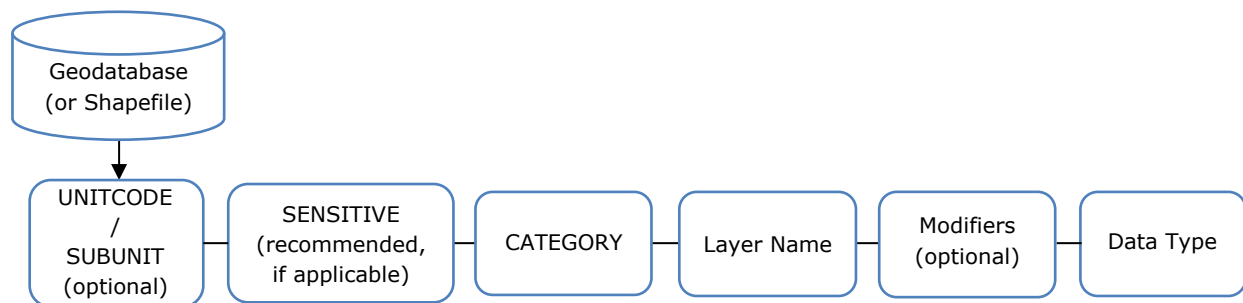


National Park Service – Layer Naming Conventions

Background

To encourage greater consistency within the National Park Service for dataset names, the NPS GIS Council has adopted a layer naming convention. The use of this convention will facilitate future regional and national Enterprise GIS efforts and support better data management and organization within the NPS. Although the convention is not required, it is encouraged for everyday use and regular data management activities with all agency data. It is not recommended, however, for transferring data from one site to another where different layer naming standards have already been established.

Naming Format



UNITCODE_SUBUNIT_SENSITIVE_CATEGORY_LayerNameModifiers_datatype

Where:

- **UNITCODE** is the four letter code for a park, office, or program; or three letter code for a region.
- **SUBUNIT** is a sub-unit code or other designator for part of a park.
- **CATEGORY** is taken from the list below and is capitalized.
- **Layer Name** is the primary dataset name in title case.
- **Modifiers** (LocationTimeResolutionSource) are other information describing the dataset. They are used only if needed to distinguish among multiple layers that would otherwise have the same name.
 - **Location** describes the area of coverage, in title case.
 - **Time** distinguishes multiple historic layers, usually by year in numeric form; but if more precision is required, then other numeric formats can be used, such as YYYYMMDD or a range of dates.
 - **Resolution** distinguishes multiple source scales, usually by numeric scale denominator for vector ("k" for thousands or kilo) or cell size for raster ("m" for meters or "ft" for feet.)
 - **Source** distinguishes multiple source providers, capitalized or in title case. This may be an organization (e.g., USGS) or a standard database (e.g., NWI).
- **Data Type** is a two- or three-letter abbreviation for point (pt), line (ln), polygon (py), raster (ra), annotation (an), non-feature-attribute table (tbl), or relationship class (rc), in lower case.

Example:

SOIL_SSURGO100k_py
REDW_SENSITIVE_CULT_Archaeology_pt
IMR_VEG_Weeds2008_py
FACILITY_BuildingLink_tbl

National Park Service – Layer Naming Conventions

Additional Information:

- CATEGORY, Layer Name, and DataType are always required in the name.
- Modifiers such as Location, Time, Resolution, and Source are used only if needed to distinguish among similar layers.
- UNITCODE and SUBUNIT are used if needed to distinguish among data layers from different areas.
- If a dataset contains only sensitive data then the capitalized term, "SENSITIVE" will be placed immediately before the CATEGORY and after any UNITCODE/SUBUNIT, separated with underscores. Layers that contain both sensitive and non-sensitive data must have a field that defines which features are sensitive and which are not and will include the capitalized term, "SENSITIVEFL" (FL for feature level) in the same position within the name. Both terms are optional (though recommended) if the layers containing sensitive data are stored apart from non-sensitive data in separate geodatabases.

Annotation:

Annotation not tied to other layers (or feature linked) will be stored in a feature dataset as "CARTO_Annotation". Each feature class under that feature dataset will have the feature type "an". Annotation that is tied to specific layers (such as road labels) will be stored in the relevant category with the "an" suffix.

Example: CARTO_Annotation (feature dataset)
 CARTO_Annotation100k_an (feature class)
 CARTO_Annotation24k_an (feature class)
 TRANS_RoadsAnnotation12K_an (feature class)

Relationship Classes:

Relationship classes will follow a similar format: CATEGORY_Sourcetable_Destinationtable_rc

Where:

- CATEGORY is the prefix for the geometry layer
- Sourcetable is the source table name with its associated data type suffixed
- Destinationtable is the destination table name with its associated data type suffixed

Example: FACILITY_BuildingLinktbl_Buildingpy_rc

In the example above, the geometry layer involved in the relationship class (Building) is in the FACILITY category. The source table is the standalone table, "BuildingLink", and so receives the "tbl" suffix. The destination table is the feature table for the polygon feature class "Building", and so receives the "py" suffix. In other cases, the source table may be associated with a feature class, while the destination table is not. There is no underscore separating the table name from the feature type (tbl, py, pt, etc.) to keep the names as short as possible. Note that relationship classes apply only to layers stored in a geodatabase.

National Park Service – Draft Layer Naming Conventions

Categories

AIR	Air resources, air quality
BIRD	Birds, and related data
BND	Most boundaries, including park, wilderness, judicial districts, wildlife refuges, land use, parcels, tracts, planning layers including management zones, project boundaries, local zoning, rights-of-way, overflight zones
CARTO	Data used to assist with cartographic display, such as offshore and inland masks, annotation (geographic names), etc.
CLIM	Rainfall, temperature, solar radiation
CULT	Cultural resources, including archaeology, cultural landscapes and contributing features, historic structures (LCS), ethnographic features, fences, etc.
ECO	Ecoregions, ecosystems, plots and transects (e.g. for general I&M or cross-type monitoring)
FACILITY	Non-transportation facilities, including buildings, signs, utilities, campgrounds, mooring buoys, navigational aids, fences, abandoned mine lands (AML), energy facilities and transmission lines, culverts
FIRE	Fire history, fuels, fire intensity, fire severity, fire management zones, lightning strikes, fire hazards
FISH	Fish, and related data
GEOL	Geology, including hazards, lithology, structure, faults, landforms, glaciations, beaches, caves, lava flows
HERP	Amphibians, reptiles, and related data
HYDRO	Hydrography, including streams, water bodies, coastlines, levees, waterfalls, glaciers, water quality, aquifers, flood zones, wells, anchialine pools, wetlands, tsunami zones, watershed divides
IMG	Raster images, including indexes to locate satellite imagery and air photos, orthos, DRGs,
INVERT	Invertebrates, and related data
LAW	Law enforcement, including incidents, marijuana sites, etc.
MAMMAL	Mammals, plots for mammals, and related data
OTHER	Data layers that don't fit elsewhere in the structure. Use only as a last resort
PALEO	Paleontological data
PHOTO	Geo-tagged photographs [it is not recommended you store photographs in geodatabase]
SOCIO	Socioeconomic data, including contemporary cultural themes such as towns, census data, populations, and demographics. It is not intended to include traditional or sensitive NPS cultural resources data, which is located in its own geodatabase
SOIL	Soils, and related data
SURVEY	Monumentation (control points), BLM GCDB, USGS PLSS, ground photo points, photo control

National Park Service – Draft Layer Naming Conventions

TOPO	Topography, including DEMs, DSMs, TINs, terrain data sets, contours, bathymetry, , slope, aspect, lidar-derived surfaces (including first returns), hillshades
TRANS	Transportation, including roads, trails, railroads, other transit features, center lines, road edges, bridges, parking areas, overflight routes
VEG	Vegetation, specific plants, noxious weeds
VIEW	Viewsheds

Layer Name Examples

BIRD_CondorNests_pt	CULT_HistoricObjects_pt
BIRD_LandBird_pt	CULT_HistoricObjects_py
BIRD_SeaBird_pt	CULT_HistoricStructures_In
BIRD_SpottedOwlHabitat_py	CULT_HistoricStructures_pt
BIRD_SpottedOwlNests_pt	CULT_HistoricStructures_py
BND_AirTourManagement_py	CULT_OtherCulturalResources_In
BND_Counties_py	CULT_OtherCulturalResources_pt
BND_FutureWilderness_py	CULT_OtherCulturalResources_py
BND_CountyLandUseZoning2000_py	ECO_Plots_pt
BND_ParkManagementUnits_py	ECO_Transects_In
BND_HistoricParkBoundary_py	FACILITY_AbandonedMineLands_pt
BND_HistoricWilderness_py	FACILITY_BackcountryCampsites_pt
BND_LegislatedWilderness_py	FACILITY_Building_pt
BND_ParkBoundary_py	FACILITY_Building_py
BND_ParkTracts_py	FACILITY_BuildingLink_tbl
BND_States_py	FACILITY_Campgrounds_py
BND_WildernessLineage_In	FACILITY_Campsites_pt
CARTO_Annotation24k_an	FACILITY_Culverts_In
CARTO_GeographicNamesUSGS_an	FACILITY_OilDrillingSite_pt
CARTO_OceanMask_py	FACILITY_Powerlines_In
CLIM_Rainfall_pt	FACILITY_Powerstation_py
CLIM_Snowfall_pt	FACILITY_Sewers_In
CLIM_Temperatures_pt	FACILITY_Signs_pt
CLIM_TemperatureMean_py	FACILITY_Waterlines_In
CULT_Archaeology_In	FIRE_DailyFirePerimeter_py
CULT_Archaeology_pt	FIRE_EffectsMonitoring_py
CULT_Archaeology_py	FIRE_FireManagementUnits_py
CULT_CulturalLandscapes_py	FIRE_History_pt
CULT_CulturalLink_tbl	FIRE_History_py
CULT_CulturalResourceSurveys_In	FIRE_ManagementUnits_py
CULT_CulturalResourceSurveys_pt	FIRE_PrescribedBurnUnits_py
CULT_CulturalResourceSurveys_py	GEO_Landform_In
CULT_EthnographicResources_In	GEO_Landform_In
CULT_EthnographicResources_pt	GEO_Landform_In
CULT_EthnographicResources_py	GEO_Landform_In
CULT_HistoricBuildings_pt	HERP_Amphibians_pt
CULT_HistoricBuildings_py	HERP_Reptiles_pt
CULT_HistoricDistricts_py	HYDRO_CoastalFeatures_pt
CULT_HistoricObjects_In	

National Park Service – Draft Layer Naming Conventions

HYDRO_DoubleBankRivers_py	TOPO_Aspect10m_ra
HYDRO_Glaciers_py	TOPO_Aspect1m_ra
HYDRO_Lagoons_py	TOPO_Bathymetry
HYDRO_Lakes_py	TOPO_DEM10m_ra
HYDRO_Levees_In	TOPO_DEM1m_ra
HYDRO_SeaLevel_In	TOPO_DEM_IFSAR5m_ra
HYDRO_StreamsNHD_In	TOPO_DSM_LiDAR1m_ra
HYDRO_TsunamiZones_py	TOPO_LiDAR_pt
HYDRO_Watersheds_py	TOPO_Hillshade10m_ra
HYDRO_WetlandsNPS2005_py	TOPO_ShadedRelief10m_ra
HYDRO_WetlandsNWI_In	TOPO_ShadedRelief1m_ra
HYDRO_WetlandsNWI_pt	TOPO_SlopeDegree10m_ra
HYDRO_WetlandsNWI_py	TOPO_SlopeDegree1m_ra
IMG_DRG24kIndex_py	TOPO_SlopeGrade1m_ra
IMG_DRG24k_ra	TOPO_Subbasins_py
IMG_NAIP2009_ra	TRANS_Bridges_pt
IMG_OrthoSeamlines2005NPS_py	TRANS_Parking_py
IMG_Orthos2005NPS_ra	TRANS_ProposedTrails_In
LAW_Incidents_pt	TRANS_RemovedRoads_In
LAW_MarijuanaGardens_py	TRANS_Roads_an
LAW_MarijuanaGardenFeatures_In	TRANS_Roads_In
LAW_MarijuanaGardenFeatures_pt	TRANS_Roads_py
MAMMAL_FisherReleases_pt	TRANS_Trails_an
MAMMAL_FisherTracking_In	TRANS_Trails_In
MAMMAL_WildlifeObservations_pt	VEG_Pathogens_pt
PALEO_Localities_py	VEG_RarePlants_pt
PALEO_Sites_pt	VEG_RarePlants_py
SOIL_Soils100k_py	VEG_Vegetation_py
SOIL_Soils24k_py	VEG_Weeds_pt
SURVEY_Monumentation_pt	VEG_Weeds_py
SURVEY_PublicLandSurveySystemGCDB_In	VEG_WeedTreatments_py
SURVEY_PublicLandSurveySystemGCDB_py	

National Park Service – Draft Layer Naming Conventions

FAQs

- ***How do these naming conventions relate to existing data standards?***

These conventions are meant to complement existing NPS data standards. For example, the cultural resource data transfer standard has more than 20 feature classes. Each one has a corresponding layer name in this system. When transferring data from one's own database to another user, it is recommended to change the name to the shorter name specified in the cultural resource standard.

- ***Why are the names so long?***

The long names are useful for distinguishing multiple layers which often differ in only subtle ways. They don't present much of an issue in ArcCatalog or ArcMap.

- ***How do I deal with these long names in systems like ArcPad?***

It's recommended to use a truncated version of the file name for temporary use, then to check the data back into the corporate layer with the full name when the data collection is complete.

You can also create an alias for each layer that is a truncated version. The alias will appear in ArcPad.

- ***What should I do if I can't figure out where a particular layer should go or what it should be called?***

If you can't tell from this guidance document how to name a layer, you should temporarily place the layer in the "OTHER" category with a name of your choosing. Then email your regional GIS coordinator to let him/her know what layer needs to be added to the guidance. A national group under the GIS Council will review all suggestions and work to update the document on a yearly basis.

- ***If I see a layer name that just doesn't make sense to me, should I ignore it and name the layer how I want?***

This is guidance, not a standard. You are free to name layers as you like. However, it is strongly recommended that you document where and how you deviate from the guidance, so that future GIS specialists in your park or office will have some reference to turn to.

- ***Some data, like buildings and historic buildings, fits into more than one category. How should I deal with that?***

The layer naming conventions don't prescribe any particular data management practices. It's generally good practice to avoid layers that duplicate features, but sometimes the effort is not worth the benefit. Some parks and regions may store historic buildings in both the CULT and FACILITY categories, while others may store such features in only one of those categories.

National Park Service – Draft Layer Naming Conventions

- ***Where does planning data go?***

Some approved boundaries, such as new administrative zones, should be placed in the BND category. Other planning layers that are not part of the corporate database should remain in a separate project database.

- ***Where does interpretive data go?***

There is no separate category for interpretive data. Layers used in interpretive displays should be stored in the relevant existing categories.

- ***Where does marine data go?***

There is no separate category for marine data. Layers related to marine resources should be stored in the relevant existing categories. For example, marine mammals should be under the MAMMAL category, and coral should be under the INVERT category. It's recognized that combining terrestrial and marine data is somewhat contrary to tradition, but including a separate category for marine data would likely lead to greater confusion about where specific data, such as intertidal resources, should go. Breaking biological data into categories by taxonomy rather than by ecosystem prevents a great deal of category overlap.

- ***Where do monitoring points go?***

If a monitoring site is used for a single species or a specific group that clearly falls within an existing biological category (MAMMAL, HERP, VEG, etc.) then it should be in that category. If the monitoring site is used for multiple species that cross those categories, then it should be placed in the ECO category.

- ***Should I store orthoimagery or photographs in this structure?***

It's not recommended to store digital photos in a geodatabase, but if you choose to do so, they should be under the PHOTO category. Orthoimagery should be stored in the IMG category, but may be used more effectively if it's in its own geodatabase.

- ***How should I store NHD data and other data from outside sources?***

There are advantages to keeping NHD data in its native format to make use of various database-specific tools. As such, you may want to keep a copy of NHD as is. However, there may also be layers extracted from NHD, such as streams and lakes, that you will want to keep in your primary corporate database. Those layers would fit into the naming conventions in this document.

This approach of keeping some external data in separate geodatabases or other structures may apply to some other databases as well, though it is generally advised to store as much of your commonly-used data in a single structure using these naming conventions.

