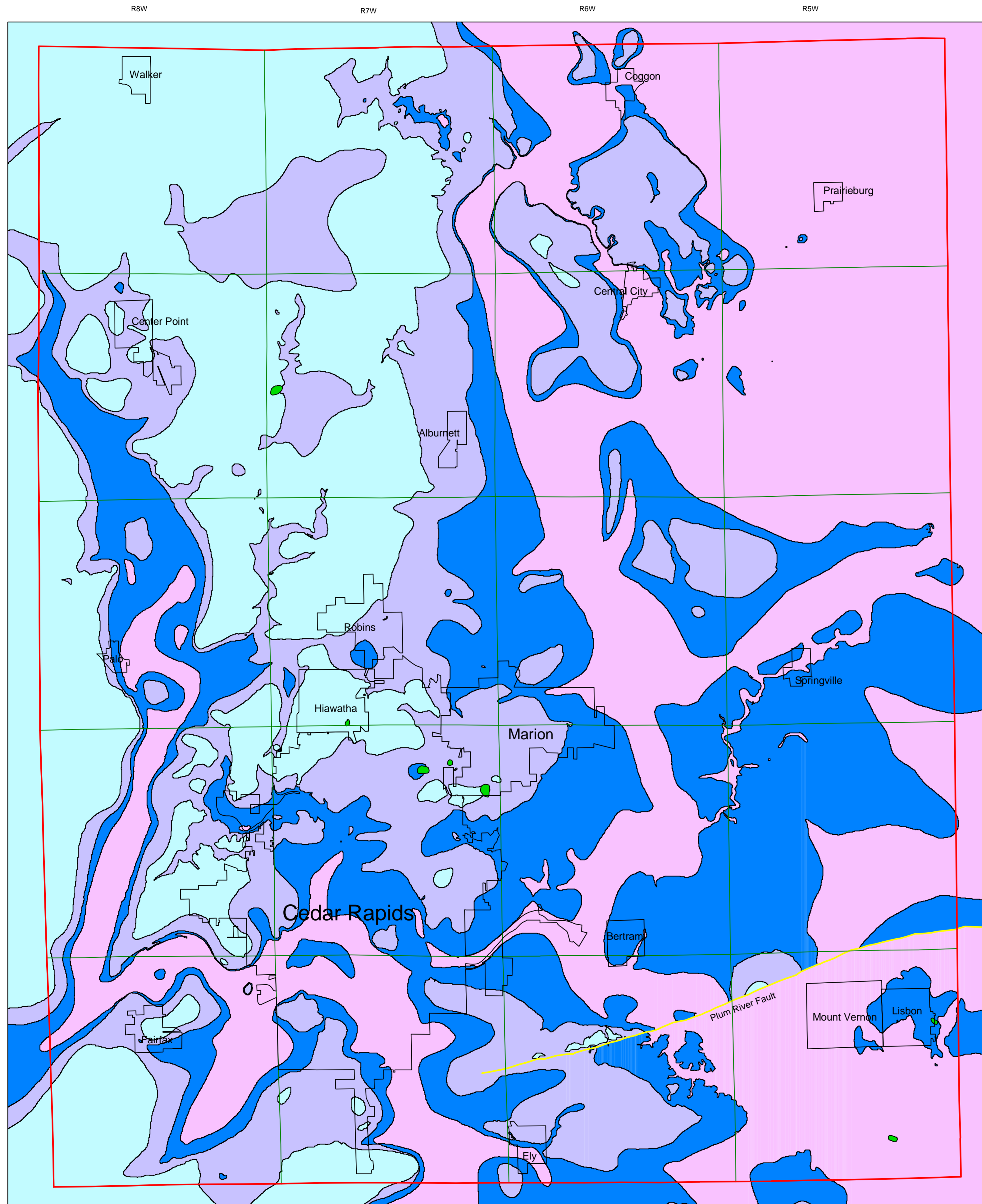


Bedrock Geology of Linn County



Geological Survey Bureau
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MAP LEGEND

Pennsylvanian System

Caseville Fm. + Cherokee Grp. undiff.

Devonian System

Cedar Valley Grp.

Pinicon Ridge Fm.

Otis/Bertram Fms., undiff.

Silurian System

Gower, Scotch Grove and Hopkinton Fms., undiff.

Description of Map Units

Unit	Description
Pennsylvanian System	
P	SHALE AND SANDSTONE (Caseville Formation and Cherokee Group) -- Soft, dark gray pyritic, carbonaceous shale with interbedded sandstone up to 6 meters in thickness. Mantles Devonian and Silurian carbonates on the bedrock surface, and also occurs as paleokarst fills.
Devonian System	
Dcv	FRACTURED CARBONATE BEDROCK (Cedar Valley Group) -- Fossiliferous gray limestones and dolostones with skeletal lime packstone, wackestone, and mudstone fabrics, up to 47 meters in thickness.
Dpr	FRACTURED CARBONATE BEDROCK (Pinicon Ridge Formation) -- Unfossiliferous limestone, dolostone, and shale. Includes up to 7.5 meters of light gray to dark brown sublitographic lime mudstone (Davenport Member), overlying up to 7.5 meters of laminated, porous, dolostone (Spring Grove Member), overlying up to 6 meters of blue gray sandy calcitic shale with limestone and dolostone interbeds (Kenwood Member). The Spring Grove Member is a porous, vuggy, unit contains cavernous openings that yield groundwater to many natural springs. Active karst is developed in this unit in the Robins area.
Dob	FRACTURED CARBONATE BEDROCK (Otis and Bertram formations) -- Unfossiliferous to poorly fossiliferous limestone and dolostone with mudstone fabrics. The Otis consists of up to 15 meters of laminated brown dolostone (Coggon Member) containing the spiriferid brachiopod <i>Emanuella</i> sp. and is overlain by limestone and dolostones (Cedar Rapids Member) with sublitographic fenestral lime mudstones fabrics, pelletal fabrics, and oolitic limestone fabrics containing the spiriferid brachiopod <i>Emanuella</i> sp. The Otis overlies the Bertram, which consists of up to 23 meters of brown to gray sublitographic laminated, sandy, intraclastic dolostone.
Silurian System	
S	FRACTURED CARBONATE BEDROCK (Gower, Scotch Grove, and Hopkinton formations) -- Fossiliferous dolostones with lime packstone, wackestone, to mudstone fabrics. This unit is the principal bedrock aquifer in Linn County. The Gower ranges from 0 to 30 meters in thickness and is mostly confined to the southern half of Linn County. It includes flat-lying laminated unfossiliferous facies (Anamosa Member) and fossiliferous mound facies (Brady Member). Underlying the Gower is the Scotch Grove Formation, up to 30 meters in thickness. The Scotch Grove includes cherty units of sparsely skeletal-moldic dolostone (Black Creek Quarry Member), units of sparsely skeletal-moldic dolostone (Waubek Member), and mound facies with abundantly fossiliferous skeletal-moldic and skeletal-replaced dolostone (Paisley-Kepler Member). The Hopkinton Formation contains about 40 meters of fossiliferous skeletal-moldic to skeletal-replaced dolostones.

SCALE
1:100000

