r294_dmg_shp

Metadata also available as

Metadata:

Identification_Information:
Citation:
Citation_Information:
Originator:
USDA Forest Service, Rocky Mountain Region, Forest Health Management
Publication_Date: January 15, 1995
Title: r294_dmg_shp
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage: <http://www.fs.fed.us/r2/resources/fhm/aerialsurvey/>
Larger_Work_Citation:
Citation_Information:
Originator:
USDA Forest Service, Rocky Mountain Region, Forest Health Management
Publication_Date: 1950 to present
Title: Annual Aerial Detection Overview Survey
Edition: 1994
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage:
<http://www.fs.fed.us/r2/resources/fhm/aerialsurvey/>
Description:
Abstract:
1994 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 "r294_flown" 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.

Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1994 (summer field season)
Currentness_Reference: publication date
Status:
Progress: Complete
Maintenance_and_Update_Frequency: As needed
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -108.839700
East_Bounding_Coordinate: -104.942085
North_Bounding_Coordinate: 39.433807
South_Bounding_Coordinate: 37.002969
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: aerial survey
Theme_Keyword: aerial detection survey
Theme_Keyword: forest insect pests
Theme_Keyword: forest disease pests
Theme_Keyword: damage causal agent
Theme_Keyword: tree mortality
Theme_Keyword: tree damage
Theme_Keyword: forest health
Theme_Keyword: forest health management
Theme_Keyword: forest health protection
Theme_Keyword: forest health monitoring
Theme_Keyword: USDA Forest Service
Place:

Place_Keyword: Rocky Mountain Region
Place_Keyword: Colorado
Place_Keyword: Wyoming
Place_Keyword: South Dakota
Place_Keyword: Nebraska
Place_Keyword: Kansas
Place_Keyword: Region 2

Temporal:

Temporal_Keyword: 1994

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 "r294_flown" 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 "r294_flown" 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_Person: Erik Johnson

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
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Contact_Electronic_Mail_Address: jharris@fs.fed.us
Hours_of_Service: 09:00-16:00 MST
Contact_Instructions: email is preferred

Data_Set_Credit:

USDA Forest Service, Rocky Mountain Region, Forest Health Management; Erik Johnson - Aerial Survey Program Manager.

Native_Data_Set_Environment:

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

Data_Quality_Information:

Lineage:

Process_Step:

Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\a_data\aerial_survey\1994\r294_dmg.shp.xml

Process_Step:

Process_Description: Metadata imported.
Source_Used_Citation_Abbreviation:
C:\a_data\aerial_survey\1994\r294_dmg.shp.xml

Process_Step:

Process_Description: Dataset copied.
Source_Used_Citation_Abbreviation:

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: G-polygon
Point_and_Vector_Object_Count: 1419

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
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: 0.000512
Ordinate_Resolution: 0.000512
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

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: r294_dmg_shp
Entity_Type_Definition: USDA Forest Service Region 2 1994 forest damage polygons
Entity_Type_Definition_Source:
Aerial Survey Geographic Information System Handboook (available online at: <http://www.fs.fed.us/foresthealth/publications/id/gishandbook.pdf>)
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI

Attribute_Domain_Values:
Unrepresentable_Domain:
Sequential unique whole numbers that are automatically generated.

Attribute:
Attribute_Label: ACRES
Attribute_Definition: Acres (calculated using XTOOLS)

Attribute:
Attribute_Label: STATUS

Attribute:
Attribute_Label: AREA

Attribute:
Attribute_Label: MODIFIER

Attribute:
Attribute_Label: PERIMETER

Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: SURVEY_ID1
Attribute_Definition: Year surveyed (0=2000, 99=1999, etc.)
Attribute_Definition_Source: Aerial Survey Geographic Information System Handbook

Attribute:
Attribute_Label: 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:
Attribute_Label: SURVEY_ID3
Attribute_Definition: Year surveyed (used only for polygons with three attributes).
Attribute_Definition_Source: Aerial Survey Geographic Information System Handbook

Attribute:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: PATTERN1
Attribute_Definition: Pattern (currently not used by USFS Region 2)
Attribute_Definition_Source:
Aerial Survey Geographic Information System Handbook, Appendix A

Attribute:
Attribute_Label: PATTERN2
Attribute_Definition: Pattern (currently not used by USFS Region 2)
Attribute_Definition_Source:
Aerial Survey Geographic Information System Handbook, Appendix A

Attribute:
Attribute_Label: PATTERN3
Attribute_Definition: Pattern (currently not used by USFS Region 2)

Attribute_Definition_Source:
Aerial Survey Geographic Information System Handbook, Appendix A

Attribute:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:

Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: 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:
Attribute_Label: NOTES
Attribute_Definition: Notes and comments
Attribute_Definition_Source: Aerial Survey Geographic Information System Handbook

Attribute:
Attribute_Label: DAMAGE94_

Attribute:
Attribute_Label: DAMAGE94_I

Attribute:
Attribute_Label: PEST

Overview_Description:
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

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 or Jennifer Ross jross@fs.fed.us for this document)

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

USDA Forest Service, Rocky Mountain Region, Forest Health Management

Contact_Person: Erik Johnson

Contact_Position: Aerial Survey Program Manager

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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

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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
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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: 0900-1600 MST
Contact_Instructions: email preferred
Resource_Description: Downloadable Data
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Transfer_Size: 0.837

Metadata_Reference_Information:
Metadata_Date: 20060628
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
USDA Forest Service, Rocky Mountain Region, Forest Health Management
Contact_Person: Erik Johnson
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

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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: 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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