

Map Unit Descriptions

- Other units**
 - Disturbed ground - heavily disturbed ground due to agriculture, extensive excavation, mining activity, or construction of earth dams
 - Regoils and colluvium formed on deposits of the Verde Formation - generally fine grained, in situ deposits resulting from erosion on the Verde Formation
 - Flooded areas - historically or actively flooded fields, irrigated pastures, and other lightly disturbed ground
- River Alluvium**
 - Active river channel deposits - unconsolidated, poorly to very poorly sorted sand to boulder deposits in active river channels. Deposits are typically unvegetated to lightly vegetated and extend no soil development
 - Backwash level river channel - portions of the active channel where flow passes directly over exposed bedrock. A discontinuous layer of pebbles to boulders may be present but smooth, polished bedrock lies the channel bottom
 - Flood channel and low terrace deposits - unconsolidated sand, gravel, silt and clay deposits on bars, flood channels, and low terraces. Channels form light, vegetated to heavily vegetated terraces occupied by flow in flood events, and small planar fluvial terraces less than 4 feet above the active channel
 - Historical river terrace deposits - unconsolidated, poorly sorted sand, gravel, silt and clay deposits on low terraces and high terraces within the modern floodplain
 - Late Holocene to historical river terrace deposits - unconsolidated, poorly sorted silt, sand, clay and gravel deposits on terraces adjacent to the modern floodplain. Surfaces are typically planar with little or no soil development
 - Late to early Holocene river terrace deposits - unconsolidated, poorly sorted silt, sand, clay and gravel deposits on slightly higher terraces adjacent to the modern floodplain. Surfaces typically are planar with little soil development
 - Late Pleistocene river terrace deposits, undivided - gravelly, sandy river terrace deposits 15 to 65 feet above the active river channel. Deposits consist of well rounded to rounded pebbles to cobbles with cross-bedded coarse sand and silt lenses. Clay shingles are diverse
 - Middle to late Pleistocene river terrace deposits, undivided - high standing, cobbly to sandy river terrace deposits exhibiting moderate to strong clay development and calcareous carbonate accumulation
 - Middle Pleistocene river terrace deposits, undivided - higher standing, cobbly to sandy river terrace deposits exhibiting moderate to strong clay development and calcareous carbonate accumulation
 - Early Pleistocene river terrace deposits, younger - very high standing, old river terrace deposits, lower level
 - Early Pleistocene river terrace deposits, middle - very high standing, old river terrace deposits, middle level
 - Early Pleistocene river terrace deposits, older - very high standing, old river terrace deposits, upper level
 - Early Pleistocene river terrace deposits, undivided - well rounded consolidated pebbles to cobble river conglomerate
 - Late Pleistocene to early Holocene river deposits - moderately consolidated, coarse river terrace or alluvial fan deposits capping Table Mesa southeast of Sedona about 700 ft above the modern Oak Creek channel
- Piedmont Alluvium**
 - Modern stream channel deposits - active channel deposits composed of very poorly sorted sand, pebbles, and cobbles with some boulders to moderately sorted sand and pebbles
 - Late Holocene alluvium - unconsolidated, very poorly sorted silt to cobbly low terrace and overflow channel deposits
 - Late Holocene alluvium, active fan deposits - active portions of young fan deposits exhibiting distributary drainage patterns
 - Late Holocene alluvium - planar terrace deposits located along incised channels, broad low-relief, distal fan deposits outlying onto Holocene river alluvium, and infrequently active distributary drainage deposits
 - Older Holocene alluvium - broad, low-relief, undulating fan deposits showing widespread, shallow, braided drainage patterns
 - Holocene fine-grained deposits - unconsolidated alluvium derived predominantly from basin fill deposits
 - Holocene alluvium, undivided - Holocene alluvium, undivided
 - Re-graded Pleistocene deposits - older fine-grained deposits derived primarily from the Verde Formation
 - Late Pleistocene alluvial fan and terrace deposits - weakly consolidated, sandy gravel deposits with moderate soil development
 - Middle to late Pleistocene alluvial fan and terrace deposits, undivided - weakly consolidated sandy gravel deposits with strong soil development
 - Early Pleistocene alluvium, older member - high, thin, early Pleistocene alluvial fan remnants deposited on eroded bedrock outcrops on the Verde Formation
- Cenozoic Basin Deposits**
 - Late Miocene to Pliocene Verde Formation, lacustrine carbonate facies - fine-grained, laminated silt and claystone deposits
 - Late Miocene to Pliocene Verde Formation, fluvial clastic facies - fine to medium grained, friable, and evaporite beds (Dewitt et al., 2008)
 - Late Miocene to Pliocene deposits - moderately to strongly indurated conglomerate and sandstone basin fill deposits
- Bedrock units**
 - Tertiary basalt, undivided - Tertiary basalt flow, associated older cones and pyroclastic rocks, trinitite basalts, and mafic rocks
 - Schnebly Hill Formation - tan to light gray, oolitic, cross-bedded sandstone and minor mudstone, limestone, and evaporite beds (Dewitt et al., 2008)
 - Hemitt Shale - Permian Hemitt Shale
 - Sugar Formation - Permian and Upper Pennsylvanian mudstone, siltstone, sandstone, limestone and dolomite

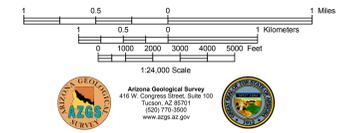
Bedrock and surficial geologic mapping for areas outside the lateral limits of Holocene river alluvium was compiled from the following sources

DeWitt, Ed., Langenheim, Victoria, Force, Eric, Vance, R.K., Lindberg, P.A., Driscoll, R.L., 2008. Geologic Map of Prescott National Forest and the Headwaters of the Verde River, Yavapai and Coconino Counties, Arizona. U.S. Geological Survey Scientific Investigations Map 2996, scale 1:100,000, 100-p.

House, P.K., Pearthree, P.A., Cook, J.P., and Bigio, E.R., in press. Geologic map of the Page Springs 7 1/2 quadrangle, Yavapai County, Arizona. Arizona Geological Survey Digital Geologic Map 83, scale 1:24,000.

House, P.K., Pearthree, P.A., Cook, J.P., and Bigio, E.R., in press. Geologic map of the Cornville 7 1/2 quadrangle, Yavapai County, Arizona. Arizona Geological Survey Digital Geologic Map 85, scale 1:24,000.

Weir, G.W., Ulrich, G.E., and Nealey, L.D., 1989. Geologic map of the Sedona 30' x 60' quadrangle, Yavapai and Coconino Counties, Arizona. U.S. Geological Survey Miscellaneous Investigations Series Map I-1896, 1 sheet, scale 1:100,000.



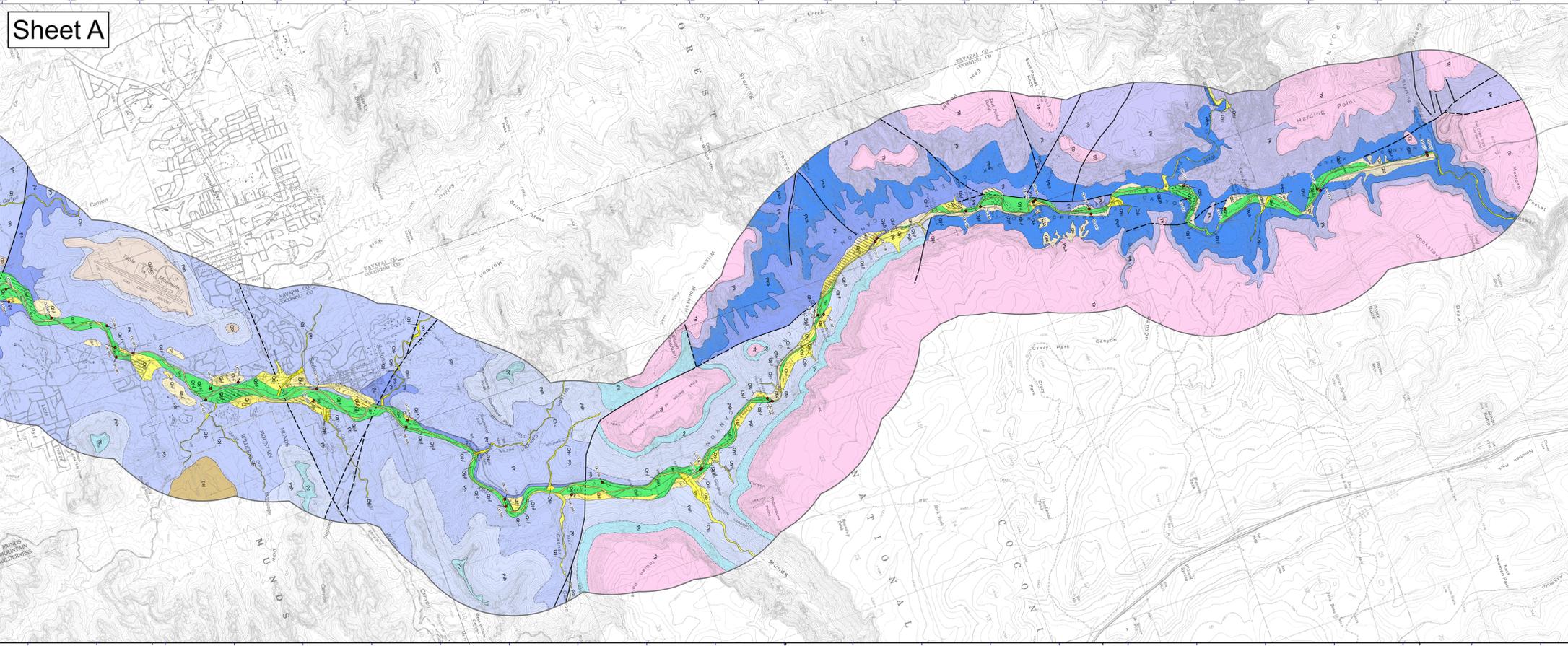
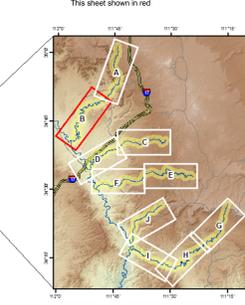
SURFICIAL GEOLOGIC MAP OF OAK CREEK, WET BEAVER CREEK, WEST CLEAR CREEK, FOSSIL CREEK, AND THE EAST VERDE RIVER, CENTRAL ARIZONA

by
Bigio, E.R., Pearthree, P.A., and Cook, J.P.
October 2010
Arizona Geological Survey
Digital Map DM-RM-3B
version 1.0

Funding for this project was provided by the Arizona Department of Water Resources
USGS 244 quadrangle series topographic base maps
North American Datum of 1983. Projection and 1000-meter grid ticks (NAD83). Universal Transverse Mercator, zone 12.

- Boundaries of Holocene River Alluvium**
 - This, Solid Line - Clearly defined, accurately located contacts between Holocene river alluvium and bedrock units. These boundaries are marked by a solid line with appropriate symbols for the alluvium, and are often located in historically paved fields. Line location accuracy is within 100 feet.
 - This, Dashed Line - Fairly well defined contacts between Holocene river alluvium and bedrock units. These boundaries are often associated with a well defined alluvial fan or terrace. Line location accuracy is within 100 feet.
 - This, Dotted Line - Fairly well defined contacts between Holocene river alluvium and bedrock units. These boundaries are often associated with a well defined alluvial fan or terrace. Line location accuracy is within 100 feet.
- Other Geologic Lines**
 - This, Solid Line - Accurate contact
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Location Map



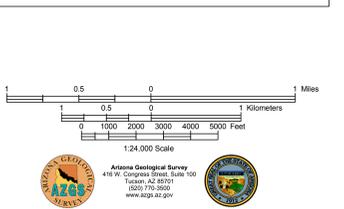
Map Unit Descriptions

- Other units**
 - Quaternary hilllope talus and colluvium - unconsolidated to weakly consolidated, very poorly sorted sand, pebbles, and cobbles of the base of bedrock slopes
 - Disturbed ground - heavily disturbed ground due to agriculture, extensive excavation, mining activity, or construction of earth dams
 - Flooded areas - historically or actively flooded fields, irrigated pastures, and other lightly disturbed ground
- River Alluvium**
 - Active river channel deposits - unconsolidated, poorly to very poorly sorted sand to boulder deposits in active river channels. Deposits are typically unvegetated to lightly vegetated and extend no soil development
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- Cenozoic Basin Deposits**
 - Late Miocene to Pliocene deposits - moderately to strongly indurated conglomerate and sandstone basin fill deposits
- Bedrock units**
 - Tertiary basalt, undivided - Tertiary basalt flow, associated older cones and pyroclastic rocks, trinitite basalts, and mafic rocks
 - Kabab Formation - lower than the upper level to sandy dolomite, dolomite and cherty limestone, and lenses of fine grained sandstone (Fife et al., 1999)
 - Schnebly Hill Formation - tan to light gray, oolitic, cross-bedded sandstone and minor mudstone, limestone, and evaporite beds (Dewitt et al., 2008)
 - Hemitt Shale - Permian Hemitt Shale
 - Sugar Formation - Permian and Upper Pennsylvanian mudstone, siltstone, sandstone, limestone and dolomite
 - Coconino Sandstone - light gray to tan, fine-grained, oolitic, cross-bedded sandstone
 - Towson Formation - Permian and Upper Pennsylvanian mudstone, siltstone, sandstone, limestone and dolomite

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Location Map

