

*Fundamental Elements
of a
Landscape Stewardship Plan*

Report of a Workshop

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Kingston, Ontario

***Supported by the Frontenac Stewardship
Foundation and the County of Frontenac***

Reported by Gray Merriam and Don Ross

BACKGROUND TO THE WORKSHOP

The Frontenac Stewardship Council had conducted stewardship projects for over ten years. As preliminary outreach to the people on the land, the Stewardship Council, financially supported by the County Council, produced “The Naturally Rich Frontenacs”, a booklet displaying the riches of Frontenac County. The Naturally Rich Frontenacs encouraged engagement and pride of the people in their lands and waters.

More recently, Stewardship Council members questioned whether projects typically supported by the Council would be more effective if they were judged against and then followed a stewardship plan for the entire County. The need for a County Stewardship Plan was moved forward into an Integrated Community Sustainability Plan for the County and became a listed component project within that plan.

Looking ahead toward formulating such a County Stewardship Plan, the question arose: does the existing base of conservation and planning knowledge include a clear and critical description of the essential components of such a stewardship plan? The definition of such a plan was not well known.

The Frontenac Stewardship Council proposed, to the County Development officer, a design of a workshop and a set of contributing expert participants to address the question: “What are the fundamental elements of a stewardship plan for a small region?” The plan was accepted for shared funding by the County and the Stewardship Council and was held May 9-10 at the Donald Gordon Conference Centre in Kingston, Ontario.

THE WORKSHOP

The goal of the workshop was to develop “a defensible set of elements of a stewardship plan” which would, in the short term, serve

as guidance for the programs and activities of the Frontenac County Stewardship Council¹, and in the longer term could serve as a template for other stewardship and conservation organizations in other places. Presenters spoke to various elements of the potential equations of landscape management, in areas of sustainability, resilience, social and community engagement.

¹ currently functioning as The Frontenac Stewardship Foundation, a charitable corporation

CONCLUSIONS

1. Landscape care is a process — a living process continuing into the future. A landscape plan is a plan for this process.
2. The objective of the process is to conserve the self-maintenance functions of the whole system. Planning for resilience is the recommended process to achieve the target of sustainability. Resilience seeks conservation of system functions so that when impacts disturb the system, those system self-maintenance processes can return the disturbed system to a functional state.
3. Engagement is critical. Without the people on the land being engaged, landscape care won't succeed. Engagement will involve marketing, not just logical arguments.
4. Planning should be evidence-based and should incorporate adaptive management based on the best current knowledge base.
5. Ecological, sociological and economic variables should be treated together as a single complex of variables whenever possible. Maximizing community agreement on priorities within this complex variable is key to a successful stewardship process. Economic variables should never be considered alone, without the interactions of the other two components of the complex.
6. A socio-economic-ecological inventory is vital to assess the system being planned. Because the system and the people change,

monitoring of the changing system is required and is vital to provide feedback to enable adaptation of the living plan to changes.

PERSPECTIVES ON CONCLUSIONS

1. People, ecosystems and futures are all uncertain and subject to change. People remember the way it used to be but 'path dependency' is a false guide to planning when facing the dynamics of ecosystems and the realities of unpredictable change. There is no 'balance of nature'. Stewardship will be a continuing interaction between perceptions of the community and the realities of changes in the ecosystem.

2. The target of resilience requires that system processes be conserved so that, when the system suffers inevitable impacts, the system processes will still be able to function to reposition the system in a new workable configuration.

Systems disturbed by impacts can find a new temporary stability, provided the self-maintenance processes are conserved and can re-stabilize the system's functions. The objective of conserving processes is in contrast with conserving rare species or other structural components of the system. Conserving the functioning of ecosystems has the best chance of conserving the subsystems and species composing the ecosystem. Alternately, conserving a species without its essential supporting system processes may put the species at further risk. Even in resilient systems there commonly is a tipping point in damage to system processes beyond which an entirely different system takes over.

3. Engagement is critical.

Engagement begins with learning the values that the public places on all their relationships with the lands and waters. To accomplish that requires getting information to the public to allow

them to recognize and evaluate their relationships to the land at various time and space scales even if subtle and long-term. To facilitate the public engagement with information and discussion sessions is likely to require “marketing”, not just availability of the public information sessions. Achieving the endpoint of an informed public may justify diverse means of marketing.

There is no single trigger that engages everyone’s interest. Across the community, and even within communities, specific issues, features and elements of the landscape will resonate with some individuals and groups of people. Listening for those things that resonate, comprehending what inspires and motivates communities, and translates to action is the process of engagement. In integrating all of the community interests, a form of marketing strategy will be used to bring all elements together.

Planning should always present alternative futures and the people using the land must be engaged in examining these alternatives. Interpretation and instruction in analysis of alternatives must be provided and is enhanced by graphic illustrations or artwork. Management will be pushed by various agendas and mandates. Solid analysis will balance transparency and inclusiveness with science and integrity. There is no one correct solution. Degree of engagement of the people on the land should be judged by interpretation of feedback and the planning process should proceed iteratively as engagement on particular topics becomes satisfactory.

4. Planning and management of our communities and our landscapes are too critical to be based on weak foundations. Decisions must be based on demonstrable knowledge. Evidence will have different forms and is not necessarily classical scientific or statistical in nature, e.g. aesthetics. Because people and ecosystems change unpredictably, planning must be ongoing and must change as information flowing back from the people and the system indicates the need for modification of the planning and the management. This is adaptive management.

5. Without cultural considerations, ecological targets are unlikely to be met. Economic variables should never be considered alone, without the interactions of the sociological and the ecological components of the complex. In any semi-natural system where human culture is fitting itself into the system, it is unrealistic to talk of planning without considering the interactions among all of the sociological, economic and ecological components and differential value systems of component community groups. Rather than selecting a system "norm" from some fixed point in time, planning should target functional system processes as the "norm". This will require an understanding of the past, good baseline data for the present and repeated monitoring to track future changes in these processes.

Economic variables have been incorporated into planning considerations historically; the problem has been that economic variables have been allowed to eclipse ecological and sociological variables in planning considerations. Commonly this has happened because the time scales used have been inappropriate to insightful analysis of the other variables. For example, short-term personal cash flow from unmanaged forest harvesting in the watershed of a lake or river can have long-term negative economic effects through degradation of the quality of the lake water and consequent reduction in value to property owners and to the tax base. Similarly, permitting development of a ready-mix cement plant, with minimal local employment prospects, on a flow-path into a lake and on a major travel-path near tourist facilities delivers too little short-term gain to balance the longer-term reductions in values that are predictable.

Economic considerations in landscape planning should always be related to ecological and sociological considerations at a regional spatial scale and at more than one time scale. Relating ecological, sociological and economic considerations will necessitate agreement on priorities for valuing all competing potential uses of the land. A fundamental example is whether high value is placed on semi-natural areas, such as swamps or second growth forest, making them competitive with non-natural areas, such as solid waste dumps, quarries and sports fields.

6. Feedback from the people and the system is vital to a process of adaptive management. That information flow can only be assured if monitoring is providing ongoing evidence from the inter-relationship of the functioning of the system and the natural and cultural communities. This monitoring must include sociological, economic and ecological information.

Prescription by the province and the municipality is effective in the planning process once the relative values of the public for various land uses have been established. Prescription allows prediction and enhances transparency. But delays in applying prescriptions can allow damage to system functions from uncritical impacts and can cause incorporation of outdated interpretation of the current knowledge base. Prescriptions must be revisited and updated to maintain accurate relationship to current conditions of the system and current applicable knowledge. Non-prescriptive, adaptive planning processes have the advantage of being inherently responsive to changing processes.

BEYOND THE BRIEF CONCLUSIONS

When planning for any particular landscape or community, each of the three components of the ecological-sociological-economic complex will require detailed information and consideration. Ideally this requirement will be repeated at each spatial and temporal scale used in the planning. However, in many situations we can make significant progress using the knowledge already available.

For example, the ecological component must consider whether there is a sufficient quantity of appropriate quality habitat to allow survival of populations of particular species. The spatial distribution of that habitat also must be considered and if it is highly fragmented, the degree of connectivity required to ensure survival of those populations also must be considered.

In areas of natural riches, such as the lakelands of northern Frontenac County, high densities of human dwellings and cottages with damaging impacts on lakefronts should be prevented to avoid well-known negative effects on lakes' ecological processes, e.g. elevated nutrient input into the lake. A conclusion already offered by some research is to direct increased development away from waterfronts, including river shores. However restricting subdivisions away from waterfronts will reduce the demonstrable enjoyment of people from waterfront living.

Similar sub-elements of the sociological and of the economic components also must be considered. Such sub-elements will control the interactions of the three main components and their interactions will control the success of the resilience being targeted. Similarly, the emergent effects of the interactions of the major components will strongly influence aesthetic qualities of the resultant system, producing feedback through the enjoyment of human lifestyles and the evolutionary success of wild species living in the system.

For example, scattering new development widely across the landscape will attenuate social interactions among the people. Retaining or enhancing those social interactions can be achieved by enticing people who highly value such interactions into the existing hamlets and villages where community halls support social interactions.

It is possible to use minimum ecological impact and maximum social benefits as planning criteria. Many individuals already think this way but the suggestion here is to incorporate such thinking into planning desiderata.

Thus it seems that planning should be sensitive to the value system of the people involved. Planning should facilitate the peoples' use of the landscape so that their unavoidable impacts are restricted to parts of the landscape where the people will gain maximum enjoyment from particular features of the landscape and from social relationships. Economic futures should be sensitive to these same considerations.

NEW DIRECTIONS FOR LANDSCAPE STEWARDSHIP AND FOR REGIONAL COMMUNITY PLANNING

Landscape stewardship includes a hierarchy of approaches. Local projects may apply only to one field or one forest. Such local work constitutes the building blocks of anything larger. But without some view at a larger spatial scale, individual local projects can become 'random acts of stewardship' unable to maintain resiliency and to direct a small region toward a more predictable future state. Enthusiastic groups can find, organize and execute local projects. Some other group is required to contemplate the conditions across the region, recognize differences in the socio-economic-ecological system across the region, and bring to bear the current knowledge that can reveal the alternative futures of that complex across the region. This is the role of landscape stewardship planning.

Landscape stewardship planning must interact with regional community planning. In our regions, we are not planning in wild nature. Even where the landscape is 'semi-natural', a major variable forcing change in the ecological component of the S+E+E complex is people trying to fit their cultural communities into the semi-natural environment. How regional community planning guides that fitting process will support or inhibit any landscape stewardship planning or management. Existing prescriptions enforced by provincial or other governing levels may need re-examination and possibly updating with more recent information from ecological or planning studies. Outdated and misapplied prescriptions can be the most damaging inhibition of progress toward new plateaus of co-coordinated planning in rural and semi-wild environments.

CONTRIBUTORS TO THE WORKSHOP

- Dr. Lael Parrott, University of British Columbia, Kelowna Campus, expert on complex system management. Lael.parrott@ubc.ca
- Dr. Sara Gagné , University of North Carolina at Charlotte, expert on design of systems for landscape management. sgagne@uncc.edu
- Dr. Kathryn Lindsay, Environment Canada, expert on landscape planning and management of the Bonnechere River watershed. chair@bonnechereriver.ca
- Dr. Allyson Quinlan, The Resilience Alliance, expert on application of resilience thinking to landscape planning. aquinlan@resalliance.org
- Mr. Joe Gallivan, Manager of Sustainability Planning, Frontenac County. jgallivan@frontenacounty.ca
- Mr. Peter Young, Community Planner, Frontenac County. pyoung@frontenacounty.ca
- Ms. Anne Marie Young, Manager of Economic Sustainability, Frontenac County. ayoung@frontenacounty.ca
- Mr. Gordon Rodgers, Chair, Frontenac Stewardship Council. grodgers@xplornet.com
- Mr. Bret Colman, Executive Director, Frontenac Stewardship Foundation. bcolman@live.com
- Mr. Don Ross, Executive Director, Frontenac Arch Biosphere Reserve recorder/reporter dmross@1000island.net
- Dr. Gray Merriam, Landscape ecologist, workshop organizer/chair gmerriam60@gmail.com

PAPERS PRESENTED AND DISCUSSED

Dr. Lael Parrott. The Dynamic Social-Ecological Complex that Comprises a Landscape Stewardship Plan.

Dr. Allyson Quinlan. Resilience: A Basis for Stewardship and Planning.

Dr. Sara Gagné. Simple, Defendable, Practical Principles for Ecological Land Management.

Dr. Allyson Quinlan. An Integrated Social-Ecological System (SES) Perspective on Land Management and Planning.

Dr. Kathryn Lindsay. Information and Engagement Required to Plan and Manage the Bonnechere Watershed.