

Identification_Information:

Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20050901

Title: Alley Spring Glade and Other Fires of Ozark National Scenic Riverways - 2005

Geospatial_Data_Presentation_Form:

Raster digital data.

Vector data are also available as ArcView Shape Files.

Publication_Information:

Publication_Place: Sioux Falls, South Dakota USA

Publisher: U.S. Geological Survey

Online_Linkage: <http://edc.usgs.gov>

Description:

Abstract:

The U.S. Geological Survey (USGS) has entered into a cooperative agreement with the National Park Service (NPS) to deliver satellite imagery and derivative products centered on major fires that impact national parks and other federal lands. This data set was compiled at the request of a federal land management agency and is part of a suite of products generated for a specific fire.

See the National Burn Severity Mapping web site at:

http://edc2.usgs.gov/fsp/severity/fire_main.asp

Purpose:

The purpose of this project is to develop a robust mapping methodology and consistent data products that allow federal land managers and fire ecologists to evaluate and compare burn severity within individual fires and between fires across various ecosystems. These products will help land managers to more effectively plan, implement and monitor fire recovery activities.

Supplemental_Information:

Fire Names (8): Alley Spring Glade, Long Bay, Denning Hollow, Campbell Point/Beaver Pond, Booming Shoals, Mill Mountain, Winding Stairs, Big Spring Ridge

Agency: National Park Service

Land Management Unit: Ozark National Scenic Riverways

Dates of Fires: 4/4/05, 3/15/05, 3/31/05; 2/26/04, 2/27/04, 4/4/04, 11/03/03, ???/??/??

Type of assessment: Initial, Initial, Initial, Extended Extended, Extended, Extended, ???

Acres within Fire Perimeters: 270, 1200, 400, 610, 1090, 970, 410, 630

Landsat Path and Row: 24/34

Pre-Fire Landsat Date/Scene ID:

Landsat 5; June 28, 2003 / LT5024034000317910

Post-Fire Landsat Date/Scene ID:

Landsat 5; June 1, 2005 / LT5024034000515210

Output Dataset Projection: UTM

UTM Zone: 15

Datum name: NAD83

Spheroid Name: GRS80

Image subset Corner Coordinate (center of upper left pixel, projection meters)

ULX: 611250 LRX: 695760

ULY: 4152870 LRY: 4067970

Image subset size:

#Rows: 2831

#Columns: 2828

Pixel size: 30 meters

Bounding Box:

North Lat: 37 30 58 N

South Lat: 36 44 18 N

East Long: 90 47 10 W

West Long: 91 45 13 W

Latitude and Longitude within Fire Perimeter:

	Latitude	Longitude
Alley Spring Glade	37 09 26 N	91 26 37 W
Long Bay	36 56 03 N	90 58 13 W
Denning Hollow	37 06 03 N	91 12 14 W
Campbell Point/Beaver Pond	36 57 07 N	90 58 49 W
Booming Shoals	37 10 51 N	91 09 31 W
Mill Mountain	37 07 07 N	91 12 02 W
Winding Stairs	37 05 30 N	91 11 36 W
Big Spring Ridge	36 57 39 N	90 59 54 W

Fire Perimeter: Individual shape files provided by park personnel and combined into single file.

For further information on NLAPS and Landsat TM data, please refer to the metadata documentation found on the USGS Clearinghouse website at:

<http://www.fgdc.gov/clearinghouse/clearinghouse.html>

Product List:

asdl05a_pretm.tif

June, 2003 Pre-Fire Landsat data subset (bands 1-5,7 Geo-TIFF format)

asdl05a_postm.tif

June, 2005 Post-Fire Landsat data subset (bands 1-5,7 Geo-TIFF format)

asdl05a_dnbr

Differenced Normalized Burn Ratio (DNBR) subset (16 bit ArcInfo GRID)

asdl05a_pi

Fire Perimeter (shape file)

asdl05a_hist.xls

DNBR pixel count within the fire perimeter (excel file)

d243406030605

June 2003 - June 2005 Full Scene DNBR (16 bit ArcInfo GRID)

Time_Period_of_Content:

Time_Period_Information:

Multiple_Dates/Times:

Single_Date/Time:

Calendar_Date: 20030628 (pre-fire image)

Single_Date/Time:

Calendar_Date: 20050404 (date fire began)

Single_Date/Time:

Calendar_Date: 20050315 (date fire began)

Single_Date/Time:

Calendar_Date: 20050331 (date fire began)

Single_Date/Time:

Calendar_Date: 20040226 (date fire began)

Single_Date/Time:

Calendar_Date: 20040227 (date fire began)

Single_Date/Time:

Calendar_Date: 20040404 (date fire began)

Single_Date/Time:

Calendar_Date: 20031103 (date fire began)

Single_Date/Time:

Calendar_Date: 20050601 (post-fire image)

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: as needed

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -91.45.13

East_Bounding_Coordinate: -90.47.10

North_Bounding_Coordinate: 37.30.58

South_Bounding_Coordinate: 36.44.18

Keywords:

Theme:

Theme_Keyword_Thesaurus: none

Theme_Keyword: burn mapping

Theme_Keyword: imagery

Theme_Keyword: fire

Theme_Keyword: Landsat

Theme_Keyword: National Park Service

Place:

Place_Keyword_Thesaurus: none

Place_Keyword: Ozark National Scenic Riverways

Place_Keyword: Alley Spring Glade

Place_Keyword: Long Bay

Place_Keyword: Denning Hollow

Place_Keyword: Campbel Point/Beaver Pond

Place_Keyword: Booming Shoals

Place_Keyword: Mill Mountain

Place_Keyword: Winding Stairs

Place_Keyword: Big Spring Ridge

Place_Keyword: Missouri

Access_Constraints: FTP data sets are available to any user.

Use_Constraints: There are no restrictions on use, except for reasonable and proper acknowledgement of information sources.

Point_of_Contact:

Contact_Information:

+001 605-594-6151 or (USA) 800-252-4547

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Position: CSR

Contact_Voice_Telephone: +001 605-594-6151

Contact_Address:

Address_Type: physical and mailing address

Address: 47914 252nd Street

City: Sioux Falls

State_or_Province: SD

Postal_Code: 57198-0001

Country: USA

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Contact_Voice_Telephone: +001 605-594-6151

Contact_Facsimile_Telephone: +001 605-594-6589

Contact_Electronic_Mail_Address: fsedc@usgs.gov

Hours_of_Service: 0800 - 1600 CT, M-F, -6 h GMT

Contact_Instructions: http://edc2.usgs.gov/fsp/severity/contact_us.asp

Data_Set_Credit: USGS and NASA

Native_Data_Set_Environment: Oracle, ERDAS Imagine, & ArcInfo

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

Three on-board calibrators (two solar, one internal) provide an absolute accuracy of 5 percent, excluding band 6.

Logical_Consistency_Report:

These Landsat data are collected from a nominal altitude of 705 kilometers in a near-polar, near-circular, sun-synchronous orbit at an inclination of 98.2 degrees, imaging the same 183-km swath of Earth's surface every 16 days.

The pixels representing the bands for the image are in the data set only once.

Completeness_Report: Fire perimeter was automated, (seed value 425, distance 325) with manual edits.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Energy reflected from Earth's surface passes through a whisk-broom scanning system and all-reflective optics before being collected by the solid-state detectors at the focal plane.

Lineage:

Process_Step:

Process_Description:

These data products are derived from Landsat Thematic Mapper data.

A pre-fire scene and a post-fire scene are analyzed to create a Differenced Normalized Burn Ratio (DNBR) image. The DNBR image portrays the variations of burn severity within the fire.

The Landsat images are terrain corrected and geometrically rectified to an Albers Conical Equal Area map projection using the National Landsat Archive Production System (NLAPS). The images are further processed to convert bands 1-5 and 7 to at-satellite-reflectance. The Normalized Burn Ratio (NBR) is computed for each date of imagery using the following formula:

$$(\text{Band 4} - \text{Band 7}) / (\text{Band 4} + \text{Band 7}) = \text{NBR}$$

The differenced NBR is computed by subtracting the post-fire NBR from the pre-fire NBR:

$$\text{PreNBR} - \text{PostNBR} = \text{DNBR}$$

Higher DNBR values are correlated with more severe burns. The DNBR image is evaluated to determine the threshold value between burned and unburned areas. The perimeter of the fire is delineated using the DNBR image. The DNBR image, the pre-fire and post-fire TM images, and a fire perimeter vector file are provided in digital format in the map projection used by the National Park Service.

Source_Used_Citation_Abbreviation: TM

Process_Date: 20050901

Source_Produced_Citation_Abbreviation: DNBR

Cloud_Cover: 10

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Position:

Principal Scientist

Land Cover Applications

Contact_Address:

Address_Type: mailing and physical address

Address:

47914 252nd Street

National Center EROS

City: Sioux Falls

State_or_Province: SD

Postal_Code: 57198-0001

Country: USA

Contact_Voice_Telephone: +001 605-594-6151
Contact_TDD/TTY_Telephone: +001 605 594-6933
Contact_Facsimile_Telephone: +001 605 594-6589
Contact_Electronic_Mail_Address: fsedc@usgs.gov
Hours_of_Service: 0800 - 1600 CT, M-F, -6 h GMT
Contact_Instructions: http://edc2.usgs.gov/fsp/severity/contact_us.asp

Distribution_Liability:

No warranty expressed or implied is made by the USGS regarding the use of the data, nor does the act of distribution constitute any such warranty.

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Format_Name: Geo-TIFF
Format_Version_Number: 1

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name: http://edc2.usgs.gov/fsp/severity/download_data.asp

Digital_Form:

Digital_Transfer_Information:

Format_Name: DNBR ArcInfo GRID

Format_Version_Number: 1

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name: http://edc2.usgs.gov/fsp/severity/download_data.asp

Digital_Form:

Digital_Transfer_Information:

Format_Name: shape file
Format_Version_Number: 1

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name: http://edc2.usgs.gov/fsp/severity/download_data.asp

Fees: No charge

Ordering_Instructions: <http://edc2.usgs.gov/fsp/severity/help.asp#ordering>

Turnaround: same day

Metadata_Reference_Information:

Metadata_Date: 20050922

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

USGS National Center EROS
Science & Applications Branch

Contact_Position:

Principal Scientist
Land Cover Applications

Contact_Address:

Address_Type: mailing and physical address

Address:

47914 252nd Street
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City: Sioux Falls

State_or_Province: SD

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Contact_Electronic_Mail_Address: fsedc@usgs.gov

Hours_of_Service: 0800 - 1600 CT, M-F, -6 h GMT

Contact_Instructions: http://edc2.usgs.gov/fsp/severity/contact_us.asp

Metadata_Standard_Name: Content Standard for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Access_Constraints: none

Metadata_Use_Constraints: none