City of Austin: Environmental Remediation Fund

Mission

To protect the health and welfare of Austin residents and the environment.

Vision

Environmental sites that are found harmful to the environment and pose health risk to the general public will be remediated with funding from the ERF and the supporting City of Austin departments. (ARR, WPDR, AWU)

Loop 360 Landfill Remediation

Presentation to City of Austin
Zero Waste Advisory Commission
July 11, 2012

Site Description

- Located on a slope in the Barton Creek greenbelt south of Barton Creek and east of Loop 360 (4001 ½ S. Capital of Texas HWY)
- Area appears to have been utilized as a rural landfill in the 1900's to 1950's.

Loop 360 Landfill Delineation

Assessment

- surface soil samples: Lead and Antimony
- Antimony below 15 kg/mg PCL, Pb 510 – 1320 kg/mg (Above PCL 500 kg/mg)
- Upstream and downstream samples of Barton Creek (2x) and tributary
- 2 monitoring wells
- 60 soil borings
- soil gas samples
- stream sediment samples

Assessment Results

- The landfill covers approx. 3.6 acres
- Relatively shallow, 2-6'
- Heavily overgrown with trees and brush
- Many areas with exposed waste, e.g. cans, bottles, wire, etc.

Assessment Results

- Soil - Lead and antimony elevated
- Soil gas - No methane found
- Sediment - Low level of antimony in tributary
- Surface water – Low level of antimony found in 3 samples
- Groundwater – low levels of VOC's and metals (not unexpected)

Environmental Concerns

- Presence of known and possible unknown contaminants over Barton Springs recharge area
- Mature trees in and near waste
- Endangered bird habitat

Options

- No action
- Stabilize waste in place
- Phytoremediation
- Perimeter fencing
- Limited brush and tree removal with placement of a partial soil cap
- Complete site clearing with complete soil cap
- Complete waste removal due to location in environmentally sensitive area of Barton Creek

Complete Removal of MSW Chosen

- Complete waste removal and site restoration
- Eliminate any potential threat to the sensitive Barton Creek system
- By removing all MSW there would not be 30 year post closure requirements for City
- Re-vegetate to replicate surrounding greenbelt and bird habitat
- Leave Monitoring wells in place
- Cost estimate - $1.8M to $2.1M

Project Details to Date

- Construction contractor selected - Prudent
- Construction Phase started in Dec 2011
- Revegetation coordinated with WPDR and BCP
- Estimated completion – July 2012
- Funding: Mainly Certificate of Obligation (CO) to be paid back by ARR, Watershed, and AWU

Rosewood Municipal Solid Waste (MSW) Site Improvements

July 11, 2012
Presentation to ZWAC

Regional Location

731 ½ McClain St

Rosewood Site

Site Characteristics

- Homewood Heights Neighborhood
- 2.3 acres of City owned property
- Designated for drainage purposes and park use
- Surrounded by private property
- Mostly wooded with a natural spring

Typical Terrain at Site

Typical MSW at Site

MSW of Concern

- Ash, melted metal and broken glass
- Possible incinerator waste
- Environmental and health concerns

Testing Results

- Initial samples of material detected lead, arsenic and DDT (Pb – 190 to 4210 mg/kg)
- Further testing revealed boundaries extended to private property
- Tested private property

MSW Location

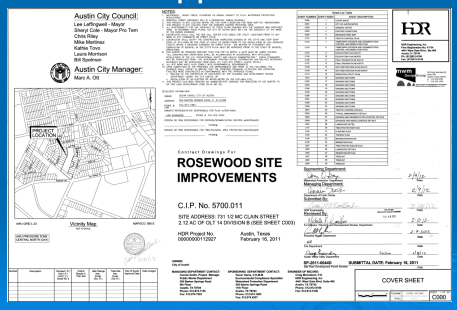
Project Goals

- Remove all MSW from City property
  - In ravine below private property
- Remove MSW from private property
  - Where maintenance of slope stability above City property is necessary
- Comply with State MSW Regulations
- Estimated completion by January 2013

Cost Estimate

- Estimated Project Cost: $2.7M
- Funding: CO to be paid by ARR, Watershed, and AWU

Design Complete, Site Plan Approved


Austin City Council:
Lee Leffingwell - Mayor
Sheryl Cole - Mayor Pro Tem
Chris Riley
Mike Martinez
Kathie Tovo
Laura Morrison
Bill Spelman

Austin City Manager:
Marc A. Ott

HDR

Contract Drawings For

ROSEWOOD SITE IMPROVEMENTS

C.I.P. No. 5700.011

SITE ADDRESS: 731 1/2 MC CLAIN STREET
2.12 AC OF OLT 14 DIVISION B (SEE SHEET C003)

HDR Project No.
0000000011/2527

Austin, Texas
February 16, 2011

COVER SHEET

C000

Status

- Out for Bid as of 5/21/12
- Bid Opening on 7/12/12
- Review of Proposals and selection
- Anticipated NTP around Aug / Oct 2012

Austin Resource Recovery FM 812 Eco Industrial Park Projects

July 11, 2012 Presentations to ZWAC

Eco Industrial Park Projects Located at the FM 812 LF

- Eco Industrial Park
- Landfill Gas to Energy Project
- Landfill Solar Cap Project

FM 812 Eco Park Location

Eco Industrial Park

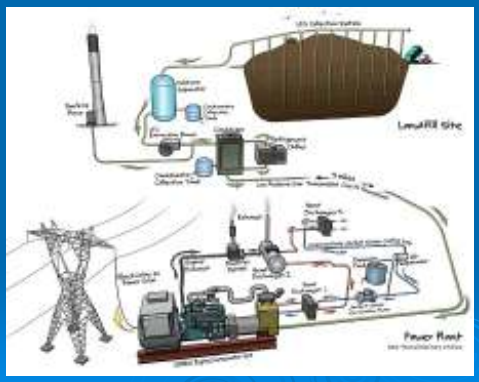
- Located at the City of Austin's FM 812 Closed Landfill the Eco Park will be developed on approximately 80 acres of undeveloped/unused landfill property.
- The Eco Industrial Park will be a system of production and research facilities that conserves natural and economic resources, reduces energy and water usage, and provides opportunities for reuse or recycling of waste materials.

Eco Industrial Park

- Encourage the development of eco industrial parks in Austin that would relocate major manufacturing activities next to processors of recyclables
- Partner with universities to research new technologies
- Recruitment of businesses and industries to use locally generated resources
- Encourage mentoring of public school projects that allow student research in reuse, recycling and research in ways to reuse waste stream products

Landfill Gas to Energy

The FM 812 operated as a Type I MSW landfill from the 1960's until 1999. It accepted C&D material until 2009 prior to the landfill closing. Methane and Carbon dioxide are produced as byproducts of the decomposition of putrescible municipal solid waste. A landfill gas collection system captures these LFG and they are currently flared at the site. It is anticipated that methane generation will continue for at least 15 to 20 years and will be available for use in gas to energy systems.



Landfill Solar Cap Project

- Landfills are ideal for Solar Energy systems due to their large footprints and typically clear open areas.
- It is estimated that up to 18 mega-watts can be generated from approximately 85 - 90 acres available at the FM 812 closed landfill.
- This is enough electricity to power up to 4,500 homes each year of operation or to provide electricity for the Eco Industrial Park.

Tessman Road LF - Film

Landfill Solar Cap Project Summary

- Utilization of closed landfill for energy production
- Rigid photo voltaic or flexible membrane system to generate electricity
- Core team of staff members currently researching solar energy systems
- Research delivery and best procurement method
- Bid Landfill Solar Energy project