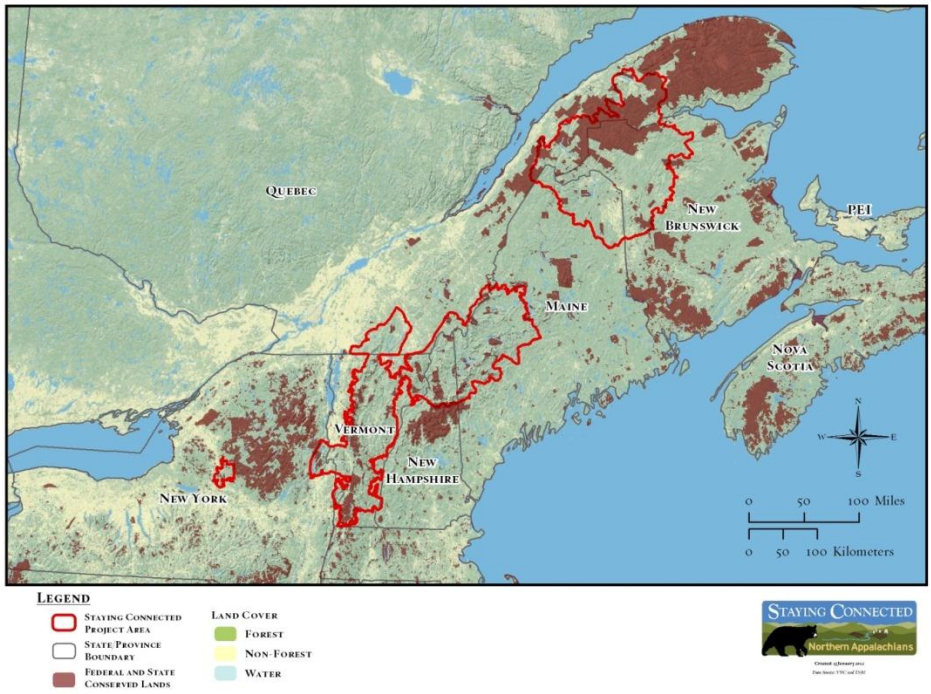
# Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages

**Phase 2 of Competitive SWG awarded 2009 (U2-4-R-1)**

## A proposal to the Competitive State Wildlife Grants Program

## January, 2012




**Applicant & Grant Administrator**: Vermont Fish & Wildlife Department

**Sub-grantee, & Primary Contractor**: The Nature Conservancy-Vermont

Phase 2 of the Staying Connected Initiative: continuation of a cooperative regional partnership effort to protect functional habitat linkages for wildlife across the Northern Forest region and detailed workplans to implement priority actions from the Maine, New Hampshire, New York, and Vermont State Wildlife Action Plans that will benefit at least 41 wide-ranging and forest dwelling Species of Greatest Conservation Need.

VERMONT

**Fish & Wildlife Department**
103 South Main St., 10 South
Waterbury, Vermont 05671-0501
**www.VTFishandWildlife.com**

[phone] 802-241-3700
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*Agency Of Natural Resources*

January 20, 2012

Mr. Dan Ashe, Director
U.S. Fish & Wildlife Service
c/o Paul Van Ryzin
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Director Ashe,

It is my pleasure to submit, on behalf of the states of Vermont, Maine, New Hampshire, and New York, the enclosed proposal for the Staying Connected Initiative (SCI) to the Competitive State Wildlife Grants program for the FY 2012 grant cycle.

SCI is a four-state, public-private partnership focused on maintaining, enhancing and restoring habitat connectivity for Species of Greatest Conservation Need across the Northern Appalachian Eco-region. SCI was developed to address the primary threats to wildlife identified in each of the four states' Wildlife Action Plans (habitat loss, transportation systems and climate change). SCI integrates land use planning, wildlife management and conservation science and applies it by working with towns in specific habitat connectivity focus areas. This approach benefits at least 41 Species of Greatest Conservation Need and at least 10 habitat types.

The Wildlife Action Plans of Vermont, Maine, New Hampshire, and New York contain numerous recommendations related to habitat connectivity conservation for wide-ranging and forest-dwelling SGCN. New Hampshire begins by identifying the need to "map potential wildlife corridors and buffers" (p5.8), Maine calls for "protecting and managing high quality uplands through cooperation with NGOs, local land trusts, municipalities, government agencies, private landowners and other partners" (p 5:227) and New York recommends "developing land protection strategies for large blocks of unfragmented forests" (p80).

Vermont's Wildlife Action Plan identifies habitat loss (through fragmentation and conversion), transportation systems and climate change as three of the five most significant problems impacting Vermont's SGCN and their habitats (p2:9-11). As a result our Wildlife Action Plan recommends enhancing "regional connectivity to maintain and/or re-establish wide-ranging SGCN populations through... linkages to New York, New Hampshire, and Canada" (p4:43) as well as within the state (pp.4:41-48, 4:49-54, 4:55-60 and 4:61-66).

SCI was awarded Competitive SWG funding in 2009 (U2-4-R-1) and in the last three years, has meet with great success across the four states. SCI's efforts have led to the conservation of more than 20,000 acres of important wildlife habitat linkage habitat, increased and improved town plans and zoning bylaws that more effectively address habitat conservation, refined conservation science and a greater appreciation for the larger network of connected land. SCI is connecting citizens, scientists, wildlife managers and planners to produce better land use & transportation planning, and healthier wildlife populations. This is vitally important given the threats of climate change and habitat fragmentation

This proposal seeks to build on the success of phase 1, by focusing on strategically identified linkage areas, a new suite of effective technical assistance tools, and increased interaction between fish and wildlife agencies and transportation agencies. This also takes advantage of the large conservation partnership that has been developed as a result of phase 1.

The Vermont Fish & Wildlife Department remains convinced that SCI is important to the state and the region. We are committed to its ongoing success. Thank you for the opportunity to present this proposal for funding. Please don't hesitate to contact me if you have any questions.

Sincerely,

Patrick H. Berry
Commissioner

GRANTS.GOV™

# Grant Application Package

| | |
|---|---|
| **Opportunity Title:** | State Wildlife Grants Competitive Grant Program |
| **Offering Agency:** | Fish and Wildlife Service |
| **CFDA Number:** | 15.634 |
| **CFDA Description:** | State Wildlife Grants |
| **Opportunity Number:** | DOI-FWS-WSFR-SWGCOMP12 |
| **Competition ID:** | DOI-FWS-WSFR-SWGCOMP12 |
| **Opportunity Open Date:** | 10/25/2011 |
| **Opportunity Close Date:** | 01/20/2012 |
| **Agency Contact:** | PAUL VAN RYZIN<br>Grants Specialist<br>E-mail: paul_vanryzin@fws.gov<br>Phone: 703-358-1849 |

**This electronic grants application is intended to be used to apply for the specific Federal funding opportunity referenced here.**

**If the Federal funding opportunity listed is not the opportunity for which you want to apply, close this application package by clicking on the "Cancel" button at the top of this screen. You will then need to locate the correct Federal funding opportunity, download its application and then apply.**

**This opportunity is only open to organizations, applicants who are submitting grant applications on behalf of a company, state, local or tribal government, academia, or other type of organization.**

*** Application Filing Name:** Vermont Department of Fish and Wildlife

**Mandatory Documents**

Move Form to Complete

Move Form to Delete

**Mandatory Documents for Submission**

Application for Federal Assistance (SF-424)

**Optional Documents**

Attachments
Budget Narrative Attachment Form
Project Narrative Attachment Form
Budget Information for Non-Construction Program
Assurances for Non-Construction Programs (SF-42
Disclosure of Lobbying Activities (SF-LLL)
Assurances for Construction Programs (SF-424D)

Move Form to Submission List

Move Form to Delete

**Optional Documents for Submission**

## Instructions

**1** **Enter a name for the application in the Application Filing Name field.**

- This application can be completed in its entirety offline; however, you will need to login to the Grants.gov website during the submission process.
- You can save your application at any time by clicking the "Save" button at the top of your screen.
- The "Save & Submit" button will not be functional until all required data fields in the application are completed and you clicked on the "Check Package for Errors" button and confirmed all data required data fields are completed.

**2** **Open and complete all of the documents listed in the "Mandatory Documents" box. Complete the SF-424 form first.**

- It is recommended that the SF-424 form be the first form completed for the application package. Data entered on the SF-424 will populate data fields in other mandatory and optional forms and the user cannot enter data in these fields.

- The forms listed in the "Mandatory Documents" box and "Optional Documents" may be predefined forms, such as SF-424, forms where a document needs to be attached, such as the Project Narrative or a combination of both. "Mandatory Documents" are required for this application. "Optional Documents" can be used to provide additional support for this application or may be required for specific types of grant activity. Reference the application package instructions for more information regarding "Optional Documents".

- To open and complete a form, simply click on the form's name to select the item and then click on the => button. This will move the document to the appropriate "Documents for Submission" box and the form will be automatically added to your application package. To view the form, scroll down the screen or select the form name and click on the "Open Form" button to begin completing the required data fields. To remove a form/document from the "Documents for Submission" box, click the document name to select it, and then click the <= button. This will return the form/document to the "Mandatory Documents" or "Optional Documents" box.

- All documents listed in the "Mandatory Documents" box must be moved to the "Mandatory Documents for Submission" box. When you open a required form, the fields which must be completed are highlighted in yellow with a red border. Optional fields and completed fields are displayed in white. If you enter invalid or incomplete information in a field, you will receive an error message.

**3** **Click the "Save & Submit" button to submit your application to Grants.gov.**

- Once you have properly completed all required documents and attached any required or optional documentation, save the completed application by clicking on the "Save" button.
- Click on the "Check Package for Errors" button to ensure that you have completed all required data fields. Correct any errors or if none are found, save the application package.
- The "Save & Submit" button will become active; click on the "Save & Submit" button to begin the application submission process.
- You will be taken to the applicant login page to enter your Grants.gov username and password. Follow all onscreen instructions for submission.

OMB Number: 4040-0004
Expiration Date: 01/31/2009

## Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received: Completed by Grants.gov upon submission.

4. Applicant Identifier: SWG Comp FY12 TNC

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Vermont Department of Fish and Wildlife

* b. Employer/Taxpayer Identification Number (EIN/TIN): 03-6000274

* c. Organizational DUNS: 809800311

d. Address:

* Street1: 103 South Main Street
Street2: 10 South
* City: Waterbury
County:
* State: VT: Vermont
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 05676

e. Organizational Unit:

Department Name: Fish and Wildlife

Division Name: Wildlife

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
* First Name: jens
Middle Name:
* Last Name: Hawkins-Hilke
Suffix:

Title: Conservation Planning Biologist

Organizational Affiliation: Vermont Department of Fish and Wildlife

* Telephone Number: 802-338-4862
Fax Number:

* Email: jens.hilke@state.vt.us

OMB Number: 4040-0004
Expiration Date: 01/31/2009

## Application for Federal Assistance SF-424

Version 02

**9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Fish and Wildlife Service

**11. Catalog of Federal Domestic Assistance Number:**

15.634

CFDA Title:

State Wildlife Grants

*** 12. Funding Opportunity Number:**

DOI-FWS-WSFR-SWGCOMP12

* Title:

State Wildlife Grants Competitive Grant Program

**13. Competition Identification Number:**

DOI-FWS-WSFR-SWGCOMP12

Title:

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

New York, Vermont, New Hampshire & Maine

*** 15. Descriptive Title of Applicant's Project:**

Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

OMB Number: 4040-0004
Expiration Date: 01/31/2009

## Application for Federal Assistance SF-424

Version 02

**16. Congressional Districts Of:**

* a. Applicant: 1 * b. Program/Project: 1

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

**17. Proposed Project:**

* a. Start Date: 07/01/2012 * b. End Date: 06/30/2015

**18. Estimated Funding ($):**

| | |
|---|---|
| * a. Federal | 999,923.00 |
| * b. Applicant | 0.00 |
| * c. State | 0.00 |
| * d. Local | 0.00 |
| * e. Other | 484,682.00 |
| * f. Program Income | 0.00 |
| * g. TOTAL | 1,484,605.00 |

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

☐ Yes ☒ No Explanation

**21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**

Prefix: * First Name: sherri

Middle Name: A.

* Last Name: Yacono

Suffix:

* Title: Financial Manager

* Telephone Number: 802-583-7174 Fax Number:

* Email: sher.yacono@state.vt.us

* Signature of Authorized Representative: Completed by Grants.gov upon submission. * Date Signed: Completed by Grants.gov upon submission.

Sherri A Yacono 1/19/12

OMB Number: 4040-0004
Expiration Date: 01/31/2009

**Application for Federal Assistance SF-424** Version 02

*** Applicant Federal Debt Delinquency Explanation**

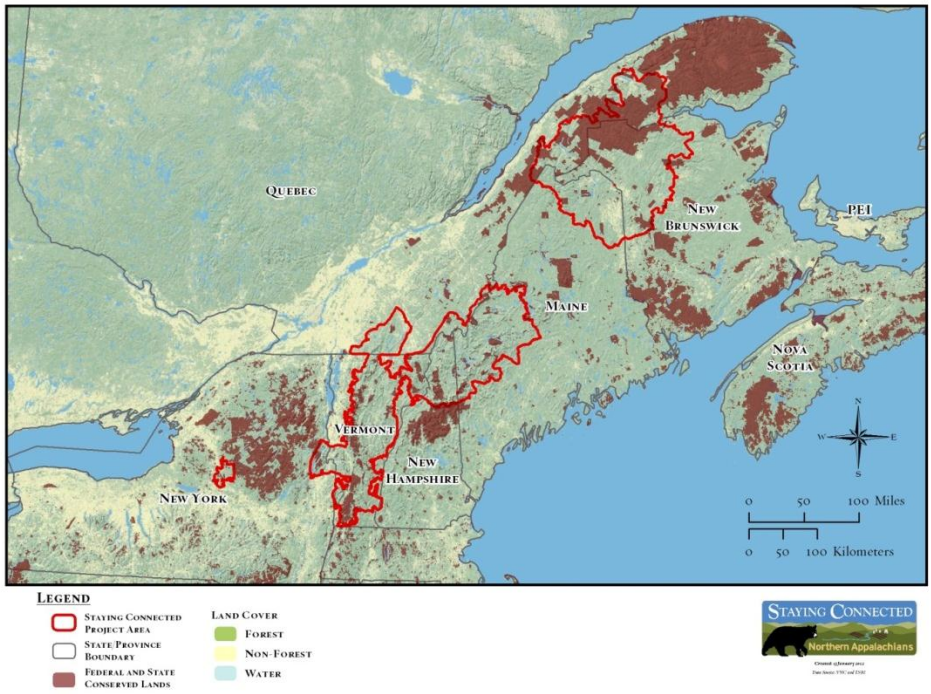
The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

# Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages

**Phase 2 of Competitive SWG awarded 2009 (U2-4-R-1)**

## A proposal to the Competitive State Wildlife Grants Program

## January, 2012




**Applicant & Grant Administrator**: Vermont Fish & Wildlife Department

**Sub-grantee, & Primary Contractor**: The Nature Conservancy-Vermont

Phase 2 of the Staying Connected Initiative: continuation of a cooperative regional partnership effort to protect functional habitat linkages for wildlife across the Northern Forest region and detailed workplans to implement priority actions from the Maine, New Hampshire, New York, and Vermont State Wildlife Action Plans that will benefit at least 41 wide-ranging and forest dwelling Species of Greatest Conservation Need.

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## Executive Summary

**Applicant:** Vermont Fish & Wildlife Department

**Grant Goal & Objectives:** Our goal is to maintain, enhance and restore habitat connectivity for Species of Greatest Conservation Need across the Northern Appalachian Ecoregion in order to mitigate the impacts of habitat fragmentation and climate change. This will be achieved by deploying a suite of related strategies within and across key connectivity linkage areas throughout the ecoregion. Grant objectives will enhance and apply conservation science; protect key lands, provide technical assistance to state transportation agencies, regional and local land use planners, and conservation organizations; and develop technical assistance tools and materials.

Grant Period: 07/01/2012 to 6/30/2015

**Estimated Federal & Non-Federal Costs** (budget detail in summary table & Project budget narratives)

Total grant amount $1,484,606

Competitive SWG funds requested $999,923 67% of total grant amount

Non-federal matching funds $484,682 33% of total grant amount

**Funding sources:** Cash provided by non-Federal entities, and waived costs and in-kind contributions from contractors and other third parties.

**Active Partners:** (20) Vermont Fish & Wildlife Department, The Nature Conservancy (ME, NH, NY & VT chapters), NY Dept of Environmental Conservation, NY Dept of Transportation, Tug Hill Commission, Tug Hill Tomorrow, Wildlife Conservation Society, Maine Dept of Inland Fish & Wildlife, Maine Audubon, Maine Dept of Transportation, NH Audubon, NH Department of Transportation, New Hampshire Fish & Game Department, National Wildlife Federation, Trust for Public Land, Wildlands Network, Two Countries-One Forest, VT Agency of Transportation, VT Land Trust, Vermont Natural Resources Council

**State(s) benefitting from the work:** Maine, New Hampshire, New York and Vermont

**SGCN and key habitats addressed:** The work performed under this grant will benefit at least 41 Species of Greatest Conservation Need (Appendix D) and at least 10 habitat types (Appendix E).

**Abstract:** The “Staying Connected Initiative"(SCI) is a 3 year old, four-state, two country partnership of state fish & wildlife agencies, agencies of transportation and NGO partners focused on conserving habitat connectivity for forest dwelling terrestrial species in the Northern Appalachians Ecoregion. Focused on several key areas (“linkages”) that connect large forested “core” habitats areas across a network of connected land through New York, Vermont, New Hampshire, Maine and Southern Canada, SCI proposes to build on three years of connectivity conservation work in a Phase 2 project, using private-lands connectivity conservation tools developed in Phase 1 on connectivity conservation in spatial “pinch point” priorities within habitat linkages. Our proposal includes a suite of objectives and approaches flexibly applied

across a broad region, informed and refined by three years of partnership based connectivity conservation experience, and supported by a robust public (8 state agencies)/non-profit (13 organizations) partnership that consists of diverse array of expertise and skills. We propose to continue our locally focused linkage work designed to implement connectivity conservation in a private-lands setting with predominantly local government land-use decision jurisdiction: providing technical assistance to local governments, land-use town and regional planners, and other groups, with pragmatically developed goals rooted in the particular socio/political settings of this work: from changes in zoning and by-laws to voluntary connectivity conservation recommendations. This proposal also consists of initiatives to mitigate wildlife road crossing barriers in key habitat linkage road corridors by working with local and state road agencies and by increasing our ability to define fine-scale road corridor connectivity conservation objectives through conservation science. Also, partner land protection-oriented organizations will achieve a number of conservation gains in priority connectivity linkages (43,000 acres). This on the ground work will be complemented by a suite of cross cutting initiatives aimed at incorporating connectivity-friendly policy and planning level road corridor management into state transportation agencies, enhancing our ability to identify fine-scale functional connectivity landscape feature of road corridors to better target fine-scale road corridor management guidance, and refine our ability to provide partners support on climate change science to better represent and integrate habitat connectivity conservation into climate change adaptation strategies. This project benefits at least 41 wide-ranging and forest-dwelling SGCN. Benefits to SGCN have and will continue to accrue through protecting the ability of species to move regionally in response to changing climate and by protecting and/or restoring the opportunity for regional genetic interchange. This effort will help implement top priority actions from the Maine, New Hampshire, New York and Vermont Wildlife Action Plans to identify, prioritize and protect the most important habitat linkages in the Northern Appalachian Ecoregion.

## Budget Summary

### Budget Summary for all projects

| Project # | Project | Total Grant Amount | SWG Competitive Funds | Non-federal Match | SWG % of total grant | Non-federal match % of total grant |
|---|---|---|---|---|---|---|
| 1 | Within-Linkage Projects | | | | | |
| *1.1* | *Tug Hill - Adirondack Linkage* | $223,705 | $162,442 | $61,263 | 72.61% | 27.39% |
| *1.2* | *Adirondacks-Green Mtns Linkage* | $187,221 | $140,801 | $46,419 | 75.21% | 24.79% |
| *1.3* | *Green Mtns - Sutton Mtn Linkage* | $167,102 | $123,779 | $43,323 | 74.07% | 25.93% |
| *1.4* | *Worcester Mtns - NE Kingdom Linkage* | $120,929 | $120,929 | $0 | 100.00% | 0.00% |
| *1.5* | *NEK VT-Northern NH-Western ME Linkage* | $299,793 | $145,062 | $154,731 | 48.39% | 51.61% |
| *1.6* | *Vermont Multi-Linkage Connectivity* | $217,926 | $105,393 | $112,533 | 48.36% | 51.64% |
| | | | | | | |
| 2 | Transportation Cross-Cutting | $48,195 | $29,389 | $18,806 | 60.98% | 39.02% |
| 3 | Monitoring & Evaluation Cross-Cutting | $49,095 | $33,699 | $15,396 | 68.64% | 31.36% |
| 4 | Climate Change Tech Assist Cross-Cutting | $22,233 | $18,330 | $3,903 | 82.44% | 17.56% |
| 5 | SCI Management & Coordination | $148,407 | $120,099 | $28,308 | 80.93% | 19.07% |
| | | $0 | | | | |
| | **totals** | **$1,484,606** | **$999,923** | **$484,682** | **67.35%** | **32.65%** |

## Budget Summary by Federal Category

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| VFWD & NHF&G Personnel | $84,937 | $79,937 | $5,000 |
| TNC Personnel | $275,189 | $192,338 | $82,851 |
| Contractual | $731,845 | $441,798 | $290,047 |
| Travel | $22,387 | $17,867 | $4,520 |
| Equipment | $0 | $0 | $0 |
| Supplies | $11,950 | $10,950 | $1,000 |
| Construction | $0 | $0 | $0 |
| Other | $77,300 | $64,300 | $13,000 |
| | | | |
| **Total direct costs** | **$1,203,608** | **$807,190** | **$396,418** |
| | | | |
| TNC Indirect (22.55%) | $250,005 | $161,741 | $88,265 |
| VFWD Indirect (34.46%) | $30,992 | $30,992 | $0 |
| | | | |
| | | | |
| **Total Budget** | **$1,484,606** | **$999,923** | **$484,682** |
| match rate check | | 67.35% | 32.65% |

## Budget Narrative:

F&W Personnel – Salary expenses for the Vermont Fish and Wildlife Department (VFWD) staff for both regular and seasonal employees.

TNC Personnel – Salary expenses for The Nature Conservancy (TNC) staff for both regular and seasonal employees. Also includes the federally approved fringe benefits rate of 42% for regular employees and 12% for seasonal employees, effective July 1, 2011, which is applied to salary expenses.

Contractual - Contracts for services and subawards with those Staying Connected nongovernmental partners who would receive SWG funds, as well as with outside professionals.

Travel - Travel costs for TNC and VFWD staff. Includes estimated travel to and from the project areas and meeting/workshop sites (mileage reimbursable at the IRS rate of $0.555 per mile), as well as lodging and miscellaneous travel-related expenses.

Supplies – Includes non-office supplies for project sites, tools for data collection/technical support and materials for meetings/workshops.

Other – Includes communications, printing and meeting costs, as well as due diligence costs related to land protection (but not including the cost of the property interest itself).

Indirect – The federally approved indirect rate effective July 1, 2011, applied to all direct costs. The current indirect rate for TNC is 22.55% and for VFWD is 34.46%.

Non-federal match – Provided by TNC and other Staying Connected partners in various eligible forms funded by non-federal sources (e.g., staff time, travel costs, due diligence costs related to land protection). All pledged match is documented in commitment letters accompanying this proposal (see Appendix H).

Please refer to the budgets, budget narratives, and descriptions for each of the component projects of this proposal for additional specific information.

Also, please note that although additional funds leveraged but not eligible as match are not quantified systematically in this proposal, substantial amounts of such funds will be leveraged by the Staying Connected Initiative partnership in the 3-year Phase 2 that this grant would cover. A few examples include:

- Nearly $18 million that has been committed from the Forest Legacy Program to an effort led by the Trust for Public Land for protection of roughly 40,000 acres of high priority lands for connectivity in the Northeastern Highlands-northern New Hampshire-western Maine linkage (project 1.5).
- The portions that will remain (~$100,000-150,000) of the $1.25 million the Staying Connected Initiative has secured thus far from its first Competitive SWG award and private grants from the Wildlife Conservation Society Wildlife Action Opportunities Fund and the Jessie B. Cox Charitable Trust.
- Nearly $70,000 the Vermont Natural Resources Council has secured from the Northeastern States Research Cooperative for work with regional planning commissions to address forest fragmentation (and associated habitat considerations) in Vermont.
- $20,000 that the Vermont Fish & Wildlife Department will be committing in federally funded staff time that will be dedicated to advancing Staying Connected Phase 2.

# Project Statement

## Location

At its broadest scale, the area of interest for the Staying Connected Initiative covers an immense region from the Tug Hill Plateau in NY through Vermont, New Hampshire, Maine and into eastern Canada. Staying Connected has identified a network of connected land that links this region east to west as well as north to south. (See Map 1 Staying Connected Project Area).

Upon closer scrutiny of this larger project area, it becomes clear that this network of connected land across the Northern Appalachians is comprised of several large "core" habitats connected by a series of interspersing linkage areas, with "core" generally defined as an area with sufficient size, suitable intact cover type(s), and sufficient condition to serve as source habitat for all or most forest-dwelling terrestrial species characteristic of the region. In contrast, a linkage area is an area of mixed-use lands that separates core habitats, retains a significant forested component, and its functional connectivity is required to enable the movement of multiple species between "core" habitats.

Landscape analysis work from the first phase of Staying Connected (funded under our first competitive SWG U2-4-R-1) refined the boundaries of SCI linkage areas via a disparate series of analyses, customized to individual linkages, resulting in linkage-scale assessments of both structural and modeled functional connectivity.

Staying Connected is proposing to continue connectivity conservation work in a subset of these linkage areas most important for protecting connectivity across the Northern Appalachians (See Map 2 for Project Sites):

- Tug Hill Plateau to the Adirondack Mountains (NY)
- Adirondack Mountains to the Southern Green Mountains (NY-VT)
- Northern Green Mountains to the Northeastern Highlands (VT)
- Northeastern Highlands across northern New Hampshire to Maine (VT-NH-ME)
- Northern Green Mountains in Vermont to Sutton Mountains of Canada (funded work would occur only in the US)

## Purpose & Need

**Introduction**: The Northern Appalachian ecoregion is unique, and uniquely challenged: we know of nowhere else in the world where such an intact temperate mixed and deciduous forest is located so close to so many people. The ecoregion spans two countries, four states, four provinces and 80- million acres; it contains a multitude of rare and uncommon natural communities and habitats from alpine habitat to floodplain forests, a rich diversity of plants and animals, large unfragmented forest blocks, and 5.4 million people. While extraordinarily intact compared to other forests of its type across the globe, preliminary studies reveal that this ecoregion is increasingly faced with habitat fragmentation, rendering once contiguous habitats into a series of discrete islands of large habitat patches. The isolating effects of this type of fragmentation is increasingly problematic for forest dwelling Species of Greatest Conservation Need (SGCN), given the need to accommodate species movement in response to climate change,

and the need for species populations to interact across the landscape to maintain genetic diversity, maximizing the responsive function of evolutionary processes to adapt to environmental change. Protection of key habitat linkages across the landscape is a critical need.

The Staying Connected Initiative was first funded by a Competitive State Wildlife Grant in 2009 (U2-4-R-1). As a project that sought to implement conservation of connectivity in 4 states, Staying Connected developed and refined a partnership infrastructure to facilitate collaboration and coordination of habitat connectivity work across multiple jurisdictions, while successfully (in addition to U2-4-R-1) funding partnership connectivity work through private foundations to achieve conservation gains in terms of habitat connectivity for SGCN's and their habitats. Specifically, Phase 1 of Staying Connected has refined the identification and delineation of important linkage areas, produced a framework of performance measures for structural connectivity at a coarse scale, and identified a complex network of connected land across the region. This network represents a best-science hypothesis of a regionally comprehensive network of connected lands (see Map 1) that is bigger than the objectives and geographic scope requesting funding under this proposal (Map 2 defines areas requesting funding under this SWG proposal). With respect to technical assistance, we have successfully deployed a broad suite of land use technical assistance to landowners and state agencies across a wide geographic area. Staying Connected partners have conserved more than 20,000 acres of land so far and are positioned to continue with protection across this region. In phase 1, we assessed and prioritized key lands for conservation, and developed a framework to assess functional connectivity on key road sections. We also assessed functionality for thousands of road-miles by documenting wildlife sign. This proposal seeks to build on this success.

Indeed, Staying Connected, having built a partnership framework and having achieved a series of distinct and, in some cases, unique conservation accomplishments is now well positioned to stand on the painstakingly built foundations of the 3 year history of our partnership and implement connectivity conservation to a degree unachievable over the previous establishment period of the partnership. Accordingly, we seek continued funding to build on our successes across Maine, New Hampshire, Vermont and New York, and look forward to continuing our work to provide lasting conservation gains for SGCN in the Northern Appalachians for habitat connectivity conservation.

Moreover, this work is also occurring in Canada: Complementary conservation efforts by partner agencies and organizations in the provinces of Nova Scotia, Newfoundland, Labrador and Quebec, makes this a truly international effort and increases our success.

**Problem**: The Wildlife Action Plans of Maine, New Hampshire, Vermont and New York identify 41 wide-range and forest-dwelling Species of Greatest Conservation Need (Appendix D) including Canada lynx, American marten, black bear, and bobcat. The primary threats to the viability of populations of these species, as identified in each state's Wildlife Action Plan, are land-use related: habitat loss (through fragmentation, degradation and conversion) and the impacts of transportation systems (Appendix F).

Maintaining and enhancing populations of wide-ranging species has traditionally focused on the conservation of large landscapes containing contiguous wildlife habitat through land designations that include wildlife management areas, state and national forests, national wildlife refuges, and privately owned nature reserves. Such landscapes also support the natural processes

and functions vital to long-term sustainability of populations of both wide-ranging and less vagile species. In addition, the rural working landscape of the northeast is a critical component to wildlife conservation success and for meeting the needs of these wide-ranging species.

However, the nature of land ownership and political jurisdictions in the Northeast poses an elemental impediment to landscape-level planning and the implementation of actions to conserve large, well-connected landscapes. Because the majority of lands in the region are privately owned, the resulting landscape patterns are driven from the bottom-up. That is, individual decisions made by local land owners and town planners collectively determine habitat quality at the landscape level.

As a result, the primary threats to many SGCN today are not directly addressed through public land ownership. Furthermore, because the Northern Appalachians Ecoregion spans four states and two countries, important transportation infrastructure decisions are made at state and local levels, often with little knowledge or consideration of the multi-jurisdictional, landscape-level environmental implications of their actions.

Climate models focused on the Northeast universally predict (1) increases in the likelihood and severity of heavy rainfall events, (2) increases in winter precipitation on the order of 20-30%; and (3) a combination of higher temperatures, increased evaporation, expanded growing season, and other factors that will cause summer and fall to become drier, with extended periods of stream flow (Stager and Thill, 2010, Hayhoe et al 2006, Hayhoe et.al. 2008, UCS 2006). Ultimately, plant and animal distribution patterns will respond to these changes, and many species will need to move in order to find suitable habitat.

To meet this threat, the science of wildlife management and landscape ecology have developed to identify the need to link habitat blocks in order to help these species:

- Meet their seasonal or annual resource needs;
- Exchange genes among otherwise isolated populations, and within meta-populations that may cover millions of acres;
- Facilitate dispersal of progeny to new territories;
- Re-establish populations after local extirpations; and;
- Respond to changes in habitat due to climate change, natural disturbances and human produced obstructions such as highways and commercial and residential development.

These needs distill into a habitat connectivity conservation framework that focuses on linkage habitat, as vital habitats providing connectivity across one or more temporal scales (e.g., seasonal, annual, generational) among areas used by animals and plants to allow movement between larger blocks of “core” habitat. These linkages exist and must be conserved within fragmented landscapes that are characterized primarily by human habitation and use, yet also need to retain sufficient enough habitat sufficient to join less fragmented “core” habitats.

The Wildlife Action Plans of Maine, New Hampshire, Vermont and New York contain numerous recommendations related to the conservation of such linkage habitat for wide-ranging and forest-dwelling SGCN (Appendix D). New Hampshire begins by identifying the need to "Map potential wildlife corridors and buffers" (p 5.8), Maine calls for "Protecting/managing

high-value uplands through cooperation with NGOs, local land trusts, municipalities, government agencies, private landowners and other partners" (p 5:227) and New York recommends "Developing land protection strategies for large blocks of unfragmented forests" (p 80). And Vermont identifies the need for "regional connectivity to maintain and/or re-establish wide-ranging SGCN populations through… linkages to New York, New Hampshire, and Canada" (p 4:43).

**Need:** To effectively conserve and enhance SGCN populations, their habitats and landscapes, natural resources managers must provide local decision makers with data, tools, technical guidance and other resources needed to help them make decisions appropriate both locally and regionally.

We request financial support from the Competitive State Wildlife Grants program to continue the implementation of actions to conserve, maintain and enhance the five top priority habitat linkages in the Northern Appalachian Ecoregion (see Map 2). Such support would help ensure landscape scale connectivity across the ecoregion from the western edge of the Tug Hill Plateau in New York through Vermont, New Hampshire and Maine and on to Quebec's Gaspe Peninsula.

Significant work has been completed, or will be completed shortly, within the ecoregion that will allow project partners to take conservation action immediately upon grant approval. This includes:

- The Staying Connected Initiative (SCI) has been intensively working on habitat connectivity conservation in the ecoregion for the last three years. The Initiative was initially funded by a Competitive SWG awarded 2009 (U2-4-R-1), and subsequent support was obtained by Wildlife Conservation Society's Wildlife Action Opportunities Fund, Jessie B. Cox Foundation and from project partners. In this time, SCI has developed and refined a highly effective multi-state partnership focusing on large scale landscape conservation, honed project management and communication, developed and deployed a robust technical assistance network to land use planners and local organizations, protected more than 20,000 acres of priority connecting lands, developed science-based landscape conservation modeling-based assessments that fine-tunes the location of key linkage areas and the larger network of connected land, and developed working relationships with state Agencies of Transportation.
- The Northern Forest has been selected as a landscape-scale focus area for America's Great Outdoors and the Connecticut River Valley (including both Vermont and New Hampshire has been selected as state-level focus areas. Both of these overlap substantially with the Staying Connected project area.
- Vermont Fish & Wildlife Department has identified and prioritized for conservation the state's large habitat blocks (2011), and is in the process of a Natural Resource Mapping Project (Dec 2012) to prioritize all lands the contribute to the state's biological diversity. This includes among other factors, connecting lands and datasets developed by the Staying Connected Initiative.
- Maine Department of Transportation partnering with Maine Department of Inland Fisheries and Wildlife completed a modeling tool for predicting priority road segments. These priority road segments were integrated into the undeveloped blocks maps that are provided to towns and conservation organizations around the state as part of the Beginning with Habitat outreach program. In addition, new interpretive materials addressing road and connectivity issues are being developed to accompany the maps.

- Vermont Agency of Transportation is about to complete (2012) Habitat Connectivity Best Management Practices , (prepared by consultants that are Staying Connected partners) that affect every level of the organization, from planning to operations.
- The New Hampshire Fish and Game Department, in collaboration with other conservation partners, is developing a Climate Change Adaptation Plan, to be completed in Spring 2012, that will include a number of recommended conservation strategies relevant to the Northern Forest ecoregion such as land protection that allows for habitat connectivity and wildlife movement. This Plan will be incorporated into the NH Climate Action Plan and NH Wildlife Action Plan to promote statewide support for strategy implementation that safeguards wildlife and habitats.
- In New York State, the Tug Hill Commission recently completed an official Town Roadway Inventory for all of the roads within the Staying Connected Initiative's Tug Hill – Adirondacks linkage. This new tool greatly benefits the ability for towns to maintain natural areas and enhance the ability of wildlife to move throughout the landscape as well as provides highway managers with information to help with special designations (i.e. low-volume roads).
- NY Department of Conservation has included "connectivity" as an Open Space Plan criteria for vetting land protection projects within NYS DEC Region 6, which covers the geography of the Adirondack-Tug Hill linkage. The Open Space Plan sets the parameters for how New York State Environmental Protection Fund resources are allocated for fee and easement acquisitions.
- The North Atlantic Landscape Conservation Cooperative is now actively working across all the states in the SCI project area and consists of a partnership of 13 Northeast states and 18 federally recognized tribes, federal agencies, and NGOs. There is significant alignment with the landscape scale vision and focus of NALCC with the interests of the Staying Connected Initiative given the NALCC's emphasis on advancing science-based strategies for climate change adaptation, and enhancing resilience of priority species and significant natural systems in the face of environmental change

## Grant Objectives

The goal of this grant is to maintain, enhance and restore habitat connectivity for Species of Greatest Conservation Need across the Northern Appalachian Ecoregion in order to mitigate the impacts of habitat fragmentation and climate change. To achieve our goal we have developed seven strategic objectives; four will be applied locally within each habitat linkage area, and three applied across the entire region:

Within-Linkage objectives (The following four objectives direct work in the linkage areas. Each linkage area has developed a work plan that balances these objectives slightly differently, allowing for regional variations and appropriate emphasis.)

1. **Conservation science:** Identify fine-scale functional connectivity pathways in key wildlife road crossing areas via fine-scale wildlife road crossing analyses and assessments on critical wildlife road crossing locations, validated by documenting wildlife presence and movement (functional connectivity) within each linkage area. This builds on work completed in SCI's phase 1, which produced coarser-scaled linkage boundaries priorities via modeling and pin-pointed priority road crossing areas within

each linkage. Conservation science outcomes in this proposal focus on assessing functional connectivity at a finer scale within these targeted priority crossing areas. Since we consider these locations to be the "weakest" and most threatened link in regional habitat networks, this work is necessary to inform and support the work of Objectives 2, 3, and 4.

2. **Provide technical assistance for local land use planning and local organizations:** Municipalities, regional planning commissions, county governments and other local organizations will have an increased understanding of habitat connectivity, accompanied by knowledge and guiding support in terms of the means by which they can benefit habitat connectivity on a local basis. Our technical assistance contractors and SCI partners with land use planning expertise will assist these organizations in integrating these concepts into land use planning tools that include: town & regional plan language on the importance of habitat protection and connectivity values, zoning and subdivision ordinances, and habitat connectivity overlay districts. Overall, the skills of the local wildlife and community interest groups, other stakeholders, and landowners will be improved so they can more effectively support implementation of a broad range of conservation activities related to wildlife and habitat connectivity. We have created a number of technical assistance guidance resources (documents, fact sheets, etc) that will be of great value to Phase 2 technical assistance work. Overall, our last three years of work have allowed us to field-test our methods of providing technical assistance to achieve conservation gains in a private lands setting, enabling the partnership to maximize our effectiveness.
3. **Land protection:** Help land trusts protect at least 40,000 acres within important priority crossing areas and habitat connectivity "stepping stones," within the linkages, through the provision of technical assistance and financial assistance for land protection administrative costs. Sophisticated fine-scale targeting of land protection work is enabled by the conservation science work completed in Staying Connected's Phase 1, with further refinements achieved from objective #1 above. Other enabling factors are the cumulative effects of three years of locally focused technical assistance efforts. Under Phase 1 we developed a local network of landowner and organizational contacts that are aware of SCI and its objectives. We anticipate these factors will facilitate increased land protection success under this proposal.
4. **Road Barrier Mitigation:** On key wildlife road crossing segments in linkages, assess and inventory existing culverts and bridges for wildlife passage potential and refine and expand our understanding of fine scale functional connectivity. Specifically, we will engage in a suite of linkage-level approaches and activities, customized to meet linkage-specific needs. Most pressing needs include understanding the potential of roadway structures (i.e. culverts and bridges) to allow for wildlife passage, understanding of functional connectivity on key road segments (through Objective #1), integrating existing analyses of structural and functional connectivity into the respective state transportation agency's road corridor review processes, infrastructure improvement plans, and existing processes developing BMPs for road corridor management, and creating animal movement-facilitating structures within bridges/culverts. This work proposed under Phase 2 builds on work from the previous three years of Staying Connected, which included initial work to identify road corridor-level functional connectivity within 3 of our linkages.

**Cross-Cutting Objectives:** these four objectives will benefit all of the targeted linkage areas.

5. **Transportation:** Facilitate dialog and exchange of ideas between the four state transportation agencies and the SCI partnership to raise the profile of habitat connectivity as an issue of importance. While considerable work was done in Phase 1 of SCI with each of the separate state transportation agencies in the region, the focus of this objective concentrates on fostering communication between agencies to facilitate the universal incorporation of lessons learned and systems developed in to respective agency road corridor planning and management/maintenance processes. We expect to develop an implementation plan for designation and adoption of BMPs within each state and across all four Agencies of Transportation. We will also explore the use of special designations for road corridors for wildlife connectivity to help brand and bring awareness to the Staying Connected Region. This effort could also be leveraged to help bring in funding for additional transportation infrastructure improvements.
6. **Monitoring and Evaluation:** Develop a framework for assessing functional connectivity. Over the last three years, our Monitoring and Evaluation group developed a robust framework for monitoring structural connectivity across the linkages. Functional connectivity is more difficult to assess, requiring more intensive field work and varied methodology, but critical for understanding which areas wildlife are actually using. Development of this framework allows us to put the pieces of functional evidence we've collected so far (professional road tracking, citizen science wildlife road tracking) as well as new methodologies into a consistent structure applied across the region.
7. **Climate Change:** Improve our ability to describe and represent habitat connectivity conservation as a climate change adaptation strategy. Specifically, we will provide technical assistance to Staying Connected partners on climate change science and communication strategies to refine our project messaging. Climate change is one of the principle threats that coalesced and focused the partnership around the need for addressing habitat connectivity. But over the course of Phase 1, it became apparent that few organizations were actually capable of adequately incorporating climate change adaptation in their technical assistance work. This objective addresses this gap and also provides technical assistance to non-SCI regional-level conservation partners so they too can better integrate habitat connectivity as a climate change adaptation strategy.

## Approach

Detailed approaches for implementing the within-linkage objectives for each of the five priority linkage areas (combined in Project 1) and the four cross-cutting strategies (separate Projects) are provided in the following project plans and included in the Appendices of this document:

Project 1: Linkage work

- 1.1 Securing and restoring habitat connectivity between the Tug Hill Plateau and the Adirondack Mountains (NY)
- 1.2 Protecting habitat connectivity between the Adirondacks Mountains and the Southern Green Mountains (NY-VT)
- 1.3 Protecting & enhancing habitat connectivity between the Northern Green Mountains in Vermont to Sutton Mountains of Canada
- 1.4 Protecting & enhancing habitat connectivity between Northern Green Mountains to the Northeastern Highlands (VT)

1.5 Enhancing & securing habitat connectivity between the Northeastern Highlands across northern New Hampshire to Maine (VT-NH-ME)
1.6 Vermont Multi-Linkage Connectivity Work
Project 2: Cross-Cutting Connectivity Strategy: Transportation
Project 3: Cross-Cutting Connectivity Strategy: Monitoring & Evaluation
Project 4: Cross-Cutting Connectivity Strategy: Climate Change Technical Assistance
Project 5: Project Administration, Management & Coordination

**Project 1 Within-Linkage Work:**

Staying Connected has realized considerable success by developing an approach with multiple components (Conservation Science, Technical Assistance, Land Protection & Road Barrier Mitigation) provided by different partners, but still allowing for flexibility and regional variations necessary to implement across a diverse cultural landscape. The following is a summation of the suite of tools Staying Connected has developed for continued work within our linkages.

The project plans in the appendices detail what mix of these tools is being deployed in each linkage.

**Conservation Science**

Staying Connected invested heavily in conservation science in the last three years (phase 1). The dividends of this investment are now poised to be compounded in our proposed work, evidenced in the way this proposal is more focused on implementation-oriented activities, building on the science we have already accumulated. Yet there remains a small but critical set of conservation science needs that we seek to fulfill in this grant with the following approaches:

- Inventory and assess culverts and bridges in key road crossing areas for wildlife crossing value and remediation needs. (Projects 1.2, 1.3)
- Work with new and existing partners to acquire relevant tracking, telemetry, and other wildlife location data. (Projects 1.2, 1.3)
- Synthesize these new data sets by refining existing Staying Connected models, mapping, and spatial priorities. (Project 2)
- Verify priority crossing areas identified in Phase 1 to determine their level of actual use by various wildlife species and taxa (Projects 1.2, 1.3,)

**Technical Assistance**

Staying Connected has deployed Technical Assistance Coordinators within habitat linkages to provide technical expertise to local governments, land use planners, landowners, and organizations. Their role is to communicate the importance of habitat connectivity, engender enthusiasm and support for locally based habitat connectivity conservation, and in coordination with project partners provide assistance on town planning and landowner efforts that help protect wildlife connectivity. Technical assistance is critical to the success of Staying Connected – it links project partners to on-the-ground conservation work, bringing the expertise and capacity of partner organizations to bear when needed to complete local land use planning and land protection projects.

In Phase 1, this approach has proven its value by helping regional and town governments to develop specific comprehensive plan language and bylaw changes reflecting the needs of

wildlife habitat connectivity. In some cases, we've also been able to work more closely with the Agencies of Transportation on identification of key road sections and infrastructure as a result of our technical assistance capacity. It has also helped to connect locally based conservation organizations and landowners to our land protection partners resulting in broader engagement in land protection strategies in the linkages. Additionally, under Phase 1 we developed and refined a number of outreach materials for municipalities, landowners, and interested citizens that will continue to be applied across the Staying Connection region, and conducted a number of Community Values Mapping sessions with communities in the region. In Phase 2 we will make further use of the results of these efforts and overlay important wildlife areas with areas with other high values (recreation, open space, etc.) to help further inform land use planning.

We propose to maintain this critically important town-by-town approach (and in some cases regional planning organizations) in Phase 2 by employing a strategic approach in which we target specific communities located in key wildlife connectivity areas that are most receptive to receiving technical assistance. Work in Phase 1 has helped us to refine our project area (see Map 2) for maximum impact with respect to technical assistance and other tools, and to learn where the best opportunities lie. Our Phase 2 approach to technical assistance is well-informed by our experience over the last three years, and likewise our experience has refined our efficiency and effectiveness at working towards these project objectives.

Approaches for Technical assistance in habitat linkages:

- Work with municipal planning commissions to incorporate model language for connectivity conservation into town plans, zoning bylaws and subdivision regulations (Projects 1.2, 1.3, 1.4, 1.6)
- Work with municipal planning commissions to review or propose planning and zoning policies or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat. (Projects 1.2, 1.3, 1.4, 1.6)
- Offer wildlife and connectivity – themed community outreach events within the linkage areas to engage communities and residents in Staying Connected to encourage local enthusiasm and support for connectivity conservation. (Projects 1.2, 1.3, 1.4)
- Further analyze Community Values Mapping data (compiled in Phase 1) to identify areas of overlap between community interests and habitat connectivity conservation. (Project 1.3)
- Explore new partnerships aimed at gaining further community involvement (Projects 1.1, 1.2, 1.3, 1.4, 1.5)
- Facilitate the organization of a network of private forestland owners in important linkage "stepping stone" habitats to collaboratively produce shared private lands forest management plans that incorporate habitat connectivity conservation. (Projects 1.2, 1.3)
- Conduct regional workshops and webinars on the range of connectivity conservation options and priority action steps available to municipalities and regional planning commissions. (Projects 1.2, 1.3, 1.4, 1.6)

**Land Protection**

As the vast majority of land in the Staying Connected region's habitat linkages is held in private ownership, land protection remains a key strategy in Staying Connected's approach. Prospecting efforts and technical assistance over the last three years as well as research on model language

for easements that protect connecting land provides a sound basis for increased and more focused effectiveness for protection efforts included in this proposal. We anticipate being able to reach the following land protection goals through donated easements and fee purchase.

- 1,000 acres in Project 1.1
- 2,000 acres in Project 1.6 (of which 850 ac will be within Project 1.2, 850 ac are will be within Project 1.3, & 300 acres will be within Project 1.4)
- 39,800 acres in Project 1.5

**Road Barrier Mitigation**

It is critically important to address interaction between the transportation network and the network of connected habitat, especially within priority habitat linkages. The Staying Connected Initiative's approach addresses this interaction at multiple scales. In Phase 1, our linkage-scale Road Barrier Mitigation approach has involved partners from individual linkages, with the involvement of statewide partners working directly with state transportation agencies to identify and prioritize within-linkage priority crossing areas. Under this proposal, we seek to focus inventory work on transportation infrastructure within priority connecting lands to assess its fitness for moving wildlife.

- Inventory and assess culverts and structures within linkages for wildlife passage suitability. (Projects 1.1,1.2, 1.3)
- Identify road segments that provide the best opportunities for wildlife crossing barrier mitigation through wildlife use patterns, and surrounding road corridor habitat. (Projects 1.1,1.2, 1.3, 1.4)
- Extend field verification/development of road mitigation plans. (Project 1.5)
- Engage state transportation agencies and town road departments to include connectivity objectives in transportation planning and road maintenance. (Projects 1.1,1.2, 1.3, 1.4, 1.5, 1.6)
- Develop draft mitigation recommendations for SCI key wildlife road crossing areas in SCI linkages to state transportation agencies and local road department staff, including final report(s) and maps, and targeted supporting presentations. (Projects 1.1,1.2, 1.3, 1.4)
- Develop a specific strategy for implementing, on priority road segments within Vermont linkages, the recommendations from the Transportation and Wildlife BMP Manual that will be delivered to the Vermont Agency of Transportation during the first quarter of 2012. (Project 1.6)
- Identify potential cost share opportunities to offset costs of installing wildlife friendly transportation infrastructure by tapping state/federal/other funding pots available for mitigation. (Projects 1.1,1.2, 1.3, 1.4)
- Create a comprehensive assessment of a town's road network for critical connectivity areas, with recommendations to the planning commission. (Project 1.2)

**Project 2: Transportation Cross-cutting Strategy**

In the first phase of the Staying Connected Initiative's work, important transportation work occurred within each of our linkages between individual linkage staff and that state's agency of transportation to address specific areas of concern for wildlife habitat connectivity. More of this

linkage-scale and in-state transportation work is proposed in Project 1. But there is also an outstanding opportunity and over-arching need to facilitate communication between the various state and local agencies of transportation in the interest of tailoring SCI's linkage-based approach to the regional scale transportation network. We developed this cross-cutting project to address this need by increasing communication, information-sharing, and exploration of collaborative opportunities among the four states' agencies of transportation.

- Outreach and consultation with relevant state and Federal agencies (DOTs, Federal Highway Administration, USFWS, State Fish and Wildlife Departments, Regional Planning Commissions, etc.) to:
  - Elevate the importance of habitat connectivity and need to consider the regional scale in addressing this
  - Share current experience and ideas on enhancing connectivity through transportation planning BMPs
- Explore options for coordinated work around connectivity and transportation corridors, including: e.g., potential special designation of routes passing through significant connectivity areas; addressing connectivity within one or more Scenic Byways.
- Integrate linkage maps to provide a draft regional picture of where priority roads might be located.
- In consultation with relevant partners/agencies, draft a blueprint for how a regional approach (e.g. special designation concept) might work, including: options for funding, draft designation criteria, management standards, educational and outreach components.

**Project 3: Monitoring & Evaluation Cross-Cutting Strategy**

Building on monitoring and evaluation work in Phase 1 of SCI, specifically the development of a Regional Measures Framework focused on structural connectivity, we will begin to scale our efforts down into finer-scale monitoring of functional wildlife connectivity. We will conduct an inventory and needs assessment of the current major regional wildlife monitoring projects ongoing in the Staying Connected region (i.e., camera trapping, hair snaring, track plates, GPS collaring) and work closely with those partners to begin to form a framework to be applied across the entire region. We anticipate consulting with UVM Ph.D. candidate Laura Farrell to evaluate methodologies that will provide the most robust information on wildlife movement and the most efficient means to obtain and organize local-scale information across a the 4-state region. Other important elements of our approach include:

- Identifying the most important locations for fine scale monitoring, starting with an examination of critical road crossing areas within linkages that have been identified in the Phase 1.
- Cross referencing wildlife use data with fine-scale landscape features, such as "networked" hedgerows, forested habitat, passable culverts, wetlands and other habitat.
- Developing a unifying technique that ranks, on a fine scale, factors such as "habitat network connectedness" and "road permeability" in and around road segments.
- Provide mechanisms for data sharing across all linkages and projects

**Project 4: Climate Change Cross-Cutting Strategy**

This project focuses on training SCI staff and partners on climate change concepts and how to appropriately integrate these concepts into their technical assistance work at the local level. Furthermore our approach reaches out to regional-scale conservation groups to provide trainings

on these topics. Our objectives to provide technical assistance on climate change science will be achieved through providing new climate-change oriented training opportunities and development of resource materials.

- Produce and distribute Adapting to Climate Change ~ A Layperson's Guide that describes/discusses why habitat connectivity is an essential adaptation strategy.
- Convene a statewide workshop in each SCI state to address climate change adaptation in the region and showcase habitat connectivity as an essential adaptation strategy.
- Host a webinar for the state-wide coalition of conservation commissions in three of the four states in the SCI region (Association of Vermont Conservation Commissions, New Hampshire Association of Conservation Commissions, Maine Association of Conservation Commissions) addressing climate change adaptation and describing/discussing why habitat connectivity is an essential adaptation strategy.
- Host a webinar with SCI partners and key stakeholders on the emerging Regional Vulnerability Assessment and its impacts on land acquisition strategies/targets in the SCI region.
- Host a technical workshop at the NEAFWA 2013 Annual Meeting showcasing climate change adaptation and describing/discussing why habitat connectivity is an essential adaptation strategy.

## Approach at-a-glance

| **Project** *(Follow link to budget information in Appendix H)* | **Activities** | **Results** | **Key Personnel** | **Partners** ***Bold*** *is receiving SWG $ and/or providing match.* |
|---|---|---|---|---|
| 1.1- Tug Hill Plateau to the Adirondack Mountains (NY) | Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • Technical Assistance to improve town and regional land-use policies<br>• 1000 acres of priority connecting lands<br>• Technical assistance to NY Agency of Transportation | Dirk Bryant, Zoe Smith, Joe Racette, Katie Malinowski | **The Nature Conservancy NY, Wildlife Conservation Society, Tug Hill Commission , Tug Hill Tomorrow,** Department of Environmental Conservation, New York Department of Transportation, |
| 1.2- Adirondacks Mountains to the Southern Green Mountains (NY-VT) | Conservation Science<br>Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • Citizen Science Tracking<br>• Technical Assistance to improve town and regional land-use policies<br>• Land Protection of priority connecting lands<br>• Town road assessment for connectivity<br>• Culvert retrofits<br>• Technical assistance to Agency of Transportation<br>• Private forest lands management for connectivity | Paul Marangelo, Dirk Bryant, Zoe Smith, Joe Racette; Jamey Fidel, Siobhan Smith | **The Nature Conservancy VT**, **Adirondack Nature Conservancy and Land Trust,** The Wildlands Network, Vermont Land Trust, Vermont Natural Resources Council, The Wildlands Network, Wildlife Conservation Society**,** Department of Environmental Conservation, New York Department of Transportation, Vermont Agency of Transportation, Vermont Department of Fish & Wildlife, |
| 1.3- Northern Green Mountains in Vermont to Sutton Mountains of Canada | Conservation Science<br>Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • Citizen Science Tracking<br>• Technical Assistance to improve town and regional land-use policies<br>• Land Protection of priority connecting lands<br>• Technical assistance to Agency of Transportation | Conrad Reining, Kate Wanner, Jens Hilke, Jamey Fidel, Siobhan Smith | **The Wildlands Network,** Vermont Natural Resources Council, Vermont Land Trust, The Nature Conservancy VT, Vermont Department of Fish & Wildlife, |

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|---|---|---|---|---|
| 1.4- Northern Green Mountains to the Northeastern Highlands (VT) | Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • Technical Assistance to improve town and regional land-use policies<br>• Land Protection of priority connecting lands<br>• Technical assistance to Agency of Transportation | Jens Hilke, George Gay, Jamey Fidel, Siobhan Smith | **Vermont Department of Fish & Wildlife,** Vermont Land Trust, Vermont Natural Resources Council, The Nature Conservancy VT, Vermont Agency of Transportation |
| 1.5- Northeastern Highlands across northern New Hampshire to Maine (VT-NH-ME) | Conservation Science<br>Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • Field data incorporated into models<br>• 3 Tech Assistance events<br>• Partnership to extend TA<br>• Landowner outreach materials<br>• 39,800 acres of priority connecting lands<br>• Field verification of wildlife movement<br>• Work with Scenic Byways | Doug Bechtel, Phil Huffman, JT Horn, Jens Hilke | **The Nature Conservancy NH, The Nature Conservancy VT, Trust for Public Land, New Hampshire Fish & Game Department,** Vermont Land Trust, New Hampshire Department of Transportation, Vermont Department of Fish & Wildlife, Maine Department of transportation, Maine Department of Inland Fisheries & Wildlife |
| Project 1.6 Vermont Multi-Linkage Connectivity Work | Technical Assistance<br>Land Protection<br>Road Barrier Mitigation | • 2,000 ac of priority connecting lands<br>• Technical Assistance to improve town and regional land-use policies<br>• Technical assistance to Vermont Agency of Transportation | Conrad Reining, Jamey Fidel, Siobhan Smith | **Vermont Land Trust , Wildlands Network, Vermont Natural Resources Council** |
| 2- Transportation Cross-Cutting Strategy | Technical Assistance<br>Road Barrier Mitigation | • Coordination of four agencies of transportation<br>• Explore use of new tools (linkage designation and associated signage) | Dirk Bryant, Jens Hilke, Paul Marangelo, Conrad Reining | **The Nature Conservancy NY, The Wildlands Network, The Nature Conservancy VT,** Vermont Department of Fish & Wildlife, Vermont Agency of Transportation, New York Department of Transportation, New Hampshire Department of Transportation, Maine Department of Transportation |
| 3- Monitoring & Evaluation | Conservation Science | • Framework for Functional Connectivity<br>• Evaluation Conference for SCI partners | Conrad Reining, Dan Coker | **The Wildlands Network, The Nature Conservancy ME,** |
| 4- Climate Change Cross-Cutting | Technical Assistance | • Technical assistance to SCI partners<br>• Technical assistance to regional-scale partners<br>• Development of TA materials | George Gay | **National Wildlife Federation** |
| 5-Project Administration, Management & Coordination | Project management | • Overall project management | Phil Huffman. Jens Hilke | **The Nature Conservancy VT**, Vermont Department of Fish & Wildlife |

## Expected Results & Benefits

### Short-term (w/in 10 years)

- At least 42,800 acres of ecologically important land will be protected in key linkage areas and around priority road crossings
- At least 7 towns will develop model approaches to strengthen connectivity through land use planning. Approaches will include adopting model town plan language,

creative zoning or subdivision bylaws to promote connectivity, or creating a wildlife overlay district to recognize the importance of habitat connectivity.

- At least two regional planning commissions will adopt model language in their regional plans recognizing the importance of habitat connectivity.
- Local planning commissions and selectboards will have the knowledge, skills, support and motivation to augment their town plans, zoning and planning policies to protect and restore vital wildlife habitat and linkages within their towns, and to work with local landowners and neighboring towns to do the same.
- Regional planning commissions will have the knowledge, skills, support and motivation to augment their regional plans, and provide their own technical assistance to municipalities encouraging protection of vital wildlife habitat and linkages.
- Multiple strategies for protecting habitat connectivity at the local level will be implemented through establishment of town forests, land acquisition, conservation easements, best practices on timber and agricultural lands, and development in towns and municipalities.
- Trans-border connectivity conservation work within the Northern Appalachians will be supported by creating and sharing information, data and relevant planning tools across the US- Canadian border.
- Communication will be increased among the four agencies of transportation and among the four fish & wildlife departments related to the importance of habitat connectivity and specific high priority wildlife crossing areas.
- A greater understanding of new climate science among Staying Connected Partners will be generated and new tools for integrating that understanding into appropriate technical assistance delivery will be developed.

**Long-term benefits (greater than 10 years)**

- Increases in viability of SGCN in terms of species richness and population through the increase in size of habitat blocks and in the number of potential home range sites. Linkage habitat itself will support actively reproducing populations of some side-ranging SGCN.
- Increased species persistence through improved movement of otherwise isolated populations, and greater opportunities to re-establish populations after local extirpations.
- Improved genetic exchange throughout the ecoregion leading to greater genetic variability and increased species resilience to environmental change.
- Improved chances for successful dispersal of offspring across the landscape.
- Diminished risk of extinction of local and meta-populations from catastrophic events and/or long-term environmental change.
- Better functioning ecosystems by facilitating predator presence in habitat fragments to prevent irruptions of prey populations and the negative impacts those irruptions can trigger.
- Decreases in the wildlife mortalities, vehicular damage and injuries to humans through improved wildlife road crossings and new road design and placement.
- Reduced potential for the spread of invasive exotic species.
- Wildlife populations that provide a wide range of opportunities for recreational enjoyment will be enhanced through habitat protection actions.

- Through education, direct outreach and local and regional press coverage of the newly protected properties and connectivity efforts of the partners, increased regional and international recognition of the importance of these linkages will be achieved, which will garner further support for conservation and engender additional future conservation opportunities.

## Monitoring

We intend to take full advantage of Wildlife TRACS in the tracking and reporting of project actions and project outcomes. Wildlife TRACS, a geospatial mapping and decision support tool for "Tracking and Reporting Actions for Conservation of Species," is in-development by USFWS Federal Aid. TRACS's roll-out is expected in August 2012. It can serve as a foundation for the following project monitoring efforts

**Monitoring of project outcomes** will occur through three interrelated processes.

1. The Northeast Regional Monitoring and Performance Reporting Framework (Framework), a project of the Northeast Association of Fish & Wildlife Agencies, has identified eight landscape-level monitoring targets and associated indicators for the 13-state region which includes ME, NH, NY and VT.
2. Regular revisions to states' Wildlife Action Plans will provide consistent and ongoing opportunities for each of the partnering states to assess the status of SGCN and their habitats.
3. The Nature Conservancy has developed and maintains an annually updated, integrated database of conserved and public lands across the Northern Appalachian Ecoregion (and beyond). This database incorporates protected lands data from all four states as well as adjacent Canadian provinces. ,It will help track progress toward protecting priority linkages over time.

**Monitoring of project activities:** We have also developed two processes specifically for monitoring and coordinating the grant and project-level activities associated with this grant.

4. Project 3 includes a Monitoring and Evaluation Group (MEG). In the last three years (phase 1), the MEG developed a robust monitoring framework for structural connectivity at a course scale (i.e. individual linkage). This work uses the 2006 National Land Cover dataset as well as Mark Anderson's Resistant Kernal analysis as the baseline (Anderson, M. G., and C. E. Ferree. 2010. Conserving the stage: Climate change and the geophysical underpinnings of species diversity. Public Library of Science ONE 5 DOI:10.1371/journal.pone.0011554). 2011 land cover data will not be available until 2015, so immediate implementation of this framework is not possible. The MEG will develop a fine-scale monitoring framework based on functional connectivity that will allow us to assess the effectiveness of fine scale permeability at the scale of an individual road section or bridge or culvert. This framework will incorporate citizen science that has been developed under our technical assistance efforts, as well as professional data collected linkage by linkage. Together, these monitoring frameworks ensure that our desired impacts are focused and efficient, that they can be readily measured at multiple scales, and that they can be reported in fashion that is understandable to our partners and a broader public alike. It will supply data to support the Framework noted in monitoring process 1 above.

5. Project Administration, Management & Coordination section (below) describes how we will: a) coordinate financial management of the grant; b) ensure that all deliverables are submitted on time and all grant requirements are met; and, c) coordinate ongoing communications.

## Project Administration, Management & Coordination

**Administration:** Vermont Fish & Wildlife Department will submit the grant to USFWS Federal Aid and serve as grant administrator. The Nature Conservancy (through its Vermont Chapter) will serve as a sub-grantee, and will serve as the primary contractor, and will provide oversight and project management for the projects and activities outlined herein. The Nature Conservancy will subcontract with the other partners listed in the projects that accompany this proposal. All contractors will be required to submit quarterly financial reports and yearly interim reports. See Project 5 in the Appendix for more detail, including the budget, on this aspect of our work.

**Management:** Staying Connected has developed an effective system for project management at all the scales we work at. Overall project management is the responsibility of the Nature Conservancy Vermont chapter and is paid for through a portion of the SWG allocation (See Project 5 for budget information) that includes staff time for coordination and hosting meetings, Basecamp (our online project management software), printing costs, conference call lines and other expenses. We hold regular meetings at three scales; four-state, state and linkage specific.

- The overall project manager convenes quarterly conference calls of our Four-State Steering Committee that includes all project leaders, including each linkage project leader, each cross-cutting project leader, & representatives from Fish & Wildlife. This group is the ultimate decision-maker for the project and deals with all issues that affect all four states.
- Additionally, states with more than one linkage hold quarterly meetings of Staying Connected partners (e.g. Staying Connected Vermont). This group is responsible for making decisions related to the direction of the partnership in that state and the linkages within it, but ultimately reports to the four-state Steering Committee.
- Each linkage project manager also organizes regular meetings (e.g. Greens to Adirondacks Linkage meetings) to make decisions that involve only that linkage. At the linkage-specific meetings, additional collaborators are always involved. These local collaborators (e.g. a local rod and gun clubs, conservation commissions or regional planning commissions etc.) are not specifically mentioned in this grant because they receive no SWG funds, but it should be known that the partnership at this scale is leveraging the work of perhaps 100 additional local organizations.
- Linkages that have specific technical assistance coordinators (Greens to ADK, North Greens & Greens to Northeastern highlands) have weekly meetings between the linkage manager and the linkage coordinator to ensure effective and strategic deployment of technical assistance.
- Additionally, the Monitoring and Evaluation Group (See Project 3) is responsible for hosting a Staying Connected conference to evaluate the effectiveness of each phase of SCI's work. The first phase of SCI's work will be evaluated at our conference on February 13 & 14, 2012 and another conference is planned for the end of Phase 2 in 2015.

The Nature Conservancy (TNC) has extensive experience managing and administering federal grants. It has developed a strong system of protocols and practices and an experienced and professional grant management staff to ensure grant funds are used properly and that all reporting is sufficient and timely. This is evidenced by the following TNC documents:

• Appendix I: TNC's Guidance on Grants Roles and Responsibilities
• Appendix J: a very user-friendly Grantee Welcome Package.

### Federal NEPA, ESA Section 7 and Historic Preservation Act 106 Compliance

The activities proposed in this grant include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe there will be no adverse effect on historic, cultural or environmental resources. Because the scope of the projects in this grant are designed to benefit rare and declining wildlife, we believe that grant activities will have no adverse effect on the federally listed, proposed and candidate species found in the four states. Appendix G shows compliance with the Endangered Species Act Section 7, and Appendix K shows NEPA compliance.

## Ranking Criteria Summary Sheet: A Reviewer's Guide to Staying Connected in the Northern Appalachians

**Applicant:** Vermont Fish & Wildlife Department

**Organizational Capacity Criteria** (19 points total)

| Criterion | Explanation | Page # Section |
|---|---|---|
| 1. Grant application describes how the applicant will coordinate all aspects of work including use of common procedures, data sharing, monitoring, and reporting with partners (0-3 points). | -Four-state, state specific, and linkage specific coordination is ensured under Project Management.<br>-Project 3: Provides Monitoring, Evaluation & data sharing.<br>-Project 4: Provides support services to technical assistance providers | -Project Administration & Management (Project 5)<br>-Project 3<br>-Project 4 |
| 2. Grant application identifies dedicated staff or contractors readily available to implement work (0-3 points). | - 20 partners total: Four state fish & wildlife agencies, four agencies of transportation (ME, NH, NY & VT) and 12 NGO partners<br>- Linkage Coordinators are dedicated technical assistance staff in Project 1 | -Executive Summary Project Partners<br>-Approach at-a-glance<br>- Project 1: Technical Assistance |
| 3. Grant application describes specific Federal compliance issues which need to be addressed and what the State has done to address them to date. It is suggested that the applicant discuss each issue individually (0-3 points). | -The activities proposed in this grant include conservation planning, technical assistance and support for land conservation. No ground disturbing work will occur. We believe there will be no adverse effect on historic, cultural or environmental resources | -Appendix G:Sect 7 ESA list<br>-Appendix K: NEPA compliance<br>-Federal Compliance Statement |
| 4. Grant application describes how Federal compliance requirements can be addressed in a reasonable time and provides an estimated timeline (0-3 points). | -The activities proposed in this grant include conservation planning, technical assistance and support for land conservation. No ground disturbing work will occur. We believe there will be no adverse effect on historic, cultural or environmental resources | -Appendix G:Sect 7 ESA list<br>-Appendix K: NEPA compliance<br>-Federal Compliance Statement |
| 5. Non-Federal match<br>5a. Overall total match amount | Total grant request $1,484,606 (100%)<br>SWG: $999,923 (67%) Non-Fed Match: $484,682 (32%)<br>Details in project budgets 1-5 | Budget Summary<br>Budget Narrative<br>Project Narratives (Appendix H) |

| | | |
|---|---|---|
| 5b. Source | Cash provided by non-Federal entities, and waived costs and in-kind contributions from contractors and other third parties. | Budget Summary<br>Budget Narrative<br>Project Narratives (Appendix H) |

**Technical Scoring Criteria:** Need, Objectives, Expected Results & Benefits, Approach (71 pts)

**Need** - (28 points total)

| Criterion | Explanation | Page # Section |
|---|---|---|
| 1. Grant application clearly describes the need(s) identified in each participating States' SWAP (reference relationship to SWAP, including page numbers or section) or the need(s) is documented as an emerging issue in the grant application to address a critical or unanticipated need such as a wildlife health/disease or climate change issue (0-3 points). | -Need Statement clearly defines habitat fragmentation and climate change as pressing threats that require habitat connectivity for wildlife movement and adaptation<br>- We will implement common actions identified by the four states. Appendix F contains relevant excerpts from the 4 states action plans with page # from each Plan | -Need Statement<br>-Appendix F: Action Plans from 4 States |
| 2. Grant application proposes that each partner (other than the applicant) will implement priority conservation actions identified in the SWAPs … (3 points per partner, maximum of 15 points). | -Our approach involves multiple partners addressing different aspects of this work, all of which are priority actions identified in participating state's action plans | -Approach at-a-glance (shows which partner is doing what)<br>-Approach section<br>-Appendix F: Action Plans from 4 States |
| 3. Grant application directly targets improving the status of SGCN as described in each partners' SWAP (0-5 points). | -At least 41 forest-dwelling and wide-ranging SGCN common to at least three of the four states will benefit substantially from the work described in this grant | - Appendix D: SGCN list |
| 4. Grant application describes critical habitat by geographical location(s) to be improved for SGCN, why they are critical, and is a substantial effort to improve these areas (0-5 points). | -10 habitat types across the four state's action plans will be directly improved as a result of this work | - Appendix E: Habitat Types |

**OBJECTIVES** – (5 points total)

| Criterion | Explanation | Page # Section |
|---|---|---|
| 1. Objectives are distinct, obtainable, and quantifiable or verifiable (for example, the number of stream miles, the number of acres of wetlands, or other type(s) of habitat to be restored; the increase in available habitat for SGCN; or the expected percentage increase in a population of one or more SGCN) (0-5 points). | Grant objectives target (1) enhancing and applying conservation science; (2) protecting key lands, (3) technical assistance to regional and local land use planners and local organizations, and (4) technical assistance related to Road Barrier Mitigation;<br><br>Each linkage-level objective (in Project1) identifies discreet, obtainable objects such as: (1) specific analyses, research, models, reports to advance conservation; (2) target acreages for facilitated land protection (total 42,800 acres); (3) specific communities to be provided tech assistance and to adopt conservation-related land use guidelines; (4) areas and/or roads for transportation tech assistance; and, (5) organizations to receive technical assistance. | -Objectives section<br>-Approach section<br>-Approach at-a-glance<br>-Appendix H: Project narratives |

## EXPECTED RESULTS AND BENEFITS – (10 points total)

| Criterion | Explanation | Page # Section |
|---|---|---|
| 1. Grant application describes …expected short-term benefits ..within a ten-year period (0-5 points). | Short-term benefits are listed in the benefits section.<br>Project-specific short-term benefits are in each project description | -Expected Benefits<br>-Appendix H: Project narratives |
| 2. Grant application describes .. expected long-term benefits...beyond ten years (0-5 points). | Long-term benefits listed in the Longterm benefits section. | -Expected Benefits |

## APPROACH –(28 points total).

| Criterion | Explanation | Page # Section |
|---|---|---|
| 1. Grant application describes the specific types of conservation projects/actions that the States and its partners will conduct…(0-6 points). | The approach section of this document synthesizes all approaches used in each of our linkage areas as well as specific approaches for the cross-cutting strategies. Each linkage's approach is also described in detail in Appendix G: | -Approach section<br>-Approach at-a-glance<br>-Appendix H: Project narratives |
| 2. Projects/actions involve at least one partner from any one of the following entities: other State agencies in the same State as the applicant; other States or their agencies; other countries… (0-4 points). | Implementation of this grant involves **complex and dedicated** participation by at least 20 partners including four state fish & wildlife agencies (ME, NH, NY & VT) and four agencies of transportation.<br><br>In addition, **substantive involvement** will occur with a myriad of local collaborators within each linkage, including municipal planning & conservation commissions, regional commissions, local organizations and landowners. | -Executive Summary Partner List<br>-Approach at-a-glance |
| 3. Projects/actions are accomplished, in part, on private lands…(0-5 points) | We estimate that more than 45% of the total acreage affected by grant activities will be on private lands. | Map 2: Project Sites |
| 4. Project actions are conducted on lands owned or managed by other State or local agencies (including academic institutions owned or managed by the State), Federal agencies other than the Service, or Tribes (0 or 4 points). | Areas within the SCI project area include the Adirondack Park, Green Mountain National Forest, White Mountain National Forest, as well as numerous State Parks and Forests across NY, VT, NH & ME and numerous conservation easements held by states. | Map 1: SCI Project Area (including State and Federally owned land) |

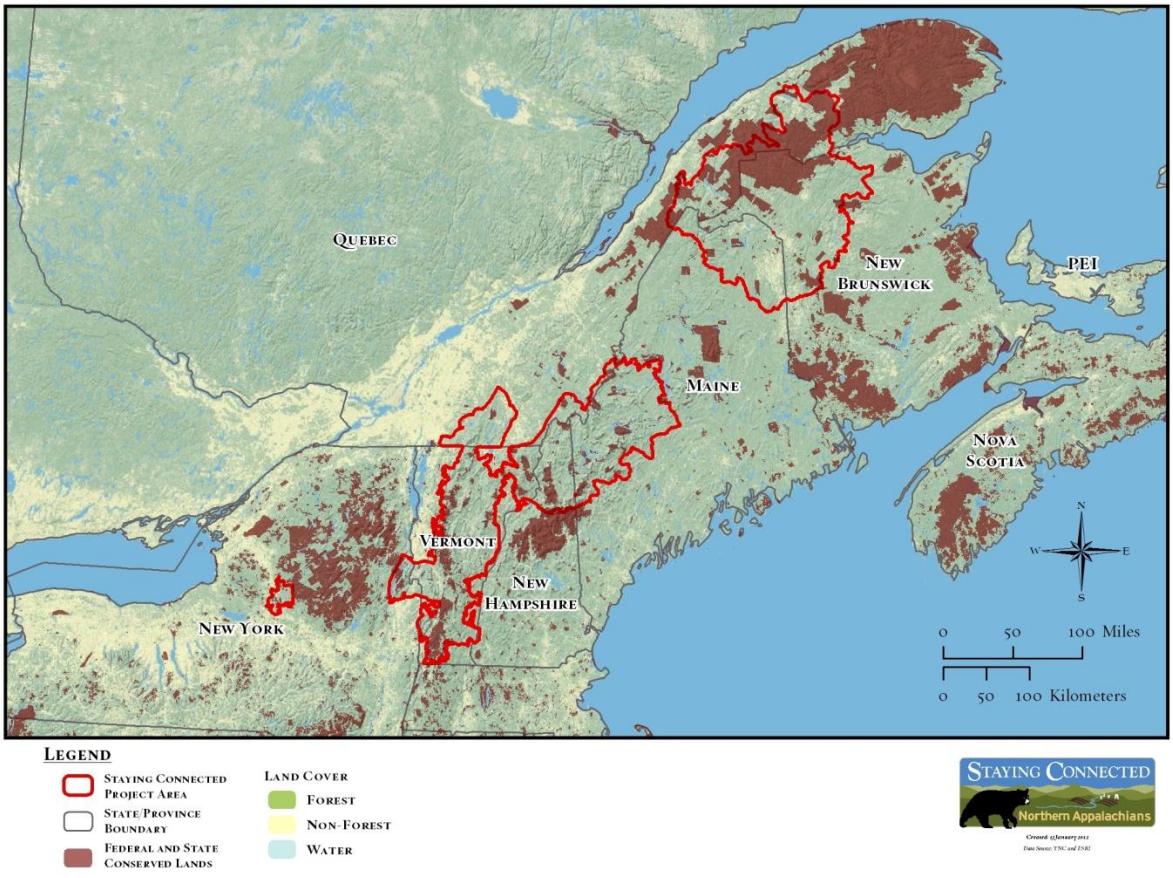
| | | |
|---|---|---|
| 5. The grant application describes a monitoring plan that each participating State or partner will use to ensure SGCN and/or habitats are adequately monitored and evaluated to determine the effectiveness of conservation actions and provide for adaptive management (0-5 points).<br>a. Approach for establishing baseline conditions;<br>b. Monitoring procedures and protocols described;<br>c. Performance measures;<br>d. Roles and responsibilities of each partner; and<br>e. Timeframe for monitoring activities. | Change promulgated by landscape level conservation actions will be monitored through three interrelated processes.<br>1) The Northeast Regional Monitoring and Performance Reporting Framework<br>2) Regular revisions to states' Wildlife Action Plans<br>3) TNC's annually updated database of conservation and public lands across the Northern Appalachian Ecoregion<br>Project 3 (The Monitoring & Evaluation Group) is specifically designed to ensure that data developed throughout the grant is consistent and rolls up efficiently to facilitate monitoring.<br>Baseline conditions with respect to structural connectivity at a linkage scale were established as part of phase 1 (2009) and a monitoring program was established. This proposal further fleshes out our monitoring protocol by adding a framework for functional connectivity | -Monitoring Section<br>-Project 3 Monitoring and Evaluation Objectives<br>-Project 3 Monitoring and Evaluation Approach<br>-Project 3 Monitoring and Evaluation Detailed Project Description |
| 6. The grant application describes how performance reports will clearly document monitoring results and how they will be used for adaptive management for improving future efforts (0-4 points).<br>a. Identifies performance measures relative to monitoring progress toward meeting the objectives.<br>b. Discusses a process that will be used to incorporate data into adaptive management decisions. | The Nature Conservancy's annually updated database of conservation and public lands across the Northern Appalachian Ecoregion. Through Project 3 (Monitoring, Evaluating and Sharing) we will compile and share data, lessons learned to inform adaptive management. | -Monitoring Section<br>-Project 3 Monitoring and Evaluation Objectives<br>-Project 3 Monitoring and Evaluation Approach<br>-Project 3 Monitoring and Evaluation Detailed Project Description |

Total Score Possible = 90 points

Total Score = _____

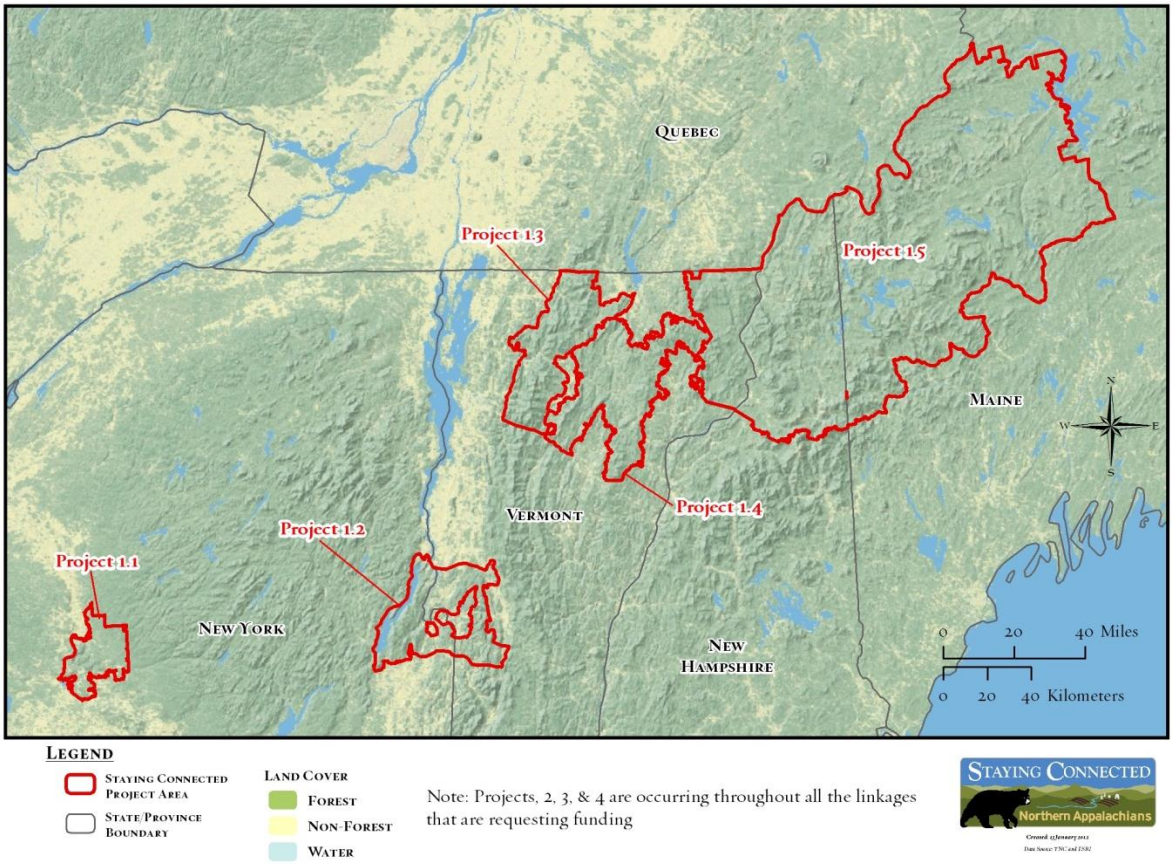
# Appendix A: Maps

## Map1: The Staying Connected Project Area




The map above shows the entire area of interest for the Staying Connected Initiative in Phase 2 of its work. Proposed work in this State Wildlife Grant will **not** occur in this entire project area. See the Map 2: Project Sites Map (below) for detail of areas proposed to receive funding.

## Map2: Project Sites in the Staying Connected Initiative Requesting Funding




This map shows individual linkage areas of eco-regional significance within the Staying Connected Initiative Project Area that are proposing to receive funding. Cross-cutting projects (Projects 2, 3, & 4) will occur in each/all of the linkages identified above. Project 1.6 is a component of the technical assistance & land protection efforts of Vermont linkages and will occur in Projects 1.2, 1.3 and 1.4. Note that bi-national linkages (Projects 1.3 and 1.5) will not be using SWG dollars outside of the U.S.

# Appendix B: Letters of Commitment & Letters of Support

TUG HILL TOMORROW LAND TRUST



ACCREDITED LAND TRUST ACCREDITATION COMMISSION

January 13, 2012

Dan Ashe
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe:

I am writing to confirm Tug Hill Tomorrow Land Trust's commitment, contingent on the SWG II grant being awarded, to implement the proposed land use protection strategy within the ADK-Tug Hill linkage. As part of this work, we will be providing $5,000 in in-kind match for personnel services associated with conservation easement transactions over the 3-year grant period.

Specifically, Tug Hill Tomorrow Land Trust will be working to develop land management guidelines related to connectivity and wildlife habitat protection for private landowners in the linkage areas, host a workshop for landowners in the linkage area focused on land management to complement the guidelines and outreach, partner with BREIA to introduce connectivity objectives into their environmental education programs and complete land transactions, focusing on donation of conservation easements on a n additional 3-4 properties.

We are excited to continue this valuable work in the linkage area. Please feel free to contact me with any questions.

Sincerely,

Linda M. Garrett

Linda M. Garrett

P.O. Box 6063 |Watertown, NY 13601 |315.779.8240
thtomorr@northnet.org|www.TugHillTomorrowLandTrust.org

The Nature Conservancy
Protecting nature. Preserving life.™

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nature.org/vermont

January 19, 2012

Mr. Dan Ashe, Director
U.S. Fish and Wildlife Service
c/o Paul Van Ryzin
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Director Ashe:

On behalf of The Nature Conservancy's Maine, New Hampshire, New York, and Vermont Chapters, I am pleased to provide this letter of strong support and commitment for a Competitive State Wildlife Grant proposal, submitted by the Vermont Fish & Wildlife Department, entitled: ***Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages. Phase 2 of Competitive SWG awarded 2009 (U2-4-R-1).*** The Nature Conservancy (TNC) has identified landscape connectivity as our top priority conservation strategy for the 4-state, bi-national Northern Appalachians ecoregion. With a landscape-scale vision, a robust, diverse, and well-functioning public-private partnership, and a proven track record of accomplishment, the Staying Connected Initiative has all of the foundational elements in place to make major progress in regional connectivity strategy implementation.

TNC has been integrally involved with the first phase of the Staying Connected Initiative. Under a grant agreement with NH Fish and Game, we have: served as the overall project manager and grant administrator; organized and coordinated the partnership of 21 public and private entities; led or participated in the linkage-specific connectivity projects across all four states; and similarly engaged in cross-cutting strategies focused on transportation, model easement language, and developing a connectivity measures framework. As we look ahead to a Phase 2 that builds off of the conservation science, transportation and planning implementation tools, agency and local relationships, and initial land protection outcomes from Phase 1, the Conservancy enthusiastically reaffirms its commitment to the Staying Connected Initiative.

As with Phase 1, TNC staff will be deeply involved in the linkage specific and cross-cutting work in New York, Vermont, New Hampshire, and Maine that is included in this proposal, and in providing overall project/grant/fiscal management and coordination for the initiative. As part of this involvement, TNC will commit a total of $189,636 in non-federal match to the project. This match is expected to include $82,851 in personnel ($58,802 salary, $24,409 fringe at approved rates), $4,520 in travel costs, $1,000 in supplies, $13,000 in other expenses, and $88,265 in indirect costs at our federally negotiated rate (22.55%). An additional $290,047 of non-federal match will be provided by a number of Staying Connected partners through TNC contracts and subawards, as outlined in the budgets and budget narratives for the component projects of this proposal. Each of those partners has provided its own letter of commitment documenting their respective match contributions.

In conclusion, please allow me to reiterate The Nature Conservancy's strong support for the Staying Connected Competitive SWG proposal. The Northern Appalachians ecoregion represents one of the Earth's last intact temperate broadleaf forests, and is a global priority for our organization. The Conservancy, the U.S. Fish & Wildlife Service, and many partners have made extraordinary investments in this region to permanently protect millions of acres of wildlife habitat. We believe that a regional approach to maintaining and enhancing connectivity, as embodied by the Staying Connected Initiative, is the next horizon and a key strategy to cope with habitat fragmentation and the anticipated effects of climate change. We hope that the U.S. Fish & Wildlife Service will look favorably upon the proposal and enable us to continue this vital work. Thank you for your consideration.

Most sincerely,

Robert Klein
State Director and Vice President
The Nature Conservancy, Vermont Chapter

United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 Westgate Center Drive
Hadley, MA 01035

In Reply Refer To:
FWS/Region 5/SA

Memorandum

To: Paul van Ryzin, Grants Specialist, AWSFR

From: North Atlantic Landscape Conservation Coordinator, Region 5

Subject: Competitive State Wildlife Grant Proposal from Vermont Fish and Wildlife

I am writing to support the Competitive State Wildlife Grant proposal *Staying Connected in the Northern Appalachians* being submitted by the Vermont Fish and Wildlife Department on behalf of a broad coalition of partners in the Northeast.

The Northern Appalachians project area incorporates the northern third of the North Atlantic Landscape Conservation Cooperative geographic area which is dominated by the largely intact temperate mixed and deciduous forest. This largely privately-owned northern forest area is under increased threat of fragmentation and this initiative to help maintain connectivity in the Northern Appalachians is both critical and timely. Understanding and addressing habitat fragmentation and maintaining connectivity is a priority for the North Atlantic LCC. The LCC is supporting projects to improve our understanding of regional and local migration and connectivity patterns and identifying priority conservation areas for sustaining Species of Greatest Conservation Need and other wildlife species. The information learned from the application of this science in the Staying Connected initiative will be critical to improving these tools for broader application in the LCC. The project is also consistent with the priorities of the State Wildlife Action Plans in the four states in the project area and the Regional Conservation Needs priorities identified and addressed by the Northeast States through pooling of State Wildlife Grant funds.

This proposal would build on the success and lessons learned of the first phase of this project funded by a Competitive State Wildlife Grant in 2009. The second phase will apply conservation science, provide technical assistance, prioritize and implement land protection and mitigate impacts of roads. It is a great example of the application, translation and use of science to most effectively conserve landscapes to sustain wildlife.

Thank you for the opportunity to provide a letter of support. Please let me know if you have if you have questions or need additional information.

/s/ Andrew Milliken

_____

**State of Vermont**
**Office of the Secretary**
103 South Main Street, Center Building
Waterbury, VT 05671-0301

[phone] 802-241-3600
[fax] 802-244-1102

*Agency of Natural Resources*

January 10, 2011

Paul Van Ryzin
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Re: Proposal for State Wildlife Grant Funding of the Staying Connected Initiative

Dear Mr. Van Ryzin:

As Secretary of the Vermont Agency of Natural Resources, I wish to express my full support for the grant application to continue the Staying Connected Initiative (SCI). This 4-state, multi-organization, conservation partnership represents a unique opportunity for the conservation of wildlife habitat connectivity at a regional, landscape scale. Given the astounding challenges to wildlife conservation associated with climate change, this is the sort of regional conservation partnership that will steer us in the right direction for creating a resilient landscape. One of the most important facets to addressing the effects of climate change on fish and wildlife, is to ensure that habitats remain connected on a regional scale so that these animals may move in response to ecological shifts from changing climatic conditions. SCI is an important opportunity towards addressing this need.

The Vermont Department of Fish and Wildlife has graciously agreed to sponsor this Competitive State Wildlife Grant application because we are a leader in the effort to ensure regional, landscape scale habitat connectivity, and over the last three years of partnering together, it is clear to us that SCI has a proven track record of success and is helping us to meet our goals. Vermont is eager to see SCI grow and accomplish more for habitat connectivity in the northeast region.

I encourage you to approve this grant application based on the merits of this successful conservation partnership to date and the potential for productive growth towards a network of regionally connected habitats. Feel free to contact me directly if you have any questions.

Yours,

Deb Markowitz
Secretary of Agency of Natural Resources

New Hampshire
Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Web site: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
FAX (603) 271-1438
E-mail: info@wildlife.nh.gov

Glenn Normandeau
Executive Director

January 19, 2012

Dan Ashe, Director
U.S. Fish and Wildlife Service
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Director Ashe:

On behalf of the New Hampshire Fish and Game Department (NHFG), I express my support for Phase II of the project "Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages." NHFG will actively participate in this continuing project, specifically as it pertains to the Northeast Kingdom – Northern New Hampshire – Western Maine Linkage.

NHFG has a strong interest in the project's continuation, particularly in the implementation of land protection, technical assistance to communities, and technical assistance to NH Department of Transportation. As a partner in the project, we will commit staff time equal to $2,500 annually for a total of $5,000 for the grant. Through our participation NHFG will be able to contribute to the understanding of significant wildlife corridors in northern New Hampshire.

The project corresponds to strategies in our NH Wildlife Action Plan including mapping potential wildlife corridors and buffers, promoting a transportation working group, and protecting riparian/shore land habitat and other wildlife corridors. Additionally, the project connects with strategies currently being developed for a Wildlife and Habitat Climate Change Adaptation Plan, underway as an addendum to NH's Wildlife Action Plan.

We fully support the proposal for Phase II of this project due to the importance of sustaining wildlife habitat connectivity in New Hampshire and the Northern Forest Region.

Sincerely,

Charles A. Bridges
Wildlife Habitat and Diversity
Programs Administrator

**New York State Department of Environmental Conservation**
**Division of Fish and Wildlife, Region 5**
**1115 NYS Route 86, PO Box 296, Ray Brook, New York 12977**
**Phone:** (518) 897-1291
**Website:** www.dec.ny.gov

Joe Martens
Commissioner

January 12, 2012

Dan Ashe
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe,

I am writing in support of the "Staying Connected" proposal for a second round of regional SWG funding. I have served as the New York State Department of Environmental Conservation (NYSDEC) representative in efforts to secure the Adirondack-Greens linkage as part of that partnership since the project was launched, and look forward to continued engagement should we be awarded a second grant.

The proposed Staying Connected work covered in this proposal is relevant to several elements of our Comprehensive Wildlife Conservation Strategy (CWCS). This includes a focus on enhancing connectivity for New York SGCN-listed species (including American Marten and Northern River Otter), protection of nine habitat types within priority linkages, and the opportunity to address a number of other threats and priority actions described in the CWCS.

Habitat connectivity is an emerging issue in upstate New York which developed in the academic community, and is now recognized as an important concern for natural resource managers in government agencies. The Adirondacks are the largest protected natural area in the Northeast, and the region has been a focus of previous habitat connectivity efforts, but this earlier work was mostly conceptual, and has not identified specific linkage locations or protection opportunities. The Staying Connected project is taking these next steps, building support for habitat connectivity work in the state agencies, and conducting outreach to local communities. At the state level, implementation of this project will address recommended action of the CWCS, and be a component of the climate change adaptation strategy. At the local level, integrating wildlife linkage habitat protection measures into local land use planning is critical to maintain and achieve habitat connectivity in New York.

I hope you will agree that habitat connectivity is an important ecological concern, and Staying Connected has built a successful partnership which is making progress protecting habitat linkages in northern New York.

Sincerely,

Joseph Racette
Lake Champlain Watershed Diversity Biologist

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0041

PAUL R. LEPAGE
GOVERNOR

CHANDLER E. WOODCOCK
COMMISSIONER

January 13, 2011

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

**Re: Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages, Phase 2.**

Dear Mr. Ashe:

On behalf of the Maine Department of Inland Fisheries and Wildlife, I wish to express my strong support for the grant proposal *"Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages, Phase 2."*

The protection and enhancement of habitat connectivity within Maine and across the Northern Appalachian region remains a priority for our department. Continued funding of this important initiative will advance our understanding of the science and measurement of wildlife connectivity in the region, generating new information and tools to bring to our outreach efforts through Beginning with Habitat. This second phase will also directly impact on-the-ground protection of important connecting lands in the western Maine linkage area by providing key funding for the Crocker Mountain project.

Key sections of Maine's State Wildlife Action Plan that are addressed in the current grant proposal include:

- Threats and priority actions for the conservation of forest-dwelling and wide-ranging SGCN in Maine:
    - **Threat** - Loss of connectivity between large blocks; habitat loss and fragmentation associated with development and building of permanent roads; and climate changes as top threats to SWAP Key Habitat types represented in Maine linkage areas Sections 5:244 and 5:245.
    - **Action** – Protect/manage high-value uplands through cooperation with NGOs, local land trusts, municipalities, government agencies, private landowners, and other partners to conserve/manage habitats for priority mammals using fee acquisition,

cooperative agreements, purchase of development rights, tax incentives, cost sharing programs (WHIP, LIP) and improved comprehensive planning. (Action 3). Page 5:227.

- **Action** – Adapt Beginning with Habitat for Use in Towns in Northern and Eastern Maine: Desired Outcomes include maintaining and increasing the number of large blocks of forest and minimizing the impact of roads. Pages 6:31
- **Action** - Protect/manage high-value upland; Create and restore habitat in focus areas through manipulation, augmentation, connecting smaller forest blocks to create large
patches, etc (Action 5). Pages 5:228

Regional initiatives such as Staying Connected that involve a broad range of partners and stakeholders and produce tangible, on-the-ground results are key to the success of State Wildlife Action Plans, especially in these times of very limited resources.

Sincerely,

John Boland
Director, Bureau of Resource Management

VERMONT

**State of Vermont**
**Policy and Planning Division**
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

*Agency of Transportation*

[phone] 802-828-5756
[fax] 802-828-3983

January 12, 2012

Paul Van Ryzin
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr.Van Ryzin:

The Vermont Agency of Transportation (VTrans) strongly supports the State Wildlife Program grant application to continue the next phase of the Staying Connected initiative.

Staying Connected has several direct benefits. Ecological connectivity is a concern for the region's state and provincial transportation agencies. For VTrans making sure the transportation network does not impede wildlife movement is an environmental stewardship responsibility and contributes to making driving in Vermont safer. It is what the public demands and also makes the agency's regulatory responsibilities that much easier by helping to build trust with regulators and environmental stakeholders.

Wildlife, cars and trucks move through the northern forest region regardless of state and federal borders. State and provincial level transportation and environmental entities and partner organizations throughout the region must work together. Staying Connected has a proven track record of tackling regional challenges and providing a valuable forum for the states to learn from each other.

Staying Connected has also identified research priorities, strategic actions, and policy and practice recommendations. The next phase will include implementation of some of these recommendations, thus helping to demonstrate their effectiveness.

VTrans has participated in the Staying Connected research, discussions and forums to date. We look forward to the second phase and hope the Staying Connected initiative receives the resources needed to continue this important work.

Sincerely,

Gina Campoli

Gina Campoli
Environmental Policy Manager

VTrans Working to Get You There
Vermont Agency of Transportation

New Hampshire DOT
Department of Transportation

**THE STATE OF NEW HAMPSHIRE**
**DEPARTMENT OF TRANSPORTATION**

*CHRISTOPHER D. CLEMENT, SR.*
*COMMISSIONER*

*JEFF BRILLHART, P.E.*
*ASSISTANT COMMISSIONER*

Dan Ashe, USF&WS Director
U.S. Fish and Wildlife Service
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

January 13, 2012

Dear Mr. Ashe:

The New Hampshire Department of Transportation (NHDOT) is pleased to express its support for Phase 2 of the competitive State Wildlife Grant Proposal entitled: Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages. NHDOT not only supports the proposal, but also intends to be an active participant in the second phase of this project.

As noted in our initial letter of support, The SAFETY-LU program authorized by Congress in 2005 directs State Departments of Transportation to consult with natural resource planning and protection agencies to compare and coordinate planning efforts and products. We see this project as an excellent opportunity for NHDOT to implement the direction given by Congress, and it is consistent with our agency's commitment to integrating environmental considerations into transportation planning and actions.

Important road segments were identified in Phase 1, from the standpoint of regional connectivity; that is, segments of road where modeling and/or field data indicate that wildlife movement/crossing is an important issue to consider. From Phase 2, we hope to use the results of this effort in combination with the NHDOT 10-year plan to identify areas of important linkages and use this information for appropriate planning, design and mitigation. NHDOT can potentially identify road segments where issues of wildlife connectivity are given greater consideration in planning/engineering/design and in conjunction with permitting agencies, determine appropriate mitigation in the form of funds used for land protection, restoration, signage (e.g., wildlife corridor signs), culvert or bridge enhancement, and other activities that enhance the prospects for connectivity.

NHDOT will contribute to the project by actively participating on the Steering Committee; providing data on NHDOT's short and long-term transportation plans; and assisting with the development and implementation of barrier mitigation strategies. Through this participation, NHDOT will commit to providing staff time as an in-kind match for the project.

We hope that the review committee will look favorably on this proposal for Phase 2. Thank you for your consideration.

Sincerely,

William Cass,
NHDOT, Director of Project Development

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232
www.nysdot.gov

JOAN MCDONALD
COMMISSIONER

ANDREW M. CUOMO
GOVERNOR

January 11, 2012

Dan Ashe
USFWS Director
U.S. Fish and Wildlife Service
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe:

As a multibillion dollar public works agency responsible for the design, construction, operation and maintenance of a 15,000 mile highway system, the New York State Department of Transportation (NYSDOT) welcomes this opportunity to encourage research activities that contribute to responsible environmental stewardship of the natural resources of New York State.

The outcomes of the "Staying Connected Initiative" could better equip NYSDOT to address biological resource concerns proactively, in the planning and management of statewide corridors as well as specific projects, such as highway crossing structure projects or planned routine maintenance.

NYSDOT applauds the effort to apply sound science and solid partnerships to maintain and restore landscape connections across the Northern Forest. The initiative is consistent with ongoing research efforts supported by NYSDOT to address habitat connectivity and biological needs of Species of Greatest Conservation Need (SGCN) as well as the Federal Highway Administration's (FHWA) Eco-Logical approach, which encourages an ecosystem approach to developing infrastructure projects.

NYSDOT looks forward to receiving useful data that could be applied to our transportation and maintenance projects. If I can be of any further assistance, feel free to contact me at (518) 485-5479.

Sincerely,

Debra A. Nelson

Debra A. Nelson
Associate Environmental Specialist
New York State Department of Transportation

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

January 13, 2011

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

**Re: Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages, Phase 2.**

Dear Mr. Ashe:

On behalf of the Maine Department of Transportation, I wish to express my support for the grant proposal *"Staying Connected in the Northern Appalachians: Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages - Phase 2."* I work within the MaineDOT's Environmental Office, and our Director serves on the Steering Committee of Maine's Beginning with Habitat Program. In that capacity, the Office has helped Maine's efforts to increase awareness of habitat connectivity issues especially as related to transportation planning, and road design.

Our Department, working with Beginning with Habitat (BwH) team members, and the Staying Connected Initiative partnership, has recently completed development of GIS models, data, and map products of species - habitat suitability data for 11 focal species that represent a variety of habitats and connectivity issues. From those products, MaineDOT assisted in the development of priority road segment information that was integrated into the BwH undeveloped blocks maps. These are provided to towns and conservation organizations around the state as part of the Beginning with Habitat outreach program. In addition, new interpretive materials addressing road and connectivity issues are being developed to accompany these maps. We are looking forward to the results of the wildlife tracking– habitat modeling study that is currently underway in western Maine. This study, largely funded by SWG Staying Connected phase 1, will help us refine our understanding of wildlife road crossing issues at the site-specific scale.

Funding of phase 2 of the Staying Connected initiative will continue to advance understanding of the science and measurements of wildlife connectivity in the northern Appalachian region, generating new information and tools to help MaineDOT' prioritize expenditure of limited economic and other resources in transportation planning efforts.

Sincerely,

Richard Bostwick
Supervisor of Field Services
MaineDOT -ENV
16 SHS Augusta, ME 04333-0016
207-592-3904 FAX 207-624-3101
richard.bostwick@maine.gov

Two Countries One Forest | Deux Pays Une Forêt

19 January 2012

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Re: Letter of Support for Competitive State Wildlife Grant Proposal Submitted by Staying Connected Initiative

Dear Mr. Ashe:

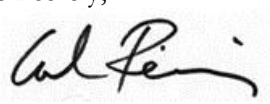
I am writing in support of the proposal, **Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages,** being submitted by the Staying Connected Initiative to the competitive State Wildlife Grant program.

Two Countries, One Forest (2C1Forest) is a Canadian-U.S. collaborative of conservation organizations, researchers, foundations and conservation-minded individuals. Our international community is focused on protection, conservation and restoration of forests and natural heritage from New York to Nova Scotia, across the Northern Appalachian/Acadian ecoregion.

Several of the habitat linkages that are the focus of this proposal fall within Canada, though funds from this grant cannot be used for activities within that country. Two Countries-One Forest can help fill this gap by promoting complementary conservation work in the Canadian portion of the linkages, through its direct efforts and by encouraging support on the part of Canadian governmental and non-governmental organizations. Two Countries-One Forest is particularly active in the Northern Green Mountains to Sutton Mountains linkage, and the "3-borders" linkage that encompasses northern Maine, northwestern New Brunswick and portions of Québec.

Thank you for your consideration. Please contact me at (802) 785-2838 or conrad@wildlandsnetwork.org with any questions.

Sincerely,



Conrad Reining
Member, Board of Directors, Two Countries-One Forest

NATIONAL WILDLIFE FEDERATION

Keeping the Wild Alive

**Northeast Regional Center**

149 State Street, Ste. 1 ▫ Montpelier, VT 05602 ▫ 802.229.0650 ▫ www.nwf.org/Northeast

Connecticut
Maine
Massachusetts
New Hampshire
New Jersey
New York
Rhode Island
Vermont

January 18, 2012

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Re: *Competitive State Wildlife Grant Application – Staying Connected – State of Vermont*

Dear Director Ashe:

The National Wildlife Federation is pleased to provide this letter confirming our match contribution regarding the above referenced proposal.

NWF will support this important initiative by providing technical assistance concerning climate change adaptation and habitat connectivity. As part of our work we will supply $3,185 in goods and services as direct match. It breaks down as follows: $400 in printing costs (700 black and white copies of Layperson's Guide) and approximately 58 hours of NWF staff time @ $50 per hour. NWF's match will be paid by unrestricted funds generated by NWF through membership fees and contributions. These NWF match funds are of non-federal origin.

Thank you very much for your attention to this important matter. Of course, if you have any questions, do not hesitate to contact me.

Very truly yours,

George Gay
Senior Manager, Climate Change Adaptation

WILDLIFE CONSERVATION SOCIETY

ADIRONDACK COMMUNITIES & CONSERVATION PROGRAM

Daniel Ashe
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

January 12, 2012

Dear Mr. Ashe,

On behalf of the Wildlife Conservation Society's Adirondack Program, I am writing in support of the Vermont Fish and Wildlife Department's application to the Competitive State Wildlife Grants Program for FY 12. WCS fully supports the proposed project "Mitigating Fragmentation and Climate Change Impacts on Wildlife through Functional Habitat Linkages: Phase 2 of the Staying Connected Initiative".

WCS recognizes that there is a critical need to protect key linkages for habitat connectivity in this region, especially as patterns of rural land use change and climate change alters our landscape. The work over the last three years of the Staying Connected Partnership demonstrates that multiple stakeholders can work across jurisdictional boundaries to perform landscape level conservation of SGCN in the northeastern United States. We highly recommend that you consider supporting this important effort once again.

As a partner on the proposal, WCS is committed to providing expertise for land use planning and technical assistance to communities within the project's linkage areas. We are also planning to remain involved as a member in the 4-state steering committee of SCI, bringing our leadership and administrative expertise to the project.

WCS has a history of studying the impacts to wildlife from low-density, backcountry development with a specific goal of maintaining large intact forested blocks to protect wildlife habitat and wildlife movement. Over the past three years of the Staying Connected Initiative, we have successfully translated our scientific results into tools for local and regional planning entities presented this to our community partners across the Staying Connected region.

Our WCS science team across North America is studying the issue of wildlife connectivity in places like the High Divide wildlife corridor in MT and ID. Here our scientists are working with highway agencies to ensure safe passage of wildlife across

7 Brandy Brook Avenue, Suite 204, Saranac Lake, NY 12983 tel 518.891.8872 fax 518.891.8875 web www.wcs.org/adirondacks

busy travel corridors and assisting private landowners to conserve wildlife corridors across their property. In western Wyoming, our researchers are leading the effort to secure recognition and permanent protection of the "Path of the Pronghorn", one of the longest large mammal migration corridor remaining in North America. WCS is pleased to provide our expertise as a partner in the proposed project across the 4-state region of the Staying Connected Initiative.

Under the proposed project, WCS will commit $15,000 in non-federal financial assistance in the form of staff time and travel funding for community collaboration in the Tug Hill – Adirondack linkage. Specifically, WCS will provide technical assistance to town boards and planning agencies to implement model approaches to planning and zoning in key connectivity areas. WCS will also provide staff time as match to assist with project planning and execution as a member of the 4-state Steering Committee. WCS will also be available to consult with partners on other elements of the project and present our work at the SCI workshop proposed in this grant application. WCS will perform any required tracking and reporting for the grant and will provide documentation for work completed under this program.

Thank you for your consideration of the proposed project and your commitment to wildlife conservation in the northeastern US. We hope the collaboration and scope of work in the proposal demonstrates the commitment of the partners to achieve conservation of SGCN across the region.

Sincerely,

Zoë Smith
Director

WCS Adirondack Program
7 Brandy Brook Ave. #204
Saranac Lake, NY 12983

518-891-8872

VNRC Vermont Natural Resources Council

COMMON SENSE SOLUTIONS
FOR A CHANGING VERMONT

January 18, 2012

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe:

Please accept this Letter of Commitment from Vermont Natural Resources Council (VNRC) for the proposal titled Staying Connected in the Northern Appalachians: Mitigating Fragmentation and Climate Change Impacts on Wildlife through Functional Habitat Linkages – Phase 2. VNRC is a non-profit organization whose mission is to protect Vermont's natural resources and environment through research, education and advocacy. VNRC is a member of the Staying Connected Initiative and our organization has invested significant resources to assist with technical assistance for land use planning to promote habitat connectivity with Staying Connected partners.

For purposes of this proposal, VNRC will commit to providing a non-federal match in the amount of $10,000 in staff salary/fringe not charged to the SWG to develop materials and perform technical assistance to local municipalities and regional planning commissions to promote habitat connectivity through town plan and zoning improvements. We feel confident making this commitment because we believe this technical assistance will make a difference on the ground in Vermont. Our goal is to help communities develop model approaches to land use planning for connectivity, which is one of the strategies this project will employ to accomplish habitat connectivity across a multi-state region. In addition, it is worth noting that as a compliment to this project, VNRC will leverage $70,000 from the Northeastern States Research Cooperative to work with regional planning commissions to address forest fragmentation (including habitat considerations) throughout Vermont.

The Stating Connected Initiative is the largest regional project VNRC is involved in which includes fish and wildlife agencies and state and federal partners. By bringing diverse organizations together to drive conservation through a multi-pronged and tested approach in our region, we believe this project can achieve functional habitat linkages across a multi-state project area. We hope funding for this project will allow project partners to build on the successful strategies in Phase 1 of the project, and to develop a replicable model for other states to work in a coordinated fashion at the landscape scale to achieve connectivity to mitigate fragmentation and climate change impacts on wildlife.

Please do not hesitate to contact us with any questions.

Sincerely,

Jamey Fidel
Forest and Wildlife Program Director, General Counsel

9 Bailey Avenue • Montpelier, Vermont 05602
PHONE 802/223 2328 • FAX 802/223 0287 • WEB www.vnrc.org • EMAIL info@vnrc.org

WILDLANDS NETWORK

RECONNECTING NATURE IN NORTH AMERICA

17 January 2012

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe:

I am pleased to provide a letter of commitment for the application by the Staying Connected Initiative for competitive State Wildlife Grant funding.

The mission of the Wildlands Network is to ensure a healthy future for nature and people in North America by scientifically and strategically connecting networks of people protecting networks of wildlands. Efforts by the Staying Connected Initiative to conserve landscape connectivity in New York, Vermont, New Hampshire and Maine dovetail strongly with our mission. Wildlands Network is a founding member of the Staying Connected Initiative, and has managed two projects during the first phase of the Initiative's work.

As part of the second phase of work, as proposed in this application, Wildlands Network would act as lead for work in the Northern Green Mountain linkage and the Monitoring and Evaluation cross-cutting project. In this capacity, we commit to providing at least $66,861 in non-Federal matching funds or value of donated services, equipment, or materials. At least $21,000 would come from Wildlands Network staff salaries, travel and supplies not charged against the project. About $40,000 would come from waived fees on the part of technical assistance coordinators. The balance, about $6,000, would come from post-doctoral support, or similar academic research funds, provided to the consulting scientist proposed for the Monitoring and Evaluation project.

Thank you for your consideration. Please contact me with any questions at (802) 785-2838 or conrad@wildlandsnetwork.org.

Sincerely,

Conrad Reining
Eastern Director
PO Box 225
East Thetford, VT 05043
Voice: (802) 785-2838
conrad@wildlandsnetwork.org

THE
TRUST
*for*
PUBLIC
LAND

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Northern
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F. (802) 223-0451

New Hampshire Office
54 Portsmouth St.
Concord, NH
03301
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F. (603) 224-0645

www.tpl.org

January 18, 2012

Dan Ashe
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe,

Please accept this letter of commitment from the Vermont/New Hampshire office of the Trust for Public Land (TPL) for the Competitive State Wildlife Grant being submitted by the Vermont Fish & Game Department. We have been part of the Staying Connected Coalition for the past three years and have succeeded in conserving almost 6,000 acres within one of the high priority Wildlife Linkages. We look forward to seeing this coalition continue, with support from the U.S.F.W.S., to help achieve significant conservation in high priority wildlife linkages and further identify structural connectivity within the Northern Forest.

Specifically, the Trust for Public Land will assist in implementing the land acquisition components within the Northeastern Highlands across northern New Hampshire to Maine. The Trust for Public Land will commit $100,000 in match, all covered by private donations to TPL. This will include $95,000 of staff time (project management and legal) towards the protection of Androscoggin Headwaters (NH), Crocker Mountain (ME), Orbeton Stream (ME) and future potential projects in the Western Maine Mountains. It will also include $5,000 of travel costs in northern New Hampshire and western Maine necessary for the conservation of the above properties.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Rodger Krussman
NH/VT State Director

# Vermont Land Trust

CONSERVING LAND FOR THE FUTURE OF VERMONT

January 18, 2012

8 Bailey Avenue
Montpelier, VT 05602
(802) 223-5234
(802) 223-4223 fax
www.vlt.org

REGIONAL OFFICES

Central Vermont
8 Bailey Avenue
Montpelier, VT 05602
(802) 223-5234

Champlain Valley
P.O. Box 850
Richmond, VT 05477
(802) 434-3079

Northeast Kingdom
P.O. Box 427
St. Johnsbury, VT 05819
(802) 748-6089

Southeast Vermont
and Mountain Valley
54 Linden Street
Brattleboro, VT 05301
(802) 251-6008

Southwest Vermont
and Mettowee Valley
10 Furnace Grove Road
Bennington, VT 05201
(802) 442-4915

Dan Ashe, Director
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Re: Letter of Commitment for Competitive State Wildlife Grants Program Proposal Submitted by Vermont Department of Fish and Wildlife

Dear Mr. Ashe,

I am writing in support of the above-referenced proposal submitted by the Vermont Department of Fish and Wildlife.

The Vermont Land Trust (VLT) is a statewide, member-supported, nonprofit 501(c)(3) land conservation organization operating five regional offices throughout the state of Vermont. VLT's primary focus is on permanently conserving the "working landscape." These lands are the productive farms and woodlands that are vital to Vermont's rural economy. These lands also provide ecologically critical habitats and help protect the quality of surface waters, and VLT incorporates these conservation values into the conservation easements used to permanently protect land. For over three decades, VLT has worked with families, towns, and businesses to protect more than 360,000 acres of forestland from subdivision, fragmentation, and development.

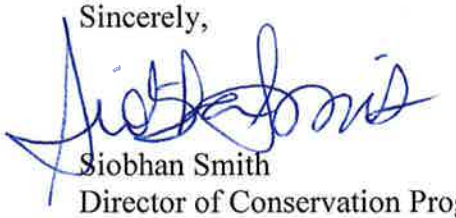
To further its conservation efforts, VLT is a member of the Staying Connected Initiative in the Northern Appalachians. This initiative is focused on safeguarding the habitat of wide-ranging and forest-dwelling wildlife (such as bear, moose, lynx, marten and bobcat) from the impacts of fragmentation and climate change by maintaining and restoring landscape connections across the Northern Appalachians region. The goals of the Staying Connected Initiative and the objectives and outcomes in this SWG proposal directly complement the mission and objectives of VLT. The work proposed in the application within the Vermont linkages are conservation priorities for both VLT and the Staying Connected Initiative.

As an active partner in the Staying Connected Initiative, VLT was a key land conservation partner delivering both land protection outcomes and providing

match to the federal funds under the first SWG grant. In support of this current proposal, VLT is committed to providing $80,000 of cash match. This match will be sourced from a variety of non-federal sources for costs associated with conservation project work in the various Vermont linkages. More specifically, these costs will include VLT staff time for prospecting and outreach efforts within the linkages to generate new conservation projects as well as VLT staff time and associated costs for completion of land conservation projects within the linkages. Associated costs include out of pocket expenses such as title searches, surveys, permits, inspections, appraisals, travel, and the like.

Thank you for your consideration. Please contact me at 802-262-1217 or siobhan@vlt.org with any questions.

Sincerely,



Siobhan Smith
Director of Conservation Programs

NEW YORK STATE TUG HILL COMMISSION

315-785-2380 / 2570 315-785-2574 (fax)
e-mail: tughill@tughill.org website: www.tughill.org

Dulles State Office Building
317 Washington Street
Watertown, New York 13601-3782



January 13, 2012

Dan Ashe
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ashe,

Please accept this letter of commitment from the NYS Tug Hill Commission for the State Wildlife Grant being submitted by the Vermont Fish & Game Department. We have been working on the Adirondack-Tug Hill linkage for the past several years with The Nature Conservancy and a variety of other partners, and are anxious to see this work continue. We have engaged several of our local towns and there is sincere grassroots interest in moving forward with recommendations.

Specifically, the Commission will assist in implementing the land use planning and barrier mitigation components within the Adirondack-Tug Hill linkage, with a value of $10,000 (personnel and travel costs) over the three year grant period. We plan to continue work with several towns on adopting comprehensive plans and relevant guidelines and regulations that take into account habitat values that support wildlife movement. We will also be working with our local town highway departments to help them implement best practices that create more permeable landscapes for a variety of wildlife.

Please do not hesitate to contact me if you have any questions.

Sincerely,

John K. Bartow Jr.

John K. Bartow Jr.

COLD HOLLOW TO
CANADA FOREST LINK

January 16th 2012

Paul Van Ryzin
U.S. Fish and Wildlife Service
Wildlife and Sport Fish Restoration Program
Mailstop WSFR-4020
4401 North Fairfax Drive
Arlington, VA 22203

Dear Mr. Ryzin,

I am writing on behalf of *Cold Hollow to Canada* to express our support for the SWG II grant proposal submitted by the *Staying Connected Initiative* (SCI) for work in the Northern Greens Linkage area. *Cold Hollow to Canada* (CHC) is a regional conservation organization, working toward the goal of land protection, sound stewardship, and wildlife habitat conservation through education and outreach, and by functioning as a conduit for coordination between local conservation commissions, public entities, and non-profit organizations that share our vision of healthy forests and wildlife for future generations in our region.

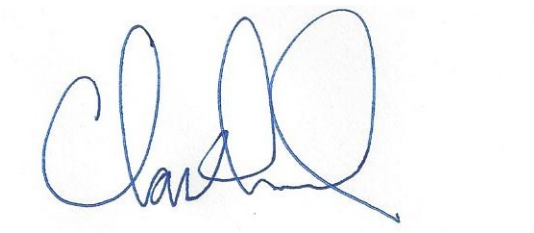
Over the past four years we've worked closely with SCI towards advancing these goals by building greater capacity within our organization, and by partnering to launch a number of programs that engage community members in our vision for the region. These include working with the *Keeping Track* program to train "citizen scientists" in tracking identification and habitat monitoring in an effort to compile data on areas of core habitat to better assist local/regional planning; partnering with the *Vermont Natural Resources Council* to provide technical assistance to our communities in incorporating language into town plans and zoning that accounts for habitat protection and connectivity; and most recently launching the *WildPaths Project* in partnership with SCI, which engages community members in monitoring functional pathways for wildlife in our communities to establish the quality and use of these "connectivity zones" identified by SCI in their work with VT Fish and Wildlife. In partnership with SCI, CHC has also launched a new extension of our existing web presence which allows community members engaged in these projects to upload their data directly and participate in an open source effort to collect data and make it easily available to the public.

The next endeavor that CHC is currently planning is a project to address cross-boundary management in our communities. Working with identified "neighborhood groups" we hope to engage multiple landowners with adjacent parcels to recognize the landscape-level importance of their individual properties and take a holistic view of management that accounts for broader habitat level concerns. The

pilot project, which we hope to launch in 2012, seeks to engage a minimum of three neighborhood groups ranging from 3-5 landowners per group, each group being selected in focal areas of core habitat and connectivity zones. Work will focus on the coordination between existing Forest Management Plans; the identification of opportunities for broad scale wildlife habitat enhancement; improved efficiencies for active management around a broad range of objectives including recreation, forest health and timber production; and an expanded ability to leverage greater cost-share funding from state and federal programs in implementing those practices identified across the different ownerships. We hope to engage these community members as a means to foster a greater appreciation for their land and a recognition of its importance in a regional context. We also hope the project can serve as a model for landscape level collaboration to enhance and maintain wildlife habitat on a landscape level. While permanent protection of these parcels through easements is not a direct objective of the project, we hope that by fostering a greater appreciation among individual landowners we can generate a greater desire to see the land protected, influencing future decision making in forest legacy planning.

The potential funding available through the SWG II grant proposal would greatly increase the feasibility of successfully implementing this project in our region through our partnership with SCI. At present CHC is an entirely volunteer based organization, with the majority of our financial and technical support in project implementation coming from partner organizations like SCI. This comprehensive grant proposal can accomplish much to protect the integrity of the broad eco-region that spans the greater Northern Forest by providing the means to build the foundation of support in our communities that is required for any measure of sustained future success.

Thank you for your consideration.



Charlie Hancock
Chair, Cold Hollow to Canada
www.coldhollowtocanada.org

# Appendix C: Project Leaders

## Project Leaders (Contact Information)

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, jens.hilke@state.vt.us
Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, phuffman@tnc.org
Dirk Bryant, Director of Conservation Programs, Nature Conservancy – Adirondack Chapter, 518-576-2082, dbryant@tnc.org
Joe Racette, NY Division of Fish, Wildlife, and Marine Resources, jaracett@gw.dec.state.ny.us
Zoe Smith, Director, Director, Wildlife Conservation Society Adirondack Program, zsmith@wcs.orgzsmith@wcs.org
Katie Malinowski, Associate Director of Natural Resources, NYS Tug Hill Commission, katie@tughill.org
Paul Marangelo, Conservation Ecologist, The Nature Conservancy-VT. pmarangelo@tnc.org
Conrad Reining, Eastern Program Director, The Wildlands Network, conrad@wildlandsnetwork.org
Doug Bechtel, Director of Conservation Science, The Nature Conservancy in New Hampshire. dbechtel@tnc.org
J.T Horn, Project Manager, The Trust for Public Land, Northeast Office, jt.horn@tpl.org
Barbara Vickery, Director of Conservation Programs, The Nature Conservancy in Maine. bvickery@tnc.org
Dan Coker, Conservation Information Manager, The Nature Conservancy in Maine. dcoker@tnc.org
George Gay, Senior Manager, Climate Change Adaptation Program, Northeast Regional Center, National Wildlife Federation. gayg@nwf.org
Kate Wanner, Project Manager, The Trust for Public Land, Northeast Office, kate.wanner@tpl.org
Jamey Fidel, Forest and Biodiversity Program Director, Vermont Natural Resources Council, jfidel@vnrc.org
Siobhan Smith, Director of Conservation Programs, Vermont Land Trust, siobhan@vlt.org

## Project Leaders (Biographies/Credentials)

**Jens Hilke**, works for the Vermont Fish & Wildlife Department as a Conservation Planning Biologist. He provides technical assistance to towns, regional planning commissions and non-governmental organizations with their conservation planning efforts. This includes help with GIS natural resource mapping, advice on prioritizing significant natural features and help with implementing town conservation goals. Jens helped lead Vermont's Natural Resources Mapping Project and has worked on numerous other conservation biology mapping efforts. Jens did his undergraduate work at Connecticut College in Environmental Sociology and then got a Masters in Botany from the University of Vermont as a Field Naturalist. Jens has taught high school science in Vermont, New Hampshire, and New Jersey and for a study-away program in

Thailand, Southeast Asia. Jens worked as a backcountry park ranger in Canyonlands N.P. in Utah and at rainforest research center in Belize.

**Phil Huffman** is the Director of Conservation Programs for The Nature Conservancy's Vermont Chapter. He leads the chapter's 13-member conservation team that works on land protection, stewardship, and partnership initiatives, and has primary responsibility for cross-boundary collaborations focused on the northern Appalachians, Lake Champlain, and the Connecticut River watershed. He recently took over as the Conservancy's representative to the North Atlantic Landscape Conservation Cooperative Steering Committee. Prior to joining TNC in 2007, Phil worked for ten years as an independent consultant focusing on place-based conservation initiatives that integrate natural and cultural heritage, recreation, and other important community values. He also worked for 8 years as a resource planner with the U.S. National Park Service, developing new models for community-based river conservation in the Northeast under the National Wild and Scenic Rivers Act. He holds a B.A. in Environmental Studies from Middlebury College, and joint Master's degrees in Environmental Studies and Public and Private Management from Yale University.

**Dirk Bryant** is the Nature Conservancy's Director of Conservation Programs for the New York State Adirondack Chapter. During his five years with TNC Dirk has worked on several major land protection projects, securing over 280,000 acres through forest preserve additions and conservation easements. Previous to this, he served as Co-Director of the World Resources Institute's (WRI's) Forest Program. During his 12-year tenure at WRI, Dirk founded Global Forest Watch, a network of non-governmental organizations, universities and other partners who map and monitor forest development and condition across most of the major forested regions of the world. He also led the first map-based assessment of remaining intact forests and historic loss of forest cover (The Last Frontier Forests: Ecosystems and Economies on the Edge, 1997) and of potential threats to the world's coral reefs (Reefs at Risk: A Map-based Indicator of Threats to the World's Coral Reefs, 1998). Dirk has a Masters degree in Environmental Management from Duke University, and served as a Peace Corps fisheries volunteer (Senegal, 1984-6).

**Joe Racette**, Biologist 1 (Ecology), NYS Department of Environmental Conservation. Joe is a Biologist with the NYSDEC in Ray Brook, where he has worked in the Water Quality and Fish and Wildlife Divisions for 16 years. Joe has worked on Bond Act and State Wildlife Grant administration, water quality and wildlife research and monitoring, and technical assistance to municipalities

**Zoe Smith**, Coordinator, Wildlife Conservation Society Adirondack Program - Before joining WCS in 2000, Zoë worked with the Student Conservation Association's Americorp Program where she facilitated service projects with local schools and community organizations throughout the Adirondack region. She also spent many years instructing outdoor recreation leadership to college students, adults, and young children with the Adirondack Mountain Club and the Wilderness Education Association. Zoe was previously WCS' community liaison, working directly with communities to promote conservation in the Park, with a focus on WCS' Black Bear Education, Awareness, and Research Program. She currently serves as the coordinator of WCS' Adirondack program.

**Katie Malinowski** is the Associate Director of Natural Resources for the NYS Tug Hill Commission. With over 13 years of experiencing working in the communities of Tug Hill on a variety of conservation, recreation, and community development projects, she brings an in-depth knowledge of the issues on Tug Hill, as well as local and regional contacts to garner resources as needed. Katie as well as other Commission staff will provide significant in-kind staff services to the project.

**Paul Marangelo**, Conservation Ecologist, The Nature Conservancy-VT, West Haven Office. Paul started working for the Vermont Chapter of The Nature Conservancy in April 2004, and among other responsibilities, has overseen wide-ranging mammal connectivity conservation work between the Green Mountains and Adirondacks. His work includes overseeing contract landscape modeling work, model interpretation, landscape modeling application to conservation planning, and partnership coordination. His work for TNC also involves management of terrestrial and aquatic invasive species, stream restoration, conservation planning, and providing aquatic ecology expertise to Vermont TNC. Paul previously worked for the Michigan Chapter of TNC for three years as an Aquatic Ecologist, and worked for two years of for a consulting company in St. Louis, MO as a Malacologist. He has also held short term positions with TNC's Eastern New York Chapter as a Wetland Restoration Specialist and as an Aquatic Biologist for the Vermont Department of Environmental Conservation. Areas of specialty and interest include terrestrial landscape connectivity, the biology and conservation of freshwater mussels, aquatic invasive species, and fluvial ecology and geomorphology. Paul holds a MS (1997) in Resource Ecology and Management from the University of Michigan's School of Natural Resources and Environment, and a BA (1986) from Rutgers College.

**Conrad Reining**, is the Eastern Program Director of the Wildlands Project, where he is responsible for coordinating conservation planning, outreach and fundraising. Since joining the Wildlands Project in 2001, a major focus of his work has been the development of a trans-border proposal for a network of linked conservation areas in the Northern Appalachians of southeastern Canada and northeastern US. He is also participating in a Two Countries, One Forest initiative to develop a comprehensive conservation strategy for the Northern Appalachians, and is collaborating in efforts to advance conservation in high priority linkage areas of the region. Conrad holds a Masters degree from Yale School of Forestry and Environmental Sciences and a BA degree from UC Berkeley.

**Doug Bechtel**: Director of Conservation Science, TNC, NH Chapter, Concord, NH. Doug oversees TNC's New Hampshire science programs, including ecoregional and conservation planning; serves and leads science and technical teams and committees with agency and NGO partners; and builds and maintains science and academic partnerships on behalf of the Chapter. Doug is currently focusing on freshwater conservation science and strategies including floodplain forest protection and restoration; aquatic connectivity; and climate change adaptive capacity and resilience of freshwater systems. Doug holds a Master's Degree (1995) from the University of Vermont's Field Naturalist Program, and a Bachelor's Degree (1989) from Grinnell College in Iowa.

**J.T. Horn** is a Project Manager at the Trust for Public Land's Northern New England Field Office where he has worked since 2007. At TPL his experience includes creating new municipally managed community forests, conserving large timberland parcels, preserving

farmland, and building citizen coalitions in support of conservation projects. He is currently managing the ongoing 31,300 acre Androscoggin Headwaters Project at the Umbagog National Wildlife Refuge in Errol, NH. Prior to TPL, he worked for 10 years at the Appalachian Trail Conservancy as the New England Director overseeing 730 miles of the Appalachian Trail between Connecticut and Maine. He also has worked at the Appalachian Mountain Club's White Mountain Trails Program and as a winter caretaker in Tuckerman Ravine on Mt. Washington. J.T. has extensive experience working with the US Fish and Wildlife Service, USDA Forest Service, National Park Service, and Natural Resource Conservation Service on acquisition of conservation properties and management of public lands. He is a Phi Beta Kappa graduate of St. Lawrence University in Canton, NY with a degree in philosophy. He is also a graduate of Antioch New England Graduate School's Institute for Non-Profit Management.

**Barbara Vickery**, Director of Conservation Programs, The Nature Conservancy in Maine Barbara Vickery has worked for The Nature Conservancy in Maine since 1983 where she has served in various positions including Director of Science and Stewardship, Director of Conservation Planning and since 1998 as Director of Conservation Programs. She is responsible for oversight of Science and Stewardship Program, Regional, Ecoregional and Conservation Area Planning, Freshwater and Marine Conservation Programs and serves as the liaison with Beginning with Habitat and Maine Natural Areas Programs. She supervises 4 staff directly and 6 indirectly. Ms. Vickery has a B.A from Harvard College and a B.S. in Biology from Bates College (Phi Beta Kappa).

**Daniel Coker:** GIS Analyst, The Nature Conservancy in Maine. Dan is responsible for the management, analysis, visualization, and flow of conservation information into, out of, and within TNC's Maine field office. He plays a lead GIS role for several TNC regional initiatives, including planning and analysis for the Northern Appalachians and Gulf of Maine integrated landscapes. His current focuses include wildlife connectivity habitat modeling in the western Maine linkage area, developing a measures framework for connectivity in the Northern Appalachians, and mapping fish population trends in the Gulf of Maine. In addition, he serves as the GIS liaison to partners in the conservation community and Maine state government. Dan joined the Maine chapter of TNC in 2002 after 5 years as the GIS Manager with the Maine Natural Areas Program. He holds a Master's Degree (1994) from the University of Vermont's Wildlife Biology program, and a Bachelor's Degree (1990) from Ithaca College.

**George Gay,** Senior Manager, Climate Change Adaptation Program, Northeast Regional Center, National Wildlife Federation. George received a Bachelor of Science degree in Forestry and Wildlife Management from Virginia Tech in 1981 and a law degree from Vermont Law School in 1985. From 1990 to 1994, he served as an Assistant Attorney General in the State of Maryland and as counsel to Maryland's Chesapeake Bay Critical Area Commission, Wildlife Service, and Freshwater Fisheries Administration. From 1994 to 1997, he was General Counsel to Vermont's Environmental and Water Resources Boards. From 1999 through 2001, he was Southeast Regional Director of The Wilderness Society and during his tenure with TWS, he was Chair of the Southern Appalachian Forest Coalition, a coalition working to protect natural resources in the Southern Appalachians, and helped launch SAFC's Great Forest Protection Campaign, a region wide effort to conserve unprotected National Forest lands in the South. He served as Executive Director of the Northern Forest Alliance from May 2003 to January 2009 and created and coordinated the "Vermont Wildlife Partnership," a diverse coalition of wildlife stakeholders

dedicated to increasing funding for the state's fish and wildlife legacy. George has presented to numerous conferences and workshops on climate change and wildlife protection, including the Association of Fish and Wildlife Agencies, NEAFWA, Rutgers University and the following states: NY, NH, VT, RI, and NJ. He is a member of New York's Biodiversity Working Group which is working to update the State's Wildlife Action Plan to address climate change. George serves on the steering committee of the North Atlantic Landscape Conservation Cooperative.

**Kate Wanner,** Project Manager, The Trust for Public Land: Vermont/New Hampshire Field Office. Kate has worked for TPL since 2005, conserving over 7,000 acres in Vermont including new municipally-managed community forests, large timberland parcels, and additions to the Green Mountain National Forest. As the resident biologist in the office, she also writes stewardship plans, works on baseline documentation, and uses GIS (Geographic Information Systems) to create maps of TPL projects in Maine, New Hampshire and Vermont. Prior to TPL, she worked for 5 years with The Wildlands Project as Conservation Biologist, designing landscape-scale regional conservation plans that incorporate connectivity and the needs of focal species. She has also worked as a biological technician for the U.S. Forest Service in Moose Pass, Alaska and as a naturalist guide at an ecotourism lodge in the rainforest of Tambopata, Peru. Kate received a master's degree in conservation biology and forest ecology from Duke University (1998) and is a Phi Beta Kappa graduate of the University of Notre Dame (1996) with a dual degree in environmental science and mathematics.

**Jamey Fidel** is the Forest and Biodiversity Program Director & General Counsel for Vermont Natural Resources Council. Jamey has a B.S. in Environmental Studies and a Minor in Wildlife Biology from University of Vermont's School of Natural Resources, and a J.D. and M.S. in Environmental Law from Vermont Law School. Jamey was previously Conservation Director of the Aspen Wilderness Workshop, Project Director of Public Counsel of the Rockies, and Biological Inventory Coordinator of Pitkin County, Colorado. He has served on various boards including the Executive Committee of the Northern Forest Alliance, the Pitkin County Open Space and Trails Board, and the Waitsfield Planning Commission and Development Review Board.

# Appendix D. SGCN in the Project Areas of at Least Three of the Four States Partnering States

(* Denotes Wildlife Species of Regional Conservation Concern in the Northeastern US identified by Northeast Endangered Species and Wildlife Diversity Technical Committee— 1999).

| Scientific name | Common Name | ME | NH | VT | NY | US | Total |
|---|---|---|---|---|---|---|---|
| **Birds (20)** | | | | | | | |
| Accipiter cooperii | Cooper's Hawk | | X | X | X | | 3 |
| Accipiter gentilis | Northern Goshawk | | X | X | X | | 3 |
| Anas rubripes | American Black Duck | X | X | X | X | | 4 |
| Asio otus | Long-eared Owl* | X | | X | X | | 3 |
| Bonasa umbellus | Ruffed Grouse | | X | X | X | | 3 |
| Buteo lineatus | Red-shouldered Hawk | | X | X | X | | 3 |
| Caprimulgus vociferus | Whip-poor-will* | X | X | X | X | | 4 |
| Catharus bicknelli | Bicknell's Thrush | X | X | X | X | | 4 |
| Catharus fuscescens | Veery | X | X | X | | | 3 |
| Chordeiles minor | Common Nighthawk | X | X | X | X | | 4 |
| Coccyzus erythropthalmus | Black-billed Cuckoo | X | | X | X | | 3 |
| Contopus cooperi | Olive-sided Flycatcher | X | | X | X | | 3 |
| Dendroica caerulescens | Black-throated Blue Warbler | X | | X | X | | 3 |
| Dendroica castanea | Bay-breasted Warbler | X | X | X | X | | 4 |
| Euphagus carolinus | Rusty Blackbird | X | X | X | X | | 4 |
| Falcipennis canadensis | Spruce Grouse | | X | X | X | | 3 |
| Hylocichla mustelina | Wood Thrush | X | X | X | X | | 4 |
| Picoides dorsalis | American Three-toed Woodpecker | X | X | | X | | 3 |
| Scolopax minor | American Woodcock | X | X | X | X | | 4 |
| Wilsonia canadensis | Canada Warbler* | X | X | X | X | | 4 |
| **Mammals (12)** | | | | | | | |
| Canis lupus | Gray Wolf | X | X | X | X | E | 4 |
| Lasionycteris noctivagans | Silver-haired Bat | | X | X | X | | 3 |
| Lasiurus borealis | Eastern Red Bat* | | X | X | X | | 3 |
| Lasiurus cinereus | Hoary Bat* | | X | X | X | | 3 |
| Lontra canadensis | Northern River Otter | | | X | X | | 2 |
| Lynx canadensis | Lynx* | X | X | X | X | T | 4 |
| Lynx rufus | Bobcat | | X | X | | | 2 |
| Martes americana | American (Pine) Marten | | X | X | X | | 3 |
| Myotis leibii | Eastern Small-footed Bat | X | X | X | X | | 4 |
| Myotis sodalis | Indiana Bat | | X | X | X | E | 3 |
| Synaptomys borealis | Northern Bog Lemming | X | | X | | | 3 |
| Ursus americanus | Black Bear | | X | X | | | 2 |
| **Amphibians (3)** | | | | | | | |
| Ambystoma jeffersonianum | Jefferson Salamander* | | X | X | X | | 3 |
| Ambystoma laterale | Blue-spotted Salamander* | X | X | X | X | | 4 |
| Bufo (woodhousii) fowleri | Fowler's Toad | | X | X | X | | 3 |
| **Reptiles (3)** | | | | | | | |
| Clemmys guttata | Spotted Turtle* | X | X | X | X | | 4 |

| Scientific name | Common Name | ME | NH | VT | NY | US | Total |
|---|---|---|---|---|---|---|---|
| Crotalus horridus | Timber Rattlesnake | X | X | X | X | | 4 |
| Glyptemys/Clemmys insculpta | Wood Turtle | X | X | X | X | | 4 |
| **Arthropods (3)** | | | | | | | |
| Cicindela marginipennis | Cobblestone Tiger Beetle | | X | T/X | X | | 3 |
| Cicindela puritana | Puritan Tiger Beetle | | X | T/X | X | T | 3 |
| Lithophane lepida lepida | Noctuid Moth sp. | X | X | | X | | 3 |

# Appendix E. Action Plans' habitats that will benefit from this work

| Habitat Type | State |
|---|---|
| Matrix Forming Forests (NH), Landscape Forests (VT) | NH/VT |
| Deciduous and Mixed Forest (ME), Northern Hardwood-Conifer (NH), Pine-Northern Hardwood (NY), Northern Hardwood Forests (VT) | All |
| Coniferous Forest (ME), Lowland Spruce-Fir (NH) and High Elevation Spruce-Fir (NH), Spruce-Northern Hardwood (NY), Spruce-Fir Northern hardwood (VT) | All |
| Shrub / Early Successional and Regenerating Forest (ME)<br>Successional northern hardwoods (NY), Successional Stage Forests (VT) | ME, NY |
| Appalachian oak-pine (NY). Oak-Pine-Northern Hardwoods (VT) | NY/VT |
| Mountaintop Forest (including krummholz) | ME |
| Floodplain forests | NY, VT |
| Forested Wetlands | ME, VT |
| Vernal Pools | NY, VT |
| Emergent marsh | NY |

# Appendix F: Threats and priority actions for the conservation of forest-dwelling and wide-ranging SGCN from the ME, NH, NY and VT Wildlife Action Plans

| info type | state | Action Plan excerpts | page |
|---|---|---|---|
| Threat ID | ME | **Loss of connectivity between large blocks;** habitat loss and fragmentation associated with development and building of permanent roads; and climate changes as top threats to SWAP Key Habitat types represented in both linkage areas | 5:244, 5:245 |
| Threat ID | NH | **Development and transportation infrastructure as two of the top four risks to wildlife and habitats** | 4:05 |
| Threat ID | NY | **Anthropogenic changes including development** (residential and commercial, roads, power lines), dredging, and wetland draining, and natural changes such as succession reduce not only habitat quantity, but the quality of habitat as well by disrupting the function of remaining habitat patches. | 185 and 340 |
| Threat ID | VT | **Habitat loss (through fragmentation and conversion), transportation systems and climate change are three of the top five most significant problems** impacting Vermont's Species of Greatest Conservation Need and their habitats | 2:9-11 |
| Action | NY | **Identify and map large blocks of unfragmented habitat cover types.** This includes roadless forest tracts, grasslands, shrub lands, riparian areas and free-flowing streams. Wherever possible, these mapping efforts should extend across watershed and state boundaries, and both public and private lands, especially in the case of forested and aquatic habitats. | 76 |
| Action | VT | **Identifies the need for regional connectivity to maintain and/or re-establish wide-ranging SGCN populations,** specifically recommending regional connectivity through linkages to New York, New Hampshire, and Canada and statewide connectivity within Vermont | 4:43, 4:45 |
| Action | NH | ***Map potential wildlife corridors and buffers*.** Strategy 200: Conservation Planning, Objective 205 calls for mapping landscape connectivity using spatially explicit models. | 5.8 |
| Action | NH | ***Promote a transportation working group.*** Strategy 600: Interagency Regulation and Policy, Objective 603 call for a transportation-wildlife working group to identify opportunities to maintain or improve the ecological integrity of landscapes impaired by existing or planned roads. | 5.18 |
| Action | NH | **Protect riparian/shoreland habitat and other wildlife corridors**. Strategy 700: Land Protection, Objective 701 calls for promoting the projection of wildlife corridors including riparian areas and shoreland. | 5.20 |
| Action | VT | "**Identify and prioritize for conservation the existing contiguous forest blocks and associated linkages"** is a primary conservation strategy for landscape-scale forests) and matrix forest formations (Northern Hardwood Forest, Spruce-Fir N. Hardwood Forest, and Oak-Pine N. Hardwood Forest | 4:41-48, 4:49-54, 4:55-60, 4:61-66 |
| Action | ME | **Protect/manage high-value uplands through cooperation with NGOs, local land trusts, municipalities, government agencies, private landowners and other partners** to conserve/manage habitats for priority mammals using fee acquisition, cooperative agreements, purchase of development rights, tax incentives, cost sharing programs (WHIP, LIP) and improved comprehensive planning. ( Action 3) | 5:227 |

| info type | state | Action Plan excerpts | page |
|---|---|---|---|
| Action | ME | **Protect/manage high-value upland; Create and restore habitat in focus areas** through manipulation, augmentation, connecting smaller forest blocks to create large patches, etc (Action 5) | 5:228 |
| Action | ME | **Adapt Beginning with Habitat for Use in Towns in Northern and Eastern Maine:** Desired Outcomes include maintaining and increasing the number of large blocks of forest and minimizing the impact of roads. | 6:31 |
| Action | NY | **Develop land protection strategies for large blocks of unfragmented forests** by working with private land owners and public land managers, transportation planners, and local government to reduce planned fragmentation. | 80 |
| Action | NY | **Work with the US and state departments of transportation to incorporate SGCN-friendly components into road maintenance and renovation work.** | 83 |
| Action | NY | **Make information available to public and private land managers** regarding the benefits and need for reducing fragmentation of mature forests. | 83 |
| Action | NY | **Share information on lands that provide critical habitat for SGCN with county and town planning boards** to assist them in steering development and growth away from critical areas. | 185 |
| Action | NY | **Conservation partners should direct funding for SGCN to the eastern and southern portion of the Lake Champlain Basin** where development pressures pose a relatively greater threat to species of concern and their habitats. This includes the Champlain Valley south through the northern extent of the Hudson Valley and the northern Taconic Highlands. | 211 |
| Action | NY | **Coordinate the diverse array of stakeholder groups** that will need to be involved in land-use planning for SGCN, particularly groups that may not have been traditionally involved in a large scale conservation planning process | 363 |
| Action | VT | **Identify, prioritize and maintain existing contiguous forest blocks and associated linkages** that allow for upward and northward movement in response to climate change. (Conserving VT's Birds) | 4:14 |
| Action | VT | **Maintain and restore habitat connectivity and minimize fragmentation of forest blocks.** Identify and prioritize wildlife road crossing locations. Work with the Agency of Transportation and adjacent landowners to reduce wildlife mortality and increase the potential for movement from one side of the road to the other. (Conserving VT's Mammals) | 4:28, 4:52, 4:57, 4:64 |
| Action | VT | **Work with landowners, towns, and communities to protect critical habitats** and maintain connectivity,<br><br>**Acquisition of land and conservation easements**-High priority action for landscape level forest conservation<br><br>**Provide technical assistance to landowners, towns, regional planning commissions and transportation agencies**-Priority for landscape level forest conservation | 4:28, 4:52, 4:57, 4:64 |
| Action | VT | **Increase cooperation/coordination between adjacent states and provinces to** support and encourage trans-jurisdictional actions to address issues such as global climate change, acid rain and connectivity**.** | 4:45, 4:58, 4:64 |
| Habitat Usage | NH | **More than 30 Species of Greatest Conservation Need** (SGCN) utilize Northern Hardwood-Conifer, Lowland Spruce-Fir, and High Elevation Spruce-Fir matrix-forming forests | 3:11-13 |

| info type | state | Action Plan excerpts | page |
|---|---|---|---|
| Habitat Usage | VT | **At least 23 SGCN prefer large expanses of interior forest habitat** and most wildlife species rely on connectivity between habitats | 4:41-66 |
| Habitat Usage | ME | **Lists 49 Species of Greatest Conservation Need** (SGCN) that utilize Deciduous and Mixed , Coniferous, and Mountaintop matrix-forming forests identified in project linkage areas | 3:107-123 |

# Appendix G. Endangered Species Act Section 7 Compliance:

Federally Endangered, Threatened and/or Candidate species that potentially exist and/or are known to exist in one of more of the following states: Maine, New Hampshire, New York or Vermont.

| Common name | Scientific name | State |
|---|---|---|
| Bald Eagle | Haliaeetus leucocephalus | ME/NH/NY/VT |
| eskimo curlew | Numenius borealis | NY |
| least tern | Sterna antillarum | NY |
| Manx Shearwater | Puffinus puffinus | NY |
| Peregrine falcon | Falco peregrinus* | ME/NY/VT |
| Plover, piping | Charadrius melodus | ME/NH/NY |
| Roseate Tern | Sterna dougallii | ME/NH/NY |
| Atlantic salmon | Salmo salar | ME |
| Shortnose Sturgeon | Acipenser brevirostrum | ME/NH/NY |
| American burying beetle | Nicrophorus americanus | ME |
| Karner blue Butterfly | Lycaedis Melissa samuelis | ME/NH/NY |
| Dwarf wedgemussel | Alasmidonta heterodon | NH/NY/VT |
| northeastern beach tiger beetle | Cicindela dorsalis dorsalis | NY |
| Puritan tiger beetle | Cicindela puritana | NY/VT |
| Canada lynx | Lynx canadensis | ME/NH/NY/VT |
| Eastern mountain lion | Felis concolor couguar | ME/NH/NY/VT |
| Indiana bat | Myotis sodalis | NY/VT |
| New England Cottontail | Sylvilagus transitionalis | ME/NH/NY/VT |
| Wolf | *Canis* sp? | ME/NY/VT |
| bog turtle | Clemmys muhlenbergii | NY |
| Furbish's lousewort | Pedicularis furbishiae | ME |
| Hart's-tongue fern | Asplenium scolopendrium var. americanum | NY |
| Houghton's goldenrod | Solidago houghtonii | NY |
| Jessup's milk-vetch | Astragalus robbinsii var. jesupi | NH |
| Leedy's roseroot | Sedum integrifolium ssp. leedyi | NY |
| Northeastern barbed bristle bulrush | Scirpus ancistrochaetus | NH/VT |
| Northern wild monk's-hood | Aconitum noveboracense | NY |
| Sandplain gerardia | Agalinis acuta | NY |
| Seabeach amaranth | Amaranthus pumilus | NY |
| Small whorled pogonia | Isotria medeoloides | ME/NH/VT |

VERMONT

**Fish & Wildlife Department**
103 South Main St., #10 South
Waterbury, Vermont 05671-0501
www.VtFishandWildlife.com

[phone] 802-241-3700
[fax] 802-241-3295
[tdd] 802-828-3345

*Agency Of Natural Resources*

**Listed Species Present/Is Not Likely to Adversely Affect**

Dear Dr Organ:

We are writing in reference to the Application for Federal Assistance for Vermont Competitive State Wildlife Grant application for the Staying Connected Initiative (Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages) and its compliance with Endangered Species Act Section 7.

The actions proposed in this grant will take place in within the Staying Connected project area in New York, Vermont, New Hampshire & Maine within the grant period of 7/1/2012 to 6/31/2015. It has been found that the following federally listed, proposed or candidate species may be present within this area:

| Common name | Scientific name | State |
|---|---|---|
| Bald Eagle | Haliaeetus leucocephalus | ME/NH/NY/VT |
| eskimo curlew | Numenius borealis | NY |
| least tern | Sterna antillarum | NY |
| Manx Shearwater | Puffinus puffinus | NY |
| Peregrine falcon | Falco peregrinus* | ME/NY/VT |
| Plover, piping | Charadrius melodus | ME/NH/NY |
| Roseate Tern | Sterna dougallii | ME/NH/NY |
| Atlantic salmon | Salmo salar | ME |
| Shortnose Sturgeon | Acipenser brevirostrum | ME/NH/NY |
| American burying beetle | Nicrophorus americanus | ME |
| Karner blue Butterfly | Lycaedis Melissa samuelis | ME/NH/NY |
| Dwarf wedgemussel | Alasmidonta heterodon | NH/NY/VT |
| northeastern beach tiger beetle | Cicindela dorsalis dorsalis | NY |
| Puritan tiger beetle | Cicindela puritana | NY/VT |
| Canada lynx | Lynx canadensis | ME/NH/NY/VT |
| Eastern mountain lion | Felis concolor couguar | ME/NH/NY/VT |
| Indiana bat | Myotis sodalis | NY/VT |
| New England Cottontail | Sylvilagus transitionalis | ME/NH/NY/VT |
| Wolf | *Canis* sp? | ME/NY/VT |
| bog turtle | Clemmys muhlenbergii | NY |
| Furbish's lousewort | Pedicularis furbishiae | ME |
| Hart's-tongue fern | Asplenium scolopendrium var. americanum | NY |
| Houghton's goldenrod | Solidago houghtonii | NY |
| Jessup's milk-vetch | Astragalus robbinsii var. jesupi | NH |
| Leedy's roseroot | Sedum integrifolium ssp. leedyi | NY |
| Northeastern barbed bristle bulrush | Scirpus ancistrochaetus | NH/VT |
| Northern wild monk's-hood | Aconitum noveboracense | NY |
| Sandplain gerardia | Agalinis acuta | NY |
| Seabeach amaranth | Amaranthus pumilus | NY |
| Small whorled pogonia | Isotria medeoloides | ME/NH/VT |

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The actions proposed include: **technical assistance to land owners, municipalities, NGOs and state agencies, land protection, wildlife tracking on roads and between two and four culvert retrofits. The culvert retrofits involve the use of "critter-crossing animal access shelves, (see attached brochure by "Roscoe Culvert" for specifications of the product to be used) bolted to the inside of existing culverts. This action requires no earth-disturbance whatsoever.**

We believe these actions are NOT LIKELY TO ADVERSELY AFFECT these species in conducting these proposed actions because: **the proposed "animal access shelves" are bolted to the inside of an existing culvert and do not involve the use of heavy machinery and do not involve any earth disturbace.**

If any other listed species are found or any actions changed before or within the Agreement Period, state and federal authorities will be notified, and actions will cease until another Section 7 review is completed and approved by Federal Assistance.

Thank you for your time in review of this grant proposal.

Vermont Department of Fish and Wildlife Concurrence/Approval: (signatures indicate that impacts on all federally listed species within Vermont have been considered)

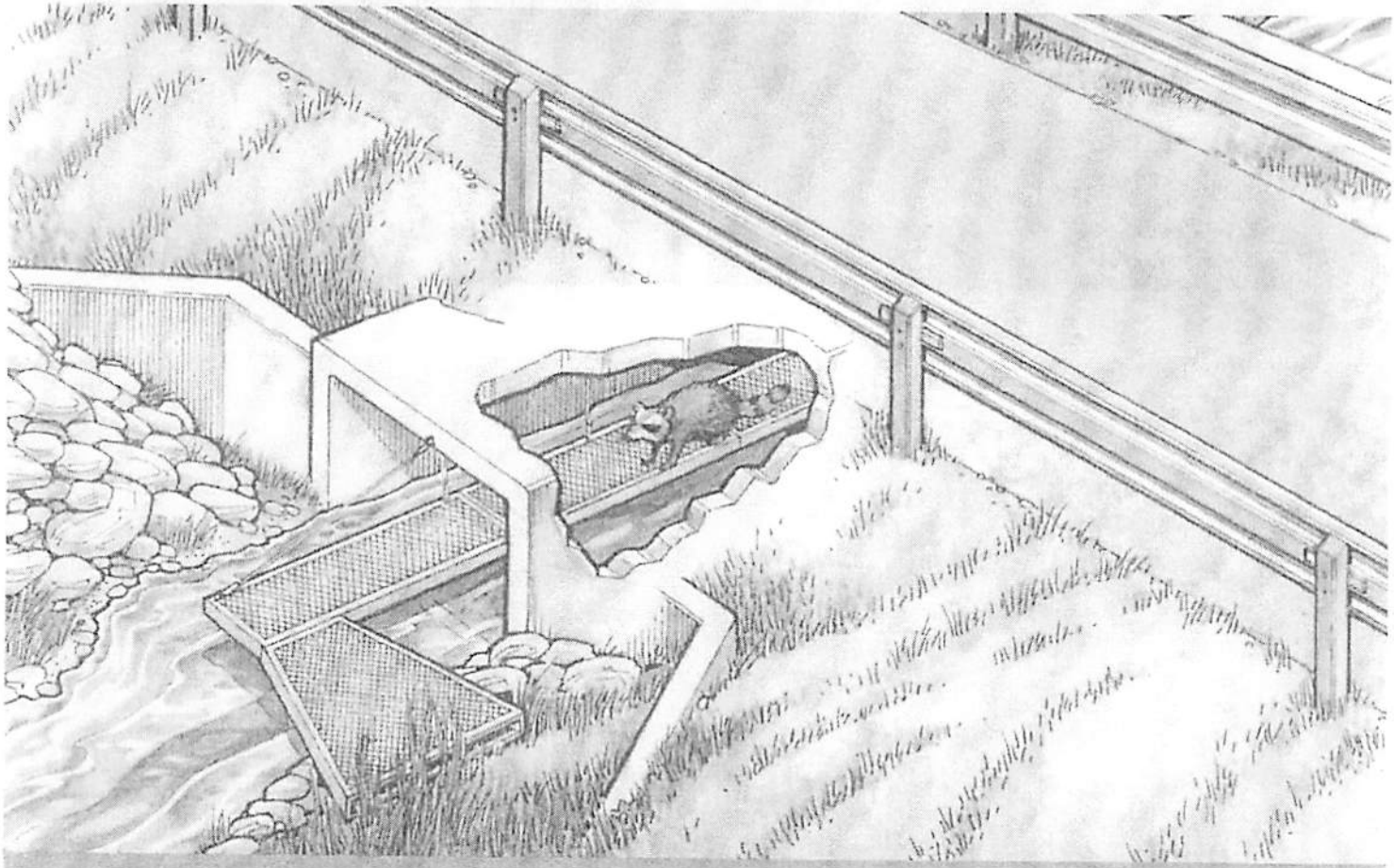
VDFW Endangered Species Leader Steven E. Parren Date 1-18-2012

VDFW Federal Aid Coordinator Sherri A. Pasco Date 1/19/12

# CRITTER-CROSSING™
## ANIMAL ACCESS SHELVES

ROSCOE CULVERT

ENVIRONMENTAL SOLUTIONS FOR SOIL AND WATER™



### CRITTER-CROSSING™ ANIMAL ACCESS SHELVES SAFE PASSAGE FOR SMALL WILDLIFE

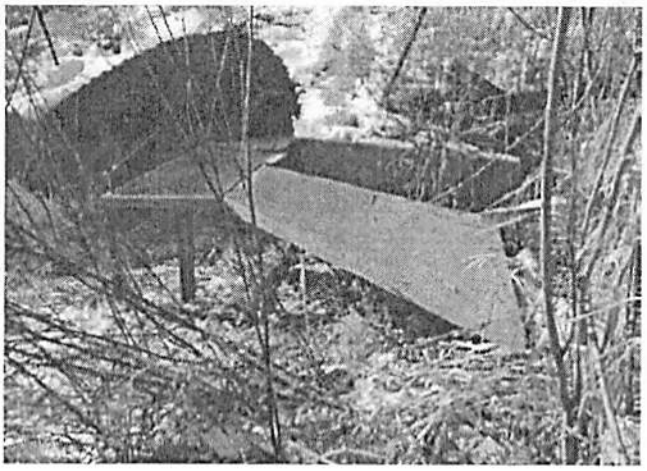
Roads and highways are dangerous places for wildlife. Countless animals die every year trying to cross them, and roadways fragment their natural habitats. People also risk their own safety whenever they swerve to avoid darting animals.

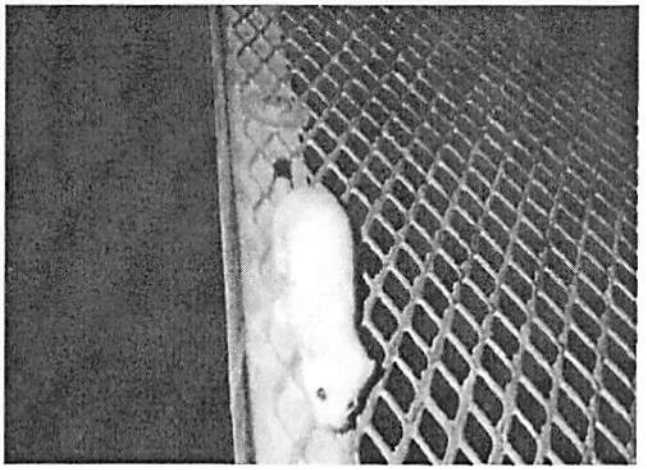
Thanks to research at The University of Montana and a design collaboration between the University and the Roscoe Companies, Roscoe now offers Critter-Crossing™ Animal Access Shelves. These patented metal shelves are mounted inside culverts, allowing animals to cross underneath roadways out of harm's way. This expands their ability to find food, shelter, and nesting areas, even near water.


**Billings Office:**
1501 S. 30th St. W., Billings, MT 59102
Ph: (406) 656-2253 FAX: (406) 656-8576

**Casper Office:**
7242 W. Yellowstone, Casper, WY 82604
Ph: (307) 472-7121 FAX: (307) 577-4914

**Missoula Office:**
5405 Momont Rd., Missoula, MT 59808
Ph: (406) 542-0345 FAX: (406) 542-1941





## HOW CRITTER-CROSSING™ ANIMAL ACCESS SHELVES WORK

Critter-Crossing™ Animal Access Shelves have a mesh surface that permits water to move in and around the shelves during high water, while providing surface area for small animal feet. Entrance ramps run along the culvert so water flows unrestricted and debris doesn't get trapped. The shelves can be removed during springtime high-water run-off or floods, are hinged to accommodate various site conditions, and extend to the surrounding vegetation.

Smaller species like voles that avoid open spaces can hop into a funnel integrated into the entrance ramp and run along a wildlife tube on the access shelf.

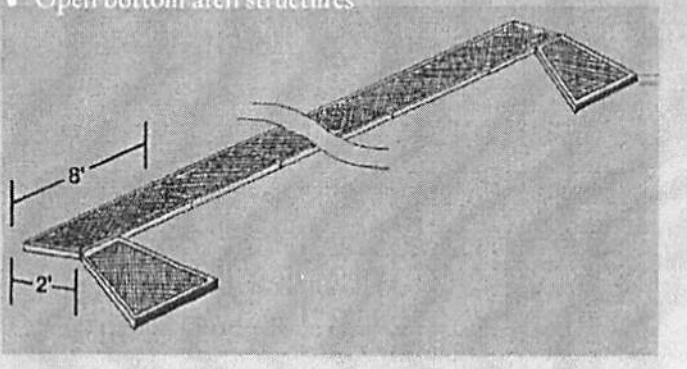
## CRITTER-CROSSING™ ANIMAL ACCESS SHELVES WORK WITH NEARLY ALL CULVERTS

Because of their modular design, Critter-Crossing™ Animal Access Shelves work with virtually all culverts at least 48" in diameter and can be assembled to fit any length. We pre-mount cable hangers and brackets inside the drainage pipe on new culverts, and existing drainage structures can be retrofitted.

Critter-Crossing™ Animal Access Shelves are manufactured in standard 2' x 8' lengths bolted along the length of the drainage structure. For example, a 72' long culvert is fitted with nine shelves, each 2' wide and 8' long. Animal access ramps are bolted to shelves on the inlet and outlet sections of the drainage structure, and cable connectors suspend the shelves from the culvert roof.

**Applications include:**

- Corrugated metal pipe
- Concrete pipe
- Box culvert structures
- Open bottom arch structures




## TO ORDER CRITTER-CROSSING™ ANIMAL ACCESS SHELVES

Critter-Crossing™ Animal Access Shelves are a patented product and manufactured by the Roscoe Companies in Missoula, Montana.

To order, please contact Clyde Bennett at (406)869-2611 or by email at cbennett@roscoesteel.com.
For more information on Critter-Crossing™ Animal Access Shelves, see critter-crossing.com.

# Appendix H: Project Narratives.

## Project 1.1 Securing and restoring habitat connectivity between the Tug Hill Plateau and the Adirondack Mountains (NY)

**State(s):** New York

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $235,960**
Competitive SWG funds requested **$162,442**
Non-federal matching funds **$**73,518

**Project Partners:**
The Nature Conservancy
Tug Hill Tomorrow Land Trust
The Tug Hill Commission
New York State Department of Conservation
New York State Department of Transportation
Wildlife Conservation Society

**Location**
The project will focus on the connectivity corridors identified through spatial modeling within the 750,000 acre Black River Valley. See map 2.

**Purpose & Need**
See Purpose & Need section of main document.

**Objectives**

**Technical assistance:**

1. Increase the knowledge, ability, and motivation of 3 target linkage towns to protect connectivity with locally supported means.
2. Incorporate model conservation zoning language in at least 1 Town comprehensive plan in the linkage.
3. Provide information and support for connectivity conservation to interested groups and local governments linkage-wide.

**Land protection:**

1. Protect 1,000 acres with an emphasis on donated easements
2. Provide landowners in critical areas in the linkage with technical support for connectivity-friendly private lands management

**Road Barrier Mitigation:**

1. Facilitate the inclusion of connectivity conservation objectives in transportation planning in the linkage.
2. Assess functional connectivity of key road segments and incorporate resulting data into transportation planning related to connectivity conservation.
3. Implement 1-2 mitigation projects, likely consisting of installing 'critter crossing' walkways within priority culverts, with effectiveness monitoring.

## Approach

### Technical Assistance:

1. Continue to provide technical support on local land use guidelines and principles to the 3 current targeted communities within the Tug Hill to Adirondack linkage (Ava, Western, and Steuben).
    . Work with those towns that participated in Community Values Mapping to identify the areas of overlap from CVM with areas of special concern and protected areas to inform local zoning in those communities.
    a. Present a customized land use "menu of options" to help inform comprehensive planning in those communities.
    b. In partnership with Town planning boards, incorporate model conservation zoning language in at least 1 Town comprehensive plan (Ava, Steuben or Western).

2. Improve availability of information to local planners about the impacts of fragmentation on wildlife connectivity and build support for addressing connectivity objectives in local land use planning within remaining targeted towns.

    - Offer a Regional Workshop within the linkage area to engage/continue to engage communities, residents and public agency representatives in Staying Connected and ultimately build support for Wildlife Heritage designation.
    - Within a year, complete an outreach plan to communities within the linkage area to engage communities and residents in the Staying Connection linkage. This could include additional Community Values Mapping in other communities.
    - In years 2-3, implement outreach plan to engage each community in the linkage.
    - Ongoing presentations of technical information to local decision makers via Town Board meetings, Tug Hill Commission meetings, and Local Government Conferences on the impacts of conservation regulations on wildlife connectivity and the strategies for adopting conservation oriented development regulations.
    - Provide technical assistance to 2-3 local municipalities within the linkage to review or propose planning and zoning policies or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat.

### Land protection:

1. Engage landowners potentially willing to donate easements and encourage voluntary best practices.

- Develop private lands management guidelines and related outreach materials for landowners documenting the importance of connectivity and options for enhancing this through management practices and long term stewardship.
- Host a Technical Workshop targeted at land owners focused on management for wildlife/connectivity (in conjunction with related land use planning tasks).
- Outreach/cultivation of landowners identified within the linkage database of priority tracts for protection.
- Work with Black River Environmental Improvement Association (BREIA) to address connectivity objectives in their environmental education programs and potentially in managing their extensive land holdings within the linkage.

2. Complete 3-4 land protection transactions, with a focus on donated easements.

**Road Barrier Mitigation:**

1. Engage local highway departments to include connectivity objectives in transportation planning.
   - Outreach with Towns to identify potential partners.
   - Extend field verification/development of road mitigation plans applied to State roads under original SWG grant to priority county/town road segments: use remote assessment tool to identify road segments, field assessment of wildlife movement and existing structures (fencing, culverts etc), develop draft recommendations.
   - Production of final report(s) and maps, presentations to local highway department staff.
   - Explore concept of a cost share program to offset costs of installing wildlife friendly transportation infrastructure by tapping state/federal/other funding pots available for mitigation.

2. Implement 1-2 mitigation projects with local highway departments and/or DOT. This will likely entail installing 'critter crossing' (removable walkways) within one or more priority culverts, to facilitate wildlife passage, and conducting before and after monitoring using camera traps to assess their effectiveness.

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in New York (Appendix G).

**Budget – Project 1.1**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| | | | |
| **TNC Personnel** | **$45,504** | **$27,534** | **$17,970** |
| Salary | $33,448 | $20,337 | $13,111 |
| Fringe | $12,056 | $7,197 | $4,859 |
| | | | |
| **Contractual-Total** | **$100,000** | **$70,000** | **$30,000** |
| *WCS* | $40,000 | $25,000 | $15,000 |
| *Tug Hill Tomorrow* | $30,000 | $25,000 | $5,000 |
| *Tug Hill Commission* | $30,000 | $20,000 | $10,000 |
| | | | |
| **Travel** | $5,087 | $4,067 | $1,020 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $11,950 | $10,950 | $1,000 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$20,000** | **$20,000** | **$0** |
| *Due diligence costs related to land protection* | $20,000 | $20,000 | $0 |
| *Land protection - capital* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$182,541** | **$132,551** | **$49,990** |
| TNC Indirect (22.55%) | $41,163 | $29,890 | $11,273 |
| | | | |
| ***Total Costs through TNC*** | **$223,705** | **$162,442** | **$61,263** |
| | | | |
| **Total Budget** | **$223,705** | **$162,442** | **$61,263** |
| match rate check | | 72.61% | 27.39% |

**Budget Narrative:**

**Personnel:** TNC Adirondack Chapter (ANC) Director of Conservation Programs Dirk Bryant will serve as the project manager for the Adirondacks-Tug Hill linkage. The ANC Conservation Scientist and Tug Hill Project Director (TNC Central and Western Chapter) will be responsible for implementing the barriers mitigation (roads permeability) strategy including installation of at least one critter walk. We will hire two seasonal field technicians positions to complete winter tracking and road infrastructure inventory on priority town/county roads within the project area, as part of the barriers mitigation work. ANC Director of Land protection will provide technical support, conduct landowner outreach and serve as liaison with NY Department of Environmental Conservation Region 6 land protection staff, in order to implement the land protection strategy. The ANC IS manager will provide GIS support to partners for relevant tasks outlined in the Tug Hill-Adirondack work plan. Fringe is calculated at 42% for regular positions, 12% for short-term.

**Contractual:** The Tug Hill Commission (THC) (Project Leader: Katie Milenowski) will be responsible for engaging local governments to implement the land use planning strategy, in coordination with the Wildlife Conservation Society (WCS.) THC project costs totaling $30,000 will cover staff time and local travel, of which $20,000 is requested from SWG, and $10,000 will be provided as non-federal match. The Wildlife Conservation Society (Project leader: Zoe Smith) will provide technical support for local land use planning work, including helping to: develop and implement the town outreach plan, organizing technical presentations to local government planning officials, and providing technical assistance to 2-3 municipalities on planning and zoning policy and on non-regulatory measures to achieve connectivity objectives. WCS project costs totaling $40,000 will cover staff time and travel, of which $25,000 is requested from SWG, and $15,000 will be provided as non-federal match. Tug Hill Tomorrow (THT) (Project leader: Linda Garrett) will conduct outreach with local land owners, help organize and host a technical workshop targeted at land owners, and complete 3-4 land protection transactions, with a focus on donated easements. THT project costs totaling $30,000 will cover staff time and local travel, or which $25,000 is requested from SWG and $5,000 will be provided as non-federal match.

**Travel:** Travel to and within the project area by the project staff and seasonal field technicians reimbursable at IRS rate of $0.555/mile is estimated at $5,087. The mileage estimate is based on: 7 trips for project staff (258 miles per trip) and 10 trips for field technicians, (325 miles, including running the tracking circuit for each trip). Travel costs include 14 overnights in the Black River Valley (lodging and meals) totaling $2,280. Ten of these overnights will be for field technicians, as the tracking circuit takes two days to complete. Approximately twenty percent ($1,020) of total travel expenses will be provided as match.

**Supplies:** This item includes: purchase of a 'critter crossing' (wildlife walkway to install in a culvert), remote game cameras with lock boxes, FD cards for the cameras, printing costs for technical and outreach materials, and meeting supplies (flipcharts, markers, etc.) Total supply costs are $11,950 of which $1,000 will be provided as non-federal match.

**Other:** appraisals, boundary surveys, legal fees, filing feesand easement baseline documentation for 3-4 conservation easement transactions. Total SWG costs are $20,000.

**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%.

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Dirk Bryant, Director of Conservation Programs, Nature Conservancy – Adirondack Chapter, 518-576-2082, dbryant@tnc.org

Zoe Smith, Director, Director, Wildlife Conservation Society Adirondack Program, 518-891-8872, zsmith@wcs.org

Joe Racette, Division of Fish, Wildlife, and Marine Resources NYSDEC, (518) 897-1293, jaracett@gw.dec.state.ny.us

Katie Malinowski, Associate Director of Natural Resources, NYS Tug Hill Commission, katie@tughill.org

## Project 1.2 Protecting habitat connectivity between the Adirondacks Mountains and the Southern Green Mountains (NY-VT)

**State(s):** New York, Vermont

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $187,221**
Competitive SWG funds requested **$140,801**
Non-federal matching funds **$**46,419

**Project Partners:**
The Nature Conservancy VT, Adirondack Nature Conservancy and Land Trust, The Wildlands Network, Vermont Land Trust, Vermont Natural Resources Council, Wildlife Conservation Society ,Department of Environmental Conservation, New York Department of Transportation, Vermont Agency of Transportation, Vermont Department of Fish & Wildlife,

**Location**
This project is focused on conserving and enhancing habitat connectivity for wide-ranging terrestrial wildlife across the Southern Lake Champlain Valley between the Green Mountains in Vermont and the Adirondack Mountains in New York or Vermont See map 2.

**Overview**
In the proposed project, habitat connectivity conservation work in the linkage will build on opportunities generated over the 3 prior years of locally engaged technical assistance work, connectivity modeling road barrier assessment (Conservation Science), and land protection. Our objectives and activities are also evolving to take advantage of new opportunities and partnerships. Specifically, Greens to Adirondacks linkage conservation work will feature all the major Staying Connected Initiative components: conservation science (organizing wildlife tracking groups to refine functional connectivity pathways along critical road segments), land protection (1,000 acres of protected lands in the linkage), barrier mitigation (incorporating connectivity conservation into plans for a road corridor improvement project in the linkage, inventory of culverts and bridges) and municipal and landowner oriented technical assistance work (incorporating connectivity enabling language and zoning for critical road corridors into town and regional plans). We have also added an evolving land management focus: facilitating the organization of groups of forest landowners in linkage structural pathways towards developing collective land management plans that incorporates connectivity conservation as part of a suite of multiple use management objectives. We also propose to expand our work on road corridor wildlife permeability by creating a comprehensive road assessment for wildlife crossing within one linkage township, in cooperation/collaboration with town conservation and planning commissions. Finally, we seek to identify and characterize all water passage structures in critical wildlife road crossing areas, informing town and state road entities where structures important for connectivity are due for replacement, new structures are designed with wildlife passage in mind. We will also continue with outreach and educational activities that support the

municipal/regional planning, road barrier mitigation, and land protection/management goals of Staying Connected by engendering local enthusiasm and support for connectivity conservation.

**Purpose and Need:**
See Purpose & Need section of main document.

**Objectives**

**Conservation Science**

1. Assess functional connectivity on 3 – 5 key road segments through data collected by citizen science roadside tracking groups through the WildPaths project (See Project 1.3 description)

**Technical Assistance for Land Use Planning:**

1. Incorporate connectivity conservation model language into Rutland Regional Planning Commission's regional plan
2. Incorporate connectivity enabling language and related zoning modifications into one at least linkage town in Vermont, and engage in town planning processes to encourage incorporation of connectivity conservation into planning documents.
3. Build a sense of recognition and enthusiasm for connectivity conservation in key townships within the linkage to support work at the town-plan level.

**Land Protection and Management:**

1. At least 1,000 new acres of key 'stepping stone habitat' protected with a focus on donated easements.
2. Increase knowledge and awareness of key landowners of the value of their land to habitat connectivity, provide technical support on land management for connectivity
3. Development of 1-2 landowner groups that develop shared forest management plans with a connectivity conservation component.

**Road Barrier Mitigation**

1. Identify highest priority culverts/bridges in the linkage for wildlife movement mitigation and provide town planning commissions with inventory of culverts in important wildlife road crossing areas, with recommendations for replacement priority.
2. In one linkage town, complete a town-wide connectivity priority and needs assessment for town road network.
3. Produce 1 or 2 shovel-ready culvert mitigation projects on Route 4 in Whitehall/Fort Anne, NY, with and accompanying effort to find implementation funding.

**Approach**

**Technical Assistance:**

1. Work with regional and municipal planning entities to incorporate model language for connectivity conservation into Rutland Regional Planning Commission's regional plan, and also into one township within the linkage, using a planning manual produced by the Vermont Natural Resources Coalition that is a product of Phase 1 Staying Connected work.

2. Build support for addressing connectivity objectives in local land use planning within remaining targeted towns through events and activities related to road barrier mitigation.
    - Organize 7 wildlife and connectivity – themed community outreach events within the linkage area in support of efforts to modify local and regional land use plans, engender interest in the creation of landowner forest management groups, implement road barrier mitigation practices, and contact/identify landowners who may be interested in land conservation via easements.
    - Provide technical assistance to an additional 2 local municipalities to propose either planning action or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat.

**Land protection and Management:**

1. In highest priority road corridor areas around critical wildlife road crossings, prospect for landowners potentially willing to donate easements. Canvas these landowners for willingness adopt voluntary best practices by landowners, and provide land management technical assistance for interested landowners.
2. Develop private lands management guidelines and related outreach materials for landowners documenting the importance of connectivity and options for enhancing this through management practices. Develop Workshops for landowners on forest and connectivity management based on these materials.
3. Facilitate development of 1-2 landowner groups that share forest management plans with a connectivity conservation component.
4. Complete at least 3-6 land protection transactions, totaling 850 acres, with a focus on donated easements.

**Road Barrier Mitigation**

1. In priority linkage road crossing areas, identify priority bridge/culverts where mitigation for wildlife movement would be most valuable.
    - Inventory and assess culverts and bridges in key road crossing areas in Vermont for wildlife crossing value and remediation needs. Identify structures that are priorities for replacement in terms of infrastructure integrity, and encourage the consideration of wildlife-crossing friendly designs as part of plans for future structure replacement work.
    - Through an organized volunteer effort, with town conservation commission cooperation, complete a town-wide road network assessment in terms of road infrastructure barrier mitigation needs, complete with report and recommendations to planning commission.
2. Identify and complete designs for 1-2culvert retrofit projects for wildlife passage on a key wildlife road crossing are on Rt 4 in Whitehall and/or Ft Ann New York.
3. Facilitate the creation and maintenance of citizen science roadside tracking groups to collect information on wildlife interaction with road corridors through the WildPaths Project (See Project 1.3 description), raise the visibility of wildlife road crossing issues, and increase local support for measures to implement road barrier mitigation practices

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in New York (Appendix G).

**Budget – Project 1.2**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Fish & Wildlife Dept-Total** | **$0** | **$0** | **$0** |
| **F&W Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| *Fringe* | $0 | | |
| | $0 | | |
| | | | |
| **TNC Personnel** | **$45,481** | **$29,603** | **$15,878** |
| Salary | $32,029 | $20,847 | $11,182 |
| Fringe | $13,452 | $8,756 | $4,696 |
| | | | |
| **Contractual-Total** | **$104,490** | **$83,490** | **$21,000** |
| *The Wildlands Network* | $104,490 | $83,490 | $21,000 |
| *Contract II* | $0 | $0 | $0 |
| *Contract III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $2,800 | $1,800 | $1,000 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$0** | **$0** | **$0** |
| *Due diligence costs related to land protection* | $0 | $0 | $0 |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$152,771** | **$114,893** | **$37,878** |
| TNC Indirect (22.55%) | $34,450 | $25,908 | $8,541 |
| | | | |
| ***Total Costs through TNC*** | **$187,221** | **$140,801** | **$46,419** |
| | | | |
| **Total Budget** | **$187,221** | **$140,801** | **$46,419** |
| match rate check | | 75.21% | 24.79% |

**Budget Narrative:**

**Personnel**: $8,286 will support the project manager/coordinator (Paul Marangelo) for Greens-Adirondacks linkage project management (coordination of partnership working group, advice, support, and coordination with work of the contracted Technical Assistance Coordinator) for project duration. $2,368 will support land protection prospecting work in the Greens-Adirondacks linkage in Vermont. $10,193 will support the Adirondack Nature Conservancy and Land Trust (Dirk Bryant) for work in New York to partner with NY Department of Transportation to prepare for a culvert wildlife passage mitigation project (project design and coordination). $8,756 will support fringe benefits for these personnel costs. $15,878 of the personnel and fringe costs will be provided as match (34.9% of the total). Fringe is calculated at 42% for regular positions.

**Contractual:** $83,490 will support work contracted to the Wildlands Network to provide 2100 hours of locally oriented technical assistance (calculated at $42 per hour for a total of $88,200, with 24% of the hourly costs of this contract waived as in-kind match, valued at $21,000). This total also includes $3,400 for technical assistance related costs (event support fees, communications, citizen science tracker training, etc.) to assist local municipalities and landowners with incorporating connectivity conservation into town plans, land use practices, etc. and to coordinate local citizen science tracking groups to gather information on wildlife use of road corridors. $2,000 is for travel for contract-related work at the IRS reimbursable rate of $0.555/mile, for 3,604 miles. Contract includes overhead of 15% for Wildlands Network.

**Travel:** $300 will support project-related travel needs for the project manager in the Vermont Chapter of the Nature Conservancy for 541 miles at the IRS reimbursable rate of $0.555/mile. $1500 will support project-related travel needs for the Adirondack Nature Conservancy and Land Trust for 2,703 miles. Remainder ($1,000) of total projected travel costs ($2,800) will be provided as match (35.7% of total).

**Supplies:**

**Equipment:**

**Other:**

**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%.

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Paul Marangelo, Conservation Ecologist, The Nature Conservancy-VT (802) 265-8645 Ext. 22, pmarangelo@tnc.org

Zoe Smith, Director, Director, Wildlife Conservation Society Adirondack Program, 518-891-8872, zsmith@wcs.orgzsmith@wcs.org

Joe Racette, NY Division of Fish, Wildlife, and Marine Resources, (518) 897-1293, jaracett@gw.dec.state.ny.us

Dirk Bryant, Director of Conservation Programs, Nature Conservancy – Adirondack Chapter, 518-576-2082, dbryant@tnc.org

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department,
jens.hilke@state.vt.us

## Project 1.3 Protecting & enhancing habitat connectivity between the Northern Green Mountains in Vermont to Sutton Mountains of Canada

**State(s):** Vermont (funded work would occur only in the US)

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $167,101**
Competitive SWG funds requested **$**123,778
Non-federal matching funds **$**43,323

**Project Partners:**
Vermont Fish & Wildlife Department
Missisquoi River Basin Association
Northern Forest Alliance
Northeast Vermont Development Association
Northwest Regional Planning Commission
The Nature Conservancy-VT
Trust for Public Land
Two Countries, One Forest
Vermont Agency of Transportation
Vermont Land Trust
Wildlands Network

*Appalachian Corridor Appalachien**
*Nature Conservancy of Canada**
*Wildlife Conservation Society of Canada**
** Partners implementing linkage habitat conservation north of the Vermont border*

**Location**
This project is focused on the Northern Green Mountains north of Route 15 in Vermont, heading north to the Canadian border. See map 2.

**Overview**

Proposed work in the Northern Green Mountains would build on the successes of existing SWG funded work by focusing activities on a smaller number of towns and a more limited geography within those towns. Recently completed GIS modeling and other assessments indicate that wildlife road crossings are particularly important in six towns on the western slope of the Northern Green Mountains (Montgomery, Enosburg, Bakersfield, Richford, Waterville, and Belvidere), all of which are active in the Cold Hollow to Canada (CHC) initiative, and one town on the eastern slope (Eden). Two towns, Johnson and Cambridge, just to the south of the CHC towns and which have been determined to be wildlife pinch points along Route 15, would be added to the project, for a total of nine contiguous towns. Also, SCI would support the Northern Vermont

Development Association in addressing municipal planning for connectivity conservation in the towns of Lowell, Westfield and Jay.

Most proposed work would be focused within the Structural Pathway areas identified in the Northern Greens see Map 2 , deploying land protection, transportation mitigation, and conservation science work within relatively small, well-defined areas to achieve maximum impact. Technical assistance activities would have a somewhat broader scope, encompassing Cold Hollow to Canada (CHC), the nine Northern Greens towns and relevant Regional Planning Commissions. CHC, a local initiative closely partnered with SCI during the first three years of the SCI, and whose capacity was successfully developed by Linkage Coordinator, Corrie Miller, is awaiting 501(c)3 status.

**Purpose & Need**

See Purpose & Need section of main document.

**Objectives**

**Conservation Science**

1. Establish linkage-wide citizen-science based roadkill reporting capability
2. Assess functional connectivity on key road segments, producing data for Road Barrier Mitigation components.

**Technical Assistance**

1. Propose planning and zoning policies or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat for 2 – 3 municipalities in the linkage, with connectivity enabling language incorporated into at least one town.
2. Further institutionalize conservation planning at the local and regional level; and
3. Strengthen the organizational structure and capacity of Cold Hollows To Canada and other local groups to continue the work of SCI into future years.

**Land Protection:**

1. Protect 850 acres of additional habitat in Structural Pathway via conservation easements or other means.

**Road Barrier Mitigation**

1. Document *functional* connectivity in the Northern Green Mountains on key road segments and provide transportation entities and municipalities with valuable, concrete data on critical, structural and *functional* wildlife crossings.

**Approach**

**Conservation Science:**

- Create and Organize Citizen Science opportunities for community residents to report wildlife sightings and roadkill anywhere in the linkage via a web interface and/or mobile phone app.
- Continue the WildPaths project (more information below), which trains volunteer scientists in wildlife track identification and data collection along roadways thought to be important wildlife crossings.

- Ground truth 6 – 8 Structural Pathways identified in Phase 1 to verify their functional connectivity value. Collaborate with Vermont Department of Fish and use a combination of professional trackers/scientists, remote cameras, and WildPaths Project citizen science teams to produce results that are robust enough to be used by VTrans for planning and mitigation purposes. [May be some overlap with elements of Transportation, above]

**Technical Assistance**

3. Build support for addressing connectivity objectives in local land use planning within linkage municipalities
   - Vermont Natural Resources Council (VNRC) and CHC are key partners in this component.
   - Offer 4-6 wildlife and connectivity – themed community outreach events within the linkage area to build local support and enthusiasm for connectivity conservation in communities and residents.
   - Hold meetings with community decision makers to build community relationships.
   - Provide technical assistance to 2-3 local municipalities to review or propose planning and zoning policies or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat. Build working relationships with municipalities to accept assistance from RPCs and VNRC for revising planning and zoning policies.
   - To develop awareness and support for local connectivity conservation, develop environmental education programs with a strong connectivity conservation theme.

**Land protection:**

1. Work with Cold Hollow to Canada and land trust partners to engage landowners potentially willing to donate easements and encourage voluntary best practices. Specifically:
   - Ensure broad distribution of Landowner Management and Landowner Resource Guides recently developed by SCI, and update and expand the Guides as needed.
   - Host several workshops targeted at adjacent land owners focused on cross-border management for wildlife/connectivity.
   - Conduct outreach to landowners of identified priority tracts for protection, providing them with background information on habitat connectivity and a range of options for conservation.
   - Amend and coordinate private Forest Management Plans developed by consulting foresters for interested adjacent landowners to encourage greater connectivity conservation. At least 3 groups or "parcel clusters" averaging 5 landowners would be identified and engaged.
2. Complete at least 3-4 land protection transactions, with a focus on donated easements.

**Road Barrier Mitigation:**

1. Engage Vermont Department of Transportation (VTrans) and town road departments to include connectivity objectives in transportation planning. Specifically,

- Conduct outreach to VTrans, town road departments, select boards and other bodies to identify potential partners.
- In conjunction with this proposal's fine-scale monitoring framework (Project 3), develop field verification protocols for priority road segments.
- Identify road segments that provide the best opportunities for mitigation.
- Develop draft mitigation recommendations, reports with recommendations, and make presentations to VTrans and local road department staff.

2. Implement 1-2 mitigation projects with local highway departments and/or VTrans.

**Background on WildPaths:**

After two years of extensive outreach, education and engagement of local residents on the importance of wildlife connectivity in the Northern Appalachians, Linkage Coordinators Monica Erhart and Robert Hawk have launched the WildPaths Project to train volunteer scientists in wildlife track identification and data collection along roadways thought to be important wildlife crossings. These crossing locations have been identified as likely wildlife crossing zones through GIS computer analysis of animal movement through these important linkage regions, the Southern Green Mountains to Adirondacks, and the Northern Green Mountains to Canada, respectively. In some locations, presence of wildlife at the crossings has additionally been confirmed through ground-truthing methods. However, the intensity of use of these crossings or the species that most frequently use them remains unknown.

In addition to providing an engagement strategy for local citizens wishing to learn more about the wildlife in their vicinities, the WildPaths Project will fill gaps in this knowledge through a 3-step process to occur over a 3-5 year period. First, citizens will be trained by professional trackers to identify wildlife tracks and sign through a variety of winter/spring conditions. Secondly, these citizens will visit targeted road segments and record data on the tracks they find. And finally, the data will be uploaded to an on-line database, where findings will be synthesized and mapped. This data will then be used by the Staying Connected Initiative to (1) evaluate priorities for future transportation corridor projects, (2) inform conservation planning work with municipal planners and administrators, and (3) enhance our engagement of landowners with parcels surrounding important crossing areas through additional outreach efforts.

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results.

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in Vermont (Appendix G).

**Budget – Project 1.3**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Fish & Wildlife Dept-Total** | **$0** | **$0** | **$0** |
| **F&W Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | $0 | $0 |
| *Fringe* | $0 | $0 | $0 |
| | | | |
| | | | |
| **TNC Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | $0 | $0 |
| Fringe | $0 | $0 | $0 |
| | | | |
| **Contractual-Total** | **$136,354** | **$101,003** | **$35,351** |
| *Contract I - Wildlands Network* | $136,354 | $101,003 | $35,351 |
| *Contractual* | $0 | | |
| | | | |
| | | | |
| **Travel** | $0 | $0 | $0 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$0** | **$0** | **$0** |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | | | |
| | | | |
| **Total direct costs** | **$136,354** | **$101,003** | **$35,351** |
| TNC Indirect (22.55%) | $30,748 | $22,776 | $7,972 |
| | | | |
| ***Total Costs through TNC*** | **$167,102** | **$123,779** | **$43,323** |
| | | | |
| **Total Budget** | **$167,102** | **$123,779** | **$43,323** |
| match rate check | | 74.07% | 25.93% |

**Budget Narrative:**

**Contractual:** $101,003 will support work contracted to the Wildlands Network to provide: 1) $18,864 for project manager/coordinator (Conrad Reining) for Northern Green Mtns linkage project management (coordination of partnership working group, advice, support, and coordination with work of the contracted Technical Assistance Coordinator) for project duration (match of $12,576 will be provided by Wildlands Network); and 2) 1872 hours of locally oriented technical assistance (calculated at $42 per hour for a total of $78,624, with 24% of the hourly costs of this contract waived as in-kind match, valued at $18,720). An additional $7,881 will support travel for contract-related work by Wildlands Network project manager and Technical Assistance coordinator at the IRS reimbursable rate of $0.555/mile. Amount is based on five trips

per year for project manager over 2 years and 700 miles/month over 18 months for coordinator. WN will match travel expenses @ $2,875. Technical assistance related costs (event support fees and communications) of $1,180 are also included to assist local municipalities and landowners with incorporating connectivity conservation into town plans, land use practices, etc. and to coordinate local citizen science tracking groups to gather information on wildlife use of road corridors. Wildlands Network will match the TA related costs at 100% or $1,180. Wildlands Network will charge an indirect fee of 15% on the contracted expenses.

**Travel:**

**Supplies:**

**Equipment:**

**Other:**

**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Conrad Reining, Wildlands Network, (802) 785-2838, conrad@wildlandsnetwork.org
Kate Wanner, Land Acquisition Specialist, Trust for Public Land, (802) 223-1373 Kate.Wanner@tpl.org
Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, jens.hilke@state.vt.us
Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, 802-229-4425 x109, phuffman@tnc.org

## Project 1.4Protecting & enhancing habitat connectivity between Northern Green Mountains to the Northeastern Highlands (VT)

**State(s):** Vermont

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $120,929**
Competitive SWG funds requested $120,929
Non-federal matching funds $0

**Project Partners:**
Vermont Department of Fish & Wildlife, Trust, Vermont Natural Resources Council, The Nature Conservancy VT, Vermont Agency of Transportation, Trust for Public Land

**Location**
The project will focus on maintaining & restoring habitat connectivity from the Northern Green Mountains east to the Northeastern Highlands of Vermont See map 2.

**Purpose & Need**
See Purpose & Need section of main document.

**Objectives**

**Conservation Science**

1. Work with state partners to ensure implementation and wide-spread usage of wildlife reporting website currently in design stages
2. Further refine Structural Pathways identified in Phase 1 to reduce land area captured.

**Technical Assistance**

1. Propose planning and zoning policies or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat for 2 – 3 municipalities in the linkage, with connectivity enabling language incorporated into at least one town.
2. Propose specific regional plan language and non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat for at least one regional planning commission.
3. Provide information and support for connectivity conservation to interested groups and local governments linkage-wide.
4. Further institutionalize conservation planning at the local and regional level.

**Land Protection:**

1. Protect 300 acres of additional habitat in Structural Pathways via conservation easements or other means.

**Road Barrier Mitigation**

1. Continue working with the Agency of Transportation and other key partners to incorporate "Critical Paths" data (i.e functional connectivity wildlife road tracking data collected in Phase 1) into transportation planning and infrastructure improvement planning.

**Approach**

**Technical Assistance:**

1. Utilize a seasonal staff position (1520 hours per year for three years) at Vermont Fish & Wildlife Department to perform technical assistance in the 30 towns of this linkage.
2. Work with regional and municipal planning entities to incorporate model language for connectivity conservation into Lamoille Regional Planning Commission's regional plan.
3. Work with municipal planning entities to incorporate model language for connectivity conservation into town plans, using a planning manual produced by the Vermont Natural Resources Coalition that is a product of Phase 1 Staying Connected work.
4. Build support for addressing connectivity objectives in local land use planning within remaining targeted towns through events and activities related to wildlife.
    - Organize three wildlife and connectivity – themed community outreach events within the linkage area in support of efforts to modify local and regional land use plans, engender interest in the creation of landowner forest management groups, implement road barrier mitigation practices, and contact/identify landowners who may be interested in land conservation via easements.
    - Provide technical assistance to additional local municipalities to propose either planning action or non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat.

**Land protection and Management:**

1. Facilitate development of 1-2 landowner groups that share forest management plans with a connectivity conservation component.
2. Complete at least 3-6 land protection transactions, totaling 500 acres, with a focus on donated easements.

**Road Barrier Mitigation**

1. In priority linkage road crossing areas, identify priority bridge/culverts where mitigation for wildlife movement would be most valuable.
    - Inventory and assess culverts and bridges in key road crossing areas in Vermont for wildlife crossing value and remediation needs. Identify structures that are priorities for replacement in terms of infrastructure integrity, and encourage the consideration of wildlife-crossing friendly designs as part of plans for future structure replacement work.
2. Facilitate the use of citizen science wildlife reporting website currently being designed by the University of Vermont (VT-SWG 2010) and scheduled to be housed at the Vermont Fish & Wildlife Department, raise the visibility of wildlife road crossing issues, and increase local support for measures to implement road barrier mitigation practices

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in Vermont (Appendix G).

**Budget – Project 1.4**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Vermont Fish & Wildlife Dept-Total** | **$120,929** | **$120,929** | **$0** |
| **F&W Personnel** | **$79,937** | **$79,937** | **$0** |
| Salary | $79,937 | $79,937 | $0 |
| Fringe | $0 | $0 | $0 |
| **Travel** | $10,000 | $10,000 | $0 |
| VFWD Indirect 34.46% | $30,992 | $30,992 | $0 |
| **TNC Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | $0 | $0 |
| Fringe | $0 | $0 | $0 |
| | | | |
| **Contractual-Total** | **$0** | **$0** | **$0** |
| *Contract I* | $0 | | $0 |
| *Contract II* | $0 | $0 | $0 |
| | | | |
| | | | |
| **Travel** | $0 | | |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$0** | **$0** | **$0** |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| *Other III* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$0** | **$0** | **$0** |
| TNC Indirect (22.55%) | $0 | $0 | $0 |
| | | | |
| ***Total Costs through TNC*** | **$0** | **$0** | **$0** |
| | | | |
| **Total Budget** | **$120,929** | **$120,929** | **$0** |
| match rate check | | 100.00% | 0.00% |

**Budget Narrative:**

**F&W Personnel:** VFWD will hire one seasonal technician position to conduct technical assistance in the project area (1520 hours per year * 3 years). Jens Hilke, Vermont Fish &

Wildlife Department Conservation Planner/Biologist, will coordinate this project, but his services (valued at $3,000 for this project) are covered through a separate VFWD grant that is not eligible as match and so are not reflected in this project budget.

**Contractual: None**

**Travel:** Travel to and within the project area by VFWD project staff and seasonal field technicians reimbursable at IRS reimbursable rate of $0.555/mile is estimated at $3,300/yr over 3 years. The mileage estimate is based on averages charged by Vermont Fish & Wildlife technical assistance staff.

**Supplies:** Covered by Vermont Fish & Wildlife Department

**Other:** none

**Indirect:** Is based on Vermont Fish & Wildlife's federally approved indirect rate of 34.46% and was applied to all funds.

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, 802-476-0126, jens.hilke@state.vt.us

Conrad Reining, Wildlands Network, (802) 785-2838, conrad@wildlandsnetwork.org

Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, 802-229-4425 x109, phuffman@tnc.org

## Project 1.5 Enhancing & securing habitat connectivity between the Northeastern Highlands across northern New Hampshire to Maine (VT-NH-ME)

**State(s):** Vermont, New Hampshire, Maine

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $294,793**
Competitive SWG funds requested **$**145,062
Non-federal matching funds **$**149,731

**Project Partners:**
The Nature Conservancy – NH and VT Chapters, Trust for Public Land, New Hampshire Fish & Game, VT Dept of Fish & Wildlife, New Hampshire Dept. of Transportation

**Location**
This project is focused on establishing functional connectivity for wildlife movement across the Northeast Kingdom of Vermont, through the Northern Forest Region of New Hampshire into the Mahoosuc Mountains of Maine. See map 2.

**Background**
In Phase 1, the Northeast Kingdom – Northern New Hampshire – Western Maine linkage focused on:

- Building a working partnership with TNC, NH Audubon, NH and VT wildlife agencies, and NH and VT transportation departments.
- Developing rigorous, GIS-based cost surfaces and connectivity models for eleven representative wildlife species.
- Assembling a first iteration connectivity blueprint (or conservation plan) for the linkage identifying high priority connectivity zones, parcels for land protection consideration, and important road segments in which to focus mitigation strategies.

**Purpose & Need**
See Purpose & Need section of main document.

**Objectives**

1. Update and refine the conservation blueprint based on new field science data sets related to wildlife presence and movement, producing refined connectivity data layer for the linkage
2. Raise community awareness of the importance of the Connecticut River valley for connectivity in the Northern Appalachians through at least three community outreach events
3. Implement land protection that advances connectivity conservation in the Connecticut River Valley, Androscoggin River Valley, and Western Maine Mountains, protecting at least 40,000 acres of land in the linkage

4. Identify and positively influence transportation planning and road corridor maintenance/improvement activities in areas important for regional connectivity by sharing newly developed connectivity data with transportation agencies, noting overlaps with proposed road projects

## Approach

### Conservation Science

Proposed work is to incorporate new data sets, particularly field science aimed at validating hypotheses about locations of functional connectivity, that help to augment, update, and refine connectivity models and priorities developed in the first phase of SCI.

1. Work with NH Fish & Game, University of New Hampshire, and other institutions to acquire relevant tracking, telemetry, and other location data.
2. Incorporate new data sets and refine models, mapping, and priorities.

### Technical Assistance:

1. Hold at least three wildlife and connectivity–themed community outreach events within the linkage area to engage communities and residents in Staying Connected. Most likely focus is to target conservation commissions and/or planning boards.
2. Explore a partnership with UNH Coop Extension Coverts program and NH Fish & Game aimed at gaining further community involvement by training volunteers in identification of key wildlife species and through use of NH Fish and Game's online wildlife observation data entry system.

### Land Protection:

Proposed work is to launch a land protection program targeted at protecting key parcels within the linkage. Tasks will include:

1. Develop targeted landowner outreach materials detailing the importance of connectivity and land protection options for maintaining or enhancing connectivity.
2. Landowner outreach, cultivation, and relationship building on at least 12 high priority ownerships in the Connecticut River and Androscoggin River valleys.
3. Undertake at least six land protection transactions, with a focus on conservation easements. Conduct due diligence including appraisals and easement drafting.
4. Complete at least four land protection transactions, including 28,000 acres of fee and easement in the Androscoggin River Valley (Northern NH) and 11,800 acres at Crocker Mountain (Western ME).

### Road Barrier Mitigation:

Proposed work consists of field verification to develop hard data on wildlife movement patterns. These data will allow us to: a) further ground-truth the validity of the connectivity models, and to refine said models as necessary; and b) document wildlife movement along key road segments to state departments of transportation, in order to drive focused investment in mitigation such as land protection, signage, speed limits, right-of-way management, and other tactics. Tasks will include:

1. Share data, findings, and recommendations with NH and VT departments of transportation, regional planning entities, and town public works departments, to inform transportation mitigation planning and expenditures.

2. Work with NH DOT to identify long-range road improvement plans that overlap with, or are in proximity to, priority road segments. Investigate and advance opportunities for avoidance of impacts on connectivity, advance mitigation, and other cooperative actions (e.g., signage, right-of-way management, land protection).
3. Pilot an effort to link connectivity values and priorities in the CT River valley with the CT River Scenic Byway.

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in Vermont, New Hampshire or Maine (Appendix G).

**Budget – Project 1.5**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **New Hampshire Fish & Game Dept-Total** | **$5,000** | **$0** | **$5,000** |
| **F&W Personnel** | **$5,000** | **$0** | **$5,000** |
| Salary | $3,289 | | $3,289 |
| *Fringe (52%)* | $1,711 | | $1,711 |
| | | | |
| | | | |
| **TNC Personnel** | **$45,050** | **$33,370** | **$11,680** |
| Salary | $31,725 | $23,500 | $8,225 |
| Fringe | $13,325 | $9,870 | $3,455 |
| | | | |
| **Contractual-Total** | **$155,000** | **$55,000** | **$100,000** |
| *Contract I* | $155,000 | $55,000 | $100,000 |
| *Contract II* | $0 | $0 | $0 |
| *Contract III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $0 | $0 | $0 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$40,500** | **$30,000** | **$10,500** |
| *Admin and due diligence costs related to land protection* | $40,500 | $30,000 | $10,500 |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | $0 | | |
| **Total direct costs** | **$240,550** | **$118,370** | **$122,180** |
| TNC Indirect (22.55%) | $54,244 | $26,692 | $27,551 |
| | | | |
| ***Total Costs through TNC*** | **$294,793** | **$145,062** | **$149,731** |
| | | | |
| **Total Budget** | **$299,793** | **$145,062** | **$154,731** |
| match rate check | | 48.39% | 51.61% |

**Budget Narrative:**

**F&W Personnel:** NH Fish and Game Department has committed $5,000 of non-federal in-kind match, deriving from the active involvement of agency wildlife staff in the linkage workgroup. NHF&G staff expect to participate in wildlife observation database training, technical assistance on conservation science, and community outreach.
**Personnel:** Doug Bechtel, The Nature Conservancy, NH Chapter, will serve as project leader for this project. TNC's NH & VT Directors of Conservation Programs and GIS & Conservation Information Managers will assist in strategy implementation and integrating conservation science data into project activities. TNC Land Protection Specialists will conduct community and landowner outreach and provide technical conservation assistance to implement the land protection strategy. The project budget includes $45,050 for personnel and fringe, which includes $33,370 of requested SWG funds and $11,680 of committed non-federal match. Fringe is calculated at 42% for regular positions.
**Contractual:** The project budget includes $155,000 for the Trust for Public Land (TPL), including $55,000 of requested SWG funds and $100,000 of committed non-federal match. TPL project expenses will include staff time for landowner outreach and project development, and for the other administrative and transactional costs associated with completing at least three land/easement acquisition projects within the Northern New Hampshire and Western Maine portions of the linkage area (further described below under "Other"). The TPL budget also includes $10,000 for travel costs associated with these land transactions.
**Travel:**
**Supplies:**
**Equipment:**
**Other:** The project budget includes $40,500 in administrative costs for land/easement acquisition, including $30,000 of requested SWG funds and $10,500 in committed non-federal match. Administrative costs that may be paid with SWG Competitive Grant funds and/or used as non-federal match are costs associated with the acquisition of real property interests that advance connectivity goals in the linkage, but not the cost of the property interest itself. These costs may include, but are not limited to appraisals, boundary surveys, legal fees, title research and insurance, biological reconnaissance, environmental contaminant surveys, recording fees and taxes, easement baseline documentation associated with the acquisition.
**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%.

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Doug Bectel, Director of Conservation Science, The Nature Conservancy in New Hampshire. dbechtel@tnc.org

Kate Wanner, Land Acquisition Specialist, Trust for Public Land, (802) 223-1373

Kate.Wanner@tpl.org

Dan Coker, Conservation Information Manager, The Nature Conservancy in Maine. dcoker@tnc.org

Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, 802-229-4425

x109, phuffman@tnc.org

## Project 1.6 Vermont Multi-Linkage Connectivity Work

**State(s):** Vermont

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $217,926**
Competitive SWG funds requested **$**105,393
Non-federal matching funds **$**112,533

**Project Partners:**
The Nature Conservancy –VT Chapters, Vermont Land Trust, The Wildlands Network, Vermont Natural Resources Council, Vermont Fish & Wildlife Department

**Location**
Three linkage areas in Vermont. See map 2.

**Purpose & Need**
These three organizations work throughout Vermont. Under the first phase of this project, they operated in all the Vermont linkages, budgeting and reporting separately for each. To better report our successes and be more clear on budget monies asked for and received, the need for a stand-alone across-Vermont subproject became clear. Work performed by these three organizations is occurring in all Vermont linkages (Projects 1.2, 1.3, & 1.4) but is budgeted for and reported on as a stand-alone subproject 1.6.

**Objectives**
See Grant Objectives for Project 1.

**Approach**
See Approach for Project 1 as a whole
See each project narrative for individualized linkage approaches. Project 1.2, Project 1.3, & Project 1.4

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in Vermont, New Hampshire or Maine (Appendix G).

**Budget – Project 1.6**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| | $0 | | |
| | $0 | | |
| **TNC Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| Fringe | $0 | | |
| | | | |
| **Contractual-Total** | **$177,826** | **$86,000** | **$91,826** |
| *Contract I-VT Natural Resources Council* | $50,000 | $40,000 | $10,000 |
| *Contract II-VT Land Trust* | $120,000 | $40,000 | $80,000 |
| *Contract III-Wildlands Network* | $7,826 | $6,000 | $1,826 |
| | | | |
| **Travel** | $0 | $0 | $0 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$0** | **$0** | **$0** |
| *Other I* | $0 | | |
| *Other II* | $0 | | |
| *Other III* | $0 | | |
| | | | |
| **Total direct costs** | **$177,826** | **$86,000** | **$91,826** |
| TNC Indirect (22.55%) | $40,100 | $19,393 | $20,707 |
| | | | |
| ***Total Costs through TNC*** | **$217,926** | **$105,393** | **$112,533** |
| | | | |
| **Total Budget** | **$217,926** | **$105,393** | **$112,533** |
| match rate check | | 48.36% | 51.64% |

**Budget Narrative:**

**Contractual: Contract 1-VT Natural Resources Council:** Budget includes $39,250 of SWG funds for VNRC staff time to provide land use technical assistance to high priority municipalities and regional planning commissions in VT linkages, and to develop online tools to promote land use planning for connectivity. VNRC will provide $10,000 of staff time from non-federal sources as match. Budget also includes $750 of SWG funds for VNRC staff travel costs to meetings with municipalities and regional planning commissions. **Contract 2-VT Land Trust:** Budget includes $40,000 of SWG funds for VLT staff time to secure and complete 10-15 easement projects (donated and/or purchase) to advance connectivity goals in priority areas of VT linkages. VLT will provide $80,000 of match from non-federal sources for staff time and administrative/associated costs for these transactions. These costs may include, but are not limited to appraisals, boundary surveys, legal fees, title research and insurance, biological reconnaissance, environmental contaminant surveys, recording fees and taxes, easement baseline documentation associated with the acquisition. They do not include the cost of the property interest itself. **Contract 3-Wildlands Network:** Budget includes $6,000 of SWG funds for Wildlands Network staff time for project management and implementation of follow-up work for VT transportation Best Management Practices for

enhancing road permeability for wildlife. Wildlands Network will provide $1,826 of staff time from non-federal sources as match. Contract includes overhead of 15% for Wildlands Network.

**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Jamey Fidel, Forest and Wildlife Program Director, Vermont Natural Resources Council, 802-223-2328 ext. 117. jfidel@vnrc.org

Siobhan Smith, Director of Conservation Programs, Vermont Land Trust, 802-262-1217. Siobhan@vlt.org

Conrad Reining, Wildlands Network, (802) 785-2838, conrad@wildlandsnetwork.org

Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, 802-229-4425 x109, phuffman@tnc.org

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, 802-476-0126, jens.hilke@state.vt.us

## Project 2: Cross-Cutting Transportation Strategy:

**State(s):** New York, Vermont, New Hampshire, & Maine

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $48,195**
Competitive SWG funds requested $29,389
Non-federal matching funds $18,806

**Project Partners:**
The Nature Conservancy NY, The Wildlands Network, The Nature Conservancy VT, Vermont Department of Fish & Wildlife, Vermont Agency of Transportation, New York Department of Transportation, New Hampshire Department of Transportation, Maine Department of Transportation

**Location**
Staying Connected Project Area in New York, Vermont, New Hampshire, & Maine See map 2.

**Purpose & Need**
See Purpose & Need section of main document.

**Objectives**

- Build multi-state support for special designation of roads with DOT's that cross priority linkages and adopt best practices within these areas to facilitate wildlife movement
- Develop an implementation plan for designation and adoption of BMPs within each state and if feasible pilot specific projects with one or more DOTs

**Approach**

- Outreach/engagement with relevant state and Federal agencies (DOT's, USFWS, State Fish and Wildlife Commissions, Regional Planning Commissions, etc) to build support for a special designation concept
- Explore options for addressing connectivity within one or more Scenic Byways
- Integrate linkage maps to provide a draft regional picture of where priority roads might be located
- Conduct an assessment of social, environmental and economic benefits of designation (e.g. estimated savings to public from reduced wildlife/vehicle collisions)
- In consultation with relevant partners/agencies, draft a blueprint for how this might work (options for funding work, draft designation criteria, management standards, educational and outreach components)
- Work with one or more States to begin implementing the concept. This would include:
  1. agreeing to special designation of road segments within regionally important connectivity areas
  2. agreeing to and applying criteria to define those roads
  3. Identifying and adopting transportation best management practices (BMPs) to make those roads more permeable to wildlife

4. developing a menu of educational/outreach opportunities transportation agencies might use to raise public awareness about the importance of connectivity and appropriate driving practices in linkage areas (e.g. signage 'You are entering a Northern Forest Wildlife Corridor' and displays at rest stops)

- Facilitate exchanges between state and provincial transportation agencies to encourage adoption of this approach across both US and Canadian portions of the region (SWG grant funding will be limited to US engagement).

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in the four state area (Appendix G).

**Budget – Project 2**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| *Fringe* | $0 | | |
| | | | |
| | | | |
| **TNC Personnel** | **$29,827** | **$18,031** | **$11,796** |
| Salary | $21,005 | $12,698 | $8,307 |
| Fringe | $8,822 | $5,333 | $3,489 |
| | | | |
| **Contractual-Total** | **$4,500** | **$3,450** | **$1,050** |
| *Contract I-Wildlands Network* | $4,500 | $3,450 | $1,050 |
| *Contract III* | $0 | $0 | $0 |
| *Contract III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $4,500 | $2,000 | $2,500 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$500** | **$500** | **$0** |
| *Meeting costs* | $500 | $500 | $0 |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$39,327** | **$23,981** | **$15,346** |
| TNC Indirect (22.55%) | $8,868 | $5,408 | $3,461 |
| | | | |
| ***Total Costs through TNC*** | **$48,195** | **$29,389** | **$18,806** |
| | | | |
| **Total Budget** | **$48,195** | **$29,389** | **$18,806** |
| match rate check | | 60.98% | 39.02% |

**Budget Narrative:**

**Personnel:** TNC Adirondack Chapter (ANC) Director of Conservation Programs Dirk Bryant will serve as the project manager for the transportation cross-cutting project. The ANC Conservation Scientist Michelle Brown will assist with outreach/engagement of Department of Transportation staff, integration/comparison of BMPs and research on potential designation approaches, including Byways. They will be assisted by the ANC conservation information coordinator and the Director of Communications. The ANC Information Services manager will provide GIS mapping and analysis of priority road segments across the region. Fringe is calculated at 42% for regular positions.
**Contractual:** Project Leader: Conrad Riening, Wildlands Project. Wildlands SWG contractual costs will total $3,450 in staff time to assist with outreach to VT, ME and NH Departments of Transportation and to help disseminate VT Best Management Practices. Wildlands Network will provide $1,050 of staff time funded by non-federal sources as match. Contract includes overhead of 15% for Wildlands Network.
**Travel:** Travel within the region to meet with and convene state Department of Transportation representatives, including travel costs for project and transportation department staff. Total project costs estimated at $4,500 of which $2,500 will be covered through non-federal match. Travel costs include: mileage (approximately 4,000 miles at the IRS reimbursable rate of $0.555/mile), 10 overnights (lodging and food), and costs for project staff to attend and present results at the Northeastern Transportation and Wildlife Conference in 2014.
**Other:** $500 in costs associated with hosting round-table meetings with transportation officials, including any room rental fees, beverages, lunch (sandwiches etc) and miscellaneous supplies (flip chart paper etc).
**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%.

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Dirk Bryant, Director of Conservation Programs, Nature Conservancy – Adirondack Chapter, 518-576-2082, dbryant@tnc.org

Conrad Reining, Wildlands Network, (802) 785-2838, conrad@wildlandsnetwork.org

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, 802-476-0126, jens.hilke@state.vt.us

Paul Marangelo, Conservation Ecologist, The Nature Conservancy-VT. pmarangelo@tnc.org

## Project 3: Cross-Cutting Monitoring and Evaluation Strategy

**State(s):** New York, Vermont, New Hampshire, & Maine

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $48,755**
Competitive SWG funds requested $33,699
Non-federal matching funds $15,056

**Project Partners:**
The Wildlands Network, The Nature Conservancy (ME, NH, NY & VT chapters), , Vermont Fish & Wildlife Dept,, Wildlife Conservation Society and Two Countries, One Forest

**Location**
Staying Connected Project Area in New York, Vermont, New Hampshire, & Maine See map 2.

**Purpose & Need**
As part of the first phase of the Staying Connected Initiative, and with support from USFWS and matching funds, a framework is being developed to establish efficient and meaningful measures that we can use to evaluate the status of landscape connectivity in the eight Landscape Linkages that are the focus of the Initiative. In addition, a number of locally focused wildlife tracking and monitoring efforts are underway by the Staying Connected partners.

Within the first six months of 2012, the "Phase 1 Regional Measures Framework" will be finalized and a baseline "snapshot" of structural connectivity status will be established. Structural connectivity is defined by the Staying Connected Initiative as the degree to which similar landscape elements, such as habitat patches or natural vegetation, are physically connected to each other. Given the large area of the linkages – millions of acres – Phase 1 of the framework will use relatively coarse-scale data, 30-meter National Land Cover Data (NLCD), as a primary dataset. It will also use the Resistant Kernel analysis, which builds on the NLCD and provides a quantitative measure of the permeability of a given landscape. The Resistant Kernel analysis is being conducted by a team headed by Mark Anderson at The Nature Conservancy's Eastern Resource Office. These data, and resulting metrics, are relatively inexpensive to acquire, analyze and disseminate, and provide the appropriate starting point for landscape-scale connectivity conservation monitoring.

The Phase 1 framework will include indicators for two main connectivity attributes: 1) Permeability/Connectivity and 2) Barriers. At least three indicators will be used to measure the Permeability/Connectivity attribute: a) Land Use/Land Cover, b) Resistant Kernel and c) Conservation Areas/Areas Secured from Development. Barrier indicators are somewhat less defined but will likely include some combination of road width, Annual Daily Traffic (ADT) counts and other factors. The baseline snapshot will provide quantitative values, and a graphical image, for each indicator for all eight linkages. All eight linkages will have precisely defined

boundaries based on factors such as habitat blocks, watersheds, results of focal species models and other factors.

The Phase 1 monitoring framework monitors structural connectivity at a coarse scale over millions of acres. There is an emerging need, however, on the part of transportation agencies, land conservation groups and other entities, for information on the actual use of road segments, road infrastructure and surrounding lands by a wide range of species. This information is needed to guide mitigation work and land conservation priorities. We thus propose to design a fine-scale (5 meters or finer resolution) monitoring framework that will allow assessment of the "functional" permeability of an individual road section, bridge or culvert, and immediately surrounding lands. This "Phase 2" framework will also incorporate citizen science that has been developed under Staying Connected's technical assistance efforts, as well as professional data collected linkage by linkage by academic researchers and professional trackers. Together, the Phase 1 and Phase 2 monitoring frameworks ensure that our desired impacts are focused and efficient, that they can be readily measured at multiple scales, and that they can be reported in fashion that is understandable to our partners and a broader public alike.

**Objectives**

- Design a fine-scale, Phase 2 framework for monitoring of wildlife movement, land use change, and transportation infrastructure change that is compatible with on-going projects being conducted by professionals and citizen scientists while providing a standardized data collection and analysis format that can be applied regionally. Ensure compatibility with the Phase 1 measures framework.

**Approach**

Building on Phase 1 of SCI, the Regional Measures Framework, we will begin to scale our efforts down into finer-scale monitoring of wildlife connectivity. We will conduct a needs assessment/inventory of the current major regional wildlife monitoring projects ongoing in the Staying Connected region (i.e., camera trapping, hair snaring, track plates, GPS collaring) and work closely with those partners to begin to form a framework to be applied across the entire region. We will consult with UVM Ph.D. candidate Laura Farrell to evaluate methodologies that will provide us with the most robust information on wildlife movement and the most efficient means to obtain and organize local-scale information across a the 4-state region. Other important elements of our approach include:

- Identifying the most important locations for fine scale monitoring, such as the structural pathways[1] or "T1" critical road crossing areas that have been identified in the Vermont linkages.
- Cross-referencing wildlife use data with fine-scale connectivity assessments, such as "networked" hedgerows, forested habitat, passable culverts, wetlands and other habitat.

[1] A structural pathway is an area with sufficient structural connectivity to function as a habitat corridor, where a habitat corridor is defined as those components of the landscape that provide a continuous or near continuous pathway that may facilitate the movement of target organisms or ecological processes between areas of core habitat.

- Developing unifying techniques that rank, on a fine scale, factors such as "habitat network connectedness" and "road permeability" in and around road segments.
- Proposing new information systems, or enhancements to existing systems, to allow for data input from across the region.

Ultimately, based on input from a range of experts and citizen scientists, a set of standardized recommendations for monitoring wildlife movement and determining whether conservation / mitigation efforts have improved functional connectivity will be proposed.

The project will require about 18 months to complete. A small team headed by Wildlands Network will be established to carry out the work of the project. The larger Monitoring and Evaluation Group (MEG) will be engaged to provide guidance and feedback. During the first six months, researchers, professional trackers and citizen science groups will be interviewed to establish the full extent of functional connectivity monitoring activities in the 4-state region. These interviews will also be an opportunity build support with this disparate group of interests. A literature review will also be conducted during this first six-month period. During the next six months, the results of the interviews and literature reviews will be integrated into a design for draft fine-scale monitoring framework, with the help of the MEG. At the end of the first year, the draft framework design will be sent out to the professionals and citizen scientist groups. Feedback will be incorporated and a final proposed framework will be completed and disseminated in hardcopy and electronic form by the end of 18 months.

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

- Fine-scale framework design will be proposed by mid-2014.

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in the four state area (Appendix G).

**Budget – Project 3**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Fish & Wildlife Dept-Total** | **$0** | **$0** | **$0** |
| **F&W Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| *Fringe* | $0 | | |
| | | | |
| | | | |
| **TNC Personnel** | **$9,528** | **$7,100** | **$2,428** |
| Salary | $6,710 | $5,000 | $1,710 |
| Fringe | $2,818 | $2,100 | $718 |
| | | | |
| **Contractual-Total** | **$20,533** | **$12,898** | **$7,635** |
| *Contract I - Wildlands Network* | $20,533 | $12,898 | $7,635 |
| *Contract II* | $0 | $0 | $0 |
| *Contract III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $0 | $0 | $0 |
| **Equipment** | $0 | $0 | $0 |
| **Supplies** | $0 | $0 | $0 |
| **Construction** | $0 | $0 | $0 |
| | | | |
| **Other-Total** | **$10,000** | **$7,500** | **$2,500** |
| *Other I-Meeting* | $10,000 | $7,500 | $2,500 |
| *Other I* | $0 | $0 | $0 |
| *Other II* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$40,061** | **$27,498** | **$12,563** |
| TNC Indirect (22.55%) | $9,034 | $6,201 | $2,833 |
| | | | |
| ***Total Costs through TNC*** | **$49,095** | **$33,699** | **$15,396** |
| | | | |
| **Total Budget** | **$49,095** | **$33,699** | **$15,396** |
| match rate check | | 68.64% | 31.36% |

**Budget Narrative:**

**Personnel:** TNC-ME GIS Analyst / Conservation Information Manager (Dan Coker) has played a key role in the development the design of and measures for the coarse-scale Staying Connected Phase I monitoring framework. He will help play a similar role in development of the Phase 2 fine-scale framework, and provide overall GIS and Information Management support. Budget includes $3,000 for support of this position. TNC-VT Conservation Ecologist (Paul Marangelo) has experience with fine-scale monitoring systems in the Champlain Valley. He will support efforts to take these systems to scale in the Phase 2 framework. Budget includes $2,000 for support of this position. Non-federal match of $1,710 will be provided for the GIS Analyst and Ecologist personnel. $2,100 will support fringe benefits for the TNC personnel, with match of $718 on the fringe. Fringe is calculated at 42% for regular positions.

**Contractual.** Project Leader: Conrad Reining, Wildlands Network. Project management for development of fine-scale functional connectivity framework. Estimate 5% time over 18 months or $4,716, with match at the equivalent of 2.5% or $1,572. The contract also includes $6,000 over 18 months for a Consulting Scientist, possibly UVM Ph.D. candidate Laura Farrell, to provide analytical support in the development of the functional connectivity framework. Consulting Scientist value will be matched at 100%, or $6,000, from non-federal sources. The contract also estimates $500 for travel at IRS reimbursable rate of $0.555/mile to attend meetings and meet with collaborators, with a match of $63. Contract includes overhead of 15% for Wildlands Network.

**Other:** Partnership Monitoring and Evaluation Meeting: A meeting to evaluate progress and lessons learned, improve efficiency and effectiveness, etc. in order to better meet project goals will be held during the second half of the project timeframe, with 40-50 members of the Staying Connected Initiative partnership and collaborating organizations. Budget includes $7,500 to support the costs of meeting space, meals and lodging for the participants. A non-federal match of $2,500 toward meeting expenses will be provided.
**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Conrad Reining, Wildlands Network, (802) 785-2838, conrad@wildlandsnetwork.org

Dan Coker, Conservation Information Manager, The Nature Conservancy in Maine. dcoker@tnc.org

## Project 4: Cross-Cutting Climate Change Technical Assistance Strategy:

**State(s):** New York, Vermont, New Hampshire, & Maine

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $22,233**
Competitive SWG funds requested **$**18,330
Non-federal matching funds $3,903

**Project Partners:**
National Wildlife Federation

**Location**
Staying Connected Project Area in New York, Vermont, New Hampshire, & Maine See map 2.

**Purpose & Need**
The scale of climate change impacts in the SCI region requires focused leadership, new stakeholders, and enhanced partnerships and collaborations across a wide range of organizations, businesses and individuals. The National Wildlife Federation's work focuses on the importance of habitat connectivity as a climate change adaptation tool by providing related technical assistance to SCI partners, key stakeholders, and decision-makers. See Purpose & Need section of main document.

**Objectives**
Provide technical assistance to Staying Connected partners on climate change science and communication strategies to refine our technical assistance efforts and better represent habitat connectivity as a climate change adaptation strategy. Climate change is one of the principle threats that coalesced and focused the partnership around the need for addressing habitat connectivity. But over the course of our first SWG, it became apparent that few organizations were actually capable of appropriately incorporating climate change adaptation in their technical assistance work. This objective addresses this gap and also provides technical assistance to non-SCI regional-level conservation partners so they too can better integrate habitat connectivity as a climate change adaptation strategy.

**Approach**

- Produce and distribute Adapting to Climate Change ~ A Layperson's Guide that describes/discusses why habitat connectivity is an essential adaptation strategy.
- Convene a statewide workshop in each SCI state to address climate change adaptation in the region and showcase habitat connectivity as an essential adaptation strategy.
- Develop and present Climate Change and Wildlife (based, in large part, upon A Layperson's Guide) to 10 or more community based energy committees. The presentation will make the case why and how community energy committees should engage community leaders on the topic.
- Host a webinar for the state-wide coalition of conservation commissions in three of the four states in the SCI region (Association of Vermont Conservation Commissions, New

Hampshire Association of Conservation Commissions, Maine Association of Conservation Commissions) addressing climate change adaptation and showcasing habitat connectivity is an essential strategy.

- Host a webinar with SCI partners and key stakeholders on the emerging Regional Vulnerability Assessment and its impacts on land acquisition strategies/targets in the SCI region.
- Host a technical workshop at the NEAFWA 2013 Annual Meeting on habitat connectivity is an essential adaptation strategy.

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in the four state area (Appendix G).

**Budget – Project 4**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Fish & Wildlife Dept-Total** | **$0** | **$0** | **$0** |
| **F&W Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| *Fringe* | $0 | | |
| | $0 | | |
| | $0 | | |
| **TNC Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| Fringe | $0 | | |
| | | | |
| **Contractual-Total** | **$18,142** | **$14,957** | **$3,185** |
| *Contract I-National Wildlife Federation* | $18,142 | $14,957 | $3,185 |
| *Contract II* | $0 | $0 | $0 |
| *Contract III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $0 | | $0 |
| **Equipment** | $0 | | |
| **Supplies** | $0 | | |
| **Construction** | $0 | | |
| | | | |
| **Other-Total** | **$0** | **$0** | **$0** |
| *Other-I* | $0 | $0 | $0 |
| *Other-II* | $0 | $0 | $0 |
| *Other-III* | $0 | $0 | $0 |
| | | | |
| **Total direct costs** | **$18,142** | **$14,957** | **$3,185** |
| TNC Indirect (22.55%) | $4,091 | $3,373 | $718 |
| | | | |
| ***Total Costs through TNC*** | **$22,233** | **$18,330** | **$3,903** |
| | | | |
| **Total Budget** | **$22,233** | **$18,330** | **$3,903** |
| match rate check | | 82.44% | 17.56% |

**Budget Narrative:**

**Contractual:** Project Manager : George Gay, Senior Manager, Wildlife Conservation Programs, National Wildlife Federation. Budget includes: (1) $11,140 for approximately 225 hours of NWF staff time valued at $50.00 per hour for project management and delivery of specified climate change technical assistance activities. NWF will provide a salary match of 25% (from non-federal sources. (2) $1,200 for project manager travel for three on-site workshops (NY, NH, and ME), including approximately 400 miles each reimbursable at IRS rate of $0.555/mile, approximately $125.00 overnight lodging each, and approximately $75.00 meals each. No travel cost is associated with the VT workshop. (3) $600 for room rental for the four on-site workshops (NY, VT, NH, and ME) at approximately $150.00 per workshop. (4) overhead at National Wildlife Federation's federally approved indirect rate of 15.59%. NWF will provide an additional $400 match from non-federal sources for printing of a project publication.
**Indirect:** Is based on The Nature Conservancy's federally approved indirect rate of 22.55%

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

George Gay, Senior Manager, Climate Change Adaptation Program, Northeast Regional Center, National Wildlife Federation. gayg@nwf.org

## Project 5: Project Administration, Management & Coordination

**State(s):** New York, Vermont, New Hampshire, Maine

**Project Period** 07/01/2012 to 6/30/2015

**Estimated Federal and Non-Federal Costs:**
**Total grant amount $148,407**
Competitive SWG funds requested $120,099
Non-federal matching funds $28,308

**Project Partners:**
The Nature Conservancy –VT Chapters, Vermont Fish & Wildlife Department

**Location**
Staying Connected in New York, Vermont, New Hampshire, Maine. See map 2.

**Purpose & Need**
See Purpose & Need section of main document.

**Objectives**
See Grant Objectives

**Approach**
See Approach

**Benefits, Deliverables & Expected Results:**
See Expected Results & Benefits for a list of expected short & long-term benefits and results

**NEPA/ESA Section 7 /Historic Preservation Act Compliance**
The activities proposed in this project include conservation planning, technical assistance and support for land conservation. No ground disturbing activities will occur. We believe this project will have no adverse effect on historic, cultural or environmental resources. Because the scope of work in this project is designed to benefit rare and declining wildlife, we believe that project activities will have no adverse effect on the federally listed, proposed and candidate species found in Vermont, New Hampshire or Maine (Appendix G).

**Budget – Project 5**

| Expense Category | Total Amount | SWG Request | Non-Federal Match |
|---|---|---|---|
| **Fish & Wildlife Dept-Total** | **$0** | **$0** | **$0** |
| **F&W Personnel** | **$0** | **$0** | **$0** |
| Salary | $0 | | |
| *Fringe* | $0 | | |
| | $0 | | |
| | $0 | | |
| **TNC Personnel** | **$99,799** | **$76,700** | **$23,099** |
| Salary | $70,281 | $54,014 | $16,267 |
| Fringe | $29,518 | $22,686 | $6,832 |
| | | | |
| **Contractual-Total** | **$15,000** | **$15,000** | **$0** |
| *Contract-I* | $15,000 | $15,000 | $0 |
| *Contract-II* | $0 | $0 | $0 |
| *Contract-III* | $0 | $0 | $0 |
| | | | |
| **Travel** | $0 | | |
| **Equipment** | $0 | | |
| **Supplies** | $0 | | |
| **Construction** | $0 | | |
| | | | |
| **Other-Total** | **$6,300** | **$6,300** | **$0** |
| communications | $3,000 | $3,000 | $0 |
| online project management site (BaseCamp) | $1,800 | $1,800 | $0 |
| printing | $1,500 | $1,500 | $0 |
| | | | |
| **Total direct costs** | **$121,099** | **$98,000** | **$23,099** |
| TNC Indirect (22.55%) | $27,308 | $22,099 | $5,209 |
| | | | |
| ***Total Costs through TNC*** | **$148,407** | **$120,099** | **$28,308** |
| | | | |
| **Total Budget** | **$148,407** | **$120,099** | **$28,308** |
| match rate check | | 80.93% | 19.07% |

**Budget Narrative:**

**Personnel:** TNC Vermont Chapter Director of Conservation Programs, Phil Huffman, will serve as the overall project manager for Phase 2 of the Staying Connected Initiative. He will have lead responsibility for coordinating sound financial management of this grant and other funds, ensuring all deliverables and grant requirements are met on time, and fostering effective communication, coordination, and shared learning across the SCI partnership. Other TNC Vermont staff including Conservation Ecologist Paul Marangelo, Director of Operations Margaret Fox, Finance Manager Joe Merrill, and regional Grants Specialist Sue Downs will be involved with various aspects of project management and grant administration. TNC Adirondacks Chapter Director of Conservation Programs Dirk Bryant will assist in fostering effective coordination among SCI partners. The project budget includes $99,799 for personnel and fringe for project management and coordination over the 3-year grant period. This total includes $76,700 of requested SWG funds and $23,099 of committed non-federal match (23.1%). Fringe is calculated at 42% for regular positions.

**Contractual:** $15,000 for professional services to develop and maintain a modest but effective website for the Staying Connected Initiative over the 3-year grant period, as a tool for enhancing communication among SCI partners, sharing information with

interested individuals and organizations, and broadening the visibility and credibility of the initiative.

**Other:** (1) $3,000 for communications including phone, conference calls, and webinars needed to sustain effective project management, communication and coordination of the complex SCI partnership (estimated at $1,000/yr over 3 years). (2) $1,800 to support the monthly costs for SCI's online project management site/software "BaseCamp" (estimated at $50/month over 3 years). (3) $1,500 printing, to support in-house printing and photocopying of SCI materials for use by the partnership and distribution to interested parties (estimated at $500/yr over 3 years).

**Indirect:** Is calculated at The Nature Conservancy's federally approved indirect rate of 22.55%

**Responsible Personnel** (see Appendix C for project leader credentials/biographies)

Phil Huffman; Director of Conservation Programs, The Nature Conservancy-VT, 802-229-4425 x109, phuffman@tnc.org

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department, 802-476-0126, jens.hilke@state.vt.us

## Appendix I: TNC's Guidance on Grants Roles and Responsibilities.

| | SPECIFIC RESPONSIBILITY REQUIRED | POSITION ACCOUNTABLE |
|---|---|---|
| **OVERARCHING OBLIGATIONS** | | |
| 1 | All staff involved in the negotiation and administration of agreements must successfully complete basic TNC grants training.<br><br>Basic TNC grants training will be provided and updated on a regular basis and at a reasonable cost. | Supervisors to ensure attendance.<br><br>Manager of Grants Services |
| 2 | Establish and maintain constructive working relationship with funding agency; ensure that the Grants Specialist knows the contact information of the administrative/finance contact. The nature of relationships will vary across agencies and teams. | Project Manager and Operating Unit External Affairs/Government Relations staff as appropriate |
| 3 | Ensure that timely and knowledgeable review is always available for all pre-proposals, proposals, match commitment letters, agreements, subcontracts, subawards, private grant agreements, and other entities' proposals that name TNC. Forward reviewed materials as early as possible. Ensure coverage during absences. | Grants Specialists and Attorneys |
| 4 | Ensure that all match letters from TNC and all entities' proposals in which TNC has committed match or is named as a participant in the project are reviewed by the Grants Specialist and Attorney before submission by the other entity. | Project Manager |
| **PRE-AGREEMENT STAGE** | | |

| SPECIFIC RESPONSIBILITY REQUIRED | | POSITION ACCOUNTABLE |
|---|---|---|
| 5 | Ensure that any proposed award meets the minimum government award size requirements. In unusual circumstances where this may significantly impair specific conservation efforts of the Operating Unit, the Project Manager must get written approval (including an explanation) from the individual with both authority and responsibility for overall finances of the Operating Unit (an Operating Unit Director, for example). This written approval will be maintained by the Grants Specialist in the master agreement file. | Project Manager |
| 6 | Ensure that the full costs to complete a project are calculated and shown in all budgets for internal review and approval, whether or not the costs can be recovered or counted toward a matching requirement. Preparation of a budget is required for every proposal and/or agreement. | Project Manager |
| 7 | All U.S. Federal Agencies should reimburse indirect costs at the current negotiated rate. If any indirect cost recovery is “waived” on any agreement, the Project Manager must get written approval (including an explanation) from the individual with both authority and responsibility for overall finances of the Operating Unit (an Operating Unit Director, for example). This written approval will be maintained by the Grants Specialist in the master agreement file. | Project Manager |
| 8 | Secure a review of all pre-proposals, including the project budget, by a Grants Specialist. All pre- proposals relating to land acquisitions must also be reviewed by the Attorney. Notify the reviewer(s) of the deadline for submission and forward for review as early as possible. | Project Manager |

| | SPECIFIC RESPONSIBILITY REQUIRED | POSITION ACCOUNTABLE |
|---|---|---|
| 9 | Ensure that all final proposals, including the project budget, are reviewed by the Grants Specialist prior to submission. All final proposals relating to land acquisitions must be reviewed by both the Grants Specialist and the Attorney. Notify the reviewer(s) of the deadline for submission and forward for review as early as possible.<br><br>Coordinating review procedures will be the responsibility of the Operating Units and teams working together. Additional reviews may be incorporated at the discretion of the Operating Unit. | Project Manager |
| 10 | Ensure that the Grants Specialist and Attorney (as required by the non-real estate SOP and relevant delegations of authority) review draft agreements, subcontracts, subawards, private grant agreements, and amendments/extensions as early in the process as possible, and always before they are signed. If the agreement is a "purchase order" from the government which does not require TNC signature, it must be reviewed by the Grants Specialist and Attorney before work is begun. Legal review is not required for no-cost extensions. | Project Manager |

| | SPECIFIC RESPONSIBILITY REQUIRED | POSITION ACCOUNTABLE |
|---|---|---|
| 11 | For all proposal, agreement, subcontract, subaward, private grant agreement, and amendment/extension reviews, primary responsibilities for content review are as outlined below:<br><br>**Legal** – ensure agreement does not violate laws or TNC policies or SOPs; identify and communicate to Project Manager potential risks/exposure/liability.<br><br>**Financial** – ensure administrative requirements are reasonable and budget appears adequate to complete scope, rates used are current, and that cost categories are appropriate.<br><br>**Program** – ensure that the scope of services is reasonable, accurately stated in the agreement, and can be performed within the times and budget specified. | Attorney<br><br>Grants Specialist<br><br>Project Manager |
| 12 | Identify who has the authority to approve and execute each agreement, subcontract, subaward, private grant agreement, and match commitment letter. | Attorney |
| **AGREEMENT ADMINISTRATION** | | |
| 13 | Complete Grants Information Form for each agreement, amendment/extension; information presented must match final agreement. | Grants Specialist |
| 14 | Review final agreement. Identify the following for project staff in a written summary document: procedures for recording matching costs and allowable costs; potential bidding and procurement issues; deliverable due dates, and other pertinent information. | Grants Specialist |

| | SPECIFIC RESPONSIBILITY REQUIRED | POSITION ACCOUNTABLE |
|---|---|---|
| 15 | Ensure that only allowable costs are billed to each agreement. Review TNC internal financial reports for accuracy and ensure the G/L data is correct.<br><br>Ensure that Project Manager gets project budget-to-actual reports in a timely manner. | Project Manager<br><br>Grants Specialist or designee<br><br>Grants Specialist |
| 16 | Ensure that matching requirements are met. Ensure that third party match documentation has been secured from other entities working on the project.<br><br>Ensure that matching expenses are properly documented. | Project Manager<br><br>Grants Specialist |
| 17 | Prepare billings and external financial reports in accordance with format and timing requirements of agreement. | Grants Specialist |
| 18 | Ensure payments are received; when payments are not received, begin collections procedures within three months of invoice date (unless other terms are specified in agreement). | Grants Specialist |
| 19 | Ensure deliverables are completed.<br><br>Maintain tracking system and provide reminders for deliverable due dates. | Project Manager<br><br>Grants Specialist |
| 20 | Submit basic subaward and private grant agreement information to Internal Audit; information presented must match final agreement. | Grants Specialist |
| 21 | Ensure written no-cost extensions are completed for deliverables or end dates. This includes extensions for subcontracts, subawards, and private grant agreements. | Project Manager to note when needed; Grants Specialist and Project Manager will work together to complete documentation |

| | SPECIFIC RESPONSIBILITY REQUIRED | POSITION ACCOUNTABLE |
|---|---|---|
| 22 | Maintain “auditable” master agreement files; ensure that WO and Project Manager get copy of final signed agreement and extensions/amendments. | Grants Specialist |
| 23 | Maintain government property inventory/tracking. | Grants Specialist |
| 24 | Ensure that grantee monitoring activities are completed/performed. | Internal Audit and Grants Specialist to work together to ensure assessment/monitoring activities are completed. |
| 25 | Maintain “auditable” master subaward and private grant agreement files as required by Grants by TNC to Grantees SOP; ensure that Internal Audit and Project Manager get copy of final signed subaward/private grant agreement and extensions/amendments. | Grants Specialist |
| 26 | Complete all closeout procedures for financial tasks within six months of final end date of agreement. Extenuating circumstances should be documented. | Grants Specialist |

## Appendix J: The Nature Conservancy's Grantee Welcome package.

The following guidance is intended as general information for distribution to TNC grantees. It is not intended to be formal legal advice or to take the place of relevant U.S. federal or local laws or regulations. To the extent that there is a conflict between the language in the English version and the _____ version of this document, you should follow the English version. If greater detail is required, please contact your TNC administrative point of contact.

### GRANTEE WELCOME PACK

**Applies to:**

- All funding sources
- All types of organizations

**About The Nature Conservancy**

The Nature Conservancy (TNC) is a leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. Founded in 1951, TNC has protected more than 119 million acres of land and 5,000 miles of rivers worldwide and participates in more than 100 marine conservation projects globally. TNC works in all 50 states in the U.S. and more than 30 countries protecting habitats from grasslands to coral reefs worldwide.

**How we work**

TNC addresses threats to conservation including climate change, fire, and invasive species; and works to protect ecologically important areas including freshwater, forests and marine ecosystems. By using a science-based approach, we pursue non-confrontational, pragmatic solutions to conservation challenges. We are able to expand our outreach by partnering with indigenous communities, businesses, governments, multilateral institutions, and non-profit organizations.

**You're going to work with funds provided by TNC, now what?**

**Review your agreement**: Read the agreement and speak with your TNC administrative point of contact if you need clarification on any terms.

Types of agreements you may receive from TNC:

- **If you received a <u>Subaward</u> of U.S. Federal funds, U.S. Federal funds passed through another organization, or private funds being used by TNC as match to U.S. Federal funds:** A subaward is an agreement that (1) includes funds that come from or

contribute to an agreement between TNC and another party, and (2) incorporate U.S. Federal government regulations and requirements.

- As a recipient of U.S. government funds, TNC is required to pass on certain regulations and requirements and monitor that grantees comply with these regulations and requirements. Please read your agreement for a comprehensive list of attachments or documents incorporated by reference. They can include, but are not limited to:

    - OMB Circular A-110 (2 CFR part 215) (this is applicable to subawards to U.S. NGOs only);
    - OMB Circular A-122 (2 CFR part 230) on allowable costs (this is applicable to all subawards);
    - Agency requirements (for example: USAID Mandatory Standard Provisions for U.S. NGOs or non-U.S. NGOs); and/or
    - Any additional regulations from U.S. federal agencies.

- **If you have received a <u>Subaward</u> of U.S. State or Local funds:** These subawards are agreements that include funds that (1) come from or contribute to an agreement between TNC and another party, and (2) incorporate U.S. State or local government regulations and requirements.

  As a recipient of these funds, TNC is required to pass on certain regulations and requirements and to monitor that grantees comply with theses regulations and requirements. The rules and regulations vary from state to state and from local government to local government. It is important to carefully read the agreement for details on the requirements.

- **If you have received a Grant Agreement or Grant Letter of Public International funds**: These are agreements whose funding source is a multilateral organization (e.g. UN, EU, or World Bank). These agreements have many and varied requirements, therefore it is important to carefully read the grant for details.

- **If you have received a Private Grant Agreement or Grant Letter:** These are agreements whose funding source is private donations. These agreements may have less stringent requirements than subawards, but it is important to carefully read the grant for details, keeping in mind that requirements may vary from grant to grant based on donor requirements.

In addition, TNC has requirements to be fulfilled. These are established in our organizational policies and procedures and include but are not limited to:

- **Due Diligence:** As part of the award determination process, you will be required to send TNC copies of institutional documents. The number and type of documents will vary depending on the source of funding being provided and amount of the agreement.

- **TNC Conflict of Interest Form:** Any organization signing an agreement with TNC must first sign the Conflict of Interest Disclosure form. This form, through a series of questions, will help the grantee disclose any conflicts of interest between TNC and the grantee.
  Generally, TNC expects the following persons to complete the Conflict of Interest Disclosure form:

  - any Grantee staff person who is serving as the project manager for the funded activities; or
  - a person representing the organization (a finance director, executive director, or operations manager) to identify any conflicts that exist between TNC and persons that have the authority to approve or influence the decision to do the project (including senior managers in the organization and Board Members). We do **not** need a separate Conflict of Interest form for each person.

  If a conflict exists, it must be disclosed to TNC. If the possibility or appearance of a conflict arises during the life of the agreement, TNC should be informed immediately so the situation can be evaluated.

- **TNC Grantee (Subrecipient) Monitoring:** TNC is required to monitor organizations to which it grants funds. You may be asked to fill out a Grantee Monitoring Questionnaire as part of TNC's due diligence process. This document helps TNC determine the level of financial reporting and other activities (site visit, review of annual audits, etc.) that TNC is required to perform as part of the monitoring process. If a visit from the TNC Subrecipient Monitoring team is required, you will be informed by the TNC administrative contact when the visit will be scheduled. If applicable, go over any previous TNC monitoring reports to confirm any findings have since been resolved. If previous findings are still outstanding, additional reporting may be incorporated in the subaward or grant until resolution is achieved.
- **Legal Clauses:** A number of legal clauses are included in all agreements. They may include, but are not limited to:
  - **Record retention requirements**: The grantee should keep records (financial records, supporting documents, statistical records, and all other records) related to the agreement for a period of three years after the submission of the last financial report / invoice, or as specified by agreement or local law, whichever is greater. See agreement for further details.
  - **Fly America**: U.S. Federally funded agreements require that all air travel and shipments outside the United States be made on U.S. flag air carriers. See agreement or talk to your TNC administrative point of contact to determine if this clause is applicable.
  - **Buy America**: Some U.S. Federally funded agreements restrict the country of origin of any goods and services purchased with agreement funds. See agreement or talk to your TNC administrative point of contact to determine if this clause is applicable.
  - **Debarment Certification**: Some funders restrict certain parties from participating in projects funded under the agreement. If your agreement includes a Debarment

Certification, you can find a current list of excluded parties at http://www.epls.gov/.

- **Budget:** Carefully review the budget included in your agreement. Funds can only be spent on budgeted line items. There may be restrictions of spending over budget on certain budget categories or on reallocating costs to new budget categories. If you need to address any issues with the budget line item distribution, please notify your TNC administrative point of contact.
- **Reporting:** Technical, financial, and other reporting requirements are specified in your agreement. Templates for these reports are provided. Please confirm that the recommended due dates allow enough time for your organization to complete your reporting on time and address any concerns to the TNC administrative point of contact before the agreement is signed. We may be able to accommodate different delivery dates. If, for any reason, you anticipate a delay submitting a required report, please let us know as soon as possible before the date the required report is due.
- **Segregation of funds:** Most agreements will require you to segregate project funds from other funds your organization holds. You may be required to open a separate interest-bearing bank account. Please review the agreement or verify with TNC if the segregation requirement applies.
- **Financial reports and disbursements process:** TNC staff will review your financial reports and attempt to complete reviews within two weeks of receipt. The TNC administrative point of contact may contact you with questions or requests for additional documentation to complete the review of allowable costs. Disbursements are made once the financial and technical reports have been approved. If you need assistance in completing these reports, please let your TNC administrative contact know.

We look forward to working with you on this project. Please contact _____ (your TNC administrative point of contact) for any questions or concerns regarding this grant.

Other guidance documents you may request:

- Guidance regarding (TNC point of contact, choose from the options below and delete this sentence):
  - Severance provisions
  - Reporting requirements
  - Purchasing
  - Matching Funds
  - Cost categories
  - Time reporting
  - Indirect cost recovery
  - Exchange rate gain or loss
  - Conflict of interest
  - Interest Income

# Appendix K: NEPA Compliance

VERMONT

**Fish & Wildlife Department**
103 South Main St., #10 South
Waterbury, Vermont 05671-0501
www.VtFishandWildlife.com

[phone] 802-241-3700
[fax] 802-241-3295
[tdd] 802-828-3345

*Agency Of Natural Resources*

Dear Dr. Organ:

I am writing in reference to the Application for Federal Assistance for a **Competitive State Wildlife Grant application for the Staying Connected Initiative (Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages)** regarding compliance with the ***National Environmental Policy Act*** (NEPA).

The actions proposed in this grant will take place **within the Staying Connected project area in New York, Vermont, New Hampshire & Maine** within the grant period of 7/1/2012 to 6/31/2015. We have reviewed the proposal for meeting NEPA compliance and found that it is ***completely covered by 516 DM 8.5 categorical exclusion No(s).*** **B3** Further, we find (43 CFR 46.215) that this proposal will NOT:

1. Have significant impacts on public health or safety.
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.
7. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.
8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.
9. Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).

Thank you for your time reviewing this grant proposal,

**State Project Leader** _____ **Date** 1/18/12

**Federal Aid Coordinator** _____ **Date** 1/19/12

VERMONT

**Fish & Wildlife Department**
103 South Main St., #10 South
Waterbury, VT 05671-0501
**www.VtFishandWildlife.com**

[phone] 802-241-3700
[fax] 802-241-3295
[tdd] 802-828-3345

*Agency of Natural Resources*



August 26, 2011

John Organ, Chief
Division of Federal Aid
US Fish and Wildlife Service
300 Westgate Center Drive
Hadley MA 01035-9589

RE: Assurances

Dear Dr. Organ,

Attached are Vermont's Assurances, Form SF-424B and SF-424D for Federal Fiscal Year 2012.

Please let me know if you have any questions or require further information.

Sincerely,

Sherri A. Yacono
Financial Manager

Enclosure
Cc: Betsy Rutledge

OMB Approval No. 0348-0042

# ASSURANCES - CONSTRUCTION PROGRAMS



**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property aquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.

4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.

5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.

6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.

14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).

18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

| SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL | TITLE |
|---|---|
| | Commissioner |
| APPLICANT ORGANIZATION | DATE SUBMITTED |
| Vermont Fish and Wildlife Department | 8/25/11 |

OMB Approval No. 0348-0040

## ASSURANCES - NON-CONSTRUCTION PROGRAMS



**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.