3-015 SANTA YNEZ RIVER VALLEY

Basin Boundaries

Summary

The Santa Ynez River Valley Groundwater Basin is located in Santa Barbara County and underlies the towns of Lompoc, Buellton, Solvang, and Santa Ynez. The surface expression of the basin boundary is mostly defined by the contact separating younger sedimentary deposits from consolidated sedimentary deposits and surrounding crystalline rocks. The basin is bound on the north by the Purisima Hills, the adjacent San Antonio Creek Valley Basin, and a watershed boundary. On the east, the basin is bound by the San Rafael Mountains. The basin is bound on the south by the Santa Ynez Mountains and on the west by the Pacific Ocean.The Santa Ynez River, which rises in Juncal Canyon, follows a westward course for about 70 miles through the valley before flowing into the Pacific Ocean. Annual precipitation across the valley ranges from 15 to 21 inches, with an average of 17 inches. Previous reports divided the basin into five parts: Santa Ynez Uplands, Lompoc Plain, Lompoc Terrace, Lompoc Uplands, and the Buellton Uplands (e.g., SBCWA 1996; Stetson 1992; Miller 1976). For this report, the Lompoc Plain, Lompoc Terrace, and Lompoc Uplands are referred to as the western portion of the basin; the Santa Ynez Uplands are referred to as the eastern portion of the basin; the Buellton Uplands are referred to as the central portion of the basin. The Santa Ynez River Valley Basin boundary is defined by forty (40) segments detailed in the descriptions below.

Segment Descriptions

Segment Label	Segment Type	Description	Ref
1-2	E Unknown	Starts from point (1) at the Pacific Ocean and crosses Quaternary alluvium to the bedrock outcrop at point (2).	{a}
2-3	E Alluvial	Continues from point (2) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Upper Miocene marine sediments materials to point (3).	{b}
3-4	E Alluvial	Continues from point (3) and follows the geologic contact of Upper Pliocene marine sediments with consolidated Upper Miocene marine sediments to point (4).	{b}
4-5	I Water Agency	Continues from point (4) and follows the Santa Ynez River Water Conservation District boundary to point (5).	{c}
5-6	E Alluvial	Continues from point (5) and follows the geologic contact of Pliocene marine sediments with consolidated Miocene marine sediments to point (6).	{b}
6-7	I Watershed	Continues from point (6) and follows the Buellton hydrologic area watershed boundary to point (7).	{d}
7-8	E Alluvial	Continues from point (7) and follows the geologic contact of Upper Pliocene marine sediments with consolidated Middle Miocene marine sediments and the Cretaceous-Jurassic Franciscan group to point (8).	{b}
8-9	E Fault	Continues from point (8) and follows the Little Pine Fault to point (9).	{b}
9-10	E Fault	Continues from point (9) and follows the Loma Alta Fault to point (10).	{e}

10-11	E Alluvial	Continues from point (10) and follows the geologic contact of Plio-Pleistocene non-marine sediments with consolidated Upper Miocene marine sediments to point (11).	{e}
11-12	E Lake	Continues from point (11) and follows the shore of Lake Cachuma to point (12).	{e}
12-13	E Alluvial	Continues from point (12) and follows the geologic contact of Quaternary non-marine sediments with consolidated Miocene marine sediments to point (13).	{e}
13-14	E Alluvial	Continues from point (13) and follows the geologic contact of Quaternary alluvium with consolidated Lower Cretaceous marine sediments to point (14).	{b}
14-15	E Alluvial	Continues from point (14) and follows the geologic contact of Quaternary alluvium and Pleistocene non-marine sediments with consolidated Miocene marine sediments to point (15).	{b}
15-16	E Ocean	Continues from point (15) and follows the Pacific Ocean to point (16).	{f}
16-17	E Alluvial	Continues from point (16) and follows the geologic contact of Quaternary alluvium and dune sands with consolidated Middle Miocene marine sediments to point (17).	{b}
17-1	E Ocean	Continues from point (17) and follows the Pacific Ocean to end at point (1).	{f}
18-18	E Alluvial	Island within the basin boundary: Starts from point (18) and follows the geologic contact of Quaternary dune sands and river terrace deposits with consolidated Middle Miocene marine sediments to end at point (18).	{b}
19-19	E Alluvial	Island within the basin boundary: Starts from point (19) and follows the geologic contact of Quaternary dune sands and river terrace deposits with consolidated Middle Miocene marine sediments to end at point (19).	{b}
20-20	E Alluvial	Island within the basin boundary: Starts from point (20) and follows the geologic contact of Quaternary river terrace deposits and Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (20).	{b}
21-21	E Alluvial	Island within the basin boundary: Starts from point (21) and follows the geologic contact of Quaternary river terrace deposits and Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (21).	{b}
22-22	E Alluvial	Island within the basin boundary: Starts from point (22) and follows the geologic contact of Quaternary river terrace deposits and Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (22).	{b}
23-23	E Alluvial	Island within the basin boundary: Starts from point (23) and follows the geologic contact of Quaternary alluvium and river terrace deposits and Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (23).	{b}
24-24	E Alluvial	Island within the basin boundary: Starts from point (24) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments end at point (24).	{b}

25-25	E Alluvial	Island within the basin boundary: Starts from point (25) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (25).	{b}
26-26	E Alluvial	Island within the basin boundary: Starts from point (26) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (26).	{b}
27-27	E Alluvial	Island within the basin boundary: Starts from point (27) and follows the geologic contact of Pleistocene non-marine sedimentswith consolidated Middle Miocene marine sediments to end at point (27).	{b}
28-28	E Alluvial	Island within the basin boundary: Starts from point (28) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (28).	{b}
29-29	E Alluvial	Island within the basin boundary: Starts from point (29) and follows the geologic contact of Pleistocene non-marine sediments and Quaternary alluvium with consolidated Middle Miocene marine sediments to end at point (29).	{b}
30-30	E Alluvial	Island within the basin boundary: Starts from point (30) and follows the geologic contact of Pleistocene non-marine sediments and Quaternary alluvium with consolidated Upper Miocene marine sediments to end at point (30).	{b}
31-31	E Alluvial	Island within the basin boundary: Starts from point (31) and follows the geologic contact of Pleistocene non-marine sediments and Quaternary alluvium with consolidated Upper Miocene marine sediments to end at point (31).	{b}
32-32	E Alluvial	Island within the basin boundary: Starts from point (32) and follows the geologic contact of Pleistocene non-marine sediments with consolidated Middle Miocene marine sediments to end at point (32).	{b}
33-33	E Alluvial	Island within the basin boundary: Starts from point (33) and follows the geologic contact of Quaternary alluvium, river terrace deposits, Pleistocene non-marine sediments, and Pliocene marine sediments with consolidated Miocene marine sediments to end at point (33).	{b}
34-34	E Alluvial	Island within the basin boundary: Starts from point (34) and follows the geologic contact of Quaternary alluvium, river terrace deposits, Upper Pliocene marine sediments with consolidated Miocene marine sediments to end at point (34).	{b}
35-35	E Alluvial	Island within the basin boundary: Starts from point (35) and follows the geologic contact of Quaternary alluvium and Upper Pliocene marine sediments with consolidated Miocene marine sediments and pyroclastic volcanic rocks to end at point (35).	{b}
36-36	E Alluvial	Island within the basin boundary: Starts from point (36) and follows the geologic contact of Upper Pliocene marine sediments with consolidated Middle Miocene marine sediments to end at point (36).	{b}
37-37	E Alluvial	Island within the basin boundary: Starts from point (37) and follows the geologic contact of Quaternary alluvium, river terrace deposits, and Upper Pliocene marine sediments with consolidated Upper Miocene marine sediments to end at point (37).	{b}

38-38	E Alluvial	Island within the basin boundary: Starts from point (38) and follows the geologic contact of Quaternary river terrace deposits with consolidated Upper Miocene marine sediments to end at point (38).	{b}
39-39	E Alluvial	Island within the basin boundary: Starts from point (39) and follows the geologic contact of Quaternary river terrace deposits and alluvium with consolidated Middle Miocene marine sediments to end at point (39).	{b}
40-40	E Alluvial	Island outside of the basin boundary: Starts from point (40) and follows the geologic contact of Quaternary river terrace deposits with consolidated Miocene marine sediments to end at point (40).	{b}

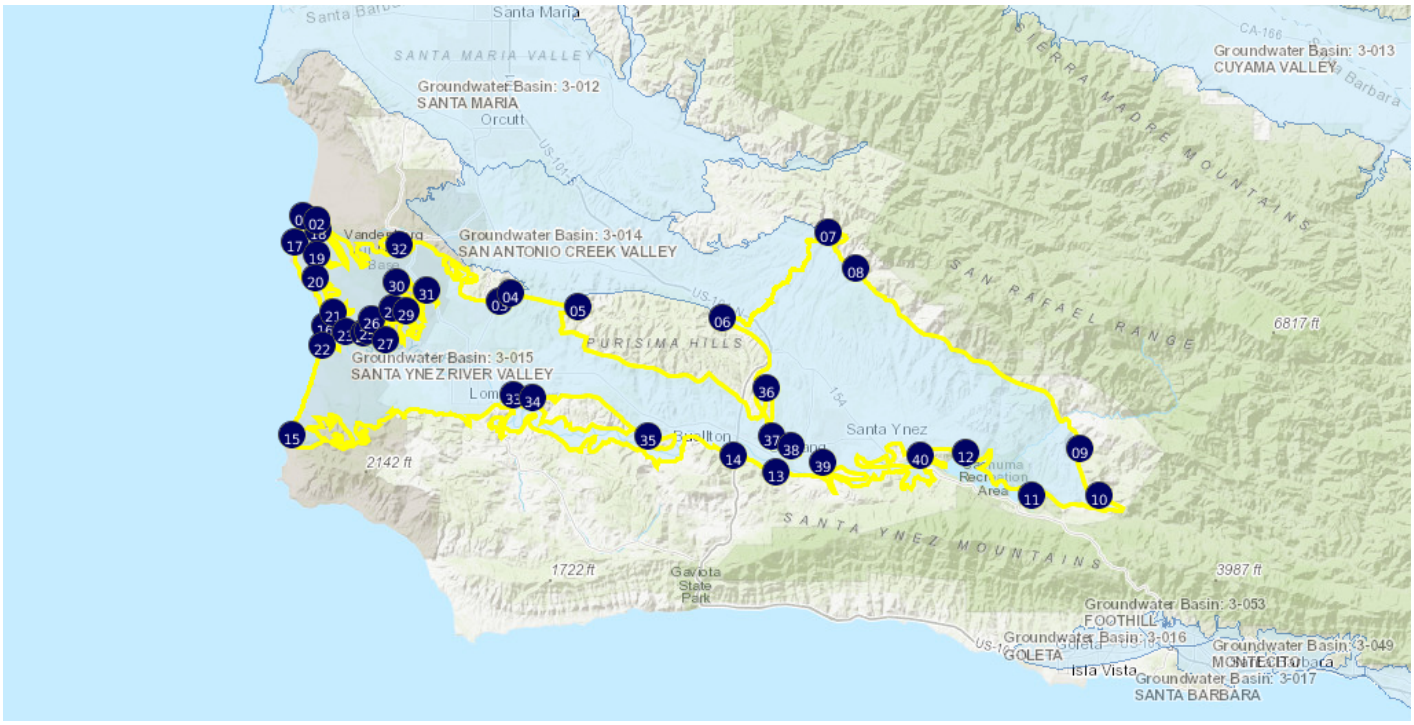
Significant Coordinates

Point	Latitude	Longitude
1	34.793155895	-120.622983427
2	34.788947432	-120.609417417
3	34.723124178	-120.427091307
4	34.729443516	-120.416663071
5	34.717763882	-120.348727694
6	34.708929301	-120.204957428
7	34.778749192	-120.098290413
8	34.750210838	-120.071370695
9	34.602356251	-119.84759808
10	34.563138239	-119.82828107
11	34.563984981	-119.895032168
12	34.598377932	-119.961992475
13	34.582780782	-120.150484524
14	34.59590316	-120.193598086
15	34.612699231	-120.634202601
16	34.702195354	-120.60092936
17	34.771626839	-120.631779632
18	34.781797605	-120.608242606
19	34.761611076	-120.609394226
20	34.742106686	-120.610974321
21	34.714110495	-120.593871371
22	34.686357702	-120.604734378
23	34.697746455	-120.581639805
24	34.696461934	-120.563790484
25	34.699441062	-120.558849976
26	34.70813775	-120.555121423
27	34.690987701	-120.54108165
28	34.71679699	-120.534324038
29	34.714889727	-120.520276126
30	34.738743549	-120.529506659

31	34.732020732	-120.499827174	
32	34.769319438	-120.526851369	
33	34.646399783	-120.413612466	
34	34.643596189	-120.394266062	
35	34.612141419	-120.278201354	
36	34.651230417	-120.16023279	
37	34.611546682	-120.155902253	
38	34.604626321	-120.136028002	
39	34.591081984	-120.10405146	
40	34.596404019	-120.007272396	

Map

3-015 SANTA YNEZ RIVER VALLEY



https://sgma.water.ca.gov/webgis/?appid=160718113212&subbasinid=3-015

References

Ref	Citation	Pub Date	Global ID
{a}	Unknown/other/new	varies	46
{b}	California Geological Survey (CGS), Geologic Atlas of California Map No. 021, Santa Maria Sheet, 1:250,000, Charles W. Jennings.URL: http://www.quake.ca.gov/gmaps/GAM/santamaria/santamaria.html	1959	26
{c}	California Department of Water Resources (DWR), California's Groundwater, Bulletin 118 - Update 2003.http://water.ca.gov/groundwater/bulletin118/update_2003.cfm	2003	73
{d}	United States Geological Survey (USGS), National Hydrography Dataset, Watershed Boundary Dataset for California, note: Coordinated effort among the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS), the United States Geological Survey (USGS), and the Environmental Protection Agency (EPA).URL: http://datagateway.nrcs.usda.gov	2016	49
{e}	California Geological Survey (CGS), Geologic Atlas of California Map No. 008, Los Angeles Sheet, , 1:250,000, Charles W. Jennings and Rudolph G. Strand.URL: http://www.quake.ca.gov/gmaps/GAM/losangeles/losangeles.html	1969	33
{f}	California Department of Forestry and Fire Protection (Cal Fire), California Counties and Paired Dataset (cnty15_1).URL: http://frap.fire.ca.gov/data/frapgisdata-subset	2/14/15	2

Footnotes

- I: Internal
- E: External