

**PARDOE FOUNDATION GIS TECHNOLOGY PLANNING MEETING  
UNIVERSITY OF NEW HAMPSHIRE, DURHAM, NH  
NOVEMBER 21, 2000  
Minutes**

After introductions around the room, Bruce Pardoe welcomed the group, thanked everyone for their time and participation, and provided some background on the Pardoe Foundation's interest in the topic of GIS Technology to enhance conservation efforts in New Hampshire. Ann Fowler Wallace described the thinking leading up to today's meeting, which grew out of the Pardoe Foundation's earlier report examining the status and needs for GIS use in New Hampshire. This meeting was developed in a collaborative fashion with foundation staff at the New Hampshire Charitable Foundation and the New England Grassroots Environment Fund.

Participants heard presentations and updates from various members of the group concerning the current status of GIS technology services to enhance conservation efforts in New Hampshire. Fay Rubin began this portion of the meeting, by describing and demonstrating the UNH GRANIT database and web site. Certain data layers of the GRANIT system are available over the web site, while others can be obtained by special request. Fay described the GRANIT system as one geared toward user groups, as opposed to lay persons, who were defined as viewers in the Pardoe report. Fay also described work under development to create a database and set of maps of protected lands in the state using ARC-IMS software. This information is being created with the land trust community in mind.

Jim McLaughlin from the NH Office of State Planning described a user friendly GIS package of information that the town of Warner's Conservation Commission has developed, with grant assistance from the McCabe Fund and ESRI. This program was developed for a lay audience as a tool for understanding about resource and land use issues in the town of Warner from a watershed perspective. Viewers can query the software program regarding a range of land use related issues, and construct a map. The hope is that this tool will help local citizens and town boards develop watershed conservation plans.

Ben Silberfarb posed a question about the groups' definitions of users and viewers – wondering the audience for several of the GIS tools described above. Dan Sundquist suggested this is not an either/or situation, but rather that many of these GIS technology resources and services will be geared toward a continuum of audiences – from first time lay persons, to more sophisticated lay persons, to skilled technology users.

Bruce Pardoe suggested that one of the promising aspects of these technologies is that ability to take advantage of their interactive properties. He added that conservation groups might become certified data gatherers in the future – thereby expanding the base of knowledge available through the various data layers and databases. Dan Sundquist supported this notion and added that in many cases conservation groups could not only become data gatherers, but could become data developers, as the Green Mountain

Conservation Group has become in the Ossipee watershed. He also added that there is yet another need and role for the conservation community – that is for value added information that helps address the arcane and often highly technical terminology used in many GIS data layers. Marcy Lyman added that there is a role for funders to help support the coordination and marketing of this value-added data.

Dan Sundquist described the GIS programs and services available through the Society for the Protection of New Hampshire Forests (SPNHF). The Forest Society has been using GIS technologies for four years, with GIS maps now an indispensable element of its conservation work. In addition, SPNHF is using ARC VIEW to help with its strategic land protection work, and is looking to provide GIS services to the land trust community in New Hampshire and beyond. SPNHF just recently sent out a survey to the land trust community – asking about interest and demand for 18-20 area of GIS services. While the land trust groups seem very enthusiastic about these technologies, it is difficult for many smaller groups to provide this capacity in-house. One appealing way to access these services is through a GIS service provider. The Forest Society would like to offer such services on a break even basis, and sees great potential in partnering with others to develop GIS products to advance conservation objectives.

George Hastings described the GIS resources available through the Department of Environmental Services, which works closely with GRANIT. George is in the process of developing several new applications using ARC IMS that should be available over the web site in the near future.

Cheryl Fischer added that the New England Grassroots Environment Fund often hears from emerging grassroots groups of their needs for GIS services. Many of these groups may start off as viewers, but evolve in their use and understanding of these technologies. It is important to recognize the different levels of need. Frank Mitchell added that Cooperative Extension often takes people into courses that start as viewers, but continue to develop their skills to become users of GIS technology. Frank noted that Cooperative Extension tries to work with clients to clarify the questions that need to be answered using GIS data, and to understand those that cannot be answered through this data.

Frank described the various education services available through UNH Cooperative Extension Service. Cooperative Extension offers two courses that take place over a two-week period: GIS for Community Decision-makers, and a Community Mapping course. Both course focus on planning and land conservation, providing GIS training in ARC VIEW, information about GIS resources available and the limitations of that data. Both courses involve class projects. Cooperative Extension also offers one-day training workshops on ARC VIEW, as well as a Community Environmental Outreach Program working with students from UNH engaged in community projects. Finally, the Extension Service offers direct assistance to communities through its Community Conservation Assistance Program, which is based on natural resource planning. Cooperative Extension is also partnering with the Forest Society to develop a New Hampshire Land Conservation Assistance Program for the land trust community.

Rich Cook from Audubon Society of New Hampshire described its involvement in the New Hampshire Ecological Reserves Project. That collaborative project is in the final stages of developing criteria for ecological reserves, which it hopes will inform land protection priority-setting. Application of these criteria could be done on a rough scale using the GRANIT database. The group discussed several avenues for disseminating these criteria – through land conservation coalition meetings, other conferences and seminars. Rich added that the Ecological Reserves Criteria seem an opportune ARC IMS project.

Ken Gallager described OSP's involvement in GIS Technology. OSP works closely with GRANIT, as well as coordinates the statewide GIS Advisory Committee. Ken described a survey that the Advisory Committee was about to mail out asking state, regional and local officials about their needs as they relate to GIS Technology and where future GIS technology emphasis should be placed. Survey results will be compiled and used to inform the development of a statewide strategic plan for GIS Technology.

Helen Whyte from the Orton Family Foundation described its efforts to develop information and tools to help rural communities address growth and development issues. In particular, Helen described Orton's new Community Viz software program, which is being beta tested, but soon to be released. Orton will be looking for interested communities to make available a limited distribution of this software program, which is based on ARC VIEW and Spatial Analysis software programs. She added that Community Viz is a product to be used by those we have described as "users," professional planners and other technical experts.

Discussion moved to the topic of gaps/challenges and obstacles to maximize access and use of GIS technology for conservation in New Hampshire. Bruce Pardoe summarized issues that had been raised earlier: need for greater education and training around this suite of technologies; developing more "user-friendly" web sites and databases; developing further services to enhance use of GIS technologies for conservation.

Frank Mitchell added that currently Cooperative Extension courses are fully subscribed, so there appears to be more demand for its training and education courses than it can service. Another challenge raised by Frank was the need to provide data that should change over time, rather than one snap-shot in time. Currently, much GIS data provides a snap-shot. Gathering additional data to provide historical perspective is needed. Tax maps showing recent subdivision changes are just one example of such data.

Ben Silberfarb noted that it would be useful to get parcel maps onto the GRANIT system. He noted that Vermont GIS is doing this. Jim McLaughlin estimated that getting town level parcel data could cost as much as \$10,000 - \$15,000 per town. The group agreed that making available parcel data per town is both a challenge and an opportunity. Cheryl Fischer suggested supporting local groups to help gather this data. It was also suggested that the group think about creating a standard for towns to provide this data – as highlight case examples and best practices where towns have made this information easily available. Dan Sundquist added that the Regional Planning Commissions are

another set of players that often have access to digitized parcel maps, particularly in the more densely developed southeast and southwest portions of the state. Another useful project would be inventorying what data is available through the RPC's and getting access to that information. Engineering and consulting firms are also repositories of such digitized parcel data. It was suggested that an appropriate role for funders might be to create demonstration opportunities for making this data available, including possibly some incentive for towns that participated in making parcel data available. The group also discussed ways of communicating and encouraging this idea through meetings and presentations taking place across the state.

Bruce Pardoe asked the group about where we should go from here. After hearing from people that today's session had been useful and that participants would like to continue this conversation, he suggested holding a follow-up meeting where the group might do more brainstorming about ways to address these challenges/gaps/opportunities. Specifically, Bruce would love to see some of the ideas raised at the next meeting developed into project proposals that the funder participants might consider either independently or in partnership. Marcy Lyman suggested that the funders might approach this issue in a collaborative funding way. Ann Fowler Wallace suggested that a next meeting would be most productive if we were able to hear about the results of the GIS Technology surveys being conducted by the GIS Advisory Committee and SPNHF. The group agreed that we should arrange a next meeting just prior to the next GIS Advisory Committee meeting set for January 17, 2001 in Durham. Ann will prepare notes from today's meeting and distribute them to meeting participants for review and comment.

It being 12:30 pm, Bruce thanked everyone for their participation and wrapped up the meeting.