



The SOLEC *Indicator*

SOLEC '96 - YEAR OF THE NEARSHORE - Day 2

Dear SOLEC Delegate:

Welcome to Day 3 of SOLEC '96. We really appreciate your contributions during the first two days -- your energy, enthusiasm, hard work and most of all your ideas on how to just get on with it.

This morning's session will feature an interactive open forum with a panel of 6 sectoral representatives from throughout the Basin. They'll share their perspectives on SOLEC '96, and what should be done in their sectors as a result. The forum moderator, Aaron Freeman, will engage the panel and delegates -- in his own inimitable way -- during the open mike session. Finally, John Mills will bring SOLEC '96 to a close by providing the Parties' views on the conference outcomes and next steps.

Once again, The SOLEC *Indicator* brings you the highlights of yesterday's discussions. As you'll see from the summaries, delegates added substantial lake-by-lake and connecting channel information, and came to some interesting and provocative conclusions about how to address cross-cutting issues facing Great Lakes managers and decision-makers.

Our keynote speakers yesterday provided us with much food for thought. John Sawhill reminded us about the importance of our protection and restoration efforts in noting that our society will be defined not only by what we create, but by what we refuse to destroy. And David Crombie challenged us to make things happen by bringing together ecology, economy, and community in projects that have senior government buy-in, but which are delivered locally.

On behalf of the Parties and the SOLEC Steering Committee, we'd like to thank you for participating in SOLEC '96. We hope that the ideas, challenges, actions, and priorities developed here in Windsor will help you get on with it in your corner of the Basin.

One final note: please take a moment or two to complete the SOLEC Evaluation Form on the back page of your Delegate's Guide, and deposit it in the box outside the plenary room. Your comments are most appreciated.

We wish you well until we meet again.

Sincerely

Paul Horvatin Harvey Shear
Co-chair Co-chair

The following summaries were prepared by the SOLEC facilitators, and reflect their perspectives on the key session outcomes and highlights. It should be noted that the summaries provide results from individual sessions, and not the conference as a whole.

LAKE ERIE

Key Changes Since SOLEC '94

- taste and odour problems associated with blue/green algae increasing in certain areas
- expanded range for round goby
- many changes in relationships, mainly among algae, zebra mussels, productivity, water clarity, phosphorus levels
- increase in benthic invertebrates (e.g., mayflies)
- wetlands and shoreline changes

Current Problems

- beach closings
- river mouths/port areas/wetlands/tributary mouths
- political climate/policy changes/regulations
- continued introduction of exotic species/decline of native species
- urban sprawl/changing land use
- fisheries management/spawning habitat
- contaminated sediments

On the Integration Paper...

Overall Assessment

- nearshore definition needs to consider uniqueness of the lake
- overgeneralized - doesn't consider subregions
- assessment lacks backing rationale
- treatment of biodiversity too broad and over-emphasized (e.g., more biodiversity may not be desirable for the lake)

Nearshore Indicators

- should determine objectives/goals first, then identify indicators
- rationale for indicator selection unclear (e.g., why only parks?)
- separate indicators needed for:

- each lake
- water clarity and algae
- indicator needed for coastal habitat
- biodiversity not sufficient for lakewide planning - need to look to OEPA's Index of Biological Integrity for application to the lake

Where Do We Go From Here?

Pressing Information/Data Needs

- immune system pathology/reproductive and exposure markers
- fish index that public can understand
- methods to trace indicator problems back to sources
- trend analysis/more investment in monitoring
- an early warning system
- consider Natural Step Program as alternative to indicators
- determine what ecosystem states are possible/feasible/sustainable
- ensure that human carrying capacity is considered
- use models - define their role and how results will be validated

Recommended Actions to Address Nearshore Problems

- identify location and composition of contaminated sediments (especially while dredging for navigational purposes)
- develop wetlands inventory
- preserve remaining habitat
- educate/communicate with public on goals, issues, options
- need more redevelopment policies (brownfields)
- build additional combined disposal facility capacity

LAKE ONTARIO

Key Changes Since SOLEC '94

- water clarity improved due to zebra mussels
- habitat restoration increasing due to implementation of strategies and projects
- increase in fish and wildlife as a result of improved habitat
- increased awareness among municipal politicians
- human use and enjoyment increasing due to new projects (e.g., Waterfront Trail in Greater Toronto Area; U.S. Canal System)
- impending urban expansion and associated infrastructure
- cooperation between agencies improving
- funding and regulatory changes at all levels - redefinition of government

Current Problems

- diversity of coastal wetlands continues to decline due to water level regulation
- ongoing hardening of shoreline
- loss of bluffs and barrier beaches
- barriers (e.g., dams) in tributaries
- river mouth habitat is static

- lack of relation between actions taken for the lake and upstream watershed

On the Integration Paper...

Overall Assessment

- not easily accessible due to layout of paper
- assessment too broad
- ecosystem approach not really used (e.g., air issues left out)?

Nearshore Indicators

- lack goals to which indicators should be linked
- need indicators to demonstrate trends - for a longer timeframe than 2 years between SOLEC meetings
- determine whether indicators are needed for science or marketing
- need indicators for:
 - lifestyle change
 - air
 - human health (broader than current indicators)

Data/Information Base

- send out search party for Lake Ontario LaMP - remember that the LaMP only covers toxic substances, not the ecosystem
- content needs to be refined, broken down, and integrated by ecoregion or watershed
- scale too large when community action is required
- GIS is powerful tool for tracking indicators and integration - need historical information mapped and benchmarks developed (i.e., coastal wetlands)
- support LOWIS (Lake Ontario Watershed Information System) both in Canada and U.S.

Where Do We Go From Here?

Pressing Information/Data and Actions Needed

- better understanding of tributary pollutant loadings and tie to management actions
- explain meaning and implications of research information to community and local politicians
- identify species and land forms in imminent risk and develop action plans for protection
- mobilize public support - need to develop community goals and visions that would be consistent with lakewide goals

LAKE SUPERIOR

Key Changes Since SOLEC '94

- increasing residential growth and development of second homes
- expanded range of exotic species
- good habitat restoration projects under way
- improved practices and discharges in pulp and paper industry
- some key areas have been protected and preserved

- increased populations of walleye, sturgeon, coaster brook trout, cormorants, bald eagles
- increased boating and angling pressure leading to degraded vegetation in specific areas

Current Problems

- ballast water introductions in ports
- woodland caribou threatened
- deformities present in amphibians
- loss of habitat for colonial birds (piping plover, black tern)
- increase in rusty crayfish (exotic species)
- ruffe displacing perch
- sand beaches, dunes, coastal wetlands under development pressure

On the Integration Paper...

Overall Assessment

- not very applicable to Lake Superior - each lake needs to be assessed on its own, not combined with others
- need quantitative measures of ecosystem health for the nearshore

Nearshore Indicators

- basin-wide indicators undervalue the lake

Where Do We Go From Here?

Pressing Information/Data Needs

- sediment contamination, assessment, and effects on biological elements, etc., need to be dealt with
- need information on coastal wetlands and nursery functions (physical processes, biological functions)
- need nearshore wetland inventories

Recommended Actions to Address Nearshore Problems

- link land use decisions with whole lake, nearshore, and watershed
- identify key habitats/ecosystems
- protect and conserve key habitats/ecosystems/features
- improve and implement ballast water management technology
- promote landowner education/stewardship
- ensure that local efforts feed into basin-wide goals - need enhanced communication

LAKE HURON

Key Changes Since SOLEC '94

- invasion and proliferation of exotic species, including river ruffe and more profoundly, zebra mussels - there are secondary effects on productivity, community composition, and population shifts

- mirex has been detected in lake water (editor's note: scientific data to be confirmed)
- increased populations of cormorants and yellow perch a positive sign

Current Problems

- intensification of shoreline development
- land use changes from rural and agricultural practices to urban uses
- second home development
- St. Marys River fish communities at risk due to navigational practices
- lake trout and walleye populations not yet self-sustaining

On the Integration Paper...

Overall Assessment

- tracking ecosystem changes over a 2-year period was not supported - an issue or specific lake focus for SOLEC should be considered
- have observed changes in community structure and species composition
- general lack of information, research, and monitoring on Lake Huron was noted

Nearshore Indicators

- quantitative indicators are needed, for example:
 - imperviousness of the watershed
 - changes in populations of exotic vs. endemic species
 - % of shoreline hardened vs. that protected
 - community actions
 - % land converted from natural or agricultural uses to commercial-residential
- measurable, quantitative targets are needed for each indicator, subjectivity of current indicator evaluation was noted

Data/Information Base

- not possible to evaluate the data because it is not in the paper

Where Do We Go From Here?

Pressing Information/Data Needs

- data on atmospheric inputs of trace contaminants, including mirex (to be confirmed)
- data on land use changes to assist in predicting and tracking ecosystem impacts
- socioeconomic information, costs associated with degradation, benefits associated with rehabilitation and protection
- water level fluctuations are a priority for research and management

Recommended Actions to Address Nearshore Problems

- most important action is to develop a clear commitment to long-term monitoring programs with associated reporting to the public, regardless of the indicators chosen
- protection of and attention to "areas of quality" should complement work on AOCs

- the public requires a summary of information on the Lake Huron ecosystem to prioritize actions and effect change
- develop specific targets for the quantitative indicators, related to restoration goals
- provide policy direction regarding land-use planning, and integrating ecosystem rehabilitation needs
- initiate a "Lake Huron Alliance" of researchers, implementors, community groups, and other interested parties in the absence of a Lake Huron LaMP. *(This was initiated. All participants have a contact list. Others wishing to participate in this new network please contact Gail Krantzberg at 416-314-7973.)*

LAKE MICHIGAN

Key Changes Since SOLEC '94

- increasing rate of development ("dockominiums", cottages, sprawl, casinos), resulting in negative impacts on shoreline
- increasing rate of change of exotic species (numbers and impacts) - impacts due to exotics include increased water clarity, community structure quality, along with decreases in wetlands and nearshore aquatic species
- increases of algae in drinking water
- composition of fish community out of balance (e.g., perch population 95% male; alewives re-emerging)

Current Problems

- tributary watersheds are degraded from land use, exotics, pollution
- nearshore aquatic species (benthic and fish) in trouble due to contaminated sediments, water level changes, armouring of shorelines, sedimentation throughout the lake
- coastline ecosystems (sand dunes and bars) are in trouble as a result of sand mining, urban development, recreation, erosion, and sand transport

On the Integration Paper...

Overall Assessment

- assessment is reasonable, but status of exotics should be rated as "poor"

Nearshore Indicators

- must be developed in the context of management goals, more ecosystem-oriented, and tied to defined goals and criteria
- also need to be linked to policy development and desired ecosystem changes
- need to address economics
- should develop a core set of indicators

Data/Information Base

- paper should include complete sections on each lake
- the fish section is incomplete - species are missing, as well as details on community structure and impacts of toxics
- lack of reference to other working papers

Where Do We Go From Here?

Pressing Information/Data Needs

- habitat/biodiversity/natural resources inventory
- data on landscape level processes and baseline data
- data on development trends and impacts
- standardized methods for data collection

Recommended Actions to Address Nearshore Problems

- more sustainable land-use development
- ecosystem conservation and stewardship
- creation of information repository (including historical information) to integrate, coordinate information and disseminate to stakeholders
- establish incentive for consistent data collection through grants (economic incentive)

LAKE ST. CLAIR/ST. CLAIR RIVER/DETROIT RIVER

Key Changes Since SOLEC '94

- fish: improved perch size; declining walleye numbers; increasing bass numbers; rotifers dying off; changes in abundance of small bottom-feeding fish
- beach closings (e.g at St. Clair Shores in summer of '96 due to e. coli)
- development: population relatively stable, but sprawl continues
- increases in shoreline hardening, surface runoff
- changing fertilization patterns (suburban vs. agricultural patterns)
- varying success in dealing with CSOs in St. Clair, Clinton, Rouge and Detroit Rivers and Lake St. Clair

Current Problems

- loss of native unionid clams in Lake St. Clair and Detroit River due to zebra mussels - there is a resulting disruption of ecological balance
- vegetation: significant loss of natural wetlands along Detroit River; increase in Eurasian milfoil in Lake St. Clair; loss of prairie savannahs due to fire suppression, drainage, and economic development
- health: problems with fish tumours and drinking water contamination
- beach closings
- shoreline development an ongoing concern

On the Integration Paper...

Overall Assessment

- does not adequately deal with these or other Great Lakes connecting channels - these are treated as side issues
- connecting channels have unique issues that warrant specific attention on these areas
- should use a watershed approach

Nearshore Indicators

- indicators should be based on environmental objectives
- the indicators used do not deal adequately with connecting channel issues

Data/Information Base

- here is very little information, data on this area included the paper
- science concerning large river management is largely missing - channels have been treated as "fast flowing lakes"

Where Do We Go From Here?

Pressing Information/Data Needs

- more science which specifically addresses large river management
- there has been too much emphasis on river mouths (e.g., loadings) - we need to look at the entire watershed, including upland areas
- how to integrate connecting channel issues within the overall planning framework for the ecoregion
- need to better integrate human health with ecosystem health
- need accessible, binational GIS information base
- need to evaluate the impact of chloride

Recommended Actions to Address Nearshore Problems

RAPs in the area should be used as an umbrella for watershed planning and to implement as many of the following actions as appropriate:

- manage the connecting channel area as a binational resource
- evaluate and protect high-quality areas
- Lake St. Clair not included in a RAP or LaMP - need a process to address issues in the lake
- ensure that waterfront redevelopment and habitat restoration are done concurrently
- educate/involve communities in environmental protection, perhaps through watershed "report card" development
- develop a more coordinated approach to research, and ensure research is focused on problem-solving and tied to program implementation and monitoring (could do a pilot project to address this, perhaps in Windsor/Essex and Grass Island)
- press for further reductions in loadings
- consider new institutional arrangements to facilitate action/implementation (i.e., beyond planning)
- deploy students/educational institutions to collect data and do monitoring

It was also noted that industry would like more binational harmonization of regulatory and voluntary approaches.

NUISANCE EXOTIC SPECIES

All three conclusions were accepted, with debates and additions and are reported below.

Session Conclusion #1: Prevention of species introductions is far better than control, but we still lack important tools to do the job.

In particular, immediate attention should be directed to:

Technology:

- develop technological tools to replace ballast exchange as a way to reduce ballast-mediated transfers of exotic species into and within the Great Lakes system;
- to develop new/better tools, we need political education to allocate funding;
- current ballast-exchange system is limited; need to improve it and do research to develop better technology; and
- need to develop technological tools for other vectors (beyond ballast).

Policy:

- establish state/provincial and federal policy tools that promote sound decision-making on planned introductions of exotic species;
- the Great Lakes Fisheries Commission has a protocol for planned introductions related to fisheries though it has no authority and decisions rest with state/provincial agency;
- use fisheries protocol as a model to develop similar approaches for other vectors (e.g., food industry, climate change, horticulture);
- need a policy for accidental introductions (as well as planned ones) N.B. national invasive species act provides this ballast vector only.

Session Conclusion #2: Similar technological policy tools should be developed to improve emergency response to dispersal of nuisance species. More explicitly, we need to develop a common protocol to examine issues, pros and cons, and assist decision-making. As well, we need to develop a bi-national mechanism to provide scientific support and technical advice to assist local government to make good decisions. We should provide a "reward" system to ease costs at the local level, e.g., emergency response systems.

A number of debates emerged relating to policy issues. Some of the discussion elements are framed below:

- Is eradication possible?
- Is it worth trying?
- Should we deal with this on a case by case basis or develop a common protocol?
- Need to weigh risks, benefits, acceptability of control measure, costs, environmental/tourism consequences.
- Small window of opportunity (no time for consensus).
- Do we need federal authority? ("Binational Strike Team")

Session Conclusion #3: Risk assessments to identify target source regions, target species and most susceptible receiving systems are more useful for preventing international introductions of alien species than accidental introductions, for which a blanket precautionary approach may be most efficient. We also need to do risk assessment for each vector to decide whether blanket precautions are necessary and how to do them, and to support political decisions. Risk assessments should be conducted for specific target species that have potential for accidental introduction.

- prevention needs higher priority
- inter-jurisdictional support system
- work on all vectors (not just ballast)
- need risk assessments, based on good science.

EXOTIC QUOTES

"The best is the enemy of the good"

"Boy, this is hard!"

HIGH QUALITY AREAS

The Group unanimously supported the concept of preserving high-quality natural areas around the Great Lakes.

The three propositions were amended after good working discussions of their intent and how they might be implemented. Numerous suggestions for next steps and approaches were made. There was a general sense that data is adequate for at least a first round of sites that might be preserved. The programs would need support of both the highest levels of government and local residents to be successful.

The three propositions presented were revised, and agreed to by the group:

1. That the International Great Lakes Community initiate a high-profile program on a scale comparable to the RAP/restoration programs to secure high-quality shoreline areas that contribute significantly to biodiversity.
2. Redirect and re-energize existing programs and initiate new programs to protect and restore biodiversity on privately held shoreline lands on the Great Lakes.
3. In the context of a shoreline conservation strategy, we need to direct the highest priority towards the most threatened and unprotected species and communities on sites with intact ecological processes.

CLIMATE CHANGE AND VARIABILITY

This group responded to four major questions regarding climate change. Their deliberations are reported below.

What is your perception of climate change with respect to the Great Lakes' nearshore?

1. Climate change will have a dramatic effect on water levels, flows, temperatures, shorelines and wetlands.

2. There is an increased variability in temperature and precipitation already happening. This is experienced in extremes or spikes. A local farmer noted that more energy is needed to produce the same amount of food as a result of these extremes.

3. Research shows that Great Lakes fish will be able to adapt to changes in climate due to the pre-adaptive nature of the Great Lakes.(?) There will be implications for fish in some tributaries due to shoreline changes.

4. It is politically difficult to reduce CO₂ emissions globally and nationally.

What information do we need in order to be able to assess the impacts of climate change on the Great Lakes nearshore?

1. There is a need for additional research on carbon "sinks". This is especially true for wetlands, which are carbon sinks. Much research is being done on ocean "sinks" but wetlands have not been studied. Canada has the second largest percentage of wetlands in the world, which makes this need much greater.

2. Research should identify the most likely scenario of change so public and policy makers have clearer understanding of the impacts of climate change.

What management actions are required to address impacts in the nearshore from climate change?

1. Take a "no regrets" approach to management actions. That is, do things that make sense even if climate change doesn't happen. Some examples of this are: water conservation; conservation tillage; energy conservation; and adaptation strategies.

2. Communicate effectively to the public and indicate a clear sense of urgency on this issue.

3. Need to think long-term and shift thinking from dollars to environment as bottom line. Need to continue to provide \$\$ for environmental protection/monitoring.

4. Experts should play a watchdog role.

Climactic quotation

"Climate, like politics, is local".

INDICATORS

The following conclusions were reached by this group:

1. *Setting ecosystem objectives is more important than identifying indicators.* Some agreed with the conclusion and some thought that setting ecosystem objectives and identifying indicators are equally important.

2. *Collecting too much data can be as unrewarding as collecting too little.* Group agreed that what we do with the data is as important as the data itself. **Group consensus.**

3. *A "common" set of indicators for the nearshore environment is not practical.* Group discussion result: a common set of indicators **is** practical if they are derived from comparable measures across nearshore areas. Causality will be lost. Cause-effect relationships will normally be derived from specific areas. Management actions will be guided by specific nearshore indicators.

Indicator recommendations for SOLEC '98

1. Greater focus on indicators.
2. Start task actions right now for bringing together indicators bi-nationally already existing. Use SOLEC to review and comment on these.
3. Get something going to co-ordinate the development of common indicators.

An Indicator of what was said"get rigour to the gas gauge".?

PROTECTION AND RESTORATION OF THE NEARSHORE ENVIRONMENT

Participants responded to a number of suggested strategies.

Strategy 1: Sciences of edge ecology and ecosystem management should be used to guide restoration and assess management actions, cutting across persistent disciplinary solitudes.

- We need to increase research on ecotones, transitional zones, connectivity, contiguity to define attributes of size, diversity, abundance and productivity.
- It is critical to understand the consequences of actions and to define/refine management strategies (e.g., water level management).
- Dynamics of nearshore environments complicate monitoring, research and management decisions.
- Research should emphasize physical **and** biological integrity.
- Cross discipline research (co-ordination and cooperation) is needed.
- Funding will be/is a key constraint.

Strategy 2: Lake Ecosystem Action Plans (LEAPs) should focus on ecotones (land-stream, land-lake, land-wetland-lake, nearshore-offshore, pelagic-benthic, littoral-profundal, forest-pasture, air-water), especially nearshore edges. These logical successors of the AOC RAPs will require conservation, restoration and recreation actions.

- LAMPs tend to lack an action agenda and focus on toxic substance impacts.
- We don't need a separate planning effort or new initiative.

- Transform LAMPs into true lake **ecosystem** plans with a nearshore component for ecosystem integrity that recommends conservation and restoration actions (land-use planning should logically evolve from LAMPs).

Strategy 3: We should integrate activities across institutions and agencies, and find a logical government level to consolidate coordinated actions.

- Strategic planning is best done at a lakewide level and action planning/implementation depends on regional/local involvement.
- Cross-discipline and cross-agency/government coordination and cooperation is essential and depends on forming consensus on goals/objectives.
- No one organization has a broad enough mission to protect and restore whole ecosystems (or nearshore systems). We must depend on coordinated actions by many, including private or non-profit entities.
- Formal and informal mechanisms are needed to share expertise across agencies (binational too) and organizations.
- BEC or another forum is needed to promote coordinated program planning and budget requests that address priorities, reduce duplication, and lead to more efficient/effective environmental results.

Strategy 4: We should transform the SOLEC process by shifting from passive, underfunded reporting to active, resourced problem-solving, producing the catalysts for change.

- Role of SOLEC should be to:
 - 1. report on state of Great Lakes ecosystem;
 - 2. identify priority issues, consequences of actions, and options for improving management; and,
 - 3. communicate above to decision makers.
- Results of SOLEC (priorities and strategies) must be communicated from scientists and resource managers to top administrative levels.

GREAT LAKES RESEARCH PRIORITIES

The following themes emerged from the session:

- The research community should market the value of their research in terms relevant to the general public.
- In face of declining resources, innovative funding alternatives should be sought. Improved data integration and multi-agency cooperation was advocated.
- Finally, a long-term commitment to research nearshore processes is fundamental to interpreting special and temporal variability in the nearshore Great Lakes environment,

1. Cost saving strategies. In many areas, researchers have already pursued integration and cost saving strategies and there is no further room for cuts. However, we can:

- systematically improve data intercompatibility including complete inventory and consolidation;
- quantify the value of research and data;
- involve the lake committees of the GLFC in LAMPs and other activities;
- advertise plans for research vessels;

- link with student training and volunteer monitoring;
- seek untapped and alternative funding mechanisms; and
- seek partnership opportunities which emerge from areas undergoing change (e.g., redevelopment).

2. **Research Needed.** We need to realize that nearshore technology and scale is very different from open lake. Given this we need:

- improved understanding of watershed dynamics/processes including socio-economic processes;
- better understanding of nearshore dynamics;
- indicator endpoints linked to ecosystem goals;
- better monitoring guided by modelling; and
- integration among laboratories and across media.

3. **RAP/LAMP Research Needs.** At present, RAP/LAMP research needs are poorly defined. However, we need:

- contaminated sediment clean-up technology;
- methods of habitat restoration;
- common loading protocols;
- tools to connect cause of use impairment and of effect;
- quantitative targets to serve as indicators of restoration;
- RAP endowment for research and implementation;
- improved RAP/LAMP coordination e.g., loadings; and
- expert system to identify research needs.

4. **Complex Research Topics.** Realizing that not all research topics require a multidisciplinary approach, we should:

- define research questions for combined approaches such as "nearshore physical/ecological processes";
- establish a mechanism to form specific groups to address specific problems;
- establish basin-wide, geo-referenced data base to help coordinate projects;
- coordinate among agencies in advance of a project;
- organize a biennial, binational research coordination workshop;
- foster trust for more effective data sharing; and
- put the onus on research managers to focus research topics.

5. **Research Funding Reductions.** Academic institutions need to be included in these decisions. We need

- to protect human resources and institutional knowledge above all else;
 - a culture and paradigm shift must occur to:
 - recognize science as part of policy, and
 - incorporate advice from the result of scientific study into decision making process.
 - a regular review of recommendations should be done e.g., IAGLR;
 - to inventory the research community and identify critical mass; and
 - to quantify the value of research.
-

Memorable Quotes:

"If monitoring is guided by a hypothesis, then it is research."

"Money can come and go, but you can't replace people."

NOTES ON NEW APPROACHES TO GROWTH MANAGEMENT

To Manage Growth Pressures, we need to:

- educate, inform, and raise awareness in the public about growth management.
- pinpoint barriers to growth management (i.e., Ontario building code), and try to remove them;
- manage where people can live because the carrying capacity of areas is limited;
- consider scale, feed-back loops in planning process;
- consider efficiencies of scale and water quality relationships; and
- use different tools in different locations, circumstances.

To curtail the outflow of jobs to the suburbs and redevelop inner city areas, municipalities should:

- consider industrial policies that encourages concentration;
- look for solutions that work over the short-term;
- improve quality of life in inner cities;
- broaden allowable land uses;
- ensure infrastructure and schools are in place;
- show what the future holds if current trends continue;
- provide no subsidies for greenfield development, and possibly subsidize brownfield sites;
- award good development; and
- regulate cars through zoning.

To better manage development, urban planning should:

- look beyond municipal boundaries when planning (i.e., watershed approach);
- analyze what problems are best handled regionally vs. locally;
- plan for both the short and long term;
- encourage public participation;
- address environmental and other policies; and
- be flexible with respect to zoning.

Thoughts from David Crombie...

"Never underestimate the power of the conservation movement - for your children it will leave legacy."

"Learning new ways of doing things is the only way to deal with historical change."

"We're not really good at learning without doing. We can't separate the projects from the learning."

Thoughts from John Sawhill:

"This gathering is targeting on the right issues, and in the right context...It's good to see the broader conservation community in the Great Lakes turning its collective eyes landward."

"If we continue to work together, we can ensure that this region enjoys the twin benefits of economic prosperity and environmental protection over the long run."

"Progress, too will come from meetings like this gathering of SOLEC. After all, in your deliberations here this week, you can help chart a course for conserving the biological legacy of the Great Lakes region."

SOLEC '96 Celebrates Success

Quite a while ago, when SOLEC's Steering Committee was discussing nearshore issues, we recognized that while there is much still to be done, there are "ambassadors" of the Nearshore -- individuals, groups and collaborations -- showing us the way. We decided to celebrate some of the many hundreds of success stories around the Great Lakes Basin.

A successful project should encompass the following elements:

- showed improvement in the Great Lakes ecosystem and the net gain for the nearshore;
- forged linkages among the economy, the environment and the community;
- created a "win-win" solution;
- formed strong partnerships;
- implemented sustainable plans; and
- encouraged community involvement.

We chose to select seven projects.

Grand Traverse Bay Watershed Initiative

The Grand Traverse Bay Watershed Initiative was established to protect the water quality of Grand Traverse Bay, Michigan, and the surrounding water resources. Using a partnership approach with more than ninety organizations, the Initiative is protecting water resources based on watersheds.

Accepted by: Chris Wright

Ojibway Park and Nature Centre

The City of Windsor, with the help of numerous partners, has set aside 66 hectares of protected land. Ojibwa park and Nature Centre provide an opportunity to learn more about the local ecology.

Accepted by: Lloyd O.W. Burridge and Paul Pratt

Northern Indiana Public Service Company (NIPSCO)

The Northern Indiana Public Service Company (NIPSCO) is an outstanding example of industry adopting an active role in local environmental initiatives. As one of the largest industrial landowners in Indiana, the Company works with various partners on projects which include facilitating the preservation of environmentally significant sites and restoring prairie and wetland habitat.

Accepted by: Chris Newell-Bourn

The Friends of Second Marsh

The Friends of Second Marsh is an active volunteer corps. The Second Marsh is one of the few remaining Lake Ontario Shoreline Wetlands adjacent to a sizable urban centre with special features including its ranking as a provincially Significant Wetland, and its status as an Area of Natural and Scientific Interest (ANSI).

Accepted by: Jim Richards and Patricia Lowe

Cleveland: the City, the County and the RAP

Working together, the City of Cleveland, Cuyahoga County, and the State of Ohio have brought about the rebirth of the Cleveland Waterfront. This has led to a broadly based revitalization of the downtown lakefront by redevelopment of brownfields and building widespread support for clean-up of the Cuyahoga River. The lakefront has become a popular destination and the groundwork has been laid for a better sense of community.

Accepted by: Paul Alsenas and Virginia Aveni

Task Force to Bring Back the Don

The Task Force to Bring Back the Don is a twenty-three member citizens group sponsored by the City of Toronto. Together, these partners are working towards bringing back a clean, green, and accessible Don River Watershed.

Accepted by: Tija Luste

The Ontario Dune Coalition

The Ontario Dune Coalition is an alliance of twenty-nine private property owners' associations, non-profit organizations, local governments, and state and federal agencies. The Coalition promotes and supports the protection, stabilization, restoration, and optimum public use in keeping with private property rights of the Eastern Lake Ontario dunes and related water resources.

Accepted by: Helen Domske

For further details, please contact Ms. Eileen Foley, Environment Canada at: 416-739-4785 or Don DeBlasio at 312-886-4360.

Don't lose that SOLEC feeling when you leave Windsor.

After the Conference, visit our web site at: <http://www.cciw.ca/solec/>