Hoot Field Results: 20 Systems, 100 Lab Tests

Field results, 2007–2011. Superior On-Site Solutions collected effluent samples from Hoot advanced treatment systems at 20 homes in Placer County, California, during routine service visits about every six months. Each sample was sent to a lab for analysis. The results below include every sample, including the occasional high reading.

91%	88%	3.2	ND
of CBOD samples ≤ 30 mg/L	of TSS samples ≤ 30 mg/L	median CBOD, mg/L	median TSS (not detected)

What the results show

- **Clean, clear effluent.** The median CBOD was 3.2 mg/L. Typical septic tank effluent runs 150–250 mg/L. Half of all TSS samples had no measurable solids.
- **Most high readings came early.** Many of the readings above 30 mg/L were a site's first or second sample, while the system was still establishing. Results typically settled well below the standard afterward.
- **Low nitrogen in the effluent.** The median TKN (organic plus ammonia nitrogen) was 2.1 mg/L.
- **Bacteria.** The median fecal coliform result was about 9 MPN/100 mL. Most of these systems did not have disinfection installed; where a county requires pathogen treatment, a UV disinfection unit is added.

For reference: California's supplemental treatment standard is typically **30 mg/L** for BOD and TSS as a 30-day average. Where pathogen treatment is required, a fecal coliform limit of **200 MPN/100 mL** applies, which calls for added disinfection such as a UV light. These results are single grab samples, not 30-day averages.

CBOD carbonaceous biochemical oxygen demand • **TSS** total suspended solids • **TKN** total Kjeldahl nitrogen • **Fecal** fecal coliform, MPN/100 mL • **ND** not detected. Sites are identified by town only to protect homeowner privacy. Three sites with incomplete records are not shown. Full sample-by-sample results are available on request.

Results by site

Median of all samples at each site, with the highest reading in parentheses (mg/L; fecal coliform in MPN/100 mL). “Met 30/30” = samples with both CBOD and TSS at or below 30 mg/L.

Site	System	Samples	CBOD	TSS	TKN	Fecal	Met 30/30
1 · Meadow Vista	H600, 2006	6 ’07–’08	14 (79)	22 (53)	56	450 (≥1,600)	4 of 6
2 · Newcastle	H600, 2005	5 ’07–’11	ND (49)	10 (40)	3.1	ND (170)	3 of 5
3 · Auburn	Hoot system	5 ’07–’09	9.3 (59)	14 (57)	6.4	465 (≥1,600)	3 of 5
4 · Meadow Vista	Hoot system	5 ’07–’09	6.7 (12)	11 (31)	5.8	175 (430)	4 of 5
5 · Colfax	H600, 2006	5 ’07–’09	ND (17)	ND (10)	3.2	21 (110)	5 of 5
6 · Sheridan	H600, 2007	5 ’07–’09	11 (32)	18 (85)	4.3	940 (≥1,600)	2 of 5
7 · Lincoln	Hoot system	5 ’07–’09	6.1 (60)	ND (5.7)	11	1.0 (4.0)	4 of 5
8 · Sheridan	Hoot system	5 ’07–’10	ND (14)	13 (66)	0.2	4.5 (220)	4 of 5
9 · Penryn	H600, 2007	5 ’07–’09	ND (2.2)	ND (ND)	1.1	13 (540)	5 of 5
10 · Auburn	H600 two-chamber, 2008	5 ’08–’10	4.2 (65)	9.7 (38)	23	72 (≥1,600)	4 of 5
11 · Lincoln	H750, 2008	5 ’08–’10	ND (22)	ND (12)	ND	1.6 (13)	5 of 5
12 · Colfax	Hoot system, 2007	5 ’08–’10	4.0 (38)	ND (58)	2.7	885 (≥1,600)	4 of 5
13 · Colfax	H600, 2007	5 ’08–’10	3.0 (10)	5.0 (6.5)	0.7	240 (≥1,600)	5 of 5
14 · Loomis	Hoot system	5 ’08–’10	4.1 (5.3)	ND (120)	1.7	483 (≥1,600)	4 of 5
15 · Applegate	H600, 2007	5 ’08–’10	4.7 (6.6)	ND (ND)	ND	3.2 (20)	5 of 5
16 · Auburn	Hoot system	5 ’08–’10	ND (36)	1.7 (45)	1.4	1.8 (27)	3 of 5
17 · Newcastle	H600, 2007	5 ’08–’10	3.1 (6.2)	ND (5.0)	2.2	2.0 (350)	5 of 5
18 · Colfax	H600, 2008	5 ’09–’11	1.9 (16)	ND (18)	3.6	33 (≥1,600)	4 of 4
19 · Loomis	H600, 2008	5 ’09–’11	ND (5.4)	5.6 (17)	1.2	9.3 (23)	5 of 5
20 · Applegate	H600, 2007	4 ’09–’11	ND (6.2)	ND (7.6)	1.0	1.8 (1.8)	4 of 4

Source: SOS water sampling log dated March 21, 2011. Fecal coliform method upper limit is 1,600 MPN/100 mL. Questions about a specific site or the full data set? Call (877) 669-4668.