130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW ____

TYPE I PERMIT APPLICATION

PART II
EXISTING CONDITIONS AND
CHARACTER OF THE FACILITY AND SURROUNDING AREA

Prepared for

130 ENVIRONMENTAL PARK, LLC

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Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

For Sections 8.1, 10.1, 10.2, 10.3, 10.4, 10.5, 11.1, 11.2, 12.1, 12.2.

For Section 10.6.

1 EXISTING CONDITIONS SUMMARY

30 TAC §330.61(a)

The 130 Environmental Park includes a proposed Type I municipal solid waste facility located in northern Caldwell County east of State Highway 130 (SH130). The 130 Environmental Park site entrance is approximately 1,500 feet north of the intersection of US Highway 183 (US183) and Farm to Market Road 1185 (FM1185), on the east side of SH130. US183 serves as the frontage road for SH130 in the general vicinity of the facility. The proposed facility is intended to provide waste disposal for residences and businesses in Caldwell County and surrounding Texas counties. The nearest community is the City of Lockhart, the city limit of which is more than two miles south of the proposed facility. The proposed facility location is outside the City of Lockhart city limits and outside its extraterritorial jurisdiction.

The proposed 130 Environmental Park facility boundary will encompass about 520 acres out of the approximately 1,229-acre property boundary. The landfill facility will be accessed from US183 through an entrance road. A gatehouse and scales will be provided within the facility boundary. Additional facilities will include a maintenance area, citizen convenience center, reusable materials staging area, and a truck wheel wash.

The overall property consists of gently undulating grasslands with limited forest cover. The property generally slopes to the south. The major topographic feature of the property is the Soil Conservation Service Site 21 Resevoir on Dry Creek, which traverses the property in a northeast to southwest direction, entering Plum Creek approximately five miles south of the property. Plum Creek eventually flows in a southeast direction, entering the San Marcos River about 23 miles downstream from the property. The facility boundary is located in the northern portion of the property, northwest of Dry Creek. Portions of the facility boundary along Dry Creek and unnamed tributaries are located within the limits of the 100-year floodplain; however, the entirety of the landfill footprint, processing and/or storage units, and entrance facilities will be located outside of the 100-year floodplain.

The property has been historically used as ranchland dating back at least to the mid-1930s. No waste disposal activities have occurred on the site and no permitting or construction permit approvals have been applied for or received.

1.1 Easements and Buffer Zones

No solid waste unloading, storage, disposal, and processing operations will occur within any easement, buffer zone, or right-of-way that crosses the site. The proposed 130 Environmental Park is consistent with the provisions of §330.543.

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, unless otherwise authorized by the executive director. All pipeline and utility easements shall be clearly marked with posts

that extend at least six feet above ground level, spaced at intervals no greater than 300 feet. There are no pipeline or utility easements that will affect solid waste unloading, storage, disposal or processing operations: refer to Appendix IIA, Drawing IIA.12 – Facility Site Plan.

The buffer zone distances between the facility boundary and landfill footprint exceeds the minimum distance of 125 feet. Buffer zone distances vary along the facility boundary. The buffer distances from the facility boundary to the landfill footprint are shown on Drawing IIA.12 – Facility Site Plan.

The buffer zone distance for waste storage or processing operational activities exceeds the minimum distance of 125 feet. Buffer zone distances vary to each storage or processing facility. The buffer distances from the facility boundary to these facilities are shown on Drawing IIA.12 – Facility Site Plan.

Refer to Appendix IIK – Location Restriction Certifications for the certification statement that 130 Environmental Park meets the requirements of §330.543.

1.2 Site Specific Conditions

A detailed discussion of site-specific conditions that potentially require special design considerations as set forth in §330.61(a), including impact on surrounding area, transportation, geology, soils, groundwater, surface water, abandoned oil and water wells, floodplains, wetlands, endangered or threatened species, and Texas Historical Commission review is included in Sections 8 through 15 of Part II. As documented, there are no existing site-specific conditions that require special design considerations or possible mitigation of conditions.

2 WASTE ACCEPTANCE PLAN

30 TAC §330.61(b)

2.1 Properties and Characteristics of Waste

The major classifications of solid waste to be accepted at 130 Environmental Park include municipal solid waste, special waste, and Class 2 and 3 industrial wastes as defined by §330.3. Special wastes accepted at the facility authorized by §330.171(c) include regulated asbestos-containing materials (RACM), nonregulated asbestos-containing materials (non-RACM), and empty containers. In addition, other special wastes may be accepted based on a waste-specific approval as authorized by §330.171(b) and the facility.

130 Environmental Park will not accept medical waste, sewage, dead animals and/or slaughterhouse waste, sludge, grease trap waste, grit trap waste, liquid waste from municipal sources, municipal hazardous waste from conditionally exempt small quantity generators, or out-of-state wastes. The facility will not accept Class 1 industrial solid wastes, except for wastes that are Class 1 only because of asbestos content. The waste classifications are defined in §330.3.

Consistent with §330.15, the facility will not accept for disposal lead acid storage batteries; used motor vehicle oil; used oil filters; whole used or scrap tires; refrigerators, freezers, air conditioners or other items containing chlorinated fluorocarbons (CFC); bulk or noncontainerized liquid waste from nonhousehold sources; regulated hazardous waste; polychlorinated biphenyls (PCB) waste; radioactive materials; or other wastes prohibited by TCEQ regulations.

The facility will not accept Class 1 industrial solid waste, except RACM that has been designated Class 1 industrial waste only because of its asbestos content. There are no existing or proposed Class 1 cells or disposal areas at the facility. Therefore, the facility is consistent with the provisions of §330.561; and the facility is not located within a coastal area as defined in 30 TAC §335.584 (b) (3) and (4). Refer to Appendix IIK for the location restriction statement and certification.

2.2 Volume and Rate of Disposal

130 Environmental Park will serve individuals, businesses, and communities in Caldwell County and surrounding Texas counties. 130 Environmental Park, LLC anticipates that in Year 1 the landfill will receive approximately 429,000 tons of incoming waste (approximately 1,500 tons per day). The waste acceptance rate will vary over the life of the facility depending on market conditions.

The estimated maximum annual waste acceptance rate for 130 Environmental Park projected for five years is as follows:

Year	Estimated Maximum Annual Waste Acceptance Rate
1	429,000 tons
2	435,778 tons
3	442,663 tons
4	449,658 tons
5	456,762 tons

As population and economic conditions and available landfill disposal capacity change within the region, the volume of incoming waste will vary. 130 Environmental Park, LLC will maintain records to document the annual waste acceptance rate for the facility. If the rate exceeds the estimated rate and is not due to a temporary occurrence, 130 Environmental Park, LLC will file a permit modification application consistent with §330.125(h). The modification would propose any needed changes in the site operating plan to properly manage the increased waste acceptance rate, if any. As provided by §330.125(h), the estimated waste acceptance rate is not a limiting parameter of the permit.

The TCEQ defines population equivalent as "the hypothetical population that would generate an amount of solid waste equivalent to that actually being managed based on a generation rate of five pounds per capita per day and applied to situations involving solid waste not necessarily generated by individuals." Based on this definition, the approximate current and projected population equivalents of the areas capable of being served were calculated as follows:

$$\text{Current Annual Average} = 1{,}500 \text{ tons/day} \times \frac{5.5 \text{ days}}{\text{week}} \times \frac{52 \text{ weeks}}{\text{year}} = 429{,}000 \text{ tons/year}$$

Population Equivalent:	Year 1	Year 20	Year 50
	= 429,000 tons/year	= 577,848 tons/year	= 924,825 tons/year
	÷ 365 days/year	÷ 365 days/year	÷ 365 days/year
	x 2,000 lb/ton	x 2,000 lb/ton	x 2,000 lb/ton
	÷ 5 lb/person/day	÷ 5 lb/person/day	÷ 5 lb/person/day
	= 470,137 persons	= 633,258 persons	= 1,013,507 persons

3 GENERAL LOCATION MAPS

30 TAC §330.61(c)

Consistent with §330.61(c), the general location maps are provided in Appendix IIA – Maps and Drawings. These general location maps are provided in addition to the maps included in Part I, Appendix IA – General Location Maps. These maps, collectively as a group, accurately show the proximity of the facility to surrounding features and specifically show the items identified in §330.61(c)(1)-(12). Refer to Appendix IIA, Drawing IIA.1 through Drawing IIA.11 for the general location maps.

4 FACILITY LAYOUT MAPS

30 TAC §330.61(d)

Consistent with §330.61(d), the facility layout maps are provided in Appendix IIA – Maps and Drawings. These facility layout maps, collectively as a group, specifically show the items identified in §330.61(d)(1)-(9). Refer to Appendix IIA, Drawing IIA.12 through Drawing IIA.14 for the facility layout maps.

5 GENERAL TOPOGRAPHIC MAP

30 TAC §330.61(e)

The United States Geological Survey (USGS) General Topographic Map is included in Appendix IIA – Maps and Drawings as Drawing IIA.2 – General Topographic Map. The topographic map consists of the 7.5 minute quadrangle sheets for Lockhart North and Dale, Texas. Drawing IIA.2 is at a scale of one inch equals 2,000 feet as required by §330.61(e).

6 AERIAL PHOTOGRAPH

30 TAC §330.61(f)

Consistent with §330.61(f), the aerial photograph of the site and surrounding area is presented in Appendix IIA as Drawing IIA.7 – Aerial Photograph. This aerial photograph represents property conditions as flown May 13, 2013 and surrounding conditions provided via Google Map imagery dated August 1, 2012. The aerial photograph shows the area within at least a one-mile radius of the facility boundary. In addition, the facility boundary and landfill footprint are shown.

7 LAND USE MAP

30 TAC §330.61(g)

Consistent with §330.61(g), a land use map is included in Appendix IIB – Land Use Analysis as Figure LU-2 – Land Use – 1 Mile. This land use map has been prepared based on the land use analysis conducted by John Worrall Consulting LLC. The land use features identified and depicted on this drawing as required by §330.61(g) include the facility boundary and existing uses such as agricultural, industrial, and residential uses within one mile of the facility boundary. Locations of residences, commercial establishments, schools, licensed day care facilities, churches, cemeteries, ponds or lakes, and recreational areas within one mile of the facility boundary are shown. Refer to Drawing IIA.8 for drainage, pipeline, and utility easements within the facility boundary.

8 IMPACT ON SURROUNDING AREA

30 TAC §330.61(h)

Consistent with §330.61(h), a land use analysis of the area surrounding the facility was conducted by John Worrall Consulting LLC. Refer to Appendix IIB – Land Use Analysis for a detailed land use analysis and discussion regarding impacts of the facility. The land use analysis addresses zoning within two miles of the facility, character of surrounding land uses within one mile of the facility, growth trends within five miles of the facility, proximity to residences and other uses within one mile of the facility.

8.1 Wells Within 500 Feet

Consistent with §330.61(h)(5), a description of known wells within 500 feet of the facility has been prepared. A water well search was conducted to identify known water wells within a 500-foot radius of the proposed facility boundary.

The water well search included a review of the interactive map and well records available on the Texas Water Development Board (TWDB) website *www.twdb.state.tx.us* in the Water Information Integration and Dissemination (WIID) ArcIMS mapping application. The Texas Commission on Environmental Quality (TCEQ) website *www.tceq.state.tx.us* and the Plum Creek Conservation District website www.pccd.org were also reviewed for water well records. The U.S. Geological Society database (URL: *maps.waterdata.usgs.gov/mapper/*) was checked for groundwater sites on which it collects data that might be in the vicinity but no additional wells were found. The TCEQ Water Utility Database (*www.tceq.state.tx.us/permitting/-water_supply/ud-/iwud.html*) was also consulted to determine if there were any public water utility wells in the area.

An attempt was also made to locate wells visible from nearby roads and streets and confirm water well locations. Within the 500-foot radius, no obvious water well production equipment, such as well houses, pump handles, windmills, or pressure tanks were identified from the street. However, any residence in this area may have a water well associated with it, especially where no public water supply is available.

An oil and gas well search of state records was conducted in June 2013 to identify any oil and gas wells on the site and within 500 feet of the facility boundary. The search included a review of records and maps on file at the Texas Railroad Commission (www.rrc.state.tx.us). Consistent with §330.61(h)(5) three dry holes have been drilled within 500 feet of the facility boundary. Of those, one is within the facility boundary but outside the footprint. There are no producing oil or gas wells located within 500 feet of the facility boundary, as shown on Drawing IIA.5 – Locations of Oil and Gas Producing Wells. If any abandoned crude oil or natural gas wells or other wells associated with mineral recovery are located during facility development they will be handled as described in Section 12.2 – Oil & Gas wells of this narrative.

9 TRANSPORTATION

30 TAC §330.61(i)

9.1 Traffic and Roadways

Consistent with §330.61(i)(1)-(4), a transportation study prepared by Lee Engineering is included as Appendix IIC – Transportation Study. The transportation study provides information on the availability and adequacy of access roads, provides data on the existing and expected vehicular traffic on access roads within one mile of the facility during the expected site life of the facility, and projects the volume of traffic expected to be generated by the facility on the access roads within one mile of the facility. Documentation of coordination with the Texas Department of Transportation (TxDOT), is also included in Appendix IIC.

9.2 Airport Impact

Consistent with §330.61(i)(5), an evaluation of the facility impact on surrounding airports was conducted in accordance with §330.545. Refer to Appendix IIA – Maps and Drawings, Drawing IIA.6 – FAA Airport Location Map for the location of the facility in relationship to area airports. The airport map uses the FAA Sectional Aeronautical Chart, San Antonio, 91st Edition, dated May 2, 2013 as the base drawing. The map depicts the location of the facility, a 5,000-foot radius, a 10,000-foot radius, and a six-mile radius from the facility facility boundary. As depicted on Drawing IIA.6, there is no existing or planned public-use airport located within a six-mile radius.

Refer to Appendix IIH – Federal Aviation Administration Documentation for documentation of coordination with FAA regarding location of the facility in relation to airports in the designated areas as required by §330.61(i) and §330.545. Refer to Appendix IIK for the airport safety location restrictions statement and certification.

10 GENERAL GEOLOGY AND SOILS STATEMENT

30 TAC §330.61(j)

Consistent with §330.61(j)(1)-(4), a general discussion of the geology and soils of the site has been prepared.

10.1 General Geology

The project site is located in the regional physiographic subdivision known as the Blackland Prairie. This north-south trending belt is underlain by Paleocene/Eocene age deposits of Midway and Wilcox Groups and Cretaceous age sediments of Navarro Group and Eagle Ford Group. These formations consist primarily of fine-grained materials deposited in ancient oceans. In addition, according to the Geologic Atlas of Texas (1972), the Leona Formation, a Quaternary fluviatile terrace deposit, is present at the surface in a narrow deposit trending northwest to southeast along the Plum Creek Valley beginning in the northwest portion of the county to the central portion of the county. Topography of the Blackland Prairie is typically flat to rolling and has a gentle slope to the southeast. The Blackland Prairie is poorly drained with sparse timber (Nordstrom, 1982).

The nearest surface water body in the area, Soil Conservation Service Reservoir 21, is located several hundred feet south of the site.

Regional Stratigraphy and Lithology

Formations of the Cretaceous System were deposited by northward advancing seas over extensively eroded Paleozoic strata. The Gulf Series of the Cretaceous System represent one of the major Cretaceous sea advancements. The project site is underlain by strata deposited during the late Cretaceous Gulf and the Paleocene/Eocene Series. The Eocene Series were deposited once marine deposition ceased after a general uplift to the west resulted in regression of the seas gulfward. Subsequent erosion of the Cretaceous deposits continued through the Cenozoic Era to the present.

Regional stratigraphy includes geologic units of the Cretaceous Gulf Series Narravo Group, the Paleocene Midway and Eocene Wilcox Group and Quaternary deposits of the Leona Formation. The site is located on the outcrops of Midway, Wilcox, and Leona. Dry Creek is the primary contact between the Midway and the Wilcox. The Midway outcrop is west of Dry Creek, while the Wilcox outcrop is east of Dry Creek. Deposits of the Leona Formation overlay portions of the Midway on the site.

Regional cross sections indicate that the geologic formations form a southeastward thickening wedge extending into the Rio Grande Embayment structural feature.

General Regional Stratagraphic Column

System	Series	Group	Formation	Maximum Thickness (ft)
Quaternary	Pleistocene	Leona Formation		40
Tertiary	Eocene	Queen City Sand		500
		Reklaw Formation		400
		Carrizo Sand		400
		Wilcox Group		2,000
	Paleocene	Midway Group		600
Cretaceous	Gulf	Navarro Group		600
		Taylor Marl, Austin Chalk and Eagle Ford Shale, undifferentiated.		1,200

Source: Follett, 1966.
Barnes, 1974.

10.2 Site Stratigraphy

The facility is located on the outcrops of the Midway, Wilcox and Leona formations as shown on Drawing IIA.9.

Leona Formation – The Leona Formation is present at the surface in a narrow deposit trending northwest to southeast along the Plum Creek Valley. An additional discontinuous deposit of the Leona is found at this site. The Leona Formation consists of stratified gravel and sand, partly cross bedded with discontinuous lenses of caliche (Hemphill, 2005). The gravel is primarily composed of limestone pebbles but contains minor amounts of chert. Water-worn shells of the Fredericksburg Group are the only fossils found in the formation. The Leona Formation thickness ranges from a few feet at its margins to more than 40 feet in the center of the plain. At the site the Leona occurs as a veneer of primarily clayey materials overlying the Midway and Wilcox formations. The Leona Formation yields groundwater to wells in the area and is discussed in Section 11.2.

Wilcox Group – The Wilcox Group was formed by a series of merged deltas. The lower portion contains sandy micaceous shale. The formation then thickens upward into more sandy units of laminated sand or clay and beds of cross stratified sand. Within the formation, some sandy units are unconsolidated in places while in other places the formations are cemented. In the vicinity of the site, the Midway thickness varies from 50 feet to 400 feet, approximately. Individual sand beds of the Wilcox can be up to 100 feet thick and the outcrop is located east of the site and Dry Creek. The Wilcox yields small to large amounts of water to wells and is discussed in Section 11.2.

Midway Group – The Midway Group is a massive gray clay that contains beds of limy concretions with basal glauconitic sand (Rasmussen, 1947). At the site, the Midway Group reaches a thickness of approximately 400 to 450 feet in the vicinity of the facility

and it outcrops on the west side of the site and Dry Creek. The Midway is not known to produce water to wells in the area.

Navarro Group – The Navarro Group lies under the Wilcox Group and is primarily composed of clay and silt with some lenses of bluish sandstone. This formation has a maximum thickness of 600 feet in Caldwell County and is approximately 600 feet deep at the site.

10.3 General Soils

On-site soils are composed primarily of clay. Shallow silty clays grade into dense clay with depth. These materials correspond to the materials which make up the Eocene Midway/Wilcox formations.

10.4 Fault Areas

Consistent with §330.61(j)(2) and §330.555, a fault areas evaluation was prepared as part of this application to demonstrate that the 130 Environmental Park site meets the location restriction for fault areas.

The property on which the 130 Environmental Park site is located was examined for the presence of faulting according to §330.555 criteria. A fault study was conducted that included reviewing aerial photographs for the site, reviewing available geologic literature and maps of the area, conducting site reconnaissance, and examining the subsurface boring data from the site.

The site and the immediate area were investigated for:

- Structural damage to constructed facilities (roadways, railways, and buildings).
- Scarps in natural ground.
- Presence of surface depressions (sag ponds and ponded water).

- Presence of lineations on aerial maps and topographic sheets. The following historical aerial photographs were reviewed:

8/1/2012
10/17/2011
3/9/2011
11/24/2009
10/30/2008
2/28/2008
4/29/2006
10/21/2005
8/12/2003
12/30/2002
12/30/1997
1/27/1995

- Structural control of natural streams.
- Vegetation changes.
- Crude oil and natural gas accumulations.
- References to published geological literature pertaining to area conditions.

A site walkover was conducted by an experienced licensed professional geoscientist and site reconnaissance was conducted by a licensed professional engineer familiar with the faulting and solid waste disposal facilities to identify possible physical evidence caused by faulting. No unusual scarps or topographic breaks were interpreted within 200 feet of the site. No evidence of faulting was found associated with formation outcrops; no evidence of faulting was found by examination of area roadways; no structural influence of stream courses was found; and no unusual relief or topographic features (such as sag ponds or truncated alluvial spurs) were observed on the site. No evidence of structural damage to buildings on the property was identified.

In summary, no fault scarps were observed at the surface within 200 feet of the site and there was no evidence of vertical subsidence on any outcrops of geologic materials. No vertical displacement or stratigraphic offset indicative of faults was observed in outcrops. There is no known active faulting within 1/2 mile of the site in Holocene time; therefore, the site complies with §330.555.

Many faults are located in the area and are related to the Balcones Fault Zone and Mexia-Luling Talco Fault Zone. The Balcones Fault Zone faults last moved during the Miocene Epoch (Garner and Young, 1976; Jordan, 1977; and Grimshaw and Woodruff, 2005), while movement along the Mexia-Luling Talco Fault Zone occurred in the Eocene Epoch (Jackson, 1982; Culotta et al, 1992; Sellards & Baker, 1934; and Weeks, 1945). Consistent with §330.555(a), the faults located in the area of the facility are documented to have last moved 45 to 100 million years ago. Also, the mapped faults in the area are

located greater than 200 feet from the waste footprint. Refer to Appendix IIK for location restrictions statement and certification.

10.5 Seismic Impact Zones

Consistent with §330.61(j)(3) and §330.557, seismic impact zones documentation was prepared as part of this application to demonstrate that the 130 Environmental Park site meets the location restriction for seismic impact zones.

TCEQ regulations state that no new MSWLF units or lateral expansions shall be located in seismic impact zones unless the owner or operator demonstrates 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.

The seismic impact zone as defined by §330.557 is an area with a 10 percent or greater probability that the maximum horizontal acceleration in lithified earthen material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years. Appendix IIA, Drawing IIA.10 shows the site location on the seismic impact zone map for Texas. The proposed 130 Environmental Park is not located within a seismic impact zone. Refer to Appendix IIK, for location restrictions statement and certification.

10.6 Unstable Areas

Consistent with §330.61(j)(4) and §330.559, unstable areas documentation was prepared as part of this application to demonstrate that the 130 Environmental Park site meets the location restriction for unstable areas.

An unstable area is defined by the TCEQ as a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill's structural components responsible for preventing releases from a landfill. An unstable area can exhibit poor foundation conditions, areas susceptible to mass movement, and karst terrains.

The determination of potential unstable areas at the landfill site is based on site observations and a review of existing documentation for the site by a licensed professional engineer. Based on this review, the foundation conditions and the local geologic and geomorphic formations are stable. In addition, there is no evidence to suspect mass movement of natural formations of earthen material on or in the vicinity of this site. No foundation problems exist at the site. The proposed landfill components were evaluated with respect to differential settlement, heave and slope stability. Based on the results of these analyses, the existing and proposed human-made features have been predicted to have adequate factors of safety with respect to stability.

Based on site observations, a review of existing geological data, and geotechnical analysis of the structural components of the landfill development, the site is not located in an unstable area and the integrity of the landfill is not expected to become impaired by

natural, surface, or subsurface human-made features or events. Refer to Appendix IIK for location restrictions statement and certification.

11 GROUNDWATER AND SURFACE WATER

30 TAC §330.61(k)

11.1 Groundwater

Consistent with §330.61(k)(1) and 330.549, a discussion of groundwater conditions at or near the facility has been prepared. The proposed groundwater monitoring well system is shown on Drawing IIA.14 – Groundwater and Landfill Gas Monitoring Plan. Refer to Appendix IIK for location restrictions statement and certification.

11.2 Regional Aquifers

Regional Tertiary and Quaternary aquifers that supply groundwater to wells in Caldwell County are the Wilcox and the Leona formations, respectively. There are no water wells on site as the Midway and Leona formations consist primarily of clayey materials.

11.2.1 Leona Formation

The Leona Formation crops out at the site and in a narrow plain in the center of Caldwell County. In Caldwell County, the Leona Formation thickness ranges from a few feet at its margins to more than 40 feet in the center of the plain. At the site the Leona occurs as a veneer of primarily clayey materials overlying the Midway and Wilcox formations. The Leona yields small to moderate amounts of groundwater to domestic wells in the primary deposits that occur along Plum Creek near Lockhart. In the past, the groundwater from the Leona has been used for domestic use, watering livestock, irrigation, and public supply. However, today public water supply is from the Wilcox, and the Leona Aquifer is only used in emergencies. The Leona has an average slope of 0.25 percent in the center of the plain deposit.

11.2.2 Wilcox Formation

The Wilcox Formation crops out east of Dry Creek on the east side of the site and in a northeast trending belt across Caldwell County. The Wilcox dips to the southeast at an average of about 150 feet per mile and increases in thickness in the direction of dip. Fresh to slightly saline water is found in the Wilcox at depths ranging from about 50 feet near the outcrop to about 2,800 feet near the southeast corner of the county. The Wilcox yields small to large quantities of water to many wells for domestic and stock purposes, public supply, and some irrigation.

11.3 Surface Water

Consistent with §330.61(k)(2), a discussion of surface water at and near the site has been developed.

130 Environmental Park is located in the San Marcos River Basin near the headwaters of Dry Creek. The major topographic and surface water feature of the property is the

130 Environmental Park is located in the San Marcos River Basin near the headwaters of Dry Creek. The major topographic and surface water feature of the property is the Soil Conservation Service Site 21 Reservoir (SCS21), located along Dry Creek. Dry Creek enters the property on the northeast property boundary and traverses the property in a northeast to southwest direction, along the east side of the facility entering SCS21, exiting the property along the south property boundary. Dry Creek generally flows in a north to south direction and enters Plum Creek about five miles south of the facility. Plum Creek flows in a southeast direction, eventually entering the San Marcos River about 23 miles downstream from the property.

The landfill footprint is west of Dry Creek situated between Dry Creek and an unnamed tributary of Dry Creek. The entrance facilities are located west of the unnamed tributary to Dry Creek. Surface topography generally slopes to the south toward Dry Creek or its unnamed tributaries and ultimately to SCS21. Surface water from the entrance facility area flows to the southeast and enters the unnamed tributary of Dry Creek, and then enters SCS21 south of the facility boundary. Surface water from the landfill footprint flows to the south entering either the unnamed tributary, Dry Creek, or SCS21.

Surface water drainage facilities will be designed and constructed as part of the development of the site. These improvements are associated with the landfill footprint and entrance facilities and include perimeter channels and detention ponds. All surface water from the landfill footprint is routed through the detention ponds before entering Dry Creek or its tributary. Surface water entering the facility boundary from the north is conveyed around the landfill footprint and exits the facility boundary on the south.

The surface water drainage design for 130 Environmental Park will address requirements for surface water runon and runoff and consists of drainage swales, downchutes, perimeter channels, detention ponds, outlet structures, and erosion and sediment controls.

11.4 Stormwater Permitting

The facility will be designed to prevent the discharge of pollutants into waters of the state of Texas or waters of the United States, as defined by the Texas Water Code and the federal Clean Water Act, respectively. 130 Environmental Park, LLC will submit a notice of intent (NOI) to comply with TPDES General Permit No. TXR050000 relating to stormwater discharge associated with industrial activity (Multi-Sector General Permit). Refer to Appendix IIG – TPDES Permit for the TPDES certification statement provided consistent with §330.61(k)(3).

12 ABANDONED OIL AND WATER WELLS

30 TAC §330.61(l)

12.1 Water Wells

As described in Section 8.1 of this narrative, there are no known abandoned water wells within the facility boundary of the 130 Environmental Park.

Should any unknown abandoned water wells be discovered during facility development, 130 Environmental Park, LLC will provide written notification to the TCEQ executive director of their location. A copy of the well plugging report for any found well will be submitted to the appropriate state agency and executive director within 30 days prior to construction.

12.2 Oil and Gas Wells

There are no known abandoned or currently producing crude oil or natural gas wells (see Drawing IIA.5) within the 130 Environmental Park facility boundary. There is one plugged dry hole location within the facility boundary but outside the waste footprint.

If any abandoned crude oil or natural gas wells or other wells associated with mineral recovery are located during site development, the landfill will provide the executive director of the TCEQ with written certification that all such wells have been properly capped, plugged, and closed in accordance with all applicable rules and regulations of the Railroad Commission of Texas. A copy of the well plugging report to be submitted to the appropriate state agency will also be submitted to the executive director of the TCEQ within 30 days after the well has been plugged. In accordance with 30 TAC §330.61(l)(2), any producing crude oil or natural gas well that does not affect or hamper landfill operations may be installed or remain in its current state if identified in the permit for the landfill.

13 FLOODPLAINS AND WETLANDS

30 TAC §330.61(m)

13.1 Floodplains

Consistent with §330.61(m)(1) and §330.547, an evaluation of the 100-year floodplain has been prepared for 130 Environmental Park. 130 Environmental Park's proposed waste disposal operations will be conducted outside the 100-year floodplain.

FEMA has defined the limits of the 100-year floodplain in the vicinity of the landfill as Zone A; no base flood elevations have been determined by FEMA. The limits of the floodplain are depicted on Drawing IIA.11 - Flood Insurance Rate Map (FIRM), which is the drawing compiled from the FIRM Community Panel Number 48055C0125E, with an effective date of June 19, 2012. Drawing IIA.11 includes the facility boundary and landfill footprint with the limit of the FEMA 100-year floodplain. This drawing demonstrates that the proposed waste disposal units will not be located within the limits of the 100-year floodplain.

In accordance with §330.547(a), 130 Environmental Park's waste disposal operations are not located in the 100-year floodway. In accordance with §330.547(b), 130 Environmental Park's new municipal solid waste disposal units are not located in the 100-year floodplain, will not restrict the flow of the 100-year flood, will not reduce the temporary water storage capacity of the floodplain, and will not result in the washout of solid waste. Further, in accordance with §330.547(c), 130 Environmental Park's processing and/or storage units are not located within the 100-year floodplain. Refer to Appendix IIK for location restrictions statement and certification.

13.2 Wetlands

30 TAC §330.61(m)(2) and (3) require identification and determination of wetlands within the proposed facility boundary. Appendix IID.1 ("Waters of the United States Delineation Report and Wetlands Determination and Identification") provides the results of an investigation that (a) delineates waters of the United States (areas subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the federal Clean Water Act, including "jurisdictional wetlands") and (b) provides a wetlands identification and determination for the 1,229 acre tract that includes the 520 acre proposed facility boundary area for the 130 Environmental Park. Based on the results of that investigation, Appendix IID.2 ("Summary of Wetlands Determination and Identification for 130 Environmental Park Facility Boundary Area") presents wetlands identification and determination for the proposed facility boundary area. As shown on Table IID.2-1 and Figure IID.2-1 in Appendix IID.2, there are approximately 1.46 acres of wetlands located within the facility boundary, 0.49 acre of which are jurisdictional wetlands; and there are approximately 0.68 acre of wetlands within the area proposed for the new municipal solid waste landfill unit (landfill footprint), none of which is jurisdictional wetlands. As required by 30 TAC §330.61(m)(2) and §330.553(a), Appendix IID-3 addresses, for these 0.68 acre wetlands areas, each of the wetlands demonstrations identified in 30 TAC §330.553(b)(1) - (5). Refer to Appendix IIK for the wetlands location restriction statement and certification.

14 ENDANGERED OR THREATENED SPECIES

30 TAC §330.61(n)

Consistent with §330.61(n) and §330.551, an evaluation of endangered or threatened species at the site has been conducted by Halff Associates and is documented in Appendix IIE – Endangered or Threatened Species Documentation.

Based on evaluation by Halff Associates, and coordination with the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department, in accordance with §330.551(a) and found in Appendix IIE – Endangered or Threatened Species Documentation, the facility and the operation of the facility will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, and will not cause or contribute to the taking of any endangered or threatened species. Refer to Appendix IIK for location restrictions statement and certification.

15 TEXAS HISTORICAL COMMISSION REVIEW

30 TAC §330.61(o)

A report of cultural resources evaluation of the 1,229-acre tract that includes the site has been submitted to the Texas Historical Commission. Because the proposed project will not be located on state or local public land and no state archaeological landmark is located within the site, the project is not subject to any requirement in Natural Resources Code, Chapter 191, Texas Antiquities Code.

A Cultural Resources Survey of the 130 Environmental Park has been prepared by AR Consultants, Inc. Refer to Appendix IIF – Cultural Resources Survey for a copy of the report. The report includes a map that shows the location of cemeteries, historic structures and sites, archaeologically significant sites, and sites having exceptional aesthetic qualities within one mile of the facility boundary, as required by §330.61(c)(12) and §330.61(h)(4).

16 COUNCIL OF GOVERNMENTS AND LOCAL GOVERNMENT REVIEW REQUEST

30 TAC §330.61(p)

Consistent with §330.61(p), Parts I and II of the application were submitted for review to the Capital Area Council of Governments (CAPCOG) to determine compliance with the regional solid waste plan. There is not an applicable local government solid waste plan and review process. Documentation of the coordination with the Capital Area Council of Governments is provided in Appendix III – Capital Area Council of Governments Documentation.