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**U.S. Fish and Wildlife Service  
National Wildlife Refuge System  
Draft Environmental Education Strategic Plan**



# SOWING SEEDS OF WONDER

## A STRATEGIC PLAN FOR IMPROVING ENVIRONMENTAL EDUCATION FOR THE NATIONAL WILDLIFE REFUGE SYSTEM

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### **I. EXECUTIVE SUMMARY**

Environmental education has long been an important way for employees to connect our agency’s conservation mission and goals with visitors. Our nation needs an informed citizenry to make knowledgeable decisions about conservation topics that have wide-ranging impacts on plants, wildlife, habitats and people. For decades, national wildlife refuges have served as outdoor classrooms for diverse learning audiences, creating a greater understanding of local, regional and national conservation issues. Today’s employees continue this tradition, as they look to teach interdisciplinary concepts to students of all ages to help them make informed conservation stewardship decisions.

With clear overarching national goals in place, Refuge System units can apply effective strategies that maximize station capabilities and best serve their surrounding communities. In the evolving and fluid fields of lifelong learning and education, the Refuge System can expand its impact by collaborating with local, state, and national partners who possess essential skills, resources, and similar environmental education program objectives.

Most importantly, this strategic plan provides recommendations to improve environmental education throughout the National Wildlife Refuge System (Refuge System) and other Service field offices, organized under seven strategic goals:

1. Inventory and evaluate program resources, content, staff, and delivery.
2. Provide quality environmental education programs throughout the Refuge System.
3. Invest in communications, training and professional development.
4. Maximize effectiveness of delivery modes.
5. Maximize partnerships and leverage program resources.

Within this framework of goals, the strategic plan identifies measureable objectives and strategies to reach those objectives over the next 10 years.

## **II. PURPOSE OF THIS DOCUMENT**

This document provides refuge staff with a direction for decision making when working with volunteers, Friends groups, and partnership organizations; establishes national-level standards and goals; addresses the need for station-level objectives; and sets individual and collective expectations for environmental education programs (attachment). The document is intended to guide, but not limit, program development. It is written with the understanding that individual field stations have unique and changing priorities, and varying levels of funding, partnerships, and staffing capabilities to accomplish environmental education objectives.

To help narrow our audience to a more distinct and targeted group, throughout this plan we refer to our primary target audience as “students.” Students can be any age and include not only traditional K-12 classes, but homeschoolers, merit badge candidates, and Road Scholar participants, to name a few.

Guidance in this document supports Recommendation 20 in the Refuge System’s *Conserving the Future: Wildlife Refuges and the Next Generation* vision document (2011):

“Develop an environmental education strategy that inventories existing efforts, identifies priorities for investment of staff and funds, and outlines basic standards for all refuges.” Additionally, the Charter for the Environmental Education Implementation Plan states that, “The environmental education program will create pathways to understanding nature and provide tangible contributions to community schools.”

This strategic plan will be reviewed on a regular basis and requires periodic progress evaluation, reporting, and when necessary, revision.

## **III. ENVIRONMENTAL EDUCATION AND THE REFUGE SYSTEM**

For more than 100 years, Refuge System employees have managed the units of the Refuge System for the American people to benefit of fish, wildlife, plants and their habitats. For decades, refuges have served the nation as an expansive network of outdoor classrooms and laboratories for students. The value of the environmental education programs on national wildlife refuges is that they are place-based. Place-based learning is an educational approach that uses all aspects of the local environment, including local cultural, historical, and sociopolitical situations and the natural and built environment, as the integrating context for learning. In its most developed forms, it includes a clear focus on learning through civic engagement and participation in service projects of obvious relevance to the local school and community.

Each year, about 350 Refuge System units offer some level of environmental education program for about 650,000 students and teachers. Visitor services specialists, biologists, education specialists, interns, refuge managers, law enforcement officer, volunteers, Friends organizations, and other community partners are all involved in delivering environmental education.

The National Wildlife Refuge System Improvement Act of 1997 established six priority public uses for national wildlife refuges, and environmental education is one of these priority activities. In addition, section 6 (e) of the National Wildlife Refuge System Volunteer and Community

Partnership Act of 1998 directs us to “develop guidance for refuge education programs to further the mission of the National Wildlife Refuge System and the purposes of individual refuges through promoting understanding and conservation of fish, wildlife, and plants and cultural and historical resources of the refuges.”

Environmental education is defined as a process designed to teach citizens and visitors the history and importance of conservation and the biological and the scientific aspects of our nation’s natural resources. Through environmental education, refuge staff can help develop a citizenry that has the awareness, knowledge, attitudes, skills, motivation, and commitment to work cooperatively towards the conservation of our Nation’s environmental resources.

For more information and policy direction for environmental education, see the Refuge System’s Environmental Education policy at <http://www.fws.gov/policy/605fw6.html>.

Environmental education incorporates on-site, off-site, distance learning materials, and mobile education activities, programs, and products that address the audience’s course of study, refuge purpose(s), physical attributes, ecosystem dynamics, cultural resources, conservation strategies, and the Refuge System mission. This comprehensive approach to education builds community support for refuges, the Refuge System, and conservation. From traditional K-12 school field trips to organized youth groups and outdoor skills linked directly with state standards of learning, refuge staff provides instruction, settings, mentoring, facilities, and materials to a wide variety of learning groups.

Environmental education programs are designed around:

- A course of study, which is an ordered process or succession, such as a number of lectures or other matter dealing with a subject, or a series of such courses constituting a curriculum. Examples of courses of study that will meet the education objectives of the refuge and students may include, but are not limited to: teacher professional development, community-based service organization programs, youth group merit badge requirements, summer camp themes, and elder hostel seminar objectives.
- Formal school curriculum that achieves specific state and district standards, including a plan of instruction that details what students need to know, how they will learn it, what the instructor’s role is, and the context in which the teaching and learning take place.

#### **IV. WHAT IS OUR VISION?**

Our vision for environmental education is to provide teaching and learning opportunities about wildlife and natural and cultural resource management and conservation issues to enable citizens to make informed decisions that ensure environmental sustainability. As a leader in conservation, the Refuge System will strive to have education programs that are an important means to achieving our mission, relevant to nearby communities, and keep pace with changing practices of learning. Refuge staff will also stress the quality of programs over the quantity of participants and strive to work with key community organizations and conservation and education partners at all levels in the design, delivery, and evaluation of our programs.

At the field station level, refuges will evaluate opportunities to partner with local schools and students, emphasizing recurring programs and building strong partnerships. At the national level, we will prioritize the investment of staff, effort, and funds that promote opportunities to connect with geographically, culturally and ethnically diverse students, schools, and partners. Our approach will be research-based, reflecting the need to connect with under-served communities in close proximity to refuges or urban centers. We will seek partnerships with national organizations and state programs that target students in grades 3 through 6. Research indicates that refuge education programs are most effective with this specific age group, and such targeting enables our agency to more narrowly focus limited education staff and resources on this key audience. This approach complements partner engagement programs for students from pre-K to grade 2 and Service employment programs directed at youth aged 15 – 25.

The Service’s environmental education programs support many of the elements in the North American Association of Environmental Education’s vision, particularly that “environmental education teaches children and adults how to learn about and investigate their environment, and to make intelligent, informed decisions about how they can take care of it.” And our programs have much in common with the Association of Fish and Wildlife Agencies conservation education objectives, which state that “Conservation education is one of the most vital tools for enhancing public understanding and appreciation of fish and wildlife management while shaping long-term conservation and enjoyment of natural resources.”

## **V. NATIONAL STANDARDS FOR REFUGE SYSTEM ENVIRONMENTAL EDUCATION PROGRAMS**

While the scope of individual refuge environmental education programs will vary dependent upon funding, staffing, partner support, and local needs, we will use the following broad standards to guide the design and delivery of quality environmental education programs. Staff should use these general guidelines with the understanding that programs need to be designed with students’ knowledge, skills, and abilities in mind with the intent of transitioning students from awareness and concern to informed action and stewardship through blended learning experiences. Our programs will be designed to foster a greater connection between people, land and water.

1. Refuges will serve as model outdoor classrooms to convey important science and conservation lessons that support local, State, and national education standards and other formal curricula through learner-centered experiences.
2. We will foster life-long learning on refuges for all ages and will search out appropriate partnership opportunities for such programs, with a special focus on reaching students in Grades 3 through 7 to build empathy and appreciation for the natural world.
3. In addition to addressing the primary wildlife, habitat, and resource management issues and purposes of particular refuges, we will strive to address broader sustainability and conservation messages relevant to the Refuge System and neighboring landscapes.
4. Our programs will be designed to capitalize on nationally recognized instructional materials created by key partners, including Project WILD, Project Learning Tree, and

Project WET, and the series of “Guidelines for Excellence” produced by the National Project for Excellence in Environmental Education.

5. Environmental education facilities and outdoor learning and discovery areas will be designed with students in mind, including school bus parking, equipment storage, student safety, and accessibility.
6. Our programs will advance environmental and scientific literacy through an interdisciplinary approach built around blended learning experiences.
7. Our programs will be designed to promote learning through refuge-specific stewardship tasks and projects that can be carried over into students’ lives.
8. We will strive to build new partnerships to engage non-traditional and under-represented audiences and emphasize recurring relationships with nearby communities that involve repeated contacts with the same students.
9. We will employ evaluation tools to ensure the effectiveness and responsiveness of our programs, and measure participants’ knowledge attainment, attitude, and behavior change.
10. We will adopt appropriate digital learning resources and tools to complement our traditional environmental education programs, thereby enhancing our ability to reach new and diverse audiences.

## **VI. WHAT ARE OUR CHALLENGES AND OPPORTUNITIES?**

It is widely acknowledged that people of all ages and backgrounds in the United States are increasingly disassociated from nature and natural processes. The Refuge System’s environmental education programs – designed to build awareness and understanding among students to work together for a sustainable environment – provides opportunities to help people connect with nature and inform our rapidly changing nation about the importance of conserving America’s natural and cultural resources. The Refuge System’s geographic breadth provides opportunities to engage thousands of communities nation-wide and millions of Americans in environmental education at some level, both on and off site.

As the American population shifts and the physical landscape changes, the Refuge System will be challenged to connect with our most steadfast traditional visitors, supporters, and partners, while also engaging new audiences. We must build upon long-established relationships and reach new audiences who do not currently understand and appreciate what refuges offer. These include urban audiences, healthcare communities, volunteer-based organizations, faith-based groups, and a wide-range of senior citizen and youth organizations whose interests and objectives are similar, but necessarily the same, as ours.

We understand that what connects one or a small group of individuals to wildlife, natural resources, and conservation might not hold true for others. While the Refuge System is national in scope, we see ourselves as part of local communities and must design programs to reflect

community values and traditions – our programs must tell their stories. To accomplish our mission, we will need to respond better to how people want to learn about wildlife, conservation and stewardship. This includes the application of newer technologies to complement our foundational program delivery methods. Our challenge will be how to make technology support what we do well, invite people to share their stories among themselves and with us, and elicit feedback. Additionally, our programs must be designed to deliver our programs beyond our boundaries and build relevant connections to people within their communities.

The Service recognizes that a quality environmental education program is a vital component to achieve the Refuge System’s conservation mission. Inviting the public to learn more about wildlife conservation and participate in citizen science programs, create schoolyard and backyard habitats, and become better land stewards wherever they reside is at the heart of conservation success for our agency. To be successful, education planning should cross agency disciplines and include active participation from refuge leaders, managers, biologists, visitor services staff, and other employees, volunteers, and partners. Our education programs must also align with on-going efforts to articulate future needs addressing our strategic communications, growth of the Refuge System, community partnerships and volunteer programs, scientific excellence, and relevance to urban audiences.

## **VIII. ENVIRONMENTAL EDUCATION PROGRAM STRATEGIC GOALS**

### **GOAL 1: Inventory and evaluate program resources, content, staff, and delivery.**

In the fast-paced environment at the field station level, evaluating environmental education programs is often a low priority. Whether employees feel they lack technical expertise, time, or funding to evaluate their programs, or do not think it is important, the reality is that evaluation is an essential component of the overall program and desired outcomes. It helps answer questions about program effectiveness, identifies strengths and weaknesses, and greatly aids the planning process.

With hundreds of refuges offering environmental education, we will assess the program’s capacity, delivery and content to identify areas of strength and gaps that need additional attention. Are we making the right investments in the right places to accomplish our mission and offer quality programs? Such an assessment should examine staffing and partner support, methods of delivery, consistency in overall program messages and standards, and available facilities that contribute to quality programming. We will examine current and potential partner resources that are needed to aid educational practitioners.

The assessment must be used to create a baseline for identifying strengths, needs and measuring success. This will involve examining the location of current programs, participation, and quality identified through the Refuge Annual Planning Process (RAPP); the availability and use of suitable facilities; are qualified teachers and education specialists available to plan and deliver the programs; assessing the success of repeated contacts with students; and, can the program serve as a best management practice for others to replicate and learn from?

Such an evaluation will allow us to consider needed changes and refine metrics for measuring effectiveness at all levels of delivery.

**OBJECTIVE 1.1.** Conduct a national assessment of environmental education programs to determine their capacity, strengths and gaps. To be undertaken by the Headquarters Office and National Conservation Training Center (NCTC) by the December 2014.

**OBJECTIVE 1.2.** By April 2014, Headquarters and the NCTC will assist the field in developing and using logic models to design and implement programs and products that meet the resource management goals and objectives of their site and the needs of their participants with identified measurable outputs and outcomes. (e.g., align with Comprehensive Conservation Plans, Visitor Services Plans, Connecting people with nature plans, etc.)

**OBJECTIVE 1.3.** By December 2013, Headquarters will explore the use of an OMB approved standard survey form for use by teachers, partners and schools and determine if this type of evaluation tool will serve a national need. If approved, this form will be used to supplement guidance in the “Visitor Services Standards: A Handbook for Evaluating Visitor Services Programs” (Visitor Services Evaluation Handbook) which is currently being used to evaluate the success of refuge programs.

**OBJECTIVE 1.4.** By December 2013, Headquarters and NCTC will develop a standardized “Rapid Self-Assessment Tool” in conjunction with the Visitor Services Evaluation Handbook to integrate staff self-assessment and program assessment procedures together. The Rapid Assessment Tool will be tested in mid-2014 as a supplement to the Visitor Services Evaluation Handbook and revised as necessary.

**OBJECTIVE 1.5.** By December 2013, headquarters office will use Refuge Annual Performance Plan (RAPP) and other relevant data sources to better measure Refuge System environmental education.

**OBJECTIVE 1.6.** By June 2014, Headquarters will assess the use of the Refuge Annual Performance and Planning system to document more clearly strengths and gaps in our environmental education programs.

**GOAL 2: Provide quality environmental education programs throughout the Refuge System.**

Building upon the Refuge System’s Environmental Education policy and our national Visitor Services Standards, we must also adopt guidelines that focus on delivering quality environmental education programs and criteria for measuring success.

The current Refuge System Environmental Education Policy, completed in 2006, should be reviewed to ensure relevancy to changes in education programming. This review will ensure consistency with professionally accepted definitions of environmental education, and reflect that environmental education is a learning process that increases peoples’ knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action. An update of the policy will also allow us to define clearer standards addressing the quality and delivery of environmental education programs that



are sustainable, are student and community focused, and address evaluation tools and measurable outcomes.

**OBJECTIVE 2.1.** Review and make recommendations for updating current Refuge System’s Environmental Education policy, 605 FW6.

**STRATEGY 2.1.A.** By December 2015, a national team will conduct a review and draft an updated environmental education Refuge System policy.

**OBJECTIVE 2.2.** Deliver the highest-quality program possible, grounded in station capabilities and staff abilities.

**STRATEGY 2.2A.** By December 2015, 15% of the refuges will provide environmental education programs with community-based partner schools, incorporating a minimum of 3 visits to the refuge each year. These visits will emphasize outdoor learning, implementing the science and research that indicate repeated visits lay the foundation for a conservation ethic. Providing environmental education programming within our local communities enhances our community partnership efforts.

**STRATEGY 2.2B.** By 2014, a national team will identify urban audiences where some of our environmental education programming efforts should be emphasized.

**STRATEGY 2.2B.** By 2015, a national team will identify refuges where distance learning will best serve students and teachers. We will help promote “centers of excellence” distance learning to assist other refuges in delivery quality programs.

**STRATEGY 2.2C.** By 2014, a national team will create an OMB approved evaluation criteria that is a supplement to the evaluation guidance provided in the Visitor Services Standards: A Handbook for Evaluating Visitor Services Programs.

**STRATEGY 2.2D.** By December 2016, every Refuge System unit with staff, partners and volunteers should provide or support a minimal level of environmental education programming, including the use of digital learning resources that support at least one management goal or objective and reaches at least one key audience.

While the capacity of refuges to deliver programs varies tremendously, it should be possible to provide some level of environmental educational programming for key audiences on most staffed refuges or to connect with other off-site audiences.

The attached tiered framework (Attachment) provides general guidelines on how staffed refuges can contribute to environmental education programming on and off-site. At each level, the type of programming and level of support should match staff expertise, station resources and partnership opportunities.

**GOAL 3: Invest in communications, training and professional development.**

Just as we are committed to scientific excellence and serving as a leader among counterparts and partners in natural resource management, we must also commit to excellence and

professionalism in engaging teachers and students in building a broader conservation ethic and deeper appreciation of the natural world.

We must invest in training and professional development opportunities to strengthen the environmental education programs offered by employees, Friends, partners, and volunteers; and, elevate the status of environmental education professionals to improve the quality of our programs. Training will be grounded in sound science, peer-reviewed and supported by research and professional acceptance, and reflect best practices in the field of environmental education.

**OBJECTIVE 3.1.** By June 2014, update the “Visitor Services Career Pathways” handbook environmental education sections to correctly reflect current needs, priorities, and initiatives.

**OBJECTIVE 3.2.** By the end of 2013, develop a core competencies training matrix to include professional development guidelines for collateral duty employees, supervisors of environmental education program leaders, entry, mid and full performance level employees, partners and Friends and volunteers. This will include an evaluation of available training, mentoring and detail opportunities to support environmental education.

**OBJECTIVE 3.3.** By 2015, develop additional training to fill the “gaps” identified in the core competencies matrix. These could include partnership delivered training not offered by the NCTC.

**OBJECTIVE 3.4.** By 2015, develop recommendations for more rigorous hiring/qualifying requirements for professionals entering into/within the 025 series and /1701/1710 series and/or develop a Refuge System specific job series that correctly reflects the roles and responsibilities of a Refuge Ranger.

**OBJECTIVE 3.5.** By 2013, develop an on-line clearinghouse through the “Visitor Services Community of Practice” hub that highlights environmental education professional development opportunities both within the Service and that are partner based. This will include new “in-reach” communications tools for our employees and volunteers.

**OBJECTIVE 3.6.** By 2016, build the necessary support programs and partnerships to increase the number of quality refuge environmental education programs by 25%.

**OBJECTIVE 3.7.** By 2015, staff from 20 refuges, including ones located in remote and urban settings, will receive training to deliver digital learning to support their goals and on-going programs.

#### **GOAL 4: Maximize effectiveness of delivery modes.**

The flow and pace of information has increased immensely in the last 20 years. Education programs are quickly evolving to “anytime, anywhere” platforms that allow audiences to learn at their own pace. While the capacity of individual refuges to deliver programs varies tremendously, it should be possible to provide some level of educational programming or materials to participants or key audiences for most refuges to connect with visitors or off-site audiences. Respecting the local community’s diversity is necessary to foster true engagement. When refuges commit efforts to reflect the whole community in all aspects of their programs, the

end result is a community with an even more powerful sense of place because it celebrates its own unique range of diverse cultural influences at the site.

For remote refuges most people will never be able to visit in person, on-line alternatives should be developed to enhance understanding and appreciation of their natural and cultural resources. Virtual field trips are alternatives that can offer authentic, inquiry-based learning experiences. With the potential for a vast global audience of students, web-based environmental education can enable students to make connections between themselves and the wide-ranging environments of the Refuge System.

**OBJECTIVE 4.1.** By December 2014, a national team, working with the Service's New Media Working Group will complete an assessment of current program delivery options to determine a matrix of resources and tools available to staff in the creation and delivery of programs.

**OBJECTIVE 4.2.** By December 2014, a national team will gather innovative message-driven technological experiences in environmental education, their practical application and successful examples, and host them through communities of practice sites. Additionally, the team will gather examples that demonstrate learning through refuge-specific stewardship programs, tasks and projects, including projects that families can carry over into their everyday lives, such as Project Bud Burst, Project Feeder Watch, Celebrate Urban Birds, and Christmas Bird Counts.

**Objective 4.3.** By December 2014, a national team will draft an Indefinite Delivery Indefinite Quantity (IDIQ) contract for new media/technology delivery methods used in environmental education including but not limited to: virtual field trips, podcasts, interactive Web-cams, and social media apps.

**Objective 4.4.** By December 2014, the Service will develop a Center of Excellence that will research and provide technical assistance and support for environmental education using a variety of delivery modes and using emerging technologies.

**Strategy 4.4.a.** By June 2014, a national team will recommend the Service assist in creating outdoor learning areas on a select number of refuges and offer criteria for evaluating learning outcomes.

**Strategy 4.4.b.** By December 2014, a national team will create standards as part of an evaluation tool to ensure that a full range of community viewpoints, accessibility needs, and language requirements are accounted for in program delivery.

**Objective 4.5.** If bi-lingual staff and/or volunteers are not available, each refuge should identify any need for services for students with limited English proficiency (LEP) (Executive Order 13166).

**Strategy 4.5.a.** By December 2015, where applicable, each refuge should identify the need for and offer services for students with limited English proficiency.

## **GOAL 5: Maximize partnerships and leverage program resources.**

While the Refuge System has been creating and delivering quality education programs for many years, our staff are not, by any means, the sole source of environmental education to the

American public. Skilled and knowledgeable environmental educators can be found nationwide, working for many organizations. We must seek out and partner with educators affiliated with federal, state, and local agencies; highly regarded businesses and consultants; independent and nonprofit organizations; retirees; universities and educational institutions. The Refuge System recognizes that our partners who deliver quality environmental education are often in the best position to help build lasting relationships with nearby communities.

The Service has partnered with many organizations at local, regional and national levels, including, but not limited to: the North American Association for Environmental Education (NAAEE), affiliates of the Association of Zoos and Aquariums, Boy Scouts of America, Girl Scouts of the USA, 4-H, Cornell Lab of Ornithology, Environment for the Americas, USA National Phenology Network, Aldo Leopold Foundation, Council for Environmental Education, National Science Teachers Association, Association of Fish and Wildlife Agencies, and National Environmental Education Foundation. We must engage these and other partners to explore collaborative efforts to build successful programs over the next 10 years.

**OBJECTIVE 5.1.** Strengthen partnerships to maintain, improve and expand quality education programs that benefit nearby communities.

**STRATEGY 5.1.A.** By July 2014, identify opportunities to work with partners for education delivery at all levels from federal, state and territorial agencies, to businesses, nonprofit organizations, to individual community members - with the expertise and ability to improve and expand our programs.

**STRATEGY 5.1.B.** By July 2014, a national team will identify at least 10 successful partnerships at varying levels (national, regional, state, and community) and increase support by communicating accomplishments internally and externally through Service information sharing platforms and other forums such as training programs.

**STRATEGY 5.1.C.** By December 2014, a national team will determine gaps in the use of partnerships to support refuge education programs and develop priorities to further cultivate and assist partnership(s) to reach program goals. The team will also consider gaps in engaging youth organizations such as Conservation Corps, Boy and Girl Scouts, 4-H, Campfire Kids, Boys and Girls Clubs, summer camps, and church youth groups and others in structured learning programs.

**OBJECTIVE 5.2** Develop relationships with new partners to deliver education programs for the Refuge System.

**STRATEGY 5.2.A.** By July 2014, conduct analysis of existing formal partnerships at all levels to determine ability and interest in expanding services to conduct programs.

**STRATEGY 5.2.B.** By December 2014, identify and develop relationships with at least 3 new receptive potential partners on a national level that could help with nurturing a connected constituency. This may create new e-learning, mobile platforms, and other ways to deliver quality programs.

**OBJECTIVE 5.3** Provide tools to assist partners in delivering education programs.

**STRATEGY 5.3.A.** By December 2015, working with other Service and non-Federal partners, provide web-based resources, webinars and video programming to provide step-by-step guidance on how to deliver partnership programs, including opportunities through on-going training.

**STRATEGY 5.3.B.** By March 2016 provide at least 3 easy- to- use tool-kits on subjects that offer relevant resources for building successful environmental education partnerships at the national, state and local levels.

DRAFT

**ATTACHMENT**

This tiered framework provides general guidelines on how staffed refuges can contribute to environmental education programming on and off site. At each level, the type of programming and level of support offered should match staff expertise, station resources and partnership opportunities.

**ENVIRONMENTAL EDUCATION DESIGN AND DELIVERY FRAMEWORK**

<b>Suggestions for Environmental Education programming</b>	<b>Minimum Level</b>	<b>Standard Level</b>	<b>Enhanced Level</b>
Conduct a rapid self-assessment of EE programs using the Visitor Services Evaluation Handbook	✓	✓	✓
Utilize e-learning opportunities and nationally-recognized environmental education curricula and resources available through citizen science programs, zoos and aquariums, etc.	✓	✓	✓
Identify and link to mobile e-learning platforms that align with your refuge’s management objectives.	✓	✓	✓
Form partnerships or recruit experienced volunteers, such as teachers, to conduct your programs on and off the refuge.	✓	✓	✓
Help local educators identify key programs available through partners that align with your refuge’s management objectives	✓	✓	✓
Designate a staff or volunteer EE program contact for local schools and partners	✓	✓	✓
Create a lending library of materials and resources	✓	✓	✓
Provide refuge-specific curriculum, lesson plans and learning activities		✓	✓
Create a refuge specific distance-learning program through your web site		✓	✓
Provide stewardship activities for local schools and citizen science monitoring programs		✓	✓
Provide training and mentoring for educators and key staff		✓	✓

<b>Suggestions for Environmental Education Programming</b>	<b>Minimum Level</b>	<b>Standard Level</b>	<b>Enhanced Level</b>
Host teacher training workshops		✓	✓
Designate accessible outdoor classroom or nature discovery area		✓	✓
Establish formal partnerships with school districts and/or community groups to provide EE programming			✓
Recruit and train volunteers from the local community to help deliver education programs		✓	✓
Conduct off-site EE programs occasionally		✓	✓
Conduct formal and more comprehensive education program evaluations every three years		✓	✓
Partner with self-sustaining volunteer organizations (i.e., State Master Naturalists, etc.) to conduct EE programs and training		✓	✓
Partner with day camps, after school programs, Elder Hostels, and other extended learning opportunities.			✓
Incorporate student learning through outdoor skills linked to curricula			✓
Offer dedicated space for on-site education programs			✓