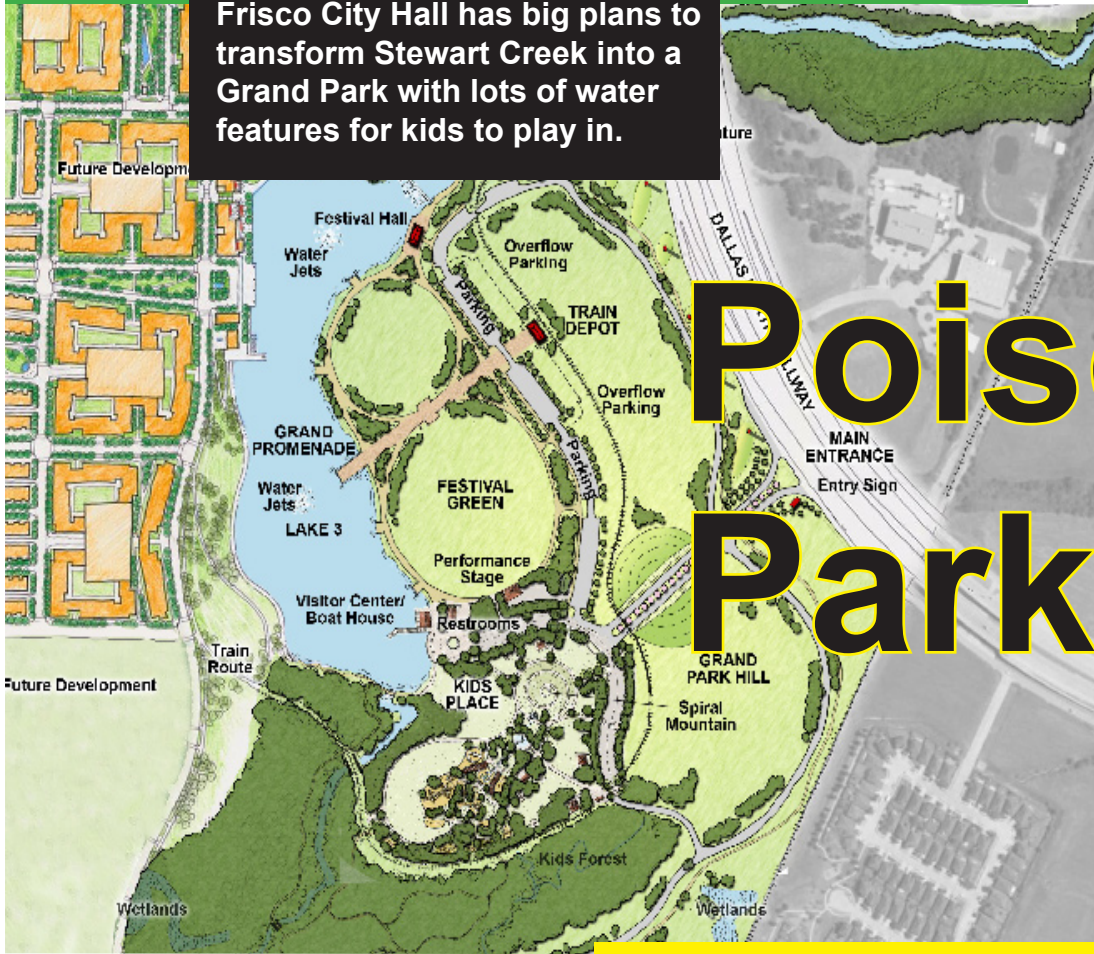


Frisco City Hall has big plans to transform Stewart Creek into a Grand Park with lots of water features for kids to play in.



Poisoned Park?

How Exide's Lead Contamination Risks Frisco's Grand Park

But the City's Grand Park is **DOWNSTREAM** of the Exide lead smelter site. The smelter's waste dumps actually extend into the creek's flood plain.



June 2013

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1. The Vision of Grand Park

a. Description

Grand Park is an ambitious \$23 million, 275 acre proposed regional park that would be the first of its kind in Frisco.



Much larger than any current park in Frisco, Grand Park would be located between Legacy Drive and the Dallas North Tollway and built within the natural valley surrounding Stewart Creek. It would also be directly downstream of the Exide lead smelter site.

Scheduled to be built in phases, plans are to eventually provide a variety of spaces for different events and activities with enough parking for up to 12,000 people.

Key features of the Park include a chain of large lakes fed by Stewart Creek, a giant children's playground, a boat house, piers, visitor center, and a large festival performing space.

According to Frisco city officials, the first phase of Grand Park development will include building “Kid’s Place,” a four to five acre playground with many topographical features like hills and a small artificial river and other water features fed by Stewart Creek.

Phase One will also include a large, multi-acre lake with a boat house and the visitors center.

b. Planning Process

Planning of Grand Park began in 2006, when the City of Frisco acquired the land with funds from that year’s bond election.

However, development of the park has accelerated in the last two years as an architect was chosen for the project and designs were discussed.

In October of 2012, city officials were quoted as saying that if everything goes according to plan, the first portion of Grand Park would be completed in about 18 to 24 months. After that, “plans for the continued expansion of the park would continue to be formulated based on the city’s needs.”

Two out of three “design meetings” between the public, the architects, and city officials at City Hall have been scheduled to decide the “finer details” of park structures and features. with the final one set for June 3rd, 2013.

To get started constructing the large park lake, the city must receive permission from the Army Corps of Engineers, which is still pending. It must also get approval from the City of Dallas because that city owns the water rights to Stewart Creek as a result of its flow into Lake Lewisville, used by Dallas as a drinking water source.

c. The Central Role Of Stewart Creek

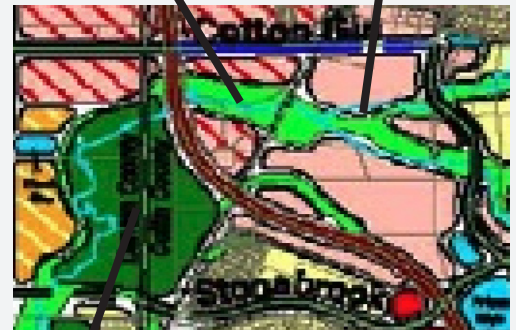
The reason there can be a large lake constructed in Grand Park is because the area is already a natural basin and flood plain for Stewart Creek.

2006 Frisco Comprehensive Plan:

What is the Future Land Use of the Exide Lead Smelter Site?

Proposed Stewart Creek Floodplain, Open Space

Exide lead smelter site



Grand Park

In the City of Frisco’s 2006 “Comprehensive Plan,” future land uses for the Exide lead smelter site were identified and listed as “Office,” “Mixed Use-Non-Residential, and ”Floodplain, Open Space” along the Stewart Creek corridor.

The “Open Spaces” designation following Stewart Creek adjoins and connects directly to the Creek’s entrance into the City’s proposed Grand Park.

All of the water features being discussed for Grand Park depend on the Creek's channel and flow. Without Stewart Creek, there could be no Grand Park as the City of Frisco has designed it.

Although only four miles long, the creek cuts a path east to west across Frisco on its way to Lake Lewisville, forming a natural valley, and is one of the most prominent sources of local topography.

This valley is what allows Frisco to build the Grand Park lake, similar to how every other lake in Texas has been constructed - by damming flow from a stream or river on one end and watching it back-up along the lips of the depression.

This valley is a pipeline for run-off from throughout the Creek's basin - including the Exide lead smelter site that sits at the bottom of it, immediately upstream of Grand Park's location.

2. The Reality of Grand Park's Location

a. The Exide Lead Smelter Site Sits in the Stewart Creek Flood Plain

Historically, toxic pollutant discharges, surface water runoff, and process wastewaters from the Exide lead smelter were discharged into Stewart Creek. Runoff from the site still flows into the creek.

Figure No. 1 below is a site location Map taken from Exide's Industrial and Hazardous Waste (RCRA) Storage/Processing/Disposal Facility Permit Renewal Application for the Frisco Battery Recycling Center ("Permit Renewal Application").

It shows the location of Stewart Creek and its tributaries in the vicinity of the proposed expansion of the permitted hazardous waste boundaries of the Exide plant. In particular, it shows the location of Exide's proposed hazardous waste permitted area in relation to Stewart Creek and its Northern tributary that flows to the southwest and joins Stewart Creek within the plant site. The proposed permitted area in Exide's Permit Renewal Application is basically the same as the area currently subject to Exide's hazardous waste permit, except that it includes additional land for the crystallization facility and a road to the Landfill that sits on the northern portion of the property.

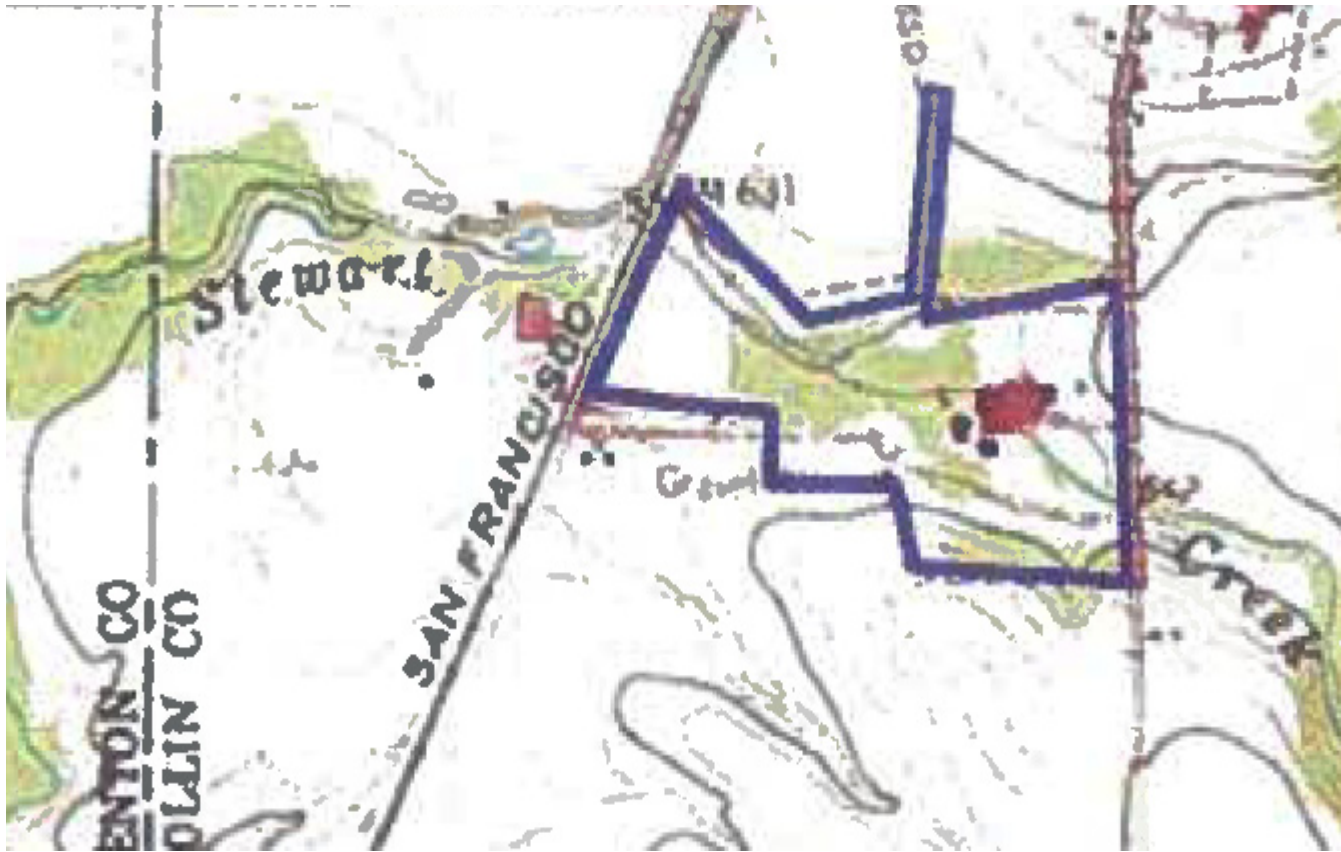


Figure 1. Location of Stewart Creek and Exide's Hazardous Waste Permitted Area (outlined)

Figure No. 2 is also taken from Exide's Permit Renewal Application. It shows Exide's waste management units in relation to the FEMA 100-year floodplain. It further shows that the vast majority of the Exide operations were within or very close to the 100-year floodplain.

Additionally, this map shows elevation contours, which indicate that, with the exception of the Landfill on the northern portion of the property and the South Disposal Area on the southern portion of the RCRA permitted area, Exide's operations were all located at the lowest elevation on the property. This evidence appears to suggest that storm water from the Landfill and the South Disposal Area would flow directly toward Stewart Creek and its tributary.

Exide claims in its RCRA Permit Renewal Application, that it constructed a ten-inch thick barrier wall as part of a 1987 Agreed Order on the north bank of Stewart Creek at a constant elevation of 637 feet and maintains that this "barrier wall will serve as sufficient protection in the event of a 100-year flood event." Exide explains that Stewart Creek is channelized near the main plant. Exide relies on an old (1976) study conducted by Lockwood Greene, Inc., in which Lockwood estimated that the wall would be 1.2 feet above the 100-year floodwater surface elevation after the creek was channelized. It is not clear whether the study was performed before or after the creek was channelized. There's no current information to indicate that Lockwood Greene's estimates remain accurate today.

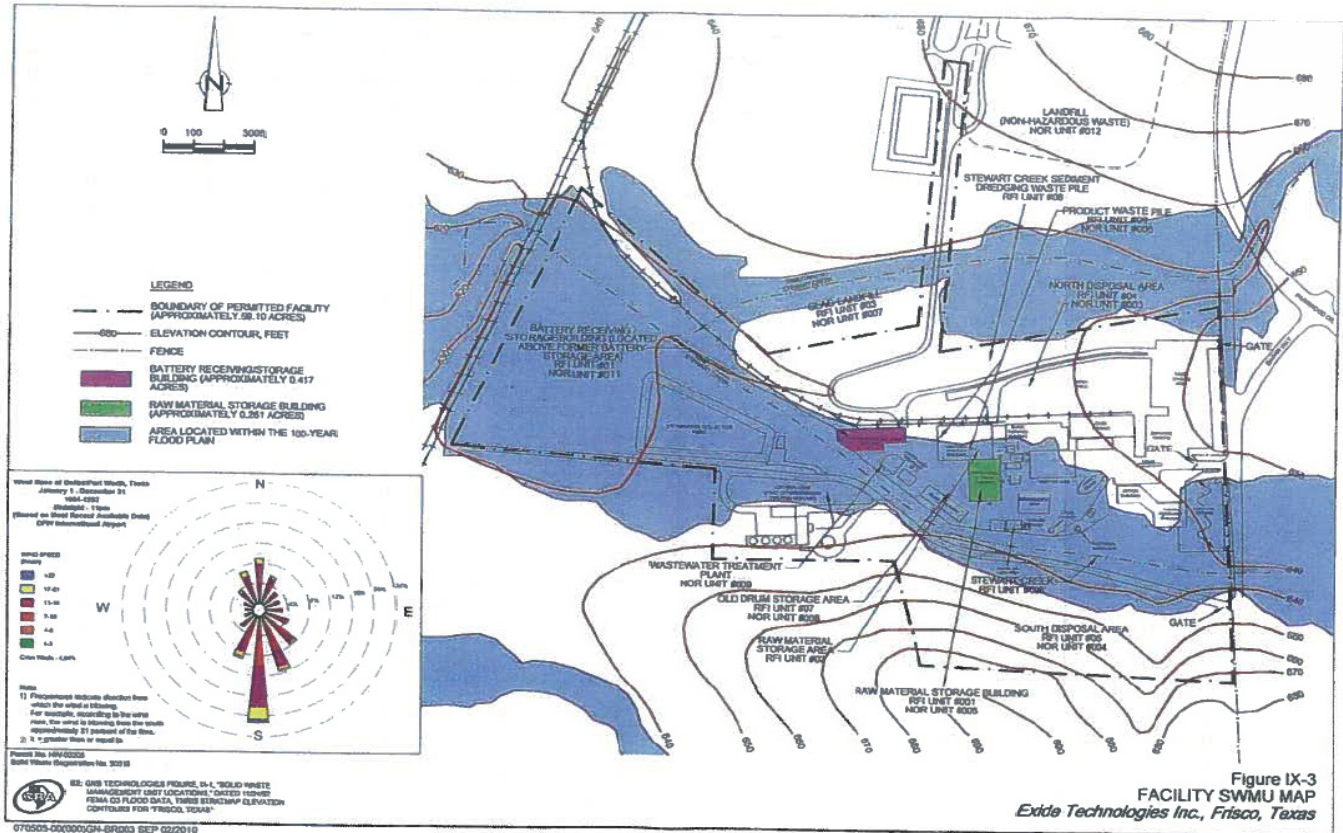


Figure 2. Location of Stewart Creek 100-Year Flood Plain and Exide's Hazardous Waste Permitted Area

b. Exide's Adverse Impact on Stewart Creek

Exide has a long history of adverse environmental and public health impacts to Stewart Creek:

- 1) Process wastewater was discharged into Stewart Creek beginning with the opening of the facility in 1964. Direct discharges into the creek or indirect discharges into the City's Stewart Creek Wastewater Treatment Plant (located upstream of the Park) continued through 1999.
- 2) Stewart Creek was lined with contaminated lead waste "slag" in the 1960s to prevent erosion. [EPA Administrative Order ("AO") 06111]
- 3) The facility's original 1988 RCRA permit included a Stewart Creek sediment dredging waste pile from an earlier remediation effort at Stewart Creek. [EPA AO.06111]
- 4) A RCRA Facility Investigation ("RFI") addendum from 1993 noted a potential surface water impact at the 5th Street culvert and elevated lead levels in Stewart Creek sediment. [EPA AO 06111]

- 5) A 1998 letter from TCEQ required the facility to address seepage of contaminated material from beneath the Battery Storage area along Stewart Creek and to assume releases of contaminants above protection levels. [EPA AO 06111]
- 6) In 1999, TCEQ required Exide to remediate over 2,000 feet of Stewart Creek where lead slag had been deposited. Recent inspections have suggested there is still lead slag along the banks of Stewart Creek that has not been remediated. [EPA AO 06/11]
- 7) A 2005 TCEQ inspection observed seepage of contaminated substances in the concrete wall near the Battery Storage Building and Stewart Creek. [EPA AO 06111]
- 8) A 2009 EPA inspection observed liquid seeping from beneath the flood wall between the facility process area and Stewart Creek, and a white crystalline substance on the ground between the wall and the creek. [EPA AO 06/11]
- 9) A 2009 EPA inspection stated, "The facility appears to be having an ongoing unpermitted discharge of contact storm water from the process areas. A white crystallized substance was observed deposited in certain areas along one bank of Stewart Creek... Also noted was a large amount of trash and debris on the banks of Stewart Creek." [EPA NPDES Inspection Report 09110]
- 10) A 2009 EPA inspection observed that "sediment is being lost from the outer cell slopes and the closed cell areas of the Class II landfill to the unnamed tributary to Stewart Creek." [EPA NPDES Inspection Report 09/10]
- 11) A May 2011 TCEQ inspection observed "liquid discharging through cracks and seeps in the barrier wall into the environment (Stewart Creek embankment)." [TCEQ 05111 Investigation Report]
- 12) A May 2011 TCEQ inspection observed discharges from the facility process areas along the banks of Stewart Creek. TCEQ observed that "these discharges have the potential to adversely affect the downstream waters and stream beds of Stewart Creek." [TCEQ 05/111 investigation Report]
- 13) Remedial efforts have been completed at both the Museum of the American Railroad (MARR; north side of the creek) and former Stewart Creek Wastewater Treatment Plan (WWTP; south side of the creek). TCEQ inspection of these downstream properties resulted in visual and laboratory confirmation of battery chips. The MARR cleanup to address "areas of concentrated battery chips" noted concentrations of lead in excess of 2,000 mg/K.g. (Southwest Geoscience Response Action Completion Report. 12/11)

Since battery waste material also has continued to be noted downstream of Exide along the banks of Stewart Creek, it seems reasonable to expect that future remedial efforts will be necessary relative to Stewart Creek downstream of Exide.

c. Current Concerns

- 1) No remediation has been performed on Stewart Creek since 1999-2000, despite extensive documentation by EPA and TCEQ of releases from the Exide facility.
- 2) The Northern tributary of Stewart Creek has likely seen impact from past filling (battery casings noted on Tract G & I), rain events (Landfill Areas to north), or overflow rain events (Evaporation Pond to north - also see 2012 elevated lead data).
- 3) The Southern tributary of Stewart Creek is within an area known to have received aerial deposition of lead and is a low lying area where metals would be anticipated to travel with colloidal material, yet there's been no extensive testing of soil or water. The "Grand Park-Revised Master Plan" indicates that the Southern tributary will run directly into water features for the Kids Place and Kids Forest as well as wetlands areas.
- 4) Other downstream portions of the Stewart Creek tributary system should be evaluated (North of the former wastewater treatment plant) since known burial of battery waste has been documented on both sides of the creek (See VCP No. 2122 and Railroad Museum property) and the future Grand Park development is anticipated immediately downstream.
- 5) There's no indication that Exide has provided any flooding protection from contaminated storm water flowing into the south side of Stewart Creek, which includes Exide's Wastewater Treatment Plant (NOR Unit #009) and the South Disposal Area (RFI Unit #05, NOR Unit #004). It doesn't appear that either of these areas would be protected from flooding or from storm water crossing the SWMUs and flowing into Stewart Creek. There's also nothing to indicate flood protection for either of the tributaries that cross the property.
- 6) The FEMA 100-year floodplain appears to run directly through the Slag Landfill (RFI Unit #03, NOR Unit #007), within 100 feet of the Stewart Creek Sediment Dredging Waste Pile (RFI Unit #08) and the North Disposal Area (RFI Unit #04, NOR Unit #003), and within 200 feet of the Landfill (Non-hazardous waste, NOR Unit #012).

3. Recommendations

A. City Officials should commission a full environmental assessment of the Grand Park Project before project planning and development go any further.

B. The clean-up of the Exide smelter site should be to the most protective "Residential" standards to allow for open spaces use along Stewart Creek.

C. All landfills, dumps and pits of lead waste should be removed from the Exide site to prevent future contamination problems from occurring.

D. The water quality of Stewart Creek must be assured.

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