

Summary of Map Units

UNCONSOLIDATED SEDIMENTARY ROCKS

- Quaternary **Qal** Alluvium - White to light-gray, unconsolidated clay, silt, sand, and locally gravel associated with floodplains.
- Pliocene **cpu** Coastal Plain Sediment - Unconsolidated to poorly consolidated, fine- to coarse-grained sands and clayey sands, with local gravel and clay beds. Gravel, gravely sand, and coarse, poorly sorted, angular to subangular sands occur at the base of the Coastal Plain section. Contact with crystalline rocks is approximate. The Coastal Plain Office of the NC Geological Survey is conducting detailed geologic mapping of Coastal Plain sediments as part of the STATEMAP program.

INTRUSIVE ROCKS

- Jurassic **Jd** Diabase - Jd - fine- to medium-grained, dense, black to greenish-black mafic olivine diabase. Jd1 - coarse-grained diabase; contains augite, hypersthene, and micrographic quartz-K feldspar intergrowth in addition to prominent locally blocky plagioclase; lacks olivine. Dot indicates float boulder.
- Late Precambrian to Early Paleozoic **grf** Granitoid (Glen Laurel granitoid) - medium- to coarse-grained, light-gray to pale-pink, massive to slightly foliated granitoid composed of quartz, plagioclase, K feldspar, muscovite, biotite, epidote, chlorite, and garnet. Locally, contains clusters of biotite and muscovite.

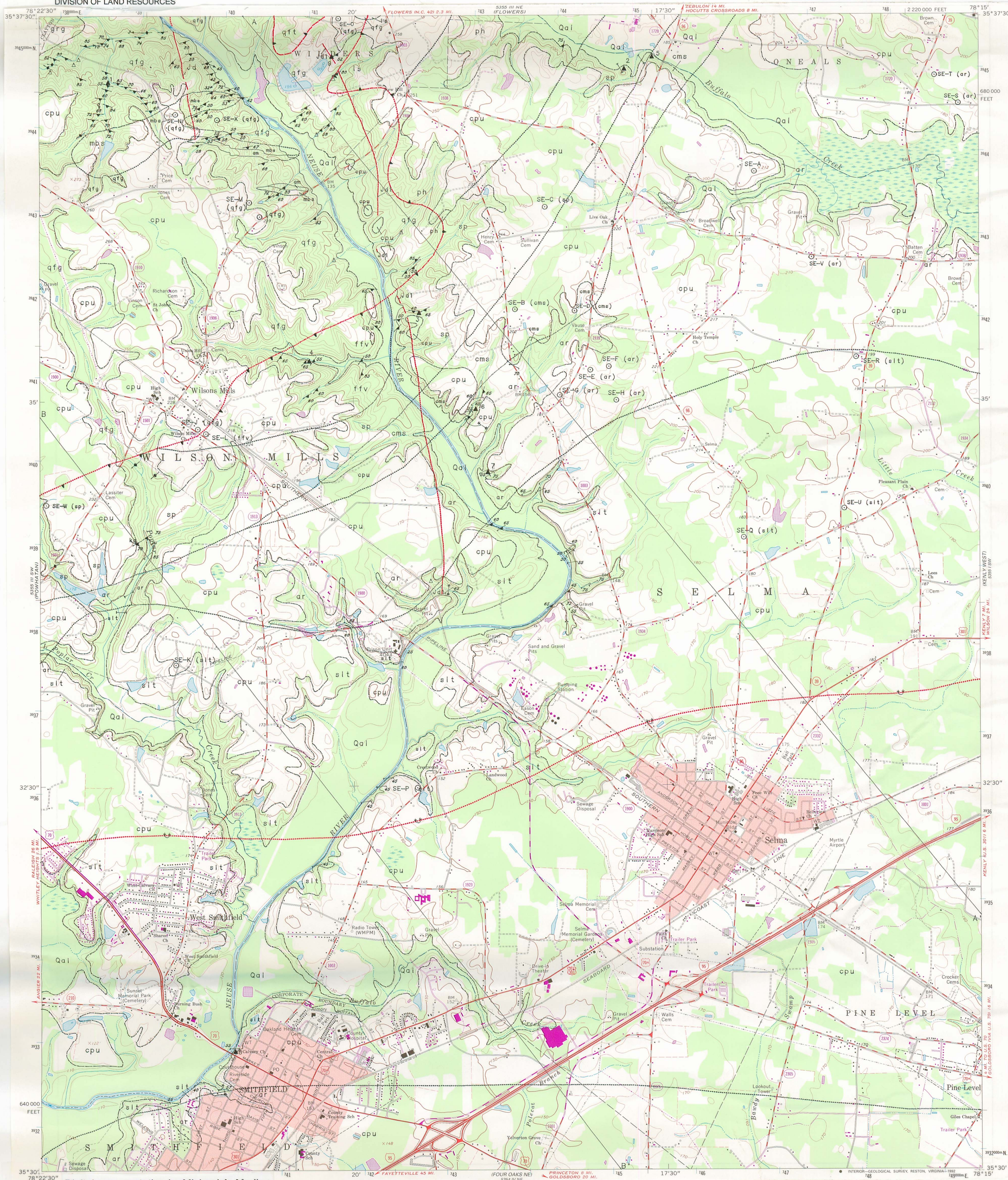
METAMORPHIC ROCKS

Upper Sequence - Metamorphic Rocks of the Eastern Slate Belt

- Metasedimentary Rocks of the Eastern Slate Belt
 - slt** Metasiltstone - Fine-grained, yellowish-gray to greenish-gray metasiltstone. Composed of quartz, plagioclase, muscovite, and chlorite. Accessory minerals include titanite, epidote, apatite, and magnetite (?). Lacks well defined bedding planes.
 - ar** Argillite - Very fine grained, light-gray to light-olive-gray laminated argillite. Chlorite-muscovite-graphite (?) layers generally <1mm thick alternate with thicker quartz-rich layers.
- Metavolcanic Rocks of the Eastern Slate Belt
 - ffv** Fine-grained felsic volcanic rock (ffv). Aphanitic, gray, quartz-feldspathic, volcanic rock interpreted as vitric and vitric-crystal tuff. Locally, includes felsic lithic tuff with disseminated pyrite west of the Neuse River. Felsic volcanic rocks are commonly altered. Sericitic alteration is prominent in sericitic phyllite (ph). Sericitization, silicification, and pyritization are present in the siliceous phyllite unit (sp) which contains chloritoid. Meta-andesite (cms) includes common alteration minerals of chlorite, epidote, and quartz. Kq - kyanite-quartz granitoids.
 - ls** Laminated epiclastic rocks and felsic lithic-crystal tuff - Medium- to coarse-grained, light-gray laminated rock. Consists of flattened pumice lapilli, quartz crystals, and layers of sediment in a matrix of quartz, plagioclase, and muscovite. Locally phyllitic.
 - qft** Felsic crystal tuff - Fine- to medium-grained, light-gray felsic volcanic rock containing phenocrysts of quartz and/or feldspar, locally up to 0.5 cm in size.
- Lower Sequence - Amphibolite-grade Gneiss and Schist
 - qfg** Quartzofeldspathic gneiss and schist - fine- to medium-grained, white to medium gray quartz-plagioclase-biotite-muscovite gneiss and quartz-muscovite schist. Interlayered with muscovite schist and minor biotite schist, fine-grained biotite gneiss, and amphibolite (am). Local layers contain abundant plagioclase crystals and sparse white lithic fragments elongate parallel to foliation. Composition and textures suggest a felsic volcanic origin. Gneiss from the Mill Creek area in the Flowers quadrangle has been given a U-Pb date of 620 ± 9 Ma (Goldberg, 1994).
 - mbs** Muscovite-biotite schist - fine-grained, gray muscovite-biotite schist commonly with white, wispy but locally heterolithic lapilli. Contains amphibolite (am) and minor interbedded felsic gneiss and biotite gneiss.

Symbols

- Contact - well located
- Contact - approximately located
- Strike and dip of bedding
- Strike of vertical bedding
- Observation site in crystalline rocks
- Outcrop locality
- Location of water well - crystalline rocks identified in outcrop
- Axis trace of overland system
- Thrust Fault - Teeth on upper plate



Digital representation by Michael A. Medina

Geology mapped 1992 - 1994.
Release date: January 1998.

BEDROCK GEOLOGIC MAP OF THE SELMA 7.5-MINUTE
QUADRANGLE, JOHNSTON COUNTY, NORTH CAROLINA

By

P. Albert Carpenter III, Robert H. Carpenter,
Edward F. Stoddard, and John R. Huntsman

1998

