Lime Sludge Pond Closure Alternatives Analysis

UTILITIES DEPARTMENT
APRIL 12, 2016

Aerial of Lime Sludge Ponds in Pinebrook Park

Purpose of Study:

Evaluate alternatives to close the existing pond sites in Pinebrook Park.

Alternatives Evaluated:

1. Remove lime sludge and import clean fill to match existing top of berm elevation.
2. Remove lime sludge, use existing berm material to fill pond to achieve flat site.
3. Mix lime sludge with existing berm material.
4. Keep lime sludge in place and spread berm material on top to achieve flat grade.

Trees and Vegetation at Lime Sludge Ponds

Alternative 1 : Remove lime sludge and fill pond

Advantages

- Removes lime sludge from site
- Eliminates City liability of lime sludge
- Trees and vegetation on berms remain

Disadvantages

- High cost of importing fill
- Finished grade of site not level
- Steep berms are safety hazard
- High cost of lime sludge disposal

Site not at Grade Level

Alternative 2 : Remove lime sludge, use berm material to fill pond

Advantages

- Removes lime sludge from site
- Eliminates City liability, etc.
- Leaves site at level grade with surrounding area

Disadvantages

- High cost of importing fill
- High cost of lime sludge disposal

Existing Berm Material

Alternative 3 : Mix lime sludge with existing berm material

Advantages

- Leaves site at level grade with surrounding area
- Mixing berm material with lime sludge creates more stable material than lime sludge alone
- Removes large amount of lime sludge

Disadvantages

- Leaves a portion of lime in sludge in place
- Requires special mixing equipment
- Potential City liability remains

Lime in Surrounding Area

Alternative 4 : Keep lime sludge, spread berm material on top

Advantages

- Lowest cost
- Leaves site at level grade with surrounding area

Disadvantages

- Leaves lime sludge in place
- Potential City liability remains
- May limit future use of site

Cost Estimates

Alternative 1	Alternative 2	Alternative 3	Alternative 4
Remove lime sludge and fill existing berm area	Remove lime sludge and demolish berms	Mix lime sludge with berm material	Keep lime sludge in place
$2.3 million	$2.3 million	$2.2 million	$373,000

Staff recommends proceeding with Alternative 2

- Alternative 2: Remove lime sludge, use berm material to fill pond
- Requests City Council approval to proceed with this alternative