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An assessment of state-level adult natural resource conservation education and volunteer training programs in the United States

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An assessment of state-level adult natural resource conservation education and
volunteer training programs in the United States

by

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A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Wildlife Biology

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Ames, Iowa

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Dedication

I dedicate this to my loving family. My parents Thomas and Alice Major, my sister Melissa and her husband Rafael, my beautiful nieces Ana and Claire Major-Weddle, and my grandparents Richard and June Schram. My humble thanks go to all of my friends and family, both past and present. You have always supported me, accepted me, and inspired me to be unique. You have taught me to appreciate the important things in life. This is for Grandpa and Georgie.

*"It is a wonderful feeling to recognize the unity of a complex of phenomena that to direct observation appear to be quite separate things."
- Albert Einstein*

*"Happiness is a butterfly, which, when pursued, is always just beyond your grasp, but which, if you will sit down quietly, may alight upon you."
- Nathaniel Hawthorne*

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Abstract

Adult natural resource education programs exist nationwide, in an effort to provide volunteers with the basic skills they need to participate in natural resource outreach. Natural resource professionals expressed some concern about the potential use of trained volunteers in natural resource programming. To evaluate these concerns and provide a more thorough understanding of volunteer activities, a nationwide assessment of state level adult natural resource education programs was conducted. Program managers were asked their opinions regarding the issue of volunteers replacing paid professional staff and the roles of volunteers used in programming.

Results showed that there is very little concern, nationwide, regarding the replacement of paid professional staff with trained unpaid volunteer staff. The assessment found that the volunteers trained by these programs are participating mostly in outreach and educational programming. Awareness of the roles volunteers are playing in outreach provides potential for long-term evaluation of volunteer impacts in education.

Introduction

Aldo Leopold noted that, “it is, by common consent, a good thing for people to get back to nature (A Sand County Almanac 1949).” It is this re-connection and awareness of nature that holds the potential to alleviate some of the environmental problems society faces. There is a need for conservation-minded citizens with the knowledge to behave in a way that is friendly to the environment (Schlickeisen 2004), and society is receptive to this notion. A survey of public attitudes towards science done by the National Science Board (2002) shows that Americans are highly supportive of the study of nature. Of those who are supportive, as large as seventy percent state that they lack knowledge of the scientific process (National Science Board 2002). One way of re-connecting nature and human society is to fill this knowledge gap through natural resource education (NRE). For the sake of simplicity in this paper the term natural resource education will be used to refer to all definitions of conservation education, environmental education, and interpretation.

Natural resource education programs

Natural resource education programs exist across the United States at many levels, with a variety of similar goals. When done effectively, the programs are adapted to the local needs of the community and provide a global perspective on the status of natural resources. In order to increase awareness of the key issues that impact the world, the community must understand how to make essential lifestyle changes. Many of the more successful programs teach this by combining natural resource education and community service (Savanick and Blair 2005). It is this type of quality programming that can foster an understanding of the ecology of local

ecosystems and encourage participation in community conservation efforts (Brewer 2002).

In particular, adult-oriented education programs have been developed with this purpose. The Master-type programs are a growing selection of adult NRE programs. Programs of this type provide a combination of formal and non-formal education in order to produce environmental stewards and volunteers for community service. Currently there are Master Conservationist or Master Naturalist-type programs in twenty-five states nationwide. The programs provide participants with 30-40 hours of basic skills training, both indoor and outdoor. In the Master Naturalist Program, participants are required to complete a further eight hours of advanced training for each following year (National Master Naturalist Annual Meeting 2005). Both types of programs require approximately 32-40 hours of volunteer service per year. The coursework covers the basic ecological concepts and natural resource management topics relevant to the community in which the program has been developed. The courses are administered by natural resource professionals and individuals considered to be experts in their field.

The prototype for many of these programs is the Master Gardener program. Like the Master Gardener program, many NRE programs are sponsored by Cooperative Extension (Rasmussen 1989). Extension specialists build programs with the purpose not only to foster an understanding of the natural resources, but to encourage parties to cooperate in the decision making process surrounding the use of natural resources (Rasmussen 1989). These programs have proven to be effective in changing attitudes and behaviors towards the environment and wildlife.

One such example of this success is the Iowa Master Conservationist adult education program. This program provides in and out of class experiences in a range of natural resource topics, including wildlife diversity and prairie ecosystems. Participants in this program showed a significant increase in knowledge following the program, with post-surveys sent up to one full year after participation in the program (Rohrberg-Johnson and Pease 2004). Iowa Master Conservationist participants significantly increased participation in teaching others about conservation issues (Rohrberg-Johnson and Pease 2004). Other examples of successful programs are the Texas Master Naturalist program and Florida Master Naturalist program. Similar in design to the Iowa Master Conservationist, these programs provide additional interpretive training. In an assessment of the Texas Master Naturalist program, volunteers demonstrated a knowledge increase of fifteen percent after participating in the program (Bonneau 2004). These participants were well-educated adults, a majority of them having a Bachelor's degree, and many having more advanced degrees. Of Texas Master Naturalist participants, more than 82 percent continue to use their knowledge in volunteer service to the community, primarily in outreach and education (Bonneau 2004). One of the main goals of the Florida Master Naturalist program is to prepare and motivate program participants to share their knowledge of natural resource issues with others (Main 2003). It is the Florida Master Naturalist perspective that being conservation minded citizens means to use resources to support conservation efforts through outreach (Main 2003).

With programs such as Master Conservationist and Master Naturalist, adult natural resource education programs are producing more trained volunteers than

ever before. Yet, not enough information is known regarding in what service areas these adult volunteers are using their training.

Volunteerism

Professionals need time, support, and confidence to coordinate an effective volunteer effort (Snider 1985). In programs where trained volunteers have been allowed to assume leadership roles, there have been proven benefits. One Extension program showed that when volunteers were allowed leadership roles, the program became stronger and volunteers took more ownership in the program (Snider 1985). Volunteers are an important factor in natural resource education and Rotolo and Wilson (2004) claim that there is no evidence that this civic engagement is on the decline. The current state of our environment causes the need for citizens to become active participants in natural resource education programs, giving them tools to directly contribute to the resource management process (O'Brien and Pease 2004).

It is often the volunteers produced by a program that put a face on the environment for the community. A visitor to an educational program or facility assumes that the educator, in some cases a trained volunteer, is a specialist in the subject matter they present (Tilden 1977). This assumption places responsibility on the volunteer to become a specialist in that area, or to point the visitor to one who can answer their questions effectively. Well-trained volunteers are capable of providing this level of quality natural resource education (Monteserin 2004), but evaluation is necessary to see that standards are being met.

Education is not all it takes to propagate change in society. Getting people excited about the information is how change is made. Many organizations have created standards for educators in order to combine both knowledge and effective communication of that knowledge. One example of these standards are the guidelines set by the North American Association for Environmental Education (NAAEE). The NAAEE guidelines for educator competency in environmental education state a need for: Competency in environmental literacy including an understanding for addressing environmental issues and personal and civic responsibility; a basic understanding of the goals, theory, practice, and history of the field of environmental education; an acceptance of the responsibilities associated with practicing environmental education; an ability to combine the fundamentals of high quality education with effective design and implementation; the ability to enable learners to engage in inquiry and investigation regarding environmental issues; and the knowledge and commitment to make assessment and evaluation integral to instruction and programs (NAAEE 2000). Education professionals spend years in training to fulfill these standards. However, due to training limitations, sometimes it is not feasible for trained volunteers to meet such high standards.

The National Association for Interpretation has deemed interpretive guide certification training necessary to ensure excellence as educators (Blodgett 2002). This, and other trainings provided by the National Association for Interpretation are designed to teach the skills and knowledge educators need to perform effectively. It is important that such trainings be provided for volunteer staff if they are being used in outreach and natural resource education programming in the community. This

allows information to be understood by the people and communicated to them in terms that they can connect to and value. One of the most influential resources in natural resource service is the adult volunteer. Older adults are spending more time volunteering than are younger adults (Gallagher 1994). As more adults are being used as volunteers in an educator's role, attention needs to be paid. As educators, our representation in society is critical to the future, not only of natural resource education, but to the reputation of the professional educators represented in this field.

Needs assessment

An evaluation of existing programs can serve as a guide in future development by identifying the problems and relevant issues being faced by today's natural resource program managers (Aguilar and Thornsby 2005). Successful programs incorporate a program assessment, particularly in the beginning stages of a program when the program focus and curricula are being developed (Brewer 2002). This sort of program framework evaluation is necessary to both improve a program, and to provide stakeholders in the program with the information needed to see value in their investment (Swackhamer and Kiernan 2005). The ability to show product is what keeps partnerships steady and keeps programs stabilized. Information can be used to mitigate for potential problems and assist in creating an efficient, adaptable, and effective program. Gaining information on some key elements of existing programs can provide further insight into improving these programs and clarify the role of the volunteer.

Information can also be gained regarding issues facing program managers specifically. Previous research has shown that there is some concern over the quality of volunteer led education, and competition for jobs amongst volunteers and professionals (Savanick and Blair 2005). Some individuals have voiced concern over the appropriateness of encouraging program graduates to share information about the environment with others (Main 2003). This assessment attempts to address some existing managerial concerns and identifies some of the roles of the natural resource adult volunteer. Program manager opinions regarding program changes and volunteerism were evaluated through a nationwide assessment of state-level adult natural resource education and volunteer training programs (hereafter referred to as the assessment).

In particular the following questions were posed in the assessment:

1. How have state-level adult natural resource education and volunteer training programs changed over the past ten years?
2. What roles are volunteers, trained by state-level adult natural resource education and volunteer training programs, filling in their community?
3. Are state-level natural resource agencies and organizations filling once paid positions with non-paid volunteers?

Methods

Target Population

An assessment was administered to adult natural resource education and volunteer training program managers (referred to together as natural resource education programs) who operated their programs primarily at the state level in the United States. Conservation education programs were defined as programs educating adults in the basic knowledge of natural resources topics and issues. Volunteer training programs were defined as programs with providing similar education, but with the purpose of producing volunteers.

Program managers were defined as the state-level representatives of a program that was being hosted at primarily a state level. The list of program managers was compiled from multiple sources and refined to a select group of individuals, meeting the set criteria. The sources of this information included the 2005-2006 Conservation Directory, developed by the National Wildlife Federation. Sources also included personal communications with state extension personnel, extension directories, and lists compiled by the former National Master Naturalist director. An extensive Internet search for program websites was conducted to locate and verify the names and positions of the compiled population. To expand and refine our population, program managers receiving the initial communication were asked to inform us via electronic mail if they were not the appropriate contact for the program and to provide the correct information. This population source correction was an ongoing process throughout the period of survey distribution.

Survey Instrument

The survey instrument was developed in collaboration with a national assessment working group under the guidance of the National Master Naturalist Initiative. The question structure and design of the survey instrument was modeled after Salant and Dillman (1994) in order to reduce non-response and measurement errors. The sample population, being made up mostly of members of professional organizations, university professors, and government employees, was considered technologically proficient for electronic mail distribution and Internet-based survey instruments (Aguilar and Thornsby 2005). The survey was then entered and

hosted on the Internet survey site www.surveymonkey.com, operated by the company Survey Monkey.

The survey was composed of two sections. Section A, entitled “An assessment of conservation education,” was distributed to the entire population of program managers via electronic mail. A cover letter explained the reasons they were selected to receive the survey, how to enter the survey online through the survey link, and an optional removal link. Program managers were informed that the survey was entirely voluntary, and that they could opt out of participating at any time during the survey process. This portion of the survey evaluated program manager opinions and asked details on volunteer activities. Upon completion of Section A, participants were directed to a thank you page. Participants were informed that at any time during either survey they could leave the survey and return to it later using the same link, and none of their information would be lost. Section B, entitled “A detailed program assessment,” was posted as an optional link at the end of Section A. This option was designed for programs that required more than twenty hours of training to gather more detail regarding their program structure.

The survey was distributed according to a modification of the Dillman method (Dillman 2000). The survey was available and initial contact was made with the target population in September 2005 via electronic mail. A second electronic mailing was sent to the revised population in October 2005. The mailing did not include members of the population who had already completed the survey or those identified to be removed from the population. The third electronic mailing was distributed in December 2005 with a notice that all surveys should be completed by the middle of

January in order to be included in the analysis. The survey was officially closed in January 2006.

The Institutional Review Board (IRB) at Iowa State University to meet with human subject protection regulations reviewed the survey. The survey was exempted from meeting the requirements of the Department of Health and Human Service, and received the IRB Identification number of 05-297. The rights and privacy of all survey participants were protected throughout the survey procedure. The population distribution list and the associated results were only accessible to the author via a private password and results of this survey are only released in summary form. The data collected on the Survey Monkey website was downloaded into an Excel worksheet for analysis (Microsoft Office X for Macintosh 2001). The data was analyzed using the SAS system for Windows version 8.0 (SAS Institute, Inc. 1999).

Results

A total of 171 program managers received this survey via electronic mail. 122 program managers responded to this survey, giving a response rate of 71 percent. Explanations for non-response include electronic mail filtering and bounce-back, broken links, lack of contact information, or incorrect contact information. Since this survey was distributed solely via electronic mail, only programs with technological capabilities were contacted. Programs not already using electronic mail were not included in this evaluation.

Responses were received from 43 states. Those states that did not respond were: Oregon, Montana, Tennessee, Rhode Island, Wyoming, Hawaii, and Maine. There were few contacts found in these states, which could account for the lack of response.

Program types were listed as conservation education, volunteer training, both, or other. Of those that responded, 35% (SE 0.04) fell into the category of adult volunteer training, 25% (SE 0.04) were adult conservation education, 38% (SE 0.04) considered their programs to fit into both categories, and 2% (SE 0.01) claimed to be something other than the previous categories.

Program goals

Program managers were asked to provide information regarding their program goals. They were allowed to select all of the options that applied to their program. The program goals that were selected the most for adult volunteer training programs were; to create volunteers for conservation education with youth, outside of schools, selected by 70% of managers, to create volunteers for public outreach

(63%), to create volunteers for conservation education with youth, inside of schools (61%), and to create volunteers for citizen science (61%). The program goals that were selected the most for adult conservation education programs were: to create support for conservation education with adults, selected by 84% of managers, to create support for public outreach (69%), to create support for conservation education with youth, inside of schools (67%), and to create support for conservation education with youth, outside of schools (64%). The option to create support for natural resource advocacy was one of the least selected options by both types of programs.

All program types were asked to respond to all of the questions, when applicable. For the purpose of the remainder of the results, program manager responses were combined from both categories, and treated together as “adult natural resource education programs.”

Program changes

The average ages of the programs was asked to evaluate how established programs are in their community. Program managers were asked the age of their program, either less than 5 years or 5 or more years old. 51% (SE 0.05) of the programs in this assessment had been active for less than five years. 49% (SE 0.05) had been active for more than 5 years (n=117). Of those programs active for more than five years, n=48 of them had been active for more than 7 years. When divided into regions, there was no significant difference in ages across regions.

Program managers were asked their opinions about staff changes and funding changes within their program, to evaluate the changes in adult NRE

programs over the past ten years (Table 1). The majority of program managers (42%) state that the number of paid professional staff in their program has stayed the same over the past ten years. However, they stated the opinion that the number of unpaid volunteer staff had increased (59%). Program managers viewed funding over the past ten years to have decreased (41%). Participation in programs, as perceived by program managers, was cited to have increased over the past ten years (70%).

Roles of volunteers

Program managers were asked if their natural resource volunteers were participating in interpretive roles. 79% (SE 0.04) of managers stated that they were using volunteers in interpretive roles, and 21% (SE 0.04) of managers stated that they were not (n=97).

Those program managers who stated that they were using volunteers in interpretive roles were asked what level of interpretation the volunteers were providing. 13% (SE 0.04) of managers stated that they were using volunteers in a lead interpretive role. 5% (SE 0.03) stated that they were using volunteers as an assistant to a professional interpreter. 69% (SE 0.05) stated that they were using volunteers in both a lead interpretive and an assistant interpretive role. 13% (SE 0.04) stated that they were using their volunteers in another type of role that did not fit into those categories (n=77).

To gain an understanding of whether or not national training programs were being utilized to train volunteers, program managers were asked whether they were currently using some form of national training. 20% (SE 0.04) stated that they were

using a national training program for their volunteers, and 80% (SE 0.04) stated that they were not (n=117). When program manager responses were divided into regional responses, there were no significant differences found.

Twenty-three programs are using a nationally sponsored training program to train their volunteers. Out of those programs, ten of them were associated with the Master Naturalist program. Three of the programs were using 4-H training curricula as a model. Two of the programs were using the Project Learning Tree curriculum as a model to train their volunteers. One stated that they were using the National Association for Interpretation training program. Two of the respondents had designed their own curriculum or were partnered with similar programs for training.

Managers were also asked their opinion on the statement: A national effort will make implementing a training program more efficient. 39% (SE 0.04) agreed with the statement, and 17% (SE 0.02) of managers stated that they strongly agreed with this statement.

Program managers were asked several questions regarding the areas of service in the natural resources that their volunteers participate (Table 2). Program managers were asked to select all of the areas that applied to their volunteers. The top areas selected, in which volunteers are participating are; public outreach (77%), conservation education with youth outside of schools (69%), conservation education with adults (69%), and conservation education with youth, inside of schools (67%).

The program managers were then asked what areas that they are in need of volunteer services, and again they could select all areas that applied. The service areas that were selected the most were; conservation education with youth, outside

of schools (77%), conservation education with youth, inside of schools (72%), public outreach (72%), and conservation education with adults.

Volunteer impacts

Managers were asked to provide information on the number of volunteers their program was training per year (n=86). 53% (SE 0.05) of program managers stated that their programs trained 100 or less volunteers per year. 47% (SE 0.05) stated that their program was training more than 100 volunteers per year. Of those training more than 100 volunteers per year, n=31 were producing 200 or more volunteers per year.

Program managers were asked what their opinions were regarding the impacts that volunteers were having on specified service areas (Table 3). In the area of wildlife and habitat conservation, the majority of managers stated that their volunteers had had either a strongly positive (42%) or moderately positive (52%) impact. In the area of conservation education and outreach, managers stated that their volunteers had a strongly positive (52%) or moderately positive (39%) impact. In the service area of natural resource advocacy, managers stated that their volunteers had a strongly positive (17%) or moderately positive (55%) impact. This was the only service area where a negative impact (2%) was found.

Concerns and challenges

Program managers were asked their opinion regarding unpaid volunteer staff replacing paid professional staff. 16% (SE 0.03) stated that this was occurring. 73% (SE 0.04) stated that they did not see this occurring. 11% (0.03) stated that they were unsure of whether or not this was happening (n=109). When the responses to

this question were divided amongst set regions of the United States, there was no significant difference between responses of different regions.

Program managers were asked their opinions regarding a set of statements. The first of these was: There is no need for concern about job competition between trained professionals and volunteer staff. 23% (SE 0.04) of program managers strongly agreed with the statement. 39% (SE 0.05) stated that they agreed with the statement. 15% (SE 0.03) remained neutral regarding the statement. 19% (SE 0.04) disagreed with the statement, and 5% (SE 0.02) strongly disagreed with the statement (n=110). The next statement, which referred to volunteers in programming, was: We have a need for interpretive staff, and feel volunteers could fill this role. 31% (SE 0.04) of program managers strongly agreed with the statement. 48% (SE 0.05) of program managers were in agreement with the statement. 15% (SE 0.03) of program managers had no opinion about the statement. 5% (SE 0.02) of managers disagreed with the statement, and 2% (SE 0.01) were in strong disagreement.

Program managers were then given the opportunity to share comments and concerns regarding the previous statements. Of those that responded to the question, 38 left remarks regarding the statements. Managers noted their concern regarding job competition specifically in the area of interpretation. One respondent stated that the use of volunteers to fill paid staff positions risks the loss of professionalism in the field of interpretation and education in general.

Program managers were asked what challenges they faced in implementing their program (Table 4). They were asked to select all that applied. The challenges

that were selected the most included; there is insufficient staff and/or time, which was selected by 84% of program managers, there are insufficient funds and resources available, which was selected by 66% of program managers, and that the program does not have priority in their agency, which was selected by 37% of program managers.

Program title opinions

Program managers were asked their opinion regarding a program title for a nationwide umbrella organization for natural resource volunteer training. They were allowed to select one ranking per title. The title 'Master Naturalist' was ranked number one more than any of the other titles (Table 4). This was followed in rank by the title 'Certified Volunteer Naturalist'. The titles 'Master Conservationist' and 'Conservation Steward' received the lowest rankings (n=107). When respondents were divided into regions of the United States, there was no significant difference in the responses provided by program managers. Program managers were asked to provide their opinions regarding the title terminology. There were program managers who felt that the term 'naturalist' should not be synonymous with 'educator' or 'interpreter'. Others felt that the term 'naturalist' should depict a trained educator with a professional degree.

Discussion

As the demand for natural resource education increases, information is needed on a national scale to gain perspective on the programs and volunteers. To further understand this, natural resource program manager opinions were assessed in a nationwide survey. Information on the following three areas was gathered: How programs have changed over the past ten years, the roles that trained volunteers are filling, and whether there is concern surrounding trained volunteers filling staff positions. With a fairly nationwide representation of natural resource program managers, a strong understanding of these areas was gathered through qualitative data. Both volunteer training and conservation education programs were well represented throughout the study.

Program goals

Initially, it was suspected that the program goals of volunteer training programs and conservation education programs would be substantially different. However, it became evident through the qualitative data that this was not the case. The most common programmatic goals that were selected by program managers fell into the categories outreach and education. This included training adults to provide education inside and outside of schools, for both children and adults, and general outreach to the public. Similarly, we thought that there might be regional differences between program goals. For example, states in the Midwest have a greater number of professional naturalists in conservation agencies compared to states in the South. Therefore, training goals might differ between the regions. While it might be an artifact of sample size, no such differences were found. However, local issues may

differ, even within a state and certainly between states. These differences may encourage programs to be more flexible and adaptable in their approach. In particular, a location with groundwater issues that need to be addressed can focus its programming on groundwater topics, whereas another location that is contending with erosion and soil issues can focus their programming in that area. It is important for programs to adapt to the demands of the community, however, there is a need for general resource availability.

Information such as this lends itself to the production of a national curriculum, which could allow for within-state and between-region differences. Respondents to this survey showed a positive attitude towards the use of a national training model, however very few were actually using a national training model. This preference for any particular national training program, amongst those using a national training, was not significant in any region. Initiatives such as the National Master Naturalist Program may be able to assist nationwide in providing resources for program managers. The focus of the individual programs, however, must be left to states to determine due to ecological and needs differences between different locations. The “once-size-fits-all” approach is not likely to succeed.

Program changes

In order to address whether or not volunteer roles have been changing in NRE programming, there was a need to evaluate the changes that have occurred over the past ten years. In doing this, it was found that the majority of programs saw an increase in the number of unpaid volunteer staff (Table 1). Similarly, nearly half felt that the number of paid professional staff had stayed the same over the same

period of time (Table 1). This difference might indicate that as the need for staff is increasing, trained unpaid volunteers are beginning to fill that gap. Nearly three-fourths of program managers felt that participation in the programs had increased over the past ten years (Table 1). This demand for programming is most likely what is contributing to the need for volunteer staff. An increase in demand shows very significantly that society is attempting to get back to nature. The resources, such as trained staff and funding, need to be available in order to meet this demand.

Funding and resources was a primary area of concern. The majority of programs perceived that funding to their agency had decreased or stayed the same over the past ten years (Table 1). This is important when acknowledging that newer programs may need to become independently financially stable if they are to last long term. An overall look at program ages was used to determine the number of established programs compared to the new natural resource program initiatives that are in development. There was an even split between programs that were less than 5 years old and those that were 5 or more years old. This information may be useful in realizing the need to strengthen programming and partnerships for those newly developing programs, not only between new programs, but also within existing programs.

Utilizing existing resources to strengthen existing programs and curriculum will be necessary in the future if natural resource education programming is to survive and remain effective. An increase in demand for programming that is not supported with an increase in funding opens up a new niche for trained unpaid volunteer staff. To track whether or not resources are being used effectively, it must

be known what primary roles these trained volunteers play in community engagement and the furthering of natural resource education.

Roles of volunteers

Volunteers are being trained in abundance across the country. When program managers were asked about the number of volunteers they trained, nearly half of them were producing more than 100 volunteers per year in the natural resources. Of that half, 31 programs were producing more than 200 trained volunteers per year. These volunteer training and conservation education programs are a substantial resource, contributing unpaid volunteer hours to areas of need in the natural resources.

In order to evaluate what roles volunteers were playing in the natural resources, program managers were asked to select all of the areas in which their volunteers were participating and all of the areas in which they had a need for volunteers (Table 2). The areas that program managers selected that had the highest participation of volunteers were education and outreach areas. It could be ascertained that these, in conjunction with the program goals, are the areas that the volunteer efforts are concentrated. This flows with the top selections for areas of volunteer needs (Table 2). The qualitative data suggests that volunteers are primarily participating in natural resource education and outreach roles in their communities.

Though this outreach is a significant tool in getting society closer to nature, it could be attributed to the fact that many of the programs are using the Master Naturalist design for their trainings. Regardless, this information clearly

indicates that volunteer led programming is occurring. With such programming, it is necessary to evaluate the impacts of those programs as well as any concerns surrounding them. This is an area in which follow-up studies would be successful in identifying areas where there are training gaps. This future research would also be useful in identifying whether or not volunteer led programs are meeting the standards of natural resource education.

Volunteer impacts

When asked about the impacts that volunteers have had in specific service areas, program managers saw an overall positive impact in all areas, including wildlife conservation, conservation education, and natural resource advocacy (Table 3). In particular, conservation education and outreach saw a substantially positive impact. The majority of the program managers stated that they did have volunteers in a teaching or interpretive role. Most of these programs were using their volunteers in both a lead and assistant capacity. This use of volunteers may identify that more information is needed on the knowledge retention from the training these volunteers received.

Awareness of knowledge and impacts over the long term may prove helpful in focusing training efforts, providing advanced or refresher trainings, and in assuring that quality education is being provided by volunteers to their community. In order to identify if program managers were in favor of using volunteers in outreach and education, they were also asked to respond to a statement regarding whether volunteers could fill their need for educational or interpretive staff. The majority of these managers felt that they agreed with this statement. As educators, individuals

take on a responsibility to be scientifically valid, knowledgeable, and informed about a topic. While managers reported that impacts were overwhelmingly positive, more impact measurement is needed. Many existing programs do program evaluations but few do the type of longitudinal assessment necessary to quantify impacts. Identifying the impacts of the education that is being provided by the volunteers is important in understanding the true impacts they are having.

Areas that were not considered to be of great need for volunteers included recruiting for natural resource recreation, private lands management, and advocacy for natural resource issues (Table 2). Particularly, natural resource advocacy showed to be an area in which volunteers were having a more neutral impact (Table 3). This was the only area that showed any negative response in volunteer impacts. Clearly, however, there are differences between state needs. This is something that should be considered for future natural resource programming. Natural resource advocacy may be a topic that should be tackled with rigor and delicacy, due to the visible impacts it can make on a community.

Concerns and challenges

The majority of these programs appear to be gearing their education toward preparing participants to be educators within their community. These participants are having a great impact on the public's perception of natural resources. Program growth has created a need to use volunteers in leadership positions, however this type of volunteer role was of particular concern to some natural resource professionals.

Concern was expressed that there may be competition between unpaid volunteer staff and paid professional staff. When managers were asked if they felt this concern, the majority of respondents agreed that there was no concern over this competition. This concern issue was then addressed by program manager responses to a statement stating that there was no need for concern regarding unpaid staff replacing paid staff. Again, three-fourths of the program managers stated that they did not believe that this replacement was occurring. These responses indicate that the majority of program managers nationwide feel that there is no concern surrounding this issue. Moreover, they appear to be comfortable accepting unpaid trained volunteer staff in interpretive roles and using volunteers to fill their need for interpretive staff.

Program managers are being faced with the challenges of insufficient staff and resources. Many programs also stated that they did not consider their programming to be an agency priority. It is important to acknowledge that program managers expressed concerns. One respondent stated that the professionalism of the field of interpretation is lost when we say that volunteers can fill the role of what should be paid, full time positions. However, with limited resources and funds, and a growing demand for programming, natural resource program managers are being met with a need that they must address. Until more information is known on the long-term knowledge retention for unpaid trained volunteer led outreach and educational programming, these concerns should not be pushed aside.

Title opinions

The potential title for a nationwide umbrella organization was also addressed in this assessment. The reason this topic was of interest was the distinct distaste for the term 'conservationist' compared to the term 'naturalist'. The title 'Master Naturalist' received the highest ranking out of the four options offered (Table 4). Options with the term 'naturalist' in them were ranked more favorably than options with the term 'conservationist'. There were many opinions expressed regarding the selection of a title. Program managers stated that the term 'conservationist' was more affiliated with manual labor, and the term 'naturalist' was affiliated with education. This may provide us with an understanding of the direction in which current adult natural resource education programs are inclined to go. There appears to be a movement against the laborer, and towards the educator in the natural resources volunteer.

This understanding of these adult natural resource programs provides the framework for where to go with future training and program development. This information will help to acknowledge what educational resources already exist, and take into account the concerns of all natural resource professionals whose reputations are directly linked to the reputations of their volunteers.

Implications for Future Research

"In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are taught." This was a statement, made by Baba Dioum in 1968 at an assembly of the International Union for the Conservation of Nature. The message is simple. Having a familiarity and an

understanding of a resource can help put people on the path towards making the subtle changes in their life that can aide in the conservation of our natural resources.

Through a better understanding of these volunteer training programs, there is an opportunity to improve natural resource education programming. There is potential for long-term evaluation of volunteer roles and of volunteer impacts. This information could be key in understanding whether or not quality education is being provided in volunteer programs. This may also identify the challenges faced by programs, in order to mitigate those problems in the future. Problems such as finding partnerships and funding may be more readily addressed with the assistance of a nationwide effort. Still, the local flexibility that allows for customizing of training programs must be a part of any national program.

This information can help inform related research on understanding and measuring environmental literacy. Knowing that volunteers are reaching a broader population, program managers can assure that the baseline environmental knowledge needed to create an environmentally literate public is being provided. Long-term evaluation of this knowledge would also be possible through the use of a standardized volunteer program model, and environmental literacy assessment, available for use in all natural resource education programs. Awareness that volunteer led natural resource education is occurring, and acknowledging the reasons that this is occurring, is important for the future of natural resource education.

Table 1: Program manager opinions regarding changes in staff, funding, and participation over the past 10 years (n=110).

Program changes in...	Increased % (SE)	Stayed same % (SE)	Decreased % (SE)	Not sure % (SE)
number of paid professional staff	30% (0.04)	42% (0.05)	25% (0.04)	4% (0.02)
number of unpaid volunteer staff	59% (0.05)	25% (0.04)	10% (0.03)	6% (0.02)
funding to the agency for the program	23% (0.04)	30% (0.04)	41% (0.05)	6% (0.02)
participation in program	70% (0.04)	17% 0.04)	8% (0.03)	5% (0.02)

Table 2: Program manager opinions regarding the services provided by their natural resource volunteers (n=96), and the service areas in which volunteer help is needed (n=108).

	Services provided by volunteers...	Services needed by volunteers...
Public outreach (booths, talks, and demonstrations)	77%	72%
Conservation education with adults	69%	70%
Conservation education with youth, outside of schools	68%	77%
Conservation education with youth, inside of schools	67%	72%
Citizen science (conservation research and monitoring)	62%	65%
Habitat management and recreational projects	56%	59%
Conservation and restoration projects	55%	56%
Natural resource advocacy	40%	44%
Recruiting hunters, anglers, boaters, and wildlife watchers	31%	40%
Private lands management	26%	30%
Other	13%	9%

Table 3: Natural resource volunteer impacts on specified service areas, as perceived by program managers (n=94).

Service areas impacted...	Strongly Positive % (SE)	Moderately Positive % (SE)	Neutral % (SE)	Moderately Negative % (SE)	Strongly Negative % (SE)
Conservation education and outreach	53% (0.05)	39% (0.05)	9% (0.03)	0% (0.0)	0% (0.0)
Wildlife and habitat conservation	43% (0.05)	51% (0.05)	6% (0.03)	0% (0.0)	0% (0.0)
Natural resource advocacy	17% (0.04)	55% (0.05)	26% (0.05)	1% (0.01)	1% (0.01)

Table 4: Natural resource program manager opinions regarding title selection of a nationwide volunteer training program (n=107).

Title	Rank				Not acceptable
	1	2	3	4	
Master Naturalist	44%	19%	14%	8%	15%
Certified Volunteer Naturalist	37%	25%	13%	12%	13%
Conservation Steward	13%	23%	20%	25%	18%
Master Conservationist	5%	19%	21%	30%	24%

Appendix A: Assessment Section A Cover Letter

Natural Resource Professional,

As a part of my master's research, I am conducting an assessment of volunteer and educational programs in the natural resources, specifically those geared towards adults. You are being invited to participate in this assessment because you or your agency have been referred to us for managing such programs.

The survey will take approximately 15 minutes to complete, and is followed by an optional detailed survey. We would like all responses to be received before Thanksgiving, if at all possible.

If you are not the contact for the program, please e-mail me at annabel@iastate.edu with the appropriate contact information.

If you have any questions, please contact Annabel L. Major at (515) 294-7222, annabel@iastate.edu, or Dr. James L. Pease at (515) 294-7429, jlpease@iastate.edu.

To begin the assessment, please click on the link below:

<http://www.surveymonkey.com/>

Thank you for your participation,

Annabel L. Major

Graduate Research Assistant

Iowa State University

Appendix B: Assessment Section A

An Assessment of Conservation Education Programs

Thank you for your willingness to participate in this survey.

If you manage more than one adult volunteer training or conservation education program, please think about the largest of these programs.

You may leave and return to the point you left off by accessing the survey from the same computer through the e-mail link provided.

To begin the survey, please click the "Next" button.

I Volunteers

1. Which type of natural resource program do you manage?

Adult volunteer training
 Adult conservation education
 Other (please specify)

2. What do you hope to achieve through your conservation education program, if applicable? (please check all that apply)

To create support for conservation education with youth - school related
 To create support for conservation education with youth - outside of school
 To create support for conservation education with adults
 To create support for public outreach (booths, talks, and demonstrations)
 To create support for recruiting hunters, anglers, boaters, and wildlife watchers
 To create support for citizen science (conservation research and monitoring)
 To create support for habitat management and recreational projects (trail construction, brush clearing)
 To create support for conservation and restoration projects (prescribed burns, exotic species control)
 To create support for private lands management
 To create support for natural resource advocacy
 We have no specific goals for the program
 Other (please specify)

3. What do you hope to achieve through your volunteer training program?
(please check all that apply)

- To create volunteers for conservation education with youth, school related
- To create volunteers for conservation education with youth, outside of school
- To create volunteers for conservation education with adults
- To create volunteers for public outreach (booths, talks, and demonstrations)
- To create volunteers for recruiting hunters, anglers, boaters, and wildlife watchers
- To create volunteers for citizen science (conservation research and monitoring)
- To create volunteers for habitat management and recreational projects (trail construction, brush clearing)
- To create volunteers for conservation and restoration projects (prescribed burns, exotic species control)
- To create volunteers for private lands management
- To create volunteers for natural resource advocacy
- We have no specific goals for the program
- Other (please specify)

4. How long have you managed volunteer training or conservation education programs for this agency?

- Less than 1 year
- 1-2 years
- 2-3 years
- 3-4 years
- 4-5 years
- 5-6 years
- 6-7 years
- More than 7 years

5. Are you currently using a national volunteer training program?

- No
- Yes (please specify)

6. Do you have any volunteers in the natural resources?

- Yes
- No

7. Approximately how many volunteers do you have in the natural resources?

Not sure

1 – 25

26 – 50

51 – 75

76 – 100

101 – 150

151 – 200

More than 200 (please provide approximate number if possible)

8. Do your volunteers participate in a teaching/interpretive role in outreach to the community?

Yes

No

9. Please select the roles that your volunteers play in teaching/interpretation to the community:

Lead teaching/interpretive role

Assistant to professional teacher/interpreter

Both

Other (please specify)

10. Which types of services do your volunteers provide? (please check all that apply)

Conservation education with youth - school related

Conservation education with youth - outside of school

Conservation education with adults

Public outreach (booths, talks, and demonstrations)

Recruiting hunters, anglers, boaters, and wildlife watchers

Citizen science (conservation research and monitoring)

Habitat management and recreational projects

(trail construction, brush clearing)

Conservation and restoration projects (prescribed burns, exotic species control)

Private lands management

Natural resource advocacy

Other (please specify)

11. Please think about the impact that your volunteers in the natural resources are having on your agency and community. What impact have your volunteers had on the following areas?

	Strongly Positive	Moderately Positive	Neutral	Moderately Negative	Strongly Negative
Wildlife and habitat conservation					
Conservation education and outreach					
Recruitment for natural resource recreation					
Natural resource advocacy					
Other agency conservation objectives					

12. In what service areas do your volunteers need additional training?
(please check all that apply)

- Conservation education with youth - school related
- Conservation education with youth - outside of school
- Conservation education with adults
- Public outreach (booths, talks, and demonstrations)
- Recruiting hunters, anglers, boaters, and wildlife watchers
- Citizen science (conservation research and monitoring)
- Habitat management and recreational projects (trail construction, brush clearing)
- Conservation and restoration projects (prescribed burns, exotic species control)
- Private lands management
- Natural resource advocacy
- Other (please specify)

13. In what service areas do you have a need for volunteers?
(please check all that apply)

Conservation education with youth - school related
 Conservation education with youth - outside of school
 Conservation education with adults
 Public outreach (booths, talks, and demonstrations)
 Recruiting hunters, anglers, boaters, and wildlife watchers
 Citizen science (conservation research and monitoring)
 Habitat management and recreational projects (trail construction,
 brush clearing)
 Conservation and restoration projects (prescribed burns,
 exotic species control)
 Private lands management
 Natural resource advocacy
 Other (please specify)

14. Natural resource volunteer training programs are available. What criteria
 would you use in choosing a volunteer training program?
 (please check all that apply)

It is led by a national professional organization
 It is sanctioned and recognized by government agencies
 It is inexpensive for volunteers and the agency
 It has a variety of written and visual resources available
 It offers effective administration at the professional level
 It is flexible and allows for adaptation to local issues
 It creates less pressure on staff time and resources
 There is a low level of bureaucracy and paperwork
 Other (please specify)

15. In choosing a volunteer program, which external partnerships would you
 use if they were available? (please check all that apply)

Federal government agencies
 State government agencies
 Non-government, non-profit organizations
 Non-government, for-profit organizations
 Educational institutions
 Not sure
 Other (please specify)

16. In your opinion, how many hours of training are needed to adequately train volunteers in the natural resources?

0 - 9 hours

10 – 19 hours

20 – 29 hours

30 – 39 hours

40 – 49 hours

50 – 59 hours

60 – 69 hours

70 hours or more

17. We would like to know your opinion regarding the topics covered during volunteer training. What amount of training should be dedicated to the following topics?

	All	Most	Half	Some	None
Natural History					
Stewardship					
Teaching/Interpreation					

18. Please provide your opinions regarding the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel the term 'Master Naturalist' will depict volunteers as professionals.					
A national effort will make implementing a training program more efficient.					
There is no need for concern about job competition between trained professionals and volunteer staff.					
Volunteer training programs should focus more on stewardship than on teaching/interpretive skills.					
We have a need for teaching/interpretive staff, and feel volunteers could fill this role.					
We would benefit most from volunteers with more in-depth training, even if this means fewer volunteers.					

19. If you have any suggestions or comments to make regarding any of these statements, please list those here:

II Staff

20. How many paid professional staff do you have whose primary job responsibility (over 50%) volunteer training and conservation education programs?

0

1

2

3

4

5

Other (please specify)

21. We are interested in the staffing changes in your volunteer training or conservation education program over the past ten years, or since your program began. Please respond to the following statements regarding these changes.

	Increased	Stayed the same	Decreased	Not sure
The number of paid professional staff in the program has...				
The number of unpaid volunteer staff in the program has...				
The funding to our agency for the program has...				
The participation in the program has...				

22. To the best of your knowledge, have trained volunteers been used to replace paid professional staff in conservation education programs in your agency?

Yes

No

Not sure

23. What level of concern do you have regarding this replacement?

High concern

Medium concern

Low concern

No concern

24. Why do you think that this replacement has occurred?
(please check all that apply)

An increase in public demand for programs

A decrease in available agency funds

A decrease in available funding from outside of the agency

An increase in the availability of trained volunteers

An increase in the availability of volunteer certification programs

Mandated staff reductions due to state legislative initiatives

Using volunteers lowers program costs

Other (please specify)

25. What are some of the major challenges your agency faces in implementing the program? (please check all that apply)

There is insufficient staff and/or time

There are insufficient funds and resources are available

There are insufficient partnerships available

There has been a decrease in participation

The change in clientele demographics

The program does not have agency priority

The program does not have an appropriate curriculum

None

Other (please specify)

III National Master Naturalist Initiative

The answers you provide in this next section will help guide the formation of the National Master Naturalist Initiative.

The purpose of the National Master Naturalist Initiative is to promote awareness and stewardship of the natural resources through science-based education and community outreach.

The National Master Naturalist Initiative is working on a national level to provide baseline development tools and to encourage the further evolution and development of the program.

Master Naturalist Programs are adult natural resources volunteer training programs, currently available in approximately 25 states. The programs are managed by state, non-profit, and federal agencies. They generally require 40 hours of training, 8 hours of advanced training per year, and 40 hours of volunteer service. The training includes basic ecological concepts and natural resource conservation and management topics that are relevant to the local community, as well as globally.

The National Master Naturalist Initiative is seeking an appropriate and all-inclusive name for a national resource center and potential umbrella organization.

This resource center would act as a tool for the development of new volunteer training programs or to assist with current volunteer training programs. They are seeking opinions and suggestions, in order to find the most acceptable name.

26. Please rank the acceptability of each of the following names from 1 to 4, with 1 being your first choice and 4 being your last choice. You may choose "Not acceptable" if you feel a name should not be considered.

	1	2	3	4	Not acceptable
Conservation Steward					
Master Naturalist					
Master Conservationist					
Certified Volunteer Naturalist					

27. Please use the space available to list any alternative names or comments:

28. How, if at all, have you already been involved in the National Master Naturalist Initiative? (please check all that apply)

We have not yet been involved

We have participated in a steering committee or working group

We have attended a workshop or workshops

We receive updates through mail or e-mail

We receive materials or resources by mail or e-mail

Other (please specify)

29. How does the National Master Naturalist Initiative currently assist the program? (please check all that apply)

It has had no effect on our program

It has increased the breadth of the program

It has provided documents and resources

It has provided increased funding opportunities

It has provided quality assurance and consistency through evaluation and monitoring

It has increased name recognition

It has improved partnerships

Other (please specify)

30. In the future, how should the National Master Naturalist Initiative assist with the program? (please check all that apply)

We will not be participating in the initiative

It should increase the breadth of the program

It should provide documents and resources

It should provide increased funding opportunities

It should provide quality assurance and consistency through evaluation and monitoring

It should increase name recognition

It should improve partnerships

Other (please specify)

31. Prior to this survey, were you aware of the National Master Naturalist Initiative?

Yes

No

IV Comments

32. Please list any additional comments or questions, or feel free to e-mail them to annabel@iastate.edu.

33. If you have any program results that you would like to share, please list them here:

34. If you have any future goals that you would like to share, please list them here:

V Contact

35. Would you like more information on the National Master Naturalist Initiative?

Yes

No

36. Please provide your contact information below so that we may track who has responded to this survey:

Program Name:

Agency:

Contact:

Title:

Address:

City:

State:

Zip Code:

Phone:

E-mail:

Website:

VI Results

37. Would you like to receive a copy of the results upon completion of the analysis?

Yes

No

Thank you!

For those who manage programs with more than 20 hours of training or education, you will have the option to complete a detailed program assessment.

Please click "Done" to submit your responses. This may take a few seconds.

Appendix C: Assessment Section B Cover Letter

Your Survey Has Been Received

Thank you for your participation in this survey!

Upon completion of the analysis, a copy of the results, if requested, will be e- mailed to the same account.

The National Master Naturalist Initiative has a special interest in adult natural resources programs with more than 20 hours of training or education.

If you manage a program such as this, we would like you to participate in an additional detailed assessment. This assessment will take approximately 15 minutes to complete.

If you choose to participate, please follow the link below, and you will be directed to this assessment. If you choose not to complete the assessment at this time, and would like to return to it at a later time, please bookmark this page:

CLICK HERE TO TAKE SURVEY

If you have conducted knowledge assessments, program demographic assessments, or have an on-line or paper copy of your manual that you would like to share, please e-mail or mail that information to the following address:

Iowa State University
Department of Natural Resource Ecology & Management
Attn: Annabel Major
Room 339 Science II
Ames, IA 50011-3221
Phone: 515-294-7222
Fax: 515-294-7874
E-mail: annabel@iastate.edu
Webpage: www.extension.iastate.edu/wildlife

Thank you again for your participation!

Appendix D: Assessment Section B

A Detailed Program Assessment

Thank you for your willingness to participate in this assessment.

You may leave and return to the point you left off by accessing the assessment from the same computer.

To begin the assessment, please click the "Next" button.

The following information will be used only to track responses.
Your contact information will be separated from your responses.

1. Please enter your contact information below:

What is your name?

What agency do you work for?

2. Please fill in the requested information for your largest adult natural resource volunteer training or conservation education program whose education or training consists of more than 20 hours.

Program Name

Required Initial Training (hours)

Required Volunteer Service (hours)

Advanced Training (hours)

Program Duration (months)

3. Where is the program operated? (please check all that apply)

Throughout the state

In specific counties

In specific cities

In specific regions of the state

Throughout the nation

Other (please specify)

4. How much autonomy is given at the level of operation?

Complete autonomy

Some autonomy

Little autonomy

No autonomy

5. Which stage of development is the program in?

Early planning
Late planning
Early implementation
Mature fully developed program
Other (please specify)

6. How long has the program been active?

Less than 1 year
1 – 2 years
2 – 3 years
3 – 4 years
4 or more years

7. What are the primary sources of funding for the program?
(please check all that apply)

Grants
Partner contributions
Corporate sponsors
Fee based
Tax allocated
Other (please specify)

8. Approximately how much is/was your annual program budget expenditure during the startup phase of this program?

\$0 – \$5,000
\$5,000 – \$10,000
\$10,000 – \$15,000
\$15,000 – \$20,000
\$20,000 – \$25,000
\$25,000 or higher
Not sure
Other (please specify)

9. Approximately how much is your annual program budget expenditure (if applicable) for your fully developed program?

\$0 – \$25,000

\$25,000 – \$50,000

\$50,000 – \$75,000

\$75,000 – \$100,000

\$100,000 – \$125,000

\$125,000 or higher

Not sure

The program is not fully developed

Other (please specify)

10. Which agencies and organizations are primarily responsible for implementing this program? (please check all that apply)

Federal Natural Resource

Agencies

State Department of Natural

Resources

State Fish and Game Agencies

State Parks and Recreation

Agencies

Extension Agencies

County Agencies

Municipalities

Private Nature Centers

Non-Profit Organizations

None

Other (please specify)

11. How many participants per year does the program educate or train in natural resource conservation?

Not sure

1 – 25

26 – 50

51 – 75

76 – 100

101 – 150

151 – 200

More than 200 (please provide approximate number if possible)

12. What is the gender of the majority of your participants?

Mostly female

Mostly male

Equal representation of female and male

Not sure

13. Which of the following age ranges do the majority of your participants fall into?

Mostly under 18 years

Mostly between 18 – 40 years

Mostly between 41 – 65 years

Mostly over 65 years

Equal representation of all age groups

Not sure

14. Where do the majority of your participants live?

Mostly rural

Mostly urban or suburban

Equal representation of rural and urban/suburban

Not sure

5. We are interested in knowing if there any special groups that you are specifically targeting through this program. If there are, please check the boxes next to these groups.

	Check
Rural	<input type="checkbox"/>
Urban/Suburban	<input type="checkbox"/>
Female	<input type="checkbox"/>
Male	<input type="checkbox"/>
Under 18 years	<input type="checkbox"/>
18 – 40 years	<input type="checkbox"/>
41 – 50 years	<input type="checkbox"/>
51 – 65 years	<input type="checkbox"/>
Over 65 years	<input type="checkbox"/>
African American	<input type="checkbox"/>
Hispanic	<input type="checkbox"/>
Asian American	<input type="checkbox"/>

16. If you have any other groups that you are targeting, please list them here:

17. Who is leading the program? (please check all that apply)

Paid agency staff
 Professionals from various partner agencies and organizations
 University personnel
 Unpaid volunteers
 Other (please specify)

18. Is there a standardized manual or curriculum that is used for the program?

Yes, we have developed one locally
 Yes, we are in the process of developing one
 Yes, we are using materials from a national program
 No, we do not have one yet
 No, we do not want a standardized manual or curriculum

19. What topics are included in your programming? (please check all that apply)

What is a "naturalist"?
 Fundamentals of the scientific method
 Ecological concepts and definitions
 Ecological regions
 Geology and soils
 Weather and climate
 Botany (Plants)
 Ornithology (Birds)
 Entomology (Insects)
 Ichthyology (Fish)
 Herpetology (Reptiles)
 Mammology (Mammals)
 Archeology
 Forest ecology and management
 Wetlands ecology and management
 Aquatic ecology and management
 Rangeland ecology and management
 Prairie ecology and management
 Urban issues
 Rural issues and/or sustainable agriculture
 Energy use and/or waste reduction
 Environmental education and interpretation skills
 Effective lobbying for conservation issues
 Other (please specify)

20. What is required for certification? (please check all that apply)

We do not offer certification
Completion of basic training
Completion of volunteer service
Completion of advanced training
Completion of a post-training evaluation
Completion of a post-training project
Re-certification is required to stay current
Other (please specify)

21. What evaluation methods do you use? (please check all that apply)

We do not evaluate the program
Pre-program knowledge and perceptions
Post-program knowledge and perceptions
Evaluations of individual instructors
Overall program evaluation by participants
Evaluation of volunteer activities
Longitudinal assessments of volunteer knowledge and perceptions
Longitudinal assessments of volunteer impacts
Other (please specify)

22. What evaluation methods would you like to develop? (please check all that apply)

We would not like to develop evaluation methods
Pre-program knowledge and perceptions
Post-program knowledge and perceptions
Evaluations of individual instructors
Overall program evaluation by participants
Evaluation of volunteer activities
Longitudinal assessments of volunteer knowledge and perceptions
Longitudinal assessments of volunteer impacts
Other (please specify)

23. Approximately what percentage of your trained volunteers have met the service requirement?

76 – 100%

51 – 75%

26 – 50%

1 – 25%

None

Not sure

24. Who monitors volunteer service? (please check all that apply)

We do not monitor volunteer service

Volunteers monitor hours and/or activities, submitted on-line

Volunteers monitor hours and/or activities, manually submitted

Local volunteer manager monitors hours and/or activities

State volunteer manager monitors hours and/or activities

National volunteer manager monitors hours and/or activities

Other (please specify)

25. If you had the means to, what volunteer service monitoring methods would you like to develop? (please check all that apply)

We would not like to monitor volunteer service

Volunteers monitor hours and/or activities, submitted on-line

Volunteers monitor hours and/or activities, manually submitted

Local volunteer manager monitors hours and/or activities

State volunteer manager monitors hours and/or activities

National volunteer manager monitors hours and/or activities

Other (please specify)

Thank you!

Please click "Done" to submit your responses.

This may take a few seconds.

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