Identification_Information:
  Citation:
    Citation_Information:
      Originator: USDA Forest Service
      Publication_Date: February 2005
      Title: Summit Fire occuring on the Inyo National Forest - 2003
      Geospatial_Data_Presentation_Form: raster digital data
      Publication_Information:
        Publication_Place: Sioux Falls, South Dakota USA
        Publisher: U.S. Geological Survey
      Online_Linkage: http://edc.usgs.gov
  Description:
    Abstract: These data products are derived from Landsat Thematic Mapper data. The pre-fire and post-fire subscenes included were used to create a Differenced Normalized Burn Ratio (DNBR) image. The DNBR image portrays the variation of burn severity within a fire. See the National Burn Severity Mapping web site at: http://edc2.usgs.gov/fsp/severity/fire_main.asp for information on details on fire severity mapping procedures.
    Purpose: These data were created by the USDA Forest Service fire and fuels monitoring project to support monitoring of wildland fire and fire regimes. These data will allow better understanding of current fire regimes, improve the accuracy of fire perimeter data, and add spatial data on fire severity and complexity.
    Supplemental_Information:
      Fire Name: Summit Fire
      Agency: US Forest Service
      Land Management Unit: Inyo National Forest
      Date of Fire: August 25, 2003
      NIFMID Link (link to Forest Service fire history database): USF05042003000052
      Type of assessment: Extended
      Acres within Fire Perimeter as determined from the dNBR: 5977
      Landsat Path and Row: 41/35
      Pre-Fire Landsat Date/Scene ID: Landsat 5; August 22, 2003
      Post-Fire Landsat Date/Scene ID: Landsat 5; August 8, 2004
      Fire Perimeter: Hand edited original Region 5 fire history database perimeter using TM data.
      Output Dataset Projection: UTM
      UTM Zone: 11
      Spheroid Name: Clarke 1866

      Product List:

      summ03b_pretm.tif
      Pre-Fire Landsat reflectance data subset, scaled by 400 and converted to integer(bands 1-5, 7 Geo-Tiff format)

      summ03b_postm.tif
      Post-Fire Landsat reflectance data subset, scaled by 400 and converted to integer(bands 1-5, 7 Geo-Tiff format)

      summ03b_dnbr
      Differenced Normalized Burn Ratio (DNBR) subset (ArcInfo Grid)

      summ03b_pr
      Fire perimeter updated by hand digitzing DNBR(shape file)

  Time_Period_of_Content:
    Time_Period_Information:
      Multiple_Dates/Times:
        Single_Date/Time:
          Calendar_Date: August 22, 2003 (pre-fire image)
        Single_Date/Time:
          Calendar_Date: August 25, 2003 (date fire began)
        Single_Date/Time:
          Calendar_Date: August 8, 2004 (post-fire image)

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    Currentness_Reference: ground condition
  Status:
    Progress: Evaluation of methods in process
    Maintenance_and_Update_Frequency: As needed
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: none
      Theme_Keyword: Wildland Fire
      Theme_Keyword: Normalized Burn Ration (NBR)
      Theme_Keyword: Fire Severity
      Theme_Keyword: USDA Forest Service
      Theme_Keyword: Landsat
    Place:
      Place_Keyword_Thesaurus: none
      Place_Keyword: Inyo National Forest
      Place_Keyword: California
      Place_Keyword: Summit Fire
  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.
  Data_Set_Credit: USDA Forest Service
  Native_Data_Set_Environment: ERDAS Imagine, ARCInfo
Data_Quality_Information:
  Positional_Accuracy:
    Horizontal_Positional_Accuracy:
      Horizontal_Positional_Accuracy_Report: These data were terrain corrected using a USGS
digital elevation model with less than 1/2 pixel RMS error.
  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 variation of burn severity within the fire.

        The pre- and post-fire Landsat images are terrain corrected and geometrically rectified to
the UTM projection. The images are further processed to convert bands 1-5 and 7 to at-sensor-
reflectance. The Normalized Burn Ratio (NBR) is computed for each date of imagery using the
following formula:
        (Band 4 - Band 7) / (Band 4 + Band 7) = NBR

        The differenced NBR is computed by subtracting the post-fire NBR from the pre-fire NBR:
        PreNBR - PostNBR = 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 fire
perimeter vector file are provided in digital format.

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Raster
  Raster_Object_Information:
    Row_Count: 477
    Column_Count: 448
    Vertical_Count: 1
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Planar:
      Grid_Coordinate_System:
        Grid_Coordinate_System_Name: Universal Transverse Mercator
        Universal_Transverse_Mercator:
          UTM_Zone_Number: 11
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      Planar_Coordinate_Information:
        Planar_Coordinate_Encoding_Method: row and column
        Coordinate_Representation:
          Abscissa_Resolution: 30.000000
          Ordinate_Resolution: 30.000000
        Planar_Distance_Units: meters
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flattening_Ratio: 294.978698
Distribution_Information:
  Resource_Description: Downloadable Data
Metadata_Reference_Information:
  Metadata_Date: February 2005
  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: USDA Forest Service, Region 5, Fire, Fuels and Aviation Mgmt.
        Contact_Person: Fire and Fuels Remote Sensing Specialist
      Contact_Address:
        Address_Type: 3237 Peacekeeper Way, Bldg. 200
        City: McClellan
        State_or_Province: California
        Postal_Code: 95652
      Contact_Voice_Telephone: 916-640-1000
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