

Appendix - Gap Analysis Matrix

Action Item#1. Aquatic Invasive Species

| Recommendation | Organizational Jurisdiction | 25 Year Plan Action Item | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities | Comments |
|---|---|--|---|---|---|---------------------|---|
| 1. Prevent spread of AIS via ballast water | | Develop strategies for controlling or eliminating invasives that have become established | Little progress- "objectives biologically naïve. Emphasis should be on prevention." | | | | Cuurrently looking to pass state-level ballast legislation |
| Improve NOBOB practices - ocean going | USCG | | | Lawsuit against EPA to eliminate BW exemption under CWA | AGO | | |
| BMP ballast treatment & hull mgmt by 2011 | USCG | | | Provided comments to EPA re: structuring regulatory program under NPDES | DEC | | |
| Monitor, report all ballast activities | USCG - State Attorney General is monitoring quality of USCG reports | | | Developing AIS regulatory program under SPDES | DEC | | |
| Review & apply BMP to non-ocean going | USCG | | | | | | |
| Expand research of policies, technologies - alternatives to on-board treatment | USCG | | | | | | |
| 2. Stop invasion thru canals, waterways | Vector issues - NAISA legislatoin | Develop strategies for exotics | Little progress - see above | Implementing NY Invasive Species Council recommendations | Canal Corp. | | |
| Complete barriers I,II - permanent separation of GL & Miss River systems | USACE | | | | | | |
| Study costs of prevening spread via Champlain, related canals | NYSDOT, Canal Corporation | | | | | | |
| Close, modify canals not in use, disrepair | | | | | | | |
| Prohibit dev't of cross-drainage basin connections | | | | | | | Unlikely in NYS, but Canal Corp in theory |
| Address flash flood-related connections | Canal Corp - | | | | Limited - NYS Flood Control Program | | DEC should be responsible but has no real authority (see exception) |
| Prevent/reduce movement into streams - opened by dam removal, culverts; consider AIS in cost-benefit of fish passages | DEC | | | | DEC Permits Program | | |
| Plans for monitoring canals as vectors | | | | | | | |
| Fund GL sea lamprey control program | GL Fishery Commission & DEC | Continue an aggressive program to control populations in Lake Ontario | Progress underway - "chronic budget shortfalls limit capability of GLFC to implement full scope." | | Lake Champlain, NYSDEC Regulatory Authority | | |

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| 3. Restrict trade in live organisms | | Forbid introduction of exotic species that are without proof of acceptability | | | | | |
| Develop list of spp of concern - immediate moratorium on trade | To be developed by NYS | | | Asian carp & snakehead listed | DEC | | |
| Implement NAISA legislation | Federal screening (NAISA) | | | Implementing NY Invasive Species Council recommendations | IS Council | | |
| Modify legislation - classify as prohibited, permitted, conditionally prohibited/permitted | Requires modification of NAISA - federal legislation | | | Implemented emergency & final regulations on bait fish to prevent spread of VHS | VHS | | |
| Modify legislation - burden of proof on importer | Modification of NAISA | | | | | | |
| Increase # of injurious spp - black, bighead, silver carps | Lacey Act - federal | | | | | | |
| Significantly increase resources for enforcement of laws | | | | | | | |
| Develop, implement risk models for organisms in aqua-culture | | | | | | | |

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| 4. Establish rapid response & mgmt | Most of this section requires linking levels of agencies, gov't | Develop strategies for exotics | Little progress - see above | | | Monitoring & surveillance; common unified data 2.1; Rapid recovery & response to introductions 2.5 | Great Lakes United apparently has a very active contact for this - Jen - need last name |
| Fund Aquatic Nuisance Spp Mgmt Plans | State & interstate levels | | | Appointed staff to Regional AIS RR Network | DEC | | |
| Develop voluntary agreements, best practices for industrial trade groups | | | | Implementing NY Invasive Species Council recommendations | DEC | | |
| Encourage investigation of economic requirements, incentives to prevent new introductions | | | | Organized & implementing PRISMs | DEC | | |
| Establish revolving fund for rapid responses | | | | Created & administer IS Eradication Grants Program via EPF; \$3 million since SFY 06 | DEC | | |
| Establish GL Federal Rapid Response Team - activities on federal lands, similar teams on other levels of gov't | | | | | | Rapid Recovery & Reponse 2.5 | |
| Fund system of enhanced monitoring, ecological surveys | | | | | | Monitoring & surveillance 2.1 (common unified data); Ecosystem instability 2.2; Predicting & prioritizing potential invasions 2.3 | |
| Support additional research to develop, implement new control methods for spp of concern | | | | | | Biology & ecology of invasives 2.4 | |
| Establish coordinated data mgmt system | | | | | | Common unified data 2.1 | |
| Ensure coordination, accountability thru Invasive Spp Council | | | | | | Common unified data 2.1; Rapid Reponse 2.5 | |

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| 5. Education & Outreach | | | | | | | |
| Support programs that education GL boaters on prevention | No state authorization | | | State-of-Lake meetings | Sea Grant has completed this. DEC/Sea Grant | | |
| Continue AIS-focused Hazard Analysis & Critical Control Point training | Sea Grant Hazard Analysis & Critical Point Control | | | AIS database | Sea Grant completed training - are there plans for additional sets of training? NY Sea Grant | | |
| Support education of all maritime commerce industry | | | | Organized & implementing PRISMs | DEC | | |
| Support AIS Organisms in Trade education campaign | Organisms in Trade | | | | | | |
| 6. Pass Comprehensive Federal AIS Legislation | | | | Active participant on GL Panel, GL ANS Coalition, GL Governor's AIS Task Force | DEC | | |
| | | | | Actively advocated amendments to Senate BW bills | DEC/AGO | | |

Action Item#2. Habitat/Species

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|--|---|---|--|---|---|
| 1. Open/Nearshore waters | | | | Established Fish Community Objectives for Lake Erie/upper Niagara River | DEC | |
| Develop, evaluate lake trout restoration (fishery mgmt) | Existing Fishery Mgmt Plans?? - FWS & DEC | a. Establish and maintain self-sustaining fish populations; b. Request additional stocks of lake trout from fed gov't to meet needs of Lake Ontario | a. Underway; b. "Some naturally spawned lake trout & concerns about excessive predation preclude additional lake trout stocking." | Updating Fish Community Objectives for Lake Ontario/lower Niagara River | DEC | Assessing potential for habitat/spp restoration 3.1; restoration of historic conditions 3.6; restoration of native spp, habitat restoration 3.7 |
| Re-establish lake sturgeon, coregonines in extirpated areas | FWS (endangered species) | Self-sustaining fish populations | Underway (see above) | Support USFWS Lake Trout & Sturgeon restoration | DEC | Potential for spp restoration 3.1; historic conditions 3.6 & native spp 3.7 |
| Develop mgmt strategies for important spp - yellow perch, lake white fish, lake trout, walleyes | DEC | Self-sustaining fish populations | Underway (see above) | Sportfish restoration via Lake Ontario & tribs NRD settlement for \$12 million from Oxy | Completed - Fishery Commission Objectives. DEC | Habitat/spp restoration 3.1; historic conditions 3.6 & native spp 3.7 |
| Better understand recruitment of lake trout, etc. remove, mitigate main impediments | DEC | See above - lake trout request | Other concerns (see above) | Lake Ontario LaMP Binational Biodiversity Strategy | DEC | Understanding & modeling links between physical environment & biological processes 3.2 |
| | | | | Implementing LE, SELO & SWLO WAPs | DEC | |
| 2. Wetlands | Funding from USDA's WRP | | | Working via IJC governmental consultation to improve natural variability to Lake Ontario water level | DEC/DOS | |
| Restore, protect 550,000 acres - wetlands, associated uplands | DEC | a. Protect highest quality wetlands & immediately adjacent uplands; b. Protect habitats (see also unique habitats) | a. Underway ; b. Underway, with limitations of statutory authority | Appointed POC and actively participating on GL Coastal Habitat database | WETLANDS PROGRAM - look into a bit further - David Adams is contact. DEC | Assess potential for habitat restoration 3.1; physical & bio processes links; economic valuation of wetlands 3.5; restoration of historic conditions 3.6; habitat 3.7 |
| Achieve 1.54 million breeding pairs of waterfowl | | Establish self-sustaining wildlife populations | Underway | NY Interagency Wetlands Task Force | DEC | Potential for spp restoration 3.1; restoration of historic conditions, spp, habitat (3.6-7) |

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| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|--|---|-------------------------|--|---|--|
| Update inventory & mapping of habitat types | | | | | Freshwater Wetlands Mapping (DEC) | Physical environment & biological processes 3.2; maintaining long-term records of offshore organisms, including spatial, temporal trends 3.4 |
| Integrate federal & state regulations | | | | | Is this goal different from the joint permit applications for DEC/USACE? | |
| 3. Riverine & related riparian areas | Currently no national program specific to river restoration - partnership dev't would be necessary | | | Survey & mapping of all dam-impeded tributaries | DEC | |
| Restore 10 GL tributaries | | | | 4 priority tribs identified for fish passage in Lake Ontario basin | There are 5 streams that are being studied for dam removal (Don Zelazny for more info). DEC (NY rivers) | Habitat restoration 3.1; Historic conditions 3.6 & habitat especially in watersheds 3.7 |
| Restore brook trout, lake sturgeon in tributaries | FWS | Mentions brook trout rather than lake trout | | 2 priority tribs identified for fish passage in Lake Erie basin | DEC | Spp restoration 3.1; historic conditions 3.6 & habitat especially in watersheds 3.7 |
| Classify watersheds - degree of altered hydrology | | | | Lake Ontario LaMP Binational Biodiversity Strategy | 319 Program: Priority Water Bodies. DEC | Physical environment & biological processes 3.2 |
| | | | | Implementing LE, SELO & SWLO WAPs | DEC | |

Action Item#2. Habitat/Species

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|--|---|---|-----------------------------------|--|---|
| 4. Coastal and upland habitats | Funding to state, federal, tribal NR mgmt plans - increasing private landowner incentives is primary focus | | | Implementing LE, SELO & SWLO WAPs | DEC | |
| Inventory, assess GL coastal habitats, prioritize for protection & restoration | | Assess priorities in developing mgmt plans for significant coastal fish & wildlife habitats designated under Coastal Mgmt Plan | No mgmt plans completed under their program - though municipalities have initiated watershed plans. How does EBM fit into this? | State Wildlife Grants | Comprehensive Wildlife Conservation Strategy; NYS Natural Heritage (inventory), Lake Ontario Biodiversity Conservation Strategy being developed currently for basin. DEC | Assess potential for habitat restoration 3.1; Physical environment & bio-processes; Restore historic conditions 3.6 & habitat especially in watersheds 3.7 |
| Protect, restore 10,000 acres of high priority coastal, upland habitats per year (basin-wide) | | Protect state's highest quality wetlands & immediately adjacent uplands with mix of private, local, federal & Environmental Assistance Fund-supported state acquisitions, easements, or other protective measures | Underway | | There are numerous programs that this would fall under - need to follow up | Assess potential for habitat restoration 3.1; Physical environment & bio-processes; Economic & recreational valuation of wetlands 3.5; Restore historic conditions 3.6 & habitat especially in watersheds 3.7 |
| Detailed monitoring of AOC's in coastal shore areas | | | | | | Modeling links between physical environment & bioprocesses 3.2 |
| Protect & restore 1.1 million acres of uplands associated with wetlands | | | | | Open Space Protection Program | Habitat'spp restoration 3.1; Historic conditions 3.6; Native spp & habitat restoration 3.7 |

Action Item#3. Coastal Health

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|--|---|--|--|-------------------------------------|
| 1. Human, industrial waste inputs | | Begin to ban discharge from PTS from point sources | Research has indicated restrictions on this activity due to TSCA & other regulations | | | |
| Implement, enforce, report wet weather control programs; identify deficiencies | Clean Water Act wet weather control programs - DEC | | | Improvements and State EPF investment to State Revolving Loan Funds | SPDES. EFC | |
| Cost share programs with federal, state, local - waste water treatment programs | NYS & local | | | Updating SPDES permits to include LTCPs for CSOs and to eliminate SSOs | Environmental Facilities Corporation; Environmental Protection Fund. DEC | |
| Distribute federal \$ - upgrade wet weather programs, CSO, permitting, etc. | CSO Control Policy - NPDES permitting & enforcement | | | | SPDES | |
| Use \$ to implement anti-degradation rules (sewage expansion) | Check with DEC Division of Water | | | | Not sure if DEC's accepted EPA's rule - being negotiated | |
| 2. Non-point source | NYSDOS | Statewide coastal nonpoint mgmt plan | NPS mgmt plan conditionally approved in 1997. Pending final approval depends on meeting EPA & NOAA conditions by 2000. At time of assessment, NYS did not have statutory authority to implement some parts of plan - legislation needed. | | | |
| Various forms of run-off, nutrient loads, bathers, boaters | | | | | | LT monitoring; refine hydro-dynamic |
| Education and/or incentives to reduce impacts | State & local health agencies | | | | | |
| Request Sea Grant make this an education/outreach priority | GL Sea Grant Network/ GL COSEE | | | | | |

Action Item#3. Coastal Health

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|-------------------------------------|---|-------------------------|--------------|---|---|
| Enforce existing regulations - take action against boaters who discharge | State & local - DEC | | | | DEC pollution discharge | |
| Require regulations - availability of adequate toilet, shower facilities based on bather density | Beach Act - NYS DOH | | | | NYS DOH - but uncertain about programs | |
| Assess contaminated sediments, especially in AOC's | State Superfund | (if there were mention of assessments in 25 year plan, would they still be relevant? Was any of the 25 year plan used in dev't of collaboration items?) | | | Completed assessments on the St. Lawrence, Rochester embayment. 18 Mile, Buffalo Rivers assessments underway. (What about Niagara?) | LT monitoring; segment analysis of watersheds; prioritize NYGL watersheds |
| Clarify sources, transport of biotoxins | | | | | NYS doesn't have authority to seek out biotoxins - state programs required. | Segment analysis of watersheds, LT monitoring |
| 3. Apply risk-based mgmt to recreational waters | | | | | | |
| Add to water quality monitoring - standardized, holistic | EPA - NYSDOH | | | | DOH implements through Beach Act | LT monitoring from diverse samples; refine hydro-dynamic model - near coast areas |
| Accelerate process necessary for field-testing, approval of real-time test methodology | EPA - NYSDOH | | | | | |
| Implement at local, tribal levels | Feds adopt - state/locals implement | | | | EFC provides financial & technical assistance to municipalities for environmental projects - would this qualify? | |
| Federal, state, tribal, local work together to standardize assessments, inspections | all levels | | | | | Create digital dababase & database clearinghouse |

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|---|--|--------------|-------------------------|---|--|---------------------|
| 4. Drinking source water quality | | | | | | |
| Establish ambient water quality criteria - parasites, pathogens, disinfectant by-products | EPA develops criteria - Safe Drinking Water Act of CWA | | | | NYSDEC, DOH accepts criteria, add to lists of standards | |
| Fund Clean Water State Revolving Fund - implement programs (treated water - no unacceptable risk) | Clean Water State Revolving Fund Act | | | | Clean Water State Revolving Fund - in NYS administered jointly by EFC & DEC | |
| State work with public water system to reduce vulnerabilities identified in the source water assessments | State & public utilities | | | | Completed vulnerability assessment, DEC, DOH, EFC | |
| 5. Drinking water infrastructure | | | | | | |
| Fully fund Drinking Water State Revolving Fund, increase flexibility, infrastructure improvements | | | | Improvements and State EPF investment to State Revolving Loan Funds | Drinking Water State Revolving Fund - administered jointly by EFC & DEC. DOH/EFC | |
| Implement & enforce infrastructure improvement plans, include security facility measures, vulnerabilities | Bioterrorism Act - USCG - State Implementation | | | | State Emergency Mgmt Organization | |

Action Item#4. Areas of Concern

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|--|---|--|---|----------------------|---------------------|
| 1. Legacy Act Funding, Amendments, Reauthorization, Guidance | | Work towards eliminating damaging waste discharges to entire system | According to those surveyed, progress rating of 4 - almost completed | | | |
| Request \$150 million/year - remediate contaminated sites in AOC's (continue for 10 years) | Congressional appropriates for Legacy Act, EPA | Continue remediation of listed hazardous waste sites | Underway/almost completed - "No specific accounting of inactive hazardous waste sites in GL basin. The 1998 RAP shows work underway or completed at 838 of 878 sites. No progress has been made on incorporating the hierarchy into regulation." | | | |
| Act should enhance & accelerate pace of remediation | CERCLA, RCRA, WRDA, Legacy Act Language Amendments | Continue remediation of listed hazardous waste sites | Underway/almost completed - "No specific accounting of inactive hazardous waste sites in GL basin. The 1998 RAP shows work underway or completed at 838 of 878 sites." (obviously this is distinct from the 6 AOC's - perhaps more relevant under coastal health?) | Appointed staff to regional advocacy task force | DEC | |
| Amendments to Legacy Act | EPA | | | | | |
| Clarify Act's intent to include 'potentially responsible parties' (funding) | | | | | | |

Action Item#4. Areas of Concern

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|--------------|-------------------------|---|--|---------------------|
| 2. AOC Capacity Program | | | | Delisted Oswego AOC - 1st in U.S.!!!! | DEC | |
| Funding to state, community-based councils in AOC's - regulate coordination, program implementation | Federal appropriations to EPA's National Program Office | | | Division of Water PPA to support statewide AOC activities | DEC | |
| Water Resources Development Act to include USACE in coordination | 1990 WRDA Section 401 (USACE GL RAP Program) | | | Negotiating EPA/DEC grant for Binational RAPs management (Niagara & St. Lawrence) | DEC | |
| | | | | Committed \$1 million to contaminated sediment investigation in Buffalo River AOC | DEC | |
| | | | | Contaminated sediment & source areas investigation Eighteenmile Creek AOC Corridor; 2006 ROD for Flintkote site surface cleanup; Barge Canal source investigation | DEC | |
| | | | | Supporting Habitat BUI delisting in Niagara/Buffalo RAPs | DEC | |
| 3. Federal-State collaboration | EPA/State RAP Work Group, Federal-State Coordinating Committee; no real state authority | | | DEC/EPA Region 2 commitment to establish delisting criteria for all AOCs by 2009 | DEC participating out of 'good will' understanding. DEC | |
| Development of environmentally sound sediment treatment technologies, re-use, best practices | EPA, USACE, State, tribes - Section 306 of Legacy Act | | | Actively participating on committee via monthly conference calls | DEC | |
| 4. Promote Disposal Technologies and Better Beneficial Use | | | | Adopted BUI Handbook for sediment remediation | DEC | |
| | | | | NY GLPF large Grants for technology Demonstration | DEC | |

Action Item#5. Nonpoint Source Pollution

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|---|---|---|---|---|---|
| Restore 550 acres of wetlands | USDA & USEPA to from task force - USACE, FWS, NOAA, 'other fed, state, tribal, local agencies, organizations" | Protect state's highest quality wetlands thru mix of private, local, federal, EAF supported state acquisitions or easements | Underway | Working via IJC governmental consultation to improve natural variability to Lake Ontario water level control plan | Freshwater Wetlands Program (DEC), NYS Open Space Plan. DOS | |
| Restore 335,000 acres of buffers over 5 years | USDA, NRCS, FSA to be lead agencies to be lead agencies - work in partnership with others | Revise current laws & regulatoins applying Freshwater Wetlands Act to increase protected buffer | | | NYS Open Space Program | |
| Create new program to address education & installation of buffers in urban & suburban environments | USDA, NRCS, FSA to be lead agencies | | | SPDES permits issued for CAFOs | DEC | |
| 40% reduction in soil loss - 10 selected watersheds - critical areas | USDA, NRCS to lead partnership | (does the Coastal Nonpoint Source Mgmt Plan mention soil loss??) Soil is not really their concern. Need to look at Dept of Ag programs. Check Cooperative extension, Sheila Myers. | | | | Collect information on source controls & avoidance of run-off; Prioritization of watershed in terms of land use, soil loss - among others |
| Develop & implement nutrient & manure mgmt on livestock farms | USDA, NRCS to lead partnership | | Completed | | Must be something, through AG & DEC | Determine BMP effectiveness; Prioritization of watershed in terms of nutrient loading, discharge. |
| Assist 12,000 farms with 50+ animals | USDA, NRCS | | | | | |
| Hydrological improvements in 10 urban watersheds | USDA, USACE, USGS, USEPA, (USDA to expand focus - include off-site impacts, CWA Section 19 funding) | Continue implementing DEC Coastal Nonpoint Source Mgmt Program, giving priority to developing corrective plans for watersheds in the basin that have significant problems | Mixed responses from underway to completed; NPS Mgmt Plan was approved conditionally in 1997. Pending final approval hinged on meeting EPA & NOAA conditions by Nov 2000. At time of assessment, state did not have statutory authority to implement some parts of the plan - requires legislation. | | | |

Action Item#6. Toxic Pollutants

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|--|---|---|--|---|---------------------|
| 1. Reduce, eliminate sources - mercury, PCB, dioxins, furans, pesticides, etc. | | Zero discharge of toxics | | Support local "Clean Sweep" programs for household hazardous wastes disposal | SPDES. DEC | |
| Develop mercury product stewardship strategy - phase out uses (waste mgmt included) | EPA | | | Developed & implementing Northeast Regional TMDL for Mercury statewide | NYS Mercury Task Force. DEC | |
| PCB's - decommission, properly disposed of | Stockholm Convention - Persistent Organic Pollutants | Begin to ban discharge of PTS from point sources | Research indicated restrictions on TSCA - grants can be given to states for programs - what are the ones in NYS? | Complete remediation of NRTMP sources | Hazardous waste mgmt program. DEC | |
| Dioxins & furans - community level - address deficiencies in infrastructure for household waste collection, and/or enforce illegal burning | State, local, tribal ??? | | | Continue State Superfund remediation of HWS | Backyard Burn Barrel program - local ordinances to prevent burning. DEC | |
| Canceled pesticides - implement strong waste pesticide collection program | State, GL Binational Strategy, LaMP, USEPA, DEC/Ag & Markets, GL Cities Initiatives | | | Re-engineer & Reinvigorate Brownfields program | NYS maintains Household Hazardous Waste Program. DEC/DOS | |
| | | | | 2006 new regulations for dental amalgam/Hg waste disposal and waste oil | DEC | |
| 2. Prevent new toxic chemicals from entering basin | | a. Incorporate P2 &/or Waste minimization requirements into water, air, solid waste permits; b. Adopt policy of protecting existing water quality from degradation. | a. Very mixed responses - some said N/A to DOS mission, some said little progress, some said underway - statutes already included P2; b. underway, new water programs | Ban on creosote wood preservative manufacture, use & disposal | Energy Efficiency Star Program. DEC | |
| Easier access to small, medium-sized business - bundle technical assistant services - compliance assistance, P2 & E2 audits | DEC, NYSRDA | | | | (search for names of programs) | |
| Tax incentives, loans to promote investment in P2, E2 | | | | | Under a range of authorities - consolidation needed | |
| Traditional regulatory programs to conduct P2 & E2 projects | Federal, state regulatory agencies, EPA, state regulatory assistance (see document!) | | | | | |

Action Item#6. Toxic Pollutants

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|---|--------------|-------------------------|--|--|--|
| 3. Institute comprehensive research, surveillance, forecasting capability to help ID chemical threats | | | | Established new P2 Institute-partnership grants for technology development | DEC | |
| Screening/LT monitoring of PTS sources, concentrations | TSCA Regulations, GL Binational Toxics Strategy | | | | Air: GL Air Deposition Network (IS THIS STATE OR REGIONAL?); Water: Revolving Intensive Basin Survey | Detect, quantify levels of PBT's; Develop industry protocols that are less costly methods for screening; Develop new equipment, methods for detection |
| Research on chemical properties, exposure, long-term effects | Studies should be federal responsibility | | | | DEC, Cornell Pathology - FWS Toxicology Partnership | Study impacts of neurotoxins, estrogens, pharmaceuticals, personal care products, etc. on pathogens & bacteria levels in nearshore & embayments on animal health; Conduct new research on new emerging chemicals |
| Modeling to predict impacts of reduction actions at various geographic scales, examine exposure scenarios | | | | | | Study impacts (see above); Conduct research on new emerging chemicals |
| Information mgmt - easy access to database | Federal - TRI | | | | NYS Participates in TRI program; Incorporate GLI Water Quality Standards into SPDES (was this a recommendation or a program?) I'm not sure of the question | |

Action Item#6. Toxic Pollutants

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|---|--------------------------|---|---|---------------------|
| 4. Protect Human Health - fish consumption, toxic reduction methods & choices | EPA develops guidelines for human consumption | | | | DOH makes determinatiotin if it wants more stringent standards, guidelines; DEC does analysis & reports concentrations to DOH, DOH then issues advisories | |
| Consistent information on fish/wildlife consumption, especially to sensitive populations, health care professionals | State, regional & federal (EPA, FDA) | | | | GL Sport Fishing Advisory Task Force; Sea Grant; DOH, DEC, GL Human Health Network | |
| Current advisory programs fully funded, implemented | Federal | | | | | |
| Public outreach & education | DOH | | | | | |
| 5. Support efforts to reduce continental, global sources of PTS to basin | Federal | Ban discharge of PTS from point sources | Restrictions (see above) | Implement Regional Greenhouse Gas Initiative (RGGI) | DEC | |
| Ratify Stockholm Convention on Persistent Organice Pollutants | Congress, federal agencies, GLBS | | | | | |
| Support international PTS mgmt & monitoring | Commission of Environmental Cooperation, EPA office of international activities | | | | | |
| Support reduction of international sources of mercury | | | | | | |

Action Item#7. Information Indicators

| Recommendation | Organizational Jurisdiction | 25 Year Plan Items | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|--|---|---|--|---|
| Increase, better coordinate collection of critical info; GLOS support | LaMPs | Improve coordination & planning for NYS GL programs (haha) | Underway or little progress, was recommended to take advantage of Pataki's Clean Air/Water bond acts (n/a) | Actively participating in GLOS steering meetings | DOS Coastal Zone Program; DEC; Ecosystem Conservation Strategy | Information & technology to multiple user groups; catalog existing models; data clearinghouse |
| | | | | Establish Science Agenda for EBM | DOS | |
| Continued development of science-based indicators | & Promoted by Interagency Task Force federal | | | Northeast states developing indicators and measures to monitor the health or condition of Species of Greatest Conservation Need, critical habitats, threats to the resource, and effectiveness of conservation actions at a landscape scale | EBM - more details needed. DEC | |
| | | | | Lake Erie & Lake Ontario LaMP indicators | DEC | |
| | | | | Updated WI/PWL for Lake Ontario Basin | DEC | |
| Implementation of indicators of SOLEC process | Interagency Task Force federal | | | | | |
| Overall federal research budget doubled over next 5 years | Federal | Strengthen federal funding & technical support | Underway - little flexibility by USEPA, limited resources, focus on implementation. Projects are activity-specific. Need to develop method for long-term integration. | | | |
| Funds made available to support GL Research Office | 1987 Clean Water Act Amendments (33 USC 1268) | | | NY GLPF RFP due 2007-08 for large grants | (State has no authority to support this. GLRC?) DEC | |

Action Item#7. Information Indicators

| Recommendation | Organizational Jurisdiction | 25 Year Plan Items | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|---|--|---|--|--------------------------|--|
| At least 10% of restoration funds allocated towards research to aid planning & assessment | | | | NY GLPF annual small grants | SUNY-ESF | |
| Facilitate easy information exchange amongst all regional partners, stakeholders, decision-makers | | a. Improve coordination & planning for NYS GL programs; b. Program more effective information transfer between state agencies & other entities | a. Underway, little progress (see above); b. Underway, see Joint Application process for wetlands. Issue of incompatible GIS systems. | | EBM | Data clearinghouse; info & technology transfer to multiple user groups |
| Create consistent & comprehensive repository of GL data | Interagency Task Force federal | Range of action items address information sharing, communication improvements | Communication has improved, but not in the means that Plan advised | | EBM - or GLBAC? (future) | Data Clearinghouse |
| Augment regional information mgmt infrastructure - adopt standardized mgmt protocols, commit to open data availability | All regional partners (see US Commission on Ocean Policy) | | | Developing Ecosystem Atlas of NYS monitoring & research programs | DOS, DEC | Data Clearinghouse; catalog existing ecosystem models |
| Establish communications workgroup - public affairs specialists from gov't & key industries | Work to be established by ITF | | | Protocols being developed via NYS Ecosystem Conservation Council | DOS | |

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|---|-------------------------|--|---|----------------------------------|
| 1. Incorporate sustainability programs into all sectors | | | | | | |
| Incorporate sustainability criteria into sewer and water infrastructure - loans, grants (prioritize) | Governor, state agencies | Ensure economic development decisions incorporate natural resource carrying capacities | | Implementing NYS Ocean-Great Lakes Ecosystem Conservation Initiative | DEC/DOS | Inform local decision makers 4.2 |
| Review grant, loan subsidy programs, incorporate sustainability criteria | GL Interagency Task Force | | | Established new Office of Climate Change | DEC | |
| Use Brownfields to revitalize waterfronts - emphasis on public access, recreational opportunities | Local gov'ts (priority funding from federal & state programs) | Guide dev't to appropriate sites where infrastructure is underused, or without unduly stressing resources | | | DOS - Brownfield Opportunity Areas Program (part of Coastal Zone Program) | |
| Review examples of sustainable practices, evaluate effectiveness & application to basin, develop criteria for potential green certification | GL Commission; GL Regional Planning Group; Sea Grant/University Contracts | | | NYS Green Building Initiative | DEC | |

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|--|---|--------------|-------------------------|--|--|---|
| 2. Align governance to enhance sustainable planning & mgmt of resources | | | | | | |
| 3-year demonstration projects in metro areas to develop land use plans | USDOT, Federal Highway Administration, Federal Transit Agency, State DOT's, Regional Metropolitan Planning Organization | | | | Sandy Creek demonstration project - EBM | |
| Integrate long-term invasive spp control with sustainable intermodal transportation | US Congress | | | Ocean-Great Lakes Ecosystem Conservation Council has begun efforts | Invasive Spp Task Report; AIS Draft Mgmt Plan. DEC/DOS | Encourage partnerships (St. Lawrence) 4.3 |
| ID, expand existing online clearinghouses - education and outreach, tourism, local watershed planning | GL Commission, GLIN, Sea Grant/Universities | | | NY Roundtable 2007 - promoted links between water and land conservation, use & re-use policies | Sea Grant. DEC/DOS | Define social science needs 4.1; Inform local decision-makers 4.2; Encourage int'l partnerships 4.3 |
| Enhance communities abilities to apply sustainability through training & technical assistance to communities | Watershed & regional councils, RAP groups, tribes, NGO's, soil & water conservation districts | | | | DOS. EFC provides technical assistance | Define social science needs 4.1; Inform local decision-makers 4.2 |
| Initiate, maintain 2 watershed/regional partnerships (emphasis on rural, multi-system watersheds) | Watershed & regional councils, RAP groups, tribes, NGO's, soil & water conservation districts | | | | FLOWPA | Water use predictive tools 4.4 |
| Enhance ports, marinas abilities to implement BP, partner with AAPA | Port authorities, state, local, private harbor & marina interests, AAPA (state) | | | | DOS & DOT | Int'l partnerships 4.3; Develop water use predictive tools 4.4 |

| Recommendation | Organizational Jurisdiction | 25 Year Plan | 25 Year Plan Assessment | Action Taken | NYS Program & Agency | Research Priorities |
|---|---|--------------|-------------------------|--|--|---------------------|
| 3. Build outreach, PR campaigns | | | | To be developed via O-GL ECC | DEC/DOS | |
| Develop, implement marketing strategies, include messages of ecological, economic importance of region | Foundations & NGO's | | | | Brownfield Opportunity Areas Program (DOS) includes a component of marketing to solicit investors - would this be relevant?? | |
| New awards to recongnize excellence in SD | Foundations, business sector associatoinis, NGO's | | | | DEC, DOS give Environmental Excellence Awards | |
| Develop additional education & outreach modules on sustainability - incorporate into school curriculum | State resource & education agencies, NGO's in partnership with local school districts | | | | | |
| 4. Provide leadership for Sustainable development | | | | | | |
| Authorize & appropriate funding for development of phased implementation plan for recommendations in Strategy | Congress | | | NYS Great Lakes Basin Advisory Council & Great Lakes Leaders monitoring activities | NY SeaGrant | |
| Amend framework to provide oversight of development of implementation plan | Regional Collaboration | | | | | |
| Renewal, expansion of commitments to sustainable use, development, conservation - proactive advocacy for SD | GL governors, mayors, tribal leaders | | | | DOS, "down the road," but not a current priority | |

* List of Acronyms

| | |
|--------|---|
| AAPA | American Association of Port Authorities |
| AG | Attorney General |
| AGO | Attorney General's Office |
| AIS | Aquatic Invasive Species |
| AOC | Areas of Concerns |
| BMP | Best Management Practice |
| BUI | beneficial use impairment |
| CAFO | Concentrated Animal Feeding Operation |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| COSEE | Centers for Ocean Science Education Excellence |
| CSO | combined sewer overflows |
| CWA | Clean Water Act |
| DEC | Department of Environmental Conservation |
| DOH | Department of Health |
| DOS | Department of State |
| DOT | Department of Transportation |
| E2 | energy efficiency |
| EAF | Electric Arc Furnace |
| EBM | ecosystem-based management |
| EFC | Environmental Facilities Corporation |
| EPA | Environmental Protection Agency |
| EPF | Environmental Protection Fund |
| ESF | College of Environmental Science and Forestry |
| FDA | Food and Drug Administration |
| FLOWPA | Finger Lakes - Lake Ontario Watershed Protection Alliance |
| FSA | Farm Services Agency |
| FWS | Fish and Wildlife Service |
| GIS | Geographic Information Systems |
| GL | Great Lakes |
| GLBAC | Great Lakes Basin Advisory Council |
| GLFC | Great Lakes Fishery Commission |
| GLIN | Great Lakes Information Network |
| GLOS | Great Lakes Observing System |
| GLPF | Great Lakes Protection Fund |
| HWS | Hobart and William Smith Colleges |
| IJC | International Joint Commission |
| ITF | Interagency Task Force |
| LaMP | Lakewide Management Plan |
| LTCP | Long-Term Control Plan |
| NAISA | National Aquatic Invasive Species Act |
| NGO | Non-governmental organization |
| NOAA | National Oceanic and Atmospheric Administration |
| NOBOB | no-ballast-on-board |
| NPDES | national pollutant discharge elimination system |
| NR | natural resources |
| NRCS | Natural Resources Conservation Service |
| NRD | Natural Resources District |
| NRTMP | Niagara River Toxics Management Plan |
| NY | New York |
| NYS | New York State |
| NYSRDA | New York State Records Disposition Authorization |
| P2 | pollution prevention |
| PBT | Persistent Bioaccumulative and Toxic |

| | |
|-------|--|
| PCB | Polychlorinated Biphenyls |
| POC | particulate-phase organic carbon |
| PPA | Phenylpropanolamine |
| PR | public relations |
| PTS | Persistent Toxic Substances |
| PWL | Priority Waterbodies List |
| RAP | Remedial Action Plan |
| RCRA | Resource Conservation and Recovery Act |
| RGGI | Regional Greenhouse Gas Initiative |
| ROD | record of decision |
| SD | sustainable development |
| SELO | Southeast Lake Ontario |
| SFY | State Fiscal Year |
| SOLEC | State of the Lakes Ecosystem Conference |
| SPDES | State Pollutant Discharge Elimination System |
| SSO | sanitary sewer overflows |
| SUNY | State University of New York |
| SWLO | Southwest Lake Ontario |
| TMDL | Total Maximum Daily Load |
| TRI | Toxic Release Inventory |
| TSCA | Toxic Substances Control Act |
| USACE | United States Army Corps of Engineers |
| USCG | United States Coast Guard |
| USDA | United States Department of Agriculture |
| USGS | United States Geological Survey |
| VHS | Viral Hemorrhagic Septicemia |
| WAP | Wildlife Action Plan |
| WI | Wisconsin |
| WRDA | Water Resources Development Act |
| WRP | Wetlands Reserve Program |