NWCG Geospatial Data Layer Standard

Data Layer Standard Name	Wildland Fire Perimeters (polygon)
Status (DSTS Use Only)	Approved
Next Anticipated Review	
Review Expiration	
Approved	9/9/2014

Name & Description

Geospatial Data Layer Name	Wildland Fire Perimeters (polygon)
Abbreviation	WildlandFirePerim
Description	Wildland Fire Perimeter Polygons geospatial data layer standard provides the standard template for exchange/transfer of wildland fire perimeter polygons, representing the daily and final perimeters for wildfires and prescribed fires.
Version	1

Contact Information

Data Standard Stewardship Group	NWCG Geospatial Subcommittee
Data Standard Steward (POC)	Skip Edel, National Park Service, skip_edel@nps.gov

General Information

Source Standard	Draft Fire History Geodatabase model, http://gis.nwcg.gov/gdbStandard.htm
System of Record	USFWS - FMIS, NPS - Fire Geodatabase, DOI - NFPORS, others
Additional Text	Much of the work done on this standard occurred in 2010 and 2011. The draft data standards defined at that time, the feedback generated by that draft, and the changes implemented based on that feedback will serve as the basis for this standard.
	Change Management Process Change proposals for this standard should be submitted to the NWCG Data Standards and Terminology Subcommittee Chair, http://www.nwcg.gov/branches/et/itc/subcommittees/subcommittees.htm
Discussion Papers Text	A discussion paper was developed to provide background related to the Fire History and Point of Origin data standards. Both standards are documented in a single discussion paper to clearly illustrate the relationship between the features and their application in capturing historical fire events for fire reporting purposes.
Discussion Papers File	1. Discussion Paper - Point of Origin & Fire History GIS Data Layers.pdf 2. Point of Origin & Fire History Data Model.pdf 3. NWCG - Point of Origin GIS Data Layer Standard - Draft.doc 4. NWCG_WildlandFireDataModel_PointOfOrigin_FireHistory_9July2010.zip. Files are located here: http://gis.nwcg.gov/gdbStandard.htm

Geospatial Data

Background	Wildland fire history data is made up of wildland fire locations (fire occurrence points) and wildland fire perimeter polygons. Wildland fire location points represent ignition locations. Wildland fire perimeter polygon(s) represent the daily and final perimeters.
Abstract	The wildland fire perimeters geospatial data layer standard applies to wildland fire perimeter polygons.

NWCG Geospatial Data Layer Standard

Purpose	Representation of where a wildfire or prescribed fire incident happened is critical to fire and aviation management planning and operations. These minimum attributes are needed for data exchange between interagency systems, and to relate to fire occurrence information, to best model fire 'on the ground'.
Data Model	Data is stored as feature classes in a geodatabase. In a geodatabase, Wildland Fire Locations (occurrences) are depicted as a point feature class. Wildland Fire Perimeters are depicted as a polygon feature class. Core and/or additional attributes may be stored in related tables.
Other Notes	All attribute field names conform to existing NWCG or IRWIN data standards where possible. To avoid redundancy, the core attributes NWCGUnitID and NFIRSUnitID were NOT included in implementation of this standard. The attributes POORespoinsibleUnit provides that information.
Related Layers	The Wildland Fire Perimeters data layer may be used with other fire planning and operations layers such as fire management units, fire fuels, management action (trigger) points, etc. The Wildland Fire Locations geospatial data is related to this standard via a relationship class in the geodatabase.
Horizontal and/or Vertical Position Accuracy	Standards for horizontal and vertical accuracies are detailed in Geospatial Positioning Accuracy Standards; Part 3: National Standard for Spatial Data Accuracy (NSSDA), http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/chapter3. NSSDA does not define threshold accuracy values. Agencies are encouraged to establish thresholds for their product specifications and applications and for contracting purposes. Ultimately, users identify acceptable accuracies for their applications. Data and map producers must determine what accuracy exists or is achievable for their data and report it (document) according to NSSDA.
Horizontal and/or Vertical Spatial Reference Information	Data layer projection parameters should be documented in a .prj file (shapefile format) or in a geodatabase projection definition. Or, specify the projection parameters via an EPSG code (example EPSG code 4326 = WGS84), http://www.epsg-registry.org . Projection parameters file should include applicable attributes as specified in the FGDC Standards Reference Model, 4.1.2.1.23.

Geospatial Data Layer Standard Attributes & Attribute Definitions

Standard Name*	Alternate Name	Required?	Data Type	Size/ Width	Description	Values	Related NWCG Standard
MapMethod	Map_Method MapMeth DataSource	Yes	String	25	Controlled vocabulary to define how the geospatial feature was derived. Map method may help define data quality.	GPS-Driven; GPS-Flight; GPS-Walked; GPS-Walked/ Driven; GPS-Unknown Travel Method; Hand Sketch; Digitized-Image; Digitized-Topo; Digitized-Other; Image Interpretation; Infrared Image; Modeled; Mixed Methods; Remote Sensing Derived; Survey/GCDB/Cadastral; Vector; Other	
DateCurrent	DateCrnt EditDate RevDate	Yes	Date		The last edit, update, of this GIS record. Example: mm/dd/yyyy		Date
Comments	Notes GIS_Note	No, but recommended	String	255	Additional information describing the feature.	Free text	
GeometryID	Geometry_ID GIS_ID Spa_ID	Yes	String	50	Primary key for linking geospatial objects with other database systems. Required for every feature. This field may be renamed for each standard to fit the feature.	Globally Unique Identifier (GUID). **	
FireOccurID	IRWINID PtOriginLnk	Yes	String	50	Primary key for linking to the Wildland Fire Locations Point dataset. The origin of this GUID is the wildland fire locations point data layer. (This unique identifier may NOT replace the GeometryID core attribute)	Globally Unique Identifier (GUID) populated from wildland fire locations point data	
UniqueFireIdentifier	IncidentID UniqFireID	Yes	String	22	Unique fire identifier is the Year-Unit Identifier-Local Incident Identifier (yyyy-SSXXX-xxxxxx). SS = State Code or International Code, XXX or XXXX = A code assigned to an organizational unit, xxxxx = Alphanumeric with hyphens or periods. The unit identifier portion corresponds to the POINT OF ORIGIN RESPONSIBLE AGENCY UNIT IDENTIFIER (POOResonsibleUnit) from the responsible unit's corresponding fire report. Example: 2013-CORMP-000001		Unique Fire Identifier
FireYear	Fire_Year CalYear	Yes	Integer	4	Calendar year in which the fire started. Example: 2013		
LocalIncidentIdentifier	FireNum SOFireNum	Yes	String	10	Local incident identifier (dispatch number). A number or code that uniquely identifies an incident for a particular local fire management organization within a particular calendar year. Field is string to allow for leading zeros when the local incident identifier is less than 6 characters. (IRWIN required). Example: 123456.		Local Incident Identifier
IncidentName	FireName	Yes	String	50	The name assigned to an incident; assigned by responsible land management unit. (IRWIN required). Officially recorded name		Incident Name

Geospatial Data Layer Standard Attributes & Attribute Definitions

Standard Name*	Alternate Name	Required?	Data Type	Size/ Width	Description	Values	Related NWCG Standard
POOOwnerUnit	UnitIDOwner	Yes	String	6	NWCG Unit Identifier of landowner agency at the point of origin of a fire. (NFIRS ID should be used only when no NWCG Unit Identifier exists). Example: CORMP		Unit Identifier
POOResponsibleUnit	UnitIDProtect	Yes	String	6	NWCG Unit Identifier (Code used in interagency wildland fire to uniquely identify a particular organizational unit (office **administratively responsible** for either managing incidents/projects, providing resources, or providing logistical services) within the government or a non-government organization recognized by NWCG as a wildland fire cooperator) of agency with primary fire protection responsibility at the point of origin of a fire. National Fire Incident Reporting System (NFIRS) ID (ID which uniquely identies a non-federal organizational unit) should be used only when no NWCG Unit Identifier exists. Example: CORMP Note: This field replaces NWCGUnitID, a required core attribute in all other NWCG Geospatial Data Layer Standards.		Point of Origin Responsible Unit; Unit Identifier
FeatureCategory	Feat_Cat	Yes	String	50	Type of wildland fire polygon	Wildfire Final Fire Perimeter; Wildfire Daily Fire Perimeter; Prescribed Fire; Unknown	
PerimeterDateTime	PerDatTime CollectDat	Yes	Date	12	The date and time that the fire perimeter was collected (mapped). Date should follow NWCG data standard for Date and time should follow NWCG standard for Time of Day, using 24 hour clock, YYYYMMDDhhmmss.ss (include seconds if available). Time zone should be documented in metadata. Example: 201406231530		Date; Time Point (Time of Day)
GISAcres	GISAcrCalc	Yes	Double		GIS calculated acres within the fire perimeter. Not adjusted for unburned areas within the fire perimeter. Total should include 1 decimal place. (ArcGIS: Precision=10; Scale=1). Example: 23.9		

*Standard field names should be used for the core attributes when possible. Alternate field name suggestions are given to accommodate database conflicts and legacy datasets. Alternate name use should be documented in the Other Notes section above.

** GUIDs are unique specially formatted numeric strings generated by a “GUID generation tool.” GUIDs can be generated at http://www.guidgenerator.com/