

## r206\_dmg

**Data format:** Shapefile

**File or table name:** r206\_dmg

**Coordinate system:** Universal Transverse Mercator

**Theme keywords:** aerial survey, aerial detection survey, forest insect pests, forest disease pests, damage causal agent, tree mortality, tree damage, forest health, forest health management, forest health protection, forest health monitoring, USDA Forest Service

**Abstract:** 2006 USDA Forest Service, Rocky Mountain Region Aerial Detection Survey Data. This data depicts the occurrence and location of forest insect, disease, and other biotic and abiotic causes of tree mortality and tree damage. Aerial survey data is collected by observing areas of tree damage or tree mortality from an aircraft and manually recording the information onto a map. Due to the nature of aerial surveys, this data will only provide rough estimates of location, intensity and the resulting trend information for agents detectable from the air. Many of the most destructive diseases are not represented in the data because these agents are not detectable from aerial surveys. The data presented should only be used as a partial indicator of insect and disease activity, and should be validated on the ground for actual location and casual agent. The accompanying "area flown/ not flown" GIS data set entitled "r206\_fln" should be used in conjunction with this data set. This "area flown/ not flown" data set provides information on the spatial extent of the aerial survey for that particular year. A companion handbook entitled "Aerial Survey Geographic Information System Handbook" should be obtained before using this data set. The handbook is available online at: <http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>. This handbook also serves as a data dictionary necessary for deciphering numeric field codes.

### FGDC and ESRI Metadata:

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Metadata elements shown with blue text are defined in the Federal Geographic Data Committee's (FGDC) [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#). Elements shown with green text are defined in the [ESRI Profile of the CSDGM](#). Elements shown with a green asterisk (\*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

### Identification Information:

**Citation:**

**Citation information:**

**Originators:** USDA Forest Service, Rocky Mountain Region, Forest Health

Management

**\*Title:**

r206\_dmg

**\*File or table name:** r206\_dmg

**Publication date:** December 10, 2006

**\*Geospatial data presentation form:** vector digital data

**Online linkage:** <http://www.fs.fed.us/r2/resources/fhm/aerialsurvey/>

**Larger work citation:**

**Citation information:**

**Originators:** USDA Forest Service, Rocky Mountain Region, Forest Health Management

**Title:**

Annual Aerial Detection Overview Survey

**Publication date:** 1950 to present

**Edition:** 2006

**Geospatial data presentation form:** vector digital data

**Online linkage:**

<http://www.fs.fed.us/r2/resources/fhm/aerialsurvey/>

**Description:**

**Abstract:**

2006 USDA Forest Service, Rocky Mountain Region Aerial Detection Survey Data. This data depicts the occurrence and location of forest insect, disease, and other biotic and abiotic causes of tree mortality and tree damage. Aerial survey data is collected by observing areas of tree damage or tree mortality from an aircraft and manually recording the information onto a map.

Due to the nature of aerial surveys, this data will only provide rough estimates of location, intensity and the resulting trend information for agents detectable from the air. Many of the most destructive diseases are not represented in the data because these agents are not detectable from aerial surveys. The data presented should only be used as a partial indicator of insect and disease activity, and should be validated on the ground for actual location and casual agent.

The accompanying "area flown/ not flown" GIS data set entitled "r206\_fln" should be used in conjunction with this data set. This "area flown/ not flown" data set provides information on the spatial extent of the aerial survey for that particular year.

A companion handbook entitled "Aerial Survey Geographic Information System Handbook" should be obtained before using this data set. The handbook is available online at:

<http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>. This handbook also serves as a data dictionary necessary for deciphering numeric field codes.

**Purpose:**

Aerial survey data sets are created annually to provide trend information on forest insects, diseases, and other biotic and abiotic causes of tree mortality and

tree damage; referred to herein as "damage causal agents". Aerial surveys provide information on the current status for many causal agents, and are important when examining insect activity trends by comparing historical and current survey data over large areas.

**Supplemental information:**

Aerial survey data sets are created annually to provide trend information on forest insects, diseases, and other biotic and abiotic causes of tree mortality and tree damage; referred to herein as "damage causal agents". Aerial survey data is collected by observing areas of tree damage or tree mortality from an aircraft and manually recording the information onto a map. This procedure is considered both an art form and a form of scientific data collection, and is highly subjective. An observer only has a few seconds to recognize the color difference between healthy and damaged trees of different species; diagnose causal agents correctly; estimate intensity; delineate the extent of damage; and precisely record this information on a georeferenced map. Air turbulence, cloud shadows, distance from aircraft, haze, smoke, and observer experience can all affect the quality of the survey. These data sets provide estimates of conditions on the ground and may differ from estimates derived by other methods.

Aerial surveys provide information on the current status for many causal agents, and are important when examining insect activity trends by comparing historical and current survey data over large areas.

Overview surveys are a "snap shot" in time and therefore may not be timed to accurately capture the true extent or severity of a particular disturbance activity. Aerial surveys can be thought of as the first stage in a multi-stage sampling design. Other remote sensing approaches, including aerial photography, electro-optical sensors, and specially designed aerial surveys with modified flight patterns, can be used to more accurately delineate the extent and severity of a particular disturbance agent. The preceding methods are often more costly than overview surveys, and are generally reserved to address situations of sufficient environmental, economic, or political importance.

**\*Language of dataset:** en

**Time period of content:**

**Time period information:**

**Single date/time:**

**Calendar date:** 2006 (summer field season)

**Currentness reference:**

publication date

**Status:**

**Progress:** Complete

**Maintenance and update frequency:** As needed

**Spatial domain:**

**Bounding coordinates:**

**\*West bounding coordinate:** -110.300708

**\*East bounding coordinate:** -96.622389

**\*North bounding coordinate:** 46.224282

**\*South bounding coordinate:** 36.772541

**Local bounding coordinates:**

\***Left bounding coordinate:** 90325.286954  
 \***Right bounding coordinate:** 1149598.771562  
 \***Top bounding coordinate:** 5118967.255150  
 \***Bottom bounding coordinate:** 4094400.432914

**Keywords:**

**Theme:**

**Theme keywords:** aerial survey, aerial detection survey, forest insect pests, forest disease pests, damage causal agent, tree mortality, tree damage, forest health, forest health management, forest health protection, forest health monitoring, USDA Forest Service

**Theme keyword thesaurus:** None

**Place:**

**Place keywords:** Rocky Mountain Region, Colorado, Wyoming, South Dakota, Nebraska, Kansas, Region 2

**Temporal:**

**Temporal keywords:** 2006

**Access constraints:** The insect and disease data is available digitally from the USDA Forest Service, Rocky Mountain Region, Forest Health Management group. The cooperators reserve the right to correct, update, modify or replace GIS products. Using this data for purposes other than those for which it was intended may yield inaccurate or misleading results. The accompanying "area flown/ not flown" GIS data set entitled "r206\_fln" should be used in conjunction with this data set. This "area flown/ not flown" data set provides information on the spatial extent of the aerial survey for that particular year.

**Use constraints:**

The insect and disease data is available digitally from the USDA Forest Service, Rocky Mountain Region, Forest Health Management group. The cooperators reserve the right to correct, update, modify or replace GIS products. Using this data for purposes other than those for which it was intended may yield inaccurate or misleading results.

The accompanying "area flown/ not flown" GIS data set entitled "r206\_fln" should be used in conjunction with this data set. This "area flown/ not flown" data set provides information on the spatial extent of the aerial survey for that particular year.

**Point of contact:**

**Contact information:**

**Contact organization primary:**

**Contact organization:** USDA Forest Service, Rocky Mountain Region, Forest Health Management

**Contact position:** Aerial Survey Program Manager

**Contact address:**

**Address type:** physical address

**Address:**

USDA Forest Service

**Address:**

attn: Erik Johnson or Forest Health staff member

**Address:**

740 Simms Street

**City:** Golden

**State or province:** Colorado

**Postal code:** 80401

**Country:** USA

**Contact voice telephone:** 303.236.8001  
**Contact voice telephone:** 303.275.5061  
**Contact TDD/TTY telephone:** 800.659.2656  
**Contact facsimile telephone:** 303.236.9542  
**Contact facsimile telephone:** 303.275.5075

**Contact electronic mail address:** jross@fs.fed.us  
**Contact electronic mail address:** fjcross@fs.fed.us  
**Contact electronic mail address:** jharris@fs.fed.us

**Hours of service:** 09:00-16:00 MST

**Data set credit:**

USDA Forest Service, Rocky Mountain Region, Forest Health Management

**\*Native dataset format:** Shapefile

**\*Native data set environment:**

Microsoft Windows 2000 Version 5.0 (Build 2195) Service Pack 4; ESRI ArcCatalog 9.0.0.535

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## Data Quality Information:

**Lineage:**

**Process step:**

**Process description:**

Metadata imported.

**Source used citation abbreviation:**

C:\a\_data\airial\_survey\2005\r205\_dmg.shp.xml

**Process step:**

**Process description:**

Metadata imported.

**Source used citation abbreviation:**

C:\a\_data\airial\_survey\2005\r205\_dmg.shp.xml

**Process step:**

**Process description:**

Metadata imported.

**Source used citation abbreviation:**

C:\a\_data\airial\_survey\2006\r206\_dmg.shp.xml

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## Spatial Data Organization Information:

**\*Direct spatial reference method:** Vector

**Point and vector object information:****SDTS terms description:**

- \***Name:** r206\_dmg
- \***SDTS point and vector object type:** G-polygon
- \***Point and vector object count:** 28718

**ESRI terms description:**

- \***Name:** r206\_dmg
- \***ESRI feature type:** Simple
- \***ESRI feature geometry:** Polygon
- \***ESRI topology:** FALSE
- \***ESRI feature count:** 28718
- \***Spatial index:** FALSE
- \***Linear referencing:** FALSE

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**Spatial Reference Information:****Horizontal coordinate system definition:****Coordinate system name:**

- \***Projected coordinate system name:** NAD\_1983\_UTM\_Zone\_13N
- \***Geographic coordinate system name:** GCS\_North\_American\_1983

**Planar:****Grid coordinate system:**

- \***Grid coordinate system name:** Universal Transverse Mercator

**Universal Transverse Mercator:**

- \***UTM zone number:** 13

**Transverse mercator:**

- \***Scale factor at central meridian:** 0.999600
- \***Longitude of central meridian:** -105.000000
- \***Latitude of projection origin:** 0.000000
- \***False easting:** 500000.000000
- \***False northing:** 0.000000

**Planar coordinate information:**

- \***Planar coordinate encoding method:** coordinate pair

**Coordinate representation:**

- \***Abscissa resolution:** 0.002048
- \***Ordinate resolution:** 0.002048
- \***Planar distance units:** meters

**Geodetic model:**

- \***Horizontal datum name:** North American Datum of 1983
- \***Ellipsoid name:** Geodetic Reference System 80
- \***Semi-major axis:** 6378137.000000
- \***Denominator of flattening ratio:** 298.257222

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**Entity and Attribute Information:**

**Detailed description:**

\***Name:** r206\_dmg

**Entity type:**

\***Entity type label:** r206\_dmg  
\***Entity type type:** Feature Class  
\***Entity type count:** 28718

**Entity type definition:**

USDA Forest Service Region 2 2006 forest damage polygons

**Entity type definition source:**

Aerial Survey Geographic Information System Handbook (available online at: <http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>)

**Attribute:**

\***Attribute label:** FID  
\***Attribute alias:** FID  
\***Attribute definition:**  
Internal feature number.  
\***Attribute definition source:**  
ESRI

\***Attribute type:** OID  
\***Attribute width:** 4  
\***Attribute precision:** 0  
\***Attribute scale:** 0

**Attribute domain values:**

\***Unrepresentable domain:**  
Sequential unique whole numbers that are automatically generated.

**Attribute:**

\***Attribute label:** Shape  
\***Attribute alias:** Shape  
\***Attribute definition:**  
Feature geometry.  
\***Attribute definition source:**  
ESRI

\***Attribute type:** Geometry  
\***Attribute width:** 0  
\***Attribute precision:** 0  
\***Attribute scale:** 0

**Attribute domain values:**

\***Unrepresentable domain:**  
Coordinates defining the features.

**Attribute:**

\***Attribute label:** ID  
\***Attribute alias:** ID  
  
\***Attribute type:** Number  
\***Attribute width:** 11

**Attribute:**

**\*Attribute label:** CODE

**\*Attribute alias:** CODE

**Attribute definition:**

Region 2 pest code (see Coding Key for Forest Insect Disease Damage on Aerial Survey Maps USDA Forest Service Region 2 Aerial Survey Program). These are the pest codes that were used by Region 2 aerial surveyors while collecting data from the aircraft. THESE WERE THE ORIGINAL CODES DIGITIZED OFF OF PAPER MAPS OR RECORDED DIGITALLY FROM THE AIR. SOME CODES HAVE BEEN MODIFIED DURING SUBSEQUENT GROUND-TRUTHING ACTIVITIES. THE CHANGES ARE NOT REFLECTED IN THIS FIELD. PLEASE USE THE DCA1, DCA2, AND DCA3 FIELDS FOR QUERIES!

**Attribute definition source:**

Coding Key for Forest Insect Disease Damage on Aerial Survey Maps USDA Forest Service Region 2 Aerial Survey Program

**\*Attribute type:** String

**\*Attribute width:** 30

**Attribute:**

**\*Attribute label:** WEB\_CODE

**\*Attribute alias:** WEB\_CODE

**Attribute definition:**

Region 2 pest code (see Coding Key for Forest Insect Disease Damage on Aerial Survey Maps USDA Forest Service Region 2 Aerial Survey Program). These are the codes used to attribute aerial survey maps viewed on our website. Changes based on ground-truthing activities are represented in this field, however, IT IS STILL RECOMMENDED THAT QUERIES BE MADE USING THE DCA1, DCA2, AND DCA3 FIELDS.

**Attribute definition source:**

Coding Key for Forest Insect Disease Damage on Aerial Survey Maps USDA Forest Service Region 2 Aerial Survey Program

**\*Attribute type:** String

**\*Attribute width:** 30

**Attribute:**

**\*Attribute label:** SURVEY\_ID1

**\*Attribute alias:** SURVEY\_ID1

**Attribute definition:**

Year surveyed (0=2000, 99=1999, etc.)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** SURVEY\_ID2

**\*Attribute alias:** SURVEY\_ID2

**Attribute definition:**

Year surveyed (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

\***Attribute label:** SURVEY\_ID3

\***Attribute alias:** SURVEY\_ID3

**Attribute definition:**

Year surveyed (used only for polygons with three attributes).

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** DMG\_TYPE1

\***Attribute alias:** DMG\_TYPE1

**Attribute definition:**

Damage type (see Aerial Survey Geographic Information System Handbook, Appendix A)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** DMG\_TYPE2

\***Attribute alias:** DMG\_TYPE2

**Attribute definition:**

Damage type (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** DMG\_TYPE3

\***Attribute alias:** DMG\_TYPE3

**Attribute definition:**

Damage type (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** SEVERITY1

\***Attribute alias:** SEVERITY1

**Attribute definition:**

Severity of damage (see Aerial Survey Geographic Information System Handbook, Appendix A)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** SEVERITY2

**\*Attribute alias:** SEVERITY2

**Attribute definition:**

Severity of damage (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** SEVERITY3

**\*Attribute alias:** SEVERITY3

**Attribute definition:**

Severity of damage (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** PATTERN1

**\*Attribute alias:** PATTERN1

**Attribute definition:**

Pattern (currently not used by USFS Region 2)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** PATTERN2

**\*Attribute alias:** PATTERN2

**Attribute definition:**

Pattern (currently not used by USFS Region 2)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** PATTERN3

**\*Attribute alias:** PATTERN3

**Attribute definition:**

Pattern (currently not used by USFS Region 2)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

\***Attribute label:** TPA1

\***Attribute alias:** TPA1

**Attribute definition:**

Number of trees per acre (see Aerial Survey Geographic Information System Handbook, Appendix A)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 11

\***Attribute number of decimals:** 2

**Attribute:**

\***Attribute label:** TPA2

\***Attribute alias:** TPA2

**Attribute definition:**

Number of trees per acre (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 11

\***Attribute number of decimals:** 2

**Attribute:**

\***Attribute label:** TPA3

\***Attribute alias:** TPA3

**Attribute definition:**

Number of trees per acre (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 11

\***Attribute number of decimals:** 2

**Attribute:**

\***Attribute label:** NO\_TREES1

\***Attribute alias:** NO\_TREES1

**Attribute definition:**

Number of trees affected/ killed (see Aerial Survey Geographic Information System Handbook, Appendix A)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 7

**Attribute:**

\***Attribute label:** NO\_TREES2

\***Attribute alias:** NO\_TREES2

**Attribute definition:**

Number of trees affected/ killed (used only for polygons with more than

one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 7

**Attribute:**

\***Attribute label:** NO\_TREES3

\***Attribute alias:** NO\_TREES3

**Attribute definition:**

Number of trees affected/ killed (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A

\***Attribute type:** Number

\***Attribute width:** 7

**Attribute:**

\***Attribute label:** DCA1

\***Attribute alias:** DCA1

**Attribute definition:**

Damage-causing agent code. This is the most reliable field for queries pertaining to damage-causing agents and it is recommended over the R2 pest code or web code fields (see Aerial Survey Geographic Information System Handbook, Appendix A and Appendix E)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix E

\***Attribute type:** Number

\***Attribute width:** 5

**Attribute:**

\***Attribute label:** DCA2

\***Attribute alias:** DCA2

**Attribute definition:**

Damage-causing agent code (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix E

\***Attribute type:** Number

\***Attribute width:** 5

**Attribute:**

\***Attribute label:** DCA3

\***Attribute alias:** DCA3

**Attribute definition:**

Damage-causing agent code (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix E

\***Attribute type:** Number

\***Attribute width:** 5

**Attribute:**

\***Attribute label:** HOST1

\***Attribute alias:** HOST1

**Attribute definition:**

Host tree species code (see Aerial Survey Geographic Information System Handbook, Appendix A and Appendix F)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix F

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** HOST2

\***Attribute alias:** HOST2

**Attribute definition:**

Host tree species code (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix F

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** HOST3

\***Attribute alias:** HOST3

**Attribute definition:**

Host tree species code (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix F

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** FOR\_TYPE1

\***Attribute alias:** FOR\_TYPE1

**Attribute definition:**

Forest type code (see Aerial Survey Geographic Information System Handbook, Appendix A and Appendix G)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix G

\***Attribute type:** Number

\***Attribute width:** 4

**Attribute:**

\***Attribute label:** FOR\_TYPE2

**\*Attribute alias:** FOR\_TYPE2

**Attribute definition:**

Forest type code (used only for polygons with more than one attribute)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix G

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** FOR\_TYPE3

**\*Attribute alias:** FOR\_TYPE3

**Attribute definition:**

Forest type code (used only for polygons with three attributes)

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook, Appendix A and Appendix G

**\*Attribute type:** Number

**\*Attribute width:** 4

**Attribute:**

**\*Attribute label:** NOTES

**\*Attribute alias:** NOTES

**Attribute definition:**

Notes and comments

**Attribute definition source:**

Aerial Survey Geographic Information System Handbook

**\*Attribute type:** Number

**\*Attribute width:** 19

**\*Attribute number of decimals:** 11

**Attribute:**

**\*Attribute label:** AREA

**\*Attribute alias:** AREA

**\*Attribute type:** Number

**\*Attribute width:** 19

**\*Attribute number of decimals:** 11

**Attribute:**

**\*Attribute label:** PERIMETER

**\*Attribute alias:** PERIMETER

**\*Attribute type:** Number

**\*Attribute width:** 13

**\*Attribute number of decimals:** 1

**Attribute:**

**\*Attribute label:** Notes

**\*Attribute alias:** Notes

**\*Attribute type:** String

**\*Attribute width:** 254

**Attribute:**

- \***Attribute label:** HECTARES
- \***Attribute alias:** HECTARES
- \***Attribute type:** Number
- \***Attribute width:** 19
- \***Attribute number of decimals:** 11

**Attribute:**

- \***Attribute label:** Hectares
- \***Attribute alias:** Hectares
- \***Attribute type:** Float
- \***Attribute width:** 19
- \***Attribute number of decimals:** 11

**Attribute:**

- \***Attribute label:** ACRES
- \***Attribute alias:** ACRES
- Attribute definition:**  
Acres (calculated using XTOOLS)
- \***Attribute type:** Number
- \***Attribute width:** 13
- \***Attribute number of decimals:** 1

**Overview description:****Dataset overview:**

A companion handbook entitled "Aerial Survey Geographic Information System Handbook" should be obtained before using this data set. The handbook is available online at:  
<http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>. This handbook also serves as a data dictionary necessary for deciphering numeric field codes.

**Entity and attribute overview:**

While the companion handbook entitled "Aerial Survey Geographic Information System Handbook" (available at <http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>) should be obtained before using the dataset in order to decipher numeric field codes, some of the more common Region 2 DCA (damage causal agent) and host codes are listed as follows:

DCA NAME  
 11002 western pine beetle  
 11006 mountain pine beetle  
 11007 Douglas-fir beetle  
 11009 spruce beetle  
 11029 pine engraver  
 11030 Ips engraver beetles  
 11049 Douglas-fir engraver  
 11050 fir engraver  
 12040 western spruce budworm  
 12123 Douglas-fir tussock moth  
 12180 tent caterpillar

24022 Dutch elm disease  
 30000 Fire  
 50006 hail  
 50001 wind/tornado  
 70001 herbicides  
 70014 road salt  
 80001 aspen decline  
 80002 subalpine fir mortality  
 80003 five-needle pine mortality  
 80004 pinyon pine mortality

#### Hosts

1 = hardwoods  
 2 = softwoods  
 3 = hardwoods/softwoods  
 15 = white fir  
 19 = subalpine fir  
 68 = eastern redcedar  
 93 = Englemann spruce  
 101 = whitebark pine  
 105 = jack pine  
 106 = common pinyon  
 108 = lodgepole pine  
 113 = limber pine  
 122 = ponderosa pine  
 202 = Douglas-fir  
 313 = boxelder  
 462 = hackberry  
 740 = cottonwood, poplar  
 746 = quaking aspen  
 749 = narrowleaf cottonwood  
 814 = Gambel oak  
 823 = bur oak  
 970 = elm

Due to the difficulty of discerning dying whitebark pine from dying limber pine from the air, all of these polygons are originally coded as "5-needle pine mortality" by the sketchmapper. Later, the hosts for these polygons are determined using the following procedure:

1. Select potential whitebark sites: ("DCA1" = 80003 OR "DCA2" =80003 OR "DCA3" =80003) AND ("HOST1" = 101 OR "HOST2" = 101)
2. Potential whitebark sites fall within 50m of whitebark polygons from local vegetation datasets are recoded whitebark only.
3. Potential whitebark polygons that occur below 8,000 ft were recoded as limber pine only.
4. Remaining polygons (>8,000ft elevation and not within 50m of whitebark poly) were left as is (coded both 101 and 113) coded mixed- except changing TPA (and # of trees) to reflect a 50/50 split.

#### **Entity and attribute detail citation:**

Aerial Survey Geographic Information System Handbook  
 (<http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>)

#### **Entity and attribute detail citation:**

Coding Key for Forest Insect Disease Damage on Aerial Survey Maps

USDA Forest Service Region 2 Aerial Survey Program  
(contact Erik Johnson [ejohnson02@fs.fed.us](mailto:ejohnson02@fs.fed.us) or Jennifer Ross [jross@fs.fed.us](mailto:jross@fs.fed.us) for  
this document)

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## Distribution Information:

### Distributor:

#### Contact information:

##### Contact organization primary:

**Contact organization:** USDA Forest Service, Rocky Mountain Region,  
Forest Health Management

**Contact position:** Aerial Survey Program Manager

##### Contact address:

**Address type:** mailing and physical address

##### Address:

USDA Forest Service, Rocky Mountain Region

##### Address:

Erik Johnson (or Forest Health staff member)

##### Address:

740 Simms Street

**City:** Golden

**State or province:** Colorado

**Postal code:** 80401

**Country:** USA

**Contact voice telephone:** 303.236.8001

**Contact voice telephone:** 303.275.5061

**Contact TDD/TTY telephone:** 800.659.2656

**Contact facsimile telephone:** 303.236.9542

**Contact facsimile telephone:** 303.275.5075

**Contact electronic mail address:** [jross@fs.fed.us](mailto:jross@fs.fed.us)

**Contact electronic mail address:** [fjcross@fs.fed.us](mailto:fjcross@fs.fed.us)

**Contact electronic mail address:** [jharris@fs.fed.us](mailto:jharris@fs.fed.us)

**Hours of service:** 0900-1600 MST

**Resource description:** Downloadable Data

### Standard order process:

#### Digital form:

##### Digital transfer information:

\***Transfer size:** 12.652

\***Dataset size:** 12.652

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## Metadata Reference Information:

\***Metadata date:** 20061208

\***Language of metadata:** en

**Metadata contact:**

**Contact information:**

**Contact organization primary:**

**Contact person:** Erik Johnson

**Contact organization:** USDA Forest Service, Rocky Mountain Region,  
Forest Health Management

**Contact position:** Aerial Survey Program Manager

**Contact address:**

**Address type:** mailing and physical address

**Address:**

USDA Forest Service, Rocky Mountain Region

**Address:**

Erik Johnson (or Forest Health staff member)

**Address:**

740 Simms Street

**City:** Golden

**State or province:** Colorado

**Postal code:** REQUI80401

**Country:** USA

**Contact voice telephone:** 303.236.8001

**Contact voice telephone:** 303.275.5061

**Contact TDD/TTY telephone:** 800.659.2656

**Contact facsimile telephone:** 303.236.9542

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**Contact electronic mail address:** ejohnson02@fs.fed.us

**Contact electronic mail address:** jross@fs.fed.us

**Contact electronic mail address:** fjcross@fs.fed.us

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**Hours of service:** 0900-1600 MST

**Contact instructions:**

email preferred

\***Metadata standard name:** FGDC Content Standards for Digital Geospatial Metadata

\***Metadata standard version:** FGDC-STD-001-1998

\***Metadata time convention:** local time

**Metadata extensions:**

\***Online linkage:** <http://www.esri.com/metadata/esriprof80.html>

\***Profile name:** ESRI Metadata Profile

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