Biodiversity Planning in King County: The LAB Project

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Local Action for Biodiversity

- A project of the International Committee for Local Environmental Initiatives, began in 2006
- Sponsored by the International Union for the Conservation of Nature (IUCN), Countdown 2010, South African Biodiversity Initiative, Roma Natura;
- Contributions of urban(izing) areas to biodiversity
- 20 participants worldwide
- King County joined the initiative in 2007
Current Participants

- Barcelona (Spain)
- Bonn (Germany)
- Cape Town (South Africa)
- Durban (South Africa)
- Edmonton (Canada)
- Ekurhuleni (South Africa)
- Ile de France (Paris, France)
- Johannesburg (South Africa)
- Joondalup (Australia)
- King County (USA)
- Leicester (U.K)
- Liverpool (Australia)
- Nagoya (Japan)
- Querétaro (Mexico)
- São Paulo (Brazil)
- Seoul (Korea)
- Tilburg (Netherlands)
- Waitakere (New Zealand)
- Walvis Bay (Namibia)
- Zagreb (Croatia)
The LAB Project Timeline

- Completed biodiversity report in 2007; printed 2008;
- Next: Develop biodiversity framework and strategy in 2008
  - Develop biodiversity plan in 2009
  - Implement 5 new biodiversity projects or programs by 2010
King County Biodiversity Report

- Completed fall 2007
- Printed April 2008
- Topics:
  - **Status**
  - Threats
  - Management
  - Governance
- Two maps produced
  - Landscape Diversity
  - Rare, Threatened, & Endangered Plants & Animals
Biodiversity levels covered:
- ecoregion (landscape)
- ecosystems
- habitat
- species

Missing: biodiversity at the genetic level

Biodiversity is defined as the variety of living organisms considered at all levels, from genetic diversity through species, to higher taxonomic levels, and includes the variety of habitats, ecosystems, and landscapes in which the species are found.
## Biodiversity Status

### Ecosystem/Habitat Level

<table>
<thead>
<tr>
<th>Wetland system</th>
<th>Number of wetlands</th>
<th>Hectares (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palustrine</td>
<td>836</td>
<td>5,507 (12,556)</td>
</tr>
<tr>
<td>Lacustrine</td>
<td>18</td>
<td>419 (956)</td>
</tr>
<tr>
<td>Palustrine/lacustrine</td>
<td>17</td>
<td>473 (1,078)</td>
</tr>
<tr>
<td>Estuarine</td>
<td>13</td>
<td>1,074 (2,449)</td>
</tr>
<tr>
<td>Marine</td>
<td>~30</td>
<td>~132 (~300)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>884</strong></td>
<td><strong>8,789 (20,039)</strong></td>
</tr>
</tbody>
</table>

### Species Level

#### KING COUNTY ANIMAL AND PLANT SPECIES

<table>
<thead>
<tr>
<th>Species Group</th>
<th>No. of Species in King County</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Birds icon] Birds</td>
<td>221 (5 are introduced)</td>
</tr>
<tr>
<td>![Mammals icon] Mammals</td>
<td>69 (8 are introduced)</td>
</tr>
<tr>
<td>![Amphibians icon] Amphibians</td>
<td>12 (1 is introduced)</td>
</tr>
<tr>
<td>![Reptiles icon] Reptiles</td>
<td>8 (2 are introduced)</td>
</tr>
<tr>
<td>![Freshwater Fish icon] Freshwater Fish</td>
<td>50 (20 are introduced)</td>
</tr>
<tr>
<td>![Fish icon] Marine Fish in Intertidal/</td>
<td>Over 60</td>
</tr>
<tr>
<td>Shallow Subtidal Habitat</td>
<td></td>
</tr>
<tr>
<td>![Vascular Plants icon] Vascular Plants</td>
<td>1249 (383 are introduced)</td>
</tr>
</tbody>
</table>
Findings

- Puget Lowland ecoregion is most altered, N. Cascade Alpine the least;
- Amphibians probably have declined most dramatically;
- Anna’s Hummingbird and Western Scrub Jay expanding range;
- Cougar Mtn. may be a local biodiversity “hotspot”;
- Many information gaps remain.
Information Gaps

- Species’ distributions and status information is poor;
- No complete natural history survey;
- Little genetic and life history information available to assess diversity and viability for known species.
Filling Information Gaps

- Eco-regional Assessment
- Public’s observations to database
- Citizen science monitoring? Phenology...
Looking Ahead –
Biodiversity Framework & Strategy

King County Biodiversity Goals:

- Functional landscapes and ecosystems
- Viable populations (native species and human sustainability)
Looking Ahead –
Biodiversity Framework & Strategy

Elements of an ecosystem-based approach to biodiversity conservation:

- Set boundaries using ecological and evolutionary processes
- Represent native ecosystem types and seral stages
- Address multiple levels of organization
- Address multiple temporal and spatial scales
- Manage for Resilience and Redundancy
- Renew the ethical commitment to conservation (Leopold)
- Engage citizens
Remember, only you can protect biodiversity.