

U.S. Fish & Wildlife Service



Conserving our Future through Environmental Education

A Strategic Plan for Improving Environmental Education in the National Wildlife Refuge System



COVER PHOTO: William F. Finley National Wildlife Refuge (Photo: George Gentry/USFWS)

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“This strategic plan provides recommendations to improve environmental education throughout the Refuge System and other Service field offices.”

I. Executive Summary

Environmental education has long been an important way for U.S. Fish and Wildlife Service (Service) employees, volunteers, Friends groups and partners to connect our agency’s conservation mission and goals with visitors and the community. Our nation needs an informed citizenry to make knowledgeable decisions about conservation issues that have wide-ranging impacts on plants, wildlife, habitats, and people. For decades, national wildlife refuges have served as outdoor classrooms for a diverse audience of learners, creating a greater understanding of local, regional, and national conservation issues. Today we continue this tradition, as we teach interdisciplinary concepts to students of all ages to prepare them to make informed conservation stewardship decisions.

With clear overarching national goals in place, our National Wildlife Refuge System (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.

This strategic plan provides recommendations to improve environmental education throughout the Refuge System and other Service field offices, organized under five strategic goals:

1. Provide quality environmental education programs throughout the Refuge System.
2. Inventory and evaluate program resources, content, staff, and delivery.
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. There are six national environmental education program objectives and strategies identified as priority actions, to provide a sense of more immediate direction.

II. Purpose of this Document

This document provides refuge staff with a direction for decision-making when working with volunteers, Friends groups, and partners; establishes national-level standards and goals; addresses the need for station-level objectives; and sets individual and collective expectations for environmental education programs (Appendix). 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, staffing, and partnerships to accomplish environmental education objectives.

To help narrow our audience to a more distinct and targeted group, we refer to our target audience throughout this plan as “students.” Students can be any age and include not only traditional K-12 classes, but homeschoolers, merit/activity badge candidates, teachers, and lifelong learners, 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 will require periodic progress assessment, reporting, and when necessary, revision.

“The environmental education program will create pathways to understanding nature and provide tangible contributions to community schools.”

“For more than 100 years, Refuge System employees, volunteers, Friends groups and partners have managed the units of the Refuge System for the American people to benefit fish, wildlife, plants and their habitats.”

III. Environmental Education and the Refuge System

For more than 100 years, Refuge System employees, volunteers, Friends groups and partners have managed the units of the Refuge System for the American people to benefit fish, wildlife, plants and their habitats. For decades, refuges have served the nation as a network of outdoor classrooms and laboratories for students. One value of environmental education programs on national wildlife refuges is that they can be locally relevant and place-based, but also address national issues. Place-based learning can use all aspects of the environment/community on and surrounding a refuge, thus serving as the integrating context for learning, making programs more relevant to target audiences.

Each year, approximately 350 Refuge System units offer some level of environmental education programming for about 650,000 students. Visitor services specialists, biologists, education specialists, interns, refuge managers, law enforcement officers, volunteers, Friends groups, 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 uses. 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, we 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.



Blackwater National Wildlife Refuge teacher's workshop. (Photo: UFWS)

For more information on the Refuge System's definition for environmental education 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, 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 current vision and mission of the Refuge System. This comprehensive approach to education builds community support for our refuges, the Refuge System, and conservation. From working with traditional K-12 schools on field trips to organized youth groups including outdoor skills and linking directly with education standards, we provide instruction, the physical settings, mentoring, facilities, and materials to a wide variety of learning groups, which are unique to our refuges based on available resources and priorities.

Environmental education programs are designed using the foundation of:

- 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/activity badge requirements, summer camp themes, and adult lifelong learner seminars.
- Formal school curricula that achieve specific state and district standards, including a plan of instruction that details what students need to know, how they will learn the material, what the instructor's role is, and the context in which the teaching and learning take place.

“Our approach will be research-based, and reflect the need to connect with low-participating communities in close proximity to refuges or urban centers.”

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 about 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 teaching and learning. We will also stress the quality of programs over the quantity of participants and strive to work with key stakeholders at all levels in the design, delivery, and evaluation of our programs.

At the field station level, refuges will evaluate opportunities to collaborate 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, and reflect the need to connect with low-participating 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 8. Research supports that refuge-based programs are most effective with this specific age group, and such targeting enables our agency to focus limited education staff and resources on key audiences. This approach complements programs for students from ages 3-5 implemented by national partners, such as the North American Association for Environmental Education (NAAEE) and Service employment and other programs for youth aged 16-25.

The Service’s environmental education programs support many of the elements in the NAAEE’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.” Our programs also have much in



(Photo: Steve Hillebrand/USFWS)

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.”

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“We should use these general guidelines with the understanding that programs need to be designed with students’ knowledge, skills, and abilities in mind.”

V. National Standards for Refuge System Environmental Education Programs

While the scope of individual refuge environmental education programs will vary dependent upon priorities, funding, partnerships, staffing capabilities, and local needs, we will use the following broad standards to guide the design, delivery and evaluation of quality environmental education programs. We should use these general guidelines with the understanding that programs need to be designed with students’ knowledge, skills, and abilities in mind. Our programs will be designed to foster a greater connection between people and nature.

1. Refuges will serve as outdoor classrooms where important science, conservation and environmental education lessons take place. These lessons support education standards (local, State, national) and other formal curricula and are catalysts for learner-centered experiences.
2. We will foster lifelong learning on refuges for all ages and will seek out appropriate partnership opportunities for such programs, with a special focus on reaching students in grades 3 through 8 to build empathy and appreciation

for the natural world, and promote knowledge gain for issue investigation and analysis, and skills for informed action.

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 issues relevant to the Refuge System and neighboring landscapes.

4. Our programs will be designed to utilize nationally recognized instructional materials created by key partners, when appropriate, and use best practices for program design, development, delivery, and evaluation.

5. Environmental education facilities and natural outdoor learning and discovery areas will be designed with students’ learning and their connecting with nature in mind, but also include 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



J.N. “Ding” Darling National Wildlife Refuge (Photo: Steve Hillebrand)

learning experiences, which may include combinations of hands-on and virtual experiences.

7. Our programs will be designed to promote learning through refuge-specific stewardship opportunities and projects that can be carried over into students’ lives and their communities.

8. We will strive to build new partnerships to engage non-traditional and low-participating audiences and emphasize frequent and sustained relationships with nearby communities that involve, when possible, repeated contacts with the same students.

9. We will employ evaluation methods to ensure the effectiveness and responsiveness of our programs at the field and national level, and measure participants’ knowledge gain, and their attitude and behavior changes.

10. We will use appropriate digital learning resources and methods to complement our traditional environmental education programs, thereby enhancing our ability to reach new and diverse audiences and provide gateways to outdoor experiences.

“Our programs will be designed to foster a greater connection between people and nature.”

“We understand that what connects one or a small group of individuals to wildlife, natural resources, and conservation might not hold true for others.”

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 nationwide and millions of Americans in environmental education at some level, both on-and off-site.

As America shifts to a more urban nation, the Refuge System will be challenged to connect with our traditional visitors, supporters, and partners, while also engaging new audiences. We must build upon long-established relationships and reach new audiences who may not know, understand or 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 not 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 should design programs to reflect community values and traditions that align with and/or compliment ours. 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 and use technology to support what we do well. Additionally, our programs should deliver our messages 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 programs, such as citizen science, schoolyard and backyard habitats, helps them become better land stewards wherever they reside. Creating better land stewards is also 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, while not losing sight of local opportunities. In the end, it will take planning to make the best use of the resources and staffing to have quality environmental education programming that is suitable for each refuge.

“Creating better land stewards is also at the heart of conservation success for our agency.”

Environmental Education at Bowdoin National Wildlife Refuge.
(Photo: USFWS)



“In a program as far-reaching, diverse, and comprehensive as the Refuge System environmental education program, there are numerous national goals, objectives, and strategies.”

VII. Environmental Education National Priorities



St. Marks National Wildlife Refuge (Photo: Steve Hillebrand)

In a program as far-reaching, diverse, and comprehensive as the Refuge System environmental education program, there are numerous national goals, objectives, and strategies. The complete list (Section VIII), written with input from Service employees, partners, and the American public, will enable the Refuge System to improve in all areas of education program design, training, and implementation.

While all of the actions in Section VIII are designed to improve environmental education in the Service, the following are recognized as high priorities:

- Complete a comprehensive, national-level environmental education program assessment
- Develop an interactive online community of practice platform to connect Refuge System EE practitioners to resources, training opportunities, and one another
- Explore the use of a standard EE customer evaluation survey form
- Modify the Refuge Annual Performance Planning Process to become a better evaluation tool for individual field stations, regional offices and headquarters
- Design a concise, standard, self-assessment tool to evaluate individual program success
- Identify pilot locations to test distance-learning education methods

VIII. Environmental Education Program Strategic Goals

Goal 1. 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, needs review to ensure relevancy to changes in education programming. This will ensure consistency with professionally accepted definitions of environmental education, and reflect that environmental education is a learning process that increases one's 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 methods and measurable outcomes.

Objective 1.1. Review and make recommendations for updating the current Refuge System Environmental Education policy, 605 FW6.

Strategy 1.1.a. By December 2015, a national team will conduct a review and draft an updated environmental education Refuge System policy.

Objective 1.2. Deliver the highest-quality program possible, grounded in station capabilities and staff abilities.

Strategy 1.2a. By 2017, a national team will identify urban audiences where some of our environmental education programming efforts should be emphasized and provide or develop appropriate programs to reach these expanding yet often low-participating audiences.

Strategy 1.2b. By 2016, a national team will

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“By December 2016, 15% of the refuges will provide environmental education programs with community schools incorporating a minimum of two visits by the school to the refuge.”

identify refuges where distance learning will best serve students and teachers. We will help promote “centers of excellence in distance learning” to assist other refuges in delivery of quality programs.

Strategy 1.2c. 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.

Strategy 1.2d. By December 2016, 15% of the refuges will provide environmental education programs with community schools incorporating a minimum of two visits by the school to the refuge, each year (research has shown that repeated visits can lay the foundation for a conservation ethic). These visits will emphasize outdoor learning and align with educational standards. Staff visits to the schools (both pre and post student visits) and/or lessons for the students should be considered part of this programming.

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 off-site audiences, as staffing, resources, needs and opportunities dictate.

The attached tiered framework (Appendix) 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 capabilities, station resources, and partnership opportunities.

Goal 2. 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 or the site may not have the resources or training to implement it. Whether employees believe they lack the 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 is an integral part of the planning process. With hundreds of refuges offering environmental education, we will assess the program’s alignment with courses of study and education standards, capacity, delivery and content to identify areas



Kodiak National Wildlife Refuge SCA Intern. (Photo: USFWS)

of strength and gaps that need additional attention. Such an assessment should examine staffing and partner support, methods of delivery, consistency in overall program messages and available facilities that contribute to quality programming. We will also examine current and potential partner resources needed to aid educational practitioners if they are an integral part of the program.

The assessment will create a baseline for identifying strengths and needs, and measuring success. Assessments will include the location of current programs and participation identified through the Refuge Annual Performance Planning (RAPP); the availability and use of suitable facilities; if teachers and education specialists are available to plan and deliver the programs; assess the success of repeated contacts with students and determine whether the program can serve as a best management practice for others to replicate and learn from.

Such an evaluation will allow us to consider needed changes, refine the methods for measuring effectiveness at all levels of

delivery, and begin to answer the question, “Are we making the right investments in the right places to accomplish our mission through quality programs?”

Objective 2.1. By July 2015, Headquarters Office and the National Conservation Training Center (NCTC) will conduct a national assessment of environmental education programs to determine their capacities, strengths, and gaps.

Objective 2.2. By 2015, 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 Self-Assessment Tool will be tested in mid-2014 as a supplement to the Visitor Services Evaluation Handbook and revised as necessary.

Objective 2.3. By 2015, Headquarters will use RAPP as one measure, and identify other relevant data sources, to better measure the quality of Refuge System environmental education.

“...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.”

Objective 2.4. By 2015, Headquarters will assess the use of RAPP to document more clearly the strengths and gaps in our environmental education programs.

Strategy 2.4. Based on the assessment, Headquarters will develop an implementation plan for changes in RAPP to provide clearer data on the strengths and gaps in environmental education programs.

Objective 2.5. By 2018, Headquarters and 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.).

Strategy 2.5.a. Resources such as Rhythms of the Refuge and others will be identified to assist with this effort.

Objective 2.6. By December 2015, 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 based on an evaluation plan. 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.

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 within the Service 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 2016, update the “Visitor Services Career Pathways” handbook’s environmental education sections to correctly reflect current needs, priorities, and initiatives.

Objective 3.2. By June 2016, develop a competencies-based training matrix to serve as professional development guidelines for collateral duty employees, supervisors of environmental education program leaders, entry, mid and full performance level employees, partners, Friends, and volunteers. This will include identifying current training, mentoring, and detail opportunities to support environmental education.

Objective 3.3. By 2015, develop any additional training identified in the competencies-based training matrix. These could include partnership-delivered training not offered by the NCTC.

Objective 3.4. By December 2014, 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 and include refuge-specific case studies that highlight best management practices.

Objective 3.5. By 2017, build the necessary support programs and partnerships to increase the number of refuge environmental education programs by 10%.

Objective 3.6. By 2016, staff from 20 refuges, including ones located in remote, rural, and urban settings, will receive training to incorporate e-learning delivery techniques into their programs.

Goal 4. Maximize effectiveness of delivery modes.

While the capacity of individual refuges to deliver programs varies tremendously, most should be able to provide some level of environmental education programs or materials to key audiences of their community through either on- or off-site delivery modes.

When refuges commit efforts to reflect the communities’ diversity in all aspects of their education programs and delivery modes, the result is a community with an even more powerful sense of place.

Objective 4.1. By July 2015, 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 2015, a national team will gather examples of innovative and practical technology-based environmental education and share them through communities of practice sites.

Objective 4.3. By 2015, a team will gather examples that demonstrate learning through refuge-specific stewardship programs, tasks, and projects. This will include projects that families can carry over into their everyday lives, such as Project BudBurst, Project FeederWatch, Celebrate Urban Birds, and Christmas Bird Counts, with the hope they will share them through communities of practice sites.

Objective 4.4. By December 2016, a national team will draft an Indefinite Delivery Indefinite Quantity (IDIQ) contract for new media/technology delivery methods used in environmental education programs including but not limited to: virtual fieldtrips, podcasts, interactive Web-cams, and social media apps.

Objective 4.5. By December 2018, the Service will develop a Center of Excellence that will research and provide technical assistance and support for environmental education a variety of delivery modes and emerging technologies.

Strategy 4.5.a. By June 2017, a national team will recommend that the Service assist in creating natural play and learning areas on a select number

“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.”

of refuges and offer criteria for evaluating learning outcomes.

Strategy 4.5.b. By December 2018, a national team will create evaluation tool standards to measure whether the full range of community viewpoints, accessibility needs, and language requirements are accounted for in program delivery.

Objective 4.6. If bilingual 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 4.6.a. By December 2016, 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, there are many additional environmental education sources available 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; and universities and other 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: local schools, local school districts, state and provincial wildlife agencies, the NAAEE, affiliates of the Association of Zoos and Aquariums, Scouts, 4-H, Road Scholars, 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 2015, a national team will identify at least 10

successful partnerships at varying levels (national, regional, state, and community) and communicate accomplishments internally and externally through Service information sharing platforms and other forums such as training programs.

Strategy 5.1.b. By July 2016, a national team will determine gaps in the use of partnerships to support refuge education programs and develop priorities to further cultivate and assist partnerships 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, church youth groups, and others in structured learning programs.

Strategy 5.1.c. By December 2016, identify opportunities to work with partners for education delivery at all levels who have the expertise and ability to improve and expand our programs. These partners could include federal, state, and territorial agencies, businesses, nonprofit organizations, and individual community members.

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

Strategy 5.2.a. By December 2016, identify and develop relationships with at least three new national-level partners who could help with nurturing a connected constituency. This may create new e-learning, mobile platforms, and other ways to deliver quality programs nationwide.

Strategy 5.2.b. Develop national-level agreements with the identified potential partners to aid field and local partnerships.

Objective 5.3. Provide necessary tools to partners to aid in delivering successful environmental education programs on National Wildlife Refuges.

Strategy 5.3.a. By December 2017, develop and provide to partners a toolkit for delivering successful programs on National Wildlife Refuges.

“Skilled and knowledgeable environmental educators can be found nationwide, working for many organizations.”

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.

VII. Appendix.

Environmental Education Program Expectations on Staffed Refuge Field Stations

Suggestions for Environmental Education Programming		Minimum Level	Standard Level	Enhanced Level
1.	Conduct a rapid self-assessment of EE programs using the Visitor Services Evaluation Handbook	✓	✓	✓
2.	Utilize nationally-recognized environmental education curricula and resources available through citizen science programs, zoos and aquariums, etc.	✓	✓	✓
3.	Designate a staff or volunteer EE program contact for local schools and partners	✓	✓	✓
4.	Provide stewardship activities for local schools and/or citizen science monitoring programs	✓	✓	✓
5.	Identify appropriate distance learning tools that can be used to achieve refuge management objectives		✓	✓
6.	Create a lending library (traditional and/or electronic) of materials and resources		✓	✓
7.	Provide training and mentoring for educators and key staff and/or host teacher workshops		✓	✓
8.	Designate accessible outdoor classroom or nature discovery area		✓	✓
9.	Establish formal partnerships with school districts and/or community groups to provide EE programming		✓	✓
10.	Recruit and train volunteers from the local community to help deliver education programs		✓	✓
11.	Conduct formal and more comprehensive education program evaluations every five years		✓	✓

Suggestions for Environmental Education Programming	Minimum Level	Standard Level	Enhanced Level
Conduct formal and more comprehensive education program evaluations every five years			
Conduct off-site EE programs when possible		✓	✓
Provide refuge-specific curriculum, lesson plans and learning activities			✓
Create a refuge specific distance-learning program through your website			✓
Outdoor skills programming meets formal and non-formal curricula			✓
Offer dedicated space for on-site education programs			✓



Prairie Wetlands Learning Center - Fergus Falls Wetland Management District
 (Photo: Courtney Celley/USFWS)

U.S. Fish and Wildlife Service
National Wildlife Refuge System

www.fws.gov/refuges

April 2014



Recommendation 20: *Develop an environmental education strategy that inventories existing efforts, identifies priorities for investment of staff and funds, and outlines basic standards for all refuges.*