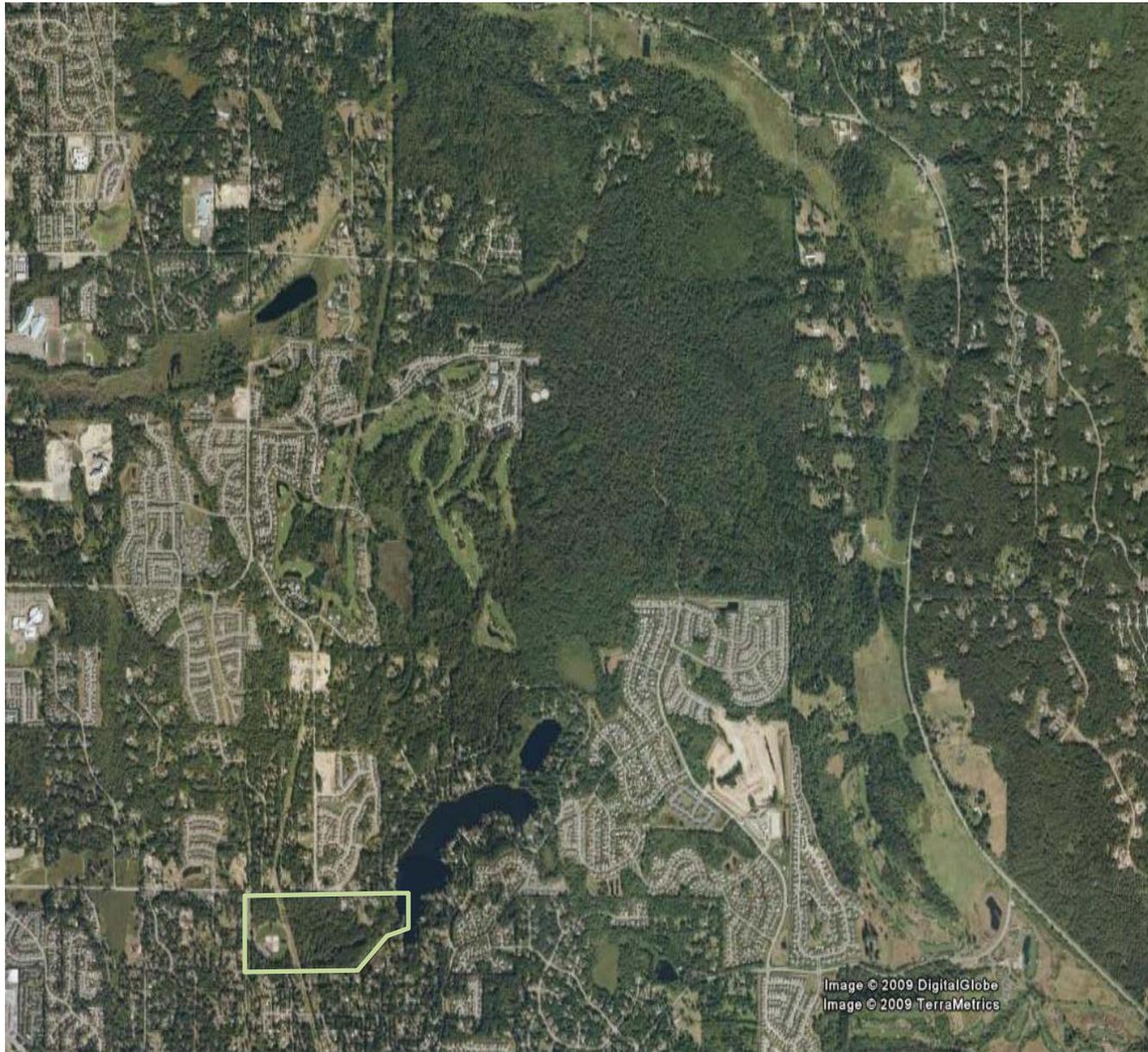




Beaver Lake Park Master Plan





Beaver Lake Park Master Plan





Beaver Lake Park Master Plan



ENVIRONMENTAL CONSIDERATIONS

STREAMS, WETLANDS, SHORELINES



Beaver Lake Park Master Plan



3 Alternatives for 3 Park Areas

- Lakeside
- The Woods
- Westside



Beaver Lake Park Master Plan



KEY ISSUES

HOT TOPICS INFLUENCING DESIGN



**Sports Field
Lighting**



**Synthetic Turf
Considerations**



**Shoreline/ Beach
Considerations**

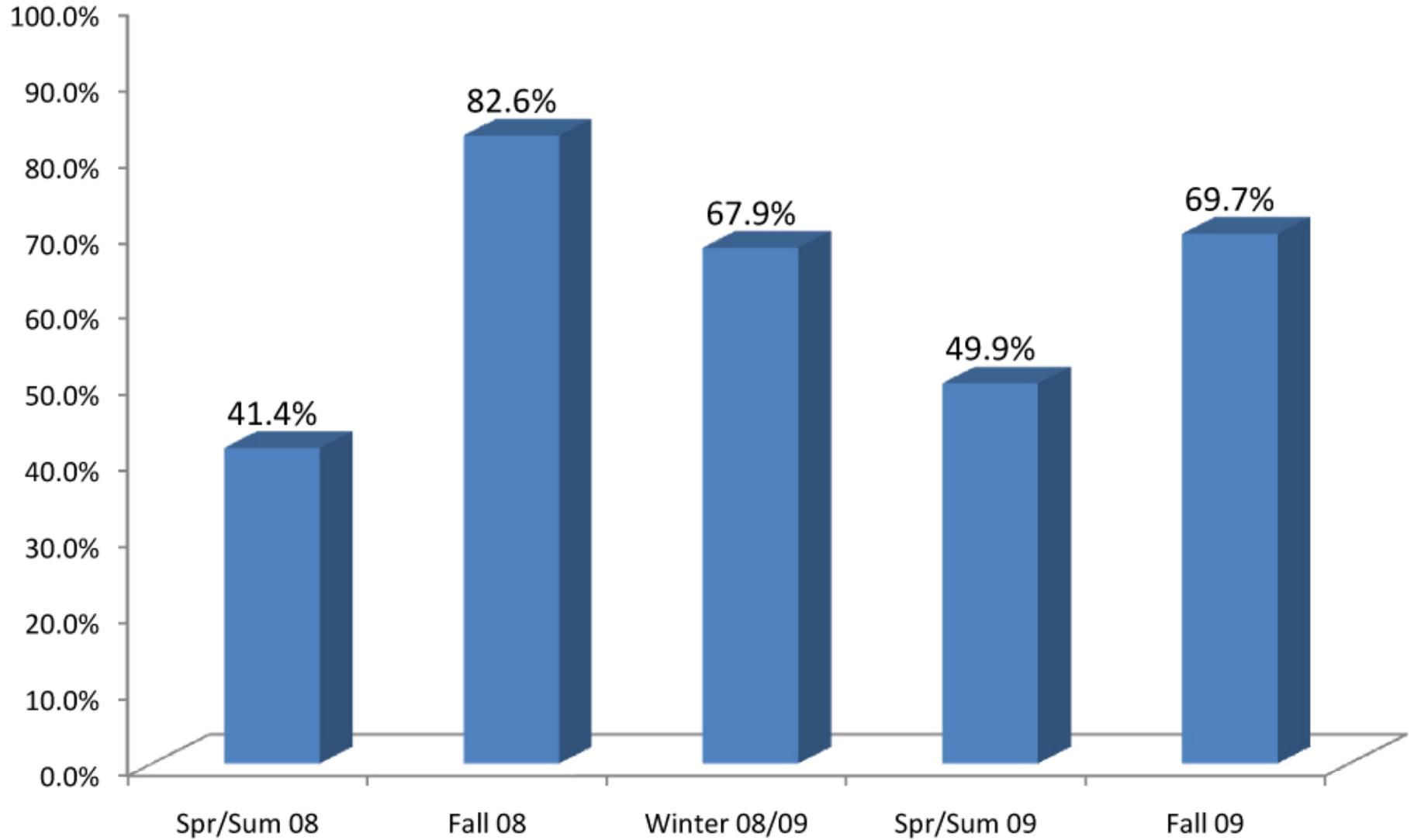


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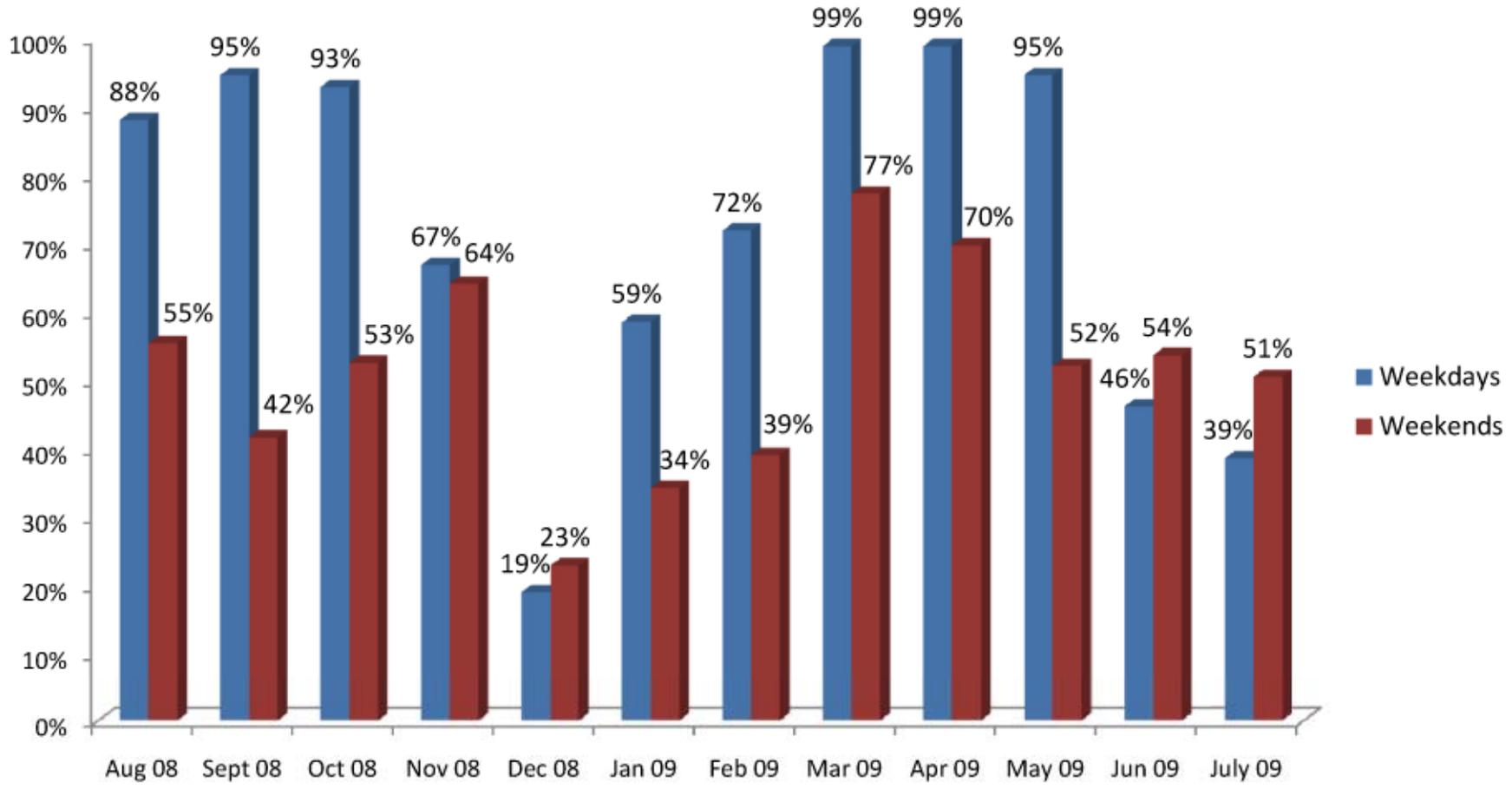
SPORTS FIELD USE

Field Requests Fulfilled



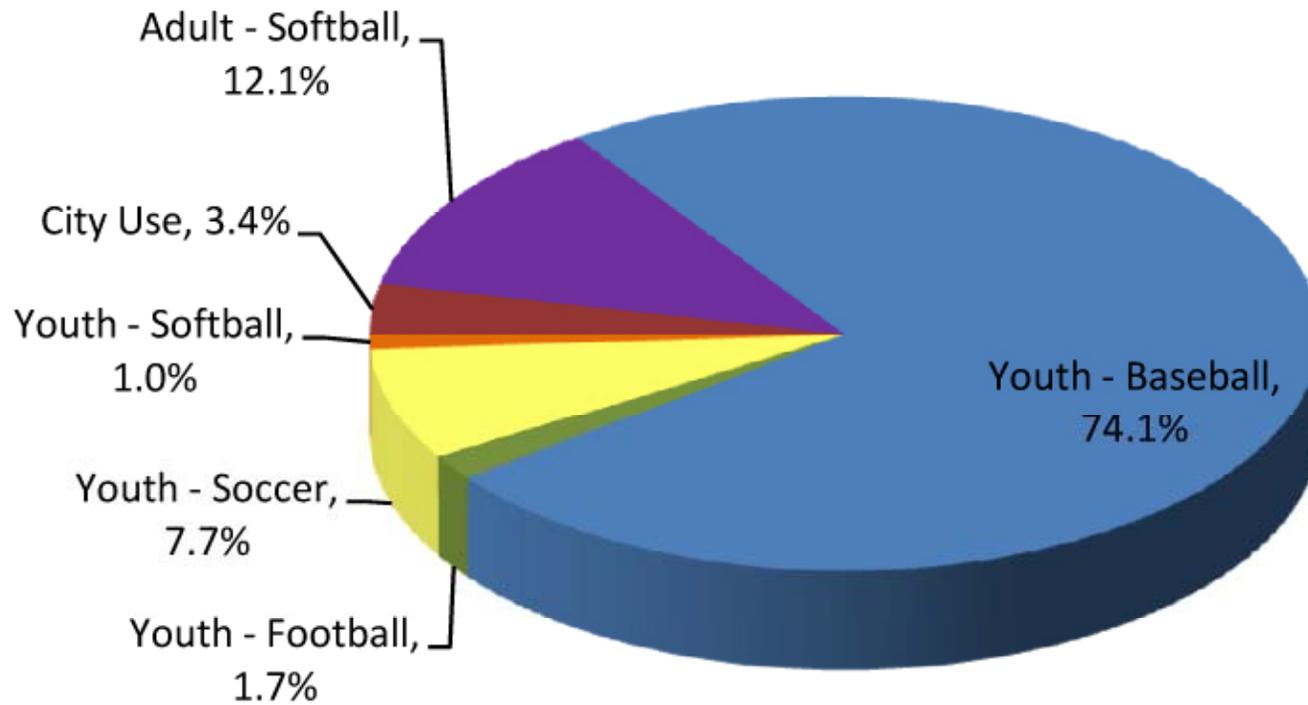
KEY ISSUES
SPORTS FIELD USE

Available Hours Booked on Artificial Fields
for the past 12 months

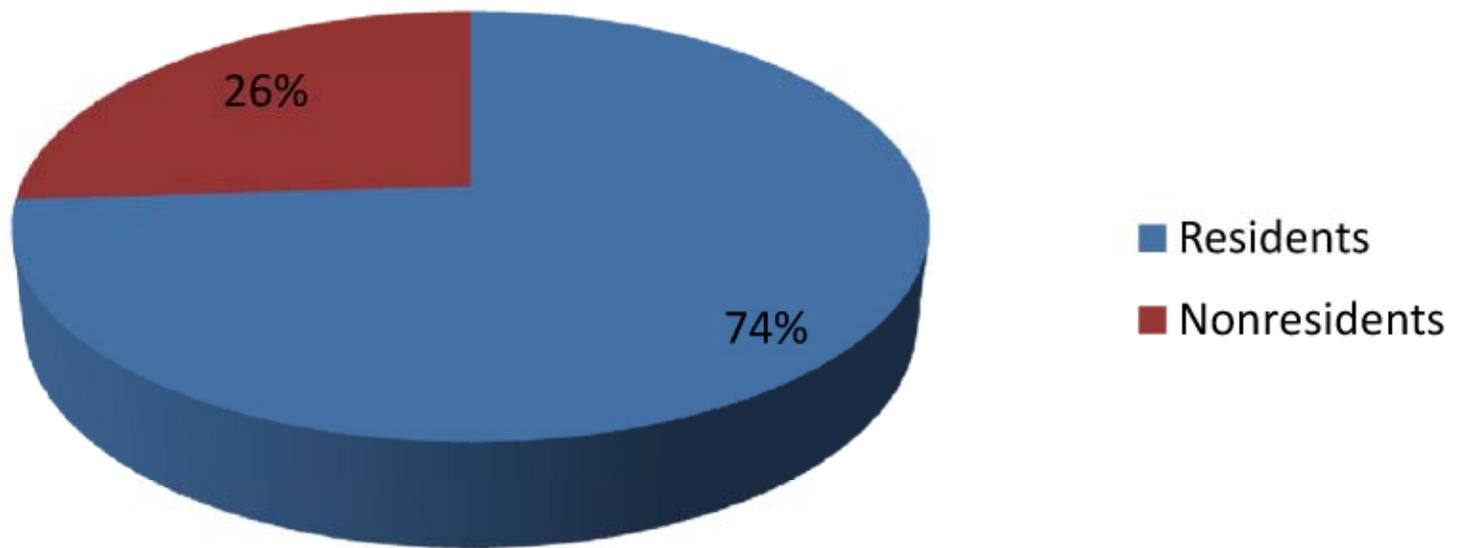


Beaver Lake Fields Usage

Mar 1, 2008-July 31, 2009

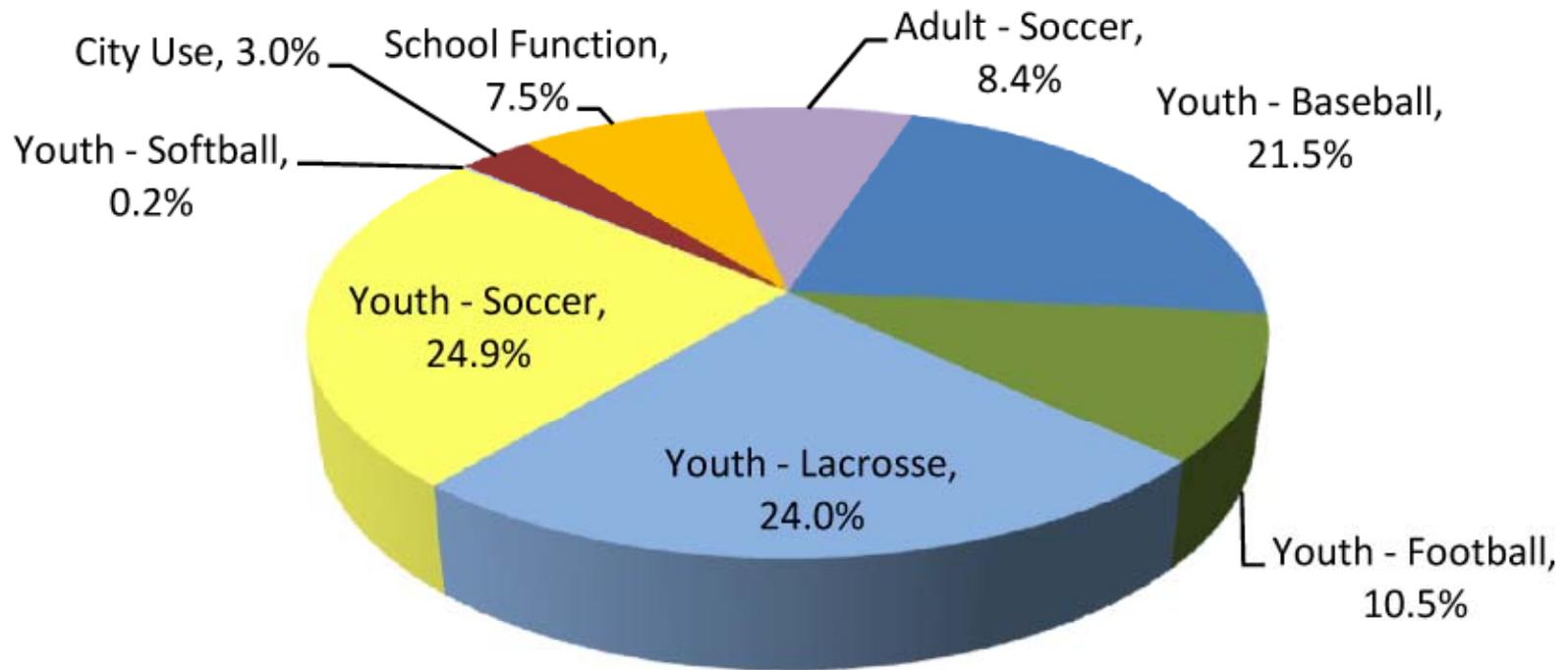


Average Youth League Residency 2009



Skyline Community Fields Usage

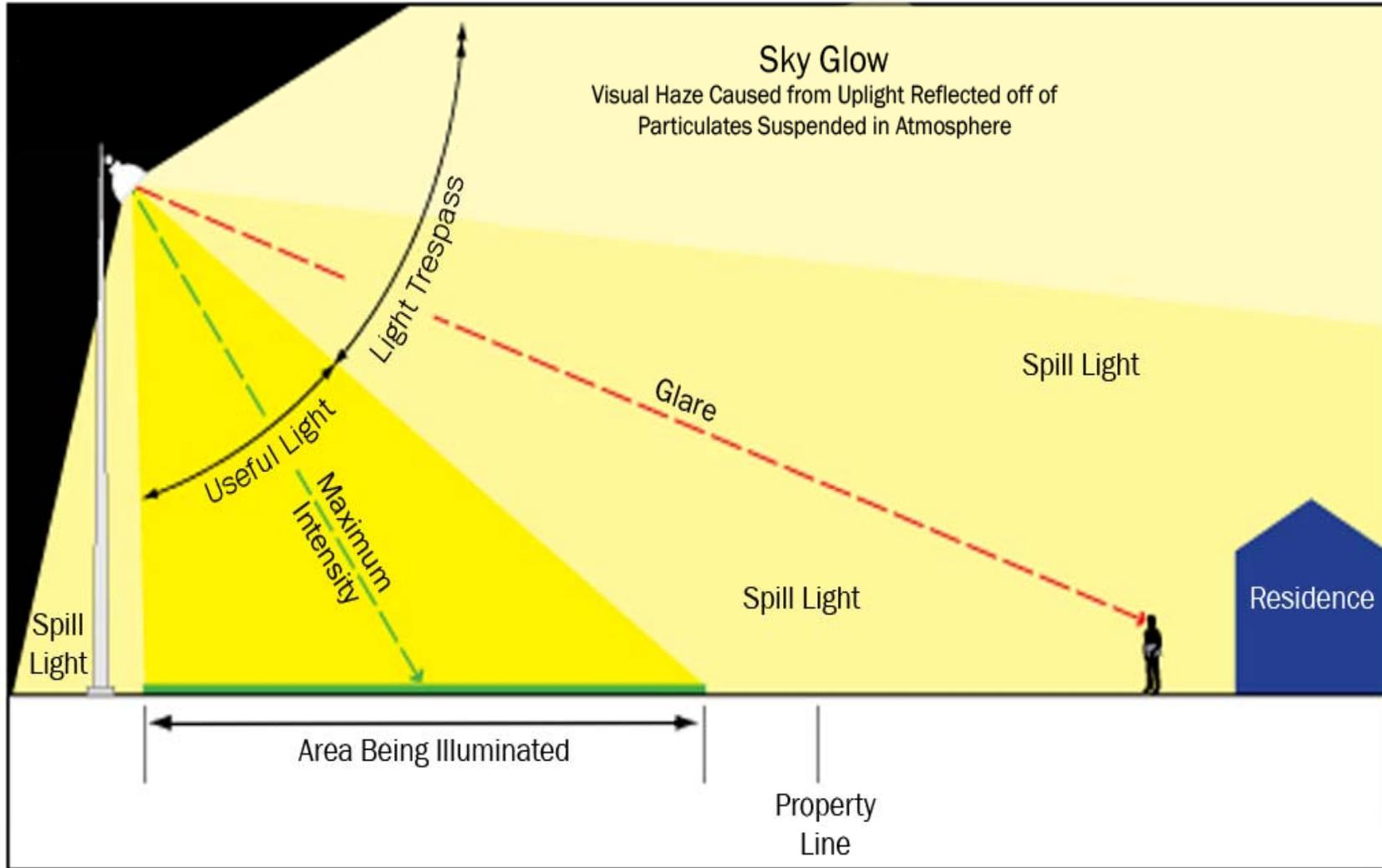
Mar 1, 2008-July 31, 2009



SPORTS FIELD LIGHTING

Impacts

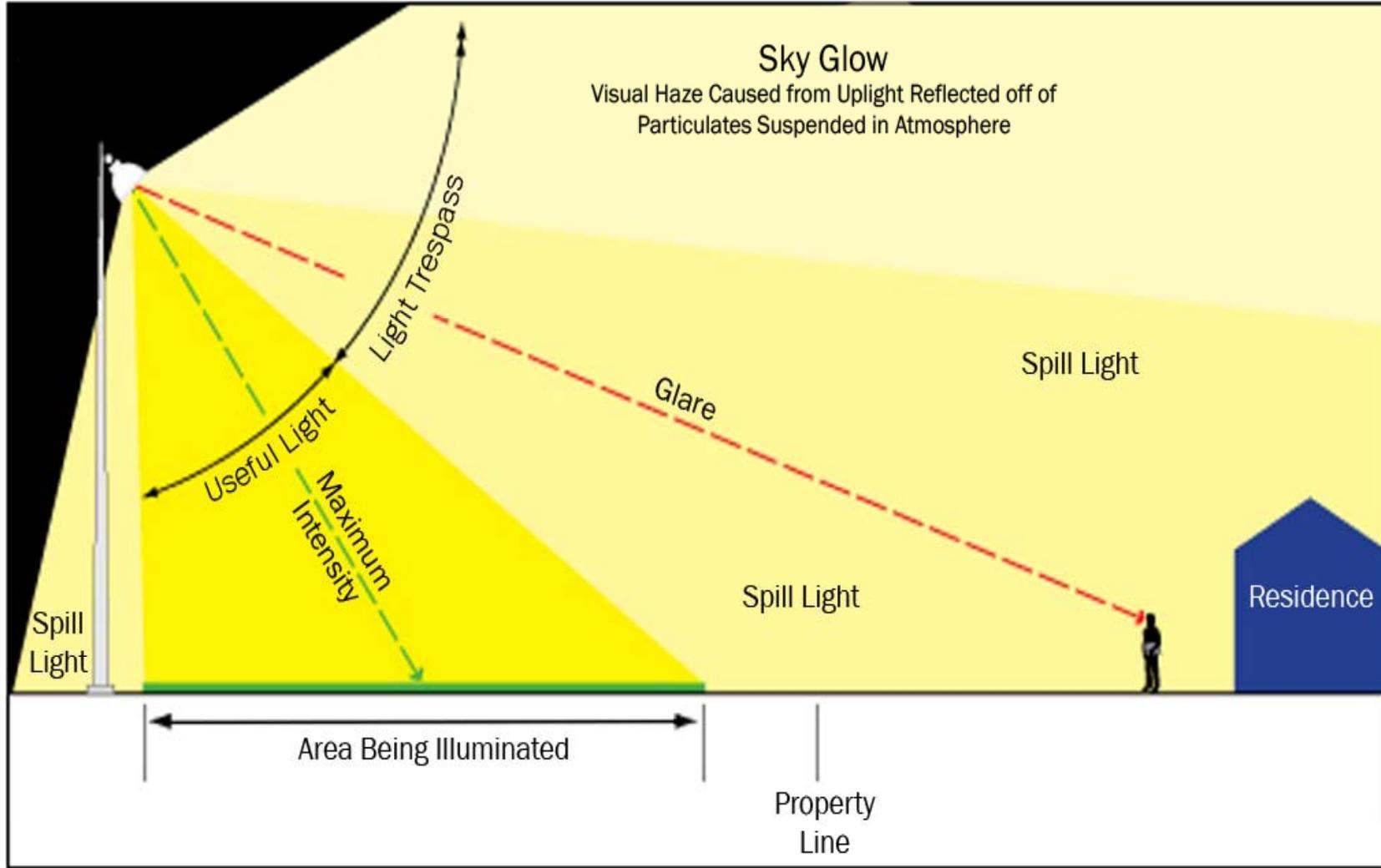
- Spill light (and Light Trespass)
- Glare
- Sky Glow



Beaver Lake Park Master Plan

Impacts

- Spill light (and Light Trespass)
- Glare
- Sky Glow



Beaver Lake Park Master Plan

Impacts

- Human
 - Primary Effects (Positive & Negative)
 - Secondary Impacts (Noise, Activity)
- Wildlife
 - Not Definitive



Beaver Lake Park Master Plan



Lighting Systems

- **Shielded Conventional**
- Full Cutoff (Soft Lighting Systems)
- Aggressively Visored (Musco LSG-Magnuson)



Beaver Lake Park Master Plan



Lighting Systems

- Shielded Conventional
- **Full Cutoff (Soft Lighting Systems)**
- Aggressively Visored (Musco LSG-Magnuson)

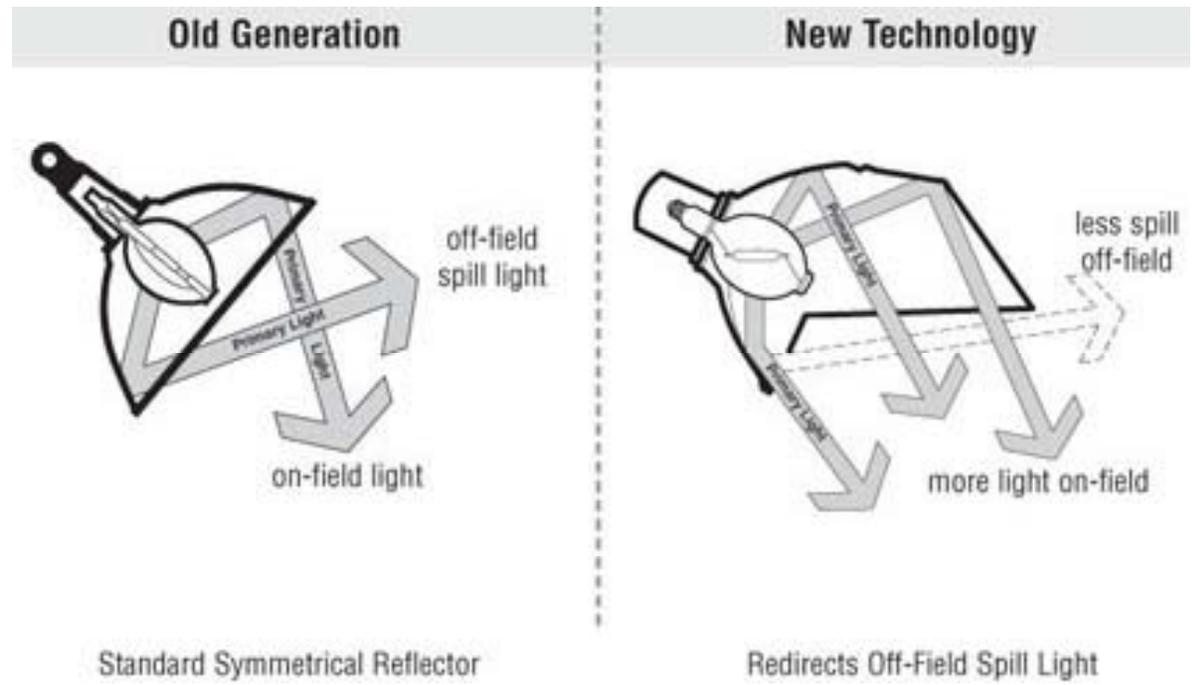


Beaver Lake Park Master Plan



Lighting Systems

- Shielded Conventional
- Full Cutoff (Soft Lighting Systems)
- **Aggressively Visored**



Beaver Lake Park Master Plan



Lighting Considerations

- Poles (and pole height)
- Wattage (1500 vs. 1000)
- Management (timing, maintenance etc.)
- Cost



Beaver Lake Park Master Plan



KEY ISSUES
SPORTS FIELD LIGHTING



KEY ISSUES
SPORTS FIELD LIGHTING



KEY ISSUES
SPORTS FIELD LIGHTING



KEY ISSUES
SPORTS FIELD LIGHTING



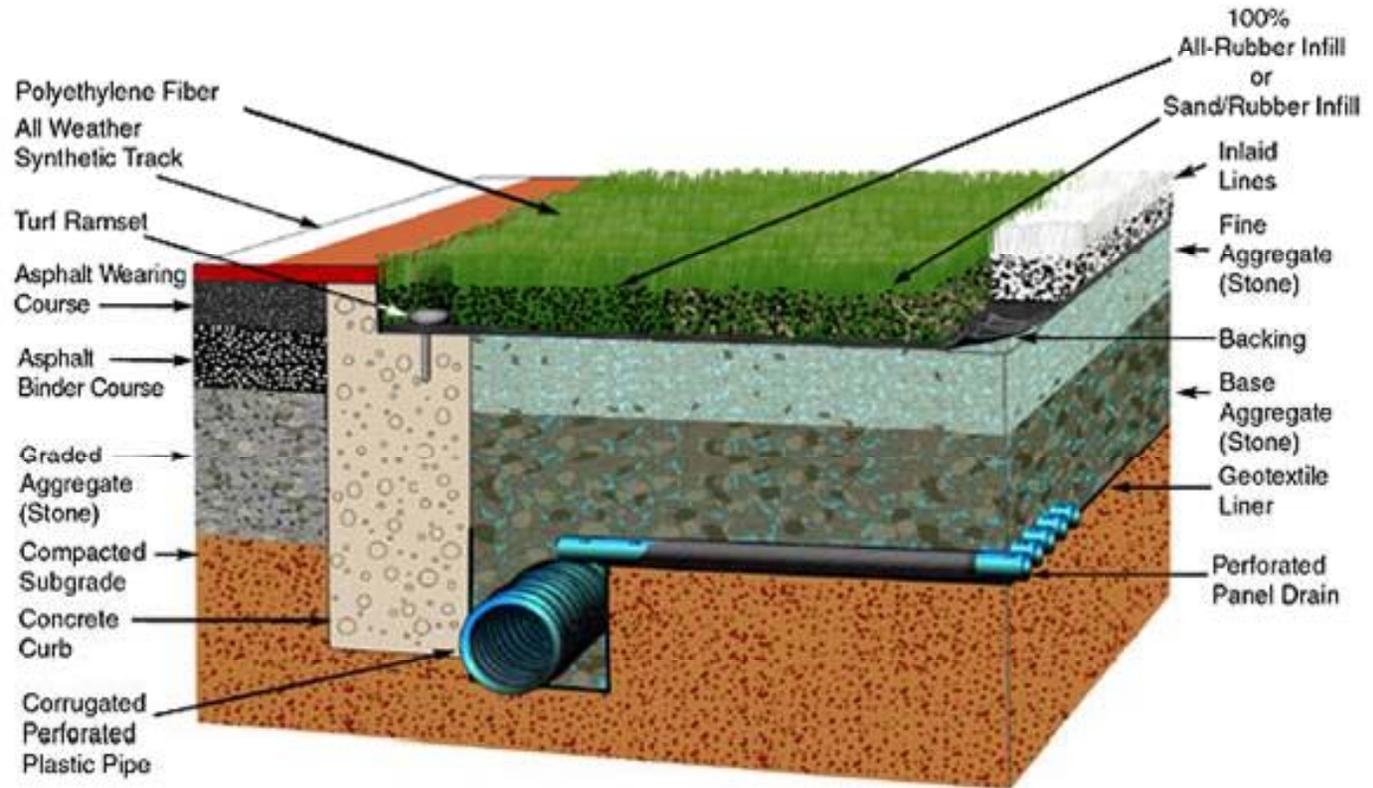
KEY ISSUES
SPORTS FIELD LIGHTING



SYNTHETIC TURF

Synthetic Turf Considerations

- Synthetic Turf vs. Turf
- Generically, about the product
 - Turf
 - Infill
 - Subgrade
 - Drainage
 - Management
 - Lifecycle



Beaver Lake Park Master Plan



Synthetic Turf Impacts:

- Increased playability
- Water quality
- Sports injuries and user risk
- Maintenance cost
- Environmental benefit



Beaver Lake Park Master Plan



Synthetic Turf Impacts:

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- **Water quality**
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Beaver Lake Park Master Plan



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Beaver Lake Park Master Plan



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Synthetic Turf Impacts:

- Increased playability
- Water quality
- Sports injuries and user risk
- Maintenance cost
- **Environmental Considerations**



Beaver Lake Park Master Plan



SHORELINE & BEACH

Controlling Agencies:

- Federal
 - USACOE (Waters of the US)
- State
 - Ecology (water Quality and Wetlands)
 - Fish and Wildlife Hydraulic Project Approval
 - DNR. Aquatic Land Lease
- City
 - Shoreline Substantial Development Permit,
 - SEPA (City)
 - Critical areas review (City)



Beaver Lake Park Master Plan



Guiding Elements of Beach Work:

- Limit impacts
 - Erosion
 - Sedimentation
 - Avoiding wetland, stream and shoreline vegetation impacts
- Habitat friendly design
 - Avoid functioning habitats.
 - Revegetate lakeshore
 - Gravels vs. Sand
 - LWD placement along lakeshore
 - Limit over water structures (Boardwalks, Docks)



Beaver Lake Park Master Plan



Opportunities to Improve Access and Protect Shoreline Habitat

- Value of Riparian and Lakeshore Wetlands
- Preserving Existing Trees
- Focusing Access in Trampled Areas
- Balancing Shoreline Habitat with Access



Existing Shoreline



Beaver Lake Park Master Plan



Preserving Existing Trees

- Value of Riparian and Lakeshore Wetlands
- Levels of Design and Information Needs
- Topographic Survey
- Retention of large conifers
- Assessment Condition of Smaller Deciduous Trees
- Defining Where Access is Compatible



Existing Shoreline



Beaver Lake Park Master Plan



Accommodating Shoreline Recreation Use

- Providing seating and viewing areas
- Providing fishing access
- Providing Access to Lake including ADA (American's with Disabilities Act)



Existing Shoreline



Beaver Lake Park Master Plan



Opportunities to Restore Habitat

- Identifying and Protecting high functioning shoreline wetlands
- Restoring Riparian Vegetation and Marsh Fringe Vegetation
- Removal of shoreline structures



Existing Shoreline



Beaver Lake Park Master Plan



Chinook Beach



Before



After



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Washington Arboretum



Before



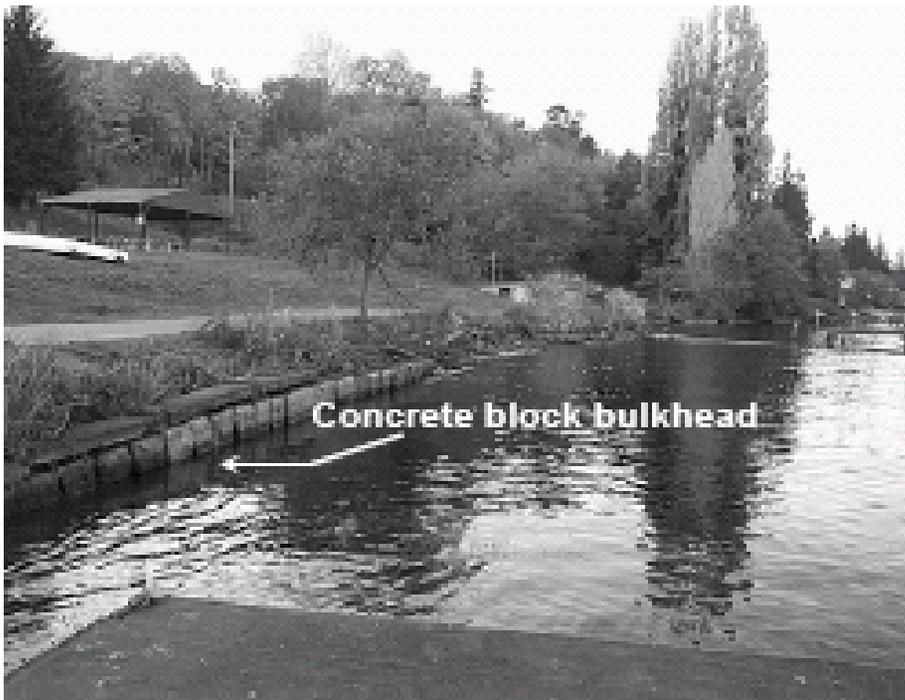
After



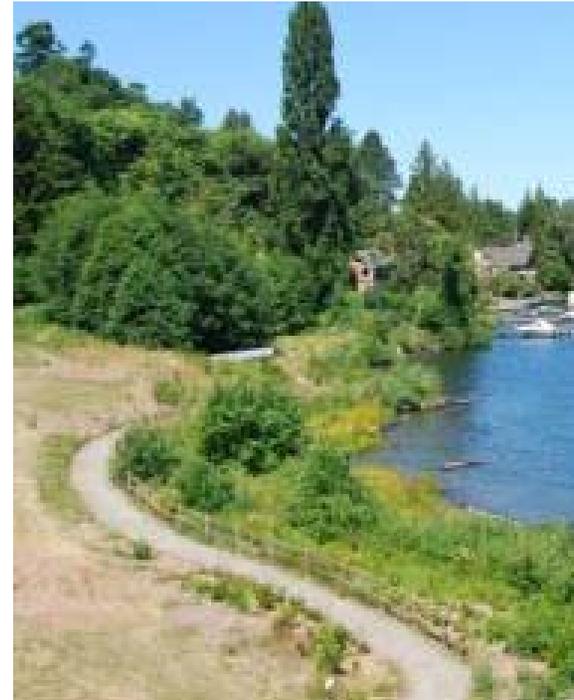
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North Shore Recreation Area



Before



After



Beaver Lake Park Master Plan



Seahurst Park



Before



After

Beaver Lake Park Master Plan



Olympic Sculpture Park



Before



After



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Additional Shoreline Considerations

- Parks issues
 - Operation and management
 - Shoreline access
 - Changes to shoreline uses (public input)



Beaver Lake Park Master Plan





Beaver Lake Park Master Plan

