentalis*);
- Jerusalem thorn; Rooseveltweed;
- mesquite (*Prosopis glandulosa*);
- live oak (*Quercus virginiana*);
- pecan (*Carya illinoensis*);
- sugarberry;
- black willow (*Salix nigra*);
- Chinaberrytree;
- eastern cottonwood (*Populus deltoides*);
- Chinese tallow;
- cedar elm; and
- American sycamore (*Platanus occidentalis*).

Common wetland vegetation observed included:

- annual marsh elder;
- swamp smartweed;
- green flatsedge;
- limestone quillwort (*Isoetes butleri*);
- buttonbush;
- Chinese tallow; and
- boxelder (*Acer negundo*).

RESULTS

WATERS OF THE UNITED STATES

The on-site field investigation identified five stream features within the Project Area (Table 1; Attachment A, Figure 3). No Section 10 waterbodies were identified within the Project Area. All mapped streams within the Project Area, other than Cibolo Creek, have ephemeral flow regimes (ST001, ST002, ST004, ST005). The portion of Cibolo Creek (ST003) adjacent to and within the Project Area had a highly variable ordinary high-Water Mark (OHWM) and alternated between ponded and dry segments. Due to difficult bank access and safety concerns, the portion of Cibolo Creek within the Project Area was not mapped in its entirety.

TABLE 1 STREAM FEATURES WITHIN THE PROJECT AREA

STREAM NAME (MAP LABEL)	FLOW REGIME	OHWM (FEET)	POTENTIAL WOTUS (Y/N)
Drainage Ditch (ST001)	Ephemeral	5	N
Unnamed tributary to Cibolo Creek (ST002)	Ephemeral	5	Y
Cibolo Creek (ST003)	Intermittent	60	Y
Unnamed tributary to Cibolo Creek (ST004)	Ephemeral	5	Y
Unnamed tributary to Cibolo Creek (ST005)	Ephemeral	3	Y

The on-site field investigation identified three wetland features and five waterbodies within the Project Area (Table 2; Attachment A, Figure 3). Mapped wetlands included one in-channel palustrine emergent (PEM) wetland (WET001), one riparian PEM wetland (WET002), and one riparian palustrine forested (PFO) wetland (WET003). Mapped ponds included four man-made retention ponds excavated in uplands (WB001, WB002, WB003, and WB005) and one natural pond adjacent to Cibolo Creek and ST004 (WB004).

TABLE 2 WETLAND AND WATERBODY FEATURES WITHIN THE PROJECT AREA

MAP LABEL	FEATURE TYPE	ASSOCIATED FEATURE	POTENTIAL WOTUS (Y/N)
WET001	PEM (In-channel)	Cibolo Creek	Y
WET002	PEM (Riparian)	Cibolo Creek	Y
WET003	PFO (Riparian)	Cibolo Creek	Y
WB001	Retention Pond	NA	N
WB002	Retention Pond	NA	N
WB003	Retention Pond	NA	N
WB004	Pond	Cibolo Creek	Y
WB005	Retention Pond	NA	N

THREATENED AND ENDANGERED SPECIES

POWER’s review of the IPaC identified nine threatened or endangered species with the potential to occur in the Project Area (USFWS 2022b). Review of the TXNDD did not indicate any existing mapped records for federally-listed threatened and endangered species or sensitive vegetation communities within the Project Area (TPWD 2022b). A list of federally-listed threatened and endangered species for the Project Area and potential Project construction effects are presented in Table 3.

TABLE 3 THREATENED AND ENDANGERED SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

COMMON NAME ¹	SCIENTIFIC NAME	FEDERAL STATUS ²	SUITABLE HABITAT	EFFECT
BIRDS				
Piping plover	<i>Charadrius melodus</i>	T	No	No Effect
Red knot	<i>Calidris canutus rufa</i>	T	No	No Effect
Whooping crane	<i>Grus americana</i>	E	No	No Effect
CLAMS				
False spike	<i>Fusconaia mitchelli</i>	PE	No	No Effect
Guadalupe orb	<i>Cyclonaias necki</i>	PE	No	No Effect
CRUSTACEANS				
Peck's Cave amphipod	<i>Stygobromus (=Stygonectes) pecki</i>	E	No	No Effect
INSECTS				
Comal Springs dryopid beetle	<i>Stygoparnus comalensis</i>	E	No	No Effect
Comal Springs riffle beetle	<i>Heterelmis comalensis</i>	E	No	No Effect
Monarch butterfly	<i>Danaus plexippus</i>	C	Yes	No Effect
PLANTS				
Bracted twistflower	<i>Streptanthus bracteatus</i>	PT	No	No Effect

¹ According to USFWS' IPaC (USFWS 2022b)

² E - Endangered; T - Threatened; PE - Proposed Endangered; PT - Proposed Threatened; C - Candidate

Based on the results of the background review and the on-site field investigation, suitable habitat capable of supporting listed threatened or endangered species was observed within the Project Area for one species: the monarch butterfly (*Danaus plexippus*).

The monarch butterfly is known to utilize herbaceous and forested habitat within Central Texas for stopovers and feeding during fall migrations to over-wintering sites in Mexico and spring migrations to breeding sites in the northern United States and Canada. Monarchs passing through Texas in the spring lay eggs before dying and are highly dependent on milkweed plants (*Asclepias spp.*) for reproduction (NatureServe 2022).

CULTURAL RESOURCES ASSESSMENT

On January 14, 2022, POWER performed a file review to identify cultural resources recorded within and near the Project Area. The file review included data from the online restricted-access Texas Historical Commission's Texas Archeological Sites Atlas and Texas Historic Sites Atlas (THC 2022a and 2022b); National Park Service databases (NPS 2022a and 2022b); and the Texas Department of Transportation's NRHP Listed and Eligible Bridges database (TxDOT 2022a) and Historic Districts and Properties of Texas database (TxDOT 2022b). No cultural resources are recorded within or adjacent to the Project. The nearest recorded cultural resources, archeological site 41BX565 and the Rittiman Addition Cemetery are 435 feet and 135 feet, respectively, from the Project boundary.

CONCLUSIONS

WATERS OF THE UNITED STATES

The on-site field investigation identified five streams, three wetlands, and five waterbodies within the Project Area (Tables 1 and 2; Attachment A, Figure 3). The status of mapped features as potential WOTUS was determined based on connectivity to downstream relatively permanent or traditionally navigable waters in addition to man-made status. Please note that only the USACE can make the final determination on whether a stream, wetland, or pond is considered a WOTUS.

THREATENED AND ENDANGERED SPECIES

Based on the background literature review and the on-site field investigation, suitable habitat for federally listed species was observed for one species: the monarch butterfly. As a candidate species, the monarch butterfly does not currently have protections under the Endangered Species Act.

The Project occurs within the primary migration corridor for the whooping crane, however, suitable habitat for the whooping crane, as well as other federally-listed bird species, was not observed during the on-site investigation. The ability of federally-listed birds to migrate through the Project Area is possible, however, these species are not anticipated in the Project Area due to the lack of suitable habitat.

CULTURAL RESOURCES

Due to the lack of cultural resources recorded within the Project, POWER concludes the Project will have no effect on known cultural resources. However, the Project has not undergone a cultural resources survey. A survey may be required if Project permitting requires compliance with Section 106 of the National Historic Preservation Act or the Texas Antiquities Code. If cultural resources are encountered during construction of the Project, all activities at the location should be halted until the Texas Historical Commission is notified and an appropriate course of action is determined.

In the event the Project Area is modified and/or expanded to occur beyond the extent of that reviewed for this report, it is suggested that Beck contact POWER to determine if any additional investigations are needed.

Thank you for allowing POWER to assist Beck with this project. If you have any questions or comments, please contact me at 210-951-6424 or julie.morelli@powereng.com.

Sincerely,
POWER Engineers, Inc.



Julie Morelli P.G., REM.
Sr. Project Manager

Enclosures:

- Attachment A – Project Figures
- Attachment B – Project Photographs

REFERENCES

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Mr. Ben Davis
January 31, 2022

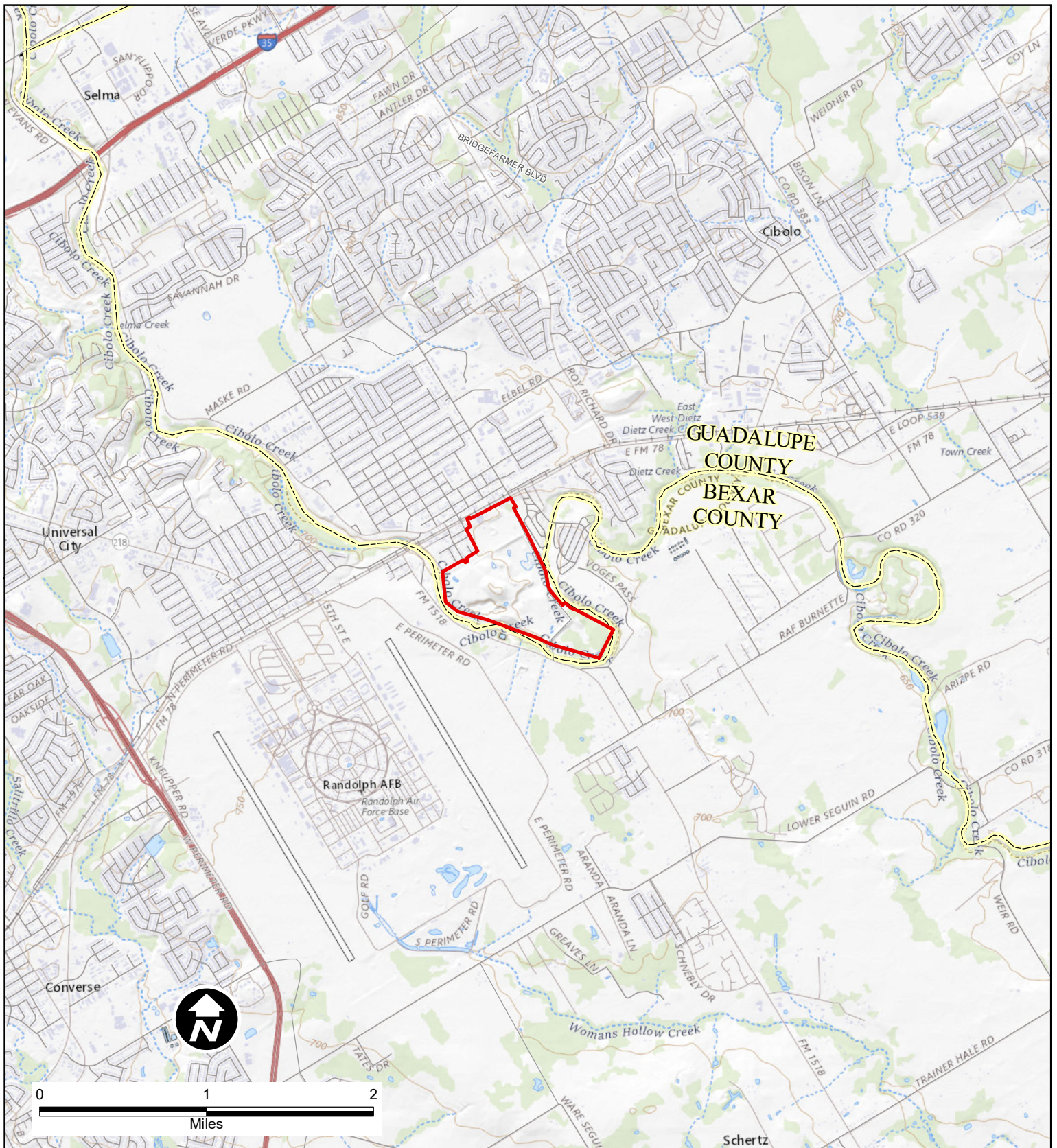
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ATTACHMENT A PROJECT FIGURES



Legend

 Permit Boundary



Project Location

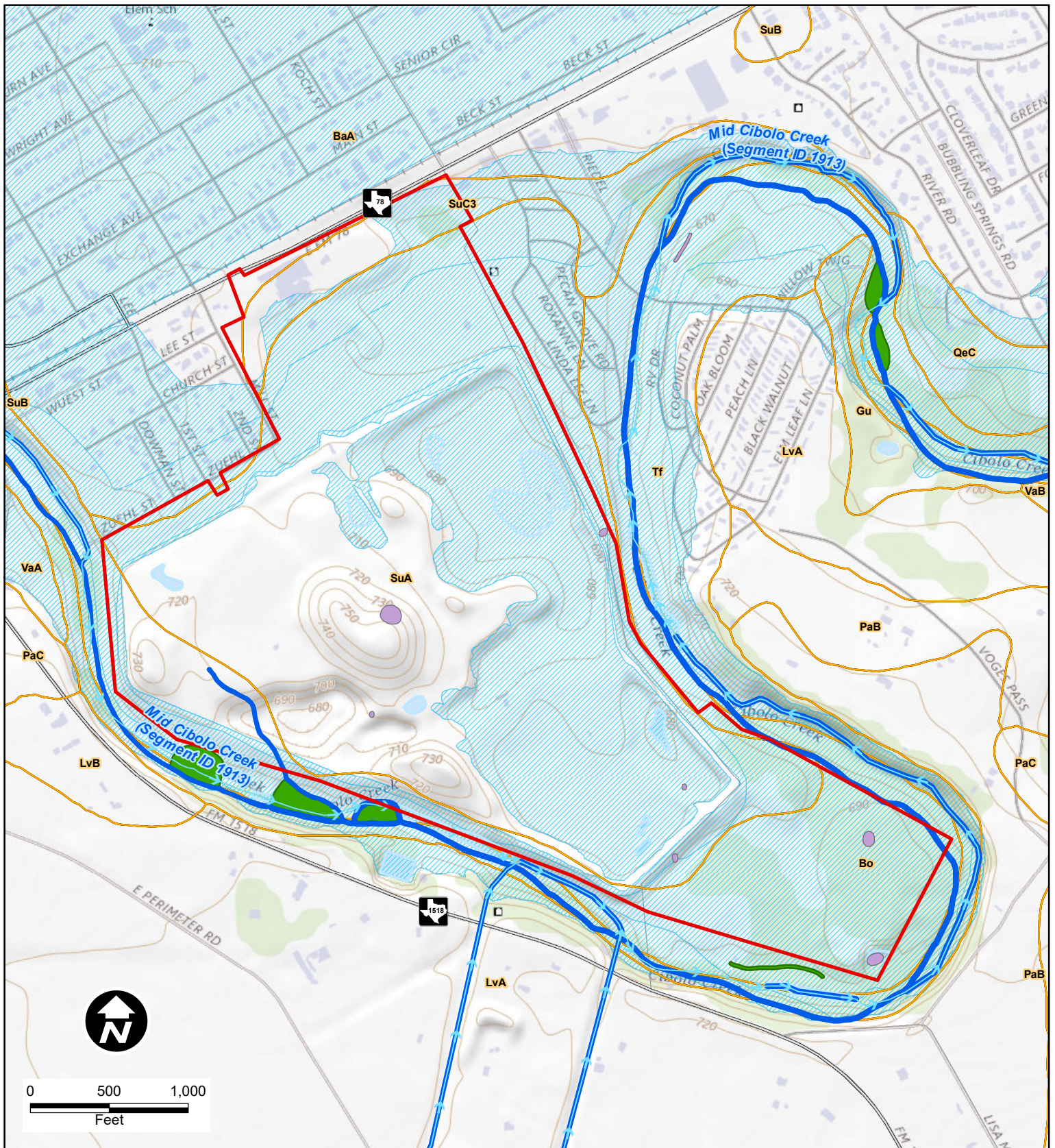
BECK LANDFILL
FIGURE 1:
PROJECT LOCATION MAP

WOTUS REPORT

GUADALUPE COUNTY, TEXAS

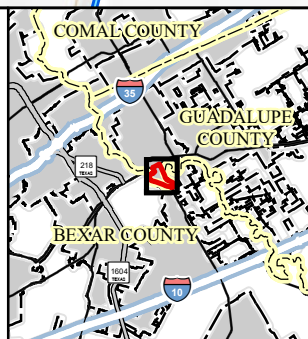


Date: 1/19/2022



Legend

- Permit Boundary
- NHD Stream
- NCRS Soil
- 100-Year Floodplain
- NWI Features**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



BECK LANDFILL
FIGURE 2:
PROJECT WATER
RESOURCES & SOILS
 WOTUS REPORT

GUADALUPE COUNTY, TEXAS



Date: 1/19/2022



Legend

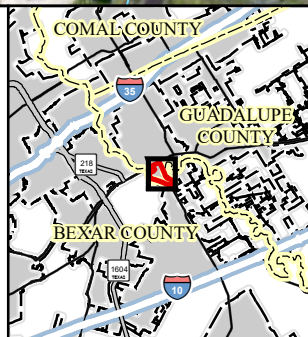
- Permit Boundary
- Survey Boundary
- NHD Stream
- Data Point

Wetland Type

- PEM Wetland
- PFO Wetland

Stream Type

- Ephemeral
- Intermittent
- Ditch
- Waterbody



BECK LANDFILL

**FIGURE 3:
WOTUS**

WOTUS REPORT

GUADALUPE COUNTY, TEXAS



Date: 1/19/2022

ATTACHMENT B PROJECT PHOTOGRAPHS



PHOTO 1 UPSTREAM VIEW OF A MAN-MADE DRAINAGE DITCH (ST001). ST001 WAS IDENTIFIED AS AN EPHEMERAL DRAINAGE DITCH FEATURE AND IS NOT LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES NORTHWEST.



PHOTO 2 DOWNSTREAM VIEW OF AN UNNAMED TRIBUTARY TO CIBOLO CREEK (ST002). ST002 WAS IDENTIFIED AS AN EPHEMERAL STREAM FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES NORTH.



PHOTO 3 UPSTREAM VIEW OF CIBOLO CREEK (ST003). ST003 WAS IDENTIFIED AS AN INTERMITTENT STREAM FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES SOUTHEAST.



PHOTO 4 DOWNSTREAM VIEW OF CIBOLO CREEK (ST003). ST003 WAS IDENTIFIED AS AN INTERMITTENT STREAM FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES EAST.



PHOTO 5 DOWNSTREAM VIEW OF AN UNNAMED TRIBUTARY TO CIBOLO CREEK (ST004). ST004 WAS IDENTIFIED AS AN EPHEMERAL STREAM FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES NORTH.



PHOTO 6 DOWNSTREAM VIEW OF AN UNNAMED TRIBUTARY TO CIBOLO CREEK (ST005). ST005 WAS IDENTIFIED AS AN EPHEMERAL STREAM FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH FACES SOUTH.



PHOTO 7 VIEW OF AN EMERGENT, IN-STREAM WETLAND WITHIN THE MAIN CHANNEL OF CIBOLO CREEK (WET001). WET001 WAS IDENTIFIED AS AN EMERGENT WETLAND FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING NORTH.



PHOTO 8 VIEW OF AN EMERGENT, RIPARIAN WETLAND ADJACENT TO CIBOLO CREEK (WET002). WET002 WAS IDENTIFIED AS AN EMERGENT WETLAND FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING SOUTH.



PHOTO 9 VIEW OF A FORESTED, RIPARIAN WETLAND ADJACENT TO CIBOLO CREEK (WET003). WET003 WAS IDENTIFIED AS AN EMERGENT WETLAND FEATURE AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING NORTH.



PHOTO 10 VIEW OF A MAN-MADE, RETENTION POND (WB001). WB001 WAS IDENTIFIED AS A MAN-MADE RETENTION POND EXCAVATED IN UPLANDS AND IS NOT LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING EAST.



PHOTO 11 VIEW OF A MAN-MADE, RETENTION POND (WB002). WB002 WAS IDENTIFIED AS A MAN-MADE RETENTION POND EXCAVATED IN UPLANDS AND IS NOT LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING SOUTHEAST.



PHOTO 12 VIEW OF A MAN-MADE, RETENTION POND (WB003). WB003 WAS IDENTIFIED AS A MAN-MADE RETENTION POND EXCAVATED IN UPLANDS AND IS NOT LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING SOUTHEAST.



PHOTO 13 VIEW OF A NATURALLY OCCURRING POND (WB004). WB004 WAS IDENTIFIED AS A NATURALLY OCCURRING POND ASSOCIATED WITH CIBOLO CREEK AND IS LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING NORTHEAST.



PHOTO 14 VIEW OF A MAN-MADE, RETENTION POND (WB005). WB005 WAS IDENTIFIED AS A MAN-MADE RETENTION POND EXCAVATED IN UPLANDS AND IS NOT LIKELY TO BE CONSIDERED A POTENTIALLY JURISDICTIONAL WOTUS. PHOTOGRAPH IS FACING NORTHEAST.

ATTACHMENT M TEXAS HISTORICAL COMMISSION REVIEW (§330.61(O))

Historic Sites and Cultural Resources

On January 14, 2022, POWER performed a file review to identify cultural resources recorded within and near the Project Area. The file review included data from the online restricted-access Texas Historical Commission's Texas Archeological Sites Atlas and Texas Historic Sites Atlas (THC 2022a and 2022b); National Park Service databases (NPS 2022a and 2022b); and the Texas Department of Transportation's NRHP Listed and Eligible Bridges database (TxDOT 2022a) and Historic Districts and Properties of Texas database (TxDOT 2022b). No cultural resources are recorded within or adjacent to the Project. The nearest recorded cultural resources, archeological site 41BX565 and the Rittiman Addition Cemetery are 435 feet and 135 feet, respectively, from the Project boundary.

Due to the lack of cultural resources recorded within the Project, POWER concludes the Project will have no effect on known cultural resources. However, the Project has not undergone a cultural resources survey. A survey may be required if Project permitting requires compliance with Section 106 of the National Historic Preservation Act or the Texas Antiquities Code. If cultural resources are encountered during construction of the Project, all activities at the location should be halted until the Texas Historical Commission is notified and an appropriate course of action is determined. See **Attachment M** to this Part for the full report.

From: [Duke, Emily](#)
To: [Morelli, Julie](#); [Comeaux, Jude](#)
Cc: [Schubert, Darren](#)
Subject: Beck Companies Landfill Project THC Response
Date: Tuesday, December 6, 2022 3:24:52 PM

Hello everyone,

Please see the response below from the Texas Historical Commission in regards to the Beck Companies Landfill Project.

Thank you,

EMILY L. DUKE, MA, RPA (She/Her)
CULTURAL RESOURCE SPECIALIST I
PRINCIPAL INVESTIGATOR

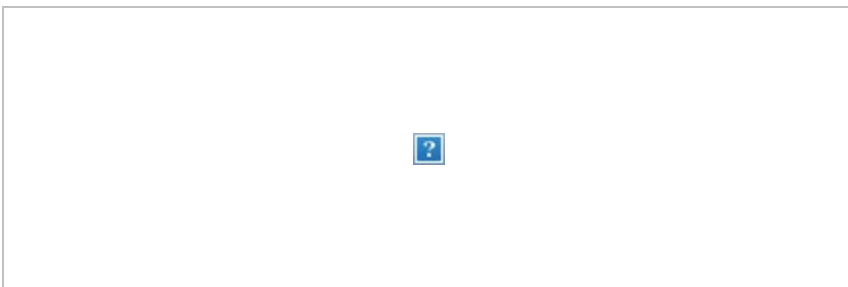
281-765-5527
281-917-1965 work cell
270-991-5300 cell

POWER ENGINEERS INC.



From: noreply@thc.state.tx.us <noreply@thc.state.tx.us>
Sent: Tuesday, December 6, 2022 9:46 AM
To: Duke, Emily <emily.duke@powereng.com>; reviews@thc.state.tx.us
Subject: [EXTERNAL] Section 106 Submission

CAUTION: This Email is from an **EXTERNAL** source. **STOP. THINK** before you CLICK links or OPEN attachments.



Re:
THC Tracking #202302374
Date: 12/06/2022
Beck Companies Landfill Project

550 John E. Peterson Boulevard
Schertz, TX 78154

Description: Beck is proposing an amendment to its existing permit to expand the landfill vertically. No horizontal expansion of the previously permitted boundary is proposed.

Dear Emily Duke:

Thank you for your submittal regarding the above-referenced project.

The review staff, led by Jeff Durst and Caitlin Brashear, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- No further review of potential effects to above-ground historic resources is required under the Antiquities Code of Texas. However, should this project ultimately include any federal involvement, additional consultation with THC/SHPO under Section 106 of the National Historic Preservation Act will be required.

Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: Jeff.Durst@thc.texas.gov, caitlin.brashear@thc.texas.gov.

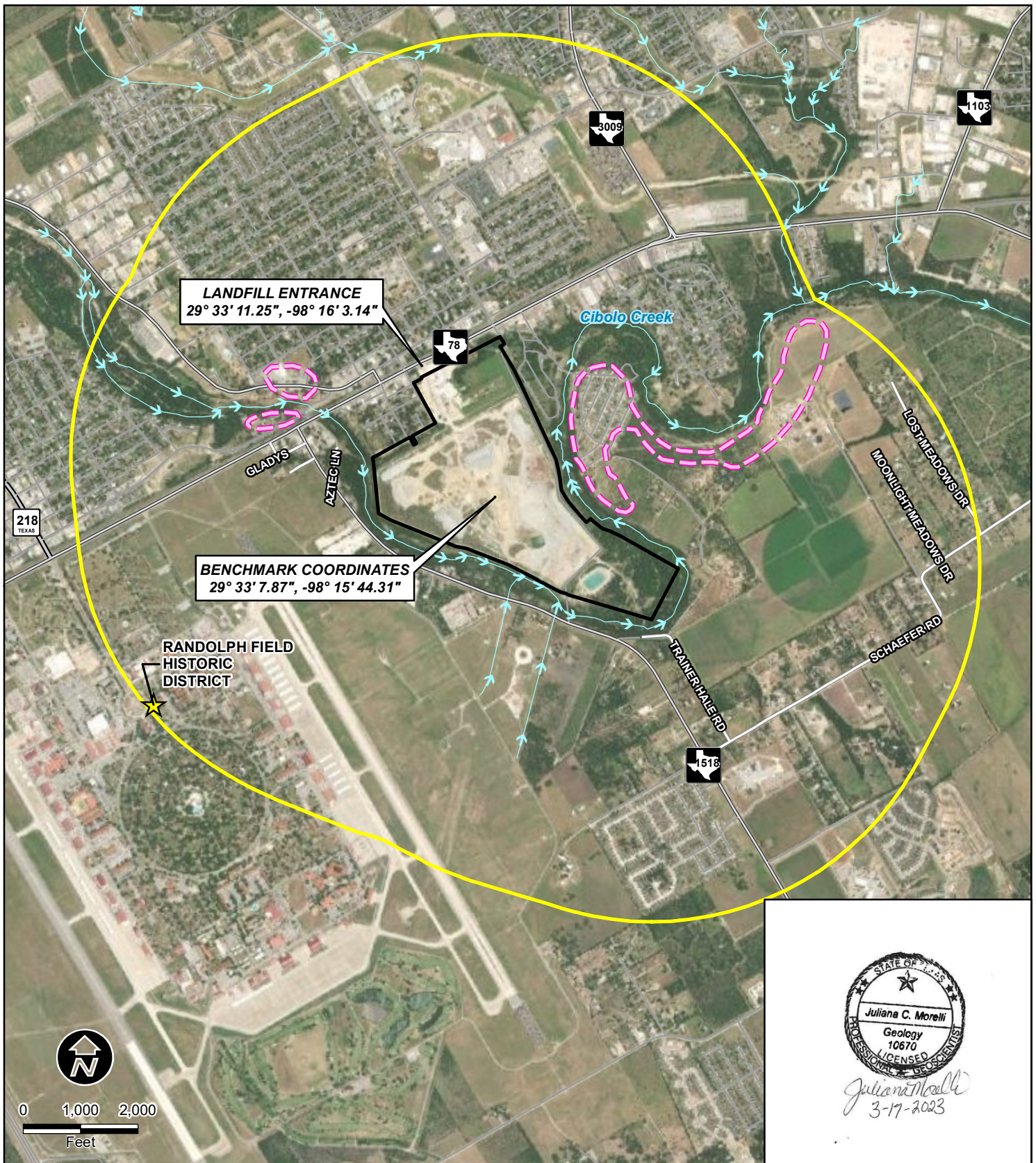
This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit <http://thc.texas.gov/etrac-system> [thc.texas.gov].

Sincerely,



for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.



Legend

- Permit Boundary
- National Register of Historical Places
- Existing Archeological Site
- Stream
- 1-Mile Radius



**NIDO, LTD
BECK LANDFILL
FIGURE 2-7:
CULTURAL RESOURCES**

SCHERTZ, GUADALUPE
COUNTY, TEXAS



Date: 3/9/2023
Rev. 0

ATTACHMENT N COUNCIL OF GOVERNMENTS AND LOCAL GOVERNMENT REVIEW (§330.61(P))

Alamo Area Council of Governments (AACOG)

Parts I and II of this application were submitted to AACOG on September 12, 2022. A review letter was requested as part of the submission. A response has not been received as of the submittal of this application. Records of correspondence with AACOG are included in **Attachment N** of this application.

City of Schertz Approval Letter

Parts I and II of this application were submitted to the City of Schertz on September 12, 2022. A review letter was requested as part of the submission. A response has not been received as of the submittal of this application. Records of correspondence with the City of Schertz are included in **Attachment N** of this application.

Cibolo Creek Municipal Authority (CCMA)

Parts I and II of this application were submitted to the CCMA on September 12, 2022. A review letter was requested as part of the submission. A response has not been received as of the submittal of this application. Records of correspondence with the CCMA are included in **Attachment N** of this application.

Schertz Fire Department Letter

Parts I and II of this application were submitted to the Schertz Fire Department on September 12, 2022. A review letter was requested as part of the submission. A response has not been received as of the submittal of this application. Records of correspondence with the Schertz Fire Department are included in **Attachment N** of this application.

Attachment M

Texas Historical Commission Review (§330.61(o))

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Attachment N Council of Governments and Local Government Review (§330.61(p))

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