

PROMOTING LANDSCAPE CONNECTIVITY IN THE ALGONQUIN TO ADIRONDACK (A2A) REGION THROUGH MUNICIPAL PLANNING: THE GREATER PARK ECOSYSTEM (GPE) MAPPING PROJECT

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Abstract

To help promote landscape connectivity between Ontario's Algonquin Park and New York State's Adirondack Park, a coalition of groups began a pilot mapping project in support of better municipal planning in the Ontario County of Leeds and Grenville. Under Ontario's Planning Act, municipal plans must "have regard for" natural heritage features. Unfortunately, municipal planners face a serious lack of information on the existence and significance of natural heritage features, especially those that cross municipal boundaries. The GPE Mapping Project used GIS-based mapping and analysis to provide planners with information on selected natural heritage features and their significance, without regard to municipal boundaries. We outline the project, and share the lessons learned to date.

Introduction

The region between Ontario's Algonquin Park and New York State's Adirondack Park (the A2A Region) offers the last opportunity for a naturally vegetated, continental-scale landscape corridor linking the wilderness areas of the Northern Boreal Forest and the Appalachian Mountains. In order to protect and enhance the natural character of the region, several Ontario organizations formed a working group to provide local municipal planners with current information on natural heritage features for inclusion in municipal plans. The group included the Ottawa Valley Chapter of the Canadian Parks and Wilderness Society (CPAWS), the Eastern Ontario Model Forest (EOMF), Parks Canada, The Watershed, and the Leeds Stewardship Council. The Kemptville District Office of the Ontario Ministry of Natural Resources (OMNR) and the United Counties of Leeds and Grenville provided significant advice.

Working with official Ontario policy statements, guides and technical manuals, the Eastern Ontario Natural Heritage Working Group (hereafter referred to as the Working Group) tried to map and evaluate the significance of woodlands, wetlands, wildlife habitat and wildlife corridors. This Greater Park Ecosystem (GPE) Mapping Project used the GIS capability of the EOMF and CPAWS, models developed by the Eastern Ontario Model Forest and CPAWS, and digital map data provided by the OMNR and Parks Canada.

Other groups have used similar GIS, geospatial data and spatial analyses to identify, map and evaluate natural heritage features and values. Few, however, have explicitly incorporated their work directly into the municipal planning process. This project provides important lessons about the ways that conservation organizations can work successfully within the Ontario municipal planning process.

Methodology

This paper does not focus on the technical details of the GIS mapping and analyses. Readers can obtain this information from the website of the Eastern Ontario Model Forest (EOMF, 2002) and from the author. Instead, this paper focuses on the advantages and disadvantages of this model of conservation, and the lessons learned.

The GPE mapping project began with the formation of the Working Group. This steering committee grew out of attempts by St. Lawrence Islands National Park to consult with stakeholders on the development of a greater park ecosystem management plan. Recognizing the importance of the park as a series of stepping stones across the St. Lawrence River for wildlife movement, and yet aware of the park's fragility and dependency upon the surrounding landscape, the park staff decided to work actively on regional conservation research and mapping. These efforts complemented the needs and priorities of other organizations: the EOMF, with its mandate to develop local indicators of sustainable management; The Watershed, a coalition of local groups dedicated to the establishment of a Biosphere Reserve; and CPAWS, with a mandate to protect and connect protected areas and wilderness.

The Working Group focused on local land-use planning for two, interconnected reasons: first, outside of the establishment of new protected areas, local municipalities make the most important conservation decisions in the design and implementation of their official plans; second, the *Ontario Provincial Policy Statement (PPS)* (OMMAH, 1997) requires municipal plans to "have regard for" natural heritage features — particularly threatened or endangered species, significant woodlands, significant wetlands, significant wildlife habitat and significant animal movement corridors. Unfortunately, local municipalities often lack the necessary natural heritage information to implement this provision of the PPS, and local conservation groups lack the necessary information to hold them to account.

The process began with formation of a Technical Committee to identify those gaps in natural heritage information which the Working Group could fill with GIS mapping and analysis. Four areas emerged: significant woodlands, unevaluated wetlands, significant wildlife habitat, and wildlife movement corridors. The Technical Committee then met regularly for more than a year to discuss and establish the procedures and criteria for identifying, mapping and evaluating these features. Once mapping began, the technical committee continued to meet to evaluate the GIS products as they became available.

While the mapping and analysis continued, the Working Group hired a local community planning and conservation consultant to work with municipal planners and councils, to

assess their information needs and timelines, and to promote the project. This community liaison also met with other conservation organizations, citizen's groups and other stakeholders to promote the project, to judge support, and to take comments and suggestions.

Results

The Working Group provided maps and evaluations of woodlands and wetlands to the Township of Leeds and the Thousand Islands, The Township of Rideau Lakes, and the Township of Elizabethtown-Kitley (the three municipalities in the study area with open plans). The wetlands map included both provincially evaluated and unevaluated wetlands. Data matching and evaluation exercises by Dr. Mike Sawada's Geography 4121 class at the University of Ottawa suggested that we could not reliably identify significant wildlife habitat and wildlife movement corridors with the available data. Instead, the Working Group provided each of the townships with a matrix of potential wildlife habitats and provincial *Ecological Land Classifications* (Lee *et al.*, 1998), and a copy of the NHIC's *The Big Picture 2002* (NHIC, 2003) — a map of landscape “cores and corridors” for Southern Ontario.

As of the writing of this paper, the consulting planner for the Township of Leeds and the Thousand Islands had included the woodlands and wetlands maps in “Schedule B” of his draft official plan - that is, as non-binding guidelines for future development and conservation. The consulting planner for both Rideau Lakes and Elizabethtown-Kitley (the same planner for both townships) submitted his draft official plans to councils prior to the release of the maps, but the maps could still appear in some form in the final official plans. In addition, several counties surrounding the initial study area have requested expansion of the mapping project, and at least one private landowner plans to use the woodlands map to help demonstrate the ecological value of a property under the federal Ecological Gifts Program.

Discussion

This project provided valuable lessons regarding the necessary conditions under which conservation organizations can work within the municipal planning process, as well as strategies and obstacles to success. An informal survey of the project participants identified a number of key points.

First, the project benefited greatly from a supportive regulatory environment. The requirement within the PPS (OMMAH, 1997) for municipalities “to have regard” for natural heritage values in their official plans and planning decisions creates a legally enforceable obligation. A 1999 review of county and regional plans in Ontario (The Community Development Group, 1999) revealed that most municipalities have attempted to comply with at least the minimum requirements of the PPS. Furthermore, in the area of this pilot project, the OMNR appears willing to use its power of review to insure that municipalities comply with the regulations, having already rejected the Township of Rideau Lakes' first new official plan because it ignored natural heritage values.

Second, the project benefited from a pre-existing public understanding and vision of the ecological significance of planning area. Prior to the GPE Mapping Project in Leeds and Grenville, many groups worked long for recognition of the region's unique ecological values — a process of education that culminated in the designation of the Thousand Islands - Frontenac Arch Biosphere Reserve. This work established the importance of conservation in the region and helped to insure a positive public reception. If such understanding and vision had not already existed, the Working Group would have needed to create them.

Third, success within the planning process required a broad coalition of groups sharing a minimum set of principles and objectives. The Working Group consists of groups committed to the practice of landscape and conservation ecology for the restoration, enhancement, and maintenance of ecological connectivity, ecosystem function, and native biodiversity, while respecting sustainable human land-uses. The breadth of the coalition — encompassing government agencies, non-governmental organizations and private sector partners — defied marginalization as a narrow “special interest group”, implied widespread community support for its objectives, and gave its presentations substantial democratic “weight” in the planning process.

Fourth, this coalition did not arise spontaneously, but coalesced around charismatic and effective local leaders. These people built a network of contacts, brought groups together, identified common interests and goals, and represented the coalition in public. Without this leadership, the coalition would have floundered for lack of direction, impetus and recognition.

In the context of these general conditions, several specific strategies contributed greatly to the project's success. First, the partners worked on a cooperative and consensual basis throughout the project, both in administration and in the development and evaluation of the GIS products. Every partner recognized the project's value, and every partner made important contributions in terms of ecological, technical or community outreach expertise. Because of this, every partner understood the value and limitations of the final maps and analyses prior to their release, and gave them full public support.

Second, the partners actively promoted the project at a grassroots level, making presentations to cottagers' associations, stewardship councils, conservation organizations, local trade shows, rural fairs, talking about the project, showing preliminary maps and analyses, and asking for feedback. Along with the work of the community liaison, these presentations increased public awareness of the project and provided critical assessments of the public response to the map products. Based upon public comments, the Technical Committee changed the maps and explanatory materials to make them more comprehensible to general audiences.

Third, and most important, the Working Group worked directly with the planners to assess their natural heritage information needs in terms of content, format and deadlines. For example, planners and municipal councils rarely have accurate maps or natural heritage information for areas outside their own municipal boundaries, making it difficult for them to incorporate regional landscape patterns and conservation priorities in their official plans. The Working Group, therefore, conducted its mapping and evaluations of wood-

lands and wetlands at regional scales, and then provided the planners with both the full digital maps and with paper maps “clipped” to township boundaries. In another instance, a planner reported that his council wanted the woodlands map to identify “significant” and “non-significant” woodlands. Although the Working Group did not plan, initially, to go beyond an unclassified evaluation, Mark Rowsell (EOMF) of the Technical Committee responded by developing a method of mapping and identifying the most significant 30% of woodlands in each quaternary watershed, and then clipping the resulting regional map to township boundaries.

Fourth, in order to give planners and councilors the confidence that its maps and analyses could withstand scrutiny before the *Ontario Municipal Board* (OMB), the Working Group based them directly upon provincial natural heritage policies, manuals and technical guides, as well as provincial data sources. For example, the Working Group based all of the components of the woodlands evaluation model on criteria taken directly from the OMNR’s *Natural Heritage Reference Manual* (1999), and it ran the model on a corrected and updated version of the Province’s Forest Resource Inventory map layer. Similarly, the Working Group based its wetland evaluation model primarily upon criteria identified in the *Ontario Wetland Evaluation System* (OMNR, 2003), as well as an OMNR study of feasibility of conducting wetland evaluations using remote sensing, GIS, and components of the OWES (Chisholm *et al.*, 1995).

The GPE mapping project also provided lessons regarding obstacles to successful use of the municipal planning process for the protection of natural heritage systems. First, despite all of the public education and outreach done during establishment of the Biosphere Reserve, the Working Group still had to convince some planners and municipal councilors that natural heritage features actually deserve protection. In its review of county and region official plans, The Community Development Group (1999: 5) found that “*the most progressive natural heritage policy originates in those areas facing intense pressure*”. In areas such as Leeds and Grenville, where woodlands, wetlands and other natural heritage features remain relatively abundant, councilors are more inclined to regard them as obstacles to development than recognize them as ecological significant components of the landscape. An understandable reluctance to incorporate in an official plan any provision which might provoke OMB hearing reinforces this tendency.

Second, this project showed that the municipal planning system can place heavy demands on the human and material resources of an organization — not least because the organization must repeat the process in each new area. “Grass-roots” democracy drives the municipal planning process, and municipal plans will always reflect local concerns, local coalitions and local leadership. These can differ greatly over a region, and an approach that works in one municipality may not work in another.

We may require several years to determine how well this model of conservation actually works. Measures of success will include the number of Townships incorporating GPE maps and analyses in their official plans, and whether or not their incorporation actually contributes to the protection of natural heritage features.

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