GIS Partners for Public Gardens: A Proposal to Build a National Team of GIS Professional Volunteers

How GIS Skills, Passion, and Partnership can Help Botanical Gardens and Zoos Thrive

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Overview

Practically overnight, access to terabytes of geographical information has changed the way people work, live and play. At work and at home, we now rely on a host of location-based technologies via our desktop computers, laptops, mobile tablets, and smart phones. GIS is one of the key technologies powering this new ecosystem of information about our world.

Along with other mobile technologies, GIS is being adopted by many botanical gardens, zoos, and other public gardens. Several market changes are driving this change:

- GIS is becoming simpler to use and more user-friendly
- GIS is rapidly moving to fast, affordable cloud-based platforms
- Mobile technology is now widely available, faster, and affordable
- Easy-to-use mobile devices (smartphones, iPads, etc.) can be linked to cloud-based GIS
- A free GIS template for mapping public gardens can be downloaded and customized
- Esri provides free GIS software, training, books, and conference registration through the American Public Gardens Association (APGA); and
- An international collaborative consortium, the Alliance for Public Gardens GIS, provides peer-to-peer support, advice, and encouragement for public garden staff.

However, the absence of in-house technical expertise to launch a new GIS program remains a big challenge for public gardens. Botanical garden and zoo curatorial and facilities staff report that they simply do not have the confidence and training they need to set up the new GIS system without expert help, nor the "many hands" needed to collect the data for their new GIS maps.

This proposal, then, suggests some general approaches and ideas about how we might overcome this barrier, as a community, by recruiting a new national team of GIS professional volunteers—GIS experts across the country— to partner with local zoos, botanical gardens, campuses, and public parks.

Good models for thriving GIS volunteer programs —Esri's *GeoMentors* and URISA's *GISCorps*—are the pattern for this new effort. However, expanding these models into a vibrant, working new expert volunteer community for public gardens will need more than a few gardens to test new ideas for recruiting, retaining, and recognizing these highly trained professionals. The following broad discussion frames a few possibilities for an initial approach.

Volunteering:

As is true for many of us, GIS specialists enjoy using their skills for the good of the community.

An American Tradition

GIS specialists like their expertise and work to have an positive impact. Volunteering is an well-documented American phenomenon: in 2012, 64.3 million Americans (more than one in four adults) volunteered through a formal organization, donating an average of four hours each week to causes of their choice. This long-standing national tradition suggests that if you ask the right people, in the right way, you may find someone who is willing to step forward and help.

Yes, Help is Out There

Seeking volunteers for highly specialized work is a special challenge. Nonetheless, it is encouraging to realize how large the geospatial field is, and how widespread GIS practitioners are.

In 2010, the US Department of Labor prepared the first rough estimates of the size of the GIS industry— nearly 425,000 geospatial professionals were currently employed in the United States, with another 150,000 new geospatial positions anticipated to be created by 2020. Outside the United States, reliable or comparable figures are more difficult to determine but well-informed estimates suggest that there were about two million professional GIS users worldwide in 2005 (Longley et al. 2005).

With so many people, the good news is that you are likely to find someone who can help or advise you very close to home!

But how will you find and connect with your local GIS professionals?

Reach Out!

There are three easy approaches to take when searching for GIS volunteers near you:

- Start Small: meet one-on-one for coffee
- Attend a Local GIS User Group: make a formal pitch at a GIS user meeting
- Online Matchmaking:
 - Esri's GeoMentor program is now open to botanical gardens and zoos
 - GISCorps is a volunteer program of URISA, one of the largest organizations for GIS professionals, that matches GIS professionals with national and international humanitarian aid groups. Although garden projects may not fit their mission, GISCorps is an inspiring model for public gardens!

◆ Start Small

It might be most comfortable for you to meet with someone one-on-one, over coffee, to start this conversation with GIS professionals. These brief, informal coffees can be a relaxed way to learn a little more about GIS, in a way that fits easily into your work week, or simply to run your ideas about GIS in the garden by an experienced person while you are still thinking them over. Later, after establishing a casual acquaintance with one or two GIS users in your community, ask if you can accompany them to a local or regional GIS user meeting or if they are willing to introduce you to other GIS professionals.

The first phone call can be a little difficult to make—GIS staff may be a little mystified at first, as hardly anyone ever asks *who* made that city map, and asks to meet them—but, as general rule, GIS personnel are terrifically nice, interesting people. Pattern thinkers, puzzle solvers, and highly technical, GIS experts were often originally attracted to GIS because they like to understand and work with problems.

GIS managers specialize in communicating important information to the general public *visually*—so they seek first to get a grasp of the big picture, and then begin to build a clear understanding of relationships between small details that might help fix the problem. So, if they do have time and interest, don't be afraid to share your most confounding and frustrating "information management" issues with them. Beyond all else, GIS practitioners are motivated by ensuring that good information is elegantly used to solve real-world problems.

But where will you find these people?

HOW TO FIND LOCAL GIS SPECIALISTS

GIS professionals are almost certainly already at work in your own county, city, or town. Although it may take a little time to find these skilled people, you can begin by checking first in the IT departments of city or county government, or within the information technology departments of public utilities, regional transportation, and fire districts.

GIS specialists may also be employed by the facilities department of a local campus or, if you have a military base not too far away, may serve as part of a GIS team working on national defense efforts. Commercial outfits such as surveying companies or the environmental monitoring firms that prepare environmental impact statements also employ GIS specialists.

Large nonprofit organizations—e.g., The Nature Conservancy, or other local advocacy groups for political or environmental change—may also have a GIS manager at regional headquarters. Finally, many universities, colleges, and community colleges have active GIS programs. Although GIS faculty are often short on time, these GIS specialists can be especially well-informed.

Attend a Local GIS User Group

If you prefer to "learn by lurking", consider attending a few nearby GIS User Group meetings.

Be clear about what you hope to gain by attending. GIS User Groups can be a wonderful way to meet a large number of GIS technical people informally during a single evening, and then to mingle with them during the break to introduce ideas for GIS at your garden in a general ways.

Another short-term goal may be to simply learn about GIS 'by osmosis'—by hearing about projects underway and meeting project leaders—while you listen quietly, learn, and begin to understanding the dynamics and interests of your local GIS user group. However, in some cases, if you are not already a GIS practitioner yourself, you may find that some GIS user group meetings are too technical for you, so don't worry if this approach doesn't work for you.

All is not lost—would you be willing to prepare a brief presentation instead? If so, officers for GIS user groups are all volunteers and may welcome having you present your ideas about GIS in public gardens briefly to the GIS group at a later meeting. When the time seems right, speak to one of the meeting organizers and see if they can advise you on how you might best reach out—perhaps with a presentation or an email to the whole group— to discuss GIS projects at your garden and, possibly, recruit GIS advisors or a team of hands-on volunteers.

HOW TO FIND LOCAL
GIS USER GROUPS

The GIS Certification Institute (GISCI) maintains an active list of <u>user groups and GIS organizational chapters</u> on their online "Organization and Events" webpage, as well as a list of <u>national and international groups</u> for industries concerned with GIS that host regular events.

If you use ArcGIS, Esri maintains a searchable map to find your nearest user group here. The Association for GIS Professionals, URISA, may also have an active chapters near you if you prefer to consider open source GIS or other non-Esri GIS tools, along with Esri software.

Finally, there may be a regional mapping group or a online clearinghouse that maintains a list of GIS events and meetings near you, as illustrated by these examples in <u>Washington State</u>, <u>Hawaii</u>, or in the San Francisco Bay Area.

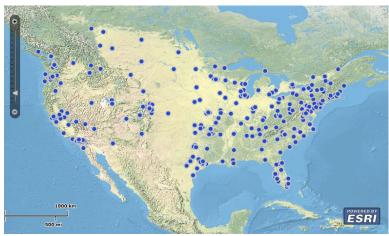
Google will help you stumble on more helpful information about upcoming user group meetings by searching for "Your Area Name (e.g., State, City, or whatever)" and "GIS User Groups".

Register at Esri to request a GeoMentor

In 2009, the *GeoMentor* program was announced by its cosponsors, the National Geographic Society (NGS) and Esri. Designed to encourage geospatial literacy in K-12 students, interested GIS professionals volunteer as *GeoMentors* and commit to work with nearby schools or youth groups (e.g., 4-H, Boy Scouts, etc.). Simultaneously, schools and youth groups sign up as "mentees" to propose collaborative projects or other GIS-centered classroom activities. Esri Education staff review the registered GIS mentors and mentees and do their best to connect possible partners.

However, Esri Education staff report that there are always far more GIS professionals signed up as willing volunteers than there are schools or youth groups who are seeking GIS help. In 2011, in response to discussions with the Alliance for Public Gardens GIS and other informal science museums, the *GeoMentors* program was expanded to include informal science education institutions such as museums, botanical gardens, zoos, science centers and libraries.

So, if you have a public garden project, please <u>consider signing up at GeoMentors</u>. Register your project and let the Esri staff help you find your match. Esri staff believe that— if our community can identify public gardens who would like GIS help—many GIS professionals are ready and willing to assist. A snapshot of unmatched *GeoMentors* expert GIS volunteers is below (March 2013).



To sign up as a *GeoMentor* mentee, you will need a free "Global Esri ID"—but requesting an Esri ID takes only a moment and requires only an email address and filling in your garden's information at the *GeoMentor* website. You do not need to be an active user of Esri software to sign up for *GeoMentors*.

Now that you have considered some strategies for connecting with GIS professionals, it is time to think about what you will say to these GIS professionals once you meet them.

Defining Your GIS Project

Begin by scoping out a possible GIS project at your garden in the most general terms. But before you scope a detailed GIS project, remember that the very most successful volunteer projects are those that not only provide help to the nonprofit, but also meet the *volunteer's* intrinsic needs.

Why Volunteer?

When designing a project that must be staffed by volunteers, then, take some time at the start to consider what "drives" the generosity of a volunteer. In addition to pride, satisfaction, and accomplishment, studies show that people share their time and talent to:

- Solve Problems
- Strengthen Communities
- Improve Lives
- Connect to Others
- Transform Our Own Lives

There are, of course, straight-forward goals you already have in mind for your GIS project: you must map all the memorial benches, or the largest trees on your site. Keep these in mind.

But even the most prosaic of tasks—mapping an irrigation system or commemorative benches—can be tied to deeper purposes. For example, mapping an irrigation system might be tied to a deeper goal of becoming more sustainable and water-thrifty garden; a bench mapping program can be tied to heartfelt stories about the donor's generosity to the community and the great meaning these benches may have for their family and friends, and the chance to celebrate these stories more publically by mapping the benches and linking stories, photos, and other memories.

So your first challenge, when designing a "mission" for a volunteer team or a single GIS professional, is to think hard about what the *meaning* behind the work is. *Why* is your garden doing this work? How will it help your community? Be sure to emphasize this deeper purpose, when describing the volunteer effort to GIS specialists in the project description. With that framework in mind, you are ready to describe what you need to achieve with the GIS project.

WHAT Do You Need?

Creating a formal project description, however brief, is the first step toward recruiting professional GIS volunteers. Don't make too big of deal of this—it is destined to change as you learn more. This can be a very simple paragraph but should represent your best attempt at clearly defining what, exactly, *you* need done. If there are deadlines, be sure to note them down.

As our national recruitment efforts grow, it may be helpful to share project information online. URISA's GISCorps has a fascinating section on <u>current projects</u> ("missions") and an online index to <u>completed projects</u>. The URISA projects listed are likely more complex and more technical than any work you will need completed, but this GISCorps project page may be a good model for how we might someday share volunteer team successes on the Alliance for Public Gardens GIS website, at the GeoMentors website, or elsewhere.

WHO Do You Need?

Next, add some comments to your project description about the KIND of GIS help you need, like:

- advisory team do you need someone to recommend equipment for a grant proposal?
- GIS set up do you simply need someone to lean on & call, as you set up a new GIS?
- data collection do you need teams of people to go out and map your garden?
- GIS applications do you need someone to help design custom dashboards, or to help develop a project plan, with costs and timeline, for a major project like this?

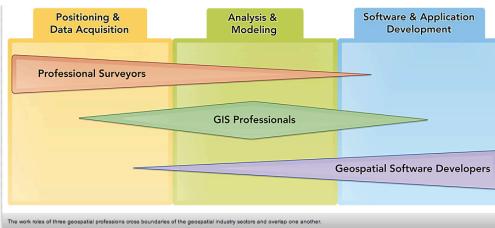
You may need help with all these things and dream of recruiting a large GIS team to help you. However, starting small and actually ACHIEVING something is a great first step, so try to focus your project to something concrete and achievable. You will want to have "small wins, fast". Typically, people are more willing to serve on a GIS Advisory Board, to provide infrequent expert advice "on call", than show up every Saturday to teach your volunteers how to map the garden—but life is surprising. So: ask for what you truly need. You never know who may turn up.

UNDERSTANDING THE GIS PROFESSION

As you define the kind of professional help you need, it might be helpful to have a broad understanding of GIS work. Recently, US Department of Labor categorized geospatial careers into two distinct GIS occupations—GIS technicians and geographic information scientists. The skilled staff working in the first series specializes in data collection and, after returning to the office, "processing" that newly gathered data into something that can be used by a GIS; the second group is focused on building systems to use and manipulate geospatial data: geospatial database design ("GIS data models"), modeling, and analysis.

Although it may sound like one is a "entry-level data jockey" vs. a "GIS expert", this is not necessarily true: a president of a local geospatial surveying firm can be as expert as a university faculty person who specializes in GIS model building, but each person is specialized in different aspects of the field. In any case, as volunteers, people may wish to stretch and extend their skills: for example, a young person who does nothing but "shoot locations" all day at work may wish to take on a demanding geodatabase design project; the vice-president of a big surveying firm, or a GIS expert who builds complex geodatabases, may find it fun to join a couple of old friends to map a garden during a series of spring and summer weekends. But in any case, you should have at least a dim grasp of what "type" of GIS specialist you are trying to recruit and what work needs to be done.

Esri's ArcNews illustrated the overlapping work roles of three geospatial sectors in a helpful chart:



©Esri ArcNews Summer 2012: "The work roles of three geospatial professions"

Next, Break It Up

Without getting too technical or spending too much time—leave that to the GIS professionals who volunteer—imagine how you might break the GIS project into smaller pieces that can be conceivably be accomplished in 3-4 weeks of volunteer effort.

- Three to five people seems to be the ideal minimum number for a GIS mini-team or task
 force: that's enough that there is a social aspect to planning and getting the project
 done, but not so few people that the whole GIS effort goes underwater when someone
 gets called for jury duty or heads off on a long vacation.
- Think in terms of "tiny tasks"—people may not wish to commit for very long, especially at first, so try to define opportunities to help with a small effort that can be accomplished pretty quickly. With luck, the project work itself will draw them into thinking about the larger, long-term GIS goals and opportunities at the garden. GIS professionals are often "can-do" people who, once engaged with a project, simply like to finish the work. Starting small and letting the larger project goals emerge from the GIS

team's conversations with the garden staff itself can be a good way to begin.

A rotating cadre of GIS volunteers—a bigger team of loosely connect GIS professionals—forming and re-forming as smaller teams who loosely organize to work on specific GIS projects in the public garden may be a great solution to long-term project needs.

WAIT—IT'S A BIRD! IT'S A PLANE! NO, IT'S ..

Finally, despite all this 'team talk', never discount the power of a single passionate individual.

In some gardens, an expert GIS volunteer may show up one day and take on an entire GIS project, recruiting people from his or her own network of personal and professional friends and 'bossing the staff around' (in a nice way, of course) to get the work done. A person like this can stick around for 4-5 years and achieve truly remarkable things, mapping an entire facility, or engaging an dedicated community of volunteers, as well as equipment and software donors.

If you should happen to stumble on someone like this—perhaps, an accomplished GIS professional who has recently retired—be sure to treat them like the major donor they are: wine and dine them, invite them to have coffee with the director, present their work at public meetings, and thank them publically, and often. Work hard and quickly to define project goals clearly, so that you can channel this person's expertise and energy to accomplish your garden's most important mission-centered goals.

Along these lines, then, remember to keep your eyes out for highly productive GIS experts who are already retired or who are soon approaching retirement age. Cultivate and engage these individuals in general discussions about your hopes and dreams for GIS at your garden. After a period of post-career recovery time, these experienced experts may be interested in returning to do this kind of work for a community organization. At the very least, they may be excellent "guides on the side" who are willing to serve as valuable advisors as you lead GIS volunteers at your public garden.

Building a GIS Team FAST RESPONSE TO INQUIRES

Once you have clarified the kind of GIS team you need for the work ahead and have gotten out the word to GIS listserves, presented to your local GIS User Group members, connected via *GeoMentors*, or simply met with local interested GIS professionals over coffee, you must be prepared to reply quickly to any inquiries from potential volunteers requesting more information.

GIS professionals are typically highly "connected" technical people who spend much of their day linked in to email and other communication systems via smartphones, tablets, or desktop systems; they may find it odd to hear nothing back from you after they send you a note saying they are interested in learning more. It is very helpful, then, to decide on your next steps and prepare your "REPLY materials" as draft messages *before* you begin your GIS recruitment efforts.

RECRUITING

One simple and personal approach is to quickly email back a note with a few more details, along with a suggestion for a quick telephone call. During the call, you can describe the GIS project briefly and learn more about the person who is considering helping out—in other words, you can both interview one another about how well the prospective volunteer fits the project.

Many public gardens have large volunteer staffs, formal volunteer training programs, and experienced volunteer managers on staff—for these gardens, none of this will be new advice. If you have a lead volunteer manager on your staff, rely on them to guide you with the early steps of volunteer recruitment; they may already have volunteer training binders, emergency contact forms, safety training procedures and other information you will need for your new team. These "big picture thinkers" will appreciate an overview to your garden and its work: the vision, mission, other projects and programs, and how the GIS work will fit into important garden initiatives.

In general, the more professional and "formal" you are during early contacts with prospective new GIS volunteers, the likely you will be to successfully engage prospective GIS volunteers in serious conversations about the work ahead. These are, after all, expert database designers and managers who enjoy organizing data and project information. Thus, many GIS practitioners will be well-organized people with established professional work flows for managing projects, calendars, and details. They would like to expect the same level of professionalism from clients like you.

If you are organizing a GIS team, rather recruiting a single individual, organize an informational meeting. Be relaxed and welcoming, but be prepared. Short handouts that describe the project, the desired commitment, whom the key staff are, and what project roles they may have, contact information, together with other project details will be much appreciated so that the new recruits can evaluate the entire project at a glance. Open the floor up to suggestions and discussions. If this is a brand new volunteer team and/or a first time "pilot project", don't hesitate to share that information with the audience. Many GIS professionals will not flinch upon hearing that they will be working in partnership with you to create the schedule, the deliverables, and work out the work flow with you—this is how most of them already work with clients.

At the end of the meeting, ask for a commitment: start a discussion to see whom, after hearing the project details, is still interested and how they feel that they themselves can best contribute to the work ahead. With luck, by the end of the first informational meeting, you will have the beginnings of a GIS team in place. Let your new GIS partners help you set the subsequent dates, times, and places for the initial working team meetings, where you will roll up your sleeves together and scope the work, estimate timelines, determine equipment needs, schedule safety training, staff validation of completed work (e.g., proofreading plant names), etc.

TRAINING

For here on, general guidelines cease to be much help—every project is unique; every expert volunteer team develops their own policies and procedures (e.g., how to inform people if they must miss a session; cancellation policies in case of bad weather) but there are a few specific things to consider in early days:

- Consider "cross-training" You teach them. They teach you.
 - TEACH THE GIS TEAM ABOUT YOUR GARDEN. Treat the GIS professionals like new public garden staff: give them a good introduction to your garden, its strengths, highlights of projects and programs, and an overview of the history and staff. WELCOME them to your staff team. Make a big deal of this. Remind them that once they are out in the garden working, visitors will assume that they will know what's going on; they should know the basics about how to direct visitors to someone on staff who can help them. Decide together how you will keep them informed about garden events and activities that visitors may ask about. If you can afford it, give them a special team hat or vest to wear along with a volunteer nametag. And, of course, consider what safety training and forms must be completed to properly prevent workplace injuries.
 - ASK FOR AN "INTRODUCTION TO GIS" FOR YOUR OWN STAFF. If you don't know much about GIS, be honest. Even if you know quite a bit about GIS, it might be interesting for your staff to have a presentation of some kind. Some GIS professionals may be willing to give you and your staff a brief demonstration/training that illustrates the kinds of work that can be done with GIS. There is a long tradition in the GIS field for GIS professionals to host or be part of a "GIS Day" in their community. Ask if they can help organize a "GIS Day" for your colleagues on staff.
- Treat GIS professionals as respectfully as you would treat major donors.
 - If this team coalesces around a project and GIS professionals donate significant hours or bring high tech tools and equipment to work with them, they will be major donors: a GIS manager averages \$90,000/year in Northern California, while a GIS technician can make \$60,000/year early in their careers. If donors were arriving for a garden meeting, you would have coffee and tea ready, informational packets prepared, and start on time. Do the same for your GIS team. Treat them like the busy professionals they are.
- Many GIS professionals strive to meet the highest standards of professionalism in their field; this can mean keeping GIS certifications in their field current. Some GIS "cert programs" require Professional Contributions. For example, the GIS Certification Institute requires active GIS professionals to complete some work that advances the field of GIS or that serves their community— thus, they are awarded certification points for "...GIS Volunteer Efforts: any form of uncompensated GIS-related work performed in agreement with service-oriented organizations [1-71 hours: volunteer work; 72 and up hours: volunteer missions]". Ask the GIS professionals what kind of record-keeping and documentation they may need, so that you are careful to track hours of their in-kind service properly.

Consider how you will share your project success with the wider garden community. If we
hope to expand this into a national effort, we need to hear about what you have tried and
how well it worked; or how miserably it failed—and what factors influenced either outcome.
Consider writing up brief reports periodically or posting completed missions and stories with
the Alliance for Public Gardens GIS. Again, GISCorps has an excellent model.

RETENTION

The volunteer manager at your public garden can guide you about successful ideas to ensure team retention. A few key ideas are noted here, just to get you thinking about volunteer retention.

As the GIS project gets going, stay involved. Many projects begin to unravel when volunteers cannot get basic assistance from the staff they are helping—so review completed maps quickly, congratulate achievement often, and simply meet frequently for coffee breaks with the GIS team to stay in touch and get a sense about how things are going. Listen for problems and do what you can to smooth the way—as you can afford it, provide the critical tools and equipment they need—and keep the GIS team connected to other garden staff, as possible. Even if the GIS professionals are not working a "normal" weekly schedule like other volunteer teams at the garden, be sure to invite them to all special garden activities and discounts that are open to other volunteers.

Take the GIS work seriously. There is nothing more important for retention than sharing one-on-one with each volunteer how much their work has made a difference at your public garden.

Plan for the Future. Even in the best, most successful volunteer teams, some attrition will inevitably take place. Sit down every so often and discuss this openly with your public garden GIS team: find out who may need to bow out gracefully in the near or distant future; ask who might know a friend or colleague that might be interested in joining the team. Plan to periodically reach out to GIS user groups to recruit new people to your GIS volunteer corps—it is often most helpful to do this once a year, perhaps in early fall, so that training and any needed re-training can take place on a regular and predictable schedule. Integration of new people can be tricky, so give that some careful thought, too. Don't imagine that it will happen smoothly without a deliberate plan.

RECOGNITION

Once or twice a year, if your GIS team continues to work over long periods, be sure to recognize the achievements and accomplishments of the GIS team during public events or in volunteer newsletters. At the very least, arrange for the Director to briefly stop by your once-a-year GIS team potluck lunch or cocktail hour, and formally thank them for all their hard work. Invite them to annual volunteer recognition events and have them stand up and be recognized.

Consider working with your marketing and outreach team to tell the story about what your GIS team is accomplishing in the local newspaper or other news outlets, as well as in your own newsletter and blogs.

Reward volunteers with relevant and meaningful special on-going training events. These can be quite simple to organize, but can be great fun for both you and your team to attend. For example:

- Periodically, invite the GIS team for a behind-the-scenes tour at your garden; invite their families, if possible. For example, simply visit other operational areas and give them a chance to see how it works: have your Director of Horticulture show them how the propagation program works in the nursery or the garden.
- Expert volunteer teams also enjoy field trips to other public gardens, where your colleagues
 at your sister gardens may be willing to host your team for an interesting backstage curatorial
 or facilities tour there, as well. Every garden does things differently and this is fascinating for
 volunteers to see, as it always invites thoughtful discussions about the "way we do things".
- With GIS teams, there are other engaging "learning tours" that can focus explicitly on GIS
 projects and places: be creative and ask the GIS team if they know of GIS work underway at
 nearby parks or nonprofits that they might enjoy learning more about. Getting off-site and
 seeing how other operations accomplish their own GIS work is always interesting.

One or two tours, special trainings, and/or end-of-year celebrations can be very rewarding for both the staff and the professional volunteers. Expert volunteer teams often enjoy using one of

these events as a chance to thoughtfully discuss and plan major initiatives and goals for the upcoming year. It is easier to commit to a volunteer activity if you know what kinds of projects are ahead. It is even more fun if you are part of the leadership team that is helping to guide these decisions and shape the projects.

Finally, get your wallet out and stop by a stationary store. Fill your top desk drawer with nice notecards, postage stamps, and keep the home addresses of your GIS team members handy. Write a personal thank you note to each GIS team volunteer at each project milestone. It takes about 5-10 minutes per card. If these GIS professionals can find time to drive round-trip to your garden and then work for free, you have time to thank them with a hand-written card while you are at work. Remember that your gratitude may be the only personal "paycheck" that they get for their generous contribution to your garden.

As needed, also provide a signed letters on organizational letterhead at the end of each year, or whenever a GIS team member may need it for a certification application, acknowledging the nature and duration of the GIS volunteer effort.

In short, treat your GIS team with the professional respect they deserve.

YOUR INSIGHTS ARE NEEDED!

Although many public gardens have had outstanding GIS volunteer teams that have helped them map their facilities and collections, no national framework to help other public gardens recruit and organize GIS professionals for the nation's botanical gardens and zoos is yet in place.

We hope that you will consider this document as a series of ideas or suggestions. However, it is intended only a starting point, to spark your *own* ideas and creativity about how this long-term goal—a national volunteer team of GIS professionals for public gardens—can best be accomplished in your own public garden, in your hometown and elsewhere. Experienced managers of national GIS volunteer corps report that the one single most important factor for success with GIS volunteers: a project leader who is an "assertive, intense, driven, passionate, tireless, and otherwise tenacious individual". If you or a team of your coworkers can take responsibility for finding and making connections with the GIS community and bring this kind of commitment and passion to the work, there are many good resources available.

Every public garden is different; every city, town, and region is different; and what works in one area, may fizzle out entirely in another county or another city. But the fact remains that public gardens staff who wish to launch new GIS programs can benefit greatly from a rich, thriving relationship with local GIS experts and GIS teams who have the expertise, skills, and talent we need to get these projects designed right, and done right. And all around us, across the nation, are GIS professionals who are ready and willing to help their local public gardens, zoos, and parks.

Let's invite them in! Let us know if you are interested in joining this national team-building effort.

Contact:

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... or via the Alliance for Public Gardens GIS LinkedIn community

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