

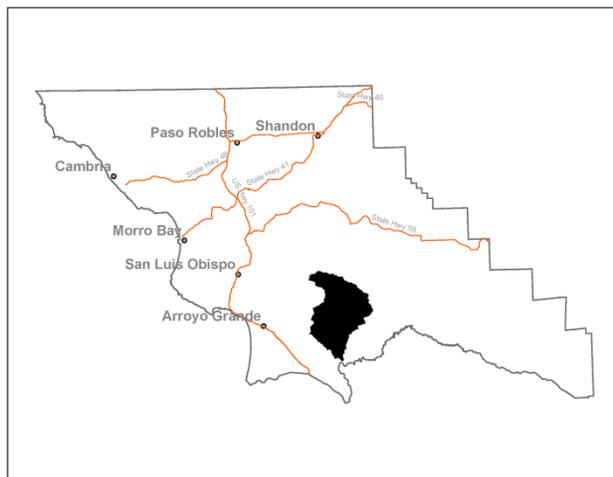
Huasna River Watershed

Hydrologic Unit Name	Water Planning Area	Acreage	Flows to	Groundwater Basin(s)	Jurisdictions
Santa Maria HU 12	Huasna Valley WPA 8	75,122 acres	Cuyama River at Twitchell Reservoir	Huasna Valley	County of San Luis Obispo; Los Padres National Forest



Description:

The Huasna River Watershed is an inland basin located in southern San Luis Obispo County. The drainage rises to a maximum elevation of approximately 3,000 feet above sea level. Huasna River flows to the Cuyama River at the downstream end of the Huasna River watershed above Twitchell Dam, which is in the Cuyama River Watershed downstream. Huasna River watershed has a number of tributary basins with their headwaters in the Santa Lucia and La Panza Mountain Ranges: Huasna Creek, Carrie Creek, Haystack Creek and Arroyo Seco Creek.



Agriculture is the principal land use in the area, ranging from small irrigated farms to large cattle ranches. A substantial portion of the area consists of hilly and mountainous land with chaparral and oak woodlands, suitable only for limited grazing. Other land uses includes oil exploration and recreation on the Los Padres National Forest.

Watershed Plans:

None

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Characteristics:

	Physical Setting	
	Rainfall	18 – 27 inches (NRCS Precipitation,1981-2010)
	Air Temperature	Summer Range (August 1981-2010): 50°- 82° F Winter Range (December 1981-2010): 36°- 66° F At Twitchell Dam (CA-NOAA National Climatic Data Center, viewed 2013)
	Geology Description	<p>The Huasna Creek, Deer Canyon, and Joaquin Canyon sub watersheds consist of steep moderately infiltrative early to mid-Tertiary headwaters – category #8.</p> <p>The Haystack Canyon, Carrie Creek, Lower Arroyo Seco, and Upper Arroyo Seco sub watersheds consist of steep pre-Quaternary non-infiltrative headwaters; steep moderately infiltrative early to mid-Tertiary valley – category #5.</p> <p>The Salt Creek sub watershed consists of steep pre-Quaternary non-infiltrative headwaters – category #13 (Bell, personal communication, 2013)</p> <p>The Huasna River basin contains thick mostly marine sedimentary Tertiary deposits that lay on top of a Jurassic-Cretaceous complex. The Huasna Basin lies between the West Huasna fault zone on the west and the East Huasna fault zone on the east (SLO County, 2012).</p> <p>The principal water bearing unit is Quaternary age alluvium. (DWR,2003)</p>
	Hydrology	
	Stream Gage	No. USGS 11137900 Huasna River near Arroyo Grande, CA (1960-2012, discontinued) and USGS 11138000 Huasna River near Santa Maria, CA (1930-1961, discontinued). (USGS, viewed 2013) Limited data and no current stream gage.
	Hydrology Models	No source identified.
	Peak Flow	10,000 - 11,400cfs at USGS 11138000. (USGS, viewed 2013)
	Base Flow	6.5 – 7.10 cfs at USGS 11138000.(USGS, viewed 2013) It is unknown if these gages were placed to accurately capture base flows. Many gages are placed as alert systems and only capture peak flows.
	Flood Reports	Yes; Floods in Cuyama Valley, California (USGS, 1998). Though normally dry, wetter winters have seen the [Twitchell] reservoir inundate the lower five miles of Huasna Valley ..., rendering areas below the 652-foot elevation unsuitable for permanent

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		<p>buildings. Upstream portions of these watercourses (and other creeks in the planning area) are potential flood hazard areas during intense or prolonged rainfall.(San Luis Obispo County, Huasna-Lopez Area Plan, 2003)</p> <p>Limited data.</p>
	Biological Setting	
	Vegetation Cover	<p>Primarily buck brush chaparral, oak woodland consisting of coast live oak and blue oak, foothill pine-oak woodland with some non-native grassland, venturan coastal sage scrub and permanently flooded lacustrine (SLO County vegetation shapefile, 1990)</p> <p>Annual grassland, foothill oak woodland, chaparral and coastal scrub, anthropogenic and ruderal, freshwater marsh wetland (MRS, 2012) Forest Service Calveg data from 2002 for this watershed describe agricultural vegetation types, as well as wildland tree and shrub communities, with some grasslands. Shrub types include mixed chaparral with some scrub oak, ceanothus chaparral, chamise chaparral, and sagebrush scrub. Forest and woodland types include oak woodlands with blue oak, coast live oak, and valley oak components as well as foothill woodland with mixed oak and foothill pine, and coulter pine. Willow riparian scrub is noted along drainages. (Calveg R5 Zone 6, EvegTile42_97_02, 2007)</p> <p>Limited spatial data. No alliance level vegetation mapping was available for the entire County. The Forest Service data is based on 2002 aerials.</p>
	Invasive Species	<p>Ripgut brome, wild radish, Russian thistle, Italian thistle, sweet fennel, bull thistle, bur clover, prickly wild lettuce, horseweed? (MRS, 2012)</p> <p>Limited data.</p>
	Special Status Wildlife and Plants	<p>Paniculate tarplant is listed by the California Native Plant Society (CNPS) but is not listed by USFWS or CDFG as threatened or endangered. Well's Manzanita were documented and it is on the CNPS List. (MRS, 2012)</p> <p>Key: FE - Federal endangered, FT - Federal threatened, SE - State endangered, ST - State threatened, SSC - State Species of Special Concern; FP- Fully Protected, SA – Special Animal, CRPR – CA rare plant rank (CNDDDB, viewed August, 2013)</p> <p>Locations listed refer to USGS 7.5' quadrangle names. Only the portion overlapping the watershed boundary was considered.</p> <p>Limited by the type of data collected in the CA Natural Diversity Database.</p>

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Common Name	Status								
		CALDWELL MESA	CHIMNEY CANYON	HUASNA PEAK	LOS MACHOS HILLS	NIPOMO	POZO SUMMIT	SANTA MARGARITA LAKE	TAR SPRING RIDGE
Animals									
<i>American badger</i>	SSC			x					
California condor	FE; SE						x	x	
California red-legged frog	FT			x					
<i>prairie falcon</i>	SA (Nesting)	x	x	x	x	x	x	x	x
<i>two-striped garter snake</i>	SSC	x							
Plants									
<i>Hardham's evening-primrose</i>	CRPR 1B.2						x		
<i>La Panza mariposa-lily</i>	CRPR 1B.3						x		
<i>Miles' milk-vetch</i>	CRPR 1B.2			x		x			
<i>Palmer's mariposa-lily</i>	CRPR 1B.2	x			x				
<i>San Luis Obispo County lupine</i>	CRPR 1B.2	x				x			x
<i>Santa Margarita manzanita</i>	CRPR 1B.2	x		x		x			x
<i>umbrella larkspur</i>	CRPR 1B.3	x							
Steelhead Streams	No. Santa Maria River is a steelhead stream. Twitchell Dam creates a barrier to access Huasna River. (NMFS, 2009)								
Stream Habitat Inventory	None identified.								
Fish Passage Barriers	None identified. Twitchell Dam creates a barrier to access Huasna River. (NMFS, 2009) Limited data. Large downstream fish barrier may not warrant upstream barrier surveys.								
Designated Critical Habitat	None identified.								
Habitat Conservation Plans	None identified.								
Other Environmental Resources	Los Padres National Forest								

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	Land Use	
	Jurisdictions & Local Communities	None.
	% Urbanized	0% (SLO County LUC)
	% Agricultural	64.4% (SLO County LUC)
	% Other	35.6% (21.46% open space and 14.12% rural lands)(SLO County LUC)
	Planning Areas	South County-Inland, Huasna-Lopez, Los Padres
	Potential growth areas	No source identified.
	Facilities Present	Private wells and septic systems Limited data.
	Commercial Uses	Huasna River Pit – sand and gravel (SLO County Mines); Proposed oil processing facilities, Recreation; agriculture – grazing Limited data.
	Demographics	
	Population	237 (U.S. Census Block, 2010)
	Race and Ethnicity	65.4% Caucasian (155), 11.8% Latinos (28), 3.5% Other, 2.5% mixed race (6) (U.S. Census Block, 2010)
	Income	MHI \$99,115 (U.S. Census Tract, 2010). Census tract is large covering portions of multiple watersheds.
	Disadvantaged Communities	None; 4% of individuals were below poverty level (U.S. Census Tract, 2010). Census tract is large covering portions of multiple watersheds.
	Water Supply	
	Water Management Entities	Twitchell Management Authority Limited data.
	Groundwater	Yes; alluvial and Huasna Valley (SLO County, 2012)
	Surface Water	No public reservoirs. Twitchell Dam recharges the Santa Maria Valley groundwater basin.
	Imported Water	No source identified.
	Recycled/ Desalinated Water	No source identified.
	Infiltration Zones	No source identified.

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	Water Budget	None to date.
	Water Uses	
	Beneficial Uses	<i>Huasna River</i> – Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Ground Water Recharge (GWR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Warm Fresh Water Habitat (WARM), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE).(RWQCB, 2011)
	Other Unique Characteristics	
	Historic Resources	No source identified.
	Archeological Resources	There was a Chumash town called Wasna at the time of European settlement (SB Museum of Natural History, viewed 2013). Limited data and low priority for this effort.
	Los Padres National Forest	The Los Padres National Forest, Santa Lucia District in the upper watershed is open to general recreation and includes the Garcia Wilderness. (U.S Forest Service Map, 2011)
	Climate Change Considerations	
		See IRWMP, 2014 Section H. Climate Change Limited data and not watershed specific.

Watershed Codes

CalWater /DWR Number	HA	Hydrologic Area Name	HSA	Hydrologic Sub-area Name	SWRCB Number	CDF Super Planning	CDF Watershed Name
3312.301301	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Haystack Canyon
3312.301302	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Carrie Creek
3312.301303	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Salt Creek
3312.301304	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Joaquin Canyon
3312.301305	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Stony Creek

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CalWater /DWR Number	HA	Hydrologic Area Name	HSA	Hydrologic Sub-area Name	SWRCB Number	CDF Super Planning	CDF Watershed Name
3312.301308	3	Cuyama Valley	0	undefined	312.30	Bald Mtn.	Deer Canyon
3312.301306	3	Cuyama Valley	0	undefined	312.30	Tassajara Hot Springs	Lower Arroyo Seco
3312.301307	3	Cuyama Valley	0	undefined	312.30	Tassajara Hot Springs	Upper Arroyo Seco
3312.301401	3	Cuyama Valley	0	undefined	312.30	Twitchell Reservoir	Huasna Creek
3312.301402	3	Cuyama Valley	0	undefined	312.30	Twitchell Reservoir	Lower Twitchell Reservoir

Source: Excerpt from California Interagency Watershed Map of 1999, Calwater 2.2.1 (CA Resource Agency, 2004 Update)

Major Changes in the Watershed

- The watershed is near the boundary of the areas historically occupied by Obispeno Chumash and the Playanos Salinan (MRS, 2012).
- The area was made part of the Mission San Luis Obispo holdings
- In 1843, title to 22,153 acres of the Huasna Rancho was granted to Isaac Sparks. Upon his death the property was divided among his daughters Flora Harloe, Rosa Porter and Sally Harkness.
- In 1870's the first hunt for oil was conducted in the region.
- In 1899, the first hole was bored for oil by Fredrick Harkness on the Porter Ranch. Other holes were bored in the 1900's on the Records Ranch and Rosa Porter Ranch. Waives of oil exploration occurred in the 1930's and again in the 1950's. (MRS, 2012)
- In 1958, Twitchell Dam and Reservoir was constructed by the Army Corps of Engineers and the Bureau of Reclamation on behalf of the Santa Barbara County Water Agency (TMA, 2010).

Watershed Health by Major Tributary

Tributary Name	Ephemeral / Perennial	303d Listed/ TMDLs	Pollution Sources NP (non-point) MP (Major Point)	Environmental Flows
Huasna River	No source identified.	No. (SWRCB, 2010)	Not assessed. (SWRCB, 2010)	No source identified.
All Other Tribs	No source identified.	Not assessed. (SWRCB, 2010)	Not assessed. (SWRCB, 2010)	No source identified.

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Watershed Health by Major Groundwater Basin

Groundwater Basin	Estimated Safe Yield	Water Availability Constraints	Drinking Water Standard Exceedance	Water Quality Objective Exceedance
Huasna Valley Basin	No existing data. (San Luis Obispo County, Master Water Report, 2012)	Physical Limitations and Water Quality Issues. Shallow alluvial deposits are typically more susceptible to drought impacts than deeper formation aquifers, (San Luis Obispo County, Master Water Report, 2012)	No historical water quality data. (San Luis Obispo County, Master Water Report, 2012)	No objective for the basin. (RWQCB, Table 3-8, 2011)

Groundwater Quality Description: No historical water quality data for the alluvial basin has been published in public documents or is available through the STORET Legacy Database. (SLO County, Master Water Report, 2012)

Primary Issues

Issue	Potential Causes	Referenced from
Sedimentation of Twitchell Dam	Natural and upland erosion primarily from Cuyama River.	TWA, 2010

The issues described above are in no way an exhaustive list but were identified by entities working in the watershed. Additional research would be needed to flush out all the issues facing the watershed. Issues were vetted by the community to various degrees based on the individual document. There was no countywide vetting process to identify the relative priority of each issue.

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