Bullitt Foundation
Conservation GIS Regional Mentorship Program
Project Description - April 3, 2001

INTRODUCTION:

In 2000, CommEn Space piloted an innovative mentorship program to support regional conservation groups using geographic information systems (GIS) to support their work. With support from the Bullitt Foundation, seven organizations participated, acquiring critical skills in designing communicative maps, managing the data that supports these products and generally expanding their capacity to strategically utilize this technology in support of their conservation efforts.

While these participants made significant gains over the course of this 8 month project, the program has yet to realize its fullest potential. In the first pilot year, many qualified participants were turned away to keep within budget. Moreover, since submitting the original proposal CommEn Space has widened its network of partnership organizations through other grant activities and collaboration, and in the process identified additional organizations focusing on issues like land conservation, habitat protection and water quality, who wish to be involved. Finally, the investment in web-based resources, tutorials and experience in conducting on-site tutorials made in this first pilot year has resulted in our developing resources and skills – capital - we can now recycle and further develop. Given these factors, we are requesting $25,000 from the Bullitt Foundation to expand upon this initial commitment, supporting our efforts to work with existing and additional partners by building upon our existing investment and leveraging key internet technologies to broaden the reach of our efforts.

PROJECT DESCRIPTION:

Drawing on the experience and lessons learned from the first year pilot, this workplan strikes a balance between individual support to meet the custom needs of participating organizations and group activities or workshops through which we can efficiently share tools and problem-solving strategies. The program is flexible but systematic and is divided into two principle components.

Assessment and Planning: Although an assessment phase was included in the first year of this project, we are proposing some changes that will further emphasize the importance of a more complete planning process. One of the problems faced by participants in the mentorship pilot – and indeed by most beginning and average conservation GIS users – is the difficulty defining and designing an appropriate project on which to focus. New users rarely understand the range of graphic and analytical possibilities available to them and consequently encounter difficulty articulating priorities on which their mapping efforts should focus. Likewise, the significance of assembling and organizing good data – what we've found to be the most intractable hurdle confronting new users – is often underestimated, setting up groups for disappointment where expectations of quickly produced, highly communicative maps were high. Finally, priorities change; new issues arise and hazy ideas gain clarity. We recognize that this is a natural process that will change the course of a group's GIS implementation en route. However a more effective planning process that commits participants to concrete goals for maps, analysis and data management will minimize the dramatic directional shifts that we've occasionally experienced with other groups and that set back progress.

Provide additional details on what the planning will do, how it will contribute to success measurement and how it supports a broader long-term strategy. Point to the lesson learned regarding the long term gains made from participation. The chance to stay a

path that's been established with helpful oversight; the tools and references on the web site and the reinforcement power these have for old concepts.

Technical Assistance: The technical assistance component of this proposal represents a creative expansion on the methods and approaches we developed to deliver assistance and oversight to participants in the pilot stage. The aim of these efforts is to cost-effectively deliver particular skills, tools and strategies that have proven relevance for conservation GIS users in a way that both acknowledges the varied information and technical needs of different groups but also takes advantages of typical problems and common issues that lend themselves to group work. Technical assistance efforts are the heart and soul of the program and will be designed to respond in part, to the needs and directions identified by the planning process. We shall both build upon the strategies and resources we developed in the pilot phase and add additional techniques that will allow us to broaden the geographic scope of our work. We will provide technical assistance in three main ways:

On-Site Support: One of the key over-riding lessons learned from the pilot work completed with last year's grant was the importance of allocating time to work with participating groups on-site. Obviously these visits afford the greatest opportunity to work with staff to evaluate information needs, the organization's system resources, and the user's environment. Operating a GIS is a demanding process for computer resources. Geographic data consume significant computer disc space and the creation of maps involves iterative steps that require substantial memory. In addition, the process of conducting analysis and building maps is always accompanied by the creation of intermediary data pieces whose lifespan is short. Managing these so they don't devour system resources and create havoc for other computer users is a challenge to anyone using GIS. We can best address these issues during on-site visits.

Through the pilot program, we now understand that site visits also play an important role on a more strategic level. Conservation groups most often task program staff to implementing their newly acquired GIS. These individuals often confront the high expectations of senior staff who are wary of technologies that may divert time and resources from "real work". Site visits can target critical issues quickly, raising the confidence of staff and managers alike. Generally all the players are aware of the cost of these visits – that they "raise the stakes" - and prepare accordingly. We found that site visits provide a critical chance to build relationships with staff, both program and management and thus build confidence and acceptance of the technology. Consequently site visits play an important immediate role in providing direct, focused assistance and a strategic role in strengthening trust and confidence in the direction and value of using GIS technology.

Supplementing our house calls, we will also offer participants limited on-call support services to respond to emergencies, fulfilling a critical role that currently can not be met by software vendors or other ad hoc resources and one that proved extremely important to past participants. During the pilot, we found that on-call support via phone and email constituted one of the most effective ways to both respond to the on-going development and education of participants and to share information among participants. Questions and inquiries were often shared among group members so that each had the opportunity to learn from the problems confronting their colleagues.

Technical Workshops: Once every four to six weeks we will offer skill building workshops that will present tools and tactics that our experience suggests are key to conservation GIS users' success. Feedback from participant evaluations of the pilot program confirmed that our choices of topics and tools were usually highly relevant and well-targeted to the needs of our partners. We are thus increasingly confident of our past research suggesting that existing training programs available through commercial vendors are usually too costly, not sufficiently focused on conservation user needs, and often fail to address the particular conditions under which non-profit groups work.

While we draw heavily upon the "curriculum" development work we've already completed, we will also make some key changes to our workshop approach in this new program. First, workshops will continue to be organized at a central downtown location for those groups working in the Puget Sound area. However we will also open them up to other members of the conservation community beyond those groups formally engaged in the mentorship process. By making the workshops accessible to additional groups for a fee, we

(a) broaden the impact of our efforts;
(b) engage organizations who may have particular needs but choose for various reasons not to participate in the full program involving evaluation, on-site and on-call support, etc.;
(c) create an alternative revenue source that leverages the grant investment to subsidize our work with enrolled participants.

We will further expand our reach by tapping into emerging capabilities of the internet to facilitate distance learning and via collaboration with a partner in technology support, TechFoundation.org. TechFoundation is developing a partnership with Webex, an industry leader in developing real-time, interactive web applications. Through this partnership, TechFoundation will support our efforts to conduct tutorials to mentorship participants and other conservation groups distributed throughout the Pacific Northwest. The software allows us to run demonstrations, tutorials and other applications locally from our machine while other users in say Bend, Boise and Bozeman follow along by pointing their browser to a pre-established conference site on the web. Once logged in, they can "see" our desktop and follow along as we execute tasks and demonstrate various GIS functionality while listening to accompanying instruction via conference call. We intend to utilize this technology both to make planned workshops available via distance learning and to provide more one-on-one support of groups working across the region.

Since the software works both ways, we will also invite these partners to lead collaborative sessions so that we can follow *their* steps and diagnose problems they encounter, effectively creating a virtual "circuit rider". Webex software will also assist us in evaluating system and data management issues confronting groups at the planning stage by allowing us to review their data and file structures remotely. We can thus involve interested groups from a far wider geographic range in the full mentorship program whereas we had to turn away numerous interested parties in the pilot phase due to the distance they would have to travel to participate in the workshops.

We have already tested the software and discussed the technical issues surrounding its use and are excited to leverage this important technology and to combine resources with TechFoundation, a national leader in providing technology support to the non-profit community.

Software Tool, Script and Data Support: The final tool in the technical assistance suite will provide us the necessary support to offer custom tools or data to address very specialized needs. Our approach to technology support generally focuses on one of three areas which form an inter-linked triangle around GIS implementation: People- Data -Technology. Supporting any effort to utilize GIS may involve the training and skill building of staff (as this program does), the creation or preparation of key datasets, or the development of custom scripts or software tools that dramatically improve the efficiency of certain tasks. In implementing the pilot mentorship program, we frequently encountered occasions where partner staff were confronting the limits of their skills and time resources even with the guidance provided by the workshop sessions. Whether it's the conversion of field data produced by volunteer stream monitors into GIS format or the creation of a custom template to facilitate the production of replicable maps by additional staff in an organization, occasionally the quickest solution to advance a group's use of GIS is not focusing on people but directly on adapting the technology to their needs. Rather than miss the opportunity to help a group leverage its efforts because we didn't have the budget to support custom scripting or data work, CommEn Space provided nearly $3,500 in in-kind support to meet the particular

needs of participants in the pilot phase. Occasionally these tools can be recycled and used again with other groups however they are designed with very precise needs in mind. So while it is clear from our pilot experience that while we want to avoid too much custom work with limited impact, support for occasional custom work will be a powerful supplement to the other technical assistance efforts.

Goals and Success Measures

The objective of this project is to strengthen the conservation efforts of regional environmental groups by dramatically increasing their ability to use the GIS technology they have acquired to support their work. As we did in the pilot phase, we will measure our success primarily by inviting participating groups to qualify and quantify the impacts of our work with them (see evaluation form and results from Conservation GIS Mentorship Program, 2000-2001). Following from the lessons learned in the pilot program, we will focus less on the creation of maps and other products in evaluating the outcome of groups' participation, though these will obviously play a role. Rather we will also stress the longer term importance of developing skills, direction and capacity. We have learned from interviewing past participants to appreciate outcomes that will inevitably materialize following the completion of the program and the final report. Perhaps a participant produces a far more advanced new map for a board retreat scheduled months down the line and uses cartographic techniques they learned or is able to utilize a piece of data acquired from a partner sometime in the future because we prepared her with the know-how to manage it - these are the longer term outcomes our recent partner groups have pointed to when asked to evaluate the full range of benefits obtained from the pilot program.

The program will also be a success if it enhances our own capacity to provide assistance to conservation users outside of the formal mentoring program. Software scripts, tutorials, and web based examples produced in the pilot stage are being re-used, strengthening our offerings to the community. And we expect the experience gained from leveraging the exciting possibilities offered by the TechFoundation/Webex collaboration to demonstrate an entirely new and innovative approach to provide technology support that others may learn from.

WORKPLAN:

The accompanying chart illustrates the scope and flow of the work outlined in the project description. The project will be executed along the following schedule:

Screening: Using the outreach methods outlined in the introduction above, we will solicit applications for the program, admitting ten groups to the subsidized program and inviting others to come at a higher price to be determined.

Timeline: Mid-October - November

Planning & Assessment: We intend to combine interviews and survey forms to complete assessments for each of the participating groups who have not yet produced a sufficient plan documenting their goals and needs.

Timeline: November - January

Technical Assistance: The three technical assistance phases will proceed concurrently and will inform one another with workshops being scheduled roughly every four to six weeks beginning in March. Since the bulk of workshop costs are in production and preparation time and given the possibility that workshops may be scheduled at times incompatible parties, we may occasionally repeat workshop offerings.

Timeline: March – August

Evaluation: We will conduct evaluations and summarize these for a final report beginning in mid-September.