



FS Agreement No. 14 -MU-11132650-039

Cooperator Agreement No. \_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING**  
**Between The**  
**U.S FEDERAL GEOGRAPHIC DATA COMMITTEE’S VEGETATION**  
**SUBCOMMITTEE; ECOLOGICAL SOCIETY OF AMERICA; NATURESERVE;**  
**U.S. GEOLOGICAL SURVEY;**  
**and the**  
**USDA, FOREST SERVICE**  
**RESEARCH AND DEVELOPMENT**

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the U.S FEDERAL GEOGRAPHIC DATA COMMITTEE’S VEGETATION SUBCOMMITTEE; ECOLOGICAL SOCIETY OF AMERICA; NATURESERVE; AND the U.S. GEOLOGICAL SURVEY; hereinafter referred to as “Cooperators,” and the USDA, Forest Service, Research and Development, hereinafter referred to as the “U.S. Forest Service.”

**Background:**

The Federal Geographic Data Committee (FGDC) was established in 1989 through the Office of Management and Budget Circular A-16 (OMB Circular 16 Revised 1990) and under Executive Order No.12906 (1994). It is charged with the responsibility to coordinate various surveying, mapping, and spatial data activities of federal agencies to meet the needs of the nation. Major objectives of the FGDC are to promote efficiencies in mapping and spatial data activities, establish geospatial standards, and provide wider access to geospatial data. The FGDC also has been charged with coordinating geospatial data-related activities among the public, private, and academic sectors. In 1990, the FGDC officially assigned the Forest Service responsibility to coordinate activities related to vegetation data (OMB Circular 16 Revised 1990; <http://www.whitehouse.gov/omb/circulars/a016/a016.html>).

As an outcome of this assignment, the U. S. Forest Service became chair of the Vegetation Subcommittee that was established in 1991 and suggested to the Ecological Society of America (ESA) in 1994 that there would be value in a joint effort, should the ESA form and charter a vegetation panel. By 1999, the Subcommittee entered into an MOU with ESA, The Nature Conservancy (TNC), and the U.S. Geological Survey (USGS) to further develop and implement the national vegetation classification standard. In 2000, the Subcommittee recognized that TNC’s expertise in the National Vegetation Classification (NVC) was transferred to NatureServe. In 2002, the responsibility was further clarified and included designating an agency contact to coordinate with lead agencies and to report activities annually (OMB Circular 16 Revised 2002). In that same year the FGDC Vegetation Subcommittee Charter was updated to formalize the responsibilities of the subcommittee.

Full membership on the FGDC Vegetation Subcommittee has included both governmental and non-governmental organizations as listed below:

**U.S. Government**

Department of Agriculture (USDA)



Forest Service (FS) - Chair  
National Agriculture Statistical Service (NASS)  
Natural Resources Conservation Service (NRCS)  
Department of Commerce (DOC)  
National Oceanic and Atmospheric Administration (NOAA)  
National Marine Fisheries Service (NMFS)  
Department of Defense (DOD)  
U.S. Army Corps of Engineers (USACE)  
U.S. Navy (NAVY)  
Department of the Interior (USDI)  
Bureau of Land Management (BLM)  
Fish and Wildlife Service (FWS)  
National Park Service (NPS)  
U.S. Geological Survey (USGS)  
Environmental Protection Agency (EPA)  
National Aeronautics and Space Administration (NASA)

#### **Non U.S. Government**

NatureServe (NS)  
Ecological Society of America (ESA)

The FGDC: The FGDC brings to this partnership representation of federal government interests, and a capability to achieve consensus and acceptance of nationwide standards within the federal agency community. As the lead agency, the U.S. Forest Service has overseen the Subcommittee's work to develop the hierarchy and standard and to redraft the upper level types. The Forest Service will continue to chair the Vegetation Subcommittee and guide the activities of the Program Manager and Subcommittee members specific to the implementation of the NVC Standard.

The Ecological Society of America: The ESA is a non-partisan, non-profit, professional organization of scientists founded in 1915 to stimulate sound ecological research, clarify and communicate the science of ecology, and promote the responsible application of ecological knowledge to public issues. ESA's more than 10,000 members conduct research, teach, and work to provide the ecological knowledge needed to inform efforts to solve environmental problems. In 1994 a symposium organized by ESA, The Nature Conservancy, and USGS scientists was held at the annual ESA meeting with the intention of fostering collaboration on vegetation classification across academic, government, and non-governmental organization (NGO) initiatives. A proposal to form the ESA Vegetation Panel evolved from that collaboration. In January of 1995, the ESA President appointed a Panel on Vegetation Classification to support and facilitate development of a standardized, scientifically credible North American vegetation classification system. The Panel became a permanent standing committee of ESA in 2009. ESA brings to the partnership a forum for debate of scientific issues relating to vegetation science and taxonomy, and the capabilities of professional ecologists spanning academic, agency, and non-government sectors. The ESA Vegetation Panel developed detailed recommendations for maintenance of the NVC (*Ecological*



*Monographs* 2009) that formed the basis for much of the 2008 revision of the National Vegetation Classification Standard. The Panel also developed and maintains VegBank, the national vegetation plot database. ESA has considerable experience with methods for professional evaluation and peer review of scientific research. This professional society has provided the expertise needed to assist in developing a standardized information infrastructure for the national vegetation classification, and its continued involvement ensures the quality of information in that infrastructure.

**NatureServe:** NatureServe is a non-profit conservation group dedicated to providing the scientific information and technology needed to guide effective conservation action. NatureServe represents a network of 82 natural heritage programs and conservation data centers in the United States, Canada, and Latin America that collect and analyze information on plants, animals, and ecosystems. To implement a consistent approach to ecosystem-based conservation, NatureServe staff and Natural Heritage Program scientists drew from existing international guidelines, national expertise, and new analyses of plot data to develop and implement a classification hierarchy and set of associations and alliances that formed a provisional basis and content for the 1997 NVC (*Terrestrial Vegetation of the United States* 1998). NatureServe staff contributed as co-lead author/editor on writing the 2008 National Vegetation Classification Standard, Version 2. NatureServe has developed data management systems to manage this information and serve it to the network of state Heritage Programs, federal and international partners. NatureServe currently manages and regularly provides new content to the NVC standard. NatureServe brings to the Subcommittee partnership this expertise in vegetation classification, data management, and database and website development, along with a well-developed network of vegetation scientists who are strategically placed across the U.S. in state agencies and offices.

**USDA Forest Service:** Established in 1905, the Forest Service mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. As the lead Federal agency in natural resource conservation, the agency provides leadership in the protection, management, and use of the Nation's forest, rangeland, and aquatic ecosystems. Over the last two decades, research has improved the understanding of the impacts of changing conditions, including potential climate change, on our Nation's forests, rangelands, and urban areas. This information and recent changes to land management regulations, and strategic plans have led to a range of management policies, science programs, and science-delivery actions aimed at developing adaptation and mitigation approaches to sustain healthy ecosystems. Ecological conditions include vegetation composition and structure, abundance, and distribution of aquatic and terrestrial habitats, human uses, and invasive species. To be successful the Forest Service maintains a consistent resource measurement and monitoring strategy across landscapes and ownerships.

In 1980, the Forest Service (FS), along with a number of other agencies including the Bureau of Land Management (BLM), the Fish and Wildlife Service (FWS), the USGS, and the Natural Resources Conservation Service (NRCS, previously the Soil Conservation Service) formed a five agency Working Group to explore classifications and inventories of natural resources with two major objectives: (1) identify and define all land use and land cover terms, and (2) develop common reference definitions that could be used across agencies. This initial step and other multi-agency efforts would later lead to the Federal Government to establish the FGDC, require metadata for geospatial data it produces, and make those data available to the public (Executive Order 12906 of April 11, 1994). The FGDC promoted consistency of documentation and terminology and the development of a National Vegetation Classification Standard (NVCS, FGDC-STD-005-1997) and then a revised NVCS (FGDC-STD-005-2008). The Forest Service supported ESA, TNC, and NatureServe in those efforts and is currently helping to support the



implementation of the 2008 NVCS. The Forest Service is the lead agency for the FGDC Vegetation Subcommittee and appoints the chair of the subcommittee.

U.S. Geological Survey: The USGS provides scientific information and technologies to support management and conservation of Federal lands and resources by partnering with Federal, State, Tribal, university, non-government, and private sector organizations nationwide. Several programs are directly involved in vegetation classification and mapping work (e.g., Vegetation Inventory Program, the National Gap Analysis Program) and have been involved in the NVC throughout its evolution. In addition, USGS Science Center and Cooperative Fish and Wildlife Research Unit scientists gather and analyze vegetation data from across the nation and Core Science Analytics and Synthesis Program promotes the development and adoption of standards (e.g., Integrated Taxonomic Information System) and protocols needed to support more effective collection, management, exchange, integration and application of biological data. USGS brings to the partnership valuable experience in data management and dissemination as well as the expertise in vegetation mapping and classification.

Title: MOU PERTAINING TO THE IMPLEMENTATION OF THE 2008 NATIONAL VEGETATION CLASSIFICATION STANDARD:

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**I. PURPOSE:** The purpose of this MOU is to document the cooperation between the parties to this understanding in accordance with the following provisions. This MOU is entered into by the U.S. Forest Service, the chair of FGDC Vegetation Subcommittee, ESA, NatureServe, and the USGS, for the purpose of formalizing a partnership to support the implementation and maintenance of the NVC Standard (FGDC 2008). This system is critical to the efficient stewardship of the Nation's biological resources.

The land cover of the U.S. is currently undergoing rapid change, related to increased demand for, and conflict over, goods and services derived from diminishing natural resources. In addition to resource use, climate change has the potential for impacting the distribution of species and plant communities, as well as the rates of ecological processes (e.g., drought, fire, flooding). To evaluate, monitor, and manage the nation's resources, substantial work to inventory, classify, and map vegetation has been underway by public, private, and professional organizations. Those efforts contributed to, and have gained significantly from, the 1997 NVC Standard (FGDC 1997). Through those efforts, opportunities to achieve potential improvements in the standard were identified by the FGDC Vegetation Subcommittee. Those improvements were formally proposed through the FGDC approval process and the NVC Standard (Version 2; FGDC-STD-005-2008) was officially adopted in February, 2008.

Major innovations in the new standard include the dynamic content standard, changes to the number of levels in the hierarchy, and elevating the distinction between natural/semi-natural vegetation and cultural vegetation to the highest level of the hierarchy, the formation class. The dynamic content standard provides the necessary framework to guarantee that the standard keeps pace with current thinking and research in the rapidly-evolving science of plant community ecology. The implementation plan for the standard provides for the participation of all interested researchers (agency, private, and



academic), while the proposal review process guarantees the quality of the standard through independent, scientific review prior to adopting changes.

Relevant rules and regulations include:

Federal Geographic Data Committee. 2008. National Vegetation Classification Standard, Version 2. FGDC-STD-005 (version 2), February 2008. Vegetation Subcommittee, Federal Geographic Data Committee, FGDC Secretariat, U.S. Geological Survey. Reston, VA. 55p (+ Appendices).  
[http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/NVCS\\_V2\\_FINAL\\_2008-02.pdf](http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/NVCS_V2_FINAL_2008-02.pdf) [Accessed 28May2009].

OMB Circular 16 Revised 1990:

<http://www.whitehouse.gov/omb/circulars/a016/a016.html> [Accessed 28May2009].

OMB Circular 16 Revised 2002;

[http://www.whitehouse.gov/omb/circulars/a016/a016\\_rev.html](http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html)). [Accessed 28May2009].

FGDC-Vegetation Subcommittee Charter

(<http://www.fgdc.gov/participation/working-groups-subcommittees/vsc/charterpdf>) [Accessed 28May2009].

## II. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

This MOU will expand cooperative work toward implementation, development, long-term maintenance, dissemination, outreach of the dynamic content of the NVC Standard. The parties agree to cooperate to the greatest extent possible, as resources allow, in the further development, implementation and management of a scientifically credible national vegetation classification. This cooperation may include, but is not be limited to these efforts:

1. Finalize the initial content (NVCS types) for all levels of the NVC Hierarchy, and improve, manage, and maintain the quality and currency of content over time.
2. Design and build the infrastructure (NVC Public Database, NVC Web Portal, NVC Peer Review and Proceedings Software, and linkages to VegBank and other vegetation plot databases) necessary to maintain and disseminate the content of the NVCS database in an open access framework.
3. Establish and support a review process for the named units of the classification, including a range-wide perspective on all vegetation units.
4. Cooperate with international partners to ensure that the NVC Standard is compatible with international standards for vegetation classification.
5. Maintain international partnerships specific to vegetation classification and data exchange.
6. Strengthen state and tribal partnerships specific to the application of the new standard.
7. Build standard data outputs specific to a variety of end-user applications.
8. Build a broad base of outreach and training materials.
9. Develop a linkage between plots and classification databases (PLANTS, FIA, others).
10. Construct and maintain data dictionaries and manuals.
11. Design and implement continuous performance measures specific to the NVC Infrastructure.
12. Build and maintain crosswalks to a wide range of non- NVC vegetation classification systems.



In consideration of the above premises, the parties agree as follows:

**III. COOPERATORS SHALL:**

- A. The ESA will represent the needs of, and assure interaction with, the professional scientific community. It will contribute its long experience with publication and peer review to developing the professional review process needed to assure the credibility of the classification.
- B. NatureServe will use its long-term experience with the development and management of the national vegetation classification system to help ensure further development and management of the content of the system over time through international, national and state partnerships. Working in cooperation with state Natural Heritage Programs and federal partners, NatureServe will assure interaction with applied vegetation scientists in the fields of resource conservation and management.
- C. The USGS through the leadership of the Core Science Analytics and Synthesis (CSAS) Program, will bring knowledge of contemporary information technologies to this partnership, and will provide increased access to the NVC system and its associated data and information products. CSAS will also provide its experience in the development, adoption and use of biological information standards, and will facilitate the further integration of the NVC with a wide range of related biological information providers.
- D. The FGDC will represent the needs of, and assure interaction with, federal agencies. It will coordinate testing and evaluation of the classification by federal agencies, and will facilitate adoption of any additions to the existing FGDC approved National Vegetation Classification and Information Standards.

**IV. THE U.S. FOREST SERVICE SHALL:**

- A. The U.S. Forest Service, as the lead agency and Chair of the FGDC Vegetation Subcommittee, will ensure communication among the FGDC vegetation subcommittee members and provide the mechanism for long-term maintenance and open access to the dynamic content through an NVC Web Portal, NVC Public Database, VegBank and the Peer Review and proceedings web-based tools.

**V. IT IS MUTUALLY UNDERSTOOD AND AGREED BY AND BETWEEN THE PARTIES THAT:**

- A. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this agreement.
- B. Principal Cooperator Contacts:

<b>Cooperator Program Contact</b>	<b>Cooperator Administrative Contact</b>
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<p><b>FGDC Vegetation Subcommittee</b> Name: Marianne Burke, Address: 1400 Independence Ave City, State, Zip: Washington, DC Telephone: 571-733-7972 FAX: 202-401-1189 Email: <a href="mailto:mburke@fs.fed.us">mburke@fs.fed.us</a></p>	<p><b>FGDC Vegetation Subcommittee</b> Name: Alexa McKerrow Address: 218 David Clark Labs City, State, Zip: Raleigh, NC Telephone: 919-513-2853 FAX: 919-513-2835 Email: <a href="mailto:amckerrow@usgs.gov">amckerrow@usgs.gov</a></p>
<p><b>USGS</b> Name: Alexa McKerrow Address: 218 David Clark Labs, NCSU City, State, Zip: Raleigh, NC, 27695-7617 Telephone: 919-513-2853 FAX: 919-515-4454 Email: <a href="mailto:amckerrow@usgs.gov">amckerrow@usgs.gov</a></p>	<p><b>USGS</b> Mike Mulligan Physical Scientist, Core Science Analytics and Synthesis, USGS West 6th Ave &amp; Kipling St Denver Federal Center, Building 810 Lakewood, Colorado 80255-0046 Telephone: 303-202-4242</p>
<p><b>NatureServe</b> Name: Don Faber-Langendoen, Address: NatureServe 4600 N Fairfax Drive, 7<sup>th</sup> Floor City, State, Zip: Arlington, VA 22203 Telephone: 1-703-908-1816 FAX: Email: <a href="mailto:don_faber-langendoen@naturereserve.org">don_faber- langendoen@naturereserve.org</a></p>	<p><b>NatureServe</b> Name: Kathy Goodin Address: NatureServe 4600 N Fairfax Drive, 7<sup>th</sup> Floor City, State, Zip: Arlington, VA 22203 Telephone: 703-908-1883 FAX: Email: <a href="mailto:Kathy_goodin@naturereserve.org">Kathy_goodin@naturereserve.org</a></p>
<p><b>Ecological Society of America</b> Name: Cliff Duke, Address: Ecological Society of America Address: 1990 M Street NW, Suite 700 Washington, DC 20036 Telephone: (202) 833-8773 ext. 202 FAX: (202) 833-8775 Email: <a href="mailto:csdyje@esa.org">csdyje@esa.org</a></p>	<p><b>Ecological Society of America</b> Name: Elizabeth Biggs, Chief Financial Officer Ecological Society of America Address: 1990 M Street NW, Suite 700 Washington, DC 20036 Phone: (202) 833-8773 ext. 203 Fax: (202) 833-8775 E-mail: <a href="mailto:liz@esa.org">liz@esa.org</a></p>

**Principal U.S. Forest Service Contacts:**

<b>U.S. Forest Service Program Manager Contact</b>	<b>U.S. Forest Service Administrative Contact</b>
<p>Name: Marianne Burke Address: 1400 Independence Ave City, State, Zip: Washington, DC Telephone: 571-733-7972 FAX: 202-401-1189 Email: <a href="mailto:mburke@fs.fed.us">mburke@fs.fed.us</a></p>	<p>Name: Duane Williams Address: 1400 Independence Ave City, State, Zip: Washington, DC Telephone: 202-205-1182 FAX: 202-401-1189 Email: <a href="mailto:dkwilliams@fs.fed.us">dkwilliams@fs.fed.us</a></p>



- C. ASSURANCE REGARDING FELONY CONVICTION OR TAX DELINQUENT STATUS FOR CORPORATE ENTITIES. This agreement is subject to the provisions contained in the Department of Interior, Environment, and Related Agencies Appropriations Act, 2012, P.L. No. 112-74, Division E, Section 433 and 434 regarding corporate felony convictions and corporate federal tax delinquencies. Accordingly, by entering into this agreement Cooperators acknowledges that it: 1) does not have a tax delinquency, meaning that it is not subject to any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, and (2) has not been convicted (or had an officer or agent acting on its behalf convicted) of a felony criminal violation under any Federal law within 24 months preceding the agreement, unless a suspending and debaring official of the United States Department of Agriculture has considered suspension or debarment is not necessary to protect the interests of the Government. If Cooperators fails to comply with these provisions, the U.S. Forest Service will annul this agreement and may recover any funds Cooperators has expended in violation of sections 433 and 434.
- D. NOTICES. Any communications affecting the operations covered by this agreement given by the U.S. Forest Service or Cooperators is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:
- To the U.S. Forest Service Program Manager, at the address specified in the MOU.
- To Cooperators, at Cooperators's address shown in the MOU or such other address designated within the MOU.
- Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.
- E. PARTICIPATION IN SIMILAR ACTIVITIES. This MOU in no way restricts the U.S. Forest Service or Cooperators from participating in similar activities with other public or private agencies, organizations, and individuals.
- F. ENDORSEMENT. Any of Cooperators contributions made under this MOU do not by direct reference or implication convey U.S. Forest Service endorsement of Cooperators 's products or activities and does not by direct reference or implication convey the cooperator's endorsement of the FS products or activities.
- G. NONBINDING AGREEMENT. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable by law or equity. The parties shall manage their respective resources and activities in a separate,



coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the parties to obligate or transfer anything of value.

Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate agreements and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides, nor meets these criteria. If the parties elect to enter into an obligation agreement that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective agreement, each party operates under its own laws, regulations, and/or policies, and any Forest Service obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective agreements must comply with all applicable law

Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

- H. USE OF U.S. FOREST SERVICE INSIGNIA. In order for Cooperators to use the U.S. Forest Service insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the U.S. Forest Service's Office of Communications. A written request must be submitted and approval granted in writing by the Office of Communications (Washington Office) prior to use of the insignia.
- I. MEMBERS OF U.S. CONGRESS. Pursuant to 41 U.S.C. 22, no U.S. member of, or U.S. delegate to, Congress shall be admitted to any share or part of this agreement, or benefits that may arise therefrom, either directly or indirectly.
- J. FREEDOM OF INFORMATION ACT (FOIA). Public access to MOU or agreement records must not be limited, except when such records must be kept confidential and would have been exempted from disclosure pursuant to Freedom of Information regulations (5 U.S.C. 552).
- K. TEXT MESSAGING WHILE DRIVING. In accordance with Executive Order (EO) 13513, "Federal Leadership on Reducing Text Messaging While Driving," any and all text messaging by Federal employees is banned: a) while driving a Government owned vehicle (GOV) or driving a privately owned vehicle (POV) while on official Government business; or b) using any electronic equipment supplied by the Government when driving any vehicle at any time. All cooperators, their employees, volunteers, and contractors are encouraged to adopt and enforce policies that ban text messaging when driving company owned,



leased or rented vehicles, POVs or GOVs when driving while on official Government business or when performing any work for or on behalf of the Government.

- L. PUBLIC NOTICES. It is the U.S. Forest Service's policy to inform the public as fully as possible of its programs and activities. Cooperators are encouraged to give public notice of the receipt of this agreement and, from time to time, to announce progress and accomplishments. Press releases or other public notices should include a statement substantially as follows:

"Research and Development Deputy Area of the U.S. Forest Service, Department of Agriculture, working with spatial data, FIA, and vegetation classification."

Cooperators may call on the U.S. Forest Service's Office of Communication for advice regarding public notices. Cooperators are requested to provide copies of notices or announcements to the U.S. Forest Service Program Manager and to The U.S. Forest Service's Office of Communications as far in advance of release as possible.

- M. U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS AND ELECTRONIC MEDIA. Cooperators shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this MOU.
- N. NONDISCRIMINATION STATEMENT – PRINTED, ELECTRONIC, OR AUDIOVISUAL MATERIAL. Cooperators shall include the following statement, in full, in any printed, audiovisual material, or electronic media for public distribution developed or printed with any Federal funding.

*In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)*

**To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.**

If the material is too small to permit the full statement to be included, the material must, at minimum, include the following statement, in print size no smaller than the text:

*"This institution is an equal opportunity provider."*



- O. TERMINATION. Any of the parties, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration.
- P. DEBARMENT AND SUSPENSION. Cooperators shall immediately inform the U.S. Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the federal government according to the terms of 2 CFR Part 180. Additionally, should Cooperators or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the U.S. Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.
- Q. MODIFICATIONS. Modifications within the scope of this MOU must be made by mutual consent of the parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change.
- R. COMMENCEMENT/EXPIRATION DATE. This MOU is executed as of the date of the last signature and is effective through December 31, 2018 at which time it will expire, unless extended by modification, signed and dated by all properly authorized, signatory officials.
- S. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the parties hereto have executed this MOU as of the last date written below.

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Kevin T. Gallagher Associate Director  
Core Science Systems, USGS

Date

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Mary Klein  
CEO and President, NatureServe

Date



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Katherine S. McCarter,  
Executive Director, Ecological Society of America

Date

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Marianne Burke, Chair,  
FGDC Vegetation Subcommittee

Date

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Jimmy L. Reaves, Deputy Chief  
U.S. Forest Service, Research & Development

Date

The authority and format of this agreement have been reviewed and approved for signature.

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JANET CICIARELLI  
U.S. Forest Service Grants Management Specialist

Date

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to complete this information collection is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).



To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.