

**USDA Service Center Initiative
Geospatial Data Acquisition, Integration and Delivery
Business Re-engineering Project**

Data Themes - Outline - Landuse/Landcover California (GAP)

I. Acquisition

A. Data Source

1. Producer Information

a. Name

A vegetation/landcover map was constructed for the state of California using digital Thematic Mapper satellite data by the California Gap Analysis Program in cooperation with the United States Geological Survey (USGS) biological Resources Division.

b. Location of Headquarters

US Geological Survey
523 National Center
Reston, VA 20192 USA

USGS/BRD/GAP Analysis Program
530 S. Asbury St. Suite 1
Moscow, ID 83843

c. Internet Address

The internet address of the USGS is www.usgs.gov
The internet address of the Biological Resources Division is www.nbs.gov
The internet address of the National GAP Analysis Program is
www.gap.uidaho.edu/gap/

2. Publisher Information

a. Name

The vegetation/landcover map is published by the University of California's Biogeography Lab.

b. Location of Headquarters

University Of California
Biogeography Lab
Santa Barbara, CA

c. Internet Address

<http://www.biogoeg.ucsb.edu/>

3. Acquisition Information

a. Delivery Media

The California landcover data is available via anonymous file transfer protocol (ftp). It is also available on CD-ROM in ARC/INFO export file format. The CD-ROM can be ordered from the California Department of Fish and Game online at:

<http://www.dfg.ca.gov/whdab/gap.htm>

or, by calling:

Scott Wilson
California Department of Fish and Game
(916) 323-2970

- b. Download URL

http://www.biogeog.ucsb.edu/projects/gap/gap_data2.html

- c. Projected Data Availability Schedule

The statewide and regional landcover data for California is available now.

B. Standards Information

1. Geospatial Data Standard

- a. Standard Name and Steward Information

National GAP Analysis Project Standards

The Geospatial data contact is:
GAP Analysis Project
National Biological Survey
Idaho Cooperative Fish and Wildlife Research Unit
University of Idaho
Moscow, ID 83843

- b. Standard Version

Handbook for Gap Analysis

- c. Standard URL

<http://www.gap.uidaho.edu/GAP/AboutGAP/Handbook/Misc/Standards.html>

2. Metadata Standard

- a. Standard Name and Steward Information

Metadata Standards for Gap Analysis 09/05/1994 based upon the FGDC standards.

The Metadata contact is:

Dr. David Stoms
Department of Geography
University of California
Santa Barbara, CA 93106-4060
Voice Telephone: (805) 893-765
e-mail: stoms@geog.ucsb.edu

An HTML version of the GAP metadata standards is available at:
<http://www.gap.uidaho.edu/gap/handbook/meta.htm>
A current version of the FGDC Metadata Standards is available at:
<http://www.fgdc.gov/Metadata/Metadata.html>

b. Description of Metadata Captured

The metadata is available online at:
<http://www.biogeog.ucsb.edu/projects/gap/data/meta/landcovdd.html>

The sections of metadata include:
Identification Information
Data Quality Information
Spatial Data Organization Information
Spatial Reference Information
Entity and Attribute Information
Distribution Information
Metadata Reference Information
Contact Information
Layer Contents

c. Metadata Accuracy and Completeness Assessment

The metadata is complete.

C. Acquired Data Structure

1. Geospatial Data Format

a. Format (raster, vector, etc.)

The California landcover map is acquired as a spatial vector ARC/INFO export file with NONE compression option. Export file then compress with gzip.

Transfer size: 24.6 Mb in gzip compressed format; 109.3 Mb uncompressed

b. Format Name

ARC/INFO export file

c. Data Extent

State of California
West Bounding Coordinate: -124.5048
East Bounding Coordinate: -114.2648
North Bounding Coordinate: 41.988
South Bounding Coordinate: 32.4234

d. Horizontal and Vertical Resolution

Distance Resolution (meters): 50
Altitude Resolution (meters): not available

e. Absolute Horizontal and Vertical Accuracy

Not Available

f. Nominal Scale
1:100,000 or 100 hectare minimum mapping unit

g. Horizontal and Vertical Datum
NAD 83

h. Projection

Albers Conical Equal Area

Spheroid: Clarke1866

Parameters:

1st Standard Parallel: 34 0 0.000

2nd Standard Parallel: 40 30 0.000

Central Meridian: -120 0 0.00

Latitude of Projection's Origin: 0 0 0.00

False Easting (meters): 0.00000

False Northing (meters): -4000000.0000

i. Coordinate Units

Meters

j. Average Data Set Size

Not Available

k. Symbology

None

2. Attribute Data Format

a. Format Name

LANDCOV.PAT, as part of an ARC/INFO coverage

b. Database Size

Not Available

3. Data Model

a. Geospatial Data Structure

landcov.shp

landcov.shx

landcov.dbf

b. Attribute Data Structure

See Below

c. Database Table Definition

Attribute Information:

REGION SP1A

WHR1 SP1B

CROWN1 SP1C

WHR2	SP2A
CROWN2	SP2B
WHR3	SP2C
CROWN3	SP3A
WHRWET	SP3B
CNDDDB1	SP3C
PCT1	SPWA
CNDDDB2	SPWB
PCT2	SPWC
CNDDDB3	SPSA
PCT3	SPSB

d. Data Relationship Definition

The California landcover file describes the landcovers and land-uses within the state of California as derived from 1990 HAP photography, 1930's VTM Survey Maps, field visits, and large scale vegetation maps.

e. Data Dictionary

REGION	Jepson biophysical region of California
WHR1	Primary WHR habitat type
CROWN1	WHR canopy closure class of primary habitat type
WHR2	Secondary WHR habitat type
CROWN2	WHR canopy closure class secondary habitat type
WHR3	Tertiary WHR habitat type
CROWN3	WHR canopy closure class of tertiary habitat type
WHRWET	Presence or absence of 9 WHR wetland habitats
CNDDDB1	California Natural Diversity Data Base ("Holland") natural communities classification code of primary type
PCT1	Proportion of polygon covered by primary cover type
CNDDDB2	California Natural Diversity Data Base ("Holland") natural communities classification code of secondary type
PCT2	Proportion of polygon covered by secondary cover type
CNDDDB3	California Natural Diversity Data Base ("Holland") natural communities classification code of tertiary type
PCT3	Proportion of polygon covered by tertiary cover type
SP1A	Code for co-dominant species in cover type covering the largest fraction of the polygon (primary type)
SP1B	Code for co-dominant species in primary cover type
SP1C	Code for co-dominant species in primary cover type
SP2A	Code for co-dominant species in cover type covering the second largest fraction of the polygon (secondary type)
SP2B	Code for co-dominant species in secondary cover type
SP2C	Code for co-dominant species in secondary cover type
SP3A	Code for co-dominant species in cover type covering the third largest fraction of the polygon (tertiary type)
SP3B	Code for co-dominant species in tertiary cover type
SP3C	Code for co-dominant species in tertiary cover type
SPWA	Code for most widespread canopy species in the wetland portion of the polygon
SPWB	Code for second most widespread canopy species in the wetland portion of the polygon
SPWC	Code for third most widespread canopy species in the wetland portion of the polygon

SPSA	Code for a species of special concern either because it is narrowly endemic, threatened or endangered that is present in the polygon
SPSB	Code for a species of special concern either because it is narrowly endemic, threatened or endangered that is present in the polygon

D. Policies

1. Restrictions

- a. Use Constraints

None

- b. Access Constraints

None

- c. Certification Issues

None

2. Maintenance

- a. Temporal Information

None

- b. Average Update Cycle

Unknown

E. Acquisition Cost

1. Cooperative Agreement

- a. Description of Agreement

None

- b. Status of Agreement

None

2. Cost to Acquire Data

Data can be downloaded from the internet free of charge.

II. Integration

A. Value Added Process

1. Benefit to the Service Center

Conservation Priority Areas and Environmental Quality Improvement Program proposals need a landcover dataset to determine and prioritize resource concerns.

2. Process Model

- a. Flow Diagram

b. Process Description

- The ARC/INFO export file is downloaded from the GAP ftp site.
- This ARC/INFO export file can then be converted into an ARC/INFO coverage and shape file.
- Landcover data for a particular county can be selected and saved as a separate shape file.
- The county shape file can then be reprojected to agree with other spatial data.

3. Technical Issues

a. Tiling

The data is now in state and regional files. This would need to be clipped to a county tile.

b. Compression

All files are compressed with the public domain gzip function.

c. Scale

This data is meant to be used at a scale of 1:100,000 or smaller (such as 1:250,000 or 1:500,000) for the purpose of assessing the conservation status of vertebrate species and vegetation types over large geographic regions.

d. Tonal Matching

Not Applicable

e. Edge-matching

Not Applicable

4. Quality Control

a. Procedures

Because source information ranged widely in date and reliability, the current database is uneven in both level of detail and accuracy. We did not have the resources to assess the statistical accuracy of the land-cover/vegetation map and associated database.

b. Acceptance Criteria

See above.

5. Data Steward

a. Name and Organization

Dr. Frank Davis
Department of Geography
University of California
Santa Barbara, CA 93106-4060

b. Responsibilities

B. Integrated Data Structure

1. Geospatial Data Format

- a. Format (raster, vector, etc.)

Same as the source

- b. Format Name

ARC/INFO Shape file

- c. Data Extent

county

- d. Horizontal and Vertical Resolution

Same as the source

- e. Absolute Horizontal and Vertical Accuracy

Same as the source

- f. Nominal Scale

Same as the source

- g. Horizontal and Vertical Datum

NAD 83

- h. Projection

UTM

- i. Coordinate Units

Meters

- j. Symbology

None

2. Attribute Data Format

- a. Format Name

None

- b. Database Size

None

3. Data Model

- a. Geospatial Data Structure

- b. Attribute Data Structure
- c. Database Table Definition
- d. Data Relationship Definition
- e. Data Dictionary

C. Resource Requirements

1. Hardware and Software

To acquire the landcover dataset, it requires a UNIX or NT machine with internet access.

2. Staffing

It requires one staff member approximately one hour to download one region and approximately one day to download the entire state from the ftp site.

D. Integration Cost

1. Hardware and Software

In order to reformat, reproject, and tile the data, the USDA requires: ARC/INFO on UNIX or NT, and Arcview.

2. Staffing

Unknown

III. Delivery

A. Specifications

1. Directory Structure

- a. Folder Theme Data is Stored In

2. File Naming Convention

- a. List of Theme Files and The File Naming Convention

B. User Information

1. Accuracy Assessment

- a. Alignment with Other Theme Geospatial Data
- b. Content

2. Appropriate Uses of the Geospatial Data

- a. Display Scale
- b. Plot Scale
- c. Area Calculations

- d. Decision Making

C. Maintenance and Updating

1. Recommendations and Guidelines

- a. Frequency of Updates
- b. Location for the Theme Data to be Maintained
- c. Maintenance and Updating Procedures Overview