FEDERAL GEOGRAPHIC DATA COMMITTEE VEGETATION SUBCOMMITTEE AND OVERVIEW OF THE NATIONAL VEGETATION CLASSIFICATION STANDARD

The current **National Vegetation Classification (NVC) Standard** was first adopted in concept by the Federal Geographic Data Committee (FGDC) in 2008 to guide the classification of the cultural and natural vegetation of the United States. The standard is intended to be:

- Useful for conservation and resource management
- Focused on classifying existing vegetation
- Hierarchical, with upper levels based on physiognomy, and lower levels based on floristics
- Inclusive of both cultural and natural vegetation types
- Built from publicly available plot data whenever possible
- Revised through a peer review process

The NVC Federal standard is a **process** standard. The standard itself does not contain a formal set of NVC units, but rather outlines the process by which such units are to be described, peer-reviewed, and maintained through various data-management and web tools. This means that the classification is dynamic, and subject to change as vegetation scientists revise or newly describe vegetation types in the United States.

Cooperative efforts built on the strengths of the respective organizations serve the national interest better than the efforts of any individual organization alone and assure greater participation and acceptance across all interested parties. Such cooperative efforts to date have promoted coordination and collaboration in developing vegetation classification activities that have minimized duplication of effort, ensured that information produced by each of the partners is made available and used to the maximum extent possible, and led to development of the proposed Standard and Implementation Plan.

Working under the umbrella of the FGDC Vegetation Subcommittee, these partners include the U.S. Forest Service (FS) as lead agency for the Subcommittee; the other Federal members of the Subcommittee are the U.S. Geological Survey (USGS) Core Science Systems, the Ecological Society of America (ESA), and NatureServe.

Federal Geographic Data Committee – Vegetation Subcommittee

The 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.

Full membership on the 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)
- 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 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 FS has overseen the Subcommittee's work to develop the hierarchy and standard and to redraft the upper level types. The FS 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 partners 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 efforts to:

1. Finalize the initial content (NVCS types) for all levels of the NVC Hierarchy, and improve 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 vegetation plots databases) necessary to maintain and disseminate the NVCS 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 NVCS 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.
12. Build and maintain crosswalks to a wide range of non-standard vegetation classification systems.

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.

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.

The USGS Core Science Systems through the leadership of the Vegetation Characterization Program and the National Gap Analysis 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. The CSS 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.

The FS, 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.

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.

OBJECTIVES

The overall objective of the Vegetation and Information Standards is to support the use of a consistent national vegetation classification system (NVCS) to produce uniform statistics in vegetation resources from vegetation cover data at the national level. It is important that, as agencies map or inventory vegetated Earth cover, they collect enough data accurately and precisely to translate it for national reporting, aggregation, and comparisons. Adoption of the Vegetation Classification and Information Standards in subsequent development and application of vegetation mapping schemes will facilitate the compilation of regional and national summaries. In turn, the consistent collection of such information will eventually support the detailed, quantitative, geo-referenced basis for vegetation cover modeling, mapping, and analysis at the field level.

SCOPE

This standard:

1. Fosters accuracy, consistency, and clarity in the structure, labeling, definition and application of a systematic vegetation taxonomy for the United States. Accuracy, consistency, and clarity are critical for making effective and efficient decisions about complex assemblages of biotic organisms.
2. Establishes a national set of standards for classifying existing vegetation cover and its associated information for the United States and its Trust Territories that will be used by Federal agencies to develop and report national statistics. This standard includes guiding principles, definitions of important terminology, and the NVCS.
3. Develops Federal minimum metadata requirements to ensure consistent reporting on the status of our Nation's vegetation resources. Both the classification system and the metadata requirements may be used nationally to link local level vegetation inventory and map efforts.

The Vegetation Classification Standards is driven by this **vision**:

The Vegetation Classification Standard enables Federal agencies to produce uniform statistics about vegetation resources across the nation, facilitates interagency cooperation on vegetation management issues that transcend jurisdictional boundaries, and encourages non-Federal partners to utilize and contribute to a common system when working with their Federal partners.

The overall **purpose** of this standard encompasses five broad objectives:

1. To facilitate and support the development of a standardized vegetation classification for the United States and its use for information sharing.
2. To maintain and disseminate the classification content.
3. To define and adopt standards for vegetation data collection and analysis used in maintenance and revision of the classification.

4. To maintain scientific credibility of the national classification through peer review of proposed changes.
5. To facilitate inter-agency collaboration and inter-agency product consistency.