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# **Community Wildlife Program Evaluation Plan**

**prepared for**

## **Kalamazoo Nature Center**

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**by**

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# Community Wildlife Program Evaluation Plan

The Community Wildlife Program (CWP), a service of the Kalamazoo Nature Center, assists property owners “to establish and maintain natural areas on their grounds, with the purpose of enhancing wildlife habitat and indigenous vegetation and protecting water resources.”<sup>1</sup>

I prepared this evaluation plan in partial fulfillment of the requirements of a graduate course in evaluation.<sup>2</sup> The evaluation is designed to provide program staff with feedback about the quality and value of the program’s process and outcomes for the purpose of improvement.

While the program director is the primary evaluation client, participating golf courses providing information for the evaluation are key stakeholders with a right be informed of the evaluation’s findings. The Nature Center may wish to disseminate the evaluation report or a summary of key findings to other parties (e.g., potential program clients, environmental and industry organizations, other nature centers, and funding organizations), at its discretion.

My initial discussion with the CWP director concerned an evaluation of the entire program, which serves a wide variety of entities, including corporations, golf courses, small businesses, schools, housing developments, and homeowners. The majority of program clients, however, are golf courses, and the program’s services to golf course are the most formalized. For these reasons, and to ensure the evaluation would be of a manageable scope, the evaluation plan was narrowed to address only the golf course component.

Data for the evaluation will be gathered from multiple sources (program staff; client course superintendents, patrons, and pros; species inventory data; relevant literature; media coverage) using multiple methods (surveys, interviews, observation, literature review, document review, analysis of extant data, visual record). The evaluation approach is based on Scriven’s (2002) Key Evaluation Checklist.<sup>3</sup>

## Program Background and Context

The Kalamazoo Nature Center started the Community Wildlife Program in 1997 in response to a growing number of requests for assistance with environment- and wildlife-friendly landscaping and land management. Most golf course superintendents have been trained in traditional course maintenance techniques—which involve routine use of pesticides, herbicides, and fertilizers and massive irrigation—and do not have expertise in more ecologically friendly land management practices. Several local golf courses have turned to the Nature Center for assistance.

A report of the Academy of Natural Sciences indicates the average golf course:

- applies 55 pounds of pesticides per acre each year—in the U.S., this adds up to more than 12 million pounds
- uses 500,000-800,000 gallons of water per day<sup>4</sup>

Such figures have generated public concern about the environmental impacts of golf courses. Increasingly, golf courses across the U.S. are adopting more ecologically sensitive course management practices—and publicizing such efforts—as a way to address these concerns.

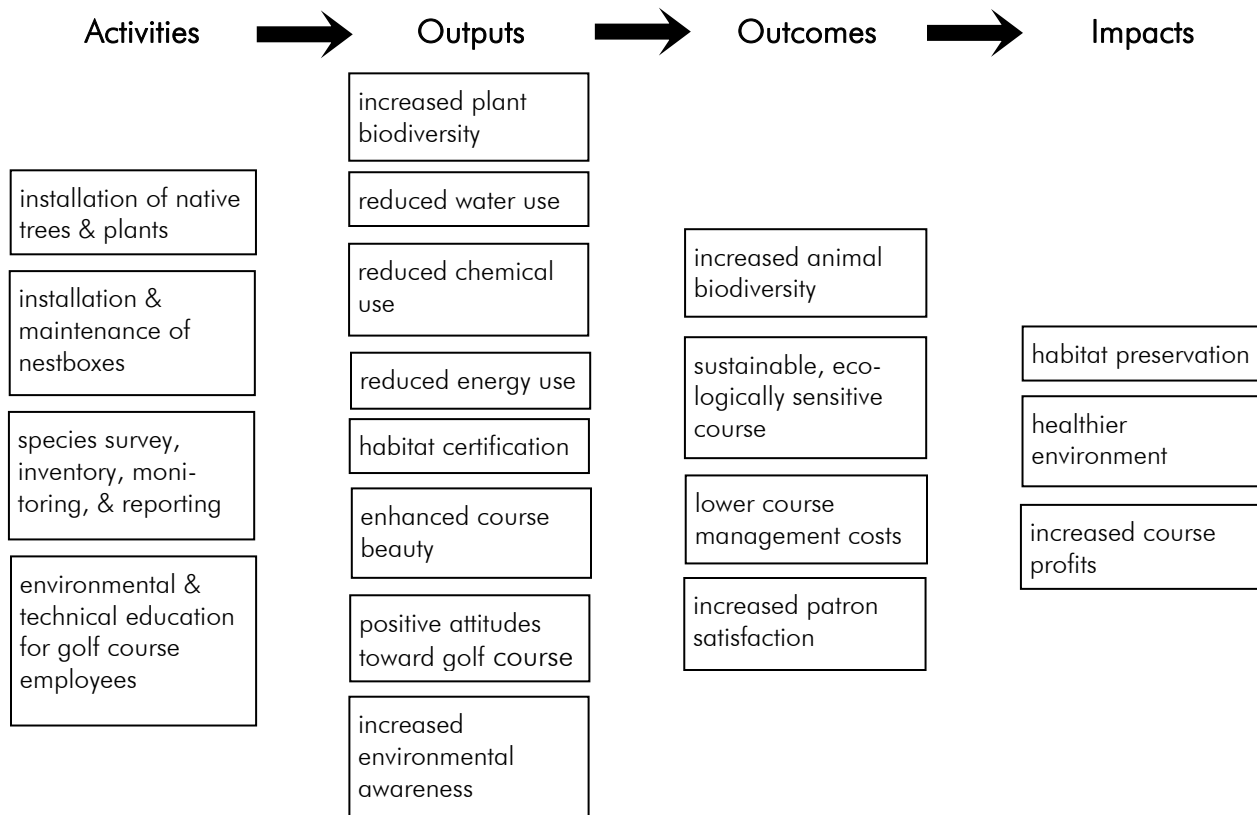
The Audubon International (AI) Cooperative Sanctuary Program offers certification—and national recognition—to golf courses that meet AI's certification criteria, which involve completing projects focused on environmental planning, wildlife and habitat management, chemical use reduction and safety, water conservation, water quality management, and outreach and education. CWP helps golf courses conduct projects in these areas and meet the requirements to become a Certified Audubon Cooperative Sanctuary. However, according to the program director, the Nature Center's services to golf courses often exceed AI's certification requirements.

CWP had never been evaluated. To date, I have not located any evaluation comparable to the one being proposed. However, there are a variety of studies available concerning environmental remediation and education projects. These sources will be consulted as they pertain to various aspects of this evaluation. In addition, AI maintains an on-line database of golf course survey results and case studies.<sup>5</sup>

## Program Description

Based on my review of program materials, interview with the program director, and review of AI's certification program, I developed a preliminary program logic model that conveys the basic relationships between/progression from program activities, outputs, outcomes, and impacts. This model will be refined throughout the evaluation.

### Community Wildlife Program Logic Model



Length and type of service is negotiated with CWP clients depending on their needs and resources. According to the program director, a typical consultation includes weekly site visits from April to August for species inventory and monitoring, assistance with the implementation of environmental projects, and delivery of a final report. The typical cost for this level of service is approximately \$1,600 - \$1,800.

## Program Consumers

The program's immediate "consumers" (recipients of program services) include 17 golf courses (3 former, 12 current, 2 new in 2003) in southwest Michigan.<sup>6</sup> Course superintendents, who are responsible for course maintenance, are the individuals most directly involved with and impacted by the program. Groundskeepers may also receive training and implement plans. Indirectly impacted by the program are golf course patrons and possibly adjacent property owners.

An important beneficiary group is the current and future residents of the communities in which the participating golf courses are located. Presumably, a healthier environment will contribute to the health and well-being of generations come to come. However, it is not within the scope of this evaluation to assess impact on the community at large, although some findings may serve as indicators for this type of long-range impact.

Other entities that may be affected by/have an interest in the program include local environmental and business organizations, golf course industry organizations, and regulatory agencies. The evaluation will not include a systematic investigation of impacts on these groups, but any such information that surfaces during the evaluation will be noted and addressed.

## Program Resources

The program is staffed by a full-time biologist/program director, half-time assistant biologist, and a certified Master Gardener who works for the program on an as-needed basis. The program has an operating budget of approximately \$35,000.

In order to inform the assessment of the project's cost-effectiveness compared to alternative uses of available resources (see section titled "Comparative Cost-Effectiveness" under the "Evaluation Components" heading below), the full range of resources available to support the program—beyond those noted above—will be identified. Such resources may include time and expertise of volunteers, community organizations, and course patrons; external funding from charitable donations and research grants; and organizational/interpersonal networks.

## Values

The program will be evaluated according to the following values:

- Basic principles of habitat restoration and native landscaping: stewardship, conservation, and sustainability
- Basic principles of customer service: professionalism, state-of-art service, responsiveness, and timeliness
- Consumer needs: Presently, this plan assumes that these will include:
  - frugal use of resources
  - enhanced course beauty and quality
  - training so that outcomes may be sustained/advanced
  - alignment with business goals
- The Nature Center’s mission to “inspire people to care for the environment...”

## Evaluation Components

The evaluation will examine the program’s process, outcomes, cost-effectiveness, exportability, and overall significance. Results of the process and outcome evaluation will inform the other evaluation components. *The evaluation questions, data sources, and criteria will be refined as I learn more about the program and evaluation context.*

Each dimension of the program (e.g., customer service) will be given a quality rating. Criteria for “excellent” and “poor” ratings on subdimensions are presented in this section. Criteria for “very good,” “good,” and “satisfactory” will be developed. All criteria will be checked for validity and weighted according to importance.

Subdimensional ratings will be synthesized to produce a rating of each major dimension according to the following rubric<sup>7</sup>:

<b>Excellent</b>	Clear example of best practices; no weaknesses
<b>Very Good</b>	Very good or excellent performance on most aspects; no real weaknesses
<b>Good</b>	Reasonably good performance on most aspects; a few slight weaknesses
<b>Satisfactory</b>	Fair performance; a few serious weaknesses
<b>Poor</b>	Clear evidence of counterproductive/detrimental practices

## Process Evaluation

The process evaluation will address the extent to which the program is implemented effectively and efficiently, focusing on customer service and technical quality. Factors that facilitate or hinder program implementation, such as those related to program contexts, inputs, and content, will be also identified.

### Customer Service

Questions/Subdimensions		Data sources
To what extent are services responsive to individual client's needs?		<ul style="list-style-type: none"> <li>• Interviews with a sample of clients</li> <li>• Mailed survey of all clients</li> </ul>
To what extent are services delivered in a professional and timely manner?		
To what extent are clients satisfied with the services and materials they received?		
To what extent did course staff gain useful knowledge and skills?		
Interpreting Results:	Excellent	Poor
<i>Activities, plans, and recommendations are...</i>	tailored to individual course's needs	delivered in "cookie cutter" style without regard to unique client characteristics
<i>Services and other deliverables are...</i>	when promised and needed	too late to be useful
<i>Clients express...</i>	high satisfaction and would recommend the program to others	dissatisfaction and would not recommend the program to others
<i>Clients gain...</i>	substantial knowledge and skills for sustaining/advance outcomes	no new or useful knowledge and skills

## Technical Quality

Questions		Data sources
To what extent are practices/recommendations consistent with best practices in habitat restoration?		<ul style="list-style-type: none"> <li>Literature review</li> <li>Interview with CWP staff</li> </ul>
To what extent are practices/recommendations consistent with best practices in course management?		
<b>Interpreting Results:</b>	<b>Excellent</b>	<b>Poor</b>
<i>Habitat restoration activities...</i>	are consistent with what is advanced as best practice in the current literature	contradict best practices
<i>Course management recommendations...</i>		

## Outcomes

The outcome evaluation will identify and assess the program's outcomes, focusing on habitat improvement, habitat quality, effect on course quality, and effect on course management costs.

### Habitat Improvement

Questions	Data sources
How much new habitat area has been added?	<ul style="list-style-type: none"> <li>Interviews with clients<sup>8</sup></li> <li>Review of relevant records</li> <li>CWP species inventory data</li> <li>Mailed survey of all clients</li> </ul>
To what extent has the number of invasive species decreased?	
To what extent has the use of chemicals decreased?	
To what extent has the program led to an increase in the type and number of native species?	

Interpreting Results:	Excellent	Poor
<i>Habitat area...</i>	increased significantly	did not increase
<i>Invasive species...</i>	were eradicated or attempts to eradicate are aggressive	are encouraged to thrive/allowed to invade neighboring properties
<i>Chemical (fertilizer, pesticides, herbicides) use...</i>	has been eliminated or substantially reduced	has not declined
<i>Native plant species...</i>	comprise the vast majority of all new plantings	are not given precedence over exotics

### Habitat Quality

Questions	Data sources	
How many native _____ species are present?	<ul style="list-style-type: none"> <li>• CWP species inventory data</li> </ul>	
plant		
butterfly		
dragonfly		
amphibian		
reptile		
bird		
Interpreting Results:	Excellent	Poor
<i>to be determined</i>		

## Effect on Course Quality

Questions		Data sources
How have CWP activities impacted the quality of play on the courses?		<ul style="list-style-type: none"> <li>• Interviews with course pros/patrons</li> <li>• Third-party course ratings</li> </ul>
How have CWP activities affected patron satisfaction?		<ul style="list-style-type: none"> <li>• Interviews with course pros/patrons</li> </ul>
How was the program impacted the aesthetic quality of the course?		<ul style="list-style-type: none"> <li>• Photographic record/observation</li> <li>• Interviews with course pros/patrons</li> </ul>
Interpreting Results:	Excellent	Poor
<i>Quality of play has...</i>	improved	significantly declined
<i>Patrons...</i>	strongly praise the changes in the course due to CWP	are very unhappy with the changes
<i>The course is...</i>	significantly more attractive	significantly less attractive

## Effect on Course Maintenance Expenditures

Questions	Data sources
To what extent have water expenditures decreased?	<ul style="list-style-type: none"> <li>• Interviews with clients</li> <li>• Documentation of costs (e.g., financial reports, if available)</li> </ul>
To what extent have chemical expenditures decreased?	
To what extent have fuel expenditures decreased?	
To what extent have labor expenditures decreased?	

Interpreting Results:	Excellent	Poor
<i>Water expenditures...</i>	significantly declined	increased
<i>Chemical expenditures...</i>		
<i>Fuel expenditures...</i>		
<i>Labor expenditures...</i>		

## Comparative Cost-Effectiveness

The comparative cost-effectiveness evaluation will examine costs (e.g., money, time, opportunity, etc.) associated with the program in relation to alternative uses of available resources. This component of the evaluation will investigate what impacts could be achieved with

- Significantly fewer resources: What impacts could be achieved for a minimum investment?
- Slightly fewer resources: Could comparable results be achieved for less?
- Slightly more resources: Could substantially more be achieved with a small increase in resources?
- Significantly more resources: What could be achieved if extensive resources were available?

These comparisons will help determine whether program costs are excessive, high, acceptable, or extremely reasonable compared to alternatives.

## Exportability

CWP is a local program designed to serve local entities. To my knowledge, it is not the Nature Center’s intent to export the program to other contexts, so the exportability evaluation will focus only on the program’s viability in the future. However, the evaluation may reveal program elements that would be valuable in other settings and/or to other entities.

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## Overall Significance

The evaluation components discussed above will inform the evaluation of the program's overall significance, including determination of salient strengths and weaknesses.

## Timeline and Deliverables

Data collection will take place from April to August, 2003.

The final report, to be delivered no later than October 1, 2003, will include the following:

- 1-page executive summary of key findings
- short (10-15 page) report with
  - descriptions and ratings of overall program processes and outcomes
  - descriptions and ratings of program outcomes at individual courses
- technical appendix with
  - detailed descriptions of the data collection and analysis techniques used
  - detailed description of how findings were synthesized to generate ratings
  - copies of survey instruments and interview protocols

## Notes

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<sup>1</sup> [www.naturecenter.org/research/wildlife.htm](http://www.naturecenter.org/research/wildlife.htm)

<sup>2</sup> Sociology 687—Evaluation Research, taught by Dr. Jane Davidson at Western Michigan University. For more information about the course and its requirements, see [homepages.wmich.edu/~j davidso/eval/](http://homepages.wmich.edu/~j davidso/eval/)

<sup>3</sup> See [www.wmich.edu/evalctr/checklists/KEC.pdf](http://www.wmich.edu/evalctr/checklists/KEC.pdf)

<sup>4</sup> Reuther, C. (1999, August). *Towards a greener game: A new environmental awareness is slowly taking hold of the U.S. golf industry*. Retrieved November 16, 2002 from [www.acnatsci.org/research/kye/golf.html](http://www.acnatsci.org/research/kye/golf.html)

<sup>5</sup> See [www.audubonintl.org/institute/rsrch-database.htm](http://www.audubonintl.org/institute/rsrch-database.htm)

<sup>6</sup> Current clients:

- Gull Lake View Golf Club (which has five separate courses: Gull Lakeview East Course, Gull Lakeview West Course, Bedford Valley Golf Course, Stonehedge Golf Course, North Course at Stonehedge)
- Egypt Valley Country Club
- Kalamazoo Country Club
- Gull Lake Country Club
- The Moors Golf Club
- Kalamazoo Municipal Golf Association (Milham Park, Eastern Hills, and Red Arrow Golf Courses)

Former clients:

- Ridgeview Golf Club
- Watermark Country Club
- Shagbark Golf Club

New clients for 2003:

- The Meadows at Grand Valley State University
- Sunnybrook Country Club

<sup>7</sup> Based on Jane Davidson's (2002) rubric for determining merit

<sup>8</sup> Interviews will be based in part on AI's managed lands survey instrument, which is available at [www.audubonintl.org/projects/managedlands/index.htm](http://www.audubonintl.org/projects/managedlands/index.htm)