

# **MEMORANDUM OF UNDERSTANDING**

**AMONG:**

**ECOLOGICAL SOCIETY OF AMERICA (ESA)**

**THE NATURE CONSERVANCY (TNC)**

**U.S. GEOLOGICAL SURVEY (FOR THE NATIONAL BIOLOGICAL IN-  
FORMATION INFRASTRUCTURE)**

**AND**

**U.S. FEDERAL GEOGRAPHIC DATA COMMITTEE (FGDC)**

**FORMING A PARTNERSHIP TO FURTHER DEVELOP AND IMPLEMENT  
THE NATIONAL VEGETATION CLASSIFICATION STANDARDS**

## PURPOSE

This Memorandum of Understanding (MOU) is entered into by the Ecological Society of America (ESA), The Nature Conservancy (TNC), the U.S. Geological Survey (USGS) on behalf of the National Biological Information Infrastructure (NBII), and the U.S. Federal Geographic Data Committee (FGDC) for the purpose of forming a partnership to develop, implement, and maintain the National Vegetation Classification (NVC) system. 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. To evaluate and manage these resources, substantial work to inventory, classify, and map vegetation is underway by public, private, and professional organizations. There presently is a developing national standard for defining or classifying terrestrial vegetation types in a systematic fashion. On 22 October 1997, Secretary of the Interior Bruce Babbitt, as the Chair of the Federal Geographic Data Committee (FGDC), endorsed the Committee's approval of the National Vegetation Classification and Information Standards. This MOU puts forth a broad, cooperative approach among key partners to further the development, implementation, and management of a systematic taxonomy of vegetation assemblages.

A jointly-sponsored NVC will promote the complementary capabilities of the partners. Cooperative efforts build on the strengths of the respective organizations, and will serve the national interest better than the efforts of any individual organization alone. It is the intent of this MOU to promote cooperation, coordinate vegetation classification activities to the greatest possible extent, minimize duplication of effort, and ensure that the information produced by each of the partners, as well as other organizations, is made available and used to the maximum extent possible.

## BACKGROUND AND SCOPE OF THE PARTNER ORGANIZATIONS

### The Ecological Society of America

The Ecological Society of America (ESA) is a non-partisan, nonprofit 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 7,000+ members conduct research, teach, and work to provide the ecological knowledge needed to solve environmental problems. 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 began its work by providing input to and a rigorous review of the FGDC "Vegetation Classification and Information Standards" (1997). Its current efforts center on development of proposed national standards for the floristic levels of the FGDC approved US national vegetation classification.

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. ESA has considerable experience with methods for professional evaluation and peer review of scientific research. This professional society can provide the expertise needed to develop a standardized information infrastructure for the national vegetation classification, to ensure the quality of information in that infrastructure.

## The Nature Conservancy

The Nature Conservancy is committed to the protection of plants, animals, and natural communities by protecting the land and waters that they need to survive. Conservation information that has been gathered on these aspects of biological diversity has resulted in the prioritization of critical sites for protection. The Conservancy has fostered a system of 86 state, provincial, and regional Natural Heritage Inventory Programs and Conservation Data Centers throughout the Americas and the Pacific to develop and manage this conservation information. Directed by this information, the Conservancy now operates the largest private system of nature sanctuaries in the world, thus safeguarding threatened species of plants and animals, and imperiled natural communities. The Conservancy currently owns or has under conservation easement 1.3 million acres in over 1,500 preserves.

In order to implement a consistent approach to conservation, the Conservancy identified the need to implement a standard community classification system over twenty years ago. With no national classification standard available, TNC and Natural Heritage Program scientists began the development and implementation of national standards that form the basis of the NVC. The Conservancy has developed the framework for the NVC and has now identified over 4,700 vegetation associations and more than 1,500 vegetation alliances across the U.S. The Conservancy has developed data management systems to manage this information and serve it to the network of Conservancy offices, as well as state Heritage Programs and federal partners. This system is presently the basis of multiple national efforts, including the National Park Service Vegetation Mapping Program and the USGS Gap Analysis Program. The Conservancy would bring to the partnership this history of vegetation classification, along with a well-developed network of vegetation scientists who are strategically placed across the U.S. in TNC field offices and in state agencies.

## U.S. Geological Survey

The U.S. Geological Survey (USGS) is leading a broad cooperative effort to develop the National Biological Information Infrastructure (NBII). The NBII is a distributed federation of biological data and information, and analytical tools from government agencies, non-government organizations, academic institutions, and others throughout the U.S. and the world. The objectives of the NBII are to make it easier to locate, exchange, and integrate biological data and information from many different distributed sources, and to apply information to natural resources management decisions. The NBII program also promotes development and adoption of standards and protocols needed to support more effective collection, management, exchange, integration, and application of biological data.

The USGS, through its leadership of the NBII initiative, will make the NVC system, and its associated data and information products, broadly accessible by incorporating them in the NBII federation. The NBII program will also promote the further implementation of the NVC standards and adoption of the system within the federal community and among the broad network of NBII partners, both nationally and internationally.

## Federal Geographic Data Committee

The FGDC was established in 1989 through the Office of Management and Budget Circular A-16 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 in order 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. To this end both The Nature Conservancy and the Ecological Society of America are members of the FGDC's Vegetation Subcommittee, which is charged with developing standards of accuracy and currency in vegetation data, the exchange of information on technical improvements for collecting vegetation data, and standards for the classification of vegetation. FGDC approved the National Vegetation Classification and Information Standards (10/22/97), which include a physiognomic classification of vegetation in detail, adoption of a lower level floristically-based classification in concept, and the goal that more work will be undertaken to further develop the floristically-based lower levels of the classification.

The FGDC would bring to this partnership representation of federal government interests, and a capability to achieve consensus and acceptance of nationwide standards within the federal agency community. This MOU will foster the detailed development of a floristically-based classification in pursuit of the FGDC's goal.

This MOU will help develop and implement a stronger set of standards for the classification and a broader partnership to ensure the long-term success of conservation through science and information.

#### COOPERATIVE ACTIVITIES

The partners agree to cooperate to the greatest extent possible in the further development, implementation and management of a scientifically credible national vegetation classification. This cooperation may include, but not be limited to:

1. Refinement of a contemporary set of national vegetation classification standards, including both physiognomic and floristic levels.
2. Establishment of, and open access to, databases containing the full classification and to other supporting data for documentation, including plot, stand, and transect data.
3. Establishment and support of a review process for the named floristic units of the classification.

The ESA will represent the needs of, and assure interaction with, the professional scientific community. Its long experience with publication and peer review will be a useful guide in developing the professional review process needed to assure the credibility of the classification.

TNC will assure interaction with applied vegetation scientists in the fields of resource conservation and management. It will use its long-term experience with the development and management of the national classification system to ensure the practical continuation of this important classification effort.

The USGS, through its leadership of the NBII, will bring a knowledge of contemporary information technologies to this partnership, to provide increased access to the NVC system and its associated data and information products. The NBII 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 sources who participate in the NBII partnership.

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 lead the adoption of any additions to the existing FGDC approved National Vegetation Classification and Information Standards.

### THIRD PARTY LIABILITY

Liability by the Federal Government for acts of its employees is governed by the Federal Tort Claims Act, availability of funds, and other Federal statutes. Nothing contained herein will constitute a waiver by any party of its sovereign immunity and the limitations set forth by Federal law.

### AMENDMENTS AND REVIEW

This Agreement shall be considered subject to revision and can be amended, extended, or modified by the mutual written concurrence of the participating signatories.

### PROJECT ANNEX PROVISION

Whenever more than the exchange of technical information or visits are planned, such activity will be described in an Annex to this MOU, which will set forth, in terms appropriate to the activity, an implementation plan, technical requirements, and other responsibilities, obligations, or conditions not addressed in this MOU. If the activity requires or involves funding arrangements between the parties or with other groups, such funding arrangements shall be set forth in separate funding agreements and/or contracts, subject to the availability of funds and in accordance with applicable laws and regulations.

### OTHER PROVISIONS

This MOU is not intended to exclude additional national or international partners. It may be amended to include such partnerships at any time.

Nothing herein intentionally conflicts with current directives or the applicable laws of any of the parties entering this agreement. If the terms of the agreement are inconsistent with existing directives or with the applicable laws of any of the parties entering the agreement, then those parts of this agreement that are determined to be inconsistent shall be invalid. The remaining terms and conditions of this agreement not affected by any inconsistency shall remain in full force and effect.

Nothing herein commits or binds the partners to a financial obligation.

Should disagreement arise about the interpretation of the provisions of this agreement, or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be reduced to writing by each party and presented to the other parties for consideration at least thirty (30) working days prior to forwarding the areas of disagreement to respective higher officials for appropriate resolution.

TERMS OF THE AGREEMENT

The terms of this agreement shall become effective upon the signature of all approving officials of the respective parties entering into this agreement. This agreement shall remain in effect until terminated by (1) mutual written agreement, or (2) at least thirty (30) days advance written notice by any party.

SIGNATORIES:

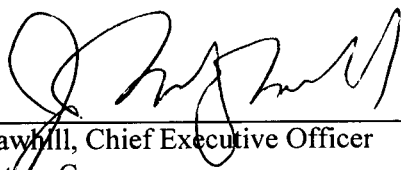


3/23/99

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Katherine McCarter, Executive Director  
Ecological Society of America

Date



4/14/99

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John Sawhill, Chief Executive Officer  
The Nature Conservancy

Date



4/1/99

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Dennis B. Fenn, Chief Biologist,  
U.S. Geological Survey (on behalf of the  
National Biological Information Infrastructure)

Date



4/5/99

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John Moeller, Director  
Federal Geographic Data Committee Secretariat Staff

Date