

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Oregon State Office  
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Portland, Oregon 97208**

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EMS TRANSMISSION 06/15/2000  
Instruction Memorandum No. OR-2000-063  
Expires: 9/30/2001

To: DMs, DSDs, Staff and Branch Chiefs  
From: State Director  
Subject: Geographic Coordinates Spatial Data Standard

Attached is the final Geographic Coordinates (GCD) GIS layer data standard. All GCD data collection is to conform to this standard. Included within the data standard is the data collection and maintenance protocols and the quality control procedures to be used with this layer. No field review was conducted as part of this standard development since this is simply documentation of existing practice.

Transactional update tools have been developed. Field offices may begin initiating transactions as soon as a completed library access form (OR9167-5) and the name of the field office data steward have been provided to the State Office (OR955.2). The library access form may be accessed via the OR/WA Geospatial web site at: [http://web.or.blm.gov/gis/docs/maplayer\\_request.pdf](http://web.or.blm.gov/gis/docs/maplayer_request.pdf)

If you have any questions about this standard or the update procedures contact one of the following:

TITLE	NAME	PHONE NUMBER	EMAIL ADDRESS
State Data Steward	Marc Thomas	503-952-6151	m2thomas@or.blm.gov
State Data Administrator	Stanley Frazier	503-952-6009	sfrazier@or.blm.gov
GIS Technical Support	Mary Harrison	503-952-6617	mjharris@or.blm.gov

Signed by

Authenticated by

1 Attachment  
1 - Geographic Coordinates Final Data Standard (6 pp)

Distribution  
WO500 - C. Ridge (Rm 775, LS)

**Geographic Coordinates Spatial Data Standard**

Date: 05/30/2000

<b>Project Name:</b>	SPATIAL DATA STANDARDS		
<b>Project Code:</b>	SDS		
<b>Name:</b>	Geographic Coordinate Points		
<b>Code:</b>	GCD		
<b>Label:</b>			
<b>Author:</b>	Data Administration		
<b>Version:</b>			
<b>Created On:</b>	07/10/1998 2:15 PM	<b>Modified On:</b>	05/30/2000 3:22 PM

## LAYER DESCRIPTION

This layer contains the points generated from the Geographic Coordinate Data Base (GCDB). These form the basis for land parcels.

## SECURITY

This layer does not contain any sensitive information that might be withheld under the Freedom of Information Act and is generally considered releasable to the public.

## DATA STEWARD

The State Data Steward for the Geographic Coordinates Database layer is: Marc Thomas, Oregon State Office(503) 952-6151

## DATA COLLECTION AND MAINTENANCE PROTOCOLS

**Accuracy Requirements:** A wide range of positional accuracy is reflected within the Geographic Coordinate Data (GCD) theme. The accuracy field within the Point Attribute Table contains feature level horizontal positional accuracy information stratified into 14 categories (see the attribute definition for PTRELIABILITY for a description of the categories).

**Update Transactions:** The unit of processing for updating the GCD is the 7.5 minute quadrangle. Updating will be performed by the District Cadastral Survey staff for the westside, and the State Office GCDB (Geographic Coordinate Data Base) staff for the eastside. This means that tile based transactions will be initiated by editors within the districts or state office to update the theme. Editors will "check-out" their districts GCD points. They will then add, delete, or modify points prior to "check-in". Utilities within OR/WA BLMs Updatetools User Interface are used to perform these transactions processes.

**Update Frequency:** Once the GCD theme has been created for a district it is the responsibility of the District Data Steward (westside) or the State Office GCDB staff (eastside) to ensure that the theme remains current. Bringing the theme up to a current level should take place at least once per year if not more frequently. This update cycle should begin and end at the start of the fiscal year.

## QUALITY CONTROL

**Transaction Level:** This level of quality control occurs when an update to the GCD theme has been completed and the resulting coverage is provided back for inclusion into the GIS corporate library. All text field data must be filled out in upper case. Upon check-in, all attributes are checked to assure that they conform to the data standard.

**Monitory Level QC:** Monitoring level quality control involves a periodic evaluation across the full extent of the GCD theme. The State Data Steward in conjunction with the District Data Stewards are responsible for reviewing the GCD theme at least once per year to assure that established protocols are being followed in the creation and maintenance of the theme. There is a wide variation in positional accuracy allowed within the theme. Evaluating the location of points requires a combination of checking positional accuracy (relating to true ground position) as well as accuracy relative to other features within the GIS such as roads and other use lines. The latter may be more important in areas where positional reliability is greater than 40 feet. The State Data Steward should work with the GIS staff to develop monitoring level quality control plots and /or reports. Suggested checks include the following: (1) check for adequate spatial extent of coverate within each district, (2) check for vertical integration between the GCD theme and other reference themes such as LLI (Landlines), (3) check to validate that the theme is being kept current. In addition, the GCD theme metadata should be reviewed annually to ensure that it is up-to-date and accurately describes the theme.

## DATA ORGANIZATION/STRUCTURE

The data in this layer is organized as shown in the table below. The Arc/Info attribute table (.PAT) should be in the order shown. Following the table is the information about each attribute.

The Arc generated items (AREA, PERIMETER,GCD#, GCD-ID) are not shown.

### GCD POINTS (POINT ATTRIBUTE TABLE)

#### Attribute List

Name	Code	Type
TOWNSHIP RANGE CODE	TWNRNG	A12
POINT IDENTIFICATION NUMBER	POINT-ID	A7
POINT SOURCE NAME	PTSOURCE	A4
POINT RELIABILITY DATE	PTDATE	D
POINT RELIABILITY CODE	PTRELIABILITY	A2
CORNER IDENTIFICATION NUMBER	CORNER-ID	A19

### TOWNSHIP RANGE CODE (TWNRNG)

#### Description

[Required]

A compound attribute showing both Township (Tier) and Range for a particular polygon. A township is defined as a Public Land Survey System unit of land north or south of a baseline. A range is defined as a Public Land Survey System unit of land east or west from a Principal Meridian.

FOIA Category: Public

#### Annotation

The LR2000 code of the township, which is defined as: 000XZY000XZY;

000 = whole township (or range) numbers, right justified

X = fractional township (range) with 1= 1/4 township (or range)

2= 1/2 township (or range)

3= 3/4 township (or range)

0= not a fractional township (or range)

Z = indicator of duplicate township/range

0=default

A=duplicate

Y = direction from the baseline (N or S) for townships and direction from the principal meridian (E or W) for range

Note: BLM Cadastral Survey does not recognize 1/4 and 3/4 townships.

## POINT IDENTIFICATION NUMBER (POINT-ID)

### Description

[Required]

A unique identification number for each point within a township and is used in conjunction with TWNRNG to uniquely identify a point (see CORNER-ID).

FOIA Category: Public

## POINT SOURCE NAME (PTSOURCE)

### Description

[Optional]

The type of survey that created the point.

FOIA Category: Public

### List of Values

PCCS = Original WODDB coordinates

GCDB = Coordinates derived as part of the GCDB project

GPS1 = Resource grade GPS (differentially corrected)

GPS2 = Cadastral grade GPS (differentially corrected)

DLG3 = USGS digital line graph data

SURV = From other survey data (county, private, etc)

ADJT = Partial township adjustment

OTHR = Other

## POINT RELIABILITY DATE (PTDATE)

### Description

[Optional]

The date of the point reliability (MMDDYYYY)

FOIA Category: Public

## POINT RELIABILITY CODE (PTRELIABILITY)

### Description

[Optional]

A classification of the reliability of the point coordinates.

FOIA Category: Public

## List of Values

0 = Default/unknown  
1 =1 foot or less  
2 =3 feet or less  
3 =10 feet or less  
4 =40 feet or less  
5 =100 feet or less  
6 =200 feet or less  
7 =300 feet or less  
8 =over 300 feet  
11=WODDB 1 foot or less  
12=WODDB 3 feet or less  
13=WODDB 30 feet or less  
14=WODDB 100 feet or less  
15=WODDB over 100 feet/unknown

## CORNER IDENTIFICATION NUMBER (CORNER-ID)

### Description

[Required]

A combination of TWRNRNG and POINT-ID in order to create an ID that is unique throughout the coverage (not just within one township). In ArcInfo this is a "redefined" item generated by concatenating TWRNRNG and POINT-ID

FOIA Category: Public