

**APPLICATION FOR
FEDERAL ASSISTANCE**

Version 7/03

1. TYPE OF SUBMISSION: Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		2. DATE SUBMITTED 03/14/2014	Applicant Identifier
3. DATE RECEIVED BY STATE		State Application Identifier	
4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier	

5. APPLICANT INFORMATION

Legal Name: Vermont Fish and Wildlife Department		Organizational Unit:	
		Department: Fish and Wildlife	
Organizational DUNS: 809800311		Division: Wildlife	
Address:		Name and telephone number of person to be contacted on matters involving this application (give area code)	
Street: 1 National Life Drive, Davis 2		Prefix:	First Name: Jens
City: Montpelier		Middle Name	
County:		Last Name Hilke	
State: Vermont	Zip Code 05602-3702	Suffix:	
Country:		Email: Jens.Hilke@state.vt.us	
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 03-6000274		Phone Number (give area code) (802) 879-5644	Fax Number (give area code)
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) (See back of form for description of letters.) Other (specify)		7. TYPE OF APPLICANT: (See back of form for Application Types) A. State Other (specify)	
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: TITLE (Name of Program): State Wildlife Grants 15-634		9. NAME OF FEDERAL AGENCY: U.S. Department of Interior, Fish and Wildlife Service	
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): Vermont and New Hampshire		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Mitigation Fragmentation & Climate Change Impacts on Wildlife by Enhancing Habitat Connectivity	
13. PROPOSED PROJECT Start Date: 07/01/2014 Ending Date: 06/30/2017		14. CONGRESSIONAL DISTRICTS OF: a. Applicant VT b. Project VT and NH	
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$ 499,018.00	a. Yes. <input type="checkbox"/> THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON	
b. Applicant	\$ 0.00	DATE:	
c. State	\$ 167,568.00	b. No. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372	
d. Local	\$ 0.00	<input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
e. Other	\$ 0.00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?	
f. Program Income	\$ 0.00	<input type="checkbox"/> Yes If "Yes" attach an explanation. <input checked="" type="checkbox"/> No	
g. TOTAL	\$ 666,586.00		
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.			
a. Authorized Representative			
Prefix	First Name Steven	Middle Name	
Last Name Gomez		Suffix	
b. Title Federal Aid Coordinator		c. Telephone Number (give area code) (802) 595-0797	
d. Signature of Authorized Representative		e. Date Signed 3/14/2014	



Department of Fish and Wildlife

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Agency of Natural Resources

March 12, 2014

Mr. Dan Ashe, Director
C/O 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 Director Ashe,

It is my pleasure to submit, on behalf of the states of Vermont and New Hampshire, the enclosed proposal for the Staying Connected Initiative to the State Wildlife Grants Competitive Grant Program for the FY 2014 grant cycle.

The Vermont Fish & Wildlife Department will serve as the lead state and is committing approximately \$27,000 in staff time to the project. The combined non-federal match provided by all project partners is \$167,568, which is 25% of the total proposed budget. We are also providing \$266,400 in Federal Highways funds that, while not eligible as match, is critical to the success of the project.

Staying Connected is a public-private partnership spanning for states focused on maintaining, enhancing and restoring habitat connectivity for Species of Greatest Conservation Need across the Northern Appalachian Ecoregion. Wildlife and transportation agencies and conservation NGOs in Vermont, New Hampshire, Maine and New York came together five years ago to establish the partnership to better address the primary threats to wildlife identified in each of our state Wildlife Action Plans-habitat loss, fragmentation, impacts from transportation systems and climate change. Staying Connected applies conservation science, land protection, land use planning, and technical assistance at multiple scales throughout the region. This approach benefits at least 12 Species of Greatest Conservation Need and at least seven habitat types.

The Vermont Fish & Wildlife Department feels that Staying Connected is important to the state and the Northeast region. Thank you for the opportunity to submit this proposal. Please don't hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Patrick H. Berry for". The signature is fluid and cursive.

Patrick H. Berry
Commissioner





Mitigating Fragmentation & Climate Change Impacts on Wildlife by Enhancing Habitat Connectivity

**A proposal to the Competitive State Wildlife Grants Program
March, 2014**

Applicant & Grant Administrator: Vermont Fish & Wildlife Department

Sub-grantee & Primary Contractor: The Vermont Land Trust

Staying Connected is a 5-year old regional effort to maintain and restore wildlife connectivity across the Northern Appalachian region by implementing priority actions from the Maine, New Hampshire, New York, and Vermont State Wildlife Action Plans that will benefit at least 12 wide-ranging and forest dwelling Species of Greatest Conservation Need.

A proposal to the Competitive-SWG program to protect critical connecting lands in Vermont and New Hampshire for wide-ranging SGCN, to enhance coordination across the partner states and to monitor the effectiveness of our actions.

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Executive Summary

Applicant: Vermont Fish & Wildlife Department

Grant Goal: 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.

Grant Period: 07/01/2014 to 6/30/2017

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

Total grant amount \$646,586

Competitive SWG funds requested \$499,018

Non-federal matching funds \$167,568

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

Active Partners for this proposal: Vermont Fish & Wildlife Department (VFWD), New Hampshire Fish & Game Department (NHFG), The Nature Conservancy-NH Chapter (TNC), Vermont Land Trust (VLT), Wildlife Conservation Society (WCS).

State(s) benefitting from the work: New Hampshire and Vermont

SGCN and key habitats addressed: The work performed under this grant will benefit at least 12 Species of Greatest Conservation Need ([Appendix D](#)) and at least seven habitat types ([Appendix E](#)).

Abstract: The Staying Connected Initiative is a five-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. Our top priority actions for this proposal are the protection of critical connecting lands in Vermont and New Hampshire for wide-ranging SGCN, enhanced coordination across the five partner states and to monitor the effectiveness of our actions.

Location: All activities will occur in high priority connectivity linkages in Maine, New Hampshire, New York and Vermont. ([Map 1](#)) Land acquisition will occur in New Hampshire and Vermont only ([Map 2](#)).

Budget Summary & Narrative

Staying Connected-SWG 2014: Total Costs By Project

Staying Connected: C-SWG 2014: Total Costs By Project

Project #	Project	Total Grant Amount	C-SWG Request	Non-federal Match	SWG % of Total Grant	Non-federal Match % of Total Grant	Other Funds Leveraged (not match eligible)
1	Land Protection						
1.1	VT Land Protection	\$343,510	\$274,010	\$69,500	41.11%	10.43%	\$4,350
1.2	NH Land Protection	\$100,781	\$90,413	\$10,368	13.56%	1.56%	\$0
2	Monitoring	\$110,045	\$42,345	\$67,700	6.35%	10.16%	\$278,001
3	Cons Delivery Mgmt & Coordination	\$112,250	\$92,250	\$20,000	13.84%	3.00%	\$11,601
	Totals	\$666,586	\$499,018	\$167,568	74.86%	25.14%	\$293,952

Project 1.1 Budget-Vermont Land Protection

1.1–VT Land Protection

Expense Category	Total Amount	C-SWG Request	Non-Federal Match	Other Funds Leveraged
VT F&W-Total	\$4,350	\$0	\$0	\$4,350
VT F&W Personnel	\$0	\$0	\$0	\$4,350
Salary	\$0			\$2,862
Fringe	\$0			\$1,488
Travel	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0
Supplies	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0
Contractual-Total	\$318,600	\$249,100	\$69,500	\$0
<i>VLT: land protection due diligence and transaction costs</i>	\$313,600	\$244,100	\$69,500	\$0
<i>VLT: Grant management</i>	\$5,000	\$5,000	\$0	\$0
Direct Costs Not Through VLT	\$0	\$0	\$0	\$4,350
Total Costs through VLT	\$343,510	\$274,010	\$69,500	\$0
Direct costs Through VLT	\$318,600	\$249,100	\$69,500	\$0
VLT Indirect (10%)	\$24,910	\$24,910	\$0	\$0
Total Budget	\$343,510	\$274,010	\$69,500	\$4,350
<i>match rate check</i>	<i>100.00%</i>	<i>79.77%</i>	<i>20.23%</i>	<i>~</i>

Personnel

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department will provide technical assistance to VLT and landowners in the project area. Estimated at 3 hours/month over 36-months for 108 hours at \$26.50/hr (plus 52% fringe) and totaling \$4,350. These services are funded through a WSFR grant to the VFWD for Interagency Technical Assistance which is not eligible as match here.

Contractual

VLT Due Diligence and Transactions Costs Associated with Land Protection: Includes property appraisals (estimated at \$8,000 each for 2 projects and \$500 for Deer Lake appraisal update for a total of \$16,500), title work (estimated at \$3,500 each for 3 projects for a total of \$10,500), Phase I ESA (\$5,000 total for three projects), ecological assessments (estimated at \$10,000), and surveying and permitting (estimated at \$25,000), mapping (estimated at \$1,000 per project for 3 projects for a total of \$3,000), baseline documentation (estimated at \$3,500 per project for 3 projects for a total of \$10,500), recording fees (estimated at \$200 per project for a total of \$600),

title insurance (estimated at \$13,000 for Deer Lake), as well as associated costs (staff time, mapping, documentation, title work, recording fees, etc.) for three easement donation projects to be developed within the linkage area during the grant period (estimated at \$30,000).

VLT staff time for project development, property assessments, and conservation work for the three identified parcels (Deer Lake, E.B. Hyde, Dotoli) as well as prospecting with other landowners in the linkage area. We estimate \$25,000 per project for staff time based on VLT average costs for projects of this size and complexity for a total of \$75,000 for the three identified projects. This includes project development by the regional director, site assessment and ecological review by VLT conservation science staff, legal work by VLT legal staff (attorney & paralegal) and costs for management oversight of the project activity by Siobhan Smith, VP for Conservation. The prospecting will be led by Regional Directors, Carl Powden and Tracy Zschau, (14 landowners) x (16 of hrs/landowner) = 230 Hours per year for three years x (VLT staffers hrly rate (\$65/hour) = \$45,000). Other VLT staff will provide support to Carl and Tracy in which may account for a small portion of the personnel costs.

VLT will provide \$60,000 in match of associated costs (staff time, mapping, documentation, title work, recording fees, etc.) for six easement donation projects (The due diligence and transaction costs for such easements typically total \$10,000 per easement. See Approach Section for Project 1) to be developed within the linkage area during the grant period and \$7,500 for the initial appraisal expense as well as \$2,000 for travel to and within the project area by VLT staff reimbursable at IRS rate of \$0.56/mile is estimated at \$2,000 based on 1,100 miles/year over 3 years.

Grant Management: VLT Director of Finance Rick Provost, VP for Enterprise and Finance Nick Richardson and VP for Conservation Siobhan Smith will serve as the primary staff members responsible for managing the C-SWG funds and the subcontracts with TNC-NH and WCS-NY and preparing grant reports and financial documentation. Total cost is \$10,000 for projects 1-3 based on an estimate of 118 hours for the three year grant period between the three VLT staff members with an average \$85/hour billable rate. This will be allocated as follows: Project 1.1: \$5,000 (VT Land Protection); Project 1.2: \$2,500 (NH Land Protection); Project 3: \$2,500 (Conservation Delivery Coordination).

Indirect: 10% of SWG funds that pass through the Vermont Land Trust based on OMB circular 2 CFR Chapter I, Chapter II, Part 200, et al

Project 1.2 Budget-New Hampshire Land Protection

1.2–NH Land protection

Expense Category	Total Amount	C-SWG Request	Non-Federal Match	Other Funds Leveraged
VT Fish & Wildlife-Total	\$0	\$0	\$0	\$0
F&W Personnel	\$0	\$0	\$0	\$0
Salary	\$0			
Fringe	\$0			
Travel	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0
Supplies	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	\$0
Contractual-Total	\$92,562	\$82,194	\$10,368	\$0
<i>TNC-NH: Land protection due diligence and transaction costs</i>	\$90,062	\$79,694	\$10,368	\$0
<i>VLT: Grant Management</i>	\$2,500	\$2,500	\$0	\$0
Direct Costs Not Through VLT	\$0	\$0	\$0	\$0
Total Costs through VLT	\$100,781	\$90,413	\$10,368	\$0
Direct costs Through VLT	\$92,562	\$82,194	\$10,368	\$0
VLT Indirect (10%)	\$8,219	\$8,219	\$0	\$0
Total Budget	\$100,781	\$90,413	\$10,368	\$0
<i>match rate check</i>	<i>100.00%</i>	<i>89.71%</i>	<i>10.29%</i>	<i>~</i>

Contractual

Land protection due diligence and transaction costs for the ±256 acre Heon parcel. The Nature Conservancy-NH staff will conduct additional technical assistance to other high priority landowners in the Linkage. Staff time (including project management, due diligence coordination, and baseline documentation) estimated at \$15,221 based on an estimate of 376 hours at an average \$40.48/hr. including fringe benefits. Travel to and within the project area by TNC staff reimbursable at IRS rate of \$0.56/mile is estimated at \$1,601 based on 953 miles/year over 3 years. Survey estimated at \$20,000. Appraisal estimated at \$3,000. EHA estimated at \$2,800. Legal fees estimated at \$8,000. Title insurance estimated at \$700. Closing costs estimated at \$2,000. Demolition costs to remove a garage and a small unoccupied cottage in poor condition to restore/enhance habitat estimated at \$20,000. Indirect based on the fixed carry-forward rate in TNC's NICRA for the given fiscal year estimated at \$16,740. Total TNC-NH Land protection work is estimated at \$90,062, with \$79,694 requested from SWG and TNC-NH will contribute the remaining \$10,368 in non-federal match to help pay these costs.

Grant Management: Vermont Land Trust Director of Finance Rick Provost, VP for Enterprise and Finance Nick Richardson and VP for Conservation Siobhan Smith will serve as the primary staff members responsible for managing the SWG grant funds, subcontractors and preparing grant reports and financial documentation. Total cost is \$10,000 for projects 1-3 based on an estimate of 118 hours for the three year grant period between the three VLT staff members with an average \$85/hour billable rate. This will be allocated as follows: Project 1.1: \$5,000 (VT Land Protection); Project 1.2: \$2,500 (NH Land Protection); Project 3: \$2,500 (Conservation Delivery Coordination).

Indirect: 10% of SWG funds that pass through the Vermont Land Trust based on OMB circular 2 CFR Chapter I, Chapter II, Part 200, et al

Project 2. Budget-Species Monitoring

2 Species Monitoring

Expense Category	Total Amount	C-SWG Request	Non-Federal Match	Other Funds Leveraged
VT Fish & Wildlife-Total	\$344,601	\$0	\$66,600	\$278,001
VT F&W Personnel	\$0	\$0	\$0	\$11,601
Salary	\$0	\$0	\$0	\$7,632
Fringe	\$0	\$0	\$0	\$3,969
Travel	\$0	\$0	\$0	
Equipment	\$0	\$0	\$0	
Supplies	\$0	\$0	\$0	
Construction	\$0	\$0	\$0	
Other (VT Camera monitoring)	\$66,600	\$0	\$66,600	\$266,400
NH Fish & Game-Total	\$15,000	\$15,000	\$0	\$0
NH F&W Personnel	\$15,000	\$15,000	\$0	\$0
Salary	\$15,000	\$15,000	\$0	
Fringe	\$0	\$0	\$0	
Travel	\$0	\$0	\$0	
Equipment	\$0	\$0	\$0	
Supplies	\$0	\$0	\$0	
Construction	\$0	\$0	\$0	
Other	\$0	\$0	\$0	
Contractual-Total	\$25,959	\$24,859	\$1,100	
NH TNC	\$25,959	\$24,859	\$1,100	
Direct Costs Not Through VLT	\$81,600	\$15,000	\$66,600	\$278,001
Total Costs through VLT	\$28,445	\$27,345	\$1,100	\$0
Direct costs Through VLT	\$25,959	\$24,859	\$1,100	\$0
VLT Indirect (10%)	\$2,486	\$2,486	\$0	\$0
Total Budget	\$110,045	\$42,345	\$67,700	\$278,001
match rate check	100.00%	38.48%	61.52%	~

Personnel

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department will manage the Vermont portion of the monitoring project. Estimated at 8 hours/month over 36-months for 288 hours at \$26.50/hr (plus 52% fringe) and totaling \$11,601. These services are funded through a WSFR grant to the VFWD for Interagency Technical Assistance which is not eligible as match here.

Vermont Camera Monitoring: Vermont Agency of Transportation is providing \$30,000 in state highway funds (as match) and \$120,000 in U.S. Highway funds (not eligible as match) over two

years for equipment and staffing costs for photo monitoring highly mobile species like bear and bobcat using bridges or culverts in the Vermont linkage where the proposed land protection work (Project 1.1) is taking place.

New Hampshire Fish & Game

Grant funds will be used for NH Fish and Game staff time (230 hours @ \$52.00 included fringe = \$14,324) and travel to and within the project area by NHF&G staff reimbursable at IRS rate of \$0.56/mile is estimated at \$676 based on 402 miles/year over 3 years to assist with the Staying Connected Initiative. NHFG staff will contribute their expertise with identifying important linkages among protected habitats in the northern portion of the state. NHFG staff will also help to work with qualified researchers to design and implement a monitoring protocol to verify use of corridors by target wildlife species and to deploy cameras to monitor use. A 19.77% federally approved indirect cost is applied to the funding request for NHFG staff time. Actual costs will be based on the approved rate effective when costs are incurred.

Contractual

\$24,859 to The Nature Conservancy to design and implement a photo monitoring study of wildlife movements using motion detection cameras at and around the Heon tract. Work will include designing and coordinating the photo monitoring study, acquiring and managing cameras and related supplies, securing landowner permission, deploying cameras in the field, and data management and analysis. Costs include staff time, travel, wildlife tracking cameras and related supplies, contracts for both a wildlife tracker and wildlife research scientist, and indirect based on TNC's fixed carry-forward rate in their NICRA for the given fiscal year.

Indirect: 10% of SWG funds that pass through the Vermont Land Trust based on OMB circular 2 CFR Chapter I, Chapter II, Part 200, et al

Project 3. Budget-Conservation Delivery Coordination

3-Conservation Delivery Management & Coordination

Expense Category	Total Amount	C-SWG Request	Non-Federal Match	Other Funds Leveraged
VT Fish & Wildlife-Total	\$11,601	\$0	\$0	\$11,601
F&W Personnel	\$0	\$0	\$0	\$11,601
Salary	\$0	\$0	\$0	\$7,632
Fringe	\$0	\$0	\$0	\$3,969
Travel	\$0	\$0	\$0	
Equipment	\$0	\$0	\$0	
Supplies	\$0	\$0	\$0	
Construction	\$0	\$0	\$0	
Other	\$0	\$0	\$0	
Contractual-Total	\$102,000	\$92,000	\$20,000	\$0
WCS: Cons Delivery Coord	\$99,500	\$89,500	\$10,000	\$0
VLT: Grant management	\$2,500	\$2,500	\$0	\$0
VNRC Land Use Planning			\$10,000	
Direct Costs Not Through VLT	\$109,500	\$89,500	\$20,000	\$11,601
Total Costs through VLT	\$2,750	\$2,750	\$0	\$0
Direct costs Through VLT	\$2,500	\$2,500	\$0	\$0
VLT Indirect (10%)	\$250	\$250	\$0	\$0
Total Budget	\$112,250	\$92,250	\$20,000	\$11,601
match rate check	100.00%	82.18%	17.82%	~

Personnel

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department will provide technical assistance and coordination support to Staying Connected partners. Estimated at 8 hours/month over 36-months for 288 hours at \$26.50/hr (plus 52% fringe) and totaling \$11,601. These services are funded through a WSFR grant to the VFWD for Interagency Technical Assistance which is not eligible as match here.

Contractual

VLT Grant Management: Director of Finance Rick Provost, VP for Enterprise and Finance Nick Richardson and VP for Conservation Siobhan Smith will serve as the primary staff members responsible for managing C- SWG funds, subcontractors and preparing grant reports and financial documentation. Total cost is \$10,000 for projects 1-3 based on an estimate of 118 hours for the three year grant period between the three VLT staff members with an average \$85/hour billable

rate. This will be allocated as follows: Project 1.1: \$5,000 (VT Land Protection); Project 1.2: \$2,500 (NH Land Protection); Project 3: \$2,500 (Conservation Delivery Coordination).

Conservation Delivery Coordination will be facilitated by the Staying Connected Coordinator. Zoe Smith, Director of the Adirondack Program of the Wildlife Conservation Society (WCS) is serving in that capacity through the end of 2014. At that time, the Staying Connected Executive Committee will continue the contract with WCS or use a new partner to serve in that capacity as mutually agreed upon through and beyond 2017. The coordinator will schedule and organize regular meetings and networked communication among more than 20 SCI partners organizations and agencies participating in Staying Connected's Executive Committee, Steering Committee and work groups estimated at 136 hrs/year at \$48/hr salary and fringe for 3 years totaling \$ 19,548. The coordinator will also manage Staying Connected's Strategy, Direction and Partnership activities, including strategic planning, fostering cross-cutting strategies, working with linkage teams and executive partner agreements, estimated at 208 hrs/year at \$48/hr salary and fringe for 3 years totaling \$ 29,898. The Coordinator will serve as the primary SCI ambassador and, enhance and support the SCI website and use of related communication tools estimated at 136 hrs/year at \$48/hr salary and fringe for 3 years totaling \$ 19,548. \$1,000 in travel per year *3 yrs totaling \$3,000 for coordinator and partners to represent SCI at meetings. Staying Connected 2016 conference will bring together SCI partners from across the region for important coordination and fine tuning of conservation delivery. Costs are estimates including partner staff time in development and facilitation 166 hours at \$48/hr salary and fringe = \$8,000, facility rental and logistics for \$6,000, travel for partners at \$3,500.

Wildlife Conservation Society will provide \$10,000 in no federal match to help pay for these activities. The Vermont Natural Resources Council will provide land-use planning technical assistance to at least two municipalities in the target linkages in the development of planning and zoning policies and non-regulatory measures for maintaining wildlife habitat connectivity, large forest blocks and critical wildlife habitat. Approximately 125 hours per town over three years at \$40/hr totals \$10,000.

Indirect: 10% of SWG funds that pass through the Vermont Land Trust based on OMB circular 2 CFR Chapter I, Chapter II, Part 200, et al

Project Statement

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, ongoing research shows 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 fragmentation is increasingly problematic for forest dwelling Species of Greatest Conservation Need (SGCN) which need large connected landscapes in order to respond to climate change, maintain genetic diversity, and maximizing the responsive function of evolutionary processes to adapt to environmental change. Protection of key habitat linkages across the landscape is a critical need.

Purpose & Need

Problem: The Wildlife Action Plans of New Hampshire and Vermont identify 12 wide-ranging and forest-dwelling Species of Greatest Conservation Need ([Appendix D](#)) including Canada lynx, American marten, black bear, and bobcat common to the two states. The primary threats to these species, as identified in each state's Wildlife Action Plan ([Appendix F](#)), are land-use related: habitat loss (through fragmentation, degradation and conversion) and the impacts of transportation systems.

Plant and animal populations also need connectivity to in order to find suitable habitat in response to climate change. Climate models for 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).

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.

The nature of land ownership and political jurisdictions in the Northeast, however, poses elemental impediments 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 (81% in Vermont), 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 cannot be adequately managed by wildlife agencies alone. Furthermore, because the Northern Appalachians Ecoregion spans five 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.

To minimize the impact of these threats we seek to protect vulnerable connecting lands that link habitat blocks in order to help these SGCN:

- 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.

The Wildlife Action Plans of New Hampshire and Vermont contain numerous recommendations for conservation of linkage habitat for wide-ranging and forest-dwelling SGCN ([Appendix E](#)). New Hampshire begins by identifying the need to "Map potential wildlife corridors and buffers" (p 5.8) and to "... promote the protection or restoration of wildlife corridors" (p 5.20). New Hampshire's recently completed Climate Change Adaption Plan, an amendment to its Action Plan, includes a strategy to "Conserve areas for habitat expansion and/or connectivity" (p 13). 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 need collaborate in the protection and management of key connecting lands.

The Staying Connected Initiative

The Staying Connected Initiative is a public-private partnership working to maintain habitat connectivity across the Northern Appalachians (See [Map 1](#)) for the benefit of wide-ranging mammals. Staying Connected partners include state fish and wildlife agencies, agencies of transportation and conservation NGOs in Massachusetts, New York, Vermont, New Hampshire, Maine and Quebec, New Brunswick, and Nova Scotia. Staying Connected received a Competitive State Wildlife Grant in 2009 (U2-4-R-1).

Because most land use decisions are made locally in this region, Staying Connected brings regional scale connectivity data and technical support to empower local decision makers. . We provide a range of options for municipalities and landowners involved in implementation and provide support from appropriate SCI partners in moving that action forward. So whether it is helping a town that is strengthening zoning language for wildlife, or working more closely between F&W and an agency of transportation or developing a conservation easement we have partners that are engaged.

The work of Staying Connected is focused on a broad constituency. This involves various decision makers from town highway garages and local planning commissions to watershed groups, hunters and anglers. Our organizational structure provides for considerable local partnership opportunities with these diverse groups, while still in touch with the regional scale science and guidance. By providing a range of conservation options and technical support to local decision makers, Staying Connected is a vehicle for delivery and interpretation of regional scientific data and conservation implementation.

Staying Connected focuses on five work areas to maintain, enhance and restore habitat connectivity in the Northern Appalachian Ecoregion:

1. Conservation science
2. Land protection
3. Technical assistance to landowners
4. Technical assistance to regional and municipal planning agencies
5. Technical assistance to remove and mitigate road barriers

Staying Connected partners converge around one or more of these topic areas, though SCI as a whole is governed by a single inter-disciplinary steering committee that coordinates actions across all groups. The strength stems from the ongoing coordination provided by an executive committee, steering committee and linkage teams that together advance the central goal of connecting habitat. Neither land protection, road barrier mitigation, nor technical assistance alone is sufficient to secure habitat connectivity in the face of climate change and forest fragmentation.

Staying Connected serves as a regional hub for partner data sharing. We maintain a website, a Basecamp online project management portal, and several state and regional listserves for communication and data sharing.

Over the course of our first three years as a partnership (2009-2012), we invested heavily in refining our conservation science for each of our linkage areas. These include connectivity models from Vermont Fish & Wildlife Department, Two Countries One Forest, The Nature Conservancy, The Wildlands Network and others. This conservation science work feeds and guides all aspects of SCI's work.

Who is involved:

Staying Connected is organized to operate on several different scales at once. Listing all the agencies and organizations involved to some extent depends on the scale in question.

At the scale of the Northern Appalachians, the following organizations have all been core partners.

Vermont Fish & Wildlife Department, The Nature Conservancy (ME, NH, NY, VT & MA 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, Nature Conservancy Canada.

Beyond this list, each linkage team includes a subset of the core partners above, but also involves local watershed groups, conservation commissions, town and regional planning commissions, rod and gun clubs and other local groups as affiliates.

Accomplishments: 2009-2014

Conservation Science

- Completed detailed conservation planning in US portions of all linkages. More planning underway.
- Identified over 80 structural pathways where habitat connections still exist.

Land Protection

- Partners completed 79 permanent land protection projects on more than 288,000 acres (1,165 km²) of critical connecting habitat.
- Ten projects covering an additional 43,000 acres (174 km²) pending as of 2014
- Natural Resource Conservation Service (NRCS) adopted connectivity as a criterion for ranking projects in VT.
- NY Department of Environmental Conservation adopted connectivity ranking criteria for land protection

Land-Use Planning Technical Assistance

- Technical assistance reached a minimum of 41 communities in the linkages.
- At least 22 communities implemented specific connectivity-conservation provisions (town plans, zoning/subdivision bylaws, conservation commissions, conservation fund)
- Several Regional Planning Commissions (RPCs) in Vermont have adopted new regional plan language addressing habitat connectivity

Road Barrier Mitigation

- Priority road segments identified in linkages
- Wildlife tracking conducted along key road stretches in most linkages
- Developed a winter tracking, model for rapid assessment of potential for wildlife movement across roads
- Four road infrastructure mitigation projects underway or pending

Staying Connected Coordination

- Built a foundation of partners willing and able to work together toward one large vision across a broad geography, recognizing partner contributions and capitalizing on the strengths of the group to meet SCI goals
- Establish formal communication channels to keep partners informed and connected.
- Maintained a single multi-disciplinary steering committee that has coordinated all actions across our work areas across the entire geography
- Coordinated the partnership at statewide and linkage specific scales. Separate Linkage teams and larger single-state steering committees have also regularly met to ensure coordination from regional picture to local implementation

Location

Project 1: Land Protection

The land protection activities in this proposal focus on 16 parcels totaling 21,254 acres. Of these, four in particular include documentation of commitment. Three are in Vermont and one in New Hampshire ([Map 2](#)). The [Site Selection](#) section describes the prioritization process that led to their selection.

Project 2: Species Monitoring

Monitoring activities will occur at 14 sites in the Northern Vermont and New Hampshire linkages ([Map 5](#)).

Project 3: Conservation Delivery Coordination

Coordination of conservation activities will occur in the U.S. linkage areas ([Map 1](#)). C-SWG funds will not be used for coordination and conservation delivery efforts in eastern Canada linkage areas, including parts of Quebec, New Brunswick and Nova Scotia.

Objectives

We seek 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 this big vision, we propose:

1. To conserve at least 6,000 acres of high priority connecting lands within the project area by June 1st 2017. Specific parcels have been identified in high priority areas and landowner agreements secured; C-SWG funds would be used for transaction costs.
2. Photo monitor wildlife movement at 14 locations within the two linkages over the next three years to assess the amount of usage by target SGCN
3. Provide coordination and communication support to enhance conservation delivery through the Staying Connected steering committee, executive steering committee and the five working groups (conservation science, land protection, transportation,

technical assistance and land use planning) to improve information sharing for more effective implementation.

Approach

Objective 1: conserve 6,000 acres of high priority connecting lands within the project area by June 1st 2017

16 key parcels have been identified using our conservation science datasets developed during the first phase of our work (2009-2014) as important connecting lands for wide-ranging SGCN. These parcels fall within our priority “structural pathways” ([Site Selection](#) describes our site selection process and importance of these parcels to regional connectivity), and rank highly in Andersons et al’s local connectivity datasets[1] (Map 3).

Deer Lake Parcel (5,923 acres in Worcester and Elmore, VT)

- An option to purchase this parcel in fee has been secured by the Vermont Land Trust ([Appendix B](#)). The landowner is motivated to sell this calendar year (2014).
- A Forest Legacy easement will be secured for the parcel and the parcel will eventually be sold to a forestland buyer.

E.B. Hyde Parcel (10,000ac parcel in Woodbury, VT)

- A letter of commitment has been secured for this parcel by the Vermont Land Trust ([Appendix B](#)) and the landowner will work with VLT to secure all or some of the parcel in the next three years.
- This parcel is adjacent to the VT Department of Fish & Wildlife Conservation Center at Buck Lake.

Dotoli parcel (3,000ac parcel in Westmore, VT)

- Lands are adjacent to Willoughby State Forest, VT.

Heon parcel (256 ac parcel in Northumberland, NH)

- TNC has a letter of commitment from the landowner ([Appendix B](#)) to purchase a ±256 acre tract in fee
- The tract is almost entirely forested and includes a ±5 acre hayfield, a small unoccupied cottage in poor condition, and a garage which will be demolished to enhance and restore connecting habitat for wildlife.
- The parcel abuts the Cape Horn State Forest, which is owned by the State of New Hampshire through its Department of Resources and Economic Development (DRED). The State is the logical and intended long-term owner of the property, though TNC may hold the property for an interim period. The property would become part of the Cape Horn State Forest.

[1] Anderson, M.G., M. Clark, and A. Olivero Sheldon. 2012. Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region. The Nature Conservancy, Eastern Conservation Science. 168 pp.

Vermont Land Trust will continue building and improving relationships with willing landowners in priority linkages by providing technical assistance regarding habitat connectivity, and land conservation and restoration options available to landowners with the goal of securing long-term protection for at least 5 high priority parcels during the grant period.

We anticipate acquiring at least six conservation easements in priority linkages via donation from willing landowners during the grant period. Our confidence in acquiring at least six easements is high as VLT averages 20-30 easement donations per year with 30% typically within priority linkages. Negotiations with willing landowners for conservation easement donations are currently underway for the high priority parcels listed below.

- Young, Wolcott, VT – 100 ac.– adjacent to Bear Swamp Natural area, easement in process, landowner desires a 2014 closing
- Hexter Fried, Stannard, VT – 110 ac.– significant frontage on Stannard Brook, easement about to be drafted, landowner wants to close in 2014
- Craftsbury Outdoor Center, Craftsbury, VT – 200 ac.– land along Black River swamp, Henneveld – Enosburg, VT. 98 ac. Likely, but not a certainty.
- Rysz – Elmore, VT. 413 ac
- Butler D+T – 90 ac. Johnson, VT. likely, but not a certainty.
- Witherell – Johnson, VT. 177 ac. early stages
- Jones, Johnson, VT. 175 ac., early stages
- Maynard/Ravenelle, Johnson, VT. 205 ac. fairly certain
- Schlosser – Woodbury/Hardwick, VT. 190 acres,.
- Marvin, Johnson, VT. 2 parcels, 122 and 101 ac.
- Kaeding, Worcester, VT. 100 ac.

Objective 2: Photo monitor wildlife movement at 14 locations within the two linkages over the next three years to assess the effectiveness of our connectivity efforts.

Funds for the Vermont portion of this monitoring project have already been secured from the Federal Highway Department and the Vermont Agency of Transportation. C-SWG funds will be used for the New Hampshire portion of the project.

We will use black bear and bobcat as target species for monitoring wildlife usage of the linkage areas. These two Species of Greatest Conservation Need in Vermont and New Hampshire have large home ranges and can serve as indicators for the 12 other wide-ranging and forest-dwelling SGCN ([Appendix D](#)) that will benefit from the project.

Vermont Fish & Wildlife Department and New Hampshire Fish & Game Department maintain at least baseline population indexes for both bobcat and black bear. Nature Conservancy New

Hampshire will work with the two Departments to access this baseline data to assess the statewide abundance and regional context.

Remote camera sites will be established in 14 locations in the two linkages on transportation infrastructure (e.g., culverts, bridges). Four size classes of bridges/culverts will be selected as sites with cameras on both inlet and outlet of the structure. This captures both successful crossing as well as avoidance. Because the study area is a moderately fragmented landscape with considerable agricultural and developed land, we postulate that species such as bobcat and black bear are more likely to follow riparian cover (rather than crossing open fields) and hence are more likely to utilize transportation infrastructure for getting under roads. Based on findings from other camera work on Interstate 89 in Vermont¹ we anticipate a high ability to detect black bear and bobcat using this method. Vermont Nature Conservancy will compile and analyze camera monitoring data to assess the effectiveness of our connectivity efforts. This will give us increased resolution, above and beyond the baseline data provided by our fish & wildlife agencies and will shed light on the fine-scale changes in movement.

New Hampshire Nature Conservancy and New Hampshire Fish & Game will work together to establish the monitoring protocol and camera placement for the four cameras in New Hampshire

See [Map 5](#) for location of species monitoring project.

New Hampshire Nature Conservancy will then combine baseline population estimates from the fish & wildlife agencies, with the compiled results of VT's photo-monitoring work (From TNC VT) and the NH photo monitoring data to determine the local population response of targeted SGCN. This can give us insight into the effectiveness of our connectivity efforts in this region.

Compiled results will be analyzed and a final report will be provided to both fish & wildlife departments by New Hampshire Nature Conservancy to assess long-term outcomes of conservation actions and to provide for adaptive management in their management of these species. This can serve as a metric in assessing the effectiveness of our connectivity efforts across the region.

Objective 3: Provide coordination and communication to enhance conservation delivery through the Staying Connected steering committee, executive steering committee and the five working groups (conservation science, land protection, transportation, technical assistance and land use planning) to improve information sharing for more effective implementation.

Staying Connected includes eight state agency partners, three provincial partners, 12 NGO partners, organized around five sub committees that work across eight linkages. We hold regular meetings at three scales; Northern Appalachians, state and linkage specific.

¹ Merrow, J. et al. *Project is ongoing*. Wildlife Connectivity Study for Bolton Waterbury STP 2709(1) Movement along the I89 and Route 2 Corridor in Bolton and Waterbury VT. Vermont Agency of Transportation

- The Staying Connected coordinator convenes conference calls of our Northern Appalachians Steering Committee 2-4 times per year. This group of 20 individuals represents state fish and wildlife agencies, agencies of transportation and 10 NGOs, across our project area.
- The Staying Connected coordinator convenes quarterly Executive Steering Committee meetings (in months between Steering Committee meetings). This group sets the agenda for the Steering Committee and fine-tunes implementation.
- 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 Northern Appalachians Steering Committee.
- Additionally, specific linkage teams (e.g. Greens to Adirondacks Linkage) also meet on as-needed basis 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.).

Staying Connected will host a conference involving all SCI partners in the spring of 2016 to facilitate, review and fine tune conservation delivery strategies, as well as for networking across the large geography and for partners to meet face to face with others that they work with. The conference is a critical communication tool across scales and work areas.

Staying Connected will formalize working groups consisting of various partner organizations centered on each of its work areas. Our Coordinator (Wildlife Conservation Society) will convene, conservation science, land use planning, outreach, transportation and land protection working groups within six months of obtaining the SWG grant and those groups will hold regular meetings thereafter.

Schedule of Work

	2014			2015			2016			2017		
	Aug	Sept – Oct	Nov - Dec	Jan - Feb	March - April	May-Jun	Jul - Aug	Sept - Oct	Nov - Dec	Jan - Feb	March - April	May-Jun
Objective 1: Land Protection												
Deer Lake												
E.b. Hyde												
Dotoli												
Heon												
Objective 2: Photo Monitoring												
Collect baseline data from NHF&G & VT F&W												
Maintain Game Cameras & data collection												
Analyze baseline & photo data												
Share results with F&W departments												
Objective 3: Provide coordination and communication support for Staying Connected												
Executive Steering Committee												
Steering Committee												
Working Groups												
SCI Conference												

Site Selection for Land Protection Activities

Our process for identifying high priority sites for land protection begins with conservation science and the modeling of landscape linkages across the region. Then our state and local partners get on-the-ground to identify fine-scale features. All of this occurs within the framework of state and regional planning initiatives, from our Wildlife Action Plans to regional and species specific planning processes such as the ongoing development of the Silvio Conte National Wildlife Refuge Plan that guide our actions. All of this then fuels our implementation partners in land protection as well as land use planning, technical assistance and transportation-road ecology.

Conservation Science

Parcels included in this proposal fall within a large east-to-west landscape linkage from the Tug Hill Plateau in NY across Vermont and New Hampshire into Maine and up to the Gaspé Peninsula. In the first phase of our work (2009-2014), Staying Connected supported more localized computer modeling of subsets of this area to make use of locally available data that is state specific. Different linkages were mapped using different suites of data by our conservation science partners that include the Nature Conservancy, Vermont Fish & Wildlife Department, The Wildlands Network and Two Countries One Forest. Final reporting to the USFWS summarizing our first successfully completed Competitive SWG awarded 2009 (U2-4-R-1) details the results of this intensive modeling and prioritization process for each linkage.

Parcels in this proposal are within priority areas as modeled in these separate Staying Connected linkages;

- Worcesters to Kingdom Linkage in Vermont
- Northeast Kingdom to North New Hampshire Linkage in New Hampshire

Furthermore, all parcels identified for protection in this proposal fall within Staying Connected's "Structural Pathways"². This is a further designation of importance and priority above and beyond being included within the linkage itself. Structural pathways are specific places within the linkage that are especially critical for maintaining connectivity. Generally, these are road sections with associated connecting lands between large forest blocks. These are often a mix of cover types with interspersed development and agriculture that are at most risk of no longer functioning as connecting lands. [See Map 4.](#)

Parcels can also be seen in the context of several regional datasets made available through the North Atlantic Landscape Conservation Cooperative (NALCC). Specifically, The Nature Conservancy's Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region³ includes several datasets that provide context for guiding connectivity conservation. Of

² Staying Connected Initiative <http://www.stayingconnectedinitiative.org>

³ Anderson, M.G., M. Clark, and A. Olivero Sheldon. 2012. Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region. The Nature Conservancy, Eastern Conservation Science. 168 pp.

these, the “Local Connectedness” metric offers us an assessment of the important role these parcels play in this regional context. [See Map 3.](#)

Planning Context

Several regional plans and planning processes identify these two linkages—and the target parcels—as important to regional landscape conservation, including:

- DRAFT 2014 Cooperative Conservation Plan for the Silvio O. Conte National Wildlife Refuge. This refuge spans the Connecticut River watershed in the states of Vermont, New Hampshire, Massachusetts and Connecticut.
- North Atlantic Landscape Conservation Cooperative (NALCC)
- Trombulak, S.C., M.G. Anderson, R.F. Baldwin, K. Beazley, J.C. Ray, C. Reining, G. Woolmer, C. Bettigole, G. Forbes, and L. Gratton. 2008. The Northern Appalachian/Acadian Ecoregion: Priority Locations for Conservation Action. Two Countries, One Forest Special Report No. 1.
- 2005. Vermont's Wildlife Action Plan. Vermont Fish & Wildlife Department. Waterbury, Vermont. www.vtfishandwildlife.com
- New Hampshire Wildlife Action Plan, 2005. New Hampshire Fish and Game Department. Concord, N.H. http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm

Expected Results & Benefits

We expect the following results and benefits from the proposed actions:

- At least 6,000 acres of high priority lands within two regionally significant linkage areas will be protected.
- Local wildlife conservation efforts continue to benefit from regional-scale conservation science delivered by Staying Connected
- Improved knowledge of effectiveness of connecting lands for animal movement and will help refine our efforts working towards connectivity
- A Staying Connected conference for region wide partners
- Will have more effective communication between partners
- We will be a science delivery and implementation partner in working with the North Atlantic Landscape Conservation Cooperative data.
- Staying Connected will bring conservation science to decision makers at the local, regional and statewide scales

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 wide-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.

Grant Monitoring

Grant monitoring will take full advantage of Wildlife TRACS in the tracking and reporting of grant actions and grant outcomes. Wildlife TRACS, a geospatial mapping and decision support tool for “Tracking and Reporting Actions for Conservation of Species,” serves as a foundation for the following grant 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 NH 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 grant activities: We have also developed two processes specifically for monitoring and coordinating the grant and project-level activities associated with this grant.

4. In our first three years (phase 1) of existence, Staying Connected established 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 Kernel 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. This work allows Staying Connected to maintain its own metrics for success, compared against this baseline for reporting purposes into the future.
5. Grant 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.

Grant Administration, Management & Coordination

Administration:

Vermont Fish & Wildlife Department will submit the grant to USFWS Federal Aid and serve as grant administrator. The Vermont Land Trust will serve as a sub-grantee, and will serve as the primary contractor, and will provide oversight and grant management for the projects and activities outlined herein. The Vermont Land Trust will subcontract with the other partners listed in the projects that accompany this proposal. Vermont Land Trust will ensure that a consistent approach in conservation actions across by all project partners as well as consistent record keeping and billing. All contractors will be required to submit quarterly financial reports and yearly interim reports. Grant Management is divided by project in the budget narrative accompanying each project.

Management:

The Vermont Land Trust has extensive experience managing and administering 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.

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

The activities proposed in this grant involve land protection through fee acquisition and support of associated costs. 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 I](#) shows NEPA compliance. Specific NEPA and Section 7 documentation from New Hampshire Fish & Game will be forthcoming should this proposal be selected for funding.

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

Criterion	Explanation	Page # Section
1 Proposed conservation actions contribute to a regional, collaborative landscape conservation strategy or plan (other than a SWAP) with clearly-identified imperiled species population objectives (0-4 points).	Habitat Connectivity in the northern Appalachians is a central theme of several landscape conservation strategies targeting several imperiled species.	- See Site Selection: Planning Context
2 The Project Approach describes consistent and cohesive conservation actions (up to 2 points), methods for data sharing (up to 2 points), and methods for pre- and post-action species monitoring (up to 2 points) among all States, federal agencies, and other partners (maximum 6 points).	-Staying Connected Coordination provides for consistent and cohesive action, data sharing. -Pre and post action species monitoring is being leveraged through a grant for photo-monitoring from Vermont Agency of Transportation	-See: What is Staying Connected - See: Approach Section: Objective 2 , and Project 2 Budget
3 Proposed conservation actions directly target an urgent threat to SGCN identified in an approved SWAP, or an identified and documented emerging issue (0-3 points).	-Habitat loss and climate change are urgent threats identified in VT's SWAP. NH talks about these concepts as "Development and Transportation Infrastructure" as risks to wildlife. Land protection ensures habitat in perpetuity for target SGCN	-See: Appendix D: SGCN and Appendix E: Action Plans -See: Approach Section: Objective 1 .
4 Proposed conservation actions directly address SGCN for which other WSFR funding sources are not adequate or readily available (for example: invertebrates, reptiles and amphibians, etc.) (0-4 points).	-WSFR funding for study and protection of connecting land is profoundly limited and support for research or habitat improvement/protection for black bear and bobcat is often limited to core habitat conservation efforts. Land ownership patterns (overwhelmingly privately owned) preclude effectiveness of traditional conservation approach and necessitate a multi-faceted one.	-See Purpose & Need Section: Problem statement
5 Proposed conservation actions include on-the-ground actions specific to targeted SGCN, such as habitat management and/or species reintroduction, translocation, or other augmentation (0 to 5 points).	Maintaining connecting lands for movement of black bear and bobcat is critically important to their long term survival	-See: Appendix F Action Plan Threats and Priority Actions

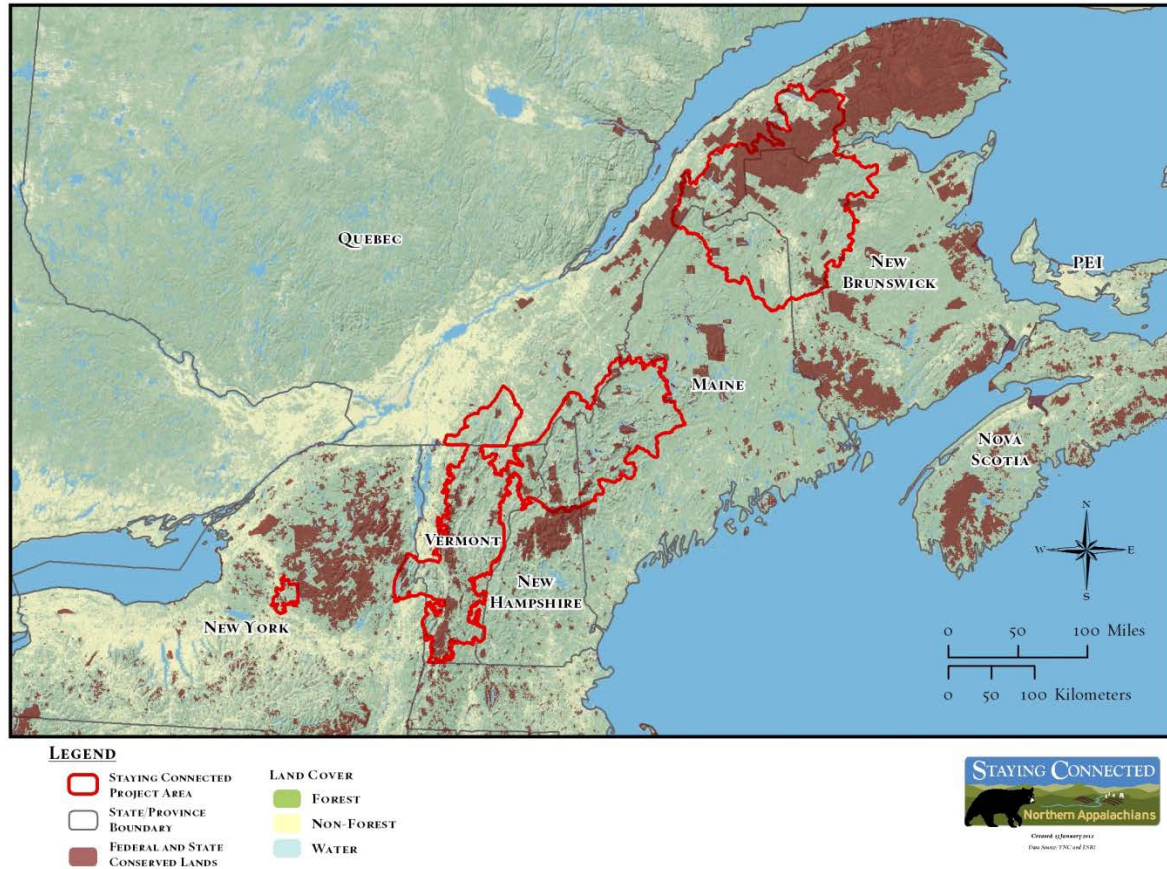
Criterion	Explanation	Page # Section
6 Proposal briefly describes a monitoring plan that each participating State or partner will use to determine the local population response of targeted SGCN, to assess long-term outcomes of conservation actions and to provide for adaptive management (0 to 5 points). One point for describing each of the following items clearly and in sufficient detail:	Species Monitoring plan makes use of leveraged work paid for by U.S. Federal Highways and Vermont Agency of Transportation. Photo-monitoring data will be combined with coarser-scale population indexes from F&W departments to assess long-term outcomes	-See Approach: Objective 2: Photo Monitoring
7 Proposal identifies SMART biological objectives that are specific, measurable, attainable, realistic, and time-bound. (0 to 4 points).	Grant objectives target 1) land protection, 2) photo monitoring of species and 3) Providing coordination and communication support for Staying Connected	-See Objectives Section
8 Proposed conservation actions are provided in adequate detail to understand how the State(s) and partner(s) will implement the project (0-6 points). The following information should be provided for all proposed conservation actions: Consistent methods/procedures used in conservation actions proposed by all project partners (4 points); and A description of who will implement the actions, and their qualifications (1 point); and Schedule of work (1 point).	The approach section of this document details responsibilities for each objective	-See: Approach Section -See Project Administration for ensuring consistency in methods and reporting. -See Appendix C for project leaders qualifications. -See: Schedule of Work
9 Proposed conservation actions will impact both public and private lands (0-4 points): Actions are accomplished on private lands, including lands owned by individuals, private academic institutions, or nongovernmental organizations (0 or 2 points). 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, or Tribes (0 or 2 points).	Proposed land protection will occur on private land. Three of the four proposed parcels are directly adjacent to public lands and will positively impact future management of those public investments. Staying Connected Coordination (See Objective 3) involves more than 12 conservation NGOs as well as eight Agencies of Transportation as well as Fish & Wildlife (NY, VT, NH, ME). The coordination of conservation action to benefit habitat connectivity has implications on public land through the involvement of these public agencies. Project 2 Monitoring is a good example of public agency involvement and implications for publicly owned infrastructure	-See Map 2 -See Staying Connected: Who is Involved -See Approach: Objective 2 as example of public / private partnership

Criterion	Explanation	Page # Section
10 Proposal describes compliance and consultation requirements and how they will be addressed, including but not limited to NEPA, NHPA, ESA, Clean Water Act, Tribes, State and local permits, etc. (0-2 points).	This proposal involves activities exempted under NEPA (criteria A4) as well as other Federal environmental protection laws	-See Federal Compliance Section -See Appendix G:Sect 7 ESA list -See Appendix H: NEPA compliance
11 Proposal documents non-Federal match in addition to the required 25% (0-4 points total).	Proposal documents \$310,968 in match, some 38% of the total grant	-See Budget summary & narrative

Appendix A: Maps

Map 1: The Staying Connected Initiative

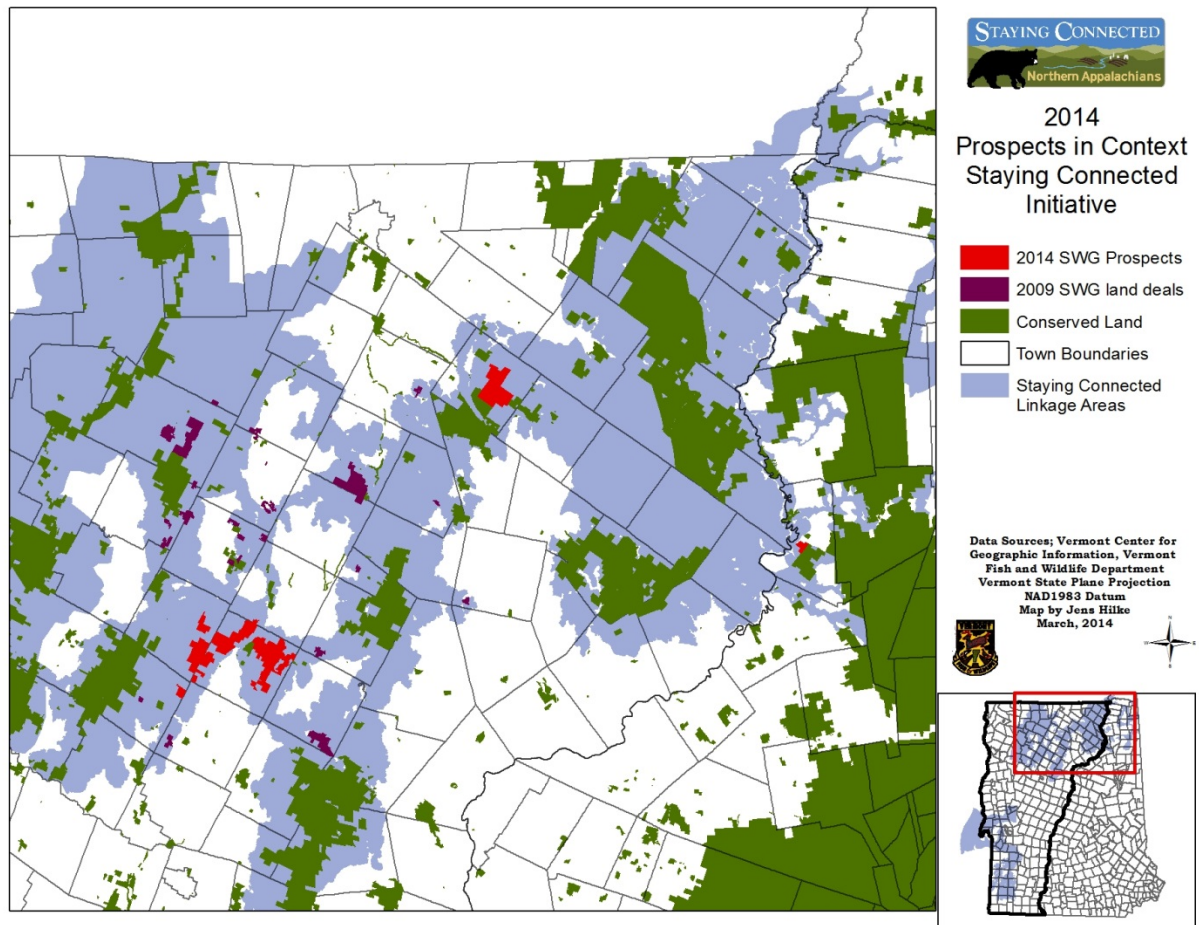
Location for Project 3: Conservation Delivery Coordination



The map above shows the entire area of interest for the Staying Connected Initiative in the Northern Appalachians. Within this expanse, Staying Connected prioritizes its work to occur within regionally significant linkage areas (in red) that are priority connecting lands at this landscape scale. Staying Connected provides coordination for partners working at various scales within this geography. Coordination work called for in Project 3 of this proposal would occur within these red areas, on the U.S side the International border.

Map 2: Land Protection Sites

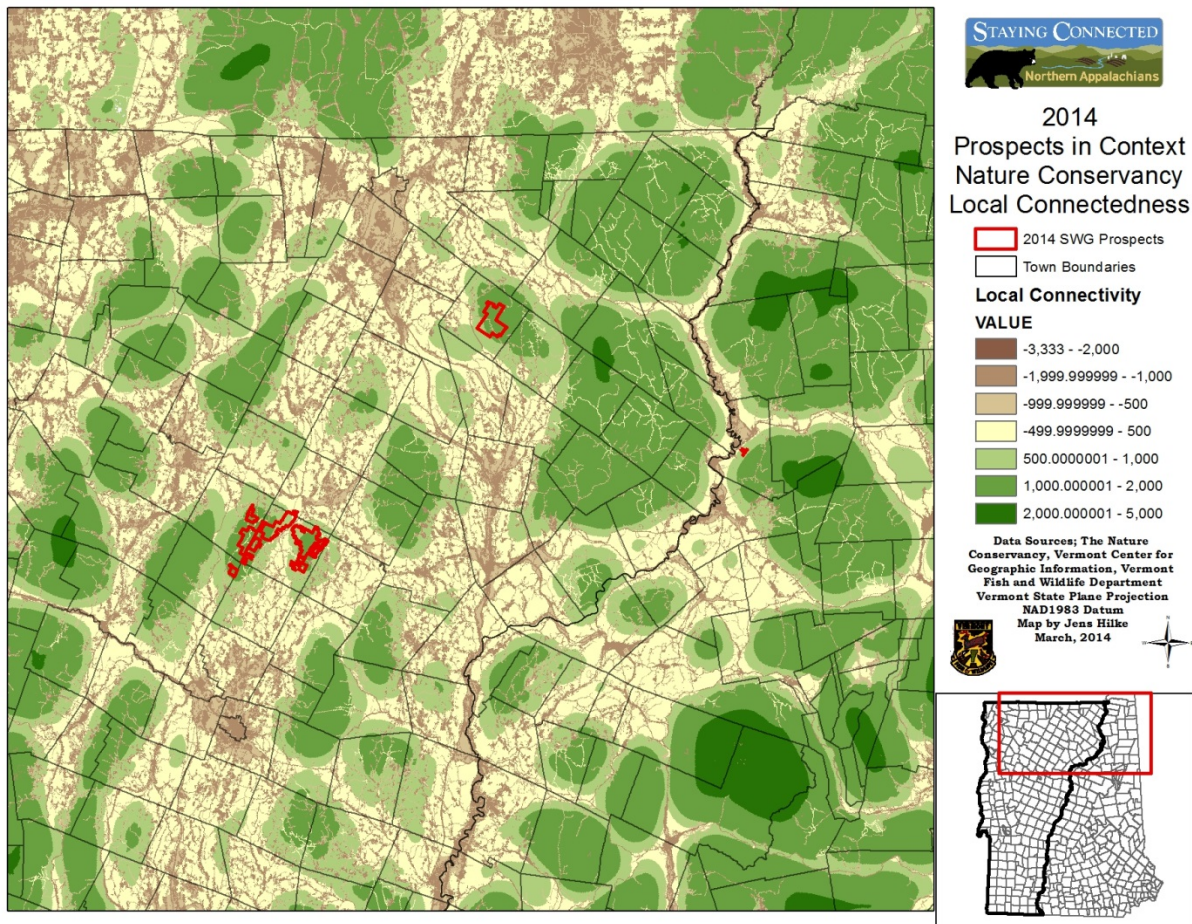
Location for Project 1, proposed Land protection in VT and NH



Map 2 shows the proposed land protection parcels (red) in the context of the Staying Connected linkage areas (light blue), and permanently conserved land (green).

Map 3: 2014 Prospects & Resilient Sites

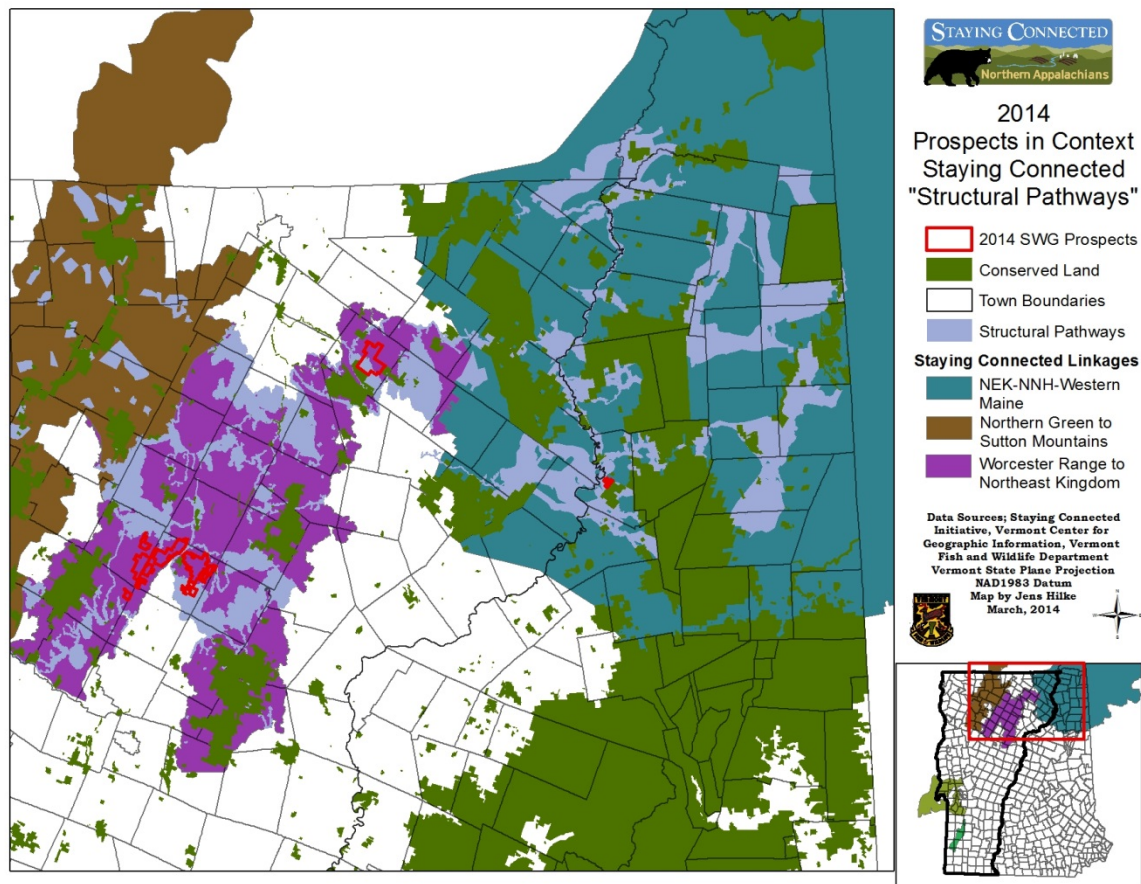
Location of proposed Land protection in VT and NH in the context of Anderson et Al. Local Connectedness⁴.



Map3 above shows the proposed land protection parcels (red) in the context of “Local Connectedness” dataset from Anderson et al’s , Resilient Sites for Terrestrial Conservation

⁴ Anderson, M.G., M. Clark, and A. Olivero Sheldon. 2012. Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region. The Nature Conservancy, Eastern Conservation Science. 168 pp.

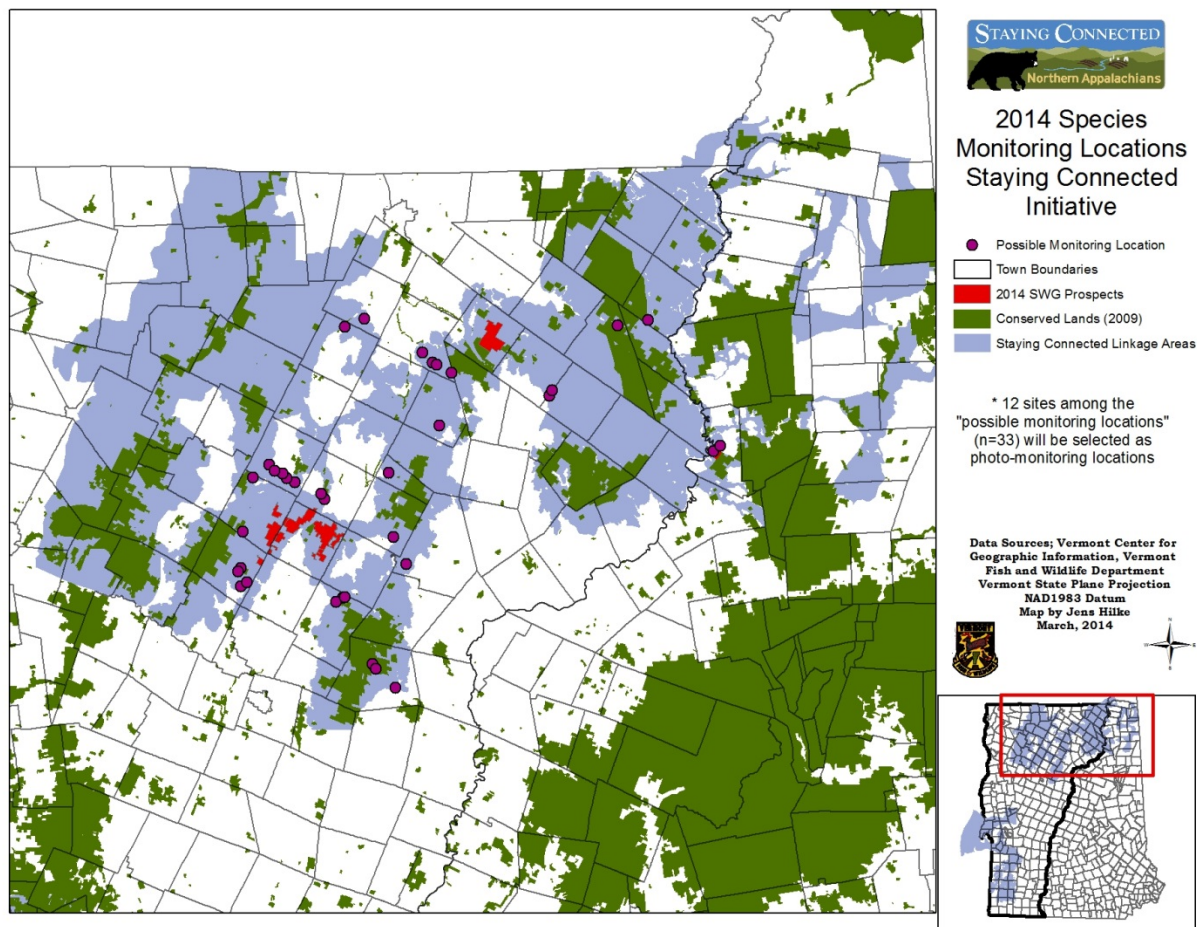
Map 4: 2014 Prospects & SCI Structural Pathways



Map 4 shows parcels proposed for protection (red) in the context of Staying Connected linkage areas (brown, purple, teal) Structural Pathways (light blue), permanently conserved land (green). Structural Pathways are critical priority areas within the linkages.

Map 5: Species Monitoring

Location for Project 2, Species Monitoring



Map 5 shows above shows the proposed land protection parcels (red), location of camera monitoring (purple points), Staying Connected Linkage areas (light blue) and permanently conserved land (green).

Appendix B: Letters of Commitment & Support



Vermont Land Trust

CONSERVING LAND FOR THE FUTURE OF VERMONT

March 14, 2014

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 is dedicated to conserving land for the future of Vermont. Since 1977, we have permanently conserved nearly 530,000 acres of the private, undeveloped land in the state. The conserved land includes more than 700 working farms, hundreds of thousands of acres of productive forestland, and numerous parcels of community land. These lands include ecologically critical habitats, significant natural communities and help protect the quality of surface waters.

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 2009 SWG grant. In support of this current SWG proposal, VLT is committed to providing \$69,500 of cash match. This match will come from non-federal sources for costs associated with the land conservation projects set forth in the proposal, primarily focused on costs incurred by VLT in support of easement donation projects protecting important connecting lands within critical linkage areas identified by Staying Connected.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gil Livingston". The signature is written in dark ink on a white background.

Gil Livingston
President



ADIRONDACK COMMUNITIES & CONSERVATION PROGRAM

March 3, 2014

Daniel M. 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,

On behalf of the Wildlife Conservation Society, I am pleased to submit a letter of commitment to the Vermont Fish and Wildlife Department's Competitive State Wildlife Grant proposal, "Mitigating Fragmentation and Climate Change Impacts on Wildlife through Functional Habitat Linkages".

The Wildlife Conservation Society has been a partner with the Staying Connected Initiative since 2009, working cooperatively to maintain, enhance and protect wildlife connectivity in four northeastern states (NY, VT, NH, ME). The proposed project builds on many years of collaboration between multiple public and private partners. Funding for this work will help continue this important work to protect core areas and help mitigate the impacts of habitat fragmentation and climate change in the four-state region.

WCS is delighted to continue working with the partnership on its efforts. Under the proposed project, WCS will actively lead the efforts to coordinate SCI partners to share the science and information across the geography in order to successfully implement the program. WCS will commit \$10,000 of non-federal matching funds towards this project.

Thank you for your consideration and please don't hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Zoë Smith".

Zoë Smith
Director, Adirondack Program

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

CONSERVATION AND EDUCATION PROGRAMS WORLDWIDE • WWW.WCS.ORG

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ST. CATHERINES WILDLIFE SURVIVAL CENTER



State of Vermont
Agency of Transportation
Environmental Section
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-5756
[fax] 802-828-2334
[tdd] 800-253-0191

Daniel M. Ashe, Director
U.S. Fish and Wildlife Service
Main Interior Building – MIB3258
1849 C Street, NW
Washington, D.C. 20240

March 12, 2014

Re: Competitive State Wildlife Grant Application; Staying Connected Initiative

Dear Director Ashe:

On behalf of the Vermont Agency of Transportation (VTrans), I am writing to express VTrans' full support of the Staying Connected Initiative's competitive State Wildlife Grant application. This grant will aid in its mission to conserve and improve landscape connectivity across the Northern Appalachian/Acadian region of the United States and Canada. This mission closely parallels VTrans' goal to provide a safe and resilient transportation system in an environmentally responsible manner.

Information exchanged via this initiative has already led to wildlife specific transportation infrastructure improvements in key SCI regions within Vermont and valuable input to the *Vermont Transportation & Habitat Connectivity Guidance Document*. The SCI has proved vital in providing habitat connectivity information and helping VTrans build regional relationships inside and outside of Vermont.

VTrans is committed to working with the Staying Connected Initiative to provide transportation infrastructure expertise and information on our state transportation system. VTrans has also committed \$64,600 in match for two wildlife studies within several SCI regions of Vermont focusing on wildlife and transportation infrastructure interaction. This contribution comes with \$266,400 of additional funds leveraged from the Federal Highway Administration.

Thank you for considering the Staying Connected Initiative for this competitive State Wildlife Grant and please contact me if you require any additional information.

Respectfully,

A handwritten signature in black ink, appearing to read "Chris Slesar", written over a horizontal line.

Chris Slesar

Environmental Specialist Supervisor



March 3, 2014

ADVISORY COMMITTEE

Maude Barlow
Ottawa

John Ewing
Burlington

Bill McKibben
Ripton

Will Raap
Burlington

Gus Speth
Strafford

EXECUTIVE DIRECTOR

Brian Shupe

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Montpelier

Eric Zencey
Montpelier

Don Hooper
NWF Affiliate Liaison

Daniel M. 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,

On behalf of the Vermont Natural Resources Council (VNRC), I am pleased to submit a letter of Commitment to the Vermont Fish and Wildlife Department's Competitive State Wildlife Grant proposal, "Mitigating Fragmentation and Climate Change Impacts on Wildlife through Functional Habitat Linkages".

VNRC has been an active partner with the Staying Connected Initiative since 2009, working cooperatively to maintain, enhance and protect wildlife connectivity in four northeastern states (NY, VT, NH, ME). VNRC is currently working on a VT State Wildlife Grant with Staying Connected for land use planning technical assistance related to habitat connectivity in the Staying Connected linkages in Vermont. The proposed project builds on many years of collaboration between multiple public and private partners in a multi-faceted approach to the problem of habitat connectivity. Funding will help continue this important work to protect core areas and help mitigate the impacts of habitat fragmentation and climate change in the four-state region.

We are pleased to continue working with the partnership on its efforts. Under the proposed project, VNRC will remain connected to the SCI initiative through Conservation Delivery Coordination (Project 3), as an active member of the Vermont Staying Connected steering committee and through our technical assistance work.

VNRC will commit \$10,000 of non-federal matching funds towards this project. Thank you for your consideration and please don't hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Stephanie Mueller", is written over a light blue horizontal line.

Stephanie Mueller
Director of Development



National Wildlife Federation
Northeast Regional Center
149 State Street, Suite 1
Montpelier, VT 05602

March 7, 2014

Daniel M. Ashe, Director
U.S. Fish and Wildlife Service
Main Interior Building- MIB3258
1849 C Street, NW
Washington, D.C. 20240

Dear Mr. Ashe,

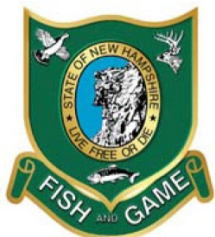
Pending before you is an extraordinary opportunity to conserve and enhance populations of Species of Greatest Conservation Need (SGCN) across the Northern Appalachian Ecoregion through the conservation of high priority connecting lands, targeted monitoring, comprehensive technical assistance, and the implementation of effective land use planning. These critical goals and more can be accomplished through the award of Competitive State Wildlife Grants Program funding to support the proposal submitted by the Vermont Fish & Wildlife Department titled *"Mitigating Fragmentation & Climate Change Impacts by Enhancing Habitat Connectivity"*.

This opportunity is made possible first and foremost by the unprecedented level of regional collaboration and conservation success resulting from the ongoing work of the Staying Connected Initiative (SCI). Through an unparalleled public-private partnership representing a constituency of state fish and wildlife agencies, agencies of transportation and conservation NGOs in Massachusetts, New York, Vermont, New Hampshire, Maine and Quebec, New Brunswick, and Nova Scotia, SCI has produced a record of significant and quantifiable success in maintaining, enhancing, and restoring habitat connectivity for the benefit of SGCN. The extent of previous conservation success, and a proven ability to engage and incorporate diverse stakeholders, has positioned SCI as the Northeast's leading landscape-level habitat connectivity conservation entity.

As a result of SCI driving the delivery of project outcomes detailed in this proposal, the National Wildlife Federation strongly supports this effort and unreservedly seeks approval of Competitive State Wildlife Grants Program funding to support *"Mitigating Fragmentation & Climate Change Impacts by Enhancing Habitat Connectivity"*.

Sincerely,

Curtis Fisher, Executive Director
Northeast Regional Center
National Wildlife Federation



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

March 11, 2024

Daniel M. 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 Director Ashe,

On behalf of The New Hampshire Fish and Game Department (NHFG), I am pleased to submit a letter of commitment and strong support for a Competitive State Wildlife Grant titled **'Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages'**. NHFG will be an active participant in the project.

The proposed project is tightly aligned with New Hampshire's Wildlife Action Plan and recently completed Ecosystems and Wildlife Climate Change Adaptation Plan. Project outcomes will help secure habitat connectivity for Species of Greatest Conservation Need within New Hampshire and contribute to habitat connectivity at the landscape scale across the Northern Appalachian Eco-region. At both scales the project will help mitigate the impacts of habitat fragmentation and climate change. Specifically, the proposed land protection project in New Hampshire advances the establishment of an important wildlife corridor across the Connecticut River valley between New Hampshire and Vermont. The species monitoring efforts will improve our understanding of wildlife movement across the Connecticut River valley, a fragmented portion of Northern New Hampshire, so that we can more effectively maintain and restore landscape permeability for wildlife.

NHFG will provide technical assistance to the monitoring component of the proposed project and the land protection effort. We are requesting \$15,000 for the grant period, to cover NHFG staff and mileage costs.

We hope that this proposal will be favorably viewed by the review committee. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Normandeau".

Glenn Normandeau,
Executive Director

March 7, 2014

Daniel M. 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 Director Ashe,

On behalf of The New Hampshire Chapter of The Nature Conservancy (TNC), I am pleased to submit this letter of commitment and to express strong support for a Competitive State Wildlife Grant titled **'Mitigating Fragmentation & Climate Change Impacts on Wildlife through Functional Habitat Linkages'**. TNC will be an active participant in the project.

The proposed project will monitor habitat connectivity for Species of Greatest Conservation Need within New Hampshire and contribute to habitat connectivity at the landscape scale across the Northern Appalachian Ecoregion. Project outcomes are tightly aligned with strategies identified in New Hampshire's Wildlife Action Plan and the recently completed Climate Change Adaptation Plan as further detailed in the proposal. Specifically, the proposed land protection project in New Hampshire advances the establishment of an important wildlife corridor across the Connecticut River valley between large-scale conservation areas in New Hampshire and Vermont. Species monitoring efforts will improve our understanding of wildlife movement across the Connecticut River valley, perhaps the most fragmented portion of Northern New Hampshire, so that conservation partners can more effectively maintain and restore landscape permeability for wildlife.

TNC will lead land protection and monitoring activities in New Hampshire. In total, TNC would need \$104,553 under the proposed grant and will provide at least \$11,468 in matching funds. Project funding will support TNC staff time, travel, supplies, due diligence costs for land protection, and wildlife monitoring activities.

We hope that this proposal will be favorably viewed by the review committee, and thank you for your consideration.



Mark Zankel
State Director

*Cynthia and Raymond Heon
122 Middle Road
Deerfield, NH 03037*

February 27, 2014

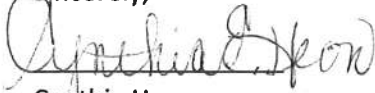
Jan McClure
The Nature Conservancy
22 Bridge St., 4th Floor
Concord, NH 03301

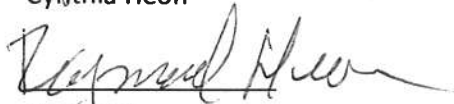
Dear Jan,

This letter serves as an expression of our intent to sell our land in Northumberland to The Nature Conservancy. While we have not yet agreed on a sale price for the property, we understand that The Nature Conservancy cannot pay more than the appraised value for the property.

We look forward to working with you to provide long term protection for our land.

Sincerely,


Cynthia Heon


Raymond Heon

**Memorandum of Understanding:
E. B. Hyde Company and Vermont Land Trust**

This Memorandum prepared by the Vermont Land Trust (VLT) and the E. B. Hyde Company (EBH) is a non-binding expression of the parties' intentions, and this Memorandum is not legally enforceable.

- 1) Deer Lake Timber Ltd. Co. (Deer Lake) has entered into an Option Agreement with VLT, with respect to the sale of its forestland located in Worcester and Elmore, Vermont. While the sale of Deer Lake lands to VLT would be unrestricted, both parties hope the land will be permanently conserved. The owners of Deer Lake also have an ownership interest in EBH, which owns approximately 10,000 acres of forestland adjacent to the Deer Lake lands.
- 2) The EBH lands have outstanding natural resource values. VLT would like the opportunity to explore permanent conservation options with the EBH owners, for a majority of their land. Further, the most effective strategy to conserve Deer Lake would be a USDA Forest Service Forest Legacy (Legacy) application that includes both Deer Lake and EBH lands.
- 3) VLT understands that EBH has 19 owners, that the owners may have different objectives, and that developing disposition plans for the EBH lands will take time.
- 4) EBH and VLT will work in good faith to reach agreement for VLT to acquire a Legacy easement on a substantial portion of the EB Hyde lands, with any such agreement being dependent upon satisfying three objectives:
 - (a) VLT's willingness to accept conservation easement exclusions and land division plans developed to serve family use, ownership and financial goals, provided key natural resource values are not significantly impacted.
 - (b) VLT's ability to assure EBH that the price to be paid for a Legacy easement is reasonable.
 - (c) VLT's demonstration to EBH's satisfaction that the Legacy easement on whatever lands do not remain in family ownership does not impede EBH's ability to secure a private buyer at a reasonable price.
- 5) Pending these discussions, EBH agrees to sign a Forest Legacy funding application, understanding that signing does not bind EBH to sell a Legacy easement if VLT secures funding.

Dated at Montpelier, Vermont this 25th day of February 2014.

E. B. Hyde Company

Vermont Land Trust, Inc.

By: Stephen B. Meyer

By: W. G. Livingston

Stephen B. Meyer, President

W. G. Livingston, President

OPTION AGREEMENT

In consideration of Ten Dollars and other valuable consideration, receipt and sufficiency of which is hereby acknowledged, **DEER LAKE TIMBER LTD. CO.**, a Vermont limited liability company with a principal place of business in Montpelier, Vermont ("the Owner"), hereby gives and grants to the **VERMONT LAND TRUST, INC.**, a Vermont non-profit corporation with a principal place of business in Montpelier, Vermont ("the Trust"), its successors and assigns, the exclusive option to purchase certain parcels of undeveloped land consisting of 5,425 acres, more or less, located in the Town of Worcester, Washington County, Vermont and in the Town of Elmore, Lamoille County, Vermont ("the Property"), to wit:

Worcester Property: Land totaling approximately 3,558 acres situated east and west of Vermont Route 12; being all and the same lands and premises conveyed to the Owner by Warranty Deed of John B. Meyer, Katherine M. Simpson, Stephen B. Meyer, Peter B. Meyer and Anne Meyer Hoffman, dated December 21, 2005 and recorded in Book 44 at page 188 of the Town of Worcester Land Records.

Elmore Property: Land totaling approximately 1,867 acres situated on both sides of Hardwood Flats Road and Eagle Ledge Road; being all and the same lands and premises conveyed to the Owner by Warranty Deed of John B. Meyer, Katherine M. Simpson, Stephen B. Meyer, Peter B. Meyer and Anne Meyer Hoffman, dated December 21, 2005 and recorded in Book ___ at page ___ of the Town of Elmore Land Records.

Reference may be made to said deeds and the records thereof for a more complete description.

The approximate boundaries of the Property are depicted on the map attached hereto as Exhibit A.

This Option is given on the following terms and conditions.

1. **The Property.** In addition to the land above-described, the Property shall include any and all existing easements and rights appurtenant thereto; and may include one or more access easements for forestry purposes and timber removal over adjacent land and premises owned by E.B. Hyde Company, a corporation in which the principals of the Owner have an ownership interest with others. The Owner and the Trust shall identify those forestry access easements currently in existence over the Property and the E.B. Hyde Company property which burden/benefit one another and, if it is agreed that additional rights are reasonably necessary to enable effective forestry access to and from those properties, a commitment shall be entered to establish those rights on or before a closing under this Option. The final configuration, boundaries and acreage of the Property shall be fixed and the commitment to establish any forestry access easements deemed reasonably necessary shall be entered by mutual agreement of Owner and the Trust by June 1, 2014.

2. **Option Payment.** In consideration hereof, the Trust has paid directly to the Owner the sum of Five Thousand Dollars (\$5,000.00) as the initial option payment. In the event the Trust's Board of Trustees approves acquisition of the Property under the terms and conditions contemplated by the within Option Agreement, on or before April 14, 2014, the Trust shall make a second option payment of Twenty-five Thousand Dollars (\$25,000.00) to the Owner's attorney, Philip Zalinger. If, however, the Trust's Board of Trustees does not approve its acquisition of the Property on or before April 14, 2014, this Option shall be null and void and the initial option payment shall be refunded to the Trust forthwith. The second Option Payment

shall be paid to the Owner by Attorney Zalinger upon the written direction of the Trust after it has been satisfied that the Owner can convey marketable title to the Property as provided under paragraph 7, below, that the Property is free of hazardous materials as provided under paragraph 9, below, and the Trust has received a written consent of the Owner's membership authorizing it to enter into and consummate the transaction contemplated by this Option Agreement. Unless notified of the Trust's termination of this Option Agreement due to a title or hazardous materials issue or non-delivery of the Owner's membership's consent on or before June 1, 2014, the second Option Payment shall be deemed non-refundable and thereafter may be delivered by Attorney Zalinger to the Owner.

3. **Term of the Option.** This Option shall extend through June 30, 2014.

4. **Purchase Price and Terms of Payment.** The Trust shall have the right to purchase the Property for the sum of Eight Hundred Fifty Dollars (\$850.00) per acre, to be paid by the Trust's check at closing. For the purpose of establishing the Purchase Price, the acreage of the Property shall be mutually agreed upon by the Owner and the Trust as provided under paragraph 1, above. The Option Payments made by the Trust under paragraphs 2 and 11, herein, shall be credited against the Purchase Price due from the Trust at closing.

5. **Entry onto the Property.** The Trust and its contractors, consultants and designees shall have the right to enter upon the Property from time to time for the purpose of preparing for the purchase of the Property and its conservation, including but not limited to preparing appraisals, conducting a timber cruise, hazardous materials inspection, acquisition and conservation funding inspections by private and public sources, or obtaining other information about the Property. The Trust's entry onto or testing of the Property shall be conducted in a manner that minimizes any disturbance to the land and to the use and enjoyment of the Property by the Owner or any tenants in possession.

6. **Appraisal.** Upon signing this Option, the Owner and the Trust shall commission an appraisal of the Property by James W. Sewall Company, or other mutually approved, disinterested, professional appraiser with the expense of such appraisal divided equally between the Owner and the Trust. The appraisal shall be completed by June 1, 2014.

7. **Title.** The state of title to the Property shall be determined pursuant to a title examination and certification by a Vermont-licensed attorney paid for by the Trust. The Owner's title shall be deemed marketable if consistent with 27 V.S.A. Chapter 5 and the Vermont Standards of Title and the certification reports that the Property is free of all liens and encumbrances other than those that the Owner can and will discharge by making payment at or before closing (including discharge or release of outstanding mortgages and tax liens); and if the Trust secures a commitment for an owner's policy of title insurance; with both the certification and commitment being subject only to (i) customary utility easements, (ii) water rights subject to the public trust doctrine, (iii) rights of the public to use roads laid out by municipalities, the state or federal government, (iv) rights of way and other easements that do not, in the Trust's opinion, materially impair beneficial use and conservation of the Property, and (v) the lien associated with enrollment in the so-called current use program. So-called lease land or glebe land and third party rights to oil, gas or minerals shall be deemed unmarketable defects in title which, in the Trust's discretion, must be cleared at or before closing. On or before June 1, 2014 the Trust shall notify the Owner of any title issues requiring resolution before closing.

8. **Permits.** The Owner and the Trust enter into this Option with the understanding that the Property is not the subject of any existing local or state permits or approvals, is in compliance with all local and state law and regulations, and that the conveyance of the Property as contemplated herein will not require any new local or state permits or approvals. Should it be determined that this understanding is incorrect, the Owner and the Trust shall reach agreement on how the deficiency will be rectified which may include the extension of the Closing Date, if necessary.

9. **Hazardous Materials.** The Owner represents to the Trust that it is not aware of any hazardous waste, substances or other materials having been dumped or placed upon the Property. The Owner agrees that the Trust may, at the Trust's expense, perform any and all tests and/or inspections necessary to confirm this representation. If, prior to June 1, 2014, the Trust discovers that hazardous materials have been dumped or placed upon the Property, the Trust may at its election declare this Option to be null and void and have returned to it the second Option Payment provided under paragraph 2, above. In the alternative, the Owner and the Trust may enter into an agreement by June 1, 2014 to either: (a) remediate the hazardous materials contamination prior to closing, which agreement may include an extension of the closing date; or (b) amend this Option to exclude from the Property that portion which is contaminated which may include provision for a reduction in Purchase Price, the procurement of any necessary permits and approvals, and the extension of the closing date.

10. **Exercise of Option.** This Option may be exercised by the Trust giving written notice by certified mail, return receipt requested, to the Owner's registered agent, John B. Meyer, delivered to 46 East State Street, Montpelier, Vermont 05602, with a copy by first class mail to Philip H. Zalinger, Esq., Zalinger, Cameron & Lambek, P.C., 140 Main Street, Montpelier, Vermont 05602. Notice and exercise shall be effective upon the date of posting.

11. **Closing Date.** If this Option is exercised, the parties shall close on the sale on or before sixty (60) days of the exercise of the Option at the Owner's attorney's office, unless otherwise agreed. The Trust may elect, by giving notice to the Owner on or before June 30, 2014 and making an additional Option Payment to the Owner of Twenty-five Thousand Dollars (\$25,000.00), to extend the closing date through October 31, 2014. The following conditions shall apply to the sale:

(a) The Owner shall, by Vermont Warranty Deed, deliver good, clear, record and marketable title to the Trust consistent with paragraph 7, above, and the Property shall be free of all tenancies and occupants.

(b) The Owner agrees to use reasonable efforts to deliver marketable title as set forth in paragraph 7, above. In the event the Owner is unable to give marketable title at the time of closing, then the Trust may elect to terminate this Agreement, in which event the Option Payments shall be returned to the Trust. The Trust shall have the right to elect to accept such title as the Owner can deliver and to pay the Purchase Price without reduction.

(c) The Owner represents and understands that (i) it and its membership are not a foreign person as defined by Section 1445 of the Internal Revenue Code of 1986, as amended; (ii) its tax identification number will be as set forth on the Vermont

Property Transfer Tax Return and other tax documents required to be executed at the closing; and (iii) it and its membership are Vermont residents for the purposes of the Vermont non-resident withholding tax. The Owner shall execute such FIRPTA and analogous state certifications as to the representations in this paragraph or may be subject to federal and state withholding taxes at closing.

(d) The Owner's delivery to the Trust of a certificate of its existence from the Vermont Secretary of State and a consent of its membership authorizing it to enter into and consummate this transaction and identifying the person(s) empowered to act on its behalf.

(e) Property taxes shall be prorated by the Owner and the Trust as of July 1, 2014. The Vermont property transfer tax, if any, shall be paid by the Trust and the Vermont land gains tax, if any, shall be paid by the Owner.

12. **Risk of Loss.** During the period between the date of this Option and the transfer of title, the risk of loss shall be on the Owner. The Owner shall not physically alter the Property or the timber resources thereon during the pendency of this Option without the prior written consent of the Trust. In the event the timber resources on the Property are substantially destroyed (any loss of 25% or more in value) by fire or other natural casualty at any time prior to closing, the Trust may in its discretion elect to terminate this Agreement.

13. **Charitable Contribution.** The Owner may commission a qualified appraisal under the Internal Revenue Code and Treasury Regulations which may reveal that the Property has a value in excess of the Purchase Price. The Trust recognizes that it is the intent of the Owner to make a charitable contribution to Trust of the difference between the fair market value and the Purchase Price. The Trust shall cooperate with the Owner in the preparation of IRS Form 8283, as required by the Internal Revenue Service, to substantiate the occurrence of the closing on the sale of the Property and that a charitable contribution occurred to a qualified organization, but the Owner shall be solely responsible for the calculation and substantiation of the amount and other details of the charitable contribution; provided, however, that the Trust will not be obligated to so cooperate if it has significant concerns about the tax deduction. This provision shall survive closing of the sale of the Property.

14. **Binding Effect, Assignment, Notice and Controlling Law.** This Agreement shall be binding upon and enforceable by the undersigned parties and their respective successors and assigns. The Trust may assign all right, title and interest it may have under this Option to an entity to be formed and solely owned by the Trust for the purpose of holding title to the Property. The Owner shall not list for sale, market or otherwise offer the Property for sale during the pendency of this Option Agreement. The Trust may, in its discretion, record a notice of the existence of this Option in the Worcester and Elmore Land Records. The terms of this Option Agreement shall be interpreted in accordance with the laws of the State of Vermont.

15. **Confidentiality.** Unless and until the Trust makes the second Option Payment referenced in paragraph 2, above, it shall not publicize this Option except to the extent necessary to obtain the approval of the Trust's Board of Trustees and to solicit specific funding requests.

Dated at Montpelier, Vermont this 6th day of February, 2014.

DEER LAKE TIMBER, LTD. CO.

By: 

Member/Manager, duly authorized

STATE OF VERMONT
Washington COUNTY, ss.

At Montpelier, this 6th day of February, 2014, JOHN B. MEYER member/manager of Deer Lake Timber, Ltd. Co., personally appeared and he acknowledged this instrument, by him sealed and subscribed, to be his free act and deed and the free act and deed of Deer Lake Timber, Ltd. Co.

Before me,



Notary Public

My commission expires: 2/10/15

Dated at Montpelier, Vermont this 7th day of February, 2014.

VERMONT LAND TRUST, INC.

By: 

Its Duly Authorized Agent

STATE OF VERMONT
Washington COUNTY, ss.

At Montpelier, this 7th day of February, 2014, Stephen Smith duly authorized agent of the Vermont Land Trust, Inc., personally appeared and she acknowledged this instrument, by her sealed and subscribed, to be her free act and deed and the free act and deed of Vermont Land Trust, Inc.

Before me,



Notary Public

My commission expires: 02/10/15

OPTION AGREEMENT

In consideration of Ten Dollars and other valuable consideration, receipt and sufficiency of which is hereby acknowledged, **E.B. HYDE COMPANY**, a Vermont corporation with a principal place of business in Montpelier, Vermont ("the Owner"), hereby gives and grants to the **VERMONT LAND TRUST, INC.**, a Vermont non-profit corporation with a principal place of business in Montpelier, Vermont ("the Trust"), its successors and assigns, the exclusive option to purchase a certain parcel of undeveloped land consisting of 548 acres, more or less, located in the Town of Elmore, Lamoille County, Vermont ("the Property"), to wit:

Land totaling approximately 548 acres situated east and west of Vermont Route 12; being a portion of the lands and premises conveyed to the Owner by Warranty Deed of Hugo B. Meyer, dated December 31, 1987 and recorded in Book ____ at page ____ of the Town of Elmore Land Records and all of those lands and premises conveyed to Owner by Warranty Deed of _____ dated _____, 20__ of record in Book ____, at page ____.

Reference may be made to said deed and the record thereof for a more complete description.

The approximate boundaries of the Property are depicted on the map attached hereto as Exhibit A.

This Option is given on the following terms and conditions.

1. **The Property.** In addition to the land above-described, the Property shall include any and all existing easements and rights appurtenant thereto. The final configuration, boundaries and acreage of the Property shall be fixed by mutual agreement of the Owner and the Trust by July 1, 2015.
2. **Option Payment.** In consideration hereof, the Trust has paid to the Owner the sum of Five Thousand Dollars (\$5,000.00). The Option Payment shall be non-refundable unless the Trust elects not to exercise its Option to purchase the so-called Deer Lake Timber property referenced in paragraph 3, below, (which exercise must occur by June 30, 2014) in which case the Option Payment shall be returned to the Trust forthwith.
3. **Term of the Option.** This Option shall extend to June 30, 2016 but may not be exercised prior to January 31, 2016 and may not be exercised unless and until the Trust has acquired approximately 5,425 acres of land in Elmore and Worcester, Vermont from Deer Lake Timber, Ltd. Co. pursuant to an Option Agreement dated on or about the date of this Option Agreement.
4. **Purchase Price and Terms of Payment.** The Trust shall have the right to purchase the Property for the sum of Eight Hundred Fifty Dollars (\$850.00) per acre, to be paid by the Trust's check at closing. For the purpose of establishing the Purchase Price, the acreage of the Property shall be mutually agreed upon by the Owner and the Trust as provided under paragraph 1, above. The Option Payment made by the Trust under paragraph 2, above, shall be credited against the Purchase Price due from the Trust at closing.
5. **Entry onto the Property.** The Trust and its contractors, consultants and designees shall have the right to enter upon the Property from time to time for the purpose of preparing for the purchase of the Property and its conservation, including but not limited to preparing appraisals, conducting a timber cruise, hazardous materials inspection, acquisition

and conservation funding inspections by private and public sources, or obtaining other information about the Property. The Trust's entry onto or testing of the Property shall be conducted in a manner that minimizes any disturbance to the land and to the use and enjoyment of the Property by the Owner or any tenants in possession.

6. **Appraisal.** On or before July 1, 2015, the Owner and the Trust shall commission an appraisal of the Property by a mutually approved, disinterested, professional appraiser with the expense of such appraisal divided equally between the Owner and the Trust. The appraisal shall be completed by December 1, 2015.

7. **Title.** The state of title to the Property shall be determined pursuant to a title examination and certification by a Vermont-licensed attorney paid for by the Trust and which shall be completed by December 1, 2015. The Owner's title shall be deemed marketable if consistent with 27 V.S.A. Chapter 5 and the Vermont Standards of Title and the certification reports that the Property is free of all liens and encumbrances other than those that the Owner can and will discharge by making payment at or before closing (including discharge or release of outstanding mortgages and tax liens); and if the Trust secures a commitment for an owner's policy of title insurance; with both the certification and commitment being subject only to (i) customary utility easements, (ii) water rights subject to the public trust doctrine, (iii) rights of the public to use roads laid out by municipalities, the state or federal government, (iv) rights of way and other easements that do not, in the Trust's opinion, materially impair beneficial use of the Property, and (v) the lien associated with enrollment in the so-called current use program. So-called lease land or glebe land and third party rights to oil, gas or minerals shall be deemed unmarketable defects in title which, in the Trust's discretion, must be cleared at or before closing.

8. **Permits.** The Owner and the Trust enter into this Option with the understanding that the Property is not the subject of any existing local or state permits or approvals, is in compliance with all local and state law and regulations, and that the conveyance of the Property as contemplated herein will not require any new local or state permits or approvals. Should it be determined that this understanding is incorrect, the Owner and the Trust shall reach agreement on how the deficiency will be rectified which may include the extension of the Closing Date, if necessary.

9. **Hazardous Materials.** The Owner represents to the Trust that it is not aware of any hazardous waste, substances or other materials having been dumped or placed upon the Property. The Owner agrees that the Trust may, at the Trust's expense, perform any and all tests and/or inspections necessary to confirm this representation by December 1, 2015. If the Trust discovers that hazardous materials have been dumped or placed upon the Property, the Trust may at its election declare this Option to be null and void. In the alternative, the Owner and the Trust may enter into an agreement to either: (a) remediate the hazardous materials contamination prior to closing, which agreement may include an extension of the closing date; or (b) amend this Option to exclude from the Property that portion which is contaminated which may include provision for a reduction in Purchase Price, the procurement of any necessary permits and approvals, and the extension of the closing date.

10. **Exercise of Option.** This Option may be exercised by the Trust giving written notice by certified mail, return receipt requested, to the Owner's registered agent, John B. Meyer, delivered to 46 East State Street, Montpelier, Vermont 05602, with a copy by first class

mail to Philip H. Zalinger, Esq., Zalinger, Cameron & Lambek. P.C., 140 Main Street, Montpelier, Vermont 05602. Notice and exercise shall be effective upon the date of posting.

11. **Closing Date.** If this Option is exercised, the parties shall close on the sale on or before sixty (60) days following the exercise of the Option at the Owner's attorney's office, unless otherwise agreed. The following conditions shall apply to the sale:

(a) The Owner shall, by Vermont Warranty Deed, deliver good, clear, record and marketable title to the Trust consistent with paragraph 7, above, and the Property shall be free of all tenancies and occupants.

(b) The Owner agrees to use reasonable efforts to deliver marketable title as set forth in paragraph 7, above. In the event the Owner is unable to give marketable title, then the Trust may elect to terminate this Agreement, in which event the Option Payments shall be returned to the Trust. The Trust shall have the right to elect to accept such title as the Owner can deliver and to pay the Purchase Price without reduction.

(c) The Owner represents and understands that (i) it and its shareholders are not a foreign person as defined by Section 1445 of the Internal Revenue Code of 1986, as amended; (ii) its tax identification number will be as set forth on the Vermont Property Transfer Tax Return and other tax documents required to be executed at the closing; and (iii) it and its shareholders are Vermont residents for the purposes of the Vermont non-resident withholding tax. The Owner shall execute such FIRPTA and analogous state certifications as to the representations in this paragraph or may be subject to federal and state withholding taxes at closing.

(d) The Owner's delivery to the Trust of a certificate of its good standing from the Vermont Secretary of State and a consent of its shareholders authorizing it to enter into and consummate this transaction and identifying the person(s) empowered to act on its behalf.

(e) Property taxes shall be prorated by the Owner and the Trust as of the date the option is exercised. The Vermont property transfer tax, if any, shall be paid by the Trust and the Vermont land gains tax, if any, shall be paid by the Owner.

12. **Risk of Loss.** During the period between the date of this Option and the transfer of title, the risk of loss shall be on the Owner. The Owner shall not physically alter the Property or the timber resources thereon during the pendency of this Option without the prior written consent of the Trust. In the event the timber resources on the Property is substantially destroyed (any loss of 25% or more in value) by fire or other natural casualty at any time prior to closing, the Trust may in its discretion elect to terminate this Agreement.

13. **Charitable Contribution.** The Owner may commission a qualified appraisal under the Internal Revenue Code and Treasury Regulations which may reveal that the Property has a value in excess of the Purchase Price. The Trust recognizes that it is the intent of the Owner to make a charitable contribution to Trust of the difference between the fair market value and the Purchase Price. The Trust shall cooperate with the Owner in the preparation of IRS Form

8283, as required by the Internal Revenue Service, to substantiate the occurrence of the closing on the sale of the Property and that a charitable contribution occurred to a qualified organization, but the Owner shall be solely responsible for the calculation and substantiation of the amount and other details of the charitable contribution; provided, however, that the Trust will not be obligated to so cooperate if it has significant concerns about the tax deduction. This provision shall survive closing of the sale of the Property.

14. **Forest Legacy Application.** The Property constitutes but a portion of approximately 10,000 acres of timber and woodland owned by Owner in Lamoille and Washington Counties. Owner agrees that with the Trust's assistance, it will sign and submit an application seeking conservation funding from the USDA Forest Legacy Program with regard to not less than 50% of the 10,000 acre ownership. However, Owner and Trust understand and agree that submitting said application shall not bind the Owner to sell a Forest Legacy easement, commit Owner to any particular easement sale price, or limit or condition Owner's ability to exclude land from future conservation, or divide said land into separate ownerships.

15. **Binding Effect, Assignment, Notice and Controlling Law.** This Agreement shall be binding upon and enforceable by the undersigned parties and their respective successors and assigns. The Trust may assign all right, title and interest it may have under this Option to an entity to be formed and solely owned by the Trust for the purpose of holding title to the Property. The Owner shall not list for sale, market or otherwise offer the Property for sale during the pendency of this Option Agreement. The Trust may, in its discretion, record a notice of the existence of this Option in the Elmore Land Records. The terms of this Option Agreement shall be interpreted in accordance with the laws of the State of Vermont.

Dated at Montpelier, Vermont this 6th day of February, 2014.

E.B. HYDE COMPANY

By: 

Its Duly Authorized Agent

STATE OF VERMONT
WASHINGTON COUNTY, ss.

At Montpelier, this 6th day of February, 2014, JOHN B. MEYER, duly authorized agent of E.B. Hyde Company personally appeared and He acknowledged this instrument, by Him sealed and subscribed, to be His free act and deed and the free act and deed of E.B. Hyde Company.

Before me,



Notary Public

My commission expires: 02/10/15

Dated at Montpelier, Vermont this 7th day of February, 2014.


VERMONT LAND TRUST, INC.

By: 
Its Duly Authorized Agent

STATE OF VERMONT
Washington COUNTY, ss.

At Montpelier, this 7th day of February, 2014, Siobhan Smith, duly authorized agent of the Vermont Land Trust, Inc., personally appeared and she acknowledged this instrument, by her sealed and subscribed, to be her free act and deed and the free act and deed of Vermont Land Trust, Inc.

Before me,


Notary Public
My commission expires: 02/10/15

Appendix C: Project Leaders

Project Leaders (Contact Information)

Jens Hilke, Conservation Planner/Biologist, Vermont Fish & Wildlife Department,
jens.hilke@state.vt.us, 802-879-5644

Siobhan Smith, Director of Conservation Programs, Vermont Land Trust, siobhan@vlt.org

Zoe Smith, Director, Wildlife Conservation Society Adirondack Program,
zsmith@wcs.org zsmith@wcs.org

Pete Steckler, GIS & Conservation Information Manager, The Nature Conservancy New Hampshire
Chapter, psteckler@tnc.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.

Siobhan Smith, Vice President for Conservation, Vermont Land Trust - Siobhan joined the staff of the Vermont Land Trust (VLT) in 1998. She is responsible for managing VLT's conservation programs, overseeing the eleven field staff that complete an average of 70 new project closings annually, and she is a member of the management team. In addition to managing all aspects of VLT's conservation programs, Siobhan helps VLT provide technical assistance to individuals, communities, and local land trusts to help them achieve their conservation objectives. Since 1977, VLT has permanently conserved more than 1,650 parcels of land covering more than 500,000 acres, or about eight percent of the private, undeveloped land in the state. The conserved land includes more than 700 working farms, hundreds of thousands of acres of productive forestland, and numerous parcels of community land.

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.

Pete Steckler, GIS & Conservation Information Manager, New Hampshire Chapter of The Nature Conservancy (TNC). Peter is the lead for TNC's work in the Northeast Kingdom of Vermont to Northern New Hampshire Linkage, a connectivity focus area of the Staying Connected Initiative. He led efforts under the FY2008 SWG-C grant to work with key partners to identify wildlife connectivity pathways using GIS models, and developed a connectivity blueprint that identifies land protection priorities, road barrier mitigation and restoration opportunities. Peter provides GIS support to TNC's conservation programs including program and data management, spatial analyses and cartography, and he leads conservation planning efforts for the New Hampshire Chapter. Prior to joining TNC in 2008, Peter worked for a civil engineering firm as an Environmental Scientist with a focus on GIS analysis and management, NEPA and wetlands permitting, and natural resource inventories. He graduated from the University of Vermont with a B.S. in Environmental Science.

Appendix D: SGCN in the Project Areas

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

SGCN in VT & NH(* **Species of concern in the Northeast US, Northeast Wildlife Vol. 54, 1999)					
* ** Northeast Wildlife Vol. 54, 1999 list					
Scientific name	Common Name	US	NH	VT	Taxon
Birds					
Accipiter gentilis	Northern Goshawk		X	X	Bird
Catharus bicknelli	Bicknell's Thrush**		X	X	Bird
Catharus fuscescens	Veery		X	X	Bird
Dendroica castanea	Bay-breasted Warbler		X	X	Bird
Falci pennis canadensis	Spruce Grouse		X	X	Bird
Hylocichla mustelina	Wood Thrush		X	X	Bird
Wilsonia canadensis	Canada Warbler*		X	X	Bird
Mammals					
Canis lupus	Gray Wolf	E	X	X	Mammal
Lynx canadensis	Lynx*	T	X	X	Mammal
Lynx rufus	Bobcat		X	X	Mammal
Martes americana	Pine Marten		X	X	Mammal
Ursus americanus	Black Bear		X	X	Mammal

Appendix E. Habitats that will benefit from the proposed project

Excerpted from the 2005 NH and VT Wildlife Action Plans.

Habitat Type	State
Matrix Forming Forests (NH), Landscape Forests (VT)	NH/VT
Northern Hardwood-Conifer (NH), Northern Hardwood Forests (VT)	NH/VT
Lowland Spruce-Fir (NH) and High Elevation Spruce-Fir (NH), Spruce-Fir Northern hardwood (VT)	NH/VT
Oak-Pine-Northern Hardwoods	VT
Floodplain forests	VT
Forested Wetlands	VT
Vernal Pools	VT

Appendix F: Threats and priority actions for the conservation of forest-dwelling and wide ranging SGCN

Excerpted from the 2005 NH and VT Wildlife Action Plans.

info type	state	Action Plan excerpts	page
Threat ID	NH	Development and transportation infrastructure as two of the top four risks to wildlife and habitats	4:05
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	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	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

info type	state	Action Plan excerpts	page
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, Acquisition of land and conservation easements -High priority action for landscape level forest conservation 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
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

Appendix G. Endangered Species Act Section 7 Compliance:



State of Vermont

AGENCY OF NATURAL RESOURCES



Vermont Department of Fish and Wildlife
111 West St
Essex Jct, Vermont 05452
TEL: (802) 878-1564
FAX: (802) 879-5649

Dr. John Organ
Division of Federal Aid
U.S. Fish & Wildlife Service
300 Westgate Center Drive
Hadley MA 01035

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 it's compliance with Endangered Species Act Section 7.

The actions proposed in this grant will take place in the **Staying Connected project area in Vermont and New Hampshire** within the grant period of 7/1/2014 – 6/31/2017. It has been found that the following federally listed, proposed or candidate species may be present within this area:

Common name	Scientific name	State
Plover, piping	<i>Charadrius melodus</i>	NH
Roseate Tern	<i>Sterna dougallii</i>	NH
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	NH
Butterfly, Karner blue	<i>Lycaedis Melissa samuelis</i>	NH
Dwarf wedgemussel	<i>Alasmidonta heterodon</i>	NH/VT
Puritan tiger beetle	<i>Cicindela puritana</i>	VT
Canada lynx	<i>Lynx canadensis</i>	NH/VT
Eastern mountain lion	<i>Felis concolor cougar</i>	NH/VT
Indiana bat	<i>Myotis sodalis</i>	VT
New England Cottontail	<i>Sylvilagus transitionalis</i>	NH/VT
Wolf	<i>Canis</i> sp?	VT
Jessup's milk-vetch	<i>Astragalus robbinsii</i> var. <i>jesupi</i>	NH
Leedy's roseroot	<i>Sedum integrifolium</i> ssp. <i>leedyi</i>	
Northeastern barbed bristle bulrush	<i>Scirpus ancistrochaetus</i>	NH/VT
Small whorled pogonia	<i>Isotria medeoloides</i>	NH/VT

The actions proposed include: **land protection.**

We believe these actions are **NOT LIKELY TO ADVERSELY AFFECT** these species in conducting these proposed actions because: **conservation easements will be secured for parcels involved in the project. In anticipation of conveyance to the State of New Hampshire, a small building will be demolished on the Heon parcel, Northumberland, NH, before the easement is in place. This is outside of known Indiana**

Bat habitat and demolition is unlikely to affect other listed species. That is the only ground-disturbing activity included in the proposal.

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  Date 3-7-2014

VDFW Federal Aid Coordinator _____ Date _____

Appendix H: NEPA Compliance



State of Vermont

AGENCY OF NATURAL RESOURCES



Vermont Department of Fish and Wildlife
111 West St
Essex Junction, Vermont 05452
TEL: (802) 879-5644

Dr. John Organ
Division of Federal Aid
U.S. Fish & Wildlife Service
300 Westgate Center Drive
Hadley MA 01035

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 Vermont and New Hampshire within the grant period of 7/1/2014 - 6/31/2017. 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) A(4)*. 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 historical 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 proposed to be listed, on the National Historic 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 the grant proposal,

State project leader _____ 

Date 3/4/14

Federal Aid Coordinator _____ 

Date 3/6/2014