

Identification\_Information:

Citation:

Citation\_Information:

Originator: U.S. Geological Survey

Publication\_Date: 20040801

Title: Poktovich Creek and Sisiak Creek Fires of Noatak National Preserve - 2004

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](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: Poktovich Creek and Sisiak Creek

Agency: National Park Service

Land Management Unit: Noatak National Preserve

Date of Fire: Poktovich Creek: 6/11/2004

Sisiak Creek: 6/14/2004

Type of assessment: Extended Assessment

Acres within Fire Perimeter: Poktovich Creek: 300

Sisiak Creek: 310

Landsat Path and Row: 80/12

Pre-Fire Landsat Date/Scene ID:

Landsat 7; July 27, 2002 / LE7080012000220850

Post-Fire Landsat Date/Scene ID:

Landsat 7; July 3, 2005 / LE7080012000518450

Output Dataset Projection: Alaska Albers

Spheroid Name: GRS80

Datum Name: NAD83

Latitude of first standard parallel: 55 00 00 N

Latitude of second standard parallel: 65 00 00 N

Longitude of central meridian: 154 00 00 W

Latitude of origin of projection: 50 00 00 N

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

ULX: -335790 LRX: -253770

ULY: 2040450 LRY: 1983510

Image subset size:

#Rows: 1899

#Columns: 2735

Pixel size: 30 meters

Bounding Box:

North Lat: 68 10 53 N

South Lat: 67 40 14 N

East Long: 160 01 10 W  
West Long: 161 56 56 W  
Latitude and Longitude within Fire Perimeter:  
                    Latitude        Longitude  
Poktovik Creek:    68 00 54 N    161 14 08 W  
Sisiak Creek:      67 54 49 N    160 36 25 W

Fire Perimeter: Perimeters were manually digitized from Landsat Imagery

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:

posi04b\_pretm.tif  
Pre-Fire Landsat data subset (bands 1-5,7 Geo-TIFF format)

posi04b\_postm.tif  
Post-Fire Landsat data subset (bands 1-5,7 Geo-TIFF format)

posi04b\_dnbr  
Differenced Normalized Burn Ratio (DNBR) subset (ArcInfo GRID)

posi04b\_pi  
Fire Perimeter (shape file)

posi04b\_hist.xls  
DNBR pixel count within the fire perimeter (excel file)

d801207020705  
Full Scene DNBR (ArcInfo GRID)

Time\_Period\_of\_Content:

Time\_Period\_Information:

Multiple\_Dates/Times:

Single\_Date/Time:

Calendar\_Date: 20020727 (pre-fire image)

Single\_Date/Time:

Calendar\_Date: 20040611 (date Poktovik Creek fire began)

Single\_Date/Time:

Calendar\_Date: 20040614 (date Sisiak Creek fire began)

Single\_Date/Time:

Calendar\_Date: 20050703 (post-fire image)

Currentness\_Reference: ground condition

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: as needed

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -161.56.56

East\_Bounding\_Coordinate: -160.01.10

North\_Bounding\_Coordinate: 68.10.53

South\_Bounding\_Coordinate: 67.40.14

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: Noatak National Preserve

Place\_Keyword: Poktovich Creek

Place\_Keyword: Sisiak Creek

Place\_Keyword: Alaska

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

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Contact\_Address:

Address\_Type: physical and mailing address

Address: 47914 252nd Street

City: Sioux Falls

State\_or\_Province: SD

Postal\_Code: 57198-0001

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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](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: 20050801

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

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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](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](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](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](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: 20050817  
Metadata\_Contact:  
Contact\_Information:  
Contact\_Organization\_Primary:  
Contact\_Organization:  
USGS National Center EROS  
Science & Applications Branch  
Contact\_Position:  
Principal Scientist  
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Contact\_Address:  
Address\_Type: mailing and physical address  
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47914 252nd Street  
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Contact\_Electronic\_Mail\_Address: [fsedc@usgs.gov](mailto: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](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