

Sample Application

2008 National Leadership Grants for Museums

Demonstration Planning Grant

Santa Barbara Botanical Garden

A Planning Grant: Assessing
the Need for a Model Irrigation
Project

Santa Barbara Botanic Garden

Founded in 1926, the Santa Barbara Botanic Garden (SBBG) is dedicated to research, conservation, education, and horticulture with a focus on California's native plants. As an American Association of Museum accredited and collections-based institution, the caretaking of our living collections is central to both our mission and our service to the public. The living collection's array of over 1,000 taxa is a priceless germplasm resource that includes examples of rare species and selected cultivars.

SBBG has become increasingly interested in irrigation issues as our antiquated, manually operated irrigation system has begun to fall apart. The system is unreliable, labor intensive to operate, and impossible to monitor. Our invaluable plant collections suffer increasing mortality rates as the system becomes progressively more undependable. SBBG sought and secured funding to begin replacing the system with one that is technologically sophisticated, computerized, and centrally controlled.

Our informal assessment indicates that many public gardens across the United States face similar irrigation-related problems. We believe that installation of a complete system at SBBG would serve as an important model to other public gardens, demonstrating the costs and benefits of this technology. We seek funding for a planning grant to conduct a formal assessment of irrigation standards in U.S. botanic gardens that will result in both the quantitative and qualitative information needed for SBBG to submit an IMLS Leadership Grant for the irrigation demonstration project.

As part of the planning process, SBBG, with assistance from our four project partners - National Tropical Botanical Garden in Kauai, Mendocino Coast Botanical Gardens in California, North Carolina Botanical Garden, and University of California Santa Cruz Arboretum - will develop a survey questionnaire covering issues such as the type of irrigation system in use, water availability, cost and quality, budgetary and staffing constraints, plant mortality, and collections diversity. We anticipate sending the survey to over 300 public gardens nationwide, including institutions in every climate zone and of all sizes, budgets, and collection types. In addition, SBBG staff will conduct site visits to eleven public gardens for a more in-depth assessment of individual conditions and needs. SBBG will also complete a literature search and produce an annotated reference list of all pertinent information including web-based and vendor information.

Based on information accrued, SBBG and its partners will be able to devise an appropriate set of trials and data-gathering protocols to ensure that a replicable model with broad applicability will result from the planned project. Planning will focus on how to best demonstrate that installation of a centrally controlled irrigation system will help public gardens reduce the time staff devotes to irrigation, reduce plant mortality, conserve water, and improve the quality and species diversity of their displays. Moreover, with the increasing cost of water and threat of devastating drought, it is important that botanical institutions take a leadership role in the responsible use of water, both as a practical benefit to themselves as well as an essential educational message to the public. The planned project will provide cost/benefit information that public gardens can use to evaluate the use of this technology at their own sites. The timeframe will be one year from November 1, 2008 to October 31, 2009.

Narrative

Assessment of Need

Botanical gardens, unlike other large-scale public landscapes, are engaged in the assembly and maintenance of diverse collections of plants - many of which are not necessarily well adapted to the location in which they are being grown. Public gardens commit a significant portion of their institutional resources to collecting, propagating, curating, and growing the plants in their living collections. These collections, in addition to providing inspiring displays and educational opportunities for the public, represent important germplasm resources vital to botanical and horticultural research, and plant conservation efforts. Safeguarding these collections is in the best interests of both the institutions and the general public.

To properly maintain these diverse collections, gardens must cultivate plants with vastly different water and soil requirements, often in close proximity to one another. To maximize success, water must be delivered in the proper amount, at the proper time, making for a complex array of watering needs. It is easy to overlook the essential life support function that an irrigation system provides. Applying too much or too little water may have an extremely negative effect on collections, and can dramatically increase plant mortality rates. Unhealthy plant collections resulting from improper irrigation are more likely to suffer from pest and weed infestations, and increased levels of soil-borne and foliar disease pathogens. Problems with soil erosion and subsequent loss of soil nutrients can also arise when operating with poor irrigation systems.

Many public gardens rely on antiquated irrigation systems to deliver water; systems that consist of manual valves and/or poorly calibrated automatic ones are inefficient and inadequate for the requirements of their collections. Unfortunately, replacing or even upgrading an irrigation system is very costly and requires a significant capital investment that many gardens have been unwilling or unable to make. Because the benefits of such expenditures are difficult to quantify, securing the funding for irrigation system upgrades is challenging. However, with the decreasing availability of water and its increasing cost, the threat of devastating drought is of growing concern nationwide. It has never been more important for gardens to evaluate the quality of their irrigation systems. Moreover, botanical institutions are uniquely suited to take a leadership role in the responsible use of water, both as a practical benefit to themselves and as an essential educational message to the public.

The Santa Barbara Botanic Garden (SBBG), established in 1926, is devoted to growing California native plants. California's flora, renowned for its rich variety, includes plants found in dry deserts and in wet temperate rain forests, reflecting the wide range of soils, topography and climate zones found within the state. The challenges of cultivating such a flora at one site are daunting. Over the last two years, the Garden has developed a plan for replacing its antiquated irrigation system that was first installed in the 1920s and has not been properly upgraded since the 1960s. A piecemeal system consisting of hundreds of manually operated valves with no central control system, it is unreliable, labor intensive to operate and repair, difficult to monitor, and requires a complete overhaul. Funding has been secured for installing the first piece of a technologically sophisticated, centrally controlled, computerized system which will allow us to precisely control the amount, location and timing of irrigation. With the addition of real-time data inputs from environmental monitors such as site-specific weather stations, soil moisture probes, water quality, and flow sensors, pinpoint accuracy of irrigation needs can be determined and achieved by this system. We anticipate that installation of the irrigation system will help SBBG

drastically reduce the time its staff devotes to irrigation while reducing plant mortality, conserving water, and improving the quality and species diversity of displays.

We will look closely at developing landscape coefficient values specific to our site as an aid to programming the new system. Derived to estimate water loss from landscape plantings, landscape coefficients are calculated from three factors: species, density, and microclimate. In addition to being able to control water delivery effectively, we will be able to precisely monitor the amount of water used by each plant exhibit. Not only will this help us understand how to better maintain our living collections, but we will be able to share this information with other botanic gardens, landscape professionals and gardening enthusiasts.

We believe the issues facing SBBG are endemic to gardens and arboreta in the United States and elsewhere. It is our desire to enlarge the scope of this irrigation project to serve as a model that demonstrates to other institutions the costs and benefits of such systems and to provide information on how these systems can be used effectively in every region. Based on a number of informal conversations with others in the botanic garden community, we believe there is great interest in this issue and a need for information. To accomplish this, SBBG proposes to assemble a small team of regionally representative gardens to conduct a survey of irrigation standards and protocols in U.S. botanic gardens. As part of the grant-funded planning process, we will identify who is the appropriate audience for this study, conduct a formal assessment of their needs, and assemble all pertinent literature. This information will enable us to fully assess whether development of such an irrigation model will have broad applicability for other botanic gardens.

National Impact and Intended Results

Public gardens face many challenges in caring for and improving the quality and diversity of their living collections. Controlling costs and ensuring the efficient use of staff time and other resources is always of utmost priority. As part of the planning process we will investigate the importance of issues such as water availability, water quality, budgetary and staffing constraints, plant mortality, and collections diversity to gardens nationwide, and how improvements to irrigation systems might address these concerns. Issues such as sustainability and water conservation are of increasing importance, and we will need to plan a project which addresses concerns gardens face both now and in the future.

Although centrally controlled irrigation systems are widely used in city parks, golf courses, and other large public spaces, the technology has rarely been implemented in botanic gardens. The project to be planned, which involves installation of a centrally controlled irrigation system at SBBG, will demonstrate the value of this technology as a solution for a host of problems facing gardens, as well as document the costs and pitfalls of implementing such a system. Careful planning is required to devise an appropriate set of trials and data-gathering protocols to ensure that a replicable model with broad applicability will result from the planned project. Planning will focus on how to best demonstrate the following anticipated benefits to gardens:

Collections Conservation

An irrigation system that delivers the appropriate amount of water for individual displays while minimizing human error will result in reduced collection losses. For these systems to be truly effective, specific irrigation schedules must be designed for individual displays at specific locations and programmed into the central controller. For our project to demonstrate important

benefits to collections conservation, our planning will investigate how to determine what pieces of environmental data are most important to consider when developing irrigation schedules.

Water Conservation

Manufacturers of these irrigation systems report an average of 30% water savings over traditional control systems for installations in public parks and commercial landscapes. Project planning will focus on how SBBG's irrigation project can demonstrate water savings in a botanical garden setting. Using the data-gathering capabilities of the system, detailed information can be assembled about water usage of plants and landscapes. This information will not only help gardens manage their collections, but prove invaluable for public garden education and outreach programs focused on water conservation. Problems with irrigation systems (such as leaks and equipment failure), can be costly to collections. Using alarm codes linked to flow monitoring devices, central control systems can automatically alert a designated contact with a phone call to allow them to troubleshoot problems as they arise.

Efficiency – staff time and cost savings

A major advantage of centrally controlled systems is their ability to constantly monitor environmental conditions and make appropriate adjustments to irrigation schedules in response to changing circumstances. Such automated controls reduce both the staff time required to alter irrigation schedules and the human error involved (e.g., failure to turn irrigation valves on or off). The ability of the system to be programmed from a single location and from remote locations will minimize disruptions caused by staff vacations, holidays and illness.

Budget constraints

Project planning will focus on how to document the costs and benefits associated with installing each component of a centralized irrigation system. Since few gardens have the capability of installing a garden-wide system at once, SBBG's planning grant will investigate how systems can be installed incrementally. Cost/benefit analysis will help quantify the monetary value of these systems and assist gardens in fund raising. Ultimately a scaleable model with the benefits and costs of each component will be achieved.

Education and interpretation

One of the main goals of botanic gardens is to acquire knowledge concerning the cultivation of a wide array of plant taxa. The knowledge gained from this project will not only help SBBG maintain its plant collections, but also help other public gardens and gardeners. These systems, which allow gardens to easily quantify the amount and timing of water delivered to plants, will yield information of great interest to the public. Features such as on-site weather stations and soil moisture probes, which provide real-time digital displays of environmental conditions, would be effective tools in demonstrating the relationship between plants and their environments.

As part of the planning process for this grant, SBBG and its partners will develop and conduct a survey of gardens nationwide along with several international gardens. A detailed picture of the state of irrigation practices in public gardens, as well as a summary of the most pressing concerns facing gardens with regard to water issues will result from this survey. In addition SBBG staff will travel to representative gardens in every American Public Garden Association (APGA) region for a site-specific review of conditions and concerns, and to solicit in-depth feedback from staff at these gardens. A comprehensive review of the literature concerning irrigation systems and the products available will also be completed. Survey and literature search results will be shared with all participants and be made available through APGA's resource center and their journal, Public Garden.

For the irrigation project to be widely useful, we will need to create a model that gardens in other climate regions can adapt to their own conditions. Planning will focus on how this may be best achieved. We will also consider how best to demonstrate the kinds of data that can be derived from such systems and how this data can be used in the care of collections. Once this process is completed, it is our intent to apply for a full IMLS National Leadership Grant to fund creation of a garden-wide centrally controlled irrigation system that is truly a demonstration project for the greater U.S. public garden community.

Project Design and Evaluation

The goals of this planning project are to assemble the background information needed, and plan the studies required to draft a successful proposal for funding a centrally-controlled irrigation system demonstration model at SBBG. The irrigation project to be planned will demonstrate the value and broad applicability of this technology in a botanic garden setting and will produce a working model for other gardens to follow. The intended results of the planning phase will be to: 1) conduct a needs-assessment of botanic gardens nationwide by means of an online survey and site visits, 2) compile the pertinent literature search including vendor information, and 3) develop a basic plan for installing the components of the irrigation project that will demonstrate its benefits to the greater public garden community. Our partners for this planning phase are: the Mendocino Coast Botanical Gardens in California, the North Carolina Botanical Gardens, the National Tropical Botanical Gardens in Kauai, and the University of California Santa Cruz Arboretum.

The phases of the one-year planning project will be implemented as follows:

1. Orient the partners

Each partner will be sent information detailing the scope of the project to be planned, along with general information on the irrigation systems to be studied and a set of basic questions to consider while developing the survey.

2. Develop the needs assessment survey

Along with its partners, SBBG will develop a survey used to query gardens on such topics as: the type of irrigation system in current use; the source, quality, availability and cost of the water used for irrigation; the size, composition, and plant mortality rates of their living collections; the climate, topographic, and soil characteristics of their site; the staff time devoted to managing irrigation; costs associated with acquiring, propagating, planting and curating plants; their budgetary constraints; their goals for their living collections, etc. The survey will be developed through a series of conference calls and emails with the partners. Editing and final formatting will be made by SBBG staff. We expect a widely applicable and sufficiently detailed survey will result from the combined efforts of the partner institutions.

3. Implement the survey

The survey will be sent to all American Public Gardens Association (APGA) members, Association of American Museums (AAM) accredited museums and zoos with botanical displays, and a few select public parks and commercial businesses for comparison purposes. We will also target international gardens as identified from sources such as Plant Net and Botanic Gardens Conservation International (BGCI). We are anticipating that the survey will be sent out to approximately 300 organizations via email. A paper copy will be sent to institutions when no email contact is available.

A follow-up survey may be conducted if additional questions present themselves after the surveys have been returned.

4. Compile survey results

A grant-funded Horticulture Assistant will be hired to help compile and summarize the data and to conduct literature searches. The survey data will be collated and graphed, and a written report produced summarizing the results. This information will be shared with our partners for input on how best to use it in creating the irrigation model.

5. Conduct literature searches

A search for all literature (including online sources) pertinent to the topic will be completed by the Horticulture Assistant, and an annotated reference list produced. In addition, a list of where centrally controlled irrigation systems have been installed will be compiled, along with a brief description of the attributes of the various systems available and a list of vendors.

6. Site visits

For an in-depth follow-up to the survey, SBBG staff will travel to gardens located in all six APGA regions. The gardens were chosen to represent a cross-section of North American climate zones and include ones located along the Atlantic Coast, the Southeast, Midwest, Interior West, Pacific Coast and Hawaii. The visits will enable staff to gather more information on the irrigation challenges faced by individual institutions in their various settings. First-hand investigation and one-on-one conversations with staff will provide information crucial to development of a flexible irrigation model. We are currently planning to visit the following eleven gardens, although the itinerary may change slightly based on results from the survey: Atlanta Botanical Garden, Brooklyn Botanic Garden, Chicago Botanic Garden, Denver Botanic Garden, Lady Bird Johnson Wildflower Center, National Tropical Botanical Garden in Kauai, New York Botanical Garden, North Carolina Botanical Garden, University of British Columbia Botanic Garden, University of California Santa Cruz Arboretum, University of Washington Botanic Gardens.

7. Plan for irrigation modeling

The final step in the process will be to collaborate with the partner organizations to outline how to implement the installation phase of the project to maximize its value as a demonstration project. Issues to address will include the kinds of data to collect, what trials to implement, what equipment is needed, and the process by which the data can be modeled for use by other institutions. Potential partners for the Leadership Grant will be approached at this time and solicited for input into the planning process if interested.

8. Reporting

Results of the survey and literature search will be emailed to all participants and made available through APGA. A paper summarizing the results will be submitted for publication in Public Garden. We anticipate that completion of the planning grant will lead to submission of a full IMLS Leadership Grant proposal for installation of an irrigation demonstration project.

Project Resources

SBBG is strongly committed to the stewardship of its living collection. Our trustees and staff have identified the replacement of our antiquated irrigation system with a central control system as a critical project for the long term health of our collections. The planning team shares the deep desire to make the irrigation project a model for other public gardens to follow when addressing their own irrigation issues.

The following SBBG staff will participate in this project:

Santa Barbara Botanic Garden

- **Andrew Wyatt**, Director of Horticulture holds a M.S. and a Kew Diploma in Horticulture. A full-time employee, he oversees all aspects of the of the horticulture department and has been the team leader on SBBG's irrigation project. He will be responsible for managing all stages of the planning project including the development and distribution of the survey, coordinating the joint work carried out by the project partners, designing the irrigation model, and the supervising the Horticulture Assistant. He will also conduct the site visits and draft the final report. 232 hours (about 11% of his time) will be allocated to the twelve month planning project – nearly half of which will be devoted to travel. Andrew will draft a paper for publication in the Public Garden.
- **Dave Kershaw**, Head Gardener. A full time employee, he supervises SBBG's grounds staff and is the primary person charged with the maintenance of the Garden's irrigation system. His 25 years experience at SBBG has enabled him to understand the vagaries of our irrigation system, and he will therefore play an important role in developing the survey and in analyzing the data collected. During the course of this project, he will devote 95 hours or about 4.5% of his work time to completing this project.
- **Horticulture Assistant**. This eight month temporary, grant-funded, 8-hour/week staff position will play a key role in developing and editing the survey, sending the survey to targeted gardens, organizing and analyzing the resulting data, making travel arrangements, and carrying out the literature search. We anticipate the duties of the Assistant will begin about one month after the start of the grant and conclude with completion of the literature search and the survey process.

Project Partners: Our partners will provide critical assistance in the design and development of the survey. Considering the needs of their own gardens and of gardens in their regions of the country, they will help assess what sorts of questions need to be included in the survey. The partners will also review data received from the survey to assess and prioritize its importance. Their input will guide Andrew Wyatt's on site investigations during his visits to U.S. botanic gardens. Finally, our partners will help in defining the project's scope and make suggestions about what should be included in developing the actual irrigation model based on the information received from the survey data, literature search and site visits. Each of the project partners will devote 20 hours to the project, and their time will be included in the grant budget as a cost share. Our four project partners are:

- Mendocino Coast Botanical Gardens, Christopher Woods, Executive Director. Chris has a wealth of experience in the public horticulture field and has worked at gardens throughout North America and the United Kingdom. He was previously the Director of Chanticleer in Pennsylvania.
- North Carolina Botanical Garden, Peter White, Director. Peter's experience as professor at the University of North Carolina and director of the University's botanic garden will bring a unique perspective to this project. Peter is also familiar with irrigation issues in botanic gardens, thus making him a key project contributor.
- National Tropical Botanical Garden, Chipper Wichman, Director and CEO. Chipper has extensive experience in the cultivation of plants on the Hawaiian Islands and horticulture in tropical climates. He will provide much needed input into the use of irrigation systems in tropical regions.
- University of California Santa Cruz Arboretum, Brett Hall, Director of Horticulture and Living Collections. Brett's vast experience working with and maintaining the irrigation system at UCSC will provide another valuable perspective and source of information for SBBG's stated desire to model its irrigation system for the public garden community.

Santa Barbara Botanic Garden

Equipment: Desk space is severely limited at SBBG, hence the laptop computer will enable the Assistant to work at various locations and ensure his/her time is used efficiently.

Cost share: The cost share will be met through a portion of the salaries of SBBG's Director of Horticulture and Head Gardener and by the time devoted by our four project partners.

Sample

PARTNERSHIP STATEMENT

Complete one of these forms for each formal partner.

Legal name of applicant organization (5a from Face Sheet): Santa Barbara Botanic Garden, Inc.

1. Legal name of partner organization: University California Santa Cruz Arboretum

2. Partner DUNS number: 626933428

3. Mailing address:

Street1: UCSC Arboretum Street2: 1156 High Street

City: Santa Cruz State: CA Zip+4: 95064-1077

4. Partner Web address: <http://http://www2.ucsc.edu/arboretum/>

5. Partner project contact name: Brett Hall

Title: Director, Living Collections and Native plant programs

Telephone number: 831-212-4853 E-mail: brett@ucsc.edu

6. Governing control of partner (choose one):

- | | |
|---|--|
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Nonprofit with 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Nonprofit without 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> City or Township Government | <input type="checkbox"/> Private Institution of Higher Education |
| <input type="checkbox"/> Special District Government | <input type="checkbox"/> Individual |
| <input type="checkbox"/> Regional Organization | <input type="checkbox"/> For-Profit Organization (Other than Small Business) |
| <input type="checkbox"/> U.S. Territory or Possession | <input type="checkbox"/> Small Business |
| <input type="checkbox"/> Independent School District | <input type="checkbox"/> Hispanic-serving Institution |
| <input checked="" type="checkbox"/> Public/State Controlled Institution of Higher Learning | <input checked="" type="checkbox"/> Historically Black Colleges and Universities (HBCU's) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Federally Recognized) | <input type="checkbox"/> Tribally Controlled Colleges and Universities (TCCUs) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Other than Federally Recognized) | <input type="checkbox"/> Alaska Native and Native Hawaiian Serving Institutions |
| <input type="checkbox"/> Indian/Native American Tribally Designated Organization | <input type="checkbox"/> Nondomestic (non-U.S.) Entity |
| <input type="checkbox"/> Public/Indian Housing Authority | <input type="checkbox"/> Other (specify) |

7. What is the partner organization's mission? [500 characters] The Arboretum at UC Santa Cruz is a living museum inspiring stewardship of the world's biodiversity through research, education, and the conservation of rare, endangered, and extraordinary plants.

8. Describe the partner organization's service area (audience served, including size, demographic characteristics and geographic area) [500 characters] The Arboretum serves the California Central Coast region and beyond. The majority of our visitors are from outside the Greater Santa Cruz/Monterey region, with a sizeable number of international tourists. From a race and age demographic perspective, the vast majority of our visitors are white and older adults.

9. List the partner's key roles and responsibilities in the project: [1000 characters] Brett Hall, Director of Living Collections and Native Plant Programs, will provide critical assistance in the design and development of the survey questionnaire, ensuring that the survey's questions (if answered by the targeted respondees), will aid in the development of the model irrigation project at SBBG. Brett will help SBBG apply the results of the survey to develop and implement a model centrally-controlled irrigation system that is applicable to most U.S. botanic gardens.

Please note:

A. Submission of this application by the Authorized Representative of the applicant organization reflects the partner organization's agreement with the following statements:

- We will carry out the activities described above and in the application narrative.
- We will use any federal funds we receive from the applicant organization in accordance with applicable federal laws and regulations as set forth in the program guidelines and the terms and conditions of the grant award.
- We assure that our facilities and programs comply with the applicable federal requirements and laws as set forth in the program guidelines.

B. Prior to submission of the application, the applicant will ensure that the partner organization has provided to the applicant a signed original of this Partnership Statement for the applicant's records. Such original will be made available to IMLS, if requested by IMLS.

Sample

PARTNERSHIP STATEMENT

Complete one of these forms for each formal partner.

Legal name of applicant organization (5a from Face Sheet): Santa Barbara Botanic Garden, Inc.

1. Legal name of partner organization: Mendocino Coast Botanical Gardens

2. Partner DUNS number: 068857333

3. Mailing address:

Street1: 18220 North Highway One Street2:

City: Fort Bragg State: CA Zip+4: 95437-8773

4. Partner Web address: <http://www.gardenbythesea.org>

5. Partner project contact name: Christopher Woods

Title: Executive Director

Telephone number: 707 964-4352 x 11 E-mail: director@gardenbythesea.org

6. Governing control of partner (choose one):

- | | |
|---|--|
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Nonprofit with 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Nonprofit without 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> City or Township Government | <input type="checkbox"/> Private Institution of Higher Education |
| <input type="checkbox"/> Special District Government | <input type="checkbox"/> Individual |
| <input type="checkbox"/> Regional Organization | <input type="checkbox"/> For-Profit Organization (Other than Small Business) |
| <input type="checkbox"/> U.S. Territory or Possession | <input type="checkbox"/> Small Business |
| <input type="checkbox"/> Independent School District | <input type="checkbox"/> Hispanic-serving Institution |
| <input type="checkbox"/> Public/State Controlled Institution of Higher Learning | <input checked="" type="checkbox"/> Historically Black Colleges and Universities (HBCU's) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Federally Recognized) | <input type="checkbox"/> Tribally Controlled Colleges and Universities (TCCUs) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Other than Federally Recognized) | <input type="checkbox"/> Alaska Native and Native Hawaiian Serving Institutions |
| <input type="checkbox"/> Indian/Native American Tribally Designated Organization | <input type="checkbox"/> Nondomestic (non-U.S.) Entity |
| <input type="checkbox"/> Public/Indian Housing Authority | <input type="checkbox"/> Other (specify) |

7. What is the partner organization's mission? [500 characters] The mission of the Mendocino Coast Botanical Gardens is to conserve plants suited to the climate of the Mendocino Coast and display them for the enjoyment and education of our guests.

8. Describe the partner organization's service area (audience served, including size, demographic characteristics and geographic area) [500 characters] Mendocino Coast Botanical Gardens is the most visited cultural institution on the North Coast of California. With over 60,000 visitors per year, the Gardens has a significant and positive economic impact on the region. Approximately 75% of visitors come from beyond Mendocino County with the majority visiting as tourists between the months of May and September.

9. List the partner's key roles and responsibilities in the project: [1000 characters] Chris Woods, Executive Director of the Mendocino Coast Botanic Garden, will provide critical assistance in the design and development of the survey questionnaire, ensuring that the survey's questions (if answered by the targeted respondees), will aid in the development of the model irrigation project at SBBG. Chris will help SBBG apply the results of the survey to develop and implement a model centrally-controlled irrigation system that is applicable to most U.S. botanic gardens.

Please note:

A. Submission of this application by the Authorized Representative of the applicant organization reflects the partner organization's agreement with the following statements:

- We will carry out the activities described above and in the application narrative.
- We will use any federal funds we receive from the applicant organization in accordance with applicable federal laws and regulations as set forth in the program guidelines and the terms and conditions of the grant award.
- We assure that our facilities and programs comply with the applicable federal requirements and laws as set forth in the program guidelines.

B. Prior to submission of the application, the applicant will ensure that the partner organization has provided to the applicant a signed original of this Partnership Statement for the applicant's records. Such original will be made available to IMLS, if requested by IMLS.

Sample

PARTNERSHIP STATEMENT

Complete one of these forms for each formal partner.

Legal name of applicant organization (5a from Face Sheet): Santa Barbara Botanic Garden

1. Legal name of partner organization: National Tropical Botanical Garden

2. Partner DUNS number: 07-766-7426

3. Mailing address:

Street1: 3530 Papalina Rd. Street2:

City: Kalahaeo State: HI Zip+4: 96741-9599

4. Partner Web address: <http://www.ntbg.org>

5. Partner project contact name: Charles R. Wichman Jr.

Title: CEO and Director

Telephone number: 808-332-7324

E-mail: wichman@ntbg.org

6. Governing control of partner (choose one):

- | | |
|---|--|
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Nonprofit with 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Nonprofit without 501(c)3 IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> City or Township Government | <input type="checkbox"/> Private Institution of Higher Education |
| <input type="checkbox"/> Special District Government | <input type="checkbox"/> Individual |
| <input type="checkbox"/> Regional Organization | <input type="checkbox"/> For-Profit Organization (Other than Small Business) |
| <input type="checkbox"/> U.S. Territory or Possession | <input type="checkbox"/> Small Business |
| <input type="checkbox"/> Independent School District | <input type="checkbox"/> Hispanic-serving Institution |
| <input type="checkbox"/> Public/State Controlled Institution of Higher Learning | <input checked="" type="checkbox"/> Historically Black Colleges and Universities (HBCU's) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Federally Recognized) | <input type="checkbox"/> Tribally Controlled Colleges and Universities (TCCUs) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Other than Federally Recognized) | <input type="checkbox"/> Alaska Native and Native Hawaiian Serving Institutions |
| <input type="checkbox"/> Indian/Native American Tribally Designated Organization | <input type="checkbox"/> Nondomestic (non-U.S.) Entity |
| <input type="checkbox"/> Public/Indian Housing Authority | <input type="checkbox"/> Other (specify) |

7. What is the partner organization's mission? [500 characters] The mission of the National Tropical Botanical Garden (NTBG) is to enrich life through discovery, scientific research, conservation, and education by perpetuating the survival of plants, ecosystems, and cultural knowledge of tropical regions.

8. Describe the partner organization's service area (audience served, including size, demographic characteristics and geographic area) [500 characters] NTBG and its gardens are located in the only tropical climate zones in the United States. NTBG's nearly 1,800 acres of gardens and preserves afford a natural open-air environment in which these species flourish. There are four gardens in Hawaii and one in Florida. Visitors to the gardens total approximately 60,000 to 70,000 per year.

9. List the partner's key roles and responsibilities in the project: [1000 characters] Chipper Wichman, CEO of NTBG, will provide critical assistance in the design and development of the survey questionnaire, ensuring that the survey's questions (if answered by the targeted respondees), will aid in the development of the model irrigation project at SBBG. Chipper will help SBBG apply the results of the survey to develop and implement a model centrally-controlled irrigation system that is applicable to most U.S. botanic gardens.

Please note:

A. Submission of this application by the Authorized Representative of the applicant organization reflects the partner organization's agreement with the following statements:

- We will carry out the activities described above and in the application narrative.
- We will use any federal funds we receive from the applicant organization in accordance with applicable federal laws and regulations as set forth in the program guidelines and the terms and conditions of the grant award.
- We assure that our facilities and programs comply with the applicable federal requirements and laws as set forth in the program guidelines.

B. Prior to submission of the application, the applicant will ensure that the partner organization has provided to the applicant a signed original of this Partnership Statement for the applicant's records. Such original will be made available to IMLS, if requested by IMLS.

Sample

BUDGET FORM - PAGE FOUR

Section B: Summary Budget

	\$ IMLS	\$ Cost Share	\$ TOTAL COSTS
1. Salaries and Wages			
2. Fringe Benefits			
3. Consultant Fees			
4. Travel			
5. Supplies and Materials			
6. Services			
7. Student Support			
8. Other Costs			
TOTAL DIRECT COSTS (1–8)			
9. Indirect Costs			
TOTAL COSTS (Direct and Indirect)			

Project Funding for the Entire Grant Period

1. Grant Funds Requested from IMLS

2. Cost Sharing:

 a. Cash Contribution

 b. In-Kind Contribution

 c. Other Federal Agencies*

 d. TOTAL COST SHARING

3. TOTAL PROJECT FUNDING (1+2d)

% of Total Costs Requested from IMLS

* If funding has been requested from another federal agency, indicate the agency's name:

Schedule of Completion

Activities	2008				2009							
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct
1) Orient the partners												
2) Hire Horticulture Assistant												
3) Develop the needs assessment survey												
4) Implement the survey												
5) Compile survey results												
6) Conduct literature search												
7) Site visits												
8) Plan for irrigation modeling												
9) Reporting												

Sample