Creating bird-friendly communities

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APWA – MN | Fall Meeting
Creating bird-friendly communities

AGENDA

- Why birds?
- Birding Economics
- 10 Commandments for:
  - Improving habitat
  - Reducing threats
  - Involving people
- Nature & Human Health
Birds are amazing...
And essential
And accessible
47 million birders
or
20% of Americans
Spent
$41B in the US
Minnesota

11th in nation for birding participation with 25% of our population

1 in 4 Minnesotans considers themselves a “birder”
Benefits of Birds and their habitats

- Beauty!
- Diversity
- Tourism
- Ecosystem Health
- Save time & money
- Experience Nature
- Health & Happiness

Pied-billed Grebe © Rebecca Field
What makes a community bird-friendly?
Increasing Habitat
Reducing Threats
Involving People

10 Commandments
Create and protect habitat anywhere and everywhere possible
1 Create habitat | anywhere, everywhere
Boulevards
Rain gardens
Pollinator benefits too...
Roadside / right of way
Native Restoration | Cost – Benefit

A 4.5 acre prairie (Indiana)

▪ Paid for itself in the first year
▪ Reduced on-going maintenance costs by $8,000 annually
▪ Along with other benefits (filter pollutants, control nuisance geese, reduce algae and erosion, attract wildlife)

http://www.hamiltoncountyuca.org/
Ground-nesting grassland species are among **the most threatened** of all birds

* Mowing | frequency (as little as possible)
Delay mowing until:

- July *at least*
- August *preferred*
Underused park area – consider less mowing, increasing low maintenance native plantings
Reduce Mowing | Eco-grass = “No Mow”
2 Promote native and beneficial plant species
* While controlling invasive and detrimental species
Why? Because...

native plants = native insects = native birds
96% of terrestrial birds raise their young on insects

(non-native plants generally do not produce the resources they need)
Example: A Black-capped Chickadee needs 5-10,000 caterpillars to raise one brood.
Which tree species best support birds?

Look at how many caterpillar species the trees support

Native Oaks
534 species of caterpillars

Non-native Ginkgo
4 species of caterpillars
### Best caterpillar trees

<table>
<thead>
<tr>
<th>Tree</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oak</td>
<td>534</td>
</tr>
<tr>
<td>Willow</td>
<td>456</td>
</tr>
<tr>
<td>Cherry</td>
<td>456</td>
</tr>
<tr>
<td>Birch</td>
<td>413</td>
</tr>
<tr>
<td>Crabapple</td>
<td>311</td>
</tr>
<tr>
<td>Blueberry</td>
<td>288</td>
</tr>
<tr>
<td>Maple</td>
<td>285</td>
</tr>
<tr>
<td>Pine</td>
<td>203</td>
</tr>
<tr>
<td>Hickory</td>
<td>200</td>
</tr>
</tbody>
</table>

http://www.bringingnaturehome.net/what-to-plant.html - Doug Tallamy
Forests for birds and wildlife

- Native species
- Species Diversity
- Structural diversity
- Climate resiliency
- Food and nesting resources
- Beauty
4 Ensure clean water in natural waterways
5 Provide nesting opportunities
Nesting platforms (Osprey)
Nest boxes (Bluebirds, tree swallows, kestrels, wood ducks)
Google Maps/Google Earth from http://www.capitolregionwd.org
Trout Brook Nature Sanctuary

- Creating urban habitat
- Restoring stream hydrology
- Creating nesting sites
- Creating recreational and stewardship opportunities
- Connecting residents
Reduce threats anywhere and everywhere possible
1. Cats
2. Buildings
3. Wind Turbines
4. Cars
5. Powerline electrocutions and collisions
6. Communication Towers
7. Toxic chemicals
6. Reduce threats from free roaming pets, esp. cats

Do not allow the practice of TNR in your community

Beware of TNR:
- Trap
- Neuter
- Release
Reduce collisions with windows
Window Collisions

**PRIMARY CAUSES**

- Reflection
- Transparency

EXACERBATED BY

Light Pollution

© Debra Kriensky / NYC Audubon

© Joanna Eckles

© Christine Sheppard
**Bird-friendly Building | Legislation, Ordinances, Codes and Guidelines**

**Mandatory**
- **Minnesota**: Buildings, Benchmarks and Beyond
- **San Francisco, CA**: Standards for Bird-safe Buildings
- **Oakland, CA**: Bird Safety Measures
- **Highland Park, IL**: new public buildings
- **Mountainview, CA**
- **Cook County, IL (unincorporated)**
- **Toronto, Canada**: Bird-friendly Development Standards
- **Ontario, Canada**: Environmental Protection Act, Species at Risk Act

**Voluntary**
- Sunnyvale CA: Standards for Bird-safe Buildings
- Palo Alto, CA
- California: CALGreen
- Calgary, Canada
- Howard County, MD

**Pending**
- Portland, OR
- San Jose, CA
- Washington, DC
- Arlington, VA
- Fairfax County, VA
- **FEDERAL** Bird-safe Buildings Act

Map courtesy of Chris Sheppard & Stefan Knust
Window Collision – Solutions

- Glass Hazards
- Light Pollution
Window collisions are a preventable problem...

- **Best** handled during design
- **But** retrofit solutions are available now
Design Solutions - Glass

Fritted glass
UV glass
Etched glass

Courtesy of Walker Glass
Screening / public art installation
Retrofit Solutions

Window film – custom design
Window film – commercially available design
- LEED Pilot Credit 55: Bird-deterrence
- Sustainability standards – local, regional (MSBG)
- Ordinances – ex. City of Minneapolis (Skyways)
Humans and all life on earth evolved with a balance of light and darkness. The tremendous increase in artificial light at night has serious repercussions for all living creatures, including us.
Increase in Artificial Night Sky Brightness | North America

Components of Light Pollution:

- **Sky Glow** = brightening of the night sky over inhabited areas.
- **Light Trespass** = light that shines where it is not needed or wanted.
- **Glare** = excessive brightness that causes visual discomfort.

http://darksitefinder.com/maps/world.html
Maximize useful light
Lighting Design and Retrofit

- Avoid “globe” lighting of any kind
- Plan for the systematic replacement of light fixtures that spill light up and/or horizontally

© Joanna Eckles
Lighting Retrofit – down-shield stadium lighting - AZ
Lighting Retrofit – residential porch lighting – MN

In planning municipal and residential lighting, specify fully down-shielded “dark sky compliant” fixtures
Carefully consider all “pest control” options

- Pesticides
- Herbicides
- Rodenticides

Exhaust all non-toxic options 1\textsuperscript{st}. Chemicals can have serious detrimental effects on birds and other wildlife.
People & Birds

Get people outside and involved in birding and conservation.
Involve people | Recreational opportunities
10 Involve people | Stewardship opportunities
10 Commandments for creating bird-friendly communities

SUMMARY

I. Increase Habitat
   1. Create habitat wherever possible
   2. Plant native species / Reduce invasives
   3. Provide native trees, snags, structural & species diversity
   4. Ensure clean water / natural hydrology
   5. Provide nesting opportunities – natural and constructed

II. Reduce threats
   6. Reduce window collisions
   7. Reduce Light Pollution
   8. Reduce threat from free-roaming pets
   9. Prioritize non-toxic “pest” control strategies

III. Involve people
   10. Provide Recreation and Stewardship opportunities
And lastly, Nature & Human Health

- Increased energy
- Increased immunity
- 50% lower risk of diabetes
- Reduced stress
- Reduced anxiety & depression
- 50% lower risk of heart attack
- 30% lower risk of colon cancer

SUGGESTED DOSAGE

2 MINUTES
STRESS IS RELIEVED WITHIN MINUTES OF EXPOSURE TO NATURE
(AS MEASURED BY MUSCLE TENSION, BLOOD PRESSURE AND BRAIN ACTIVITY)

2 HOURS
MEMORY PERFORMANCE AND ATTENTION SPAN IMPROVES
20% AFTER SPENDING AN HOUR INTERACTING WITH NATURE

2 DAYS
LEVELS OF CANCER FIGHTING WHITE BLOOD CELLS INCREASE 50%
AFTER SPENDING TWO OR MORE CONSECUTIVE DAYS IN NATURE


Nature & Human Health
Bird-friendly Communities

Better for Birds ... and People