9-033 COASTAL PLAIN OF SAN DIEGO

Basin Boundaries

Summary

The Coastal Plain of San Diego groundwater basin underlies the Cities of San Diego, National City, Chula Vista, Imperial Beach, and San Ysidro in southwestern San Diego County. The basin boundary represents the area underlain by the San Diego Formation. The basin is bound on the west by the San Diego Bay and the Pacific Ocean. The basin is bound on the south by the international border with Mexico and is bound on the north by the alluvium of the Mission Valley Basin. The basin is bound on the east by the La Nacion fault and the lateral extents of the San Diego Formation and the alluvial areas in Otay Valley and Sweetwater Valley. The surface waters are drained westerly towards the Pacific Ocean by the Sweetwater River, the Otay River, the Tijuana River, and various creeks. Average annual precipitation ranges from about 12 to 20 inches.The basin boundary is defined by twelve (12) segments detailed in the descriptions below.

Segment Descriptions

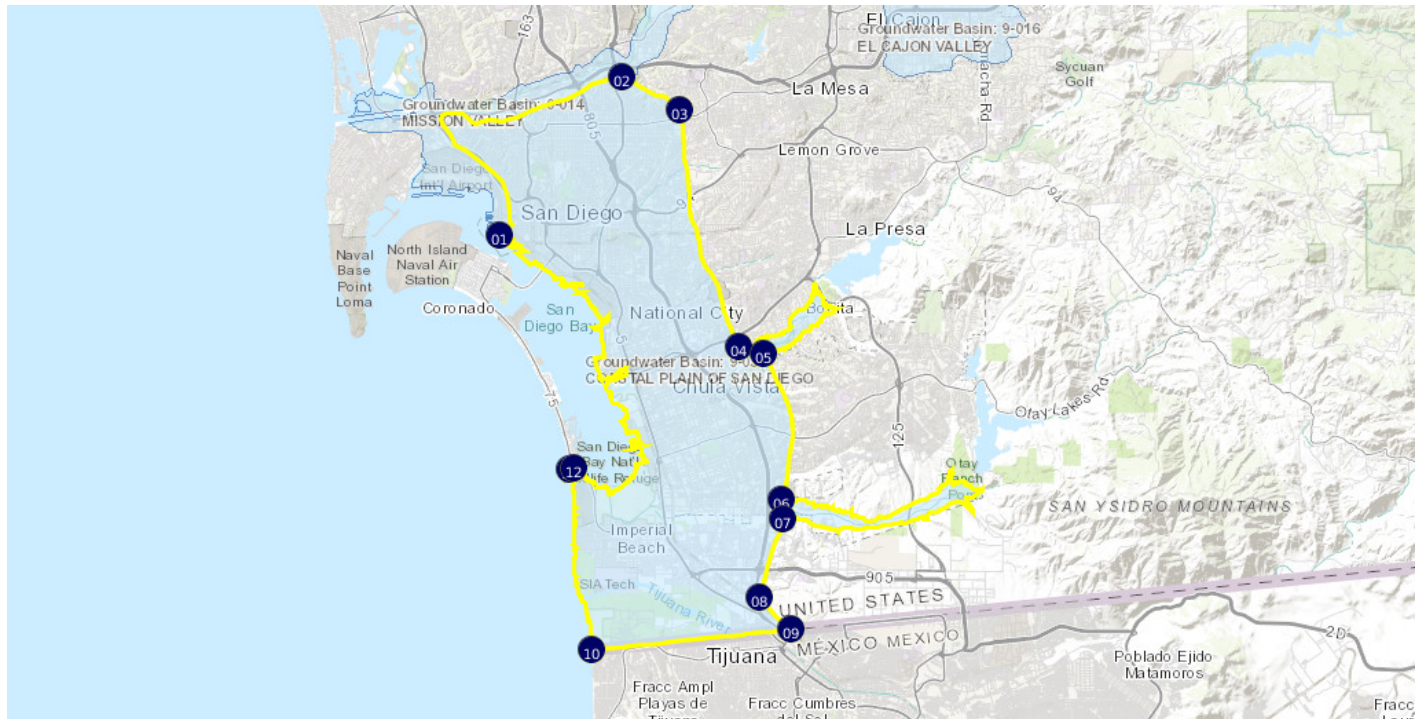| Segment Label	Segment Type	Description	Ref
1-2	I Non-Alluvial	Begins from point (1) and follows the contact of Quaternary alluvium with Plio-Pleistocene San Diego Formation, where the vertical thickness and expected groundwater productivity are significantly reduced, to point (2).	{a}
2-3	E Non-Alluvial	Continues from point (2) and follows the extent of the Plio-Pleistocene San Diego Formation to point (3).	{a}
3-4	E Fault	Continues from point (3) and follows the La Nacion fault to point (4).	{b}
4-5	E Alluvial	Continues from point (4) and generally follows the contact of Quaternary alluvium with the Tertiary Mission Valley and Otay Formations and Jurassic volcanic and metasedimentary rocks to point (5).	{b}
5-6	E Fault	Continues from point (5) and follows the La Nacion Fault to point (6).	{c}
6-7	E Alluvial	Continues from point (6) and generally follows the contact of Quaternary alluvium with Tertiary fanglomerate, Mission Valley and Otay Formations, and Cretaceous Santiago Peak Volcanics to point (7).	{b}
7-8	E Fault	Continues from point (7) and generally follows the La Nacion Fault to point (8).	{d}
8-9	E Non-Alluvial	Continues from point (8) and generally follows the extent of Plio-Pleistocene San Diego Formation, west of the La Nacion fault zone, to point (9).	{a}
9-10	E Country	Continues from point (9) and follows the county line/Mexican border to point (10).	{e}
10-11	E Ocean	Continues from point (10) and follows the county line/Pacific Ocean to point (11).	{e}
11-12	E Non-Alluvial	Continues from point (11) and crosses Holocene beach deposits and Pleistocene paralic deposits at the narrowest part of the peninsula to point	{f}

			(12).	
12-1	E	Ocean	Continues from point (12) and follows the county line/San Diego Bay and ends at point (1).	{e}

Significant Coordinates

Point	Latitude	Longitude	
1	32.708417912	-117.170274805	
2	32.774596146	-117.109276858	
3	32.760907271	-117.079776014	
4	32.66117041	-117.050656819	
5	32.658515975	-117.03819725	
6	32.597425427	-117.029227973	
7	32.589044802	-117.028749054	
8	32.556117527	-117.040468861	
9	32.542761912	-117.024521648	
10	32.534084069	-117.123899961	
11	32.609755428	-117.134742697	
12	32.610247199	-117.132759809	

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Map

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https://sgma.water.ca.gov/webgis/?appid=160718113212&subbasinid=9-033

References

Ref	Citation	Pub Date	Global ID
{a}	BBMRS	varies	45
{b}	California Geological Survey (CGS), Geologic Compilation of Quaternary Surficial Deposits in Southern California, T.L. Bedrossian, P. Roffers, C.A. Hayhurst, J.T. Lancaster, and W.R. Short.URL: http://www.conservation.ca.gov/cgs/fwgp/Pages/sr217.aspx	2012	50
{c}	California Geological Survey (CGS), Geologic Map of California, Geologic Data Map No. 2, C. W. Jennings, C. Gutierrez, W. Bryant, G. Saucedo, and C. Wills.URL: http://maps.conservation.ca.gov/cgs/gmc/	2010	43
{d}	California Geological Survey (CGS), Geologic Atlas of California Map No. 015, San Diego- El Centro Sheet, , 1:250,000, Rudolph G. Strand .URL: http://www.quake.ca.gov/gmaps/GAM/sandiegoelcentro/sandiegoelcentro.html	1962	21
{e}	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
{f}	Unknown/other/new	varies	46

Footnotes

- I: Internal
- E: External