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Durham Pool Assessment Findings

City Council Presentation

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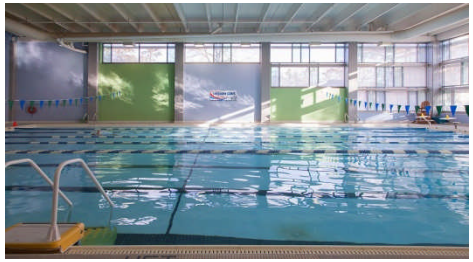

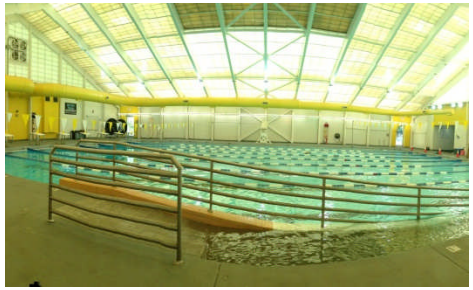

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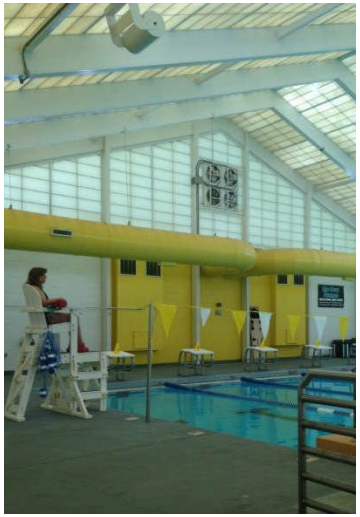
Introduction

Status of Szostak Assessment Study

- Szostak began City Pools study in May 2014.
- Initial focus of study has been on Long Meadow Pool that was closed for 2014 season due to an electrical hazard from water infiltration into the underground Pump Room.
- The Long Meadow Assessment was presented to Council in October 2014. At the Council's direction, the first phase of repairs to the facility is underway.
- Today's presentation focuses on the City of Durham's remaining aquatics facilities, with an update on progress at Long Meadow.



Introduction

Status of Szostak Assessment Study

- Study includes all five City Pool facilities and four spraygrounds
  - Long Meadow Pool
  - Hillside Pool and sprayground
  - Forest Hills Pool and sprayground
  - Campus Hills Pool
  - Edison Johnson Pool and sprayground
  - East End Park sprayground
- Goals for the Durham Pool Assessment
  - Identify major facility deficiencies
  - Identify facility code violations and minor deficiencies
  - Provide options and cost estimates for repairs/improvements
  - Develop a long-term planning strategy implementation

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Forest Hills Key Issues

Original Pool Construction: Late 1920s. Sprayground Construction 2001.

- **Age**
- **Location in Flood Plain**
- **Deficiencies and Code Violations**

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Forest Hills Key Issues

- **Age**
- **Pool Constructed in 1920s -** Over 85 Years Old
  - **Pool Shell Liner / 14 years old / Minor Leakage**
  - **Deteriorating Wall at Access Ramp / Safety Hazard**

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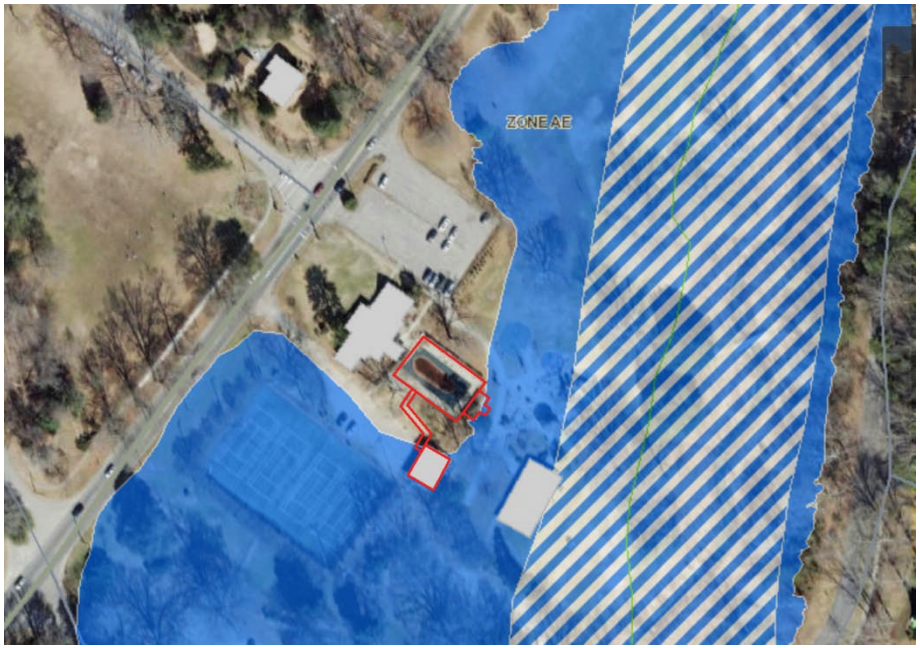
Forest Hills Key Issues

- **Location in Floodplain**

FEMA and UDO govern new development and repairs of existing facilities



Forest Hills Pool Facility

High Flood Risk

Floodway

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Forest Hills Key Issues

- **Location in Flood Plain**
  - Forest Hills Pump Room is subject to frequent flooding; the Bath House is also prone to flooding.
  - Any New Facility Improvements in Floodplain will continue to be at risk.
  - Some types of repairs may require that the structures be brought into full compliance with UDO Floodplain Code:

    Full compliance means either floodproofing the structures or raising them 2 feet above the floodplain.

    Either renovation is prohibitively expensive.

Pump Room

Forest Hills
Key Issues

- **Deficiencies and Code Violations**
  - Backwash Pit Undersized
  - Chemical Controller
  - Access from Parking to Pool Inefficient
  - Inadequate Wayfinding Signage
  - Misc. Minor Repairs
  - Non-Compliant ADA Access to Facility and Pool
  - Minor Aquatics Health Code Violations

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Dry Ramp is not compliant with the ADA

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Hillside Key Issues

Pool Facility and Sprayground. Original Pool and Sprayground Construction: 2000

- **Pool Shell Leakage**
- **Deck Drainage**
- **Deficiencies and Code Violations**

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Hillside Key Issues

- **Pool Shell Leakage**
  - Pool Shell Leakage: Approx. loss of 4-6” water per day.
  - Leak Testing: Portion of the work is complete.
- **Deck Drainage**
  - Water ponding.
  - Minor cracking.
  - Excessive erosion at pool enclosure on south and west

Cracked skimmer
Erosion at fence

Hillside
Key Issues

- **Deficiencies and Code Violations**
  - Security/Visibility
  - Inadequate Wayfinding Signage
  - Minor Repairs
  - Non-Compliant ADA Access
  - Minor Aquatic Health Code Violations

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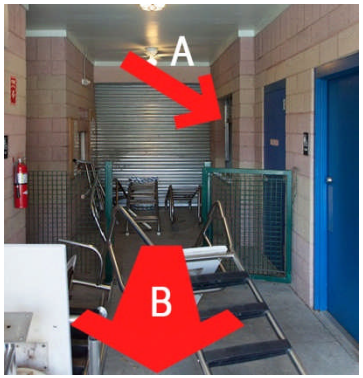
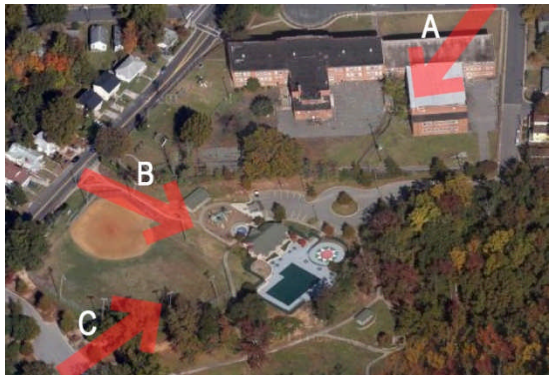


Security: A. Cashier
B. Patron Approach



Visibility: A. No visibility from street.
B. No visible vehicular access. C. No Visibility from main parking lot.

ADA Ramp: Inadequate Landing and Guardrails

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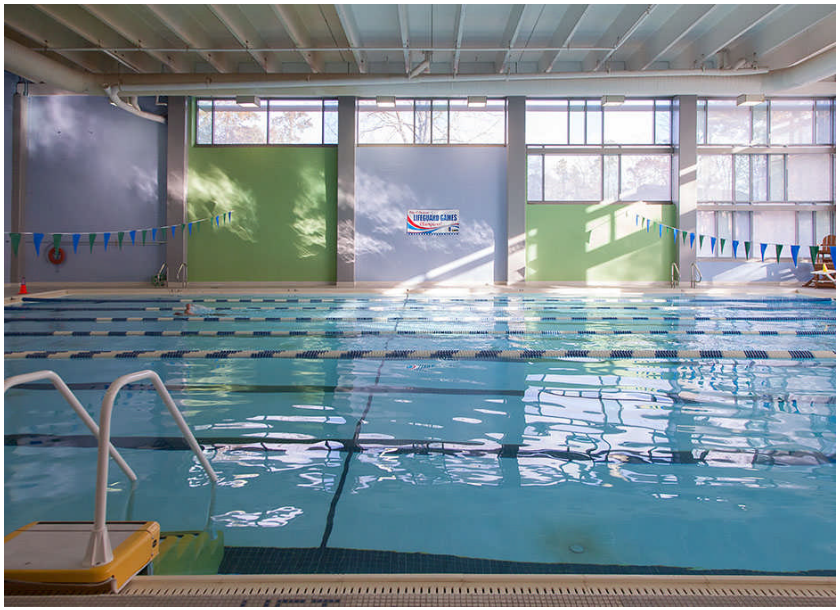
Campus Hills Key Issues



Natatorium. Original Construction: 1990

- **Failing Dehumidification Unit**
- **Hazardous Natatorium Lighting**
- **Deficiencies and Code Violations**

Campus Hills
Key Issues

- **Failing Dehumidification Unit**
  - Corrosion and Refrigerant Leaks
  - Inability to maintain humidity and air quality standards
  - Insufficient air circulation
  - Undersized for peak occupancy
  - Replacement recommended within two years

- **Hazardous Natatorium Lighting**
  - Fixtures not adequately sealed
  - Ballast failures resulting in dangerous sparking

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Corrosion at coils

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Campus Hills Key Issues

- **Deficiencies and Code Violations**
  - Cracked, Uneven Deck Tile
  - Pool Shell Finish
  - Minor Repairs
  - ADA Pool Access
  - Minor Aquatics Health Code Violations

Chipped and delaminating tile.

Ponding at deck.

Non-ADA compliant dry ramp.

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Edison Johnson Key Issues

Pool Facility and Sprayground. Original Pool Construction: 1990. Sprayground Construction: 2001

- **Failing Dehumidification Unit**
- **Lighting Deficiencies**
- **Deficiencies and Code Violations**

Edison Johnson
Key Issues

- **Failing Dehumidification Unit**
  - Corrosion and Refrigerant Leaks
  - Inability to maintain humidity and air quality standards
  - Insufficient air circulation
  - Undersized for peak occupancy
  - Needs to be replaced as soon as possible
- **Lighting Deficiencies**
  - Frequently overheats
  - Fixtures inaccessible without draining pool
  - Excessive glare on water surface, limits lifeguards' visibility

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Overheating light fixture
In inaccessible location

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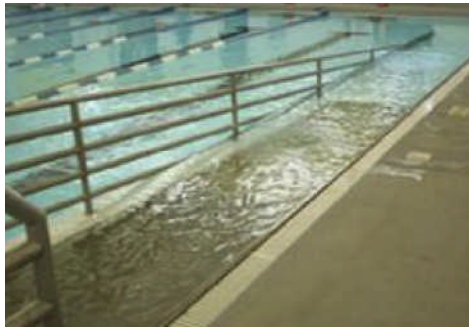
Edison Johnson Key Issues

- **Deficiencies and Code Violations**
  - Issues with Operable Roof Panels
  - Pool Shell Finish
  - Minor Repairs
  - ADA Access Ramp
  - Minor Code Violations

Unsecured roof panels.

Equipment corrosion.



Ramp missing hand rail.

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East End Sprayground Key Issues

Standing water at sprayground.

Original Construction: 1999.

- **Deficiencies**
  - Shared Water Service with Restroom
  - Sprayground Drainage and Standing Water

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Budget Estimate

Outdoor Facilities

Forest Hills

1. Pool Liner Replacement	$36,000	
2. Replace Pool Access Ramp and Retaining Wall	$70,000	
3. Elevate Chemical Storage to 304.4' Elev.	$6,000	
4. Deficiencies	$16,450	
5. Code Violations	$20,500	
6. Fees, P&O and Contingencies	$77,156	
Subtotal		**$226,106**

Hillside

1. Pool Shell Leakage	$35,000	
2. Deck Drainage/Install Linear Deck Drain	$12,000	
3. Deficiencies	$36,100	
4. Code Violations	$12,200	
5. Fees, P&O and Contingencies	$49,365	
Subtotal		**$144,665**

East End Sprayground

$22,770

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Budget Estimate

Indoor Facilities

Campus Hills

1. Replace Dehumidification Unit	$475,000	
2. Replace Natatorium Lighting	$75,000	
3. Deficiencies	$58,000	
4. Code Violations	$13,400	
5. Fees, P&O and Contingencies	$321,885	
Subtotal		**$943,285**

Edison Johnson

1. Replace Dehumidification Unit	$410,000	
2. Replace Natatorium Lighting	$100,000	
3. Deficiencies	$69,200	
4. Code Violations	$6,500	
5. Fees, P&O and Contingencies	$303,393	
Subtotal		**$889,093**

Total **$2,225,919**

Long Meadow Update

Short-Term Option

Minimum Repairs Required to Reopen the Pool:

1. Pool Shell Leak Repairs

- Six leaks – repairs complete.
- New Gutter leak identified and repairs underway – 70% complete.

2. Stormwater Inlet / Piping Flushing

- Video investigation revealed the storm drain pipe is collapsed and cannot be flushed.
- Replacement cost quoted.
- Surveying is underway.
- Internal design, then bid phase/construction phase.

3. Pump Room Stairwell Cover

- Work complete.

4. Seal Cracks in Pool Deck

- Work complete.

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Long Meadow Update

Further Repairs that May be Required

5. Foundation Drain

•This work will require design services and municipal approvals

6. Electrical Upgrades in Pump Room

• Includes Testing for all Fixtures/Fittings, Water-Tight Fittings, High Water Sensor Alarm, Shunt Trip Breaker, Staff Training

7. Building Code Requirements

•Includes ADA Lift, Stairwell improvements, Latching Gates

8. Health Code Requirements

•Includes Gutter Covers, Removal of Trip Hazards, Depth Marker Replacement, Elevation of Chemical Storage

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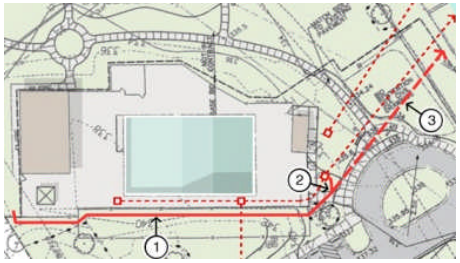

Durham Pool Assessment Schedule

March/April	Pool Assessment Report finalized.
Late April	Evaluate the Short-Term repairs at Long Meadow for effectiveness in mitigating the water infiltration in the pump room.
June	Potential Long Meadow reopening. Note: If water infiltration is still a problem, pool to remain closed and foundation drain work to begin.

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Durham Pool Assessment Recommendations

Short-Term

- Develop Funding Strategy to Address Critical Issues at All Pools

Long-Term Planning

- Develop Aquatics Master Plan
  - Demographic Analysis
  - Aquatics Needs Assessment
  - Define Future Program Requirements
  - Recommend New Construction and Facility Renovations

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