



NWCG Data Administration Working Group (DAWG)

**Program
Management
Office**

A Concept Paper

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**National Wildfire
Coordinating Group**

**Information Resource
Management**

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1. Introduction

This paper introduces the concept of establishing a formal working group, comprised of wildland fire business data stewards chartered by NWCG, to act as the approving body for NWCG data standards. The term “business” is used to describe the activities and functions performed by the wildland fire community to accomplish its mission, not just administrative functions. More and more information systems are being developed to support the business activities of the wildland fire community. It is important that business representatives from the wildland fire community are involved in the development of the data standards used by these systems to ensure that true business needs are addressed. The resulting data standards will be published in the NWCG repository for use by all project and development groups responsible for implementing interagency wildland fire systems.

2. Business Case

An organized body of data stewards will provide the following benefits:

- Establishment of common terms and definitions to be used in interagency systems.
- Involvement by the NWCG business community in the standardization process, resulting in interagency participation and buy-in.
- A single point of contact for referencing NWCG data standards.
- A permanent group which will provide continuity across the wildland fire enterprise even after project teams are disbanded or personnel changes occur.
- Facilitated change management coordination when new data standards are created, or changes to existing standards are made.
- Coordination between other standards groups and involvement of affected parties in the change management process.
- NWCG Project teams will pass data issues to the data stewards for resolution, allowing the project to keep moving forward.

3. Problem Statement

Recent attention to wildland fire efforts has increased the expectation that the wildland fire community provide more accurate and timely information. As the availability of human resources decreases, the fire community needs to produce automated systems that reduce or eliminate the need to manually gather, collate, and produce reports. Technology has advanced to the point where it is now possible to provide the data, network, and processing required to meet the information needs of the community. The wildland fire community needs to make a cultural change to work towards integrated and/or interoperable systems.

Today, there exist many systems to support wildland fire. Few of these systems are able to exchange or share data. In spite of the millions of dollars spent on computer hardware and software, managers are still being crippled by information requests that require manual compilation of data from various systems. There are several reasons for this lack of interoperability between systems:

- a) There is no process to facilitate coordination between projects and existing systems to establish and implement shareable data standards. There is no mechanism in which a person or organization can request a modification to existing data definitions and terms, therefore resulting in yet another definition.
- b) There is no single authoritative source (repository/library) in which to track data standards. Since there is no single place for collection and storage of data standards, the standards that do exist are scattered throughout various systems throughout the nation.

These were some of the problems identified in the *NWCG IRM Strategy Project: Wildland Fire Business Model (1996)*, also known as the NWCG IRM Strategy Report. As a result, the NWCG Program Management Office was created (2000). The report contained the Wildland Fire Business Model, which included the NWCG Enterprise Process and Data Models. These models are intended to serve as the foundation upon which to build and improve the enterprise architecture of the wildland fire community.

4. Proposed Solution

a. Introduction of Solution

This concept paper proposes the establishment of the NWCG Data Administration Working Group (DAWG) to manage stewardship of interagency wildland fire data definitions. This group will function within the existing interagency structure of the National Wildfire Coordinating Group (NWCG). Guidance and direction will be provided by the NWCG IRM Program Management Office (IRM-PMO) Data Architect.

Within the NWCG, there are currently twelve working teams representing the various business areas of the interagency wildland fire community. Each NWCG working team will designate a data steward to represent the business interest of that working team. The designated data stewards will serve as a member of the DAWG.

The NWCG IRM Strategy Report identifies the major data areas within the wildland fire community. It is intended that each of these data areas will be assigned to one NWCG working team or associated group to serve in the lead data stewardship role. Appendix B - NWCG Stewardship Data Areas provides a list of these data areas and proposed team or group assignments. The data steward for the working team with the lead data stewardship role will be responsible for facilitating the development of the data standard proposal and submitting it to the DAWG. The DAWG will then coordinate the review process, and approve and publish the final data standard.

The DAWG is responsible for oversight of interagency wildland fire data management that includes involvement by the business community to ensure:

- System data supports the business need across the enterprise
- Business rules are applied consistently across project/system boundaries
- NWCG systems implement quality assurance measures
- Definitions for core/common data elements have been defined
- Standard lookup values, when applicable, are defined and published
- Standard naming convention guidelines are applied

Appendix A - Illustration 1 provides a graphical depiction of the DAWG's relationships to the NWCG, other agencies, systems, and projects. In addition, participation from other organized interagency groups, such as the National Coordinators Group, may be included in the DAWG membership.

It is important to note that the data stewards are not responsible for the actual data. The responsibility for the quality of the data lies with the assigned data custodian. Appendix A – Illustration 2 provides more information about the role of the data custodian.

The Data Administration Working Group will:

- Establish and approve core data standards for the NWCG Enterprise Data Model to achieve data consistency and improve data quality throughout the wildland fire community
- Resolve national, interagency data issues to work toward integration of data throughout NWCG systems. This includes coordination with ongoing NWCG projects and existing automated and manual NWCG systems
- Evaluate requests for NWCG projects/systems' deviation from established standards and make recommendations to NWCG through the IRM Working Team
- Establish and facilitate the change management process for NWCG data standards
- Represent the wildland fire community through NWCG Working Teams and associated groups to provide a global perspective on all data issues
- Facilitate the data administration program for NWCG and coordinate with agency data administration programs

b. Application of Solution

The DAWG will be formally chartered by the NWCG as a working group.

The NWCG IRM-PMO Data Architect, a full-time permanent position, will serve as chairperson for the DAWG.

Each NWCG Working Team will designate a person to serve as its Data Steward and member of the DAWG. A person may serve as data steward for multiple working teams.

The NWCG data repository will serve as the reference library for standards to enable standardization across manual and automated systems.

DAWG member responsibilities include:

- Build upon the existing NWCG Enterprise Data Model that represents the information needs for the entire wildland fire community
- Work with their respective working team or associated group in all issues involving data standards
- Coordinate with other DAWG members on all information required for developing NWCG data standards and guidelines
- Provide guidance and expertise in their area of responsibility for correct usage of data as it relates to the interagency wildland fire community
- Promote an awareness of the importance of coordination with NWCG data and records administration in the initiation of data collection or data sharing arrangements
- Provide input to NWCG data administration policy development

The DAWG will ensure that the following are informed and involved when appropriate:

- Agency Data Administrators
- NWCG IRM PMO Application Architect
- NWCG IRM PMO Repository Manager
- NWCG Project Analysts
- Other Standards Groups
- Representatives of existing systems

c. Future Direction

The DAWG will consist of a data steward affiliated with each of the NWCG working teams and associated groups. These data stewards will represent specific data areas in the wildland fire community. Working teams and associated groups include, but are not limited to:

NWCG Working Teams

Fire Danger
Fire Equipment
Fire Use
Fire Weather
Incident Business Practices
Incident Operation Standards
Information Resource Management
Publication Management System
Safety & Health
Training
Wildland Fire Education
Wildland Fire Investigation

Other Associated Groups

National Coordinators
IRMWT Geospatial Task Group

5. Conclusion

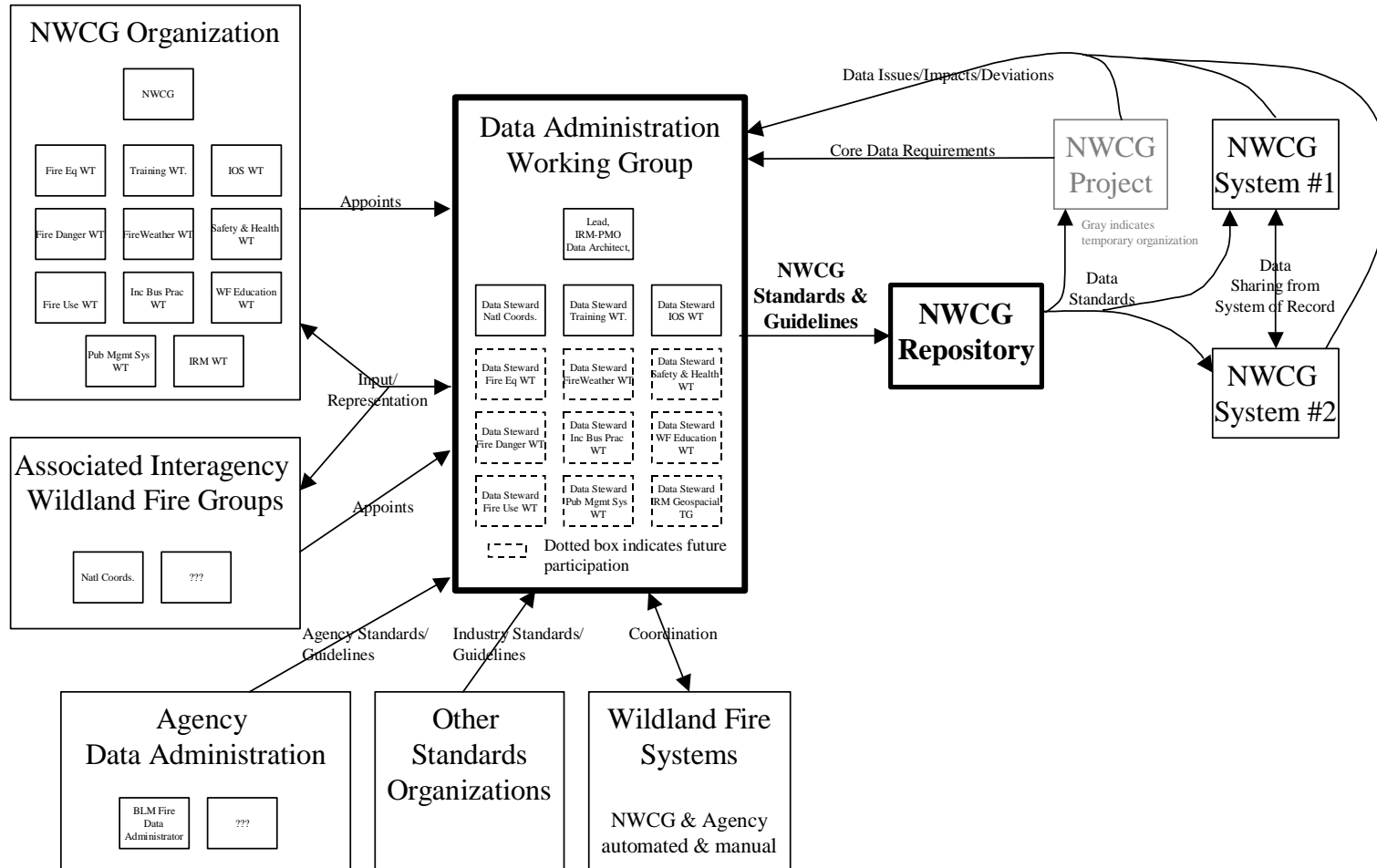
The acceptance and implementation of operational standards within the wildland fire community has contributed to the success of the interagency fire program. Likewise, the development and implementation of data standards across wildland fire information systems will contribute to successful data management.

The NWCG IRM Program Management Office will proceed to implement this concept by:

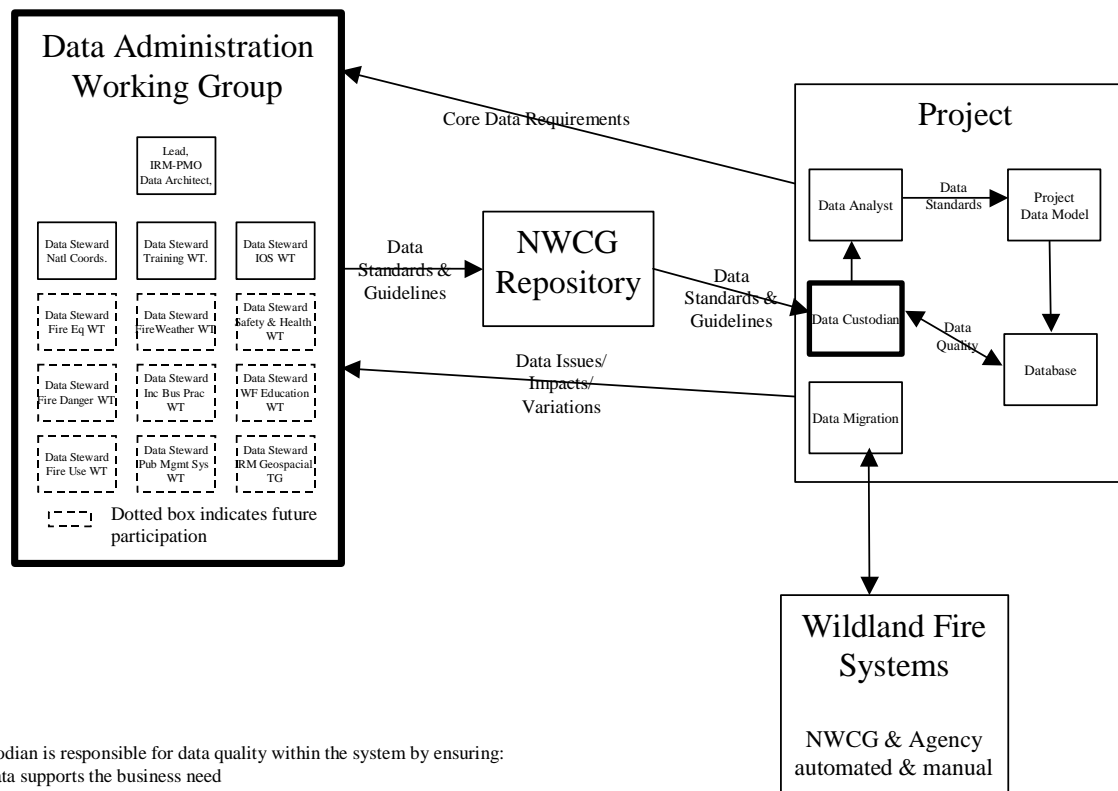
- Making presentations to the various NWCG Working Team chairs to introduce and implement the DAWG concept
- Providing an NWCG Enterprise Data Model and supporting data dictionaries. These products will be posted on the NWCG website and made available to all interested parties
- Guiding the DAWG group in establishing data standards and managing changes to existing standards
- Formally chartering and establishing the DAWG through NWCG.

Appendix A - Illustrations

Data Administration Working Group Relationships



Data Custodian and NWCG Project Relationships



- A Data Custodian is responsible for data quality within the system by ensuring:
- System data supports the business need
 - Existing business rule definitions are appropriate and sufficient
 - Quality of the data is satisfactory as it relates to other data
 - Data standards, naming conventions, and core data lookup values are appropriately used
 - System-specific data definitions, names, and look-up values are in conformance with standardization practices

A project Data Analyst is responsible for adherence to existing data standards.

Appendix B - NWCG Stewardship Data Areas

The NWCG IRM Strategy Report and Wildland Fire Business Model provides enterprise process and data models. The enterprise data model identifies the following major data areas and components. The NWCG enterprise data model was developed by a group of interagency wildland fire subject matter specialists who produced a high-level view of the major data areas described below. At this high-level, birds-eye view, it is acknowledged that many data areas are missing. As business functional areas are further analyzed, these data areas will be expanded and enhanced.

This table does not include lead data stewardship assignments for all the NWCG working teams; however, as the DAWG proceeds, additional assignments will be added. In addition, these suggested assignments might be changed as deemed appropriate by the DAWG.

Data Area (from NWCG Enterprise Data Model)	Components (from NWCG Enterprise Data Model)	Suggested WT or Group for lead data stewardship
Agreement	Land	(to be determined by DAWG)
	Burn Permit	(to be determined by DAWG)
Assignment	Resource Assignment	National Coordinator Group
Capability	Equipment/Supply	Fire Equipment Working Team
	Person	IOS Working Team
Environment	Atmosphere	Fire Weather Working Team
	Vegetation	Fire Danger Working Team
Event	Incident	IOS Working Team
	Planned Event	(to be determined by DAWG)
	Assessment	(to be determined by DAWG)
Boundary Unit (Polygons)		IRM WT Geospatial Work Group
Development (Man-made structure)		IRM WT Geospatial Work Group
Environment observation	Atmosphere	Fire Weather WT

Data Area (from NWCG Enterprise Data Model)	Components (from NWCG Enterprise Data Model)	Suggested WT or Group for lead data stewardship
	Vegetation	Fire Danger WT
Organization	Agency	DAWG
	Interest Group	DAWG
	Vendor	DAWG
	Unit Identifiers	National Coordinator Group
Person	Employee	Fire Business Practices WT
Request	Resource Order	National Coordinator Group
	Training Request	Training Working Team
	Requisition/Purchase Order	Fire Business Practices WT
Resource Capability	Equipment	Fire Equipment Working Team
	Supply	Fire Equipment Working Team
	Overhead / Crews	IOS Working Team
	Aircraft	Fire Equipment Working Team
Task		IOS Working Team
Training Course		Training Working Team
Travel		Fire Business Practices WT