

apex septic design

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CITY OF SANTA ROSA
P.O. BOX 1678
SANTA ROSA, CA 95402

April 08, 2016

JUL 29 2016

City of Santa Rosa

DEPARTMENT OF
COMMUNITY DEVELOPMENT

Re: Site evaluation at 1791 and 1793 Fulton Road in Santa Rosa, CA 95403
APN: 034-091-023

I conducted site and soil evaluations at the subject parcel on January 21, 2016 at 11:30 a.m. to determine the site suitability to install a new code compliant septic system. The parcel has .39 acre of land, and it contains a main dwelling, a guest house, and a workshop.

The concrete septic tank was observed during the site visit. It is located approximately 2 feet west from the main dwelling which is too close (minimum setback from the septic tank to the house is 5 feet). There is a crack on top of the septic tank. The wastewater level inside the septic tank's outlet compartment was approximately 2 to 3 inches above the outlet pipe; this indicated that the leach lines hasn't been working in accepting wastewater.

I augered two holes to observe the soil (see site map for locations). Auger hole #1 has friable sandy loam soil from top to 42 inches; groundwater inside the hole was at 15 inches from the ground surface. Auger hole #2 has friable, gravelly sandy loam soil from top to 28 inches; below, the soil is very firm, gravelly clay loam from 28 to 35 inches; groundwater was observed at 16 inches from the ground surface. The soil is identified as Huichica loam in the USDA's soil survey map.

The existing septic system is failing because the leach lines wouldn't accept any more wastewater; a repair to the existing septic system will unlikely work because of the septic system's old age and high groundwater. There isn't any space to install a new septic system due to the setback to the property lines (5' setback for standard system and 15' setback for innovative septic system), building (5' setback for standard system and 15' setback for innovative septic system), water well (50' setback for a repair septic system and 100' setback for a code compliant septic system), and road drainage ditch (25' setback for a repair septic system and 50' setback for a code compliant septic system). Furthermore, the site is suitable to install neither a standard in-ground septic system because it would require at least 72 inches separation to groundwater (0 to 72" clearance), a subsurface drip system because it would require 36 inches of separation to groundwater (0 to 36" clearance), nor a mound system because it would need at least 24 inches of separation to groundwater (0 to 24" clearance).

For those reasons I mentioned above, I recommend this subject parcel be connected to the city sewer.

For further information or questions I can be reached at (707) 322-5827.

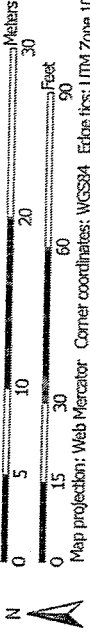
Respectfully,

Tai Nguyen
Registered Environmental Health Specialist #7177

Soil Map—Sonoma County, California



Map Scale: 1:410 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

 Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

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MAP LEGEND

- Area of Interest (AOI)
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- Soils
 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features
 - Streams and Canals
- Transportation
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background
 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sonoma County, California
 Survey Area Data: Version 9, Sep 30, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 14, 2011—Aug 15, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Sonoma County, California (CA097)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
H1A	Huichica loam, 0 to 2 percent slopes	0.6	100.0%
Totals for Area of Interest		0.6	100.0%

Profile: Auger Hole 1		Average Ground Slope: 0-1%						
Depth	Munsell Color	% Rock	Texture	Structure	Consistency	Moist	Pores	Roots
0-42"	Brown	0%	Sandy Loam	Blocky	Friable	Damp to Seepage	Many	Few
Mottling: Reduction <input type="checkbox"/> Oxidation <input type="checkbox"/> Depth to groundwater: Perc depth:								
Other: Groundwater at 15 inches								

Profile: Auger Hole 2		Average Ground Slope: 0-1%						
Depth	Munsell Color	% Rock	Texture	Structure	Consistency	Moist	Pores	Roots
0-28"	Brown	10-15%	Gravelly Sandy Loam	Blocky	Friable	Damp to Seepage	Many	Few
28-35"	Brown	10-15%	Gravelly Clay Loam	Blocky	Very Firm	Seepage	Few	None
Mottling: Reduction <input type="checkbox"/> Oxidation <input type="checkbox"/> Depth to groundwater: Perc depth:								
Other: Groundwater at 16 inches								

Abbreviations:

USDA Texture: Gravel=G, Sand=S, Loamy Sand=LS, Sandy Loam=SL, Sandy Clay Loam=SCL, Sandy Clay=SC, Silt Loam=SiL, Loam=L, Clay Loam=CL, Silty Clay Loam=SiCL, Clay=C

Structure: Granular=G, Platy=p, Blocky=B, Prismatic=Pr, Massive=M, Columnar=C

Consistency: Loose=L, Very Friable=VFr, Friable=Fr, Firm= F, Very Firm=VF, Extremely Firm=EF, Solid (BH refusal)=S

Moisture: Dry=Dr, Damp=D, Very Damp=VD, Saturated=S, Seepage=Se