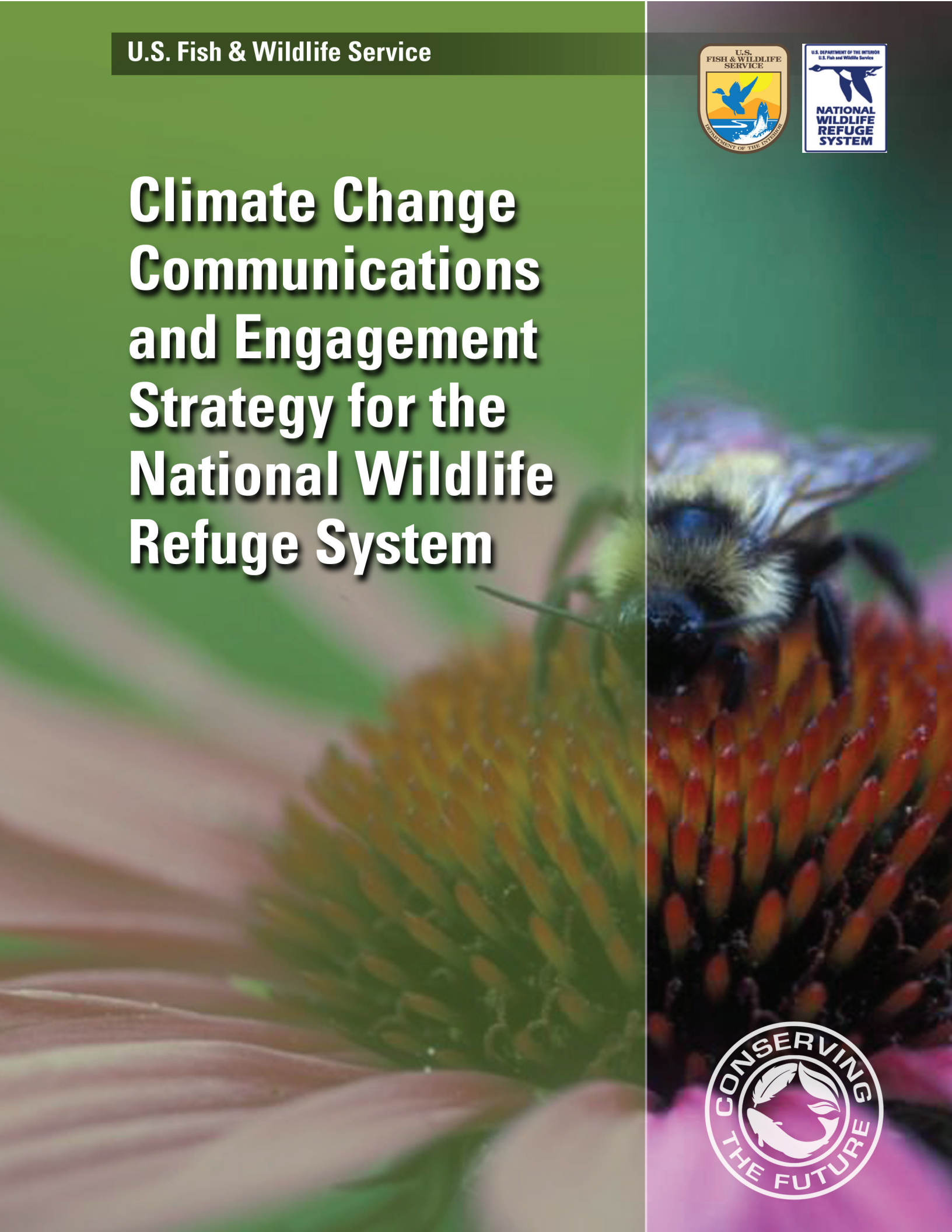
U.S. Fish & Wildlife Service

Climate Change Communications and Engagement Strategy for the National Wildlife Refuge System



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I. Setting

The National Wildlife Refuge System (Refuge System) is the nation's premier system of public lands and waters set aside to conserve wildlife and wildlife habitat. The Refuge System protects thousands of species and supports popular recreational activities such as fishing, hiking, and wildlife observation. As a portal to the natural world, the Refuge System is uniquely positioned to improve understanding of the effects of climate change on these important natural resources and to garner public and partner support for mitigation and adaption strategies that address climate impacts. In turn, the Refuge System may then also promote relevant personal action at both individual and collective levels.

An examination of recent Refuge System social science research places this task in context. A survey of more than 10,000 refuge visitors in 2010/2011[1] indicated that: 71% were personally concerned about the effects of climate change on fish, wildlife, and habitats; 74% agreed that future generations will benefit if climate change effects on fish, wildlife, and habitats are addressed; 71% thought it important to consider the economic costs and benefits to local communities when addressing these effects; and 69% believed that addressing climate change effects can improve the quality of life. About half of visitors surveyed indicated their experience would be enhanced if refuges provided information about how visitors could address the effects of climate change on fish, wildlife, and habitats.

Additional research has revealed that the Refuge System hosts a population of visitors who care deeply about public lands and natural landscapes. Further visitors' knowledge and concern about climate change is significantly greater than the levels of knowledge and concern of the broader American public. This is especially true with regard to their visitors' willingness to take mitigating actions, their perceptions of climate change impacts, and their desire for climate change education. In contrast to this apparent willingness to engage on the topic of climate change, Refuge System staff assumed a majority of visitors were only slightly to somewhat concerned about climate change. In fact, 56% of visitors reported being very to extremely concerned about climate change. These results

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suggest that the Refuge System has an engaged audience, who is more concerned and poised to take action than the rest of the broader American Public.

Despite this overwhelming visitor concern about climate change, a survey[3] of roughly 700 refuge managers and project leaders revealed a perception that many field station staffs do not have the time and/or capacity to engage in extensive climate change communication efforts. All too often, national campaigns that lack local context and relevance are not a priority for field stations, many of which are already stretched thin by their day-to-day work.

This apparent disconnect between visitors' concern over climate change impacts and what field stations are capable of providing in terms of climate change communication, must inform our path forward. This path must also consider the realities of the current budget climate. Therefore, climate change engagement and communication strategies that are dissimilar in approach and not expected to be universally accepted are likely to be most successful. Additionally, these strategies must, in most instances, be budget-neutral. "Budget-neutral" does not equate to "low priority", but rather requires the pursuit of activities that place a priority upon innovation, capitalization of existing communications and outreach resources, leveraging with key partners and maximizing creativity.

[1] National Wildlife Refuge Visitor Survey Results: 2010/2011, USGS Data Series 685 - http://pubs.usgs.gov/ds/685/

[2] *Strategies for Communicating About Climate Change Impacts on Public Land*s by Sarah Schwiezer, Jessica Thompson, Tara Teel and Brett Bruyere in Science Communication 2009 31:266, *http://scx.sagepub.com/content/31/2/266*

[3] *Assessing the Effectiveness of the U.S. Fish and Wildlife Service's Climate Change Communications -Final Report*. February 2012

II. A Call for Innovation: Vision and Goals

The stated need for a more concerted System-wide climate change communication and engagement strategies, and the associated challenges for meeting this need, is unquestionable. At the center of this challenge lies great opportunity. It is through innovation in communications and engagement at the field and regional levels that refuge staff, Friends organizations, volunteers, visitors and many others who care about wild things and wild places will be empowered. Refuge staff and their audiences (see Figure 1) must be given opportunities to participate in climate change adaptation and mitigation activities to ensure a future for fish, wildlife and plants and the refuges that Americans love.

Recent research[4] that examined the perceptions of staff and visitors to National Parks and the Refuge System indicated that climate change engagement resonates with diverse audiences when: 1) it is situated in cultural values and beliefs; 2) it is meaningful to that audience; and 3) it empowers specific action. Citizens are exposed to many messages about climate change on a daily basis, yet studies show a declining trend in public understanding of human caused climate change, indicating a strong need to engage in more meaningful dialogue with audiences. Use of place-based communications about climate change is critical. Place-based communication is meaningful dialogue situated in a specific location. It is based on the premises that people are connected to places; they have unique bonds with and value landscapes and places, such as refuges; and people remember lessons and adopt behaviors when they feel a sense of responsibility and have knowledge of consequences.

The Refuge System Vision, *Conserving the Future; Recommendation 2*, calls for the development of a Climate Change Implementation Plan, including adaptation, mitigation and engagement strategies that step-down the Service's Climate Change Strategic Plan (CCSP) [5] for application on refuges. This Communication and Engagement Strategy document, developed by a working group of the Vision Scientific Excellence implementation team, represents a part of the overall plan and is intended to guide the Refuge System

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in raising public and partner awareness that: 1) climate change is real; 2) climate change is happening now; 3) climate change is dramatically affecting fish and wildlife and the habitats that are managed by the Refuge System; and 4) the magnitude and direction of many of these changes, while unknown, will continue into the future.

This Communication and Engagement Strategy document also seeks to develop critically-needed support from different sectors of our public for Service efforts to mitigate and adapt to climate change on all refuges. Most of all, this strategy aims to improve the Refuge System's ability to engage and elicit positive changes in adaptation and mitigation behavior among target audiences.

Importantly, this Communications and Engagement Strategy invokes the pathways outlined within the Service's CCSP and the National Fish, Wildlife and Plants Climate Adaptation Strategy (NFWPCAS)[6]; two highly compatible documents that are now, by policy, both governing documents for Service climate change activities (see 056 FW 1[7]). This Communications and Engagement Strategy, therefore draws specifically from Goal #7 of the CCSP which states: *"We will engage employees; our local, State, Tribal, national, and international partners in the public and private sectors; our key constituencies and stakeholders; and everyday citizens in a new era of collaborative conservation in which, together, we seek solutions to the impacts of climate change and other 21st century stressors of fish and wildlife." This document also aligns with Goal #6 of the NFWPCAS which seeks to: "Increase awareness and motivate action to safeguard fish, wildlife, and plants in a changing climate."* This Communications and Engagement Strategy contributes to these key Service goals by working to engage American public in climate change-related efforts across the Refuge System.

[4] *Strategies for Communicating About Climate Change Impacts on Public Lands* by Sarah Schwiezer, Jessica Thompson, Tara Teel and Brett Bruyere in Science Communication 2009 31:266, *http://scx.sagepub.com/content/31/2/266*

[5] *"Rising to the Urgent Challenge: Strategic Plan for Responding to Accelerating Climate Change"* can be found at *http://www.fws.gov/home/climatechange/strategy.html*

[6] *http://www.wildlifeadaptationstrategy.gov/pdf/NFWPCAS-Final.pdf* -see §§ 6.2.2, 6.2.5, 6.2.6, 6.2.7, 6.2.8, and 6.3.3

[7] *http://www.fws.gov/policy/056fw1.pdf*

Vision

Through shared understanding and engagement, Refuge System staff, Friends organizations, partners, visitors and other key stakeholders are informed, empowered, and inspired to take personal and collective action to help reduce their carbon footprint (mitigation) and to address the impacts of climate change and related stressors on fish, wildlife and plants on Refuges and within local landscapes (adaptation).

Goals

Goal 1: Identify at least one Refuge System unit from each Service region that has shown exemplary innovation and progress toward developing and implementing climate change communication and engagement strategies with multiple audiences. Highlight the efforts and lessons learned of these stations in ways that facilitate and encourage emulation by other Refuge units. Specific emphasis will be placed upon those refuges in each region that have scientifically demonstrated the effects of, and/or adaption to, climate change using photos, graphics or other techniques.

Goal 2: Cultivate a front line of Refuge System staff, Friends organizations, and long-term volunteers to serve as "Climate Change Ambassadors" to effectively engage and inspire Refuge visitors, local communities and school systems, and other Service staff to take personal and collective mitigation and adaptation actions. The objective is not to train employees to become climate change scientists, but to provide audiences with sufficient information to make informed decisions about their own personal action.

Goal 3: Continuously link climate change communication and engagement activities recommended in this document to all other relevant Conserving the Future communications efforts. These include those strategies outlined for refuge Communications, Interpretation, Environmental Education, Friends, Volunteers and Community Partnerships, the Standards of Excellence for Urban National Wildlife Refuges, the refuge Ambassador Program, and Climate Leadership in Refuges (CLIR) teams.

" Specific emphasis will be placed upon those refuges in each region that have scientifically demonstrated the effects of, and/or adaption to, climate change using photos, graphics or other techniques. "

III. Target Audiences

This Communication and Engagement Strategy focuses on providing information and strategies necessary to effectively communicate and engage both internally and externally (see figure on page 12). Within these two groups, audiences are further identified as either *primary or secondary*. Primary audiences are targeted messengers and key points of contact who lead by example ("Climate Change Ambassadors"). Secondary audiences are those who receive messages and could be inspired to take some mitigating and/or adaptation action.

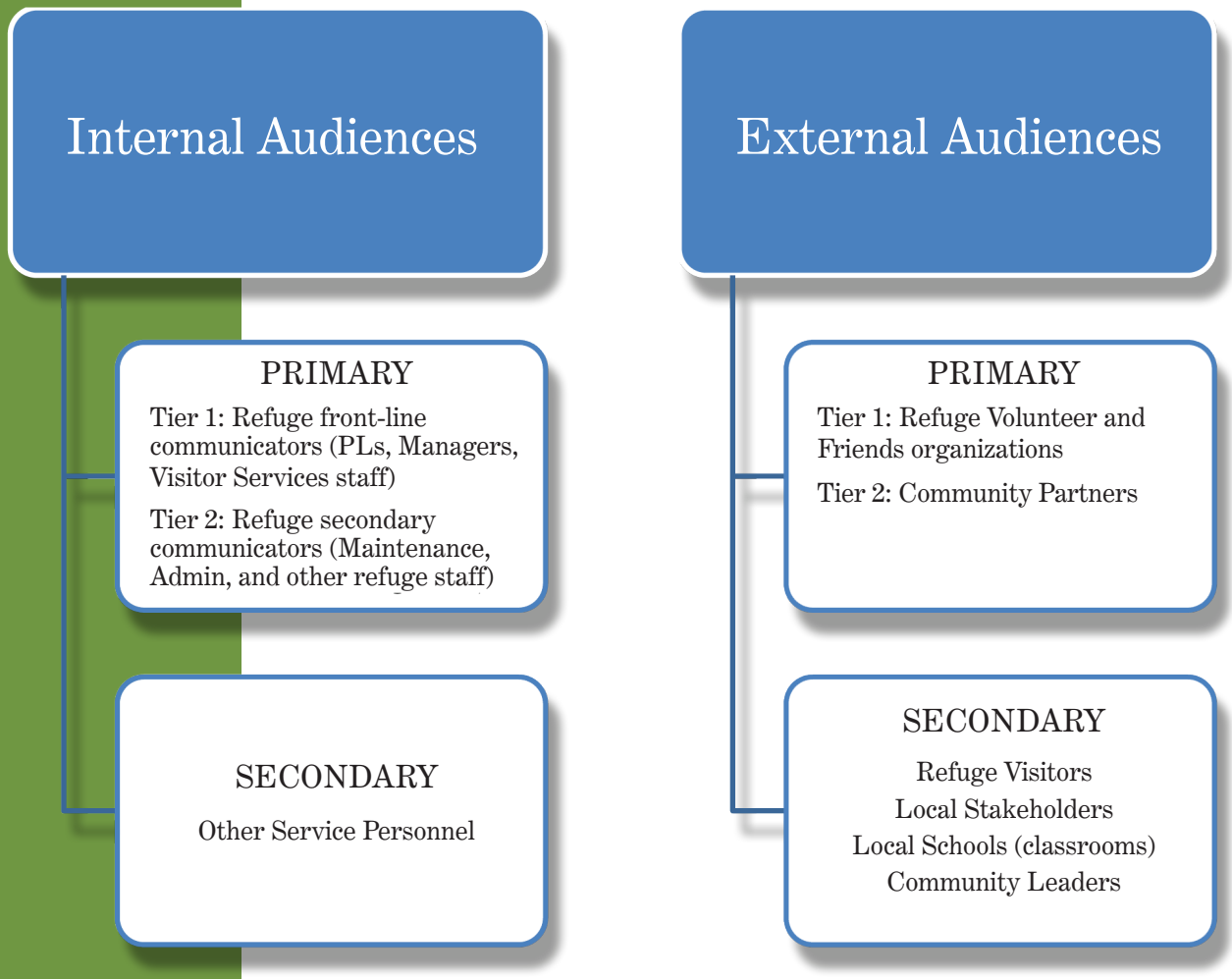

Figure 1: **TARGET AUDIENCES**

IV. Expected Outcomes for Primary and Secondary Audiences

As a result of successful implementation of this communications and engagement strategy, ***primary audiences*** *will:*

- Have the ability to effectively communicate with and engage Refuge visitors, local stakeholders, community leaders, and local school systems about refuge responses to climate change on refuges and within local landscapes.
- Serve as "Climate Change Ambassadors" with the ability to promote a deeper understanding of climate impacts among key internal and external audiences, to discuss the potential implications of climate change impacts in a personal way, and to motivate these key audiences to seek solutions.
- Have the skills, tools, and resources to facilitate the integration of best practices related to climate change mitigation and adaptation by other refuge staff into their day-to-day work on refuges.
- Share refuge-specific information with secondary audiences in other Service programs that can promote a broad understanding of climate impacts and enhance engagement to seek solutions to address those impacts.
- Communicate to refuge visitors and local stakeholders how components of the Service CCSP, NFWPCAS, Strategic Habitat Conservation and Landscape Conservation Cooperatives fit together to form an integrated strategy incorporating all work at landscape scales

"Have the ability to effectively communicate with and engage Refuge visitors, local stakeholders, community leaders, and local school systems about refuge responses to climate change on refuges."

PHOTO CREDIT: Roy Lowe, UWSFWS

As a result of successful implementation of this communications and engagement strategy, ***secondary audiences*** *will:*

- Support local refuge and other Service climate adaptation and mitigation activities through increased volunteerism, participation in Friends organizations, and participation in cooperative climate change planning activities.
- Model by example through altering their own lifestyles to reduce their carbon footprint (mitigation).
- Incorporate climate change into science curricula to reach the next generation of wildlife conservationists in local communities.
- Implement similar strategies within their respective regions and programs, using the Refuge System communications and engagement strategy as a model.

V. Key Engagement Strategies

Recent research and synthesis[8] indicates there are ten key strategies for creating effective messages about climate change.

These include:

- Know your audience and tailor your message(s) accordingly.
- Know what type of claim you are asserting.
- Connect the message to cultural values and beliefs.
- Make the message meaningful.
- Lead with your strongest argument.
- Make the message empowering.
- Link global patterns to local action.
- Partner with other organizations (such as the National Park Service, the Forest Service, schools, local communities and states).
- Start from the inside and inspire action within your organization/agency.
- Communicate about actions you/your agency is already taking to mitigate and adapt to climate change.

This research also indicates that use of place-based communication about climate change is critical. Place-based communication is meaningful dialogue situated in a specific location, where audiences interact with each other and the landscape to develop a deeper understanding about ecological and social interrelationships. It is based on the premises that people are connected to places; they have unique bonds with and value local landscapes and places such as wildlife refuges; and that people effectively learn through meaningful hands-on activities in that special place or on that landscape; and finally people remember lessons and adopt behaviors when they feel a sense of responsibility and have knowledge of consequences.

"Communicate about actions you or your agency is already taking to mitigate and adapt to climate change."

[8] The Power of Place: Climate Change Café -Gathering Collective Wisdom to Transform Climate Change Communication June 2011. Kenai Workshop - Summary Report

"Climate change is happening now, human activities are a major contributing factor, and human activities are accelerating rates of change."

VI. Recommended Path Forward

The following specific activities will be pursued by refuge staff within the context of the provided background and key strategies:

- Ensure Service and Refuge System leaders regularly support and empower refuge staff and communicate with and engage stakeholders as part of the Service's overarching strategic response to climate change.

  • The Director's message to the Refuge System will make it a priority to engage our audiences on climate change.

  • The Refuge Chief's message to the Refuge System will emphasize the Director's message and ensure that refuge staff be given opportunities to engage secondary audiences on climate change.

  • Five key messages that staff must consistently hear from leadership are:

  1. It is imperative to discuss climate change issues both internally, and with the public;

  2. Climate change is happening now, human activities are a major contributing factor, and human activities are accelerating rates of change;

  3. A changing climate has major consequences for fish, wildlife, habitats, refuges, people, and the planet;

  4. The Service and the Refuge System are responding with practices that address climate change impacts to fish, wildlife, plants, and their habitats; and

  5. The choices Americans make now in their daily lives will have impacts in the future.

- Develop a "Climate Change Ambassadors" program that targets refuge managers and refuge staff (primarily visitor services and education/outreach staff) as messengers, ensuring they are prepared with leadership support, tools, training, and resources to communicate with and engage the public and community partners on local climate change issues.

• Ensure that climate change training is provided to current Refuge System staff so that they understand climate change basics, how climate change will affect their refuge(s), what can be done to adapt to climate change, and ways to mitigate our individual and collective carbon footprints – and also have the skills and material resources for effectively communicating this information to secondary audiences to inspire action.

    • Refuge HQ staff will work with NCTC to produce a training workshop for existing staff that can either be given remotely or at NCTC.

    • Refuge HQ staff will produce materials they can use to convey messages (see bullet point further along under this topic).

• Design and ensure a climate change module is incorporated into NCTC training at Refuge Academy where new refuge staff can learn climate change basics and techniques for communicating and engaging the public on key climate change issues.

    • Produce a short training module for new staff that can be given by NCTC.

• Refuge staff will create opportunities for communication, information sharing, and engagement to spark broader understanding of climate impacts (from global to local) and encourage broader engagement in seeking solutions among audiences. Use an approach of stepping down topline messages by using relevant local details through case studies to build care for local refuges and landscapes.

• Produce "prototype" targeted climate change educational materials that can be adapted by local refuges and/or for specific audiences. Provide examples of how to adapt materials such as; brochures and leaflets, videos, coloring book, signs, displays, and social media communications to local refuges.

• Support continued development and use of the CLIR (Climate Leadership in Refuges) tool which is an Excel-based tool for use by the Refuge System for calculating greenhouse gas emissions, including those produced by visitor travel to refuges. Further, the CLIR tool itself should be utilized as an educational tool for all audiences by illustrating how refuges are addressing (minimizing) their carbon footprint.

• In concert with implementation of the Refuge System Communications Strategy, produce climate change tool kits and other materials that can be easily updated and are adaptable for use by refuges in communicating key messages and action steps to local communities and supporters.

• In concert with implementation of the Refuge System Communications Strategy, incorporate climate change information in such products as virtual scavenger hunts and virtual field trips.

• Incorporate climate change messages and information through existing products such as: Refuge Week poster and banner, Open Spaces blog, Director's blog, Fish & Wildlife News, News from Washington and other publications.

• Coordinate with other Service programs to develop climate change educational materials that are made readily available to both primary and secondary audiences on the Service's climate change web page.

• Coordinate with other Service programs to continue to improve upon the Service's emerging climate change related social media

    • Expand and improve Facebook climate change page.

PHOTO CREDIT: UWSFWS

- Expand and improve Twitter climate change page.

- Continue the support to the Coastal Conservation Networking Partnership[9]. This partnership is comprised of the Land Trust Alliance, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA), The Nature Conservancy (TNC) and the Service (NWR-Branch of Habitat Restoration). This partnership has led to the development of the Climate Change Toolkit, an online resource that includes technical reports, links to publications, education and training resources, climate change plans, case studies, outreach materials and current scientific data related to climate change.

- Conduct webinars in each Region to target audience to demonstrate the functionality of the Climate Change Toolkit in accordance with Goal 1.

[9] *http://www.landtrustalliance.org/climate-change-toolkit#b_start=0*

VII. Measuring Success

"Logic models (also known as a logical framework, theory of change, or program matrix) are tools that are sometimes used by managers to evaluate the effectiveness of a program."

Logic models (also known as a logical framework, theory of change, or program matrix) are tools that are sometimes used by managers to evaluate the effectiveness of a program. Logic models are a depiction of the logical relationships between the resources, activities, outputs and outcomes of a program (see Figure 2). While there are many ways to present logic models, the underlying purpose is to assess the "if-then" (causal) relationships between the elements of the program: If the resources are available for a program, then the activities can be implemented -If the activities are implemented successfully, then certain outputs and outcomes can be expected. Most versions of logic models define a series of outcomes/impacts, explaining in more detail the logic of how an intervention contributes to intended or observed results. This often includes short-term, medium-term and long-term results[10]. A simplified evaluation model that could be applied at the field station, regional, and/or national level might include the quantification and assessment of the following six components:

- **Inputs** » Our investment in time and money.
- **Activities** » The tasks and programs we implement.
- **Outputs:**
    - **Products** » Tools, courses, and other resources we produce.
    - **Participation** » The audiences we target.
- **Outcomes/Impacts:**
    - **Short Term** » Learning -improved awareness, knowledge, skills, or motivation.
    - **Intermediate Term** » Action -changed behavior, practice, decisions, or policies.
    - **Long Term** » Consequences -social, economic, or environmental change.

[10] For more information on program evaluation logic models please visit the University of Wisconsin -Extension bibliography web site at: *http://www.uwex.edu/ces/pdande/evaluation/evallogicbiblio.html*

VIII. Measuring Success

"The Refuge System's ability to measure behavioral and perceptional change among its internal audiences is predicated upon an understanding of a measured baseline condition."

Baseline

The Refuge System's ability to measure behavioral and perceptional change among its internal audiences is predicated upon an understanding of a measured baseline condition. Perhaps the best known source for this internal, baseline information can be derived from the report; *"Assessing the Effectiveness of the U.S. Fish and Wildlife Service's Climate Change Communications"* (February 2012). The Refuge System components of this survey were distributed to more than 700 refuge managers and staff. Only one hundred and three completed the survey, resulting in a 17% response rate. Seventy percent of respondents classified themselves as refuge managers; the remaining respondents were primarily other refuge staff, including deputy refuge managers, science staff and outreach staff[11]. The metrics examined and the methods employed in the February 2012 report could inform future efforts for repeated measurement of climate change engagement success

Concurrently, the 2010/2011 National Wildlife Refuge Visitor Survey must be viewed as a first glance at Refuge System visitors' perceptions about climate change. With more than 10,000 responses from visitors to 53 refuges, these results provide critical "baseline" information that can be tracked over time to better understand the beliefs of a key secondary audience on climate change impacts and visitors' levels of engagement on this topic.

Timeline for Re-Evaluation

It is recommended that the survey instruments developed as part of the "Assessing the Effectiveness of the U.S. Fish and Wildlife Service's Climate Change Communications" study plan be evaluated, revised (as necessary), and re-administered to Refuge System staff within four years of finalization of this document; likely Summer 2017. Similarly, it is recommended that the metrics examined (e.g., the specific climate change questions used on the survey) and the methods employed as

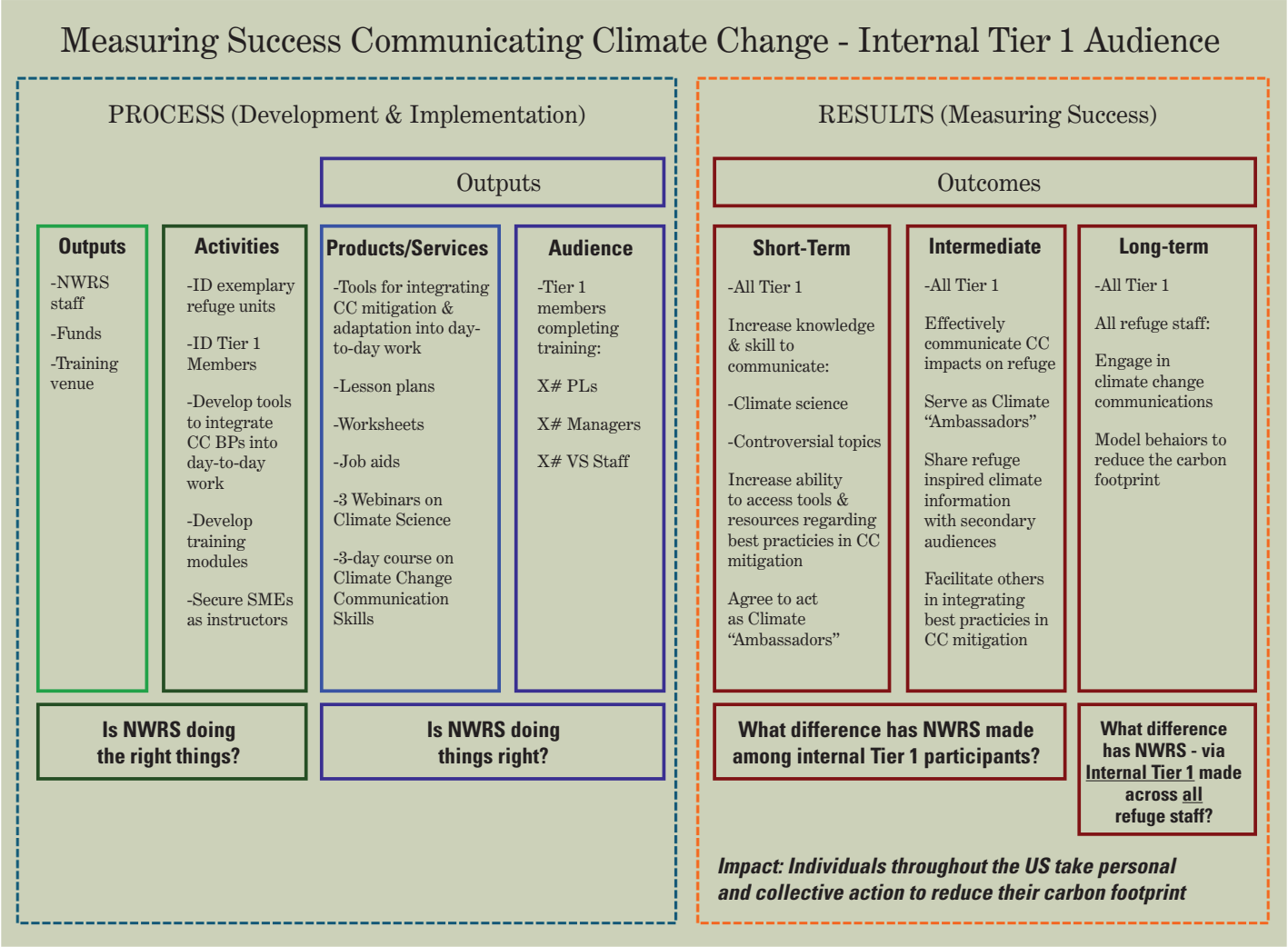

Figure 2: **SAMPLE LOGIC MODEL**

part of the 2010/2011 National Wildlife Refuge Visitor Survey should be also repeated within five years, likely Summer 2018, to assess the Refuge System's climate change communication and engagement success with external audiences. Future guidance and policy will be predicated upon the results of these re-evaluations.

Finally, this timeline for re-evaluation assumes that refuges and regional offices will take the impacts and consequences of climate change seriously, will make the commitment to engage audiences as recommended here, and will have implemented a portion of the tasks and activities outlined herein.

[11] Appendix B of the February 2012 report includes the full results (graphics and quotes) from the survey

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

www.fws.gov/refuges

February 2014

Recommendation 2: *Develop a climate change implementation plan for the National Wildlife Refuge System that dovetails with other conservation partners' climate change action plans and specifically provides guidance for conducting vulnerability assessments of climate change impacts to refuge habitats and species as well as direction for innovation in the reduction of emissions and improved energy efficiency on federal lands.*