RIO: DIRECTORY AND ATLAS FOR THE GEORGIA REGION

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Abstract. A forth-coming publication by the Georgia Environmental Organization [*GEO*] will make obtaining information and geographic data on watersheds easier for local management efforts. Using computer-generated maps and databases organized along watershed boundaries, *GEO*'s reference tool will promote a clearer perspective on the inter-relatedness of our regional waterways.

INTRODUCTION

As citizen-based organizations work to improve their communities and the environment, they are often confronted with the need for reference materials to help them visualize their goals and put them in touch with the people who can help them accomplish those goals. *GEO* has developed such a resource for the Georgia Region entitled *RIO* (River Inventory for Organizations) *Directory and Atlas*. When published this year, this dual-purpose reference tool will combine an atlas of 164 regional watershed maps with an extensive directory of local, state and national contacts to facilitate communication and networking among groups working in the field of watershed management.

BACKGROUND

By now, many of us know that maps can be used to emphasize one perspective over another in seeming objectivity. A map of Georgia, then, delineated by the familiar state and county lines, can depict the state as one of 50 separate units in a country on the North American continent. Its outline can be drawn and it appears to stand alone and is sufficient unto itself. But if one uses a different cartographic perspective, one that uses the topographic reality of the land, Georgia can be seen to be situated within a larger region of interconnected landscapes. From the mountains, water flows down in all directions through fourteen major river basins and then into the Mississippi River and two different seas, the Gulf and the Atlantic. Clustered up and down those waterways are fifty-two sub-basins that are rimmed by subcontinental divides and cupped at their upper elevations by ridge lines and railroads. Nested within these sub-basins are the 164 EcoBasins which constitute the framework around which our book is organized.

EcoBasins are aggregated watersheds. We have coined the term to emphasize that when dealing comprehensively with waterways, it is vital to treat the whole of the habitat and the ecosystem from ridge line to ridge line. Drawn by *GEO* staff members with an eye to what is practical within the framework of community involvement, they follow as much as possible the U.S. Geological Survey's cataloging units, but sometimes fall midway in size between the 8-digit hydrologic units and the smaller 11-digit units now being more fully developed by an interagency team coordinated by USGS. They are larger than a town or city, but still encompass a territory that is knowable and manageable in size by its residents. This knowable size is essential in helping people understand and visualize that the place they live in is a three-dimensional landscape with connections to many other places in a larger *hydrologic* setting.

RELATED WORK

The subject publication is a marriage of maps and data. Separately, watershed maps can be found at varying scales and availability, as discussed below. Likewise, directories of environmental interest groups and government officials have also been published before. Relevant works include the *Georgia Urban Waterbody Education Plan and Program, Appendix A* (UGA, 1994). Organized by county, it lists contacts for environmental interest groups, educators, civic and business associations, and local government and state officials useful for establishing the state-wide education program outlined in the book for the Department of Natural Resources.

Other references available include *The 1995 Directory of Environmental Organizations in Georgia,* (Georgia Environmental Council, 1994) organized alphabetically by name and environmental issue, as well as the *1996-1997 River and Watershed Conservation Directory* (River Network, 1996) containing national and state-wide organizations laid out by state.

These valuable materials, and others like them, organize their listings along political boundaries. If one is formulating a management plan in a watershed which encompasses six or even eight counties, some of which are located in another state, information must be pulled together from many corners. It would be much more useful to have the data presented from within the basin's boundary lines.

EPA Efforts

The U.S. Environmental Protection Agency (EPA) has made significant strides in that direction with its World Wide Web Site called *Surf Your Watershed.* The site is both a database of other

Web addresses associated with the watershed approach of environmental management and a series of data sets that contain relevant information retrievable by both citizens and decision makers. While there are many ways to access the information at this site, relevant to this discussion is the fact that it is primarily organized along watershed boundaries.

Surf Your Watershed allows you to utilize a ALink Your Watershed@ feature to view a list of organizations associated with your chosen watershed (unfortunately not a very long list), or request a downloadable map through a program being developed at EPA Region X in Seattle, WA. There is also a tremendous amount of viewable and downloadable data related to the watershed's environmental uses and impacts, protection efforts, water quality, basic land use, and population figures.

PUBLICATION DESIGN

In the making for the past four years, *GEO*'s publication is not meant to supplant the new, exciting efforts of the EPA. Instead, it will make that kind of interrelated information more available to a wider audience. Two issues are of concern: accessibility and scale. EPA's *Surf Your Watershed* site is most impressive and often useful, but it is not accessible to everyone because the Internet is not as yet available to all. While it is likely that this may change, a large percentage of the population still does not have a computer, computer literacy, a modem on their computer, or the means to purchase Internet access are barriers to using this information source by the general public.

The second issue relates to scale. EPA's system is organized along large hydrologic cataloging units. These sub-basins are, we believe, at too large a scale for people to understand in a meaningful way. For example, EPA's Upper Oconee Sub-Basin (#03070101) contains parts of *seventeen* different counties and is as large as many Regional Development Center areas. While an appropriate scale for many types of planning, it is too big for the average citizen's efforts, if connectedness to the landscape and a sense of empowerment is to be hoped for.

The EcoBasins delineated in the subject publication contain, on average, five or six counties, which is still too large for many groups who want to do something about just their own local stream. This scale, however, does lend itself to fostering an understanding of the connections between all smaller watersheds and provides a workable basis for organizing data associated with watershed management.

METHODS

The Atlas

The maps in our Atlas are drawn by *GEO* staff using MapInfo, a Windows desk-top computer mapping program, and TIGER-based map files. The maps include streams and waterbodies, major roads and highways, cities and towns, county boundaries, and other features to aid users in orienting themselves to their landscape. The Atlas also locates a wide variety of data points that may affect water quality and quantity: CERCLIS, NPDES and solid waste facilities, hazardous waste sites, mining and quarry sites, intake and withdrawal locations, and water treatment facilities. Finally, a summary paragraph describes the major characteristics of the watershed, such as its general topography and land use, recreational white water reaches, and notable successes or challenges encountered in the EcoBasin.

Throughout much of the *Atlas*, the EcoBasin boundaries follow those outlined by the USGS cataloging units. Departures from these already-established borders were made in some cases to facilitate the efforts of community organizing. One such case, for instance, was made around the southern part of Lake Lanier where the City of Buford from an adjoining unit was included with the Lake Lanier EcoBasin to encourage citizens of that place to act in concert for the benefit of the Lake. The size of the EcoBasins are generally smaller in metropolitan areas than in rural areas because of the density of development.

Because the boundaries follow topographic features, each EcoBasin encompasses several counties and may also cross into one of the five states which adjoin Georgia. As one looks through the maps, it becomes readily apparent that each political subdivision, whether state, county, city or town, is woven into the larger landscape through its waterways, and activities in one place can impact areas downstream. The Directory then lists all those jurisdictions which effect that EcoBasin.

RIO - A River Inventory for Organizations

One of the unique features of *GEO*'s publication is the pairing of each EcoBasin map with a directory listing water-related people and organizations obtained from *GEO*-generated databases organized along watershed boundaries. Contact names, addresses, phone/fax numbers and Internet addresses are provided for the following:

- Local environmental organizations associated with that EcoBasin, such as Adopt-A-Stream and Americorps groups.
- Regional and national organizations which are especially concerned with water resources, including environmental groups such as the Sierra Club and the Georgia Wildlife Federation.
- Elected officials at the county, state, and national levels.
- County executives and managers.
- State and local officials involved in water-related issues, such as roads, drainage, erosion, water supply, sewer, and forestry.
- USDA Program contacts, including Farmers Service Agency, Natural Resources Conservation Service (old SCS), and the Cooperative Extension Service.
- Regional Soil and Water Conservation Commission representatives.
- US Army Corps of Engineers District officers.

CONCLUSIONS

GEO is confident that this work, along with its up-coming companion book, *A Citizen's Guide to Watershed Planning*, will

be very useful to a wide range of concerned citizens, government agencies and other water-related organizations in the public, private and non-profit sectors involved in effecting positive change for our waterways.

RECOMMENDATIONS

The *RIO Directory and Atlas* fills the gap between the large-scale maps and data provided by the EPA, and the lack of geographically related information found in other environmental directories. It is hoped that the subject publication can be regularly updated and further refined cartographically. Shaded relief maps depicting the actual topography would add significantly to subsequent editions, for example. As a product of a non-profit organization, much depends on obtaining funding support from local governments and environmentally committed philanthropic concerns.

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