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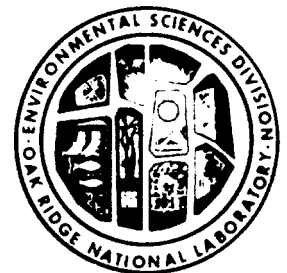
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GEOECOLOGY: A County-Level Environmental Data Base for the Conterminous United States

R. J. Olson
C. J. Emerson
M. K. Nungesser

ENVIRONMENTAL SCIENCES DIVISION
Publication No, 1537

OPERATED BY
UNION CARBIDE CORPORATION
FOR THE UNITED STATES
DEPARTMENT OF ENERGY



ABSTRACT

OLSON, R. J., C. J. EMERSON, and M. K. NUNGESSER. 1980. GEOECOLOGY: A County-level Environmental Data Base for the Conterminous United States. ORNL/TM-7351. Oak Ridge National Laboratory, Oak Ridge, Tennessee. 350 PP.

The Geoecology Data Base represents a unique compilation of computerized environmental data for research and development needs. Environmental assessment and planning for energy development require rapid access to data at appropriate spatial and temporal scales. In the Environmental Sciences Division (ESD) at Oak Ridge National Laboratory (ORNL), we have developed an integrated data base of diverse environmental resource information from extant sources. Data are stored at the county level of resolution for the conterminous United States with some data available for subcounty units within larger, more diverse eastern counties. The Geoecology Data Base contains selected data on terrain and soils, water resources, forestry, vegetation, agriculture, land use, wildlife, air quality, climate, natural areas, and endangered species. Basic files on human population are also included to complement the environmental files. Data are stored in metric-SI units. The Geoecology Data Base is currently fulfilling diverse ongoing research needs while it is being expanded and updated as needs and new data are identified.

This report is both a documentation and a "user's guide" to the Geoecology Data Base. It describes the Data Base design, illustrates applications, provides examples of accessing the Data Base, and gives general information on the data set contents. Appendix A documents each of the over 100 data sets including source of the data, spatial and temporal characteristics, variable names and labels, and, for many data sets, sample graphic or tabular materials generated from the data. An index of the 1000 variable names and labels is given in Appendix B. Appendix C lists PIPS codes, names, sizes, and centroids of the states, counties, and subcounty units used in the Data Base.

The Geoecology Data Base can be accessed in either batch or interactive modes utilizing the ORNL/IBM computer system. The Geoecology Project uses the Statistical Analysis System (SAS) for data storage, retrieval, and analysis. If the user knows SAS, the Data Base can be accessed with the information provided by this report. Maps and graphics are generated from the Data Base by using independent computer programs.

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AGRICULTURE (A) SECTOR OVERVIEW

The Agriculture Sector contains both crop and livestock data for counties based on state and federal inventories. Data set A04 contains statistics for major crops for 1975 with national coverage. These data are probably the most representative county estimates because they are based on annual surveys conducted for each county. The Census of Agriculture (used for A01 and A02) may have sampling errors due to survey techniques. Data for more years, more crops, and crops grown under irrigation are available on tapes. New data are added as they become available.

TITLE: A01 - CROP AREAS AND YIELDS, AG LAND USE

DESCRIPTION: Major crop areas, yields for selected crops, and major farmland-use statistics were obtained from the 1969 Census of Agriculture. Hectares of land harvested and kilograms yielded were included for corn, sorghum, wheat, hay, soybeans, peanuts, cotton, and tobacco. Areas devoted to vegetables, small grains, fruit orchards, berries and small fruits, potatoes, other miscellaneous crops, and nursery and greenhouses were included so that the sum of all areas equals the total cropland in the Census. Also included are total land area, large lakes, nonharvested cropland, grazed woodlands, and other land statistics. Totals for irrigated and fertilized land occurring within the various categories were included with amounts of water and fertilizer used. Data do not always accurately reflect county totals: information is withheld to maintain privacy; corporate farm holdings may be reported with the headquarters county and not the county in which the crops are located; and totals may not be properly corrected for nonrespondents of the mail questionnaire.

SOURCE(S): Breen, J. T. 1972. 1969 Census of Agriculture magnetic tape file. U. S. Department of Commerce, Bureau of the Census, Agriculture Division, Washington, DC.

REFERENCE(S): USDC 1969.

COMMENTS: Data tapes are available with approximately 500 crop and livestock types per county for 1949, 1954, 1959, 1964, and 1969. Data for North Dakota, South Dakota, Nebraska, Kansas, and the western states are not included in the data set but are available on tape.

YEAR(S): 1969	TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 2346	VARIABLES PER RECORD: 42
CREATED/UPDATED: Mar. 1980	NEW DATA: Every 5 years
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
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ALL_LAND	Approximate land area	ha
AREA_69	Total surface area - 1969 C of Ag	ha
BERRY_A	Berries and small fruits	ha
CORN_G_A	Corn for grain	ha
CORN_G_Y	Corn for grain yield	ha

CORN_S_A	Corn for silage or grazing	ha
COTTON_A	Cotton	ha
COTTON-Y	Cotton yield	kg
CROP_A	Cropland	ha
CRP_MS_A	Miscellaneous crops	ha
FARM_A	Farmland	ha
FERT_A	Total fertilized land	ha
FERT_AMT	Total fertilizer used (dry & liquid)	kg
FIPS_CO	FIPS county number	
FIPS_ST	FIPS state number	
FRUIT_A	Fruit orchards	ha
GRAIN-A	Small grains excluding wheat	ha
HARV_A	Harvested cropland	ha
HAY_A	Hay or grass silage	ha
HAY_Y	Hay or grass silage yield	kg
IRR_LAND	Irrigated land: cropland & pasture	ha
IRR_WATR	Irrigation water used	Cu m
LND_MS_A	Other land, pastured or not	ha
LRG_LAKE	Large lakes (>16 ha)	ha
NHARV_A	Nonharvested cropland	ha
NURSRY_A	Nursery and greenhouse products	ha
PASTR_A	Cropland used for pasture/grazing	ha
PASTR_T	Total pastureland - all types	ha
PEANUT_A	Peanuts for nuts	ha
PEANUT_Y	Peanuts for nuts yield	kg
POTAT_A	Potatoes	ha
SORG_G_A	Sorghum for grain	ha
SORG_G_Y	Sorghum for grain yield	kg
SORG_S_A	Sorghum for silage or grazing	ha
SOYBN_K	Soybeans for beans	ha
SOYBN_Y	Soybeans for beans yield	kg
TOBAC_A	Tobacco	ha
TOBAC_Y	Tobacco yield	kg
VEGET_A	Vegetables harvested for sale	ha
WHEAT_A	Wheat	ha
WHEAT_Y	Wheat yield	kg
WOODY_A	Woodland pastured or not	ha

TITLE: A02 - LIVESTOCK AND POULTRY INVENTORY/SALES

DESCRIPTION: Major livestock and poultry statistics of animal inventories and numbers sold were obtained from the 1969 Census of Agriculture. Data include inventories of cattle, pigs, sheep, chickens, turkeys, ducks and geese, and horses and ponies. Counts are also included for cows that have calved and milk cows, along with subtotals for chickens older than three months, hens and pullets, and broilers. Data have limitations because of survey and reporting methods - see A01 description.

SOURCE(S): Breen, J. T. 1972. 1969 Census of Agriculture magnetic tape file. U. S. Department of Commerce, Bureau of the Census, Agriculture Division, Washington, DC.

REFERENCE(S): USDC 1969.

COMMENTS: Data tapes are available with additional data for 1949, 1954, 1959, 1964, and 1969.

YEAR(S): 1969

TEMPORAL RESOLUTION: Annual

GEOCOVERAGE: East

SPATIAL RESOLUTION: County

STATUS: Online

DATA SET TYPE: Single

NUMBER OF RECORDS: 2289

VARIABLES PER RECORD: 24

CREATED/UPDATED: Mar. 1980

NEW DATA: Every 5 years

COMPILER: R J Olson

VARIABLE	LABEL AND UNITS OF MEASURE
BROILR_I	Broiler and meat chicken inventory
BROILR_S	Broiler and meat chicken sales
CATTLE_I	Cattle and calves inventory
CATTLE_S	Cattle and calves sales
CHICKN_I	Chickens inventory (older than 3 months)
CHICKN_S	Chickens sales (older than 3 months)
COW_CALF	Cows that have calved
COW_MILK	Milk cows inventory
COW_OTHR	Cows other than milk cows
FIPS_CO	FIPS county number

POULT_I	Ducks, geese and other poultry inventory
POULT_S	Ducks, geese and other poultry sales
SHEEP_I	Sheep and lambs inventory
SHEEP_S	Sheep and lambs sales
TURKEY_I	Turkey inventory
TURKEY_S	Turkey sales

TITLE: A0 4 - CROP PLANTED-HARVESTED AREAS AND YIELDS

DESCRIPTION: Statistics for land planted and harvested with associated crop yields and production were obtained from the Economics, Statistics, and Cooperative Services (ESCS), USDA, for the years 1972-1977. Data were extracted for 1975 crops of wheat, rye, rice, corn, oats, sorghum, cotton, tobacco, and peanuts crops. State statistical offices are responsible for county estimates. Data are used primarily by the Agricultural Stabilization and Conservation Service (ASCS) and Federal Crop Insurance Corporation (FCIC) .

SOURCE(S) : Barr, J. T. May, 1979. 1972-1977 County Crop Estimates magnetic tape. U. S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, Washington, DC.

COMMENT: If crop acreages are small within a county, county values may be withheld to protect privacy; however, Crop Reporting District or state statistics on the data tape include these values in the totals. Data for 1972 through 1977 are available on a magnetic tape.

YEAR(S):	1975	TEMPORAL RESOLUTION:	Annual
GEOCOVERAGE:	U. S.	SPATIAL RESOLUTION:	County
STATUS :	Online	DATA SET TYPE:	Multiple
NUMBER OF RECORDS:	13085	VARIABLES PER RECORD:	8
CREATED/UPDATED:	Mar. 1980	NEW DATA:	Every 10 years
COMPILER:	C J Emerson		

VARIABLE	LABEL AND UNITS OF MEASURE
CROP	Crop name
CROP_HRV	Crop harvested area ha
CROP_PLN	Crop planted area ha
CROP_PRD	Crop production for county kg
CROP_YLD	Crop yield, kg per area
FIPS_CO	PIPS county number
FIPS_ST	FIPS state number
YEAR	1975 year of ESCS estimate

TITLE: A05 - CROP REPORTING DISTRICT INDEX

DESCRIPTION: Crop Reporting Districts (CRD'S) are groupings of contiguous counties within states based on homogeneous agricultural practices. They are used in summarizing crop statistics.

SOURCE(S): Barr, J. T. May, 1979. 1972-1977 County Crop Estimates magnetic tape. U. S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, Washington, DC.

YEAR(S) :	1975	TEMPORAL RESOLUTION:	Currt
GEOCOVERAGE:	U. S.	SPATIAL RESOLUTION:	County
STATUS :	Online	DATA SET TYPE:	Index
NUMBER OF RECORDS:	3071	VARIABLES PER RECORD:	3
CREATED/UPDATED:	Mar. 1980	NEW DATA:	Not anticipated
COMPILER:	C J Emerson		

VARIABLE	LABEL AND UNITS OF MEASURE
CRD_CODE	Crop Reporting District code
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number

BASE DATA (B) SECTOR OVERVIEW

Basic data about the size and location of counties plus various index files are contained in the B Sector. Data set B01 defines the 3071 county units used as the primary spatial cells in the Geoecology Data Base. Data set B01SCU defines the 79 eastern counties that have been divided into 239 subcounty units based on size and environmental characteristics. Currently, index files for Air Quality Control Regions (AQCR'S) and Water Resource Council Subregions are available. The index files can be merged with other data sets by FIPS codes to aggregate counties into various regions for analysis.

TITLE: B01 - COUNTY CODES, NAMES AND CENTROIDS

DESCRIPTION: The primary 3071 county units for the 48 conterminous states utilized in the Geocology Data Base are defined. Included are FIPS codes, county names, land area, latitude/longitude location of the geographic centroid of each county, Visual Continuity Numbers (VCN), and National County Alphabetic Numbers (NCAN). Names and land area were obtained for 1970 from the 1972 County and City Data Book (USDC 1973a). Land area includes 'census water,' defined as lakes smaller than 16 ha and small streams. Centroids were calculated by averaging the latitude/longitude coordinates of the county outline obtained from Department of Transportation data. The VCN and NCAN indices are unique county codes used for digitization and display programs. VCN's were assigned to counties within states so that adjacent counties have consecutive numbers (Schreiber et al. 1974). NCAN's (1 to 3069) were assigned sequentially to alphabetical lists of counties within states arranged alphabetically. Since VCN's and NCAN's were created for a special application, not all 3071 counties were assigned codes. The county mnemonic codes are unique four-character codes derived from the county name. Data set B01SCU contains similar variables for the 79 counties in the east that have been subdivided into 239 subcounty units. It contains the additional variable SCU which is a letter designating the subcounty unit within a county.

SOURCE(S): FIPS codes and land areas: RUSTIC, Energy Division. 1975. 1972 County and City Data Book Magnetic Tape. Oak Ridge National Laboratory, Oak Ridge, TN.

NCAN's and VCN's: Assigned by the Geocology Project (see Schreiber et al. 1974).

County centroids: Calculated by the Geocology Project from the coordinates of county boundaries.

REFERENCE(S): Schreiber et al. 1974. USDC 1973a.

COMMENTS: See discussion on county units and listing of 3071 units in Appendix C. The SAS FORMAT statement may be used to substitute state and county names for FIPS codes (see section on Special Output Formats).

YEAR(S): 1970	TEMPORAL RESOLUTION: Current
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS: Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 3071	VARIABLES PER RECORD: 11
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated

TITLE: B06 - EPA AQCR INDICES

DESCRIPTION: This data set facilitates relating EPA county codes to FIPS county codes. Work at LBL (Deane Merrill) and BNL (Carmen Benkovitz) has created updated files for all EPA county and city codes along with EPA monitoring station latitude/longitude locations.

SOURCE(S): Merrill, D. 1977. EPA County Index Computer File. Lawrence Berkeley Laboratory, Berkeley, CA.

YEAR(S): 1975
GEOCOVERAGE: South
STATUS : Online
NUMBER OF RECORDS: 1388
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Current
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 6
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
AQCR	Air Quality Control Region number - EPA
EPA_CO	EPA county number
EPA_ST	EPA state number
FED_RGN	Federal region number
FIPSS_CO	FIPS county number
FIPS_ST	FIPS state number

CLIMATE (C) SECTOR OVERVIEW

The Climate Sector contains climatic data for county-subcounty units and State Climatic Divisions. Climatic data include monthly temperature ranges and total rainfall as well as potential evapotranspiration, moisture index, growing season and frost data, rainfall pH, and several indices. Most data were calculated from weather station data for the 30-year period 1941-1970. Additional detailed climatic data for longer periods of record are available on magnetic tapes.

Data sets C07-C10 were derived from the 1941-1970 monthly climatic norms for weather stations. Using the SYMAP program, station values were interpolated to determine county values for temperature and rainfall because there are many counties without weather stations. The algorithm to produce contour maps was used to estimate values for points on a grid using the irregularly spaced weather station data. County values were then obtained from the grid surface. Because no correction was made for elevation, caution is recommended when using data in mountainous areas. The resolution is adequate for regional studies. The county values were then used with the Thornthwaite (1948) equations to estimate potential evapotranspiration and moisture indices. Data sets C07SCU, C08SCU, C09SCU, and C10SCU contain data for subcounty units for the 79 larger eastern counties. The se data sets are not described separately in this section as they contain the same variables as data sets C07, C08, C09, and C10 plus the variable SCU.

State Climatic Divisions (SCD's) are areas within states with similar climate. There are 353 SCD's in the United States defined by the National Weather Service. Most follow county boundaries, but in mountainous areas the SCD's do subdivide counties. SCD names are available in C19 and counties within each SCD are defined in C17. C11-C16 contain monthly average temperature and rainfall norms for SCD's. The average, minimum, and maximum values were calculated for the period 1941-1970 from a file obtained from the National Climatic Center.

TITLE: 003 - AIR(AQCR) AND WATER(WRC-SA) INDICES

DESCRIPTION: Air and water regions are defined by naturally occurring airsheds and watersheds. These regions are approximated by Air Quality Control Regions (ANR's) and Water Resource Council Subareas (WRC-SA's) which consist of aggregations of counties. There are 247 AQCR's and 205 WRC-SA's. Air quality data are routinely provided by AQCR such as in K01. Water supply and demand data, both actual and projected, are provided by WRC-SA and the 10 larger water regions. Another definition of water regions (not currently included in 003) is used for water quality data. Water quality data are available for the 327 National Stream Quality Accounting Network (NASQAN) areas as in Q01.

SOURCE(S): Wilson, D. L. 1978. AQCR and WRC-SA Computer File. Computer Sciences Division, UCCND, Oak Ridge, TN.

REFERENCE(S): AQCR's: USEPA 1975.

WRC-SA's: Water Resources Council 1970.

YEAR(S): 1975	TEMPORAL RESOLUTION: Current
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Index
NUMBER OF RECORDS: 3105	VARIABLES PER RECORD: 5
CREATED/UPDATED : Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
AQCR	Air Quality Control Region number - EPA
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
WRCSA_75	Water Resource Council Subareas - 1975
WRCSA_76	Water Resource Council Subareas - 1976

VARIABLE	LABEL AND UNITS OF MEASURE
CO_AREA	Area of county excluding >16ha likes
CO_CODE	County mnemonic code
COUNTY	County name
FIPS_CO	FIPS county number
F I P S _ S T	FIPS state number
LATITUDE	Latitude of county centroid
LNGITUDE	Longitude of county centroid
NCAN	National County Alphabetic Number
NO_SCU	Number of subcounty units
ST	State code letters
SVCN	State Visual Continuity Number

TITLE: C07 - MONTHLY AVERAGE TEMPERATURES BY COUNTY

DESCRIPTION: Monthly average temperatures were estimated for the geographic centroid of county units. See Climate Overview for details on the estimation procedure.

SOURCE(S): Webb, T. 1976. Climatological Magnetic Tape File. Brown University, RI.

REFERENCE(S): Webb 1976, USDC 1973d.

COMMENTS: The estimation procedure did not adjust for elevation so caution should be used with data in mountainous areas.

YEAR(S): 1941-1970	TEMPORAL RESOLUTION: Norms
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 2660	VARIABLES PER RECORD: 15
CREATED/UPDATED : Mar. 1980	NEW DATA: Not anticipated
COMPILER: T Webb, III	

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_TEMP	Annual average temperature C degrees
APR_TEMP	April average temperature C degrees
AUG_TEMP	August average temperature C degrees
DEC_TEMP	December average temperature C degrees
FEB_TEMP	February average temperature C degrees
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
JAN_TEMP	January average temperature C degrees
JUL_TEMP	July average temperature C degrees
JUN_TEMP	June average temperature C degrees
MAR_TEMP	March average temperature C degrees
MAY_TEMP	May average temperature C degrees
NOV_TEMP	November average temperature C degrees
OCT_TEMP	October average temperature C degrees
SEP_TEMP	September average temperature C degrees

TITLE: C08 - MONTHLY AVERAGE PRECIPITATION BY COUNTY

DESCRIPTION: Monthly average rainfall totals were estimated for the geographic centroid of county units. See Climate Overview for details on the estimation procedure.

SOURCE(S): Webb, T. 1976. Climatological Magnetic Tape File. Brown University, RI.

REFERENCE(S): Webb 1976, USDC 1973d.

COMMENTS: The estimation procedure did not adjust for elevation so caution should be used with data in mountainous areas.

YEAR(S): 1941-1970	TEMPORAL RESOLUTION: Norms
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 2660	VARIABLES PER RECORD: 15
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: T Webb, III	

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_RAIN	Annual precipitation cm
APR_RAIN	April precipitation cm
AUG_RAIN	August precipitation cm
DEC_RAIN	December precipitation cm
FEB_RAIN	February precipitation cm
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
JAN_RAIN	January precipitation cm
JUL_RAIN	July precipitation cm
JUN_RAIN	June precipitation cm
MAR_RAIN	March precipitation cm
MAY_RAIN	May precipitation cm
NOV_RAIN	November precipitation cm
OCT_RAIN	October precipitation cm
SEP_RAIN	September precipitation cm

TITLE: C09 - MONTHLY POTENTIAL EVAPORATION BY COUNTY

DESCRIPTION: Monthly potential evapotranspiration (PE) values were calculated for the geographic centroid of county units. See Climate Overview for details on the data sources. Potential evapotranspiration is a calculated estimate of water loss from evaporation and plant transpiration. The Thornthwaite equation uses rainfall and average temperature with a latitudinal correction factor to calculate PE.

SOURCE(S): Webb, T. 1976. Climatological Magnetic Tape File. Brown University, RI.

REFERENCE(S): Webb 1976, Thornthwaite 1948.

COMMENTS: The estimation procedure did not adjust for elevation so caution should be used with data in mountainous areas.

YEAR(S): 1941-1970

TEMPORAL RESOLUTION: Norms

GEOCOVERAGE: East

SPATIAL RESOLUTION: County

STATUS: Online

DATA SET TYPE: Single

NUMBER OF RECORDS: 2660 VARIABLES PER RECORD: 15

CREATED/UPDATED: Mar. 1980 NEW DATA: Not anticipated

COMPILER: T Webb, III

VARIABLE	LABEL AND UNITS OF MEASURE	
ANN P E_	Annual potential evapotrans	cm
APR PE_	April potential evapotrans	cm
AUG P_ F^	August potential evapotrans	cm
DEC P_ E_	December potential evapotrans	cm
FEB PE_	February potential evapotrans	cm
FIPS -	FIPS county number	
FIPS~ST	FIPS state number	
JAN P E	January potential evapotrans	cm
JUL P_ F^~	July potential evapotrans	cm
JUN P_ E_	June potential evapotrans	cm
MAR P_ E_	March potential evapotrans	cm
MAY P_ E_	May potential evapotrans	cm
NOV PE^	November potential evapotrans	cm
OCTP-E^	October potential evapotrans	cm
SEPPE_	September potential evapotrans	cm

TITLE: C10 - MONTHLY MOISTURE INDEX BY COUNTY

DESCRIPTION: Monthly moisture index (MI) values were calculated for the geographic centroid of county units. See Climate Overview for details on the data sources. The moisture index is a ratio of precipitation to potential evapotranspiration (PE) with values between 1.0 and -1.0. Positive values indicate soil moisture accumulation while negative values indicate soil moisture depletion. Because the index was initially set up to calculate annual values, individual monthly values for winter months sometimes produce nonsense values. When the PE value is small, the MI becomes unreasonably large (greater than 9999.9) and is set to 99999. When the PE value is equal to zero, MI is undefined and set to -9999. Some extremely high values for monthly MI's may still appear in the data set but may be less than 9999.9. A check for these conditions should be made when using monthly data.

SOURCE(S): Webb, T. 1976. Climatological Magnetic Tape File. Brown University, RI.

REFERENCE(S): Webb 1976, Thornthwaite 1948.

COMMENTS: The estimation procedure did not adjust for elevation so caution should be used with data in mountainous areas. When using monthly data, check for unreasonable MI values (-9999 if the corresponding PE value is zero, 99999 if the MI value is greater than 9999.9).

YEAR(S): 1941-1970
GEOCOVERAGE: East
STATUS : Online
NUMBER OF RECORDS: 2660
CREATED/UPDATED: Mar. 1980
COMPILER: T Webb, III

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 15
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
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ANN_M_I_	Annual moisture index
APR_M_I_	April moisture index
AUG_M_I_	August moisture index
DEC_M_I_	December moisture index
FEB_M_I_	February moisture index
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
JAN_M_I_	January moisture index
JUL_M_I_	July moisture index

JUN_M_I_	June moisture index
MAR-M-I_	March moisture index
MAY_M_I_	May moisture index
NOV_M_I_	November moisture index
OCT_M_l_	October moisture index
SEP_M_I_	September moisture index

TITLE: C11 - MONTHLY AVERAGE TEMPERATURES BY DIVISION

DESCRIPTION: The monthly and annual average temperatures for State Climatic Divisions (SCD'S) were calculated from monthly data for the 30-year period 1941 to 1970. See Climate Overview for additional documentation. Data for individual years for the period 1931 to 1975 are available (Watts et al. 1980).

SOURCE(S): National Climatic Center. 1978. Monthly Temperature and Precipitation Normals for State Climatic Divisions, 1931-1976, Magnetic Tape. National Climatic Center, Asheville, NC.

REFERENCE(S): Watts et al. 1980, USDC 1973c.

YEAR(S): 1941-1970 TEMPORAL RESOLUTION: Norms
GEOCOVERAGE: U. S. SPATIAL RESOLUTION: SCD
STATUS : Online DATA SET TYPE: Single
NUMBER OF RECORDS: 353 VARIABLES PER RECORD: 15
CREATED/UPDATED: Mar. 1980 NEW DATA: Every 10 years
COMPILER: R J Olson

VARIABLE	LABEL AND UNITS OF MEASURE	
ANN_TAVE	Annual average temperature	C degrees
APR_TAVE	April average temperature	C degrees
AUG_TAVE	August average temperature	C degrees
DEC_TAVE	December average temperature	C degrees
FEB_TAVE	February average temperature	C degrees
FIPS_ST	PIPS state number	
JAN_TAVE	January average temperature	C degrees
JUL_TAVE	July average temperature	C degrees
JUN_TAVE	June average temperature	C degrees
MAR_TAVE	March average temperature	C degrees
MAY_TAVE	May average temperature	C degrees
NOV_TAVE	November average temperature	C degrees
OCT-TAVE	October average temperature	C degrees
SCD_CODE	State Climatic Division code	
SEP_TAVE	September average temperature	C degrees

TITLE: C12 - MONTHLY MAXIMUM TEMPERATURES BY DIVISION

DESCRIPTION: The monthly and annual maximum temperatures for State Climatic Divisions (SCD'S) were calculated from monthly data for the 30-year period 1941 to 1970. See Climate Overview for additional documentation. Data for individual years for the period 1931 to 1975 are available (Watts et al. 1980).

SOURCE(S): National Climatic Center. 1978. Monthly Temperature and Precipitation Normals for State Climatic Divisions, 1931-1976, Magnetic Tape. National Climatic Center, Asheville, NC.

REFERENCE(S): Watts et al. 1980, USDC 1973c.

YEAR(S): 1941-1970
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 353
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: SCD
DATA SET TYPE: Single
VARIABLES PER RECORD: 15
NEW DATA: Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_TMAX	Annual maximum temperature C degrees
APR_TMAX	April maximum temperature C degrees
AUG_TMAX	August maximum temperature C degrees
DEC_TMAX	December maximum temperature C degrees
FEB_TMAX	February maximum temperature C degrees
FIPS_ST	FIPS state number
JAN_TMAX	January maximum temperature C degrees
JUL_TMAX	July maximum temperature C degrees
JUN_TMAX	June maximum temperature C degrees
MAR_TMAX	March maximum temperature C degrees
MAY_TMAX	May maximum temperature C degrees
NOV_TMAX	November maximum temperature C degrees
OCT_I MAX	October maximum temperature C degrees
SCD_CODE	State Climatic Division code
S EP_TMAX	September maximum temperature C degrees

TITLE: C13 - MONTHLY MINIMUM TEMPERATURES BY DIVISION

DESCRIPTION: The monthly and annual minimum temperatures for State Climatic Divisions (SCD'S) were calculated from monthly data for the 30-year period 1941 to 1970. See Climate Overview for additional documentation. Data for individual years for the period 1931 to 1975 are available (Watts et al. 1980) .

SOURCE(S): National Climatic Center. 1978. Monthly Temperature and Precipitation Normals for State Climatic Divisions, 1931-1976, Magnetic Tape. National Climatic Center, Asheville, NC.

REFERENCE(S): Watts et al. 1980, USDC 1973c.

YEAR(S): 1941-1970
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 353
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: SCD
DATA SET TYPE: Single
VARIABLES PER RECORD: 15
NEW DATA : Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_TMIN	Annual minimum temperature C degrees
APR_TMIN	April minimum temperature C degrees
AUG_TMIN	August minimum temperature C degrees
DEC_TMIN	December minimum temperature C degrees
FEB_TMIN	February minimum temperature C degrees
FIPS-ST	PIPS state number
JAN_TMIN	January minimum temperature C degrees
JUL_TMIN	July minimum temperature C degrees
JUN_TMIN	June minimum temperature C degrees
MAR_TMIN	March minimum temperature C degrees
MAY_TMIN	May minimum temperature C degrees
NOV_TMIN	November minimum temperature C degrees
OCT_TMIN	October minimum temperature C degrees
SCD_CODE	State Climatic Division code
SEP_TMIN	September minimum temperature C degrees

TITLE: C14 - MONTHLY AVERAGE PRECIPITATION BY DIVISION

DESCRIPTION: The monthly and annual average precipitation for State Climatic Divisions (SCD'S) was calculated from monthly data for the 30-year period 1941 to 1970. See Climate Overview for additional documentation. Data for individual years for the period 1931 to 1975 are available (Watts et al. 1980).

SOURCE(S): National Climatic Center. 1978. Monthly Temperature and Precipitation Normals for State Climatic Divisions, 1931-1976, Magnetic Tape. National Climatic Center, Asheville, NC.

REFERENCE(S): Watts et al. 1980, USDC 1973c.

YEAR(S): 1941-1970
GEOCOVERAGE: U. S.
STATUS: Online
NUMBER OF RECORDS: 353
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: SCD
DATA SET TYPE: Single
VARIABLES PER RECORD: 15
NEW DATA: Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_PAVE	Annual average precipitation cm
APR_PAVE	April average precipitation cm
AUG_PAVE	August average precipitation cm
DEC_PAVE	December average precipitation cm
FEB_PAVE	February average precipitation cm
FIPS_ST	FIPS state number
JAN_PAVE	January average precipitation cm
JUL_PAVE	July average precipitation cm
JUN_PAVE	June average precipitation cm
MAR-PAVE	March average precipitation cm
MAY_PAVE	May average precipitation cm
NOV_PAVE	November average precipitation cm
OCT_PAVE	October average precipitation cm
SCD_CODE	State Climatic Division code
SEP_PAVE	September average precipitation cm

TITLE: C16 - MONTHLY MINIMUM PRECIPITATION BY DIVISION

DESCRIPTION: The monthly and annual minimum precipitation for State Climatic Divisions (SCD'S) was calculated from monthly data for the 30-year period 1941 to 1970. See Climate Overview for additional documentation. Data for individual years for the period 1931 to 1975 are available (Watts et al. 1980) .

SOURCE(S): National Climatic Center. 1978. Monthly Temperature and Precipitation Normals for State Climatic Divisions, 1931-1976, Magnetic Tape. National Climatic Center, Asheville, NC.

REFERENCE(S): Watts et al. 1980, USDC 1973c.

YEAR(S): 1941-1970
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 353
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: SCD
DATA SET TYPE: Single
VARIABLES PER RECORD: 15
NEW DATA: Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_PMIN	Annual minimum precipitation cm
APR_PMIN	April minimum precipitation cm
AUG_PMIN	August minimum precipitation cm
DEC_PMIN	December minimum precipitation cm
FEB_PMIN	February minimum precipitation cm
FIPS_ST	FIPS state number
JAN_PMIN	January minimum precipitation cm
JUL_PMIN	July minimum precipitation cm
JUN_PMIN	June minimum precipitation cm
MAR_PMIN	March minimum precipitation cm
MAY_PMIN	May minimum precipitation cm
NOV_PMIN	November minimum precipitation cm
OCT_PMIN	October minimum precipitation cm
SCD_CODE	State Climatic Division code
SEP_PMIN	September minimum precipitation cm

TITLE: C17 - CLIMATIC DIVISION INDEX

DESCRIPTION: State Climatic Divisions (SCD's) are areas within states with similar climatic characteristics. Often the SCD's are aggregates of contiguous counties; however, in mountainous areas, the SCD'S may subdivide counties. This data set defines the counties or portions of counties within each SCD. It was created by digitizing the map of SCD's (USDC 1968, page 50) . When a county occurred in more than one SCD, the proportion in each was measured with a planimeter. Individual state maps showing county lines and SCD lines were used. C19 provides the names and state weighting factors (population- and area-based) for each SCD. C11-C16 contain climatic data for SCD's.

SOURCE(S): USDC 1968, p 50; USDC 1977.

YEAR(S): 1970
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 3431
CREATED/UPDATED: Mar. 1980
COMPILER: M K Nungesser, R M Anderson

TEMPORAL RESOLUTION: Current
SPATIAL RESOLUTION: County
DATA SET TYPE: Index
VARIABLES PER RECORD: 5
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
SCD_AREA	Area of county in SCD ha
SCD_CODE	State Climatic Division code
SCD_PART	Portion of county in SCD

TITLE: C18 - GROWING SEASON LENGTH, FIRST/LAST FROST

DESCRIPTION: The growing season is defined in terms of the last spring frost date, first fall frost date, and the length of the growing season in days. The first and last frost dates were digitized from maps in the Climatic Atlas (USDC 1968, pp 29-30) and the length calculated from the two dates.

SOURCE(S): USDC 1968, pp 29-30.

COMMENTS: The Julian dates were created such that January first is stored as 60001 and December 31st as 60365.

YEAR(S): 1968
GEOCOVERAGE: East
STATUS : Online
NUMBER OF RECORDS: 2660
CREATED/UPDATED : Mar. 1980
COMPILER: L K Mann, W M Post

TEMPORAL RESOLUTION: Norms
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 5
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
FALFROST	First fall frost, Julian date
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
GROW_DAY	Growing season length in days
SPRFROST	Last spring frost, Julian date

TITLE: C20 - RAINFALL PH & H-ION LOADINGS

DESCRIPTION: The problems associated with increased acidity of rainfall in the eastern United States are being studied to understand regional environmental impacts. The pattern of rainfall acidity for 1974 (Cogbill and Likens 1974) was digitized and combined with average annual rainfall (C08) to calculate an estimate of hydrogen-ion loading factors. The formula used was: H-ions per square meter = rainfall PH * annual rainfall (cm) * 10.

SOURCE(S): Cogbill and Likens 1974. C08.

REFERENCE(S): Klopatek et al. 1980a.

YEAR(S): 1974
GEOCOVERAGE: East
STATUS: Online
NUMBER OF RECORDS: 1572
CREATED/UPDATED : Mar. 1980
COMPILER: J M Klopatek, C S Tucker

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 5
NEW DATA: As available

VARIABLE	LABEL AND UNITS OF MEASURE
ANN_RAIN	Annual rainfall, 1941-1970 norms, cm
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
H_IONS	Hydrogen ion loading factor - H ions/m2
RAIN_PH	pH of rainfall as of 1974

VEGETATION (D) SECTOR OVERVIEW

The Vegetation Sector is based primarily on two interrelated maps of ecoregions and potential natural vegetation. Ecoregions (Bailey 1976, Bailey 1978) represent a hierarchical landscape classification scheme based on climate, soils, and vegetation. There are 54 ecoregions at the section level in the conterminous United States. The vegetation aspect of the classification scheme is based on potential natural vegetation (Kuchler 1964, USDI 1970 sheets 89 and 90). We have used Kuchler's 1966 map (USDI 1970 sheet 89 and 90) to define the county occurrences. However, the larger scale 1964 map (Kuchler 1964) was used to help locate the vegetation boundaries. There are 106 vegetation types in the conterminous United States. The ecoregion and vegetation boundaries were aligned and the proportion of each ecoregion/vegetation combination within a county was estimated to create data set D10. Most other vegetation files were derived from D10.

The natural vegetation and ecoregion maps reflect potential climax conditions which might occur if man's impacts could be removed. Limitations of the Kuchler map have been recognized (Klopatek et al. 1979). To have the data reflect current conditions, the potential natural vegetation types were adjusted for current land-use practices occurring within counties. Each vegetation type was assigned a probability of being converted by man to agriculture, pasture, or inundation. Vegetation types were then proportionally reduced within a county for these and for urban build-up changes.

TITLE: D03 - POT. & ADJ. VEGETATION NATIONAL
STATS

DESCRIPTION: National and regional summary statistics for potential and land-use-adjusted natural vegetation were calculated from D04. See the Vegetation Overview for additional information on vegetation data and regions. Areal extent, fraction of the total, and county occurrence frequencies are given for each vegetation type for the eastern forest region, central plains region, and western mountains region, and for the nation. Names are given for the 106 Kuchler vegetation codes.

SOURCE(S): DO 4.

REFERENCE(S): Klopatek et al. 1979.

COMMENTS: The SAS FORMAT procedure may be used to substitute vegetation names for codes (see section on Special Output Formats).

YEAR(S): 1966-1967

TEMPORAL
RESOLUTION: Hist.

GEOCOVERAGE: U. S.
RESOLUTION:

SPATIAL

STATUS: Online
TYPE: Dictnry

DATA SET

NUMBER OF RECORDS: 106 VARIABLES
PER RECORD: 26 CREATED/UPDATED:
Mar. 1980 NEW DATA: Not
anticipated COMPILER: R J Olson

VARIABLE LABEL AND
 UNITS OF MEASURE

VEG CODE Vegetation code, 1966
Kuchler, 001-106

VEG DSCP Vegetation description

VEGP E P	Fraction of pot. vegetation in east
VEGP N A	Pot. vegetation national area ha
VEGP N_N	Pot. vegetation national no. counties
VEGPN_P	Fraction of pot. vegetation in nation
VEGP_W A	Pot. vegetation western area ha
VEGP WN	Pot. vegetation no. counties in west
VEGP WP	Fraction of pot. vegetation in west

TITLE: D04 - POT. & ADJ . VEGETATION

DESCRIPTION: Potential and land-use-adjusted areas of each type of natural vegetation occurring within a county were calculated from D10. See the Vegetation Overview for additional information on the vegetation data.

SOURCE(S): D10.

REFERENCE(S): Klopatek et al. 1979.

YEAR(S): 1966-1967 TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: U. S. SPATIAL RESOLUTION: County
STATUS : Online DATA SET TYPE: Multiple
NUMBER OF RECORDS: 7227 VARIABLES PER RECORD: 5
CREATED/UPDATED : Mar. 1980 NEW DATA: Not anticipated
COMPILER: C Kelsey, J M Klopatek, J L Jones

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
PIPS_ST	FIPS state number
VEG_CODE	Vegetation code, Kuchler, 001-106
VEGA_A	Adjusted vegetation area ha
VEGP_A	Potential vegetation area ha

VEGP_E_P	Fraction of pot. vegetation in east	
VEGP_N_A	Pot. vegetation national area	ha
VEGP_N_N	Pot. vegetation national no. counties	
VEGP_N_P	Fraction of pot. vegetation in nation	
VEGP_W_A	Pot. vegetation western area	ha
VEGP_W_N	Pot. vegetation no. counties in west	
VEGP_W_P	Fraction of pot. vegetation in west	

TITLE: D05 - VEGETATION-LAND USE CHANGE PROBABILITIES

DESCRIPTION: The algorithm to adjust potential natural vegetation for current land-use utilized conversion probabilities for each Kuchler vegetation type. The probabilities consider the existing conversion of natural vegetation to cropland, pastureland, or inundation. The values contained in D05 were obtained from several sources (Klopatek et al. 1979). They were ranked 1 (high probability) to 4 (low probability).

SOURCE(S): Klopatek et al. 1979.

YEAR(S): 1978
GEOCOVERAGE: U. S.
STATUS: Online
NUMBER OF RECORDS: 117
CREATED/UPDATED: Mar. 1980
COMPILER: J M Klopatek

TEMPORAL RESOLUTION: Current
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry
VARIABLES PER RECORD: 9
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
PROB_AGR	Probability of change to agriculture
PROB_FOR	Probability of change to forest
PROB_PST	Probability of change to pasture
PROB_RNG	Probability of change to range
PROB_WTR	Probability of being covered by water
PVEG_C	Vegetation code, Kuchler 1964
VEG_CODE	Vegetation code, 1966 Kuchler, 001-106
VEG_DSCP	Vegetation description, 1964 Kuchler
VEG_TYPE	General vegetation description - Kuchler

TITLE: DO6 - VEGETATION REPLACEMENT BY URBAN AREAS

DESCRIPTION: The algorithm to adjust potential natural vegetation for current land-use incorporated the replacement of vegetation types within counties by urban build-up. In the smaller eastern counties, urban build-up area was proportionally subtracted from all vegetation types occurring in a county. This data set defines vegetation types within western counties that have been urbanized. The data were obtained by overlaying a map of urban areas with Kuchler's vegetation map.

SOURCE (S) : USDI 1970 sheets 89 and 90.

YEAR(S): 1978	TEMPORAL RESOLUTION: Current
GEOCOVERAGE: West	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 169	VARIABLES PER RECORD: 3
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: J M Klopatek	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
VEG_CODE	Vegetation code, Kuchler, 001-106

TITLE: D07 - POT . & ADJ. ECOREGION NATIONAL STATS

DESCRIPTION: National and regional summary statistics for potential and land-use-adjusted ecoregion areas at the section level were calculated from D08. See the Vegetation Overview for additional details on the ecoregion data. Areal extent, fraction of the total, and county occurrence frequencies are given for each ecoregion for the Eastern Deciduous Forest region, Central Plains region, Western Mountains region, and nation. Names are also given for the 54 ecoregion section codes (Bailey 1976, Bailey 1978) .

SOURCE (S) : D08.

YEAR(S): 1976	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: u. s.	SPATIAL RESOLUTION:
STATUS: Online	DATA SET TYPE: Dictnry
NUMBER OF RECORDS: 54	VARIABLES PER RECORD: 10
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
ECO_CODE	Ecoregion section code, Bailey 1976
ECO_DSCP	Ecoregion section description
ECO_KEY	Ecoregion section numeric key, 1-54
EOA_N_A	Adj. ecoregion national area ha
EOA_N_N	Adj. ecoregion national no. of counties
EOA_N_P	Fraction of adj. ecoregion in nation
ECOP_N_A	Pot. ecoregion national area ha
ECOP_N_N	Pot. ecoregion national no. of counties
ECOP_N_P	Fraction of pot. ecoregion in nation
R G N	Region - E,C,W

TITLE: DO9 - POT . & ADJ . VEGETATION-ECOREGION STATS

DESCRIPTION: Potential and land-use-adjusted natural vegetation statistics for each ecoregion at the section level were calculated from D10. See the Vegetation Overview for additional information. Statistics are given for the 387 ecoregion/vegetation combinations occurring in the conterminous United States. Areal extent, fraction of the total, and county occurrence frequencies are included for vegetation types (Küchler 1964, USDI 1970 sheets 89 and 90) occurring in each of the 54 ecoregions (Bailey 1976, Bailey 1978). Ecoregions are keyed to their location in the Eastern Deciduous Forest region (E), Central Plains region (C) , or Western Mountains region (W) .

SOURCE(S) : D10.

YEAR(S): 1978	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION:
STATUS : Online	DATA SET TYPE: Dictnry
NUMBER OF RECORDS: 387	VARIABLES PER RECORD: 11
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
ECO_CODE	Ecoregion section code, Bailey 1976
ECO_KEY	Ecoregion section numeric key, 1-54
EVEGA_A	Ecorgn/adj. veg. area ha
EVEGA_N	Ecorgn/adj. veg no. of counties
EVEGA_P	Fraction in ecoregion of adj. veg. type
EVEGP_A	Ecorgn/pot. veg. area ha
EVEGP_N	Ecorgn/pot. veg no. of counties
EVEGP_P	Fraction in ecoregion of pot. veg. type
RGN	Region - E,C,W
VEG_CODE	Vegetation code, 1966 Küchler, 001-106
VEG_KEY	Vegetation number, 1966 Küchler, 1-106

TITLE: D10 - POT. & ADJ. VEGETATION WITHIN ECOREGIONS

DESCRIPTION: Potential and land-use-adjusted natural vegetation areas occurring within ecoregions (section level) within county units were digitized from maps as the base data set. See Vegetation Overview for additional information. The potential natural vegetation map (Küchler 1964, USDI 1970 sheets 89 and 90) and the ecoregion map (Bailey 1976) were combined so that appropriate vegetation and ecoregion boundaries coincided. The resulting map was overlaid with county outlines and the proportion of counties in each ecoregion/vegetation type estimated. Digitizing was done with a dot grid for the 37 eastern states and with a planimeter for the larger western states. Proportions were estimated to the nearest 10 percent for the small counties in the east, and to 0.1 percent in the west. The digitizing errors associated with individual counties are probably fairly high due to the techniques used; however, considerable effort was spent in verifying that ecoregion/vegetation types occurred in counties so recorded. Areas were calculated using the 1970 Census Bureau county land area data (B01) .

SOURCE (S) : Küchler 1964, USDI 1970 sheets 89 and 90; Bailey 1976; B01.

YEAR(S): 1978
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 7614
CREATED/UPDATED : Mar. 1980
COMPILER: R J Olson, J M Klopatek, J T Kitchings

TEMPORAL RESOLUTION: Hist.
SPATIAL RESOLUTION: County
DATA SET TYPE: Multiple
VARIABLES PER RECORD: 6
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
ECO_CODE	Ecoregion section code, Bailey 1976
EVEGA_A	Adjusted ecorgn/vegetation area ha
EVEGP_A	Potential ecorgn/vegetation area ha
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
VEG_CODE	Vegetation code, Küchler, 001-106

TITLE: D11 - ECOREGION CODES DICTIONARY

DESCRIPTION: Ecoregion codes and names are given for the province and section levels based on Bailey's (1976) map.

SOURCE (S) : Bailey 1976.

COMMENTS: The ecoregion names can be substituted for the codes by using the SAS FORMAT statement (see the section on Special Output Formats).

YEAR(S):	1976	TEMPORAL RESOLUTION:	
GEOCOVERAGE:	U. S.	SPATIAL RESOLUTION:	
STATUS :	Online	DATA SET TYPE:	Dictnry
NUMBER OF RECORDS:	63	VARIABLES PER RECORD:	2
CREATED/UPDATED:	Mar. 1980	NEW DATA:	Not anticipated
COMPILER:	R J Olson		

VARIABLE	LABEL AND UNITS OF MEASURE
ECO_CODE	Ecoregion section code, Bailey 1976
ECO_DSCP	Ecoregion section description

TITLE: D13 - VEGETATION SENSITIVITY TO S02

DESCRIPTION: Sensitivities of potential natural vegetation (Küchler 1964) to sulfur dioxide (S02) were rated by Argonne National Laboratory (Ballou et al. 1979). Their method involved rating (sensitive, intermediate, and resistant) individual species based on tolerance to S02, as reported in the literature. Vegetation communities were then classified according to the most sensitive dominant species in the association.

SOURCE(S) : Ballou, S. W. 1979. Unpublished manuscript. Argonne National Laboratory, Argonne, IL.

REFERENCE(S): Ballou et al. 1979.

COMMENTS: This data set can be combined with D10 to obtain the S02 sensitivity of potential natural vegetation within counties.

YEAR(S): 1979
GEOCOVERAGE: U.S.
STATUS : Being Edited

TEMPORAL RESOLUTION: Hist.
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry

FOREST (F) SECTOR OVERVIEW

The Forest Sector is based primarily on data produced by the U. S. Forest Service's Continuous Forest Inventory (CFI) program. This program conducts timber surveys on permanently established plots at approximately ten-year intervals. States are sampled on a staggered schedule. The sampling intensity is defined to produce statistical estimates within a specified level of sampling error for forest survey units. Forest survey units are aggregates of counties. County estimates have higher sampling errors and often are not published if forestland is very sparse. County-level statistics are not readily available as a national file in either printed or computer readable forms. State inventories vary in format depending on the region of the country. The list of publications used to compile data sets F01 to F07 is presented below. The compilation of county-level forestry statistics, especially species-level data in F05-F07, represents a significant effort in producing a uniform data set for the eastern United States.

SOURCE(S): F01, F02, and F03 (southern states): Bellamy and Knight 1970, Cost 1968, Cost 1975a, Cost 1975b, Earles 1967, Earles 1975, Ferguson 1964, Gansner 1968, Haines 1967, Hedlund and Earles 1969, Hedlund and Earles 1970a, Hedlund and Earles 1970b, Hedlund and Earles 1971, Knight and McClure 1967, Knight and McClure 1974, McClure 1969, McClure 1970, Snyder and Knight 1970, Sternitzke and Van Sickle 1968, Welch 1968, Welch 1975, Welch and Knight 1974.

F06 and F07 (eastern states): Delcourt et al. 1980.

- TITLE: F01 - FOREST AREA BY MAJOR TYPES

DESCRIPTION: Forestland areas by major forest types were obtained from USFS state forest inventory publications. See Forest Overview for details on data sources. Commercial forestland is defined as land producing or capable of producing crops of industrial wood which has not been withdrawn from timber production. The sum of the major forest types equals the area of commercial forest.

SOURCE(S): USFS state forest inventory publications.

YEAR(S): 1965-1977

TEMPORAL
RESOLUTION: Annual.

GEOCOVERAGE: South

SPATIAL
RESOLUTION: County

STATUS: Online
Single

DATA SET TYPE:

NUMBER OF RECORDS: 1388 VARIABLES PER
RECORD: 16 CREATED/UPDATED: Mar.
1980 NEW DATA: Every 10 years
COMPILER: R J Olson

VARIABLE	LABEL AND UNITS OF MEASURE	
CEDAR _A	Cedar forest	ha
ELM _AA	Elm-ash-cottonwood forest	ha
FIPS_C-O	FIPS county number	
FIPSST	FIPS state number	
FOREST _A	Forest land - commercial	ha
HARDWD A	Hardwood forest	ha
LNGL P A	Longleaf-slash pine forest	ha
LOBL PA	Loblolly-shortleaf pine forest	ha
MAP B A	Maple-beech-birch forest	ha
OAK GA	Oak-gum-cypress forest	ha
OAK HA	Oak-hickory forest	ha
OAK PA	Oak-pine forest	ha
SOFTWD A	Softwood forest	ha
SP FIR A	Spruce-fir forest	ha
WP HEM A	White pine-hemlock forest	ha
WPINE A	White pine forest	ha

TITLE: F02 - FOREST GROWING-STOCK VOLUMES

DESCRIPTION: Growing-stock volumes for commercial tree species groupings were obtained from USFS state forest inventory publications. See Forest Overview for details on data sources. Growing-stock volume is defined as net volume in live sawtimber and poletimber trees from the stump to a 1.6 cm top. Deductions were made for rot and other defects. Survey methods and species aggregations differ between states depending on forest conditions and the USFS forest survey region. The softwoods consist of all conifers including the southern or yellow pines and other eastern softwoods. In some states the hardwood category consists of hard and soft hardwoods. Hard hardwoods include select oaks (white and red oaks) and miscellaneous hardwoods, while the soft hardwoods include the gums.

SOURCE(S): USFS state forest inventory publications.

COMMENTS: Units of measure are thousands of cubic meters (k m**3).

YEAR(S) : 1965-1977 TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: South SPATIAL RESOLUTION: County
STATUS : Online DATA SET TYPE: Single
NUMBER OF RECORDS: 1388 VARIABLES PER RECORD: 12
CREATED/UPDATED: Mar. 1980 NEW DATA: Every 10 years
COMPILER: R J Olson

VARIABLE	LABEL AND UNITS OF MEASURE
ALL_SP_G	Growing stock vol. of all species
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
GUM_G	Growing stock vol. of gum
HARD_H_G	Growing stock vol. of hard hardwoods
HARD_S_G	Growing stock vol. of soft hardwoods
HARDWD_G	Growing stock vol. of all hardwoods
OAK_G	Growing stock vol. of select oaks
OTHR_H_G	Growing stock vol. of misc. hardwoods
OTHR_S_G	Growing stock vol. of misc. softwoods
PINE_G	Growing stock vol. of southern pine
SOFTWD_G	Growing stock vol. of all softwoods

TITLE: F03 - FOREST SAWTIMBER VOLUMES

DESCRIPTION: Sawtimber volumes for commercial tree-species groupings were obtained from USFS state forest inventory publications. See Forest Overview for details on data sources. Sawtimber volume is an estimate of the amount of available lumber or other forest products in standing trees. Deductions are made for estimated rot and defects along with manufacturing losses such as saw kerf and unusable slabs. Survey methods and species aggregations differ between states, depending on forest conditions and the USFS forest survey region. See F02 for definitions of species groupings.

SOURCE(S): USFS state forest inventory publications.

COMMENTS: Units of measure are thousands of cubic meters (k m**3).

YEAR(S) :	1965-1977	TEMPORAL RESOLUTION:	Annual
GEOCOVERAGE:	South	SPATIAL RESOLUTION:	County
STATUS :	Online	DATA SET TYPE:	Single
NUMBER OF RECORDS:	1388	VARIABLES PER RECORD:	12
CREATED/UPDATED:	Mar. 1980	NEW DATA:	Every 10 years
COMPILER:	R J Olson		

VARIABLE	LABEL AND UNITS OF MEASURE
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ALL_SP_S	Sawtimber volume of all species
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
GUM_S	Sawtimber volume of gum
HARD_H_S	Sawtimber volume of hard hardwoods
HARD_S_S	Sawtimber volume of soft hardwoods
HARDWD_S	Sawtimber volume of all hardwoods
OAK_S	Sawtimber volume of select oaks
OTHR_H_S	Sawtimber volume of misc. hardwoods
OTHR_S_S	Sawtimber volume of misc. softwoods
PINE_S	Sawtimber volume of southern pine
SOFTWD_S	Sawtimber volume of all softwoods

TITLE: F04 - FOREST SURVEY UNIT INDEX

DESCRIPTION: The Forest Service groups counties within states into forest survey units based on homogeneous forest conditions. Sampling methods and frequencies are designed to produce forest statistics with small sampling errors at the forest survey unit level. States are also grouped into regions for conducting forest inventories and other programs. This data set provides an index to these designations. The index does not include counties in the Central Plains which do not contain forestland nor does the index include certain urbanized counties in the east.

SOURCE (S) : U. S. Department of Agriculture. 1967. Forest Survey Handbook No. 436, Chap. 70. U. S. Department of Agriculture, Forest Service, Washington, DC.

YEAR(S): 1975	TEMPORAL RESOLUTION:
GEOCOVERAGE: u. s.	SPATIAL RESOLUTION: County
STATUS: Online	DATA SET TYPE: Index
NUMBER OF RECORDS: 2842	VARIABLES PER RECORD: 5
CREATED/UPDATED: Mar. 1980	NEW DATA : Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
USFS_REG	USFS survey region code within a section
USFS_SEC	USFS section code, 1-4
USFS_UNT	USFS survey unit code within a state

!

TITLE: F05 - TREE-SPECIES CODES DICTIONARY

DESCRIPTION: The tree-species codes dictionary for use with F06 was created from D01 with the addition of codes to accommodate aggregations of species as used by the Forest Service. See the D01 description for more information on the coding system.

SOURCE(S): U. S. Department of Agriculture. 1967. Forest Survey Handbook, No. 436. U. S. Department of Agriculture, Forest Service, Washington, DC.

YEAR(S): 1979	TEMPORAL RESOLUTION:
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION:
STATUS : Online	DATA SET TYPE: Dictnry
NUMBER OF RECORDS: 328	VARIABLES PER RECORD: 3
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
TREE_DSC	Tree species common name
TREE_SPC	Tree genus-species scientific name
TREECODE	Tree species mnemonic code
TREE_KEY	Tree species code number

TITLE: F06 - TREE-SPECIES GROWING-STOCK VOLUMES

DESCRIPTION: Estimates of individual tree-species growing-stock volumes were obtained from USFS state forest inventory publications, unpublished tables, and data tapes (Delcourt et al. 1980). Estimates are based on the Continuous Forest Inventory (CFI) program within the USFS. See the Forest Overview for details on data sources. This compilation represents a unique and significant effort in creating a single uniform file from the various sources within the USFS. Growing-stock volume is defined as the net volume in live sawtimber and poletimber trees from stump to a 1.6 cm top. Deductions were made for rot and other defects. Although most of the species are tabulated individually, when species occur at low densities they may be aggregated into genus-level groupings. Species-specific conversion factors were used to calculate biomass from the growing-stock volumes. In areas with low forest density, such as in the Corn Belt, forest statistics are presented for forest survey units.

SOURCE(S): Delcourt H. 1979. Eastern Forest Species Data File. Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.

REFERENCE(S): Delcourt et al. 1980.

COMMENTS: Species may be aggregated or grouped in different combinations in different states. Data may only be available for forest survey units in some states. Forest survey units have FIPS county codes greater than 900. See F04 for the counties within a forest survey unit.

YEAR(S): 1965-1978 TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: East SPATIAL RESOLUTION: County
STATUS : Being edited DATA SET TYPE: Multiple
NUMBER OF RECORDS: 29781 VARIABLES PER RECORD: 6
CREATED/UPDATED: Mar. 1980 NEW DATA : Every 10 years
COMPILER: H Delcourt, P Delcourt

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
TREE_BIO	Tree biomass in commercial forest tn/ha
TREE_GSV	Tree growing stock volume 10**6 ft**3
TREE_KEY	Tree species numeric code
TREE_VOL	Tree volume in commercial forest m**3/ha

T_S_BIO	Total stand biomass	m. tn/ha
T_S_GSV	Total stand growing stock volume	m**3/ha
USFS_CO	County code - USFS	
USFS_LAT	Latitude of county or survey unit	
USFS_LNG	Longitude of county or survey unit	
USFS_ST	State code - USFS	

TITLE: F07 - FOREST AREA & GROWING-STOCK VOLUME

DESCRIPTION: This data set contains county or survey unit statistics compiled in connection with F06 (Delcourt et al. 1980). See the Forest Overview for details on data sources. Included are land area, forest area, and commercial forest area. The USFS land area does not coincide with the B01 data primarily because water areas greater than 0.6 ha are included in F07 but excluded in B01. Forestland includes areas stocked at least ten percent with forest trees or that formerly had tree cover but are not developed for nonforest use. Commercial forestland is forestland that is producing or capable of producing crops of industrial wood. USFS county codes, geographic centroid of the county or survey unit, and publication reference to the source of growing-stock data in F06 are given. The sum of the growing-stock volumes for all species in F06 and the sum of the biomass are also included.

SOURCE(S): Delcourt H. 1979. Eastern Forest Species Data File. Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.

REFERENCE(S): Delcourt et al. 1980.

COMMENTS: Data are presented for survey units if the density of forestland is low. Forest survey unit codes are indicated by FIPS codes greater than 900. No data are included for the western portions of the Great Plains states including Texas, Oklahoma, Kansas, Nebraska, and the Dakotas. Data are included for the Canadian portions of the eastern deciduous forest.

YEAR(S): 1965-1978
GEOCOVERAGE: East
STATUS: Being edited
NUMBER OF RECORDS: 1679
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 12
NEW DATA: Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
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FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
FS_CF_A	Area of co. in commercial forest ha
FS_CO_A	Area of county based on USFS estimates
FS_FOR_A	Area of county in forest ha
PUB_REF	Publication reference

AIR QUALITY (K) SECTOR OVERVIEW

Ambient air quality is monitored by EPA to determine compliance with the Clean Air Act and other legislation. Often monitoring stations are concentrated in industrial or urban areas. The frequency, reliability, and number of pollutants measured varies with local conditions. Air quality statistics have been compiled by Lawrence Berkeley Laboratory as part of the Population At Risk to Air Pollution (PARAP) project (Merrill 1980). These county-level statistics were estimated from the available EPA monitoring data which were screened before being used. County estimates were calculated for the population centroid of the counties which had a monitoring station within 60 km. Air emissions from projected industrial activity are calculated by the Strategic Environmental Assessment System (SEAS) model. The SEAS model is a joint DOE\EPA effort. We plan to incorporate data from SEAS on projected emissions and ambient concentrations when these data become available. The SEAS data are for AQCR's.

TITLE: K04 - AIR QUALITY NONATTAINMENT AREAS (EPA)

DESCRIPTION: Air quality nonattainment areas are those which have recorded a violation of the National Ambient Air Quality Standards for one of the major pollutants during a specific time. This file, from EPA, gives the status of counties as of April 23, 1979. Pollutants included are: sulfur dioxide (SO2), nitrogen oxides (NOX), total suspended particulate (TSP), carbon monoxide (CO), and photochemical oxidants (OX). Codes are included to indicate if part (P) or all (A) of the county is in violation of either the primary (1) or secondary (2) standards.

SOURCE(S): Deal, L. August , 1979. Nonattainment county card deck. EPA, Research Triangle Park, NC.

YEAR(S): 1979
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 1246
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 5
NEW DATA: Annually

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
NA_STD	Standard not met (1=primary 2=secondary)
NC_PART	Noncomplying part of co. (P=part A=all)
POLLUTNT	Pollutant

LAND (L) SECTOR OVERVIEW

The Land Sector includes several data sets related to land-use, land capability, and land-use restrictions. County-level land-use statistics which have national coverage are available from the 1967 Conservation Needs Inventory (USDA 1971). The CNI is both out-of-date and subject to relatively high statistical sampling errors for individual counties. The inventory is also restricted to nonfederal land. Data sets L01, L02, L03, and L07 are based on the CNI. Land Resource Regions (LRR) (L06) are defined in terms of the agricultural practices and capabilities of a region.

GEOECOLOGY GUIDE L01-1 ORNL/TM-7351

TITLE: L01 - LAND USE (CNI DETAILED)

DESCRIPTION: Land-use statistics for 25 categories are given based on the 1967 Conservation Needs Inventory (CNI). The CNI was conducted by the USDA to determine land use, land capability, and required conservation treatment needs. Only nonfederal, nonurban land was surveyed (about 75 percent of the conterminous states and 1 percent of Alaska). It was based on field surveys using a stratified sampling scheme of individual counties. About 2 percent of the area was sampled, ranging from 1 percent to 10 percent depending on the county. A limited resurvey (state level) was conducted in 1975. The CNI data suffer from several deficiencies but provide the only source of relatively consistent county-level land-use statistics for the nation. Problems include out-of-date estimates, high sampling errors for counties, and discrepancies in county totals. The totals for some counties differ significantly from county area given in the 1970 Census file (B01). We have been unable to resolve these differences. Data set L07 provides aggregated land-use statistics based on L01, in which the values have been standardized to the 1970 county areas. The L01 data set was created by aggregating capability classes in data set L03 and merging in estimates of the noninventory categories of urban build-up, federal, and small water areas. Estimates of these areas were obtained from Iowa State University for each county.

SOURCE(S): L03. R. Hickman. July, 1975. CNI-Noninventory Magnetic Tape. Statistical Laboratory, Iowa State University, Ames, IA.

REFERENCE(S): USDA 1971.

COMMENTS: The sum of the land-use areas within a county may not equal the 1970 county Census area.

YEAR(S): 1967 TEMPORAL RESOLUTION: Annual

GEOCOVERAGE: U. S. SPATIAL RESOLUTION: County

STATUS: Online DATA SET TYPE: Single

NUMBER OF RECORDS: 3071

VARIABLES PER RECORD: 27

CREATED/UPDATED: Mar. 1980

NEW DATA: As available COMPILER: R J Olson

VARIABLE LABEL AND UNITS OF MEASURE

CONS_LND Conservation use only ha

CRN_CROP Corn and sorghum ha

CROPLAND	Total of all types of crop land	ha
FALLOW	Summer fallow	ha
FARM_LND	Farmsteads, feedlots, roads	ha
FED_LAND	Federally owned land	ha
FIPS_CO	FIPS county number	
FIPS_ST	FIPS state number	
FLD_CROP	Close grown field crops	ha
FOREST	Total of all forest land	ha
FORST_C	Commercial forest (.6 cu m/yr)	ha
FORST_NC	Noncommercial forest	ha
GRAZ_CF	Grazed portion of comm. forests	ha
GRAZ_NCF	Grazed portion of noncomm. forests	ha
HAY_FAST	Rotation hay and pasture	ha
HAYLAND	Permanent forage production	ha
NFRM_LND	Nonfarm land - houses, swamps, etc	ha
OPEN_LND	Open land without recent use	ha
ORCH_LND	Orchards, vineyards, bush berries	ha
OTHR_LND	Otherland-houses, swamps, etc	ha
PAST_LND	Pastureland managed for forage	ha
RANG_LND	Rangeland with natural forage	ha
ROW_CROP	Other row crops-not corn, wheat	ha
SML_LAKE	Small lakes <16ha and rivers	ha
TMP_IDLE	Temporarily idle with recent use	ha
TOT_AREA	Total area excluding >16ha lakes	ha
URB_LAND	Urban areas	ha

TITLE: L02 - LAND CAPABILITY CLASSES (CNI)

DESCRIPTION: The 1967 Conservation Needs Inventory classified the land in terms of the capability of soils for agricultural uses (crops and pasture) or sustaining natural vegetation (forest and range). See L01 for a description of the CNI and limitations of the data. The Inventory did not include federal land nor urban build-up land; therefore county totals do not equal the total county area, and some counties are excluded if the entire county is federal or urban. Eight land capability classes (LCC) are included ranging from LCC-1 (few limitations restricting land use) to LCC-8 (severe limitations precluding commercial crop activities). In general, LCC-1 through LCC-4 are capable of producing cultivated crops, while LCC-5 and LCC-6 are capable of sustaining managed natural vegetation. Dominant limitations are designated as E-erosion hazard, W-excess water limitation, S-other unfavorable soil conditions such as shallowness, stoniness, salinity, low fertility, etc., and C-climatic limitation, either temperature or lack of moisture. The data set was created by aggregating land-use types in data set L03.

SOURCE(S): L03.

REFERENCE(S) : USDA 1971.

COMMENTS: The 1967 CNI does not include federal land nor urban build-up land; therefore, county totals do not equal the total county area.

YEAR(S): `1967	TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 3057	VARIABLES PER RECORD: 31
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
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FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
LCC_1	Soil with no limits ha
LCC_2C	Soil with some limits - temp/dryness ha
LCC_2E	Soil with some limits - erosion ha
LCC_2S	Soil with some limits - poor soil
LCC_2W	Soil with some limits - excess water ha
LCC_3C	Soil with severe limits - temp/dryness

LCC_3E	Soil with severe limits - erosion	ha
LCC_3S	Soil with severe limits - poor soil	ha
LCC_3W	Soil with severe limits - excess water	
LCC_4C	Soil w/ very severe limits-temp/dryness	
LCC_4E	Soil w/ very severe limits-erosion	ha
LCC_4S	Soil w/ very severe limits-poor soil	ha
LCC_4W	Soil w/ very severe limits-excess water	
LCC_5C	Soil level but wet/stoney - temp/dryness	
LCC_5E	Soil level but wet/stoney - erosion	ha
LCC_5S	Soil level but wet/stoney - poor soil	ha
LCC_5W	Soil level but wet/stoney - excess water	
LCC_6C	Soil for range,forest, etc - temp/dryness	
LCC_6E	Soil for range,forest, etc - erosion	ha
LCC_6S	Soil for range,forest, etc - poor soil	ha
LCC_6W	Soil for range,forest, etc - excess water	
LCC_7C	Soil for forest, wildlife - temp/dryness	
LCC_7E	Soil for forest, wildlife - erosion	ha
LCC_7S	Soil for forest, wildlife - poor soil	ha
LCC_7W	Soil for forest, wildlife - excess water	
LCC_8C	Soil w/ cultivatn precluded-temp/dryness	
LCC_8E	Soil w/ cultivatn precluded-erosion	ha
LCC_8S	Soil w/ cultivatn precluded-poor soil	ha
LCC_8W	Soil w/ cultivatn precluded-excess water	

TITLE: L05 - LAND SURFACE MINING

DESCRIPTION: Areas of counties disturbed by surface mining were estimated for several types of mining activities which either do or do not require land reclamation activities. Commodities included were coal, sand and gravel, and all other. Areas needing reclamation were further subdivided into those for which reclamation is and is not required by law. Areas disturbed include land from which materials have been displaced, land upon which materials have been deposited, haul roads, and other lands whose natural state has been disturbed as a result of surface mining activities. The inventory is the fourth since 1965. The data set was created by keypunching the tables contained in the Soil Conservation Service report (Holmberg 1977).

SOURCE(S): Holmberg 1977.

YEAR(S): 1975	TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 3071	VARIABLES PER RECORD: 10
CREATED/UPDATED: Mar. 1980	NEW DATA: As available
COMPILER: C J Emerson	

VARIABLE	LABEL AND UNITS OF MEASURE
COAL_NEC	Coal mines - reclamation necessary ha
COAL_RQD	Coal mines - reclam required by law ha
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
LAND_DST	Total land disturbed ha
LAND-NOT	Land not requiring reclamation ha
OTHR_NEC	Other mines - reclamation necessary ha
OTHR_RQD	Other mines - reclam required by law ha
SAND_NEC	Sand and gravel reclam necessary ha
SAND_RQD	Sand and gravel - reclam rqd by law ha

TITLE: L06 - LAND RESOURCE REGION INDEX

DESCRIPTION: The conterminous states have been divided into 20 Land Resource Regions (LRR's) and into 156 Major Land Resource Areas (LRA's) based primarily on existing agricultural activity and physiographic conditions. The boundaries have been adjusted to counties for compilations of statistical data; however, counties within an LRA are not always contiguous. The names and characteristics of the regions are available in USDA Handbook 296 (Austin 1965). This data set was included with the 1967 CNI file. The data set also includes the Water Resource Region index code; however, data set B03 contains a more up-to-date and detailed index of Water Regions.

SOURCE(S): Hickman, R. 1972. 1967 CNI Magnetic Tape. Statistical Laboratory, Iowa State University, Ames, IA.

REFERENCE(S): Austin 1965.

YEAR(S): 1967
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 3071
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Current
SPATIAL RESOLUTION: County
DATA SET TYPE: Index
VARIABLES PER RECORD: 5
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state-number
LRA_CODE	SCS Land Resource Area code
LRR_CODE	SCS Land Resource Region code
WRR_CODE	SCS Water Resource Region code

TITLE: L08 - LAND AREAS (RURAL,URBAN,ROADS,WATER,FED)

DESCRIPTION: Counties were inventoried by the USDA for urban, rural, water, and transportation rights-of-way areas. Transportation land included road, highway, interstate, and railroad rights-of-way areas. Roads were divided into dirt roads, gravel roads, paved roads, state highways, and interstates. All categories were subdivided into federal and nonfederal land. This data set contains updated information which can be combined with the 1967 CNI data sets (L01, L07). Since county officials were required to verify the figures, the file is probably accurate.

SOURCE(S): Goebel, J. J. Dec. 1979. County Statistics Magnetic Tape. Statistical Laboratory, Iowa State University, Ames, IA.

YEAR(S): 1979
GEOCOVERAGE: U. S.
STATUS: Online
NUMBER OF RECORDS: 3071
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 26
NEW DATA: As available

VARIABLE	LABEL AND UNITS OF MEASURE	
AREA_77	Total surface area - 1977	ha
FEDRE_77	Total federal land area - 1977	ha
FIPS_CO	FIPS county number	
FIPS_ST	FIPS state number	
HIWAY_F	Highways on rural-federal	ha
HIWAY_N	Highways on rural-nonfederal	ha
INTER_F	Interstates on rural-federal	ha
INTERS_N	Interstates on rural-nonfederal	ha
LAND_77	Land area - 1977	ha
RAILR_77	Total railroad area - 1977	ha
RAILRD_F	Railroads on rural-federal	ha
RAILRD_N	Railroads on rural-nonfederal	ha
ROAD_D_F	Dirt roads on rural-federal	ha
ROAD_D_N	Dirt roads on rural-nonfederal	ha
ROAD_G_F	Gravel roads on rural-federal	ha
ROAD_G_N	Gravel roads on rural-nonfederal	ha
ROAD_P_F	Paved roads on rural-federal	ha
ROAD_P_N	Paved roads on rural-nonfederal	ha
ROADS_77	Federal and state road area - 1977	ha
RUR_F_77	Rural federal land area - 1977	ha
RUR_N_77	Rural nonfederal land area - 1977	ha
RURAL_77	Total rural land area - 1977	ha

URB_F_77	Urban-federal land area - 1977	ha
URB_N_77	Urban nonfederal land area - 1977	ha
URBAN_77	Total urban land area - 1977	ha
WATER_77	Census water area - 1977	ha

NATURAL AREAS (N) SECTOR OVERVIEW

Natural areas are defined as areas administered and protected to maintain natural ecological conditions. Included are parks, wilderness areas, national forests and rangelands, wildlife refuges, ecological preserves, and others. We anticipate expanding this sector to include a comprehensive inventory of federal, state, and selected private natural areas.

TITLE: NO1 - RARE II TRACTS

DESCRIPTION: The USDA Forest Service initiated the Roadless Area Review and Evaluation II (RARE II) program in 1978 to inventory existing roadless areas within the National Forests and to determine their management strategies. This data set gives code, name, size, location, 1978 status, and 1979 RARE II recommendation for each of 1910 tracts in the conterminous states. Data sets N04, N05, N06, N07, and NO 8 contain additional information on the RARE II tracts. These files can be merged with NO1 to give complete name and location data.

SOURCE(S): Simons, P. June, Nov. and Dec. 1978. RARE II Magnetic Tape Files. U. S. Department of Agriculture, Forest Service, Washinton, DC.

REFERENCE(S): USDA 1979.

COMMENTS: Wilderness status codes are: EX-existing, EN-endorsed, SW-wildlife refuge, ST-state area, LM-land management, and IN-inventory area.

YEAR(S): 1978
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 1910
CREATED/UPDATED : Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: Points
DATA SET TYPE: Single
VARIABLES PER RECORD: 13
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
LAT_D	Latitude of area degree
LAT_M	Latitude of area minute
LONG_D	Longitude of area degree
LONG_M	Longitude of area minute
ST	State 2 letter code
USFS_RGN	USFS region code
WLD_AREA	Wilderness gross area ha
WLD_CODE	Wilderness area code number -USFS
WLD_FDRL	Wilderness area federal ownership ha
WLD_NAME	Wilderness name
WLD_PLAN	Wilderness planning designation -USFS
WLD_RATE	Wilderness attribute rating-USFS Apr 78
WLD_STAT	Wilderness status-ex,en,sw,st,lm,in

TITLE: N02 - NATIONAL PARK SERVICE AREAS

DESCRIPTION: An inventory of the National Parks including code number, name, location, and size was obtained from the National Park Service. The file is used for accounting purposes and contains fields for bookkeeping. Occasionally a field will contain a negative number reflecting a transaction which resulted in a loss of area. Fee areas are those in which the Park Service has total interest and control (ownership) . Less-than-fee areas are those for which it has limited control, such as right-of-way, easement, or scenic interest.

SOURCE(S): Ucman, F. A. June 1979. National Park Service Lands Magnetic Tape File. U. S. Department of the Interior, National Park Service, Washington, DC.

REFERENCE(S) : USDI 1975.

YEAR(S): 1979
GEOCOVERAGE: U. S.
STATUS: Online
NUMBER OF RECORDS: 710
CREATED/UPDATED: Mar. 1980
COMPILER: M K Nungesser

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Multiple
VARIABLES PER RECORD: 11
NEW DATA: Infrequently

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
PRK_AREA	Park area - gross ha
PRK_CODE	National park identification number
PRK_FEE	Park area - fee ha
OPRK_LTF	Park area - less than fee ha
PRK_NAME	National park name
PRK_PRV	Park area - private ha
PRK_PUB	Park area - other public ha
PRK_SUB 1	Park area - fee & less than fee ha
PRK_SUB 2	Park area - other public & priv. ha

TITLE: NO3 - WILDERNESS AREAS

DESCRIPTION: An inventory of existing and proposed wilderness areas was derived from the data base obtained for the RARE II project (NO1). This file excludes RARE II areas. The code designations for each tract include characters identifying the agency managing the tract. Abbreviations are NF-Forest Service; NP-National Park Service; FW-Fish and Wildlife Service; or two-character state abbreviation if it is State managed. The status codes are described under NO1.

SOURCE(S): NO1.

YEAR(S): 1978	TEMPORAL RESOLUTION:
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 577	VARIABLES PER RECORD: 7
CREATED/UPDATED: Mar. 1980	NEW DATA: Infrequently
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
WLD_AREA	Wilderness area - gross ha
WLD_CO_A	Wilderness area - county portion ha
WLD_CODE	Wilderness code number -USFS
WLD_NAME	Wilderness area name
WLD_STAT	Wilderness area status code

TITLE: P01 - POPULATION BY SEX AND 5 YEAR AGE CLASSES

DESCRIPTION: The 1970 summary population counts for 5-year age groups and for males and females are contained in data set P01.

SOURCE(S): Loebel, A. S. 1975. 1970 Population Computer File. Energy Division, Oak Ridge National Laboratory. Oak Ridge, TN.

REFERENCE(S): USDC 1972.

YEAR(S): 1970
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 3071
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Annual
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 41
NEW DATA: Every 10 years

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
FOO_04	Females between birth and 4 years of age
F05_09	Females between 5 and 9 years of age
F10_14	Females between 10 and 14 years of age
F15_19	Females between 15 and 19 years of age
F20_24	Females between 20 and 24 years of age
F25_29	Females between 25 and 29 years of age
F30_34	Females between 30 and 34 years of age
F35_39	Females between 35 and 39 years of age
F40_44	Females between 40 and 44 years of age
F45_49	Females between 45 and 49 years of age
F50_54	Females between 50 and 54 years of age
F55_59	Females between 55 and 59 years of age
F60_64	Females between 60 and 64 years of age
F65_69	Females between 65 and 69 years of age
F70_74	Females between 70 and 74 years of age
F75_79	Females between 75 and 79 years of age
F80_84	Females between 80 and 84 years of age
F85_GT	Females 85 years of age and greater
MOO_04	Males between birth and 4 years of age
MO_09	Males between 5 and 9 years of age
M10-14	Males between 10 and 14 years of age
M15_19	Males between 15 and 19 years of age
M20_24	Males between 20 and 24 years of age
M25_29	Males between 25 and 29 years of age
M30_34	Males between 30 and 34 years of age

M35_39	Males between 35 and 39 years of age
M40_44	Males between 40 and 44 years of age
M45_49	Males between 45 and 49 years of age
M50_54	Males between 50 and 54 years of age
M55_59	Males between 55 and 59 years of age
M60_64	Males between 60 and 64 years of age
M65_69	Males between 65 and 69 years of age
M70_74	Males between 70 and 74 years of age
M75_79	Males between 75 and 79 years of age
M80_84	Males between 80 and 84 years of age
M85_GT	Males 85 years of age and greater
P_1970A	1970 total population
P_1970F	1970 female population
P_1970M	1970 male population

TERRAIN (T) SECTOR OVERVIEW

Various aspects of the terrain are characterized as part of the Terrain Sector. A set of National Atlas (USDI 1970) maps including land form, lithology, soils, karst terrain, glacial deposits, and elevation were digitized for counties in the eastern United States by C. A. Roswell, Jr (1977) . The proportion of counties in various terrain categories was estimated by overlaying county boundaries on the thematic maps. These files have been edited and mapped. Several, including soils and lithology, are being expanded to cover the western United States. In addition, a map on physical regions has been digitized. Characterization data are being developed for the chemical, physical, and land-use properties of the soils file.

TITLE: TO1 - LAND SURFACE FORM

DESCRIPTION: Land surface form is a composite of the simple topographic variables of relief, slope inclination (profile), and slope aspect. Surface form affects microclimate, drainage, and soil characteristics. Hammond (1963) produced a national map of land surface form. The bases of his classification are the proportion of area in slopes of less than eight percent (gently sloping), proportion of such gently sloping in upland versus that in lowland, and local relief. These variables are ordinarily scaled so that there is a land surface form map class for each of the 96 possible class combinations. The map was digitized by recording the proportion of each county in each land surface form class. Because of the complexity of the map and large number of map classes per county, there are potential errors resulting from the digitizing process. Percentages were recorded to the nearest ten percent.

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, Hammond 1963.

YEAR(S): 1964	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS: Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 6552	VARIABLES PER RECORD: 7
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
LAND_S_A	Area in land surface form code ha
LAND_S_P	Portion in land surface form code
LAND_S_R	Land surface local relief class code
LAND_S_S	Land surface gentle slope class code
LAND_S_T	Land surface profile type class code

TITLE: T02 - BEDROCK LITHOLOGY

DESCRIPTION: Bedrock lithology affects chiefly drainage and nutrient availability. The geologic map in the National Atlas was used as the source. This map defines classes by stratigraphy rather than by lithology. Lithology can be interpreted from stratigraphy because of the correlation between age and rock type within broad regions. The map is general enough to permit rapid interpretation of lithologic information, but too broad for detailed analysis. The translation and classes are listed below. The proportion of each county in each class was digitized to the nearest ten percent.

Code	Lithologic Class	Geologic Map Units
1	Intrusive Igneous Rocks	Lower Tertiary, Mesozoic, Paleozoic
2	Metamorphic Rocks	Precambrian (Older, Younger)
3	Consolidated Sediments	Paleozoic (Upper, Middle, Lower)
4	Unconsolidated Sediments	Quaternary, Tertiary (Upper, Lower), Cretaceous
5	Volcanic Rocks	Quaternary, Tertiary

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, USDI 1970 Sheet Number 74.

YEAR(S): 1970	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 3414	VARIABLES PER RECORD: 5
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
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FIPS_CO	FIPS county number
FIPS_ST	FIPS state number

LITHOL_A	Area in bedrock lithologic class	ha
LITHOL_C	Bedrock lithologic class code	
LITHOL_P	Portion in bedrock lithologic class	

TITLE: T04 - GLACIAL GEOLOGY

DESCRIPTION: The age and nature of glacial deposits affects drainage conditions and the nutrient status of the soils developing on them. The source for this file was the glacial map of the eastern United States. The classes are:

Code	Glacial Deposit
11	Wisconsin drift
12	Illinoisan drift
13	Kansan drift
14	Nebraskan drift
21	Wisconsin end moraine
22	Illinoisan end moraine
31	Ice-contact stratified drift
32	Outwash sediments
33	Lacustrine sediments
34	Marine sediments

SOURCE (S) : Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, Geological Society of America 1959.

YEAR(S): 1970	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 3250	VARIABLES PER RECORD: 5
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
GLACL_A	Area in glacial geology class ha
GLACL_C	Glacial geology class code
GLACL_F	Flag, * = area is < 0.001 of county

TITLE: T05 - KARST TERRAIN

DESCRIPTION: Karst terrain is often associated with extreme droughtiness or other peculiar drainage conditions, while the associated soils are generally highly basic (alkaline). The true karst is always associated with limestone or dolomite, while particular classes of pseudokarst may be associated with igneous rocks or unconsolidated sediments. The proportion, to the nearest ten percent, of each karst types was recorded. The eleven types are listed below.

LIMESTONE AND DOLOMITE

- 11 Ponors and dolines on plains and valley floors; undissected uplands
- 12 Ponors and dolines with extensive karrenfelder on plains and valley floors
- 13 Doline ponds and lakes on plains
- 14 Dolines and uvala on ridges and dissected uplands
- 15 Collapsed dolines and uvala on dissected plateaus and plains; small poljes on margin of plateaus

GYPSUM AND SALT TERRAIN

- 21 Dolines and ponors on plains

PSEUDOKARST

- 31 Sinkholes and cisterns on lava plains
- 32 Basins on plains of weathered lava
- 33 Sinkholes and basins on gravel and sand plains and plateaus
- 34 Shallow sinkholes on granite and diorite uplands

KARRENFELDER

- 41 Karrenfelder outside of areas of other karst types

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, USDI 1970 Sheet Number 77.

YEAR(S): 1970	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS: Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 944	VARIABLES PER RECORD: 5
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
KARS_A	Area in karst terrain class ha
KARST_C	Karst terrain class code
KARST_P	Portion in karst terrain class

TITLE: T06 - ELEVATION (BROAD CLASSES)

DESCRIPTION: Elevation has a significant influence on climatic factors, especially temperature, and indirectly affects species distributions. The source topographic map had wide contour intervals so that elevation data fall into five rather broad classes. Class limits in meters are (1) 0-150, (2) 150-300, (3) 300-600, (4) 600-1500, and (5) 1500-2700. An average elevation was calculated using the midpoint of each class weighted by the proportion of the county in that class.

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S) : Roswell 1976, USDI 1970 Sheet Number 59.

YEAR(S): 1959	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 2802	VARIABLES PER RECORD: 9
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPLIER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
ELEV_AVE	Average elevation
ELEV_1	Area between 0 and 150 m ha
ELEV_2	Area between 150 and 300 m ha
ELEV_3	Area between 300 and 600 m ha
ELEV_4	Area between 600 and 1500 m ha
ELEV_5	Area between 1500 and 2700 m ha
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number

TITLE: T07 - SOIL ORDER, SUBORDER, MAP UNIT DICTIONRY

DESCRIPTION: This data set contains a dictionary of English names for the soils codes. Names are included for the nine orders, 53 suborders, and 194 map units. The dictionary includes all types occurring in the east.

SOURCE(S): Roswell 1976.

YEAR(S): 1967	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION:
STATUS : Online	DATA SET TYPE: Dictnry
NUMBER OF RECORDS: 194	VARIABLES PER RECORD: 6
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
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SOIL_M_C	Soils map unit code
SOIL_M_D	Soils map unit description
SOIL_O_C	Soils order code
SOIL_O_D	Soils order description
SOIL_S_C	Soils suborder code
SOIL_S_D	Soils suborder description

TITLE: T08 - GREAT SOIL GROUPS CHARACTERISTICS

DESCRIPTION: The Soil Map Units are associations of Great Soil Groups. This data set provides information on the average characteristics of Great Soil Groups to allow the interpretation of soils classification data in terms of ecological studies. Included are base status, moisture status, organic matter content, pans, temperature, and texture characteristics. By consulting the map legend and 1967 Supplement to the Seventh Approximation (USDA 1960, USDA 1975) of soil classification, ordinally scaled values were assigned to each soil parameter.

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, USDI 1970 Sheet Number 86.

YEAR(S): 1967	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION:
STATUS : Online	DATA SET TYPE: Dictnry
NUMBER OF RECORDS: 85	VARIABLES PER RECORD: 8
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: C A Roswell, Jr	

VARIABLE	LABEL AND UNITS OF MEASURE
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GSG_CODE	Great soils group code
GSG_DSCP	Great soils description"
S_BASE_C	Soil base code
S_MOIS_C	Soil moisture code
S_ORGN_C	Soil organic matter code
S_PAN_C	Soil pan code
S_TEMP_C	Soil temperature code
S_TEXT_C	Soil texture code

TITLE: T09 - GREAT SOIL GROUPS WITHIN MAP UNITS

DESCRIPTION: The Soil Map Units are associations of Great Soil Groups. This data set defines these associations including the rank of each Great Soil Group within a Soil Map Unit. This data set permits the merging of Great Soil Group characteristics (T08) with the soils distribution data (T03) .

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S) : Roswell 1976, USDI 1970 Sheet Number 86.

YEAR(S): 1967
GEOCOVERAGE: East
STATUS : Online
NUMBER OF RECORDS: 459
CREATED/UPDATED : Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Hist.
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry
VARIABLES PER RECORD: 3
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
GSG_CODE	Great soils group within soils map unit
GSG_RANK	Great soils group rank within map unit
SOIL_M_C	Soils map unit code

TITLE: T10 - SOIL MAP UNIT CHEMICAL CHARACTERISTICS

DESCRIPTION: The average chemical characteristics are defined for each Soil Map Unit. Values for base saturation, pH, cation exchange capacity (CEC), soil organic matter, and clay content were obtained for the A horizon of typic soils within Soil Map Units. These values were obtained from several literature sources to represent the average conditions in the upper 20-25 cm. If a typic soil was not described, values for an atypic but widely distributed soil were used. These data have been used to investigate impacts of acid rain on soils. In these studies the total base contents of the upper soil were estimated by multiplying base saturation by CEC.

SOURCE(S): USDA 1975, USDA 1960, Buol et al. 1973, Hole 1976, Hoyle 1973.

REFERENCE(S): Klopatek et al. 1980a.

YEAR(S): 1979
GEOCOVERAGE: East
STATUS : Online
NUMBER OF RECORDS: 194
CREATED/UPDATED: Mar. 1980
COMPILER: J M Klopatek

TEMPORAL RESOLUTION: Hist.
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry
VARIABLES PER RECORD: 7
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
SOIL_BS	Soil base saturation percent
SOIL_CC	Soil clay content percent
SOIL_CEC	Soil cation exchange capacity meq/100g
SOIL_M_C	Soils map unit code
SOIL_OM	Soil organic matter percent
SOIL_PH	Soil pH

TITLE: T11 - UNIQUE LAND SURFACE COVER (SAND & SWAMP)

DESCRIPTION: The land surface form map (Hammond 1959) indicates areas in which more than fifty percent of the surface is covered by sand and areas in which standing water covers more than fifty percent or covers ten to fifty percent of the surface. This data set contains the area of each county in which these conditions occur. Sands are usually droughty and infertile while standing water is the extreme case of poor drainage. These conditions either restrict the habitat or create unique habitat conditions.

SOURCE(S): Roswell, C. A. 1976. Terrain Magnetic Tape File. University of Maryland, MD.

REFERENCE(S): Roswell 1976, Hammond 1959.

YEAR(S): 1967
GEOCOVERAGE: East
STATUS : Online
NUMBER OF RECORDS:
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION: Hist.
SPATIAL RESOLUTION: County
DATA SET TYPE: Single
VARIABLES PER RECORD: 5
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
SND_50_A	Area covered by sand (>50% coverage) ha
WTR_30_A	Area occupied by water (10-50%) ha
WTR_50_A	Area occupied by water (>50%) ha

TITLE: T12 - SOILS AVERAGE CHEMICAL CHARACTERISTICS

DESCRIPTION: The Soil Map Unit characteristics (T10) and Soil Map Unit distribution data (T03) were combined to estimate average soil characteristics for counties. If several Soil Map Units occurred within a county, the values were weighted according to the area of the county occupied by each type. Such an averaging procedure tends to obscure minor soil types or stypic variation. Since rocky outcrops and stony land were not included in the ratings, the county data are likely to overestimate soil properties such as the capacity to buffer acid precipitation. The orientation of this data set is regional, so local variation, which must be considered for site-specific studies, was not considered.

SOURCE(S): T03; T10.

REFERENCE(S): Klopatek et al. 1980a.

COMMENTS: Soil cation exchange capacity is expressed as milli-equivalents per 100 grams (meq/100g).

YEAR(S): 1967	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 2660	VARIABLES PER RECORD: 7
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: J M Klopatek	

VARIABLE	LABEL AND UNITS OF MEASURE
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
SOIL_BS	Soil base saturation percent
SOIL_CC	Soil clay content percent
SOIL_CEC	Soil cation exchange capacity meq/100g
SOIL_OM	Soil organic matter percent
SOIL_PH	Soil pH

TITLE: T13 - SOILS AT SOIL ORDER LEVEL

DESCRIPTION: The Soil Map Unit data set (T03) was aggregated to the Soil Order level by county to form this data set. Thus the area of counties in each of the nine Soil Orders was created. This data set was mapped and used for editing the T03 file. Some of the editing was performed at Brookhaven National Laboratory by Ed Kaplan and Alicia Portas.

SOURCE(S): T03.

YEAR(S): 1967	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: East	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Single
NUMBER OF RECORDS: 2660	VARIABLES PER RECORD: 11
CREATED/UPDATED: Mar. 1980	NEW DATA: Not anticipated
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
ALFI_A	Alfisol soil ha
ARIDI_A	Aridisol soil ha
ENTI_A	Entisol soil ha
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
HISTO_A	Histosol soil ha
INCPT_A	Inceptisol soil ha
MOLLI_A	Mollisol soil ha
SPODO_A	Spodosol soil ha
ULTI_A	Ultisol soil ha
VERTI_A	Vertisol soil ha

WILDLIFE (W) SECTOR OVERVIEW

The Wildlife Sector includes information on birds and mammals. The distribution and abundance of birds was obtained from the Breeding Bird Survey (BBS) which is conducted annually by the Fish and Wildlife Service. Information on the potential presence or absence of 280 mammal species by county was digitized from a variety of sources. Endangered species (animals and plants) data were obtained from Brookhaven National Laboratory (Nagy and Calef 1979). Plans exist to incorporate additional information which would define wildlife habitat requirements.

TITLE: W01 - BBS ROUTES (BREEDING BIRD SURVEY)

DESCRIPTION: Since 1966, the U. S. Fish and Wildlife Service has coordinated an annual survey of birds during the breeding season (early summer). The Breeding Bird Survey (BBS) is conducted by volunteers. Routes have been established which follow roads selected to give a random sample of roadside habitats. Fifty three-minute stops are made along the 40 km route and the count of each species seen or heard within 0.4 km radius is recorded. The survey provides species composition by various habitats, relative abundance estimates, and population trends over time. This data set defines the name, number, location, type, strata code, ecoregion code, and vegetation code(s) of each route. The type code indicates if the route was not run using prescribed methods. Codes are: 1=regular, 2=experimental, 3=late finish (over 5.5 hours), 4=check route, 5=early start (over 15 minutes), 6=late finish (over 30 minutes), 7=miscellaneous, 8=bad weather, 9=late date, 0=incomplete (fewer than 45 stops) Ecological strata are physiographic/ecological subdivisions used by the USF&WS to define homogeneous regions. There are 58 strata in the United States. Each route was associated with ecoregions (Bailey 1976) by comparing the state route maps with the ecoregion maps. Potential natural vegetation types (Kuchler 1964) were also keyed to the BBS routes by comparing the BBS routes and vegetation map. When BBS routes crossed several vegetation types, the three, or fewer, most dominant types were included. This data set is used with W02 through W08 to provide route data.

SOURCE(S): Bystrak, D. 1979 1 BBS Super-Deck Magnetic Tape File. U. S. Fish and Wildlife Service, Laurel, MD.

REFERENCE(S): Bystrak 1979.

YEAR(S): 1978	TEMPORAL RESOLUTION: Annual
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: Points
STATUS : Online	DATA SET TYPE: Index
NUMBER OF RECORDS: 2367	VARIABLES PER RECORD: 27
CREATED/UPDATED: Mar. 1980	NEW DATA: Infrequently
COMPILER: R J Olson	

VARIABLE	LABEL AND UNITS OF MEASURE
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BBS_CMNT	Comments about BBS route
BBS_LAT	Latitude of start of BBS route
BBS_LONG	Longitude of start of BBS route

BBS_NAME	BBS route name
BBS_RT	BBS route number within a state
BBS_ST	BBS state code number
BBS_T_65	BBS route type, 1965
BBS_T_66	BBS route type, 1966
BBS_T_67	BBS route type, 1967
BBS_T_68	BBS route type, 1968
BBS_T_69	BBS route type, 1969
BBS_T_70	BBS route type, 1970
BBS_T_71	BBS route type, 1971
BBS_T_72	BBS route type, 1972
BBS_T_73	BBS route type, 1973
BBS_T_74	BBS route type, 1974
BBS_T_75	BBS route type, 1975
BBS_T_76	BBS route type, 1976
BBS_T_77	BBS route type, 1977
BBS_T_G	Tag, * - BBS route within one strata
ECO_CODE	Ecoregion section code, Bailey 1976
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
STR_CODE	BBS strata code
VEG1_C	Vegetation crossed by BBS route, Kuchler
VEG2_C	Vegetation crossed by BBS route, Kuchler
VEG3_C	Vegetation crossed by BBS route, Kuchler

TITLE: WO2 - BBS PHYSIOGRAPHIC STRATA DICTIONARY

DESCRIPTION: The names of the Breeding Bird Survey physiographic strata are given. The BBS strata are defined by the USF&WS using a combination of the potential natural vegetation scheme of Kuchler (1964) and the physiographic/land-use scheme of Fenneman (1931, 1938).

SOURCE(S): Bystrak, D. 1979. Map of BBS Strata. U. S. Fish and Wildlife Service, Laurel, MD.

YEAR(S): 1978
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 61
CREATED/UPDATED: Mar. 1980
COMPILER: R J Olson

TEMPORAL RESOLUTION:
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry
VARIABLES PER RECORD: 3
NEW DATA: Not anticipated

VARIABLE	LABEL AND UNITS OF MEASURE
BBS_RT_N	BBS number of routes within a strata
STR_CODE	BBS strata code
STR_DSCP	Physiographic strata description

TITLE: W09 - ENDANGERED SPECIES CODES DICTIONARY

DESCRIPTION: Federally designated endangered and threatened species information has been compiled by Brookhaven National Laboratory. They continually update and expand their file as new information becomes available. Thus our file, W10, may be out-of-date. Species are identified by 3-digit numeric codes. This data set provides English names for the codes along with species type information, e.g. mammal, bird, fish, etc. Data sets W10 and W11 contain county-level distribution data for each species. W11 has been supplemented at ORNL to include additional species and more specific species range data. Data set W09 contains the national counts (number of county occurrences) for both W10 and W11.

SOURCE(S): Calef, C. March, 1978. 1978 ESEA Magnetic Tape File. Brookhaven National Laboratory, Upton, NY.

REFERENCE(S): Calef and Nagy 1979.

COMMENTS: An updated file with more species, better distribution definitions, and endangered plant data is anticipated in 1980.

YEAR(S): 1977
GEOCOVERAGE: U. S.
STATUS : Online
NUMBER OF RECORDS: 204
CREATED/UPDATED: Mar. 1980
COMPILER: C E Calef, J Nagey

TEMPORAL RESOLUTION:
SPATIAL RESOLUTION:
DATA SET TYPE: Dictnry
VARIABLES PER RECORD: 6
NEW DATA: As available

VARIABLE	LABEL AND UNITS OF MEASURE
EAT_CODE	Endangered species numeric code
EAT_DSCP	Endangered species description
EAT_GRP	Endangered species type group code
EAT_TYPE	Endangered species type description
EATN_BNL	Endangered species national counts-BNL
EATN_OR	Endangered species national counts-ORNL

TITLE: W10 - ENDANGERED SPECIES (BNL FILE)

DESCRIPTION: County-level distribution data for federally designated endangered species of the United States were compiled by Brookhaven National Laboratory. Although this data set contains only the counties of historic occurrence, more recent data are available from BNL on species distribution according to four levels: designated critical habitat, present range, potential range, and historic range. See W09 for species names associated with code designations.

SOURCE(S): Calef, C. March, 1978. 1978 ESUSA Magnetic Tape File. Brookhaven National Laboratory, Upton, NY.

REFERENCE(S): Shreeve, Calef, and Nagy 1978. Calef and Nagy 1979. Nagy and Calef 1978.

YEAR(S): 1977	TEMPORAL RESOLUTION: Hist.
GEOCOVERAGE: U. S.	SPATIAL RESOLUTION: County
STATUS : Online	DATA SET TYPE: Multiple
NUMBER OF RECORDS: 6916	VARIABLES PER RECORD: 3
CREATED/UPDATED: Mar. 1980	NEW DATA: As available
COMPILER: C E Calef, J Nagey	

VARIABLE	LABEL AND UNITS OF MEASURE
EAT_CODE	Endangered species numeric code
FIPS_CO	FIPS county number
FIPS_ST	FIPS state number
