Biodiversity Toolkit

A WHC – NRMCA Partnership to Promote Voluntary Biodiversity and Community Outreach Initiatives

Workshop Plan

• Part 1: Making the Case

• Part 2: Program Implementation

• Part 3: Alignment with Certification Programs

• Part 4: Success Story
The Corporate Role in Conservation

- 11.5% of Earth’s land is protected; that is not enough to provide adequate protection for global biodiversity (Rodrigues et al. 2004).
- Conservation activities on private lands are crucial to creating suitable habitat to support species on local and regional scales.
- Widespread cuts to science education in schools make conservation education on private lands critical for developing stewardship.

The Wildlife Habitat Council (WHC)

- 501 (c) (3) non-profit conservation organization
- Founded in 1988, international in scope
- HQ in the greater Washington DC area, operates with regional offices
- Strong standing with government and non-profit organizations
- Partner with SAC
- Mission: to increase the quantity of quality wildlife habitat on corporate, private and public lands.
What we do

Wildlife at Work

• Compatible with variety of properties: restoration, remediation, biodiversity enhancement, recreational, agricultural

• Step-by-step guide for employees and employers as they establish, develop and manage a wildlife program, leading up to WHC accreditation

• Program recognizes initiatives above and beyond mitigation or requirements

Corporate Lands for Learning

• Fosters in learners a clear understanding of wildlife, habitat, and their relationships to people.

• CLL works with both adults and children.

• CLL programs exist in both rural and urban areas, both on corporate wildlife habitats and in community parks and schoolyards.

Wildlife Habitat Council - Certified Programs 2012-2013
### Why get involved?

**Facility-level**
- License to operate
- Employee morale
- Improved community relations
- Protection / restoration of biodiversity
- Better rapport with regulatory agencies

**Corporate Level**
- Meeting sustainability goals
- KPIs for surveys and reporting
- Increased public recognition
- Increased effectiveness of EMS

### Flexible approach to specific needs

- Team Approach
- Tailored to Company’s needs
- Promotes an Integrated Strategy
- Utilizes a variety of options
- Works through partnerships
- Strong emphasis on community engagement
Challenges and Opportunities

- Facilities and Operations of a smaller size
- Limited Resources
- Smaller workforce
- Desire from the industry to increase visibility
- Create ways for all to participate in sustainability
  Connect with community in which you operate
- Motivate employees
- Promote role of habitat, even small patches

And the toolkit was created

- How to form a team
- Creating a management plan
- Choosing projects
- Maintenance and monitoring of projects
- Exploring community & employee outreach
- How to get certified
Compatible Biodiversity Projects

- Invasive Species Control & Use of Native Species
- Avian Management Programs
- Pollinator Habitat (gardens and meadows)
- Wetlands and Ponds Structural Enhancements

Invasive Plant Control

- Invasive plants displace valuable native species.
- Non-native, invasive plants aggressively dominate landscapes outside of their natural range
- Invasive species can have devastating ecological and economic impacts
  - Decreased food sources for native birds, mammals, and other animals
  - Decrease diversity of species
  - Increase ecosystem susceptibility to environmental stresses
- Management options vary based on species and landscape

**Tree of Heaven**

**Kudzu**

**Time Commitment**

- Planning: Several weeks
- Initial: A few days
- Maintenance: Ongoing
- Monitoring: Ongoing

**Cost**

- Varies based on control method and size of invasion
- Based on long term commitment

**Potential Partnerships**

- State and local agencies
- Youth groups
- IVM practitioners

**Maintenance**

- Follow up treatments
- Long term management is vital to success

**Monitoring**

- Following treatment
- Percent cover and species
### Promoting Use of Native Species

- Replace existing landscaping, such as shrubs and trees, with exclusively native vegetation as it expires or areas are updated.

- Vegetated Swales
  - Small water channels or bioswales reduce the negative impacts of storm water runoff
  - Native grasses and wildflowers that can tolerate saturated soils should be used.
  - The native vegetation will slow the flow of water and filter out pollutants

### Time Commitment
- Initial: Minimum of 1 day
- Maintenance: Higher in 1st growing season (establishment and weeding)
- Monitoring: weekly, early spring to frost

### Cost
- Initial: Approximately $2.50 per seed packet to $1-2 per small plug
- ~$30 to $300 for 15’x15’ area

### Potential Partnerships
- Master gardeners
- Local Native Plant Society
- Youth Groups
- Schools

### Maintenance
- Hand pulling of weeds
- Apply herbicide if necessary

### Monitoring
- Pollinators
  - Species observed
  - Citizen Science
- Plant Species
  - Survival

### Pollinator Habitat

- Provides habitat for pollinators and other wildlife (songbirds, snakes, lizards and other small mammals)

- Native wildflowers and grasses

- Bloom times should be taken into consideration:
  - Three types of flowers blooming at all times (spring, summer, and fall)

- Leave on plants or create signs so that employees and visitors can identify individual species.

### Time Commitment
- Initial: Minimum of 3 days
- Maintenance: Higher in 1st growing season (establishment and weeding)
- Monitoring: weekly, early spring to frost

### Cost
- Initial: Approximately $2.50 per seed packet to $1-2 per small plug
- ~$30 to $300 for 15’x15’ area

### Potential Partnerships
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  - Survival
**Artificial Nesting Structures**

- Decline in cavity-nesting bird species.
  - Habitat loss and degradation
  - Competition with non-native, invasive bird species

- Nest boxes
  - A hands-on project that will have tangible benefits by increasing local bird populations.
  - Tailor boxes to the preferences of the targeted species and place them in areas where the species is likely to use them.
  - Routine maintenance and monitoring are a crucial part of a successful nest box project.

**Time Commitment**
- Initial: 1 to 2 days
- Maintenance: Monthly
- Monitoring: Weekly during spring and summer

**Cost**
- Initial: ~$30 per box

**Potential Partnerships**
- Birders
- Local Audubon chapter
- Youth Groups
- Schools

**Maintenance**
- Annual cleaning
- Occasional repairs

**Monitoring**
- Detailed monitoring logs
- eBird or NestWatch

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**Structural Enhancements**

**Ponds & Wetlands**

- Simple structures can be both submerged and on shore
- Enhance habitat for aquatic and terrestrial species through addition of structures.
  - Brush piles, rock piles, downed trees, basking logs, and floating platforms
- Structural Enhancements provide a variety of functions:
  - Establishment of breeding territories
  - Nesting and roosting sites
  - Cover for fish, encourage insect oviposition
  - Substrate for the growth of algae
  - Sunning areas and perching locations

**Time Commitment**
- Initial: 1 to 2 days
- Maintenance: Minimal
- Monitoring: Weekly, early spring to frost for targeted species’ use

**Cost**
- Inexpensive
- Typically from recycled materials available at facility

**Potential Partnerships**
- Local Chapter of Ducks Unlimited
- Youth Groups
- Schools

**Maintenance & Monitoring**
- Yearly inspections and repairs
- Participation in Citizen Science
- Detailed monitoring logs
  - Species observed using the structures
Going Beyond Property Boundaries: Importance of Partners

- Conservation and Education Partners provide expertise.
  - Bring in new knowledge and skills to your program
  - Adding additional resources for projects & programs

Potential Partners:
- Local Government Agencies
- Conservation NGOs
- Soil & Conservation District
- Master Gardeners

Steps to Success:
- Identify common goals/missions
- Share vision for your project
- Invite partner to join your team, add expertise
- Project goals should be mutually beneficial

Monitoring:
- Track success for you program and partner organization

Maintenance:
- Leverage partnerships
  - Resources
  - New audiences for your conservation message

Going Beyond Property Boundaries: Youth Groups, Schools, Colleges

- Create a win-win scenario for your community.
  - Learners use your habitat project as an outdoor laboratory.
  - You gain valuable expertise and volunteers for your program

Potential Partners:
- Scout groups seeking badges, patches or seeking to meet community service requirements.
- Youth groups seeking a place to “connect with the natural world” and experience project-based learning and “team building”
- Colleges, Universities and Technical Schools seeking a natural space to conduct research or to use as a “real world example” for field study or projects.
- Local schools seeking a place to study can also help with monitoring of projects, take part in annual events.

Monitoring:
- Be sure to record all partner involvement.
  - Track the hours your community contributes to your programs.
  - Track the hours your team contributes to community conservation programs.
Going Beyond Property Boundaries: A Difference Experience with your Community

- Community engagement can take many forms:
  - Outreach to the community
  - Events: earth day, pollinator week, arbor day, international wetland day
  - Open House

Potential Benefits:
- Support of local education goals
- Increased public awareness on topics of critical environmental interest.
- Increased public awareness of your commitment to those issues.

Potential Challenges:
- Identifying the type of event or program.
- Logistical aspects of inviting people to your property.
- Evaluating “success” for you and your community partners.

Recognition

- WHC Accreditation: Wildlife at Work and Corporate Lands for Learning
- Local to international recognition
- Third party credibility

- Clear requirements
- Technical Assistance
- Access to Network (over 800 programs)
Recognition

• NRMCA Sustainable Plant Certification
Targets Per Unit of Concrete Produced*

- Embodied energy: 30% reduction by 2030
- Carbon footprint: 30% reduction by 2030
- Potable water: 20% reduction by 2030
- Waste: 50% reduction by 2030
- Recycled content: 400% increase by 2030

*Sustainability Credits

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Credit 2.15 Biodiversity

- Participate in WHC Wildlife at Work program (Up to 3 Points).
  - Adopt 1 enhancement strategy
  - Adopt 2 enhancement strategy
  - Achieve Certification for 1 enhancement strategy

Connecting People to Nature

The Titan America Experience
We believe that concrete helps solve societies big challenges of the day

• Concrete products are a wise CO2 investment
• reduce CO2 footprint of the concrete mix
• improve environmental performance of sites

Environmental Performance part of our plan

• Green Star certifications
• Sustainable plant program
• Biodiversity plans
Why should I be interested? (Especially now when there is no $$$)

- Reduce (cost) carbon in maintenance plans
- Offset carbon if possible with plantings
- Reduce potential safety challenges
- Increase thinking on environmental performance
- License to operate in our communities

Tool Kit focuses on specific areas

- Manage exotic species
- Create habitat for pollinators
- Establish Avian management projects
- Enhance Visual berms and greenscaping
Manage exotic species

• Winston Salem, NC Cement terminal
Axer removal of invasive tree and poison oak.

After removal of invasive tree and poison oak.
Establish Avian management projects

- Front Royal
- Winston Salem
WILDLIFE HABITAT AREA

This area has been dedicated to restoring and enhancing the local wildlife habitat. Please help us protect our precious natural resources.
Enhance Visual berms and greenscaping

Typical
Not typical!
Eliminate mowing on slopes
Create habitat for pollinators
Pollinator’s at work
First honey harvest November 2012
There are many unplanned benefits

- Drive culture of performance
- employee satisfaction
- curb appeal for neighbors
- Removal of safety hazards
Options - Toolkit

- Investigate interest for project at your facility
- Contact WHC to obtain a customized toolkit for your area
- Start on your own or request a visit from a WHC biologist or educator
- Work towards path to certification, recognition and a happier workforce!

Options - Others

- Traditional WHC Approach with Corporate Lands for Learning or Wildlife at Work more comprehensive coverage
- Take ideas to local partners for assistance
- Not compatible with your operations? Consider adopting an alternate location
- Join the WHC and apply to other types of operations
For More Information

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