

Submitted by:

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Focus of this White Paper: Improving Protection of Coastal Water Resources

1. Make more extensive use of information and scientific expertise in evaluating environmental permits under various programs.
2. Minimize flow disruptions in river systems.
3. Restore wetland functions and provide adequate buffers to protect water quality.
4. Consider potential impacts on all down-stream users when making permit decisions by applying the precautionary principle.
5. Conclusion.

*1. Make more extensive use of information and scientific expertise in evaluating environmental permits under various programs.*

Because of budgeting limitations, the expertise needed to sufficiently evaluate complex permitting situations is often unavailable on the EPD staff, and stress tends to be placed on reaching expedient decisions. In such cases, assumptions have been made that were intuitive and unsubstantiated, and which could place important resources in jeopardy without more complete analysis and assessment.

Moreover, due to the demands of daily operations, it is difficult for EPD staff to keep up with emerging analytical techniques that are more familiar to many of those who work in academic and research institutions. We believe there are promising opportunities for bringing valuable expertise and better information to bear on permitting decisions that affect, or could affect, Georgia's water quality.

Using staff of other organizations and institutions would have several kinds of benefits. First, it could help upgrade and integrate the use of information by EPD staff through new research findings and methods. Reports by research teams on various facets of hydrology, geology, ecology, and biology, for example, would also raise public awareness about the limits and implications of available information, and the inherent risks of issuing permits for proposed activities prematurely or without sufficient conditions. By making the terms of such trade-offs more explicit, decision-makers, with appropriate technical advice, would be in a better position to impose and monitor conditions under which permitted activities should be conducted and properly tracked through targeted data collection and assessment. Involvement of researchers in questions related to permitting would also bring much-needed realism and relevance into the planning, synthesis, and application of new research. Field studies in environmental research could be specially designed to help resolve pressing problems raised in permitting decisions, and scientific studies would therefore become more useful in resolving important issues.

We realize that funding constraints are a serious problem in implementing the alternatives available for resolving water quality issues. There may be additional federal funds (such as the National Science Foundation, NOAA, and EPA) and/or federal agency staff that could be used to help augment state resources, including possible support of scientific expertise as described above. Imposing reasonable permit processing fees proportional to the cost of permit review also seems quite justifiable as a means for generating at least some of the needed revenues.

*2. Minimize flow disruptions in river systems.*

Withdrawing water from one river system and discharging it into another (so-called 'inter-basin transfers), and 'consumptive use' of water (such as evaporation loss from spray irrigation, steam-generated energy production, industrial cooling, or reservoirs) should be minimized as much as possible. Even before the current period of drought, salinity in the inter-tidal areas of coastal rivers had been increasing, putting various species of fish at risk in their earlier life stages. Increased salinity is believed to be due to several historic factors, including (1) conversion of wetlands by ditching for forestry, agriculture, and other land uses, and (2) reduced groundwater outflow resulting from the great decline in artesian pressure caused by excessive and concentrated water withdrawal for industry. Remaining fresh water flowing into Georgia's estuary system is needed to retain the function of this highly valuable habitat, which supports thousands of jobs in commercial fishing and seafood processing. Moreover, marine biologists estimate that some 80% of marine species depend on the estuary ecosystem to sustain

it, either as habitat or through the food web. The economic importance of these coastal resources is on the order of \$1 billion annually, and putting them at further risk by reducing river flow is directly contrary to the public interest.

*3. Restore wetland functions and provide adequate buffers to protect water quality.*

Complete restoration of the natural flow of our river systems is not possible for a number of reasons, but there are alternatives for achieving at least partial recovery of water resource functions. For example, critical water storage and flood protection functions of swamps that were drained and filled could be restored through selective acquisition of undeveloped land, enhanced with appropriate landscape contouring and replanting of certain native species. Likewise, along waterways with impaired water quality or impinging activities that threaten non-point source pollution, land could be acquired to serve as additional buffer areas. This would not only add water filtration and flood-protection benefits, but it would enhance nature-based tourism and commercial recreation activities within these waterways, supporting and diversifying income and business growth potential. Long-term public interests will be best served by state and local governments learning to regulate the use of resources within sustainable limits of natural processes. The sooner these actions are taken, the less Georgia taxpayers will ultimately have to pay for improved water resources.

*4. Consider potential impacts on all down-stream users when making permit decisions by applying the precautionary principle.*

Water withdrawal and discharge permits should be based on decisions that encompass full analysis of the consequences to others users of the same resource systems. Such impacts may include increased health risks (with associated medical costs), as well as damage to businesses that depend on resource quality and productivity. If current scientific understanding does not support a conclusive assessment, the relative risk should be determined using the best available information and expertise. Delay of an action pending more complete information, consistent with the precautionary principle, should be seen as the most acceptable alternative when risks are potentially significant. Presently, a permit may be issued because there is no conclusive or overwhelming evidence of public threat, even though uncertainty is great and risks are reasonably substantiated. The more we consider system-wide environmental factors in making decisions about economic development and other human activities, the greater the benefits for future generations. When risks are taken, monitoring must be extremely reliable and openly evaluated.

*Conclusion*

Protecting existing jobs, businesses, and communities that depend on the diversity and health of natural resources, as well as stewardship of ecosystems themselves, must be viewed as an essential function of government, which is even more imperative during periods of economic and environmental stress. These nature-based business activities are especially important to families of modest means, and if conducted responsibly, they are sustainable. Governmental policy that jeopardizes them would, in effect, constitute a takings by improper regulated use of natural resources to benefit new users at the expense of existing activities being conducted at a proportional, reasonable scale compatible with healthy ecosystems. Unlike many large, resource-intensive industrial water users that are, and have been, permitted to pollute and/or mine natural resources to the ultimate detriment of the public, responsible nature-based businesses work within the restorative capacity of natural systems. Sustainable practices must be protected and encouraged. If they become infeasible due to environmental conditions, our policies have surely failed and fully functioning ecosystem conditions will be increasingly difficult, if not impossible, to restore.

For Georgians to attain our economic potential over the long term, while also enhancing the quality of life for future generations, we must do so within the sustainable capacity of natural systems, under all conditions. This can only be realized with adequate regulatory agency staffing and principled leadership, which in turn requires the vision, integrity, and resolve of key decision-makers, such as the members of this study committee and the General Assembly. The Center urges you to take whatever steps necessary to improve enforcement of all applicable Georgia laws – not only to safeguard the public interest in natural resources, but also to enhance our common economic future. Above all, we must seek policies that provide motives and opportunities for pursuing self-interest that fully complements the public trust.