

TopoViewer: A Topographic and Orthophoto Map Viewer for Georgia

TopoViewer

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TopoViewer

Two Products

- ☐ Statewide TopoViewer
- ☐ County TopoViewer

Statewide TopoViewer

Statewide TopoViewer

Objective:

Publish to DVD-ROM the 1:24,000 Digital Raster Graphics (DRG's) topographic quadrangle maps **and** color satellite or orthophoto imagery as seamless data layers.

In cooperation with GA Department of Natural Resources, Environmental Protection Division, Geologic Survey

Statewide TopoViewer

A statewide viewer is needed to facilitate mapping and viewing.

- ❑ The State TopoViewer would display 1:24,000-Scale DRG* or 7.5-meter resampled Color Infrared DOQQ imagery.
- ❑ Search by county, town, and geographic names
- ❑ Measure distances
- ❑ View location in Latitude and Longitude (DMS)
- ❑ Print selected views
- ❑ MapObjects-based viewer (freely distributed graphic user interface)

* Filtered and compressed all 1017 1:24,000-scale topographic maps to remove speckling and non-contiguous single pixel cells. Product is sharper and clearer than the first generation DRG product.

Statewide TopoViewer

Search by county, town and place name (USGS Geographic Names and GA Department of Community Affairs Community Facilities)

TopoViewer Data: Geographic Names

- ❑ An automated inventory of the names and locations of physical and cultural geographic features located throughout the State of Georgia (**approximately 59,000 for Georgia**).
- ❑ Serves as the Federal Governments repository of information regarding feature name spellings and applications for features in U.S.
- ❑ The names listed in the inventory can be published on Federal maps, charts, and in other documents.
- ❑ The feature's locative information has been used in emergency preparedness, marketing, site-selection and analysis, genealogical and historical research, and transportation routing applications.

TopoViewer Data: Geographic Names

GNIS Feature Classes

airport	arch	area	arroyobar	basin
bay	beach	bench	bend	bridge
building	canal	cape	cave	cemetery
channel	church	civil	cliff	crater
crossing	dam	falls	flat	forest
gap	geyser	glacier	gut	harbor
hospital	island	isthmus	lake	lava
levee	locale	mine	military	oilfield
other	park	pillar	plain	po
ppl	range	rapids	reserve	reservoir
ridge	school	sea	slope	spring
stream	summit	swamp	tower	trail
tunnel	unknown	valley	well	woods

TopoViewer Data: Geographic Names

DUPIES FERRY (HISTORICAL) in Effingham County GNIS-ID 13544	crossing	32.50220	-81.23440	0.00000	0.00000
DUPLIN RIVER in McIntosh County GNIS-ID 13545	stream	31.41420	-81.30030	31.48970	-81.26500
DUPONT DAM in Clarke County GNIS-ID 13546	dam	33.99330	-83.31330	0.00000	0.00000
DUPONT FULL GOSPEL MISSION in Clinch County GNIS-ID 13547	church	31.00890	-82.85170	0.00000	0.00000
DUPONT LAKE in Clarke County GNIS-ID 13548	reservoir	33.99330	-83.31330	0.00000	0.00000
DUPREE CREEK in Glynn County GNIS-ID 13549	stream	31.16420	-81.47030	31.17530	-81.46970
DUPREE PARK in Cherokee County GNIS-ID 13550	park	34.10530	-84.49110	0.00000	0.00000
DURAN MOBILE HOME PARK in Richmond County GNIS-ID 13551	ppl	33.45080	-82.05670	0.00000	0.00000
DURAND in Meriwether County GNIS-ID 13552	ppl	32.91690	-84.77390	0.00000	0.00000
DURANT SCHOOL (HISTORICAL) in Greene County GNIS-ID 13553	school	33.73360	-83.22080	0.00000	0.00000
DURBEYS CHAPEL CEMETERY in Warren County GNIS-ID 13554	cemetery	33.29860	-82.75560	0.00000	0.00000
DURDEN in Brooks County GNIS-ID 13555	ppl	30.79170	-83.47360	0.00000	0.00000
DURDEN BRIDGE in Morgan County GNIS-ID 13556	bridge	33.53220	-83.63330	0.00000	0.00000
DURDEN CEMETERY in Walton County GNIS-ID 13557	cemetery	33.87390	-83.70890	0.00000	0.00000
DURDEN CEMETERY in Morgan County GNIS-ID 13558	cemetery	33.53810	-83.62580	0.00000	0.00000
DURDEN DAM in Emanuel County GNIS-ID 13559	dam	32.66330	-82.20670	0.00000	0.00000
DURDEN FARM POND in Emanuel County GNIS-ID 13560	reservoir	32.66330	-82.20670	0.00000	0.00000
DURDEN POND in Bulloch County GNIS-ID 13561	reservoir	32.51000	-81.61000	0.00000	0.00000
DURDEN POND in Emanuel County GNIS-ID 13562	reservoir	32.49720	-82.19970	0.00000	0.00000
DURDEN POND DAM in Bulloch County GNIS-ID 13563	dam	32.51000	-81.61000	0.00000	0.00000
DURDENS POND in Emanuel County GNIS-ID 13564	reservoir	32.49670	-82.20330	0.00000	0.00000
DURDENS POND DAM in Emanuel County GNIS-ID 13565	dam	32.49670	-82.20330	0.00000	0.00000
DURDENVILLE in Emanuel County GNIS-ID 13566	ppl	32.53640	-82.19360	0.00000	0.00000
DURDIN LAKE in Charlton County GNIS-ID 13567	lake	30.88780	-82.14670	0.00000	0.00000
DURDIN PRAIRIE in Charlton County GNIS-ID 13568	swamp	30.89560	-82.14780	0.00000	0.00000

TopoViewer Data: Community Facilities

The Georgia Department of Community Affairs in conjunction with the the State's 16 Regional Development Centers have compiled an extensive, statewide GIS base map containing 27 types of GPS-located community facilities. The Georgia Community Facilities (approximately 8,000 facilities) data layer includes city halls, courthouses, sheriffs' offices, marshals' office, police stations, fire stations, city jails, county jails, county correctional facilities, state prisons, federal penitentiaries, public and private universities, public and private 4-year colleges, public and private 2-year colleges, public vocational technical schools, public high schools, private schools, airports, hospitals, libraries, water systems, and wastewater treatment plants.

TopoViewer Data: Community Facilities

UID	LONGITUDE	LATITUDE	FACNAME	TYPE	ADDRESS_1	CITY	ZIP	ACODE	PHONE	FIRST_NAME	LAST_NAME	TITLE
PS150001	-83.408391	33.951644	Athens Diversion Center	State Prison	171 Old Epps Bridge Rd	Athens	30606	706	542-8628	Clarke	Arick	
CJ150002	-83.327546	33.945596	Clarke County Jail	County Jail	3015 Lexington Rd	Athens	30605	706	613-3270	Jerry	Massey	
PD152003	-83.376532	33.959276	Athens-Clarke Co Police Dept - Downtown Substation	Police Station	133 E Washington St	Athens	30601	706	613-3343			
PD152002	-83.354594	33.956453	Police Services Substation - East Athens	Police Station	385 Fairview St	Athens	30601	706	613-3358	Clarence	Holman	
PD150002	-83.328131	33.942085	Athens-Clarke County Police Department	Police Station	3035 Lexington Rd	Athens	30605	706	613-3330	Ronald	Chandler	Chief
PD152004	-83.466616	33.943395	Athens-Clarke Co Police Dept - W Athens Substation	Police Station	3700 Atlanta Hwy	Athens	30606	706	613-3850			
CC150001	-83.329695	33.944613	Athens/Clarke County Correctional Institution	County Correctional Institution	2825 County Farm Rd	Athens	30610	706	613-3400	Willie	Bolton	Warden
FS150008	-83.313546	33.911084	Athens-Clarke County Fire Department Station 05	Fire Station	1090 Whit Davis Rd	Athens	30605	706	543-2213			
FS152001	-83.365421	33.897117	GA Forestry Commission - Clarke-Oconee	Fire Station	1055 E Whitehall Rd	Athens	30605	706	542-6880	Larry	Morris	
FS150101	-83.489641	34.041621	South Jackson Volunteer Fire Department	Fire Station	550 Crooked Creek Rd	Athens	30607	706	367-1911			
FS150100	-83.499742	34.001106	South Jackson Fire Department Station 02	Fire Station	6045 Jefferson River Rd	Athens	30607	706	354-0691			
FS150009	-83.388137	33.936559	Athens-Clarke County Fire Department Station 03	Fire Station	1744 S Lumpkin St	Athens	30606	706	543-2213			
FS150006	-83.414100	33.962502	Athens-Clarke County Fire Department Station 04	Fire Station	815 Hawthorne Ave	Athens	30606	706	543-2213			
FS150004	-83.376907	33.962900	Athens-Clarke County Fire Department	Fire Station	700 College Ave	Athens	30601	706	613-3360			
FS150005	-83.329617	33.975715	Athens-Clarke County Fire Department Station 06	Fire Station	580 Athena Dr	Athens	30601	706	543-2213			
FS150003	-83.325001	33.952319	Athens Municipal Airport Fire Department	Fire Station	Ben Epps Dr	Athens	30605	706	613-3420			
FS150007	-83.453386	33.939905	Athens-Clarke County Fire Department Station 02	Fire Station	3500 Atlanta Hwy	Athens	30606	706	543-2213			
CM150001	-83.376953	33.959897	Clarke County Marshal's Office	Marshals' Office	150 E Hancock St	Athens	30601	706	354-2660	David	Cholet	Chief Marshal
SO150002	-83.374468	33.959759	Clarke County Sheriffs Office	Sheriffs' Office	325 E Washington St	Athens	30601	706	613-3250	Jerry	Massey	Sheriff
CH150002	-83.374411	33.959763	Clarke County Courthouse	Courthouse	325 E Washington St	Athens	30601	706	613-3190			
CI152044	-83.376066	33.959770	Athens City Hall	City Hall	301 College Ave	Athens	30601	706	613-3690			
AB150030	-83.322652	33.996664	Dana Corporation	Available Industrial Buidlings	150 Voyles Rd	Athens	30601	770	992-2255			
AB150026	-83.328436	33.990832	Ranick Ltd	Available Industrial Buidlings	1750 Olympic Dr	Athens	30601	706	548-9300			
AB150029	-83.329584	33.986576	Prime Composites	Available Industrial Buidlings	180 Trans Tech Dr	Athens	30601	706	548-9300			

TopoViewer Data: Imagery



Resampled CIR DOQQs (10 meter, 256 colors) - 1651 kb

Georgia

Department of Natural Resources



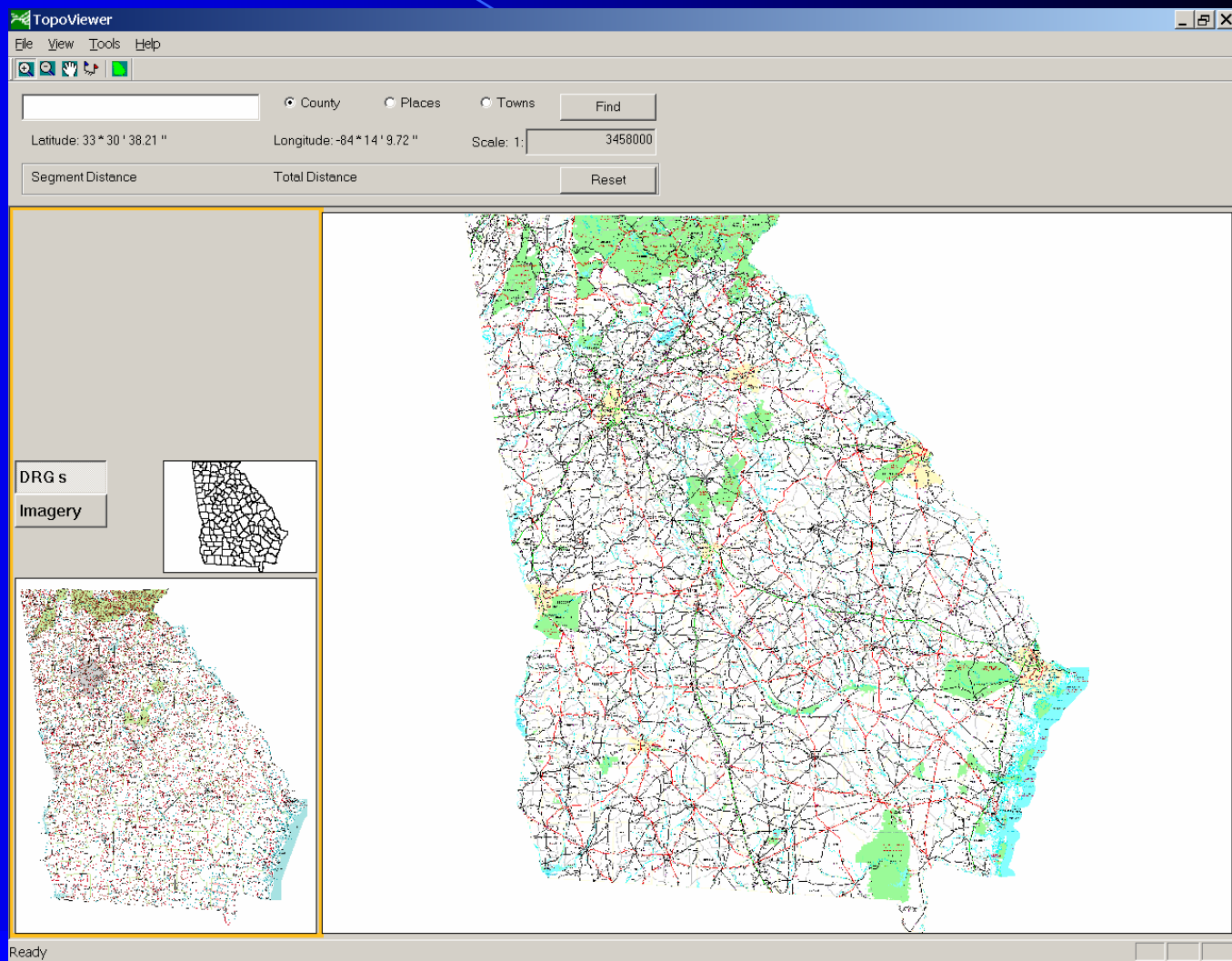
Resampled CIR DOQQs (10 meter, 256 colors) - 1651 kb

TopoViewer Data

Data sets are provided as shapefiles and TIFF (.tif) images (compatible with AutoDesk®, ESRI®, ERDAS®, and other software packages)

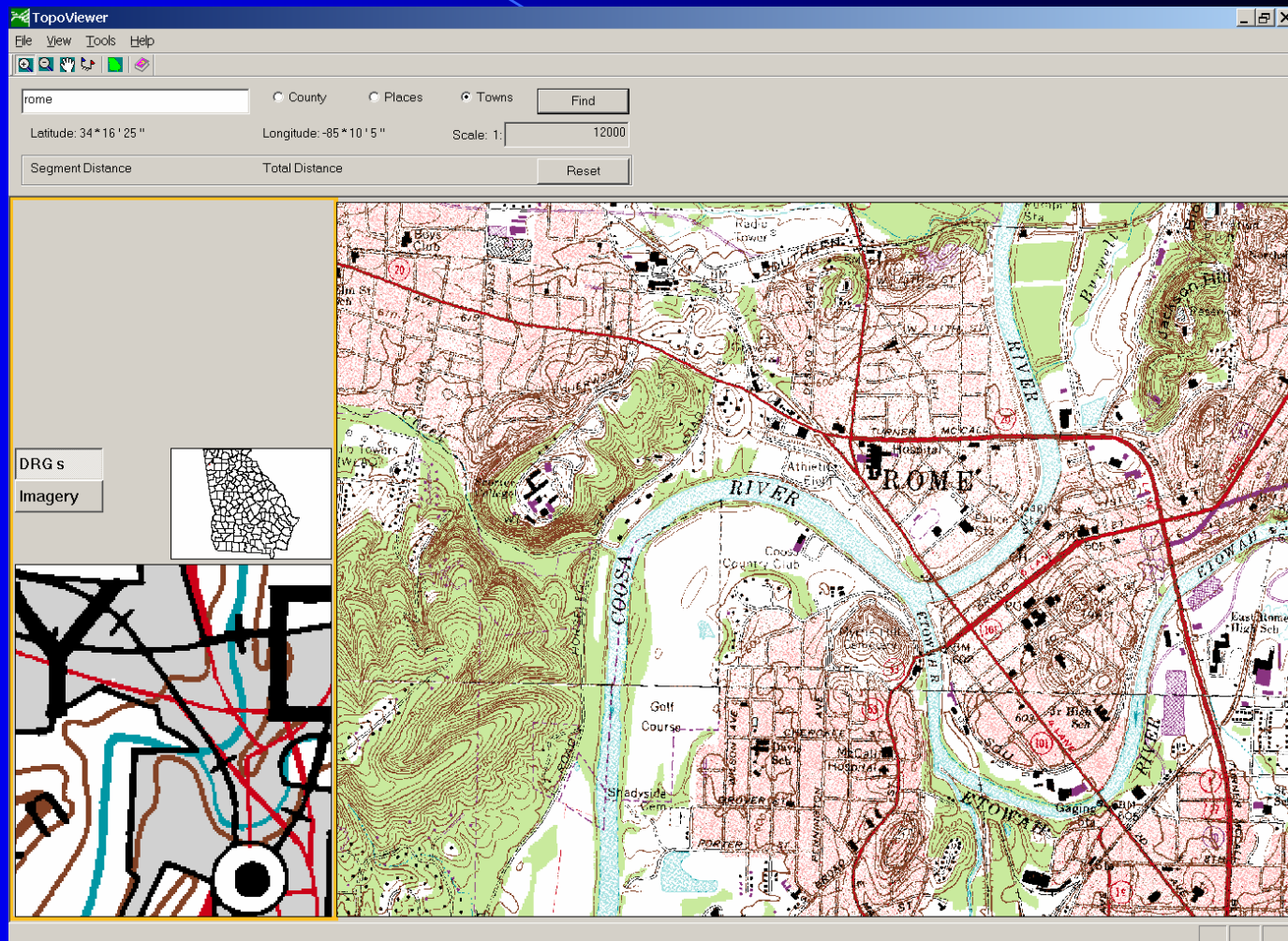
Statewide TopoViewer

Graphic User Interface



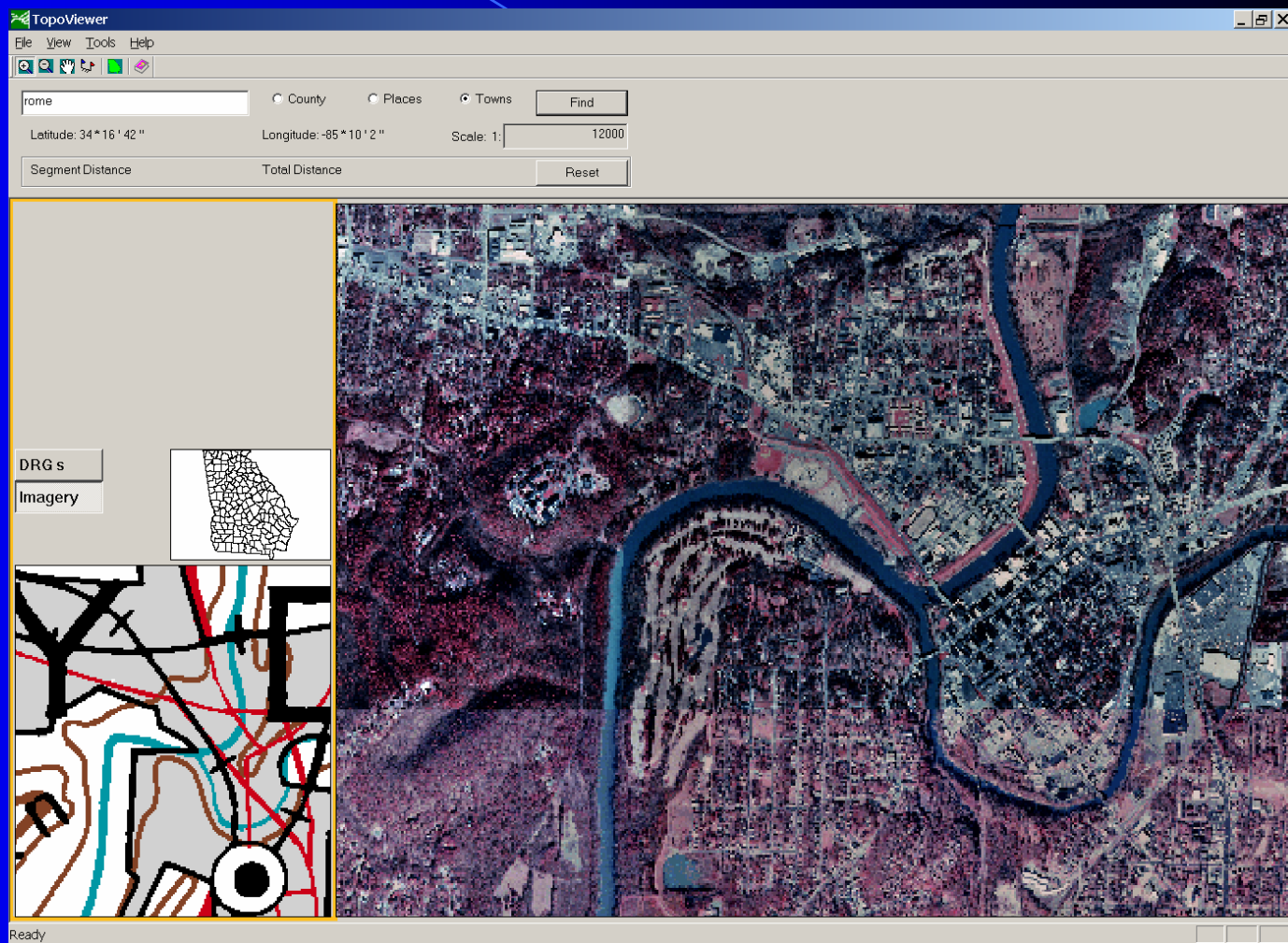
Statewide TopoViewer

Click in to the
Index Map to
view 1:24,000-
scale DRG



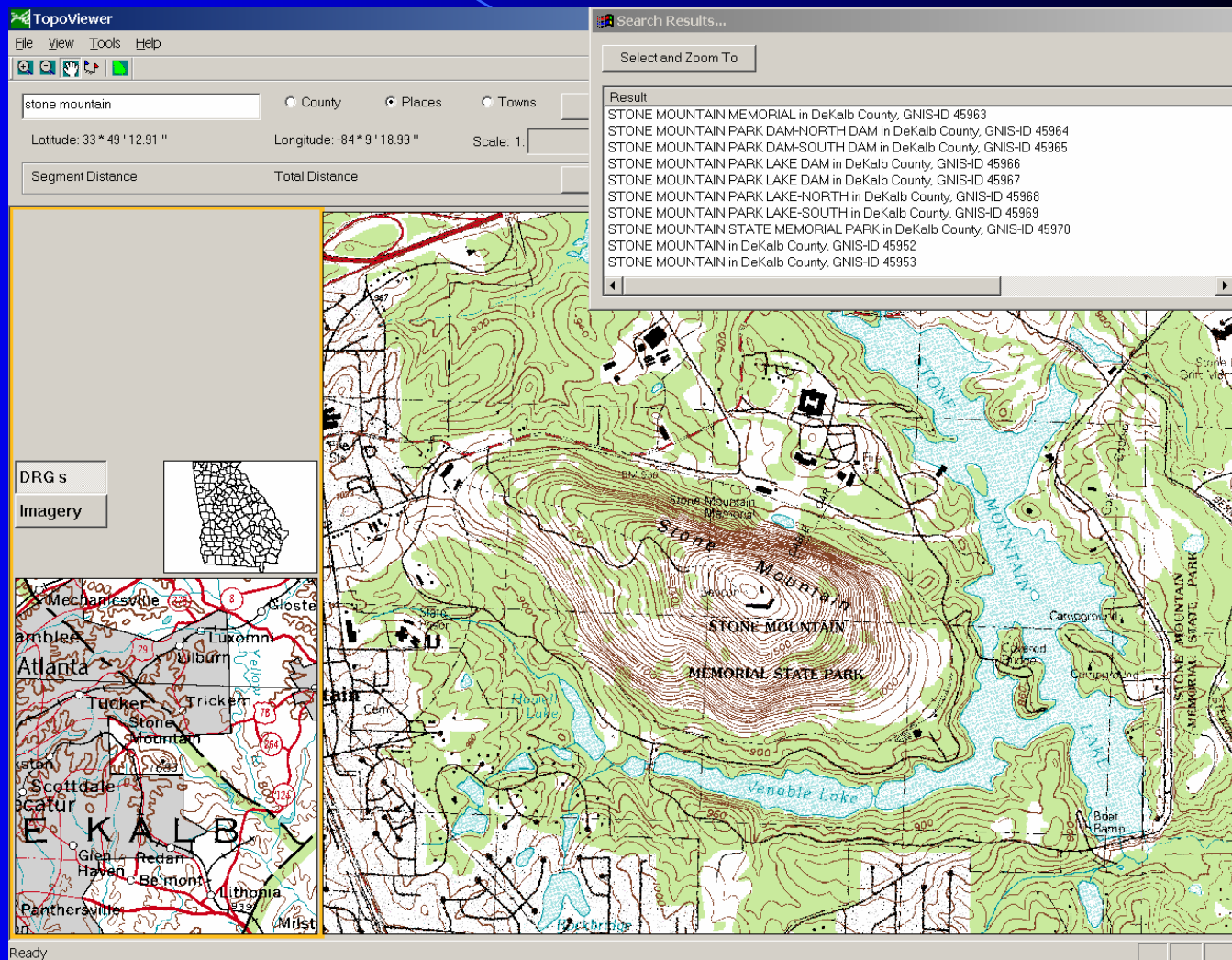
Statewide TopoViewer

Toggle Imagery
button to view
7.5-meter
resampled Color
Infrared DOQQ
imagery



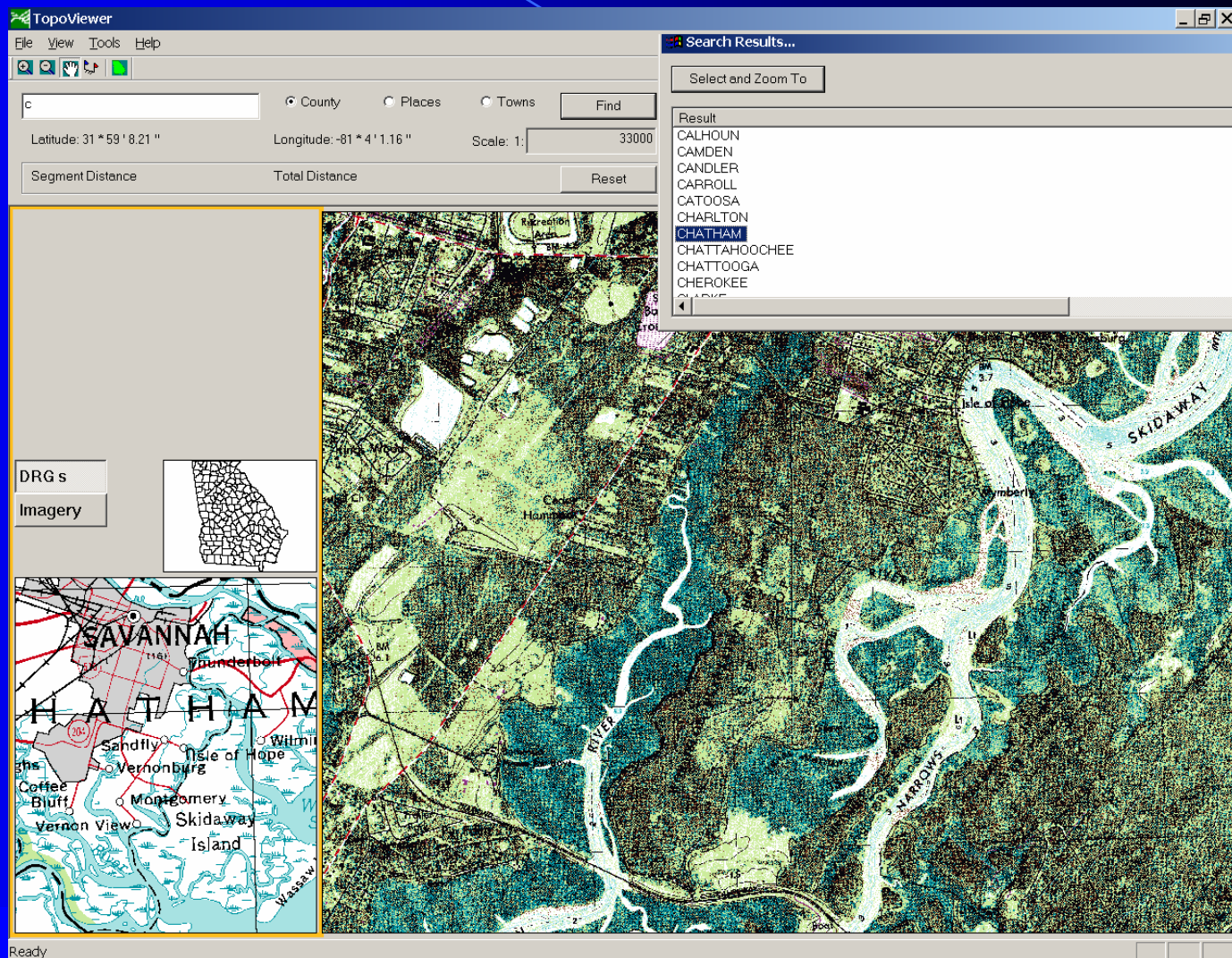
Statewide TopoViewer

**Search and
view using
GNIS place
names, county
or town names**



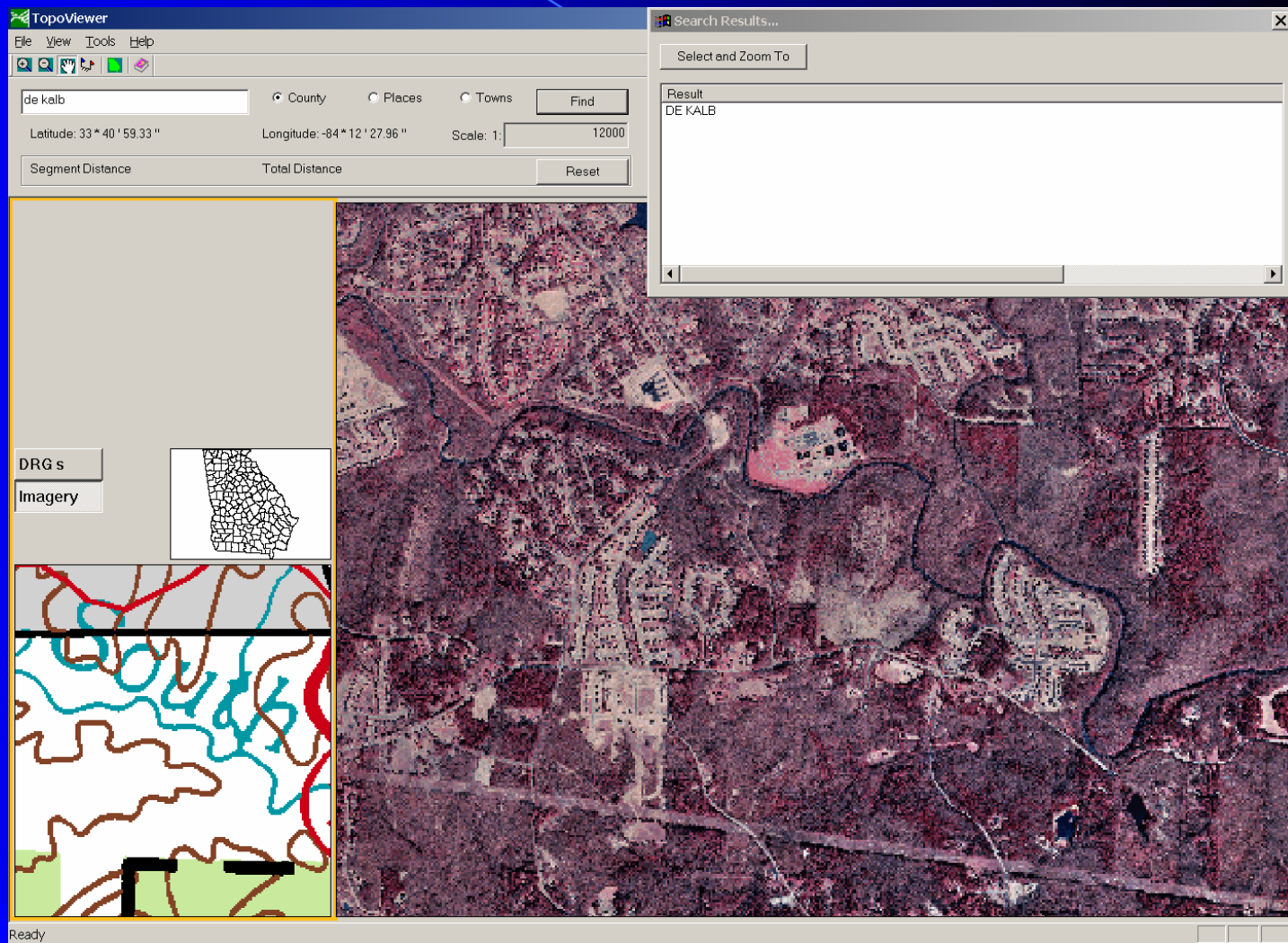
Statewide TopoViewer

County name
search



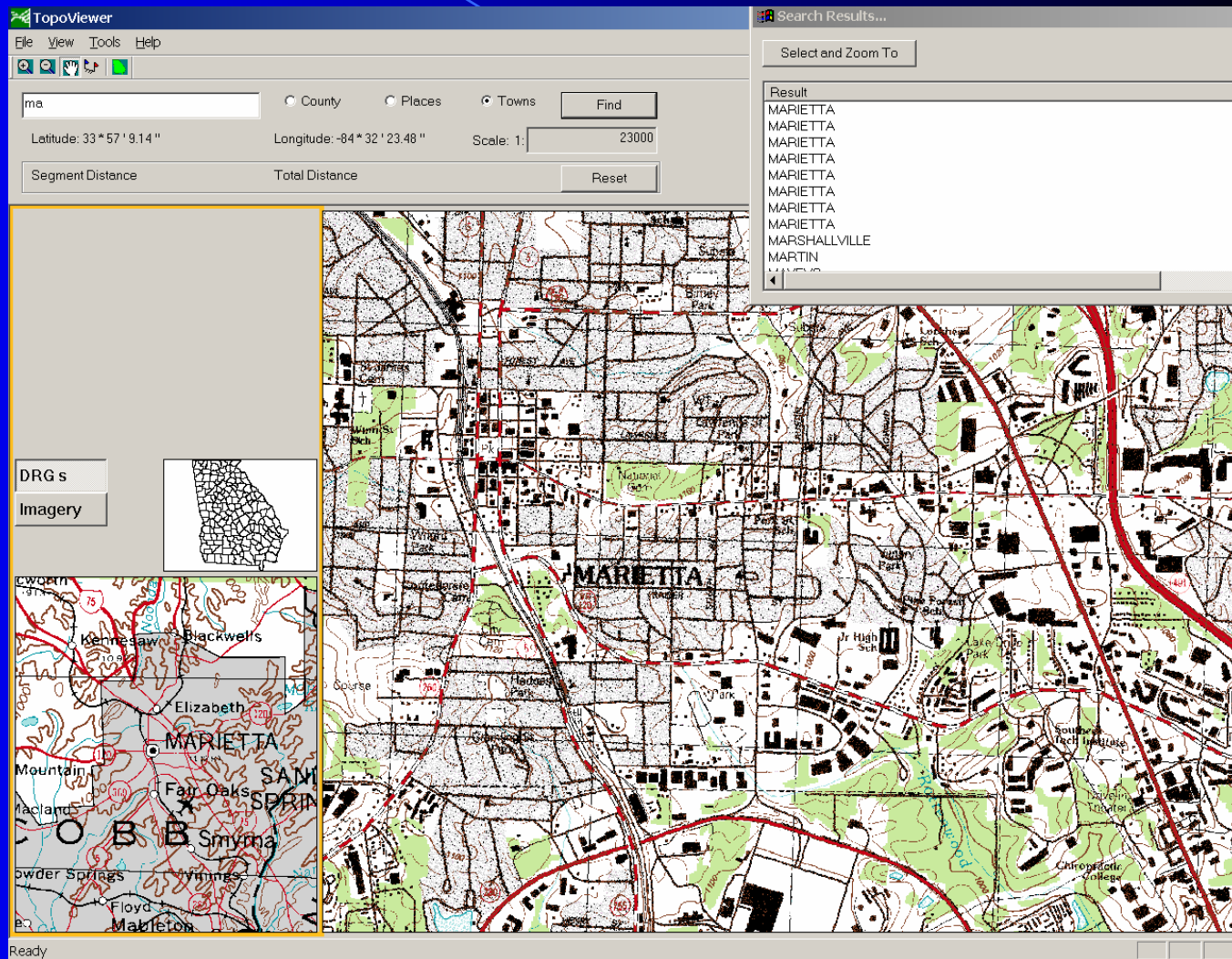
Statewide TopoViewer

County name
search



Statewide TopoViewer

Town name
search



Statewide TopoViewer: Other Features

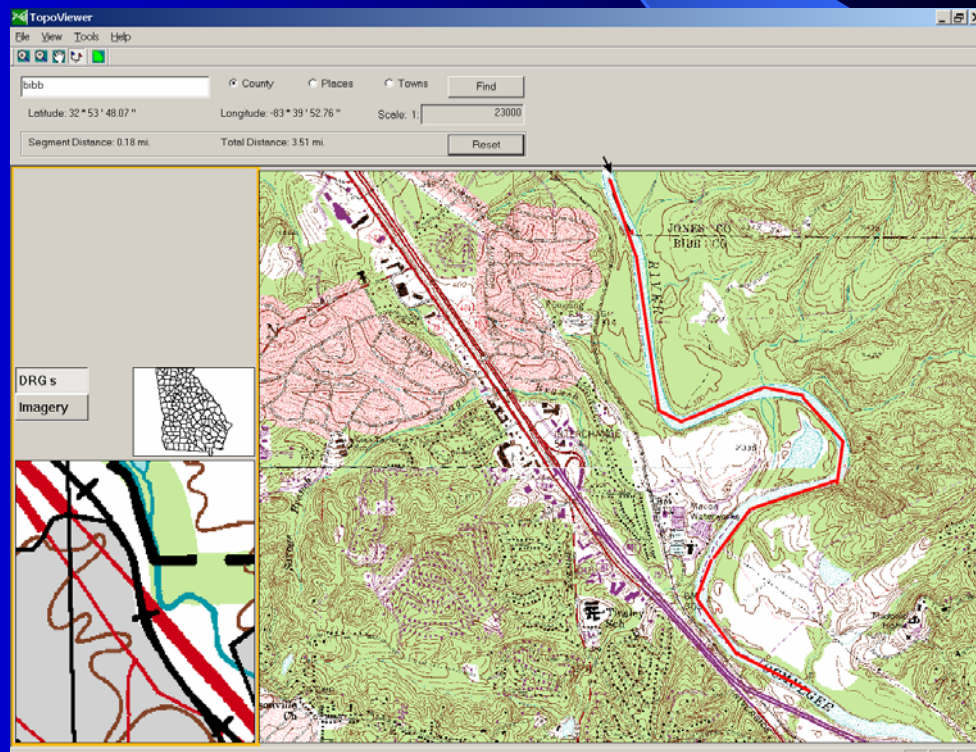
- ❑ Continuous display of latitude and longitude (degrees, minutes, and seconds) and scale fraction.

Latitude: 33° 46' 53.13"

Longitude: -84° 11' 32.13"

Scale: 1: 56000

- ❑ A measurement tool that displays both segment length and total length in miles.



County TopoViewer

Objective:

To improve Georgia's flood information infrastructure; to help prevent loss of life, human suffering and property damage

In cooperation with Georgia Emergency Management Agency and other state agencies

County TopoViewer

Work together to develop a new base map and imagery for mapping flood hazards. Prepare data for servers and web-based applications.

- ☐ 1999 CIR DOQQ or 1993 Panchromatic DOQQ where CIR not available
- ☐ 1:24,000-scale Digital Raster Graphics (DRG)
- ☐ Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Q3 Statistical Floodplain Boundaries
 - ☐ 100 Year Recurrence Interval Flood
 - ☐ 500 Year Recurrence Interval Flood
 - ☐ Floodway
- ☐ Safe Dams data*
- ☐ Flood-Depth-Frequency data (approximate Zone 'A')*
- ☐ County Boundaries, Major Roads, Community infrastructure and demographics

*next revision

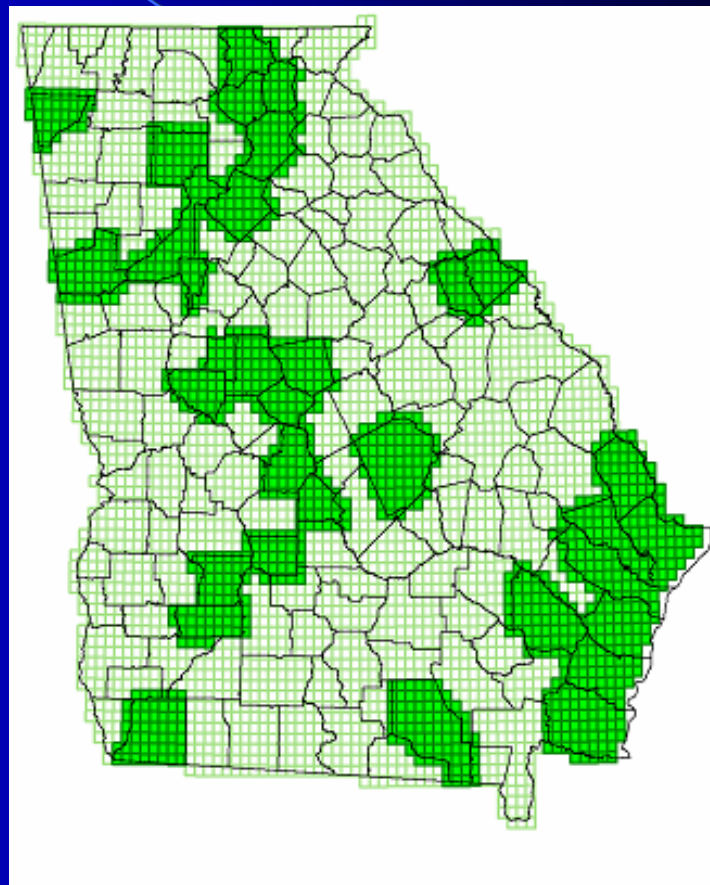
County TopoViewer

County TopoViewer

The USGS is developing a county-based, DVD-ROM viewer in cooperation with the Georgia Emergency Management Agency (GEMA) and other agencies. This is a map product that matches FEMA's vision of map modernization, which also meets many Homeland Security needs.

- ☐ The County TopoViewer will display 1:24,000-Scale DRG or 1:12,000-Scale (1-meter resolution) Digital Ortho Quarter Quadrangles (DOQQ) along with Federal Emergency Management Agency Flood Insurance Rate Map 100-year recurrence interval flood plain, 500-year recurrence interval flood plain, and floodway.
- ☐ Search by county, town, geographic names, and community facilities (contributed by GA DCA)
- ☐ Measure distances
- ☐ View location in Latitude and Longitude (DMS)
- ☐ Print selected views

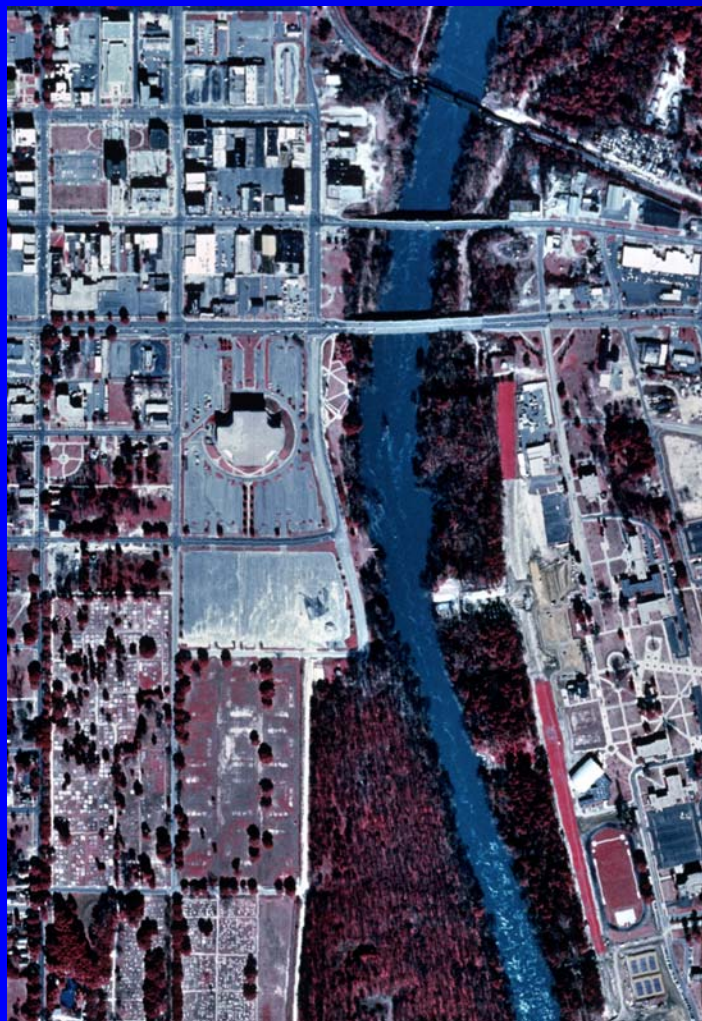
County and Quadrangle Status Maps



County TopoViewer: Imagery

- ❑ Color reduction allows a county to fit on a single DVD
- ❑ Size reduced from approximately 140MB per quarter quadrangle to approximately 40MB
- ❑ Color quality is minimally affected

County TopoViewer: Imagery



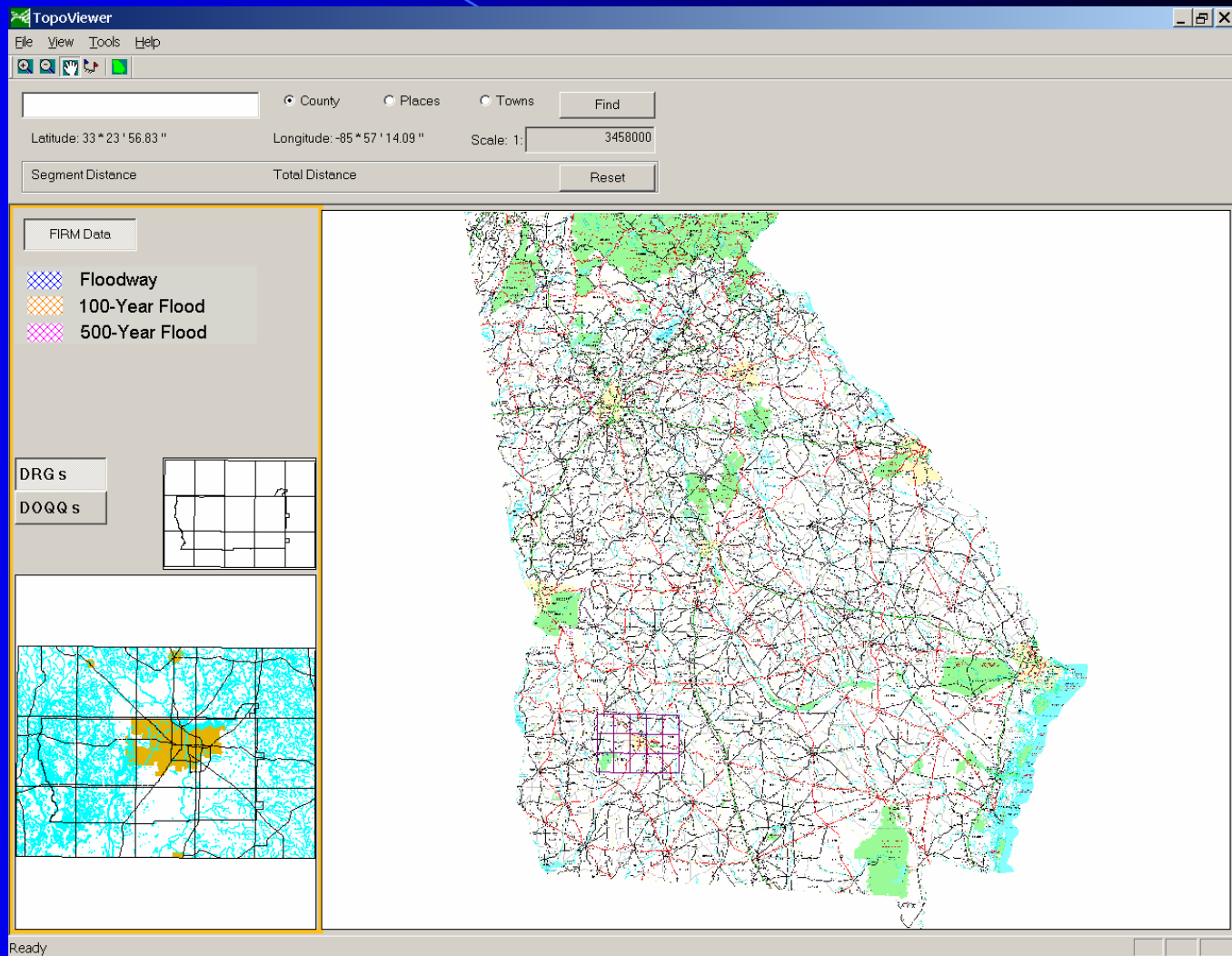
True color



256 colors

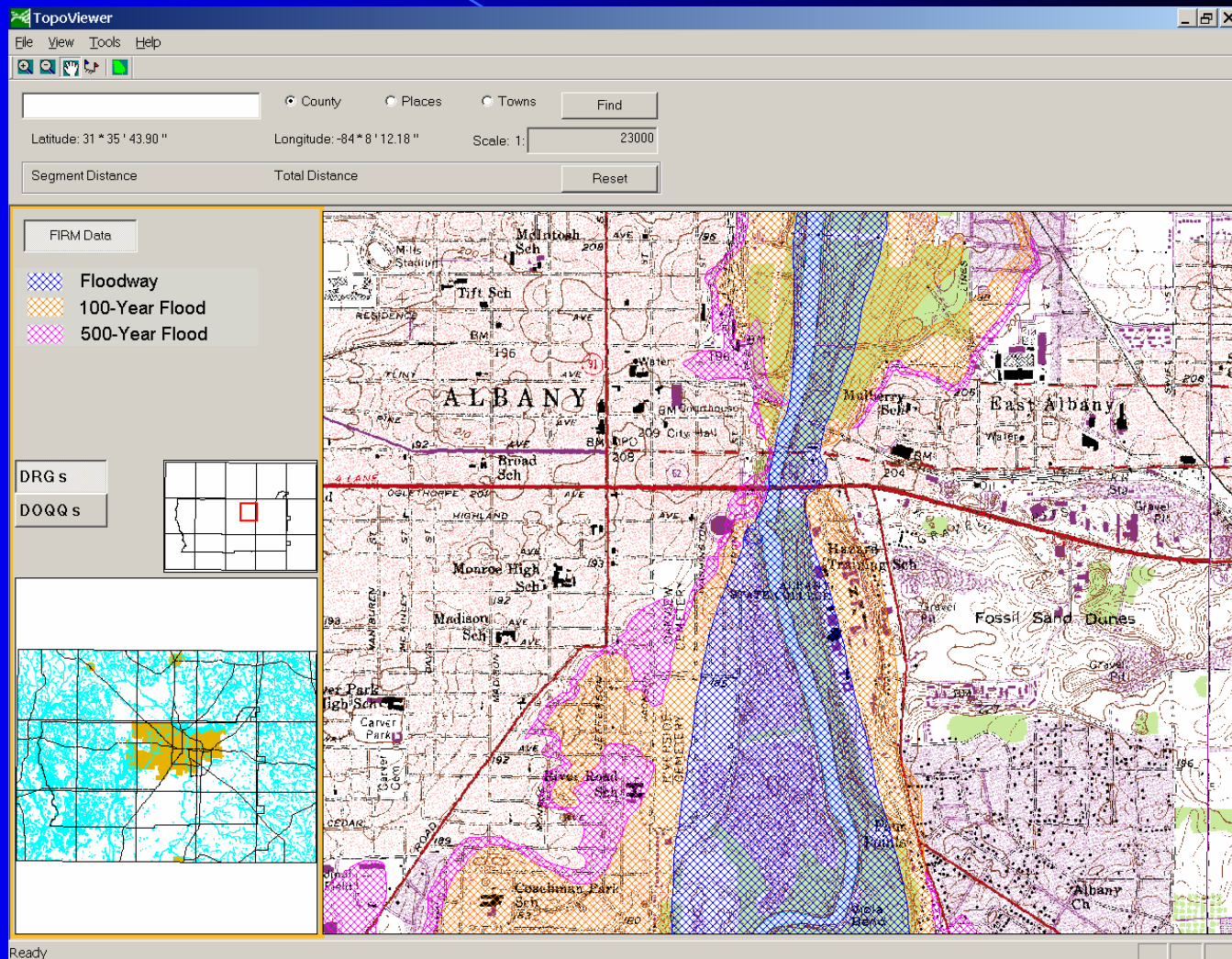
County TopoViewer

County Viewer Graphic User Interface



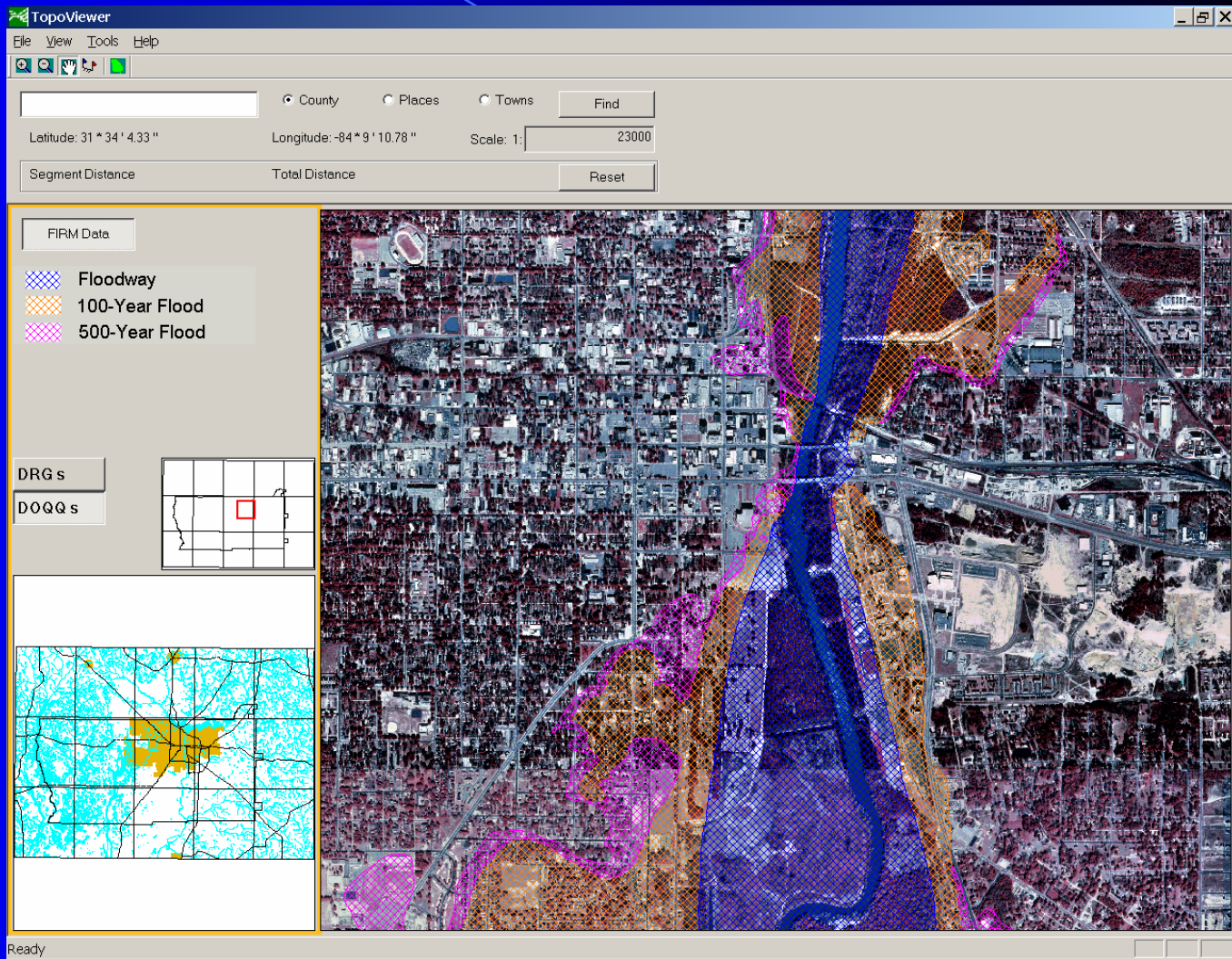
County TopoViewer

Click in to the
Index Map to
view 1:24,000-
scale DRG
with FEMA
firm
floodplains



County TopoViewer

Toggle **DOQQs** button to view 1-meter CIR DOQQs (where available)



County TopoViewer

**Toggle FIRM
Data button
to view 100-
Year Flood,
500-Year
Flood and
Floodway**

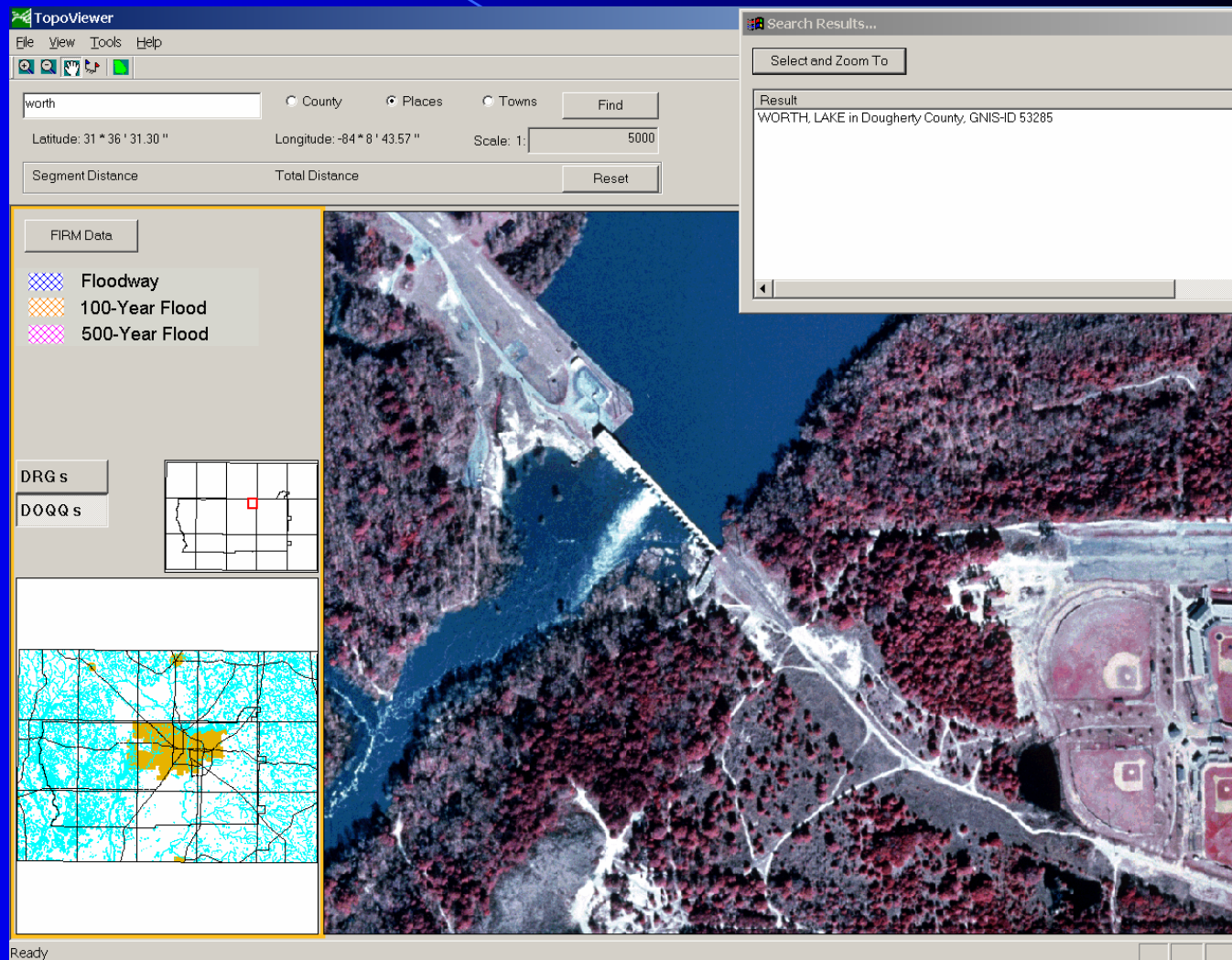
FIRM Data

-  Floodway
-  100-Year Flood
-  500-Year Flood



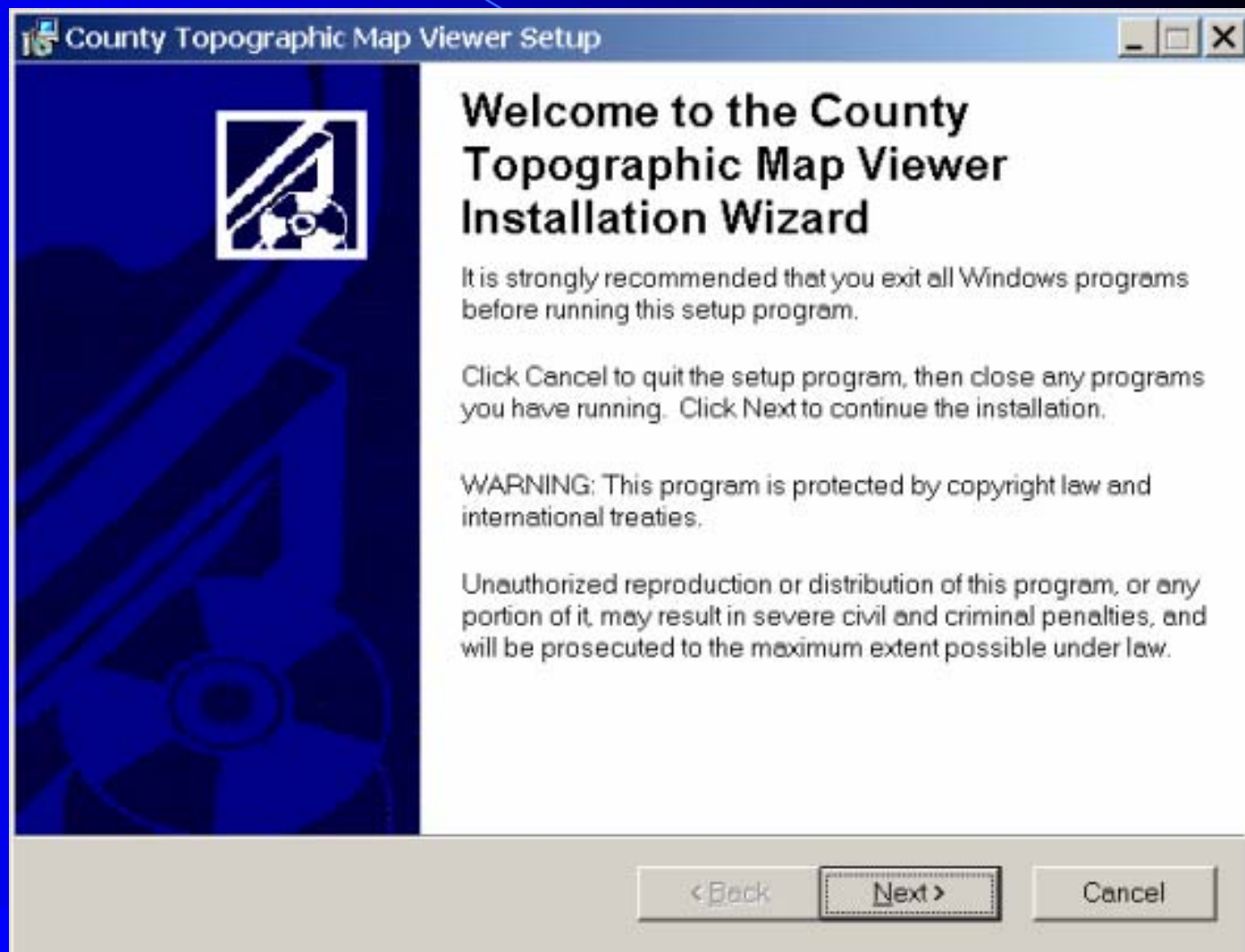
County TopoViewer

Search and view using GNIS and Georgia DCA community facility place names, county or town names



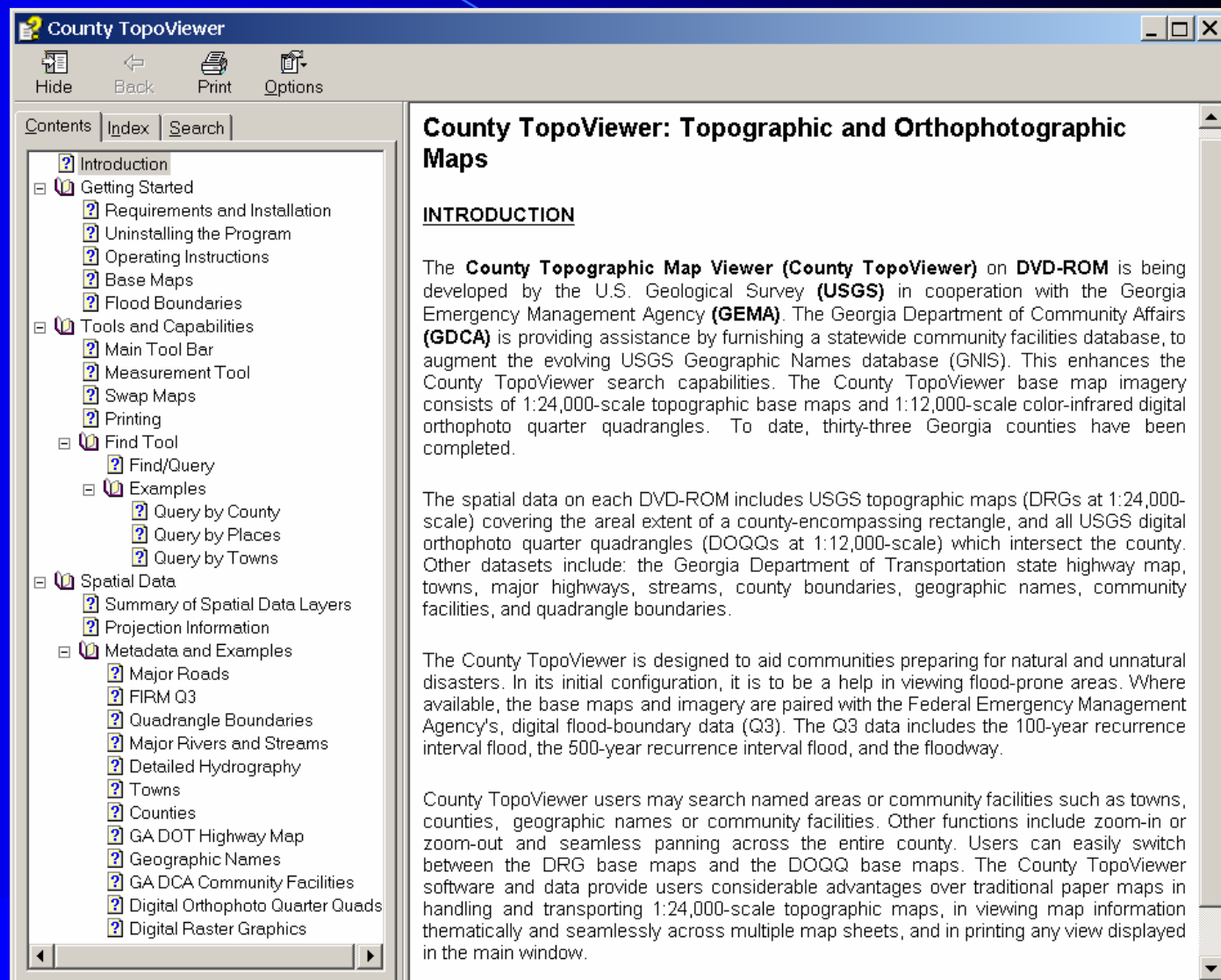
County TopoViewer: Other Features

Simple Installation



County TopoViewer: Other Features

Detailed
Help
Screens
with
Examples



Sample Paper Map

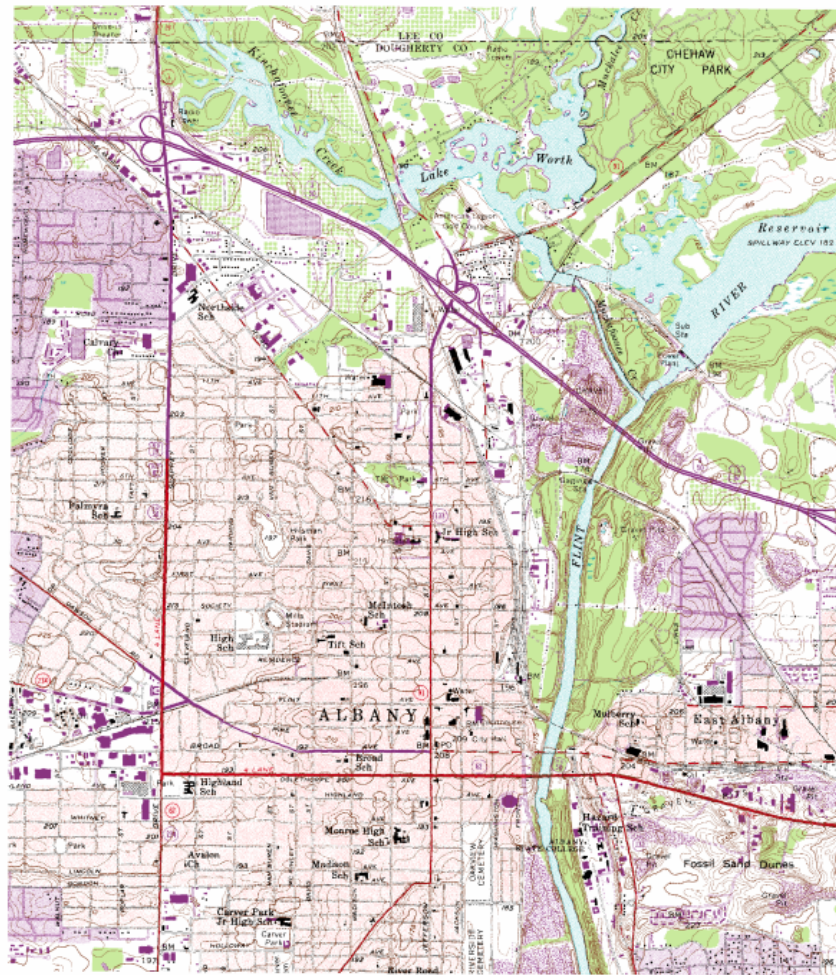


Leesburg (SE)

Albany West (NE)



Albany East (NW)



CURRENTLY AVAILABLE Q3 STATISTICAL FLOODPLAIN AREAS

The statistical floodplain areas depicted on this map do not replace the existing Flood Insurance Rate Map (FIRM) or FIRM data. For information regarding the conversion of FIRM to the Q3 statistical and related questions, refer to the Federal Emergency Management Agency (FEMA) publication, "Frequently Asked Questions" (www.fema.gov). This product has been designed to support planning activities, some Community Rating System (CRS) activities, insurance marketing, and mortgage portfolio review. Special Flood Hazard areas (SFHA) boundary information conveyed by Q3 Flood Data was developed for use at 1:24,000 scale, and meets the National Map Accuracy Standard. FEMA recommends that determination of whether a structure is within a 100 year statistical floodplain be made only when structures are located 200 feet or more outside an SFHA boundary. In cases where the structure is within 200 feet of the SFHA or inside the SFHA, data such as the base flood elevation (BFE) determined from a Flood Insurance Study (FIS) flood profile and the surveyed lowest adjacent grade and/or lowest floor elevation should be used. For additional information, refer to the FEMA publication "Q3 Flood Data Users Guide" (www.fema.gov).

Albany West (SE)

Color Infrared Digital Ortho Quarter Quad from U.S. Geological Survey and Georgia SRS Clearinghouse. Source Photo taken February 6, 1999.



Map Produced September 2002

Explanation

- 100 Year Floodplain (Q3)
- 500 Year Floodplain (Q3)
- Floodway (Q3)
- County Boundary
- Major Roads



1:24,000 Scale Topographic Map from U.S. Geological Survey (Digital Raster Graphic), 1964, Photomixed 1998

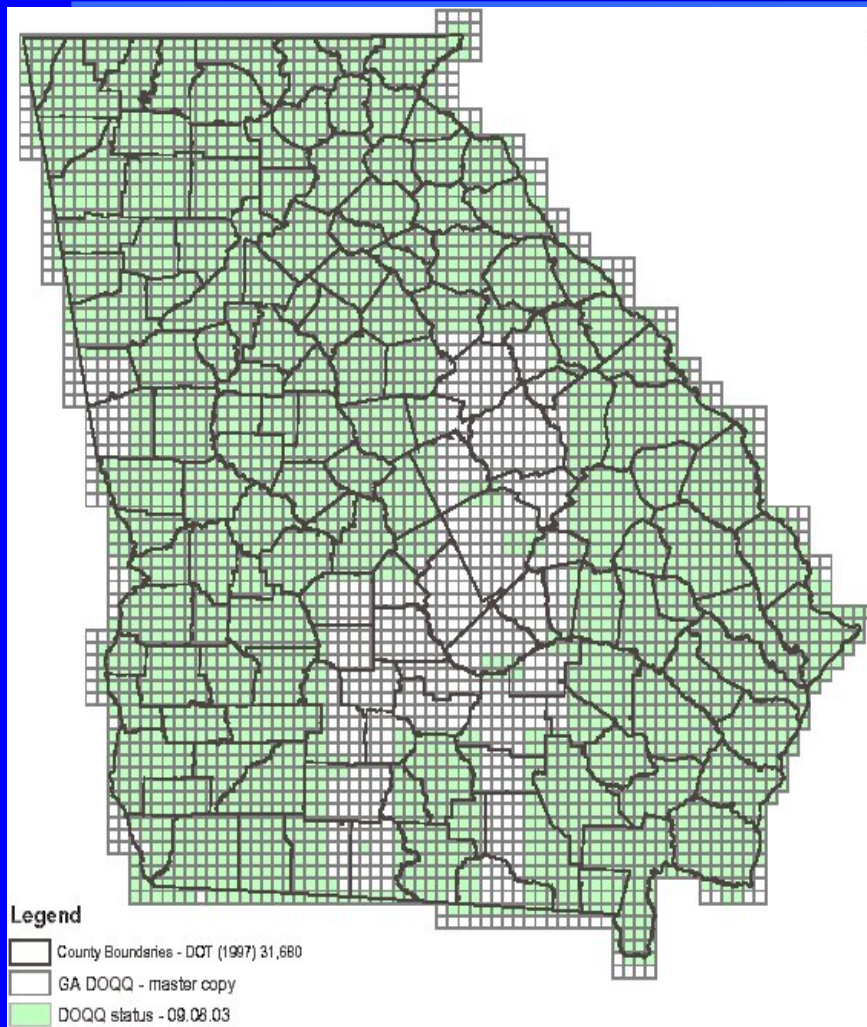
0 0.5 1 Miles

0 0.5 1 Kilometers

Scale 1:12,000

County Boundaries from 1:100,000 Scale U.S. Census TIGER/Line File
Major Roads from 1:100,000 Scale USDOT, National Highway Planning Network

Process Remaining CIR DOQQs



~400 CIR DOQQs remain to be processed as of Sept 8, 2003

TopoViewer: Summary

- ❑ The TopoViewer software and data provide users considerable advantages over traditional paper maps in handling and transporting all of Georgia's 1:24,000-scale topographic maps, in viewing map information seamlessly across multiple map sheets, and in printing.



- ❑ The TopoViewer software and data on DVD-ROM for Georgia will be distributed by the Georgia Geologic Survey's Maps and Publications Office, 19 Martin Luther King, Jr. Drive, Room 400, Atlanta, Georgia 30334.