

SUMMARY OF OJAI CREEK CONDITIONS

This subsection summarizes all creeks that flow through the City of Ojai. All water quality and stream characterization results are pulled together here to provide conclusive determinations on the status and condition of the Ojai Basin streams. Table 30, Summary of Favorable Conditions for Determining Spawning and Rearing Potential in the Ojai Creeks, is presented below as a quick reference to the findings of this study. This subsection also provides a brief summary and description for each creek in the Ojai City limits.

Arbolada Creek

Arbolada Creek is in the northwestern portion of the City limits and is a tributary to Stewart Canyon Creek. Its confluence with Stewart Canyon Creek is located south of SR 150 and immediately south of the Ojai Bike Path, between South Blanche and San Antonio Streets. Arbolada Creek crosses SR 150 (moving upstream) and flows parallel to Bristol Street and then Palomar Street. Arbolada Creek includes three primary reaches. Reach 1 is above ground with natural substrate and includes a total length of 987 feet within the City limits. Reach 2 is below ground by an impervious concrete pipe for a distance of 225 feet. Reach 3 is above ground with mostly natural substrate for a total length of 4,546 feet.

Arbolada Creek Reach 3 includes two water quality sampling stations (Stations 9 and 16): Station 9 is located at the lower end of Arbolada Creek, near the intersection of Ojai Avenue and Bristol Street. Water quality at Station 9 is moderately low in that the average measurements for temperature, dissolved oxygen, turbidity, and presence of coliform were not favorable to fish or other aquatic organisms. However, Station 9 shows favorable average conductivity, pH, and salinity measurements. Station 16, in Arbolada Creek Reach 3, is located just north of 509 Palomar Road and is just outside the city limits of Ojai, but still provides valuable information (see Figure 5). Station 16 tests shows favorable water conditions for average temperature and pH measurements; however, it does not show favorable conditions for the remaining vital parameters including conductivity, dissolved oxygen, turbidity, salinity, and coliform bacteria.

Arbolada Creek includes a moderate level of instream cover (1 to 4 types reported throughout the creek). It is no longer inhabited by functional riparian plant communities, but the vegetation does provide moderate shading (predominantly introduced and ornamental plant species). When flows are present in this intermittent and partially ephemeral stream during the winter and spring months, water velocity is favorable and appropriate spawning and rearing substrates are present in Reach 1 and 3.

Due to poor water quality results and the lack of riparian vegetation, the creek generally does not support suitable Steelhead habitat.

Table 30. Summary of Favorable Conditions for Determining Spawning and Rearing Potential in the Ojai Creeks

Creek Name	Reach No.	Morphology: Reach is 95-100% Natural?	No. of Instream Cover Types in Natural Portions of Creek	Satisfactory Riparian Habitat?	Riparian Canopy Shading in Natural Portions of Creek 76% to 90%?	Months Flows Present	Favorable Water Velocity when Flows are Present?	Spawning/ Rearing Substrate Present?	Potential Spawning/ Rearing Habitat Present?
<i>Arbolada</i>	1	Yes	1-2	No	Yes	Jan, Feb, Mar, Oct, Nov, Dec	No	Yes	No
	2	No	2-3	No	No	Jan, Feb, Mar, Oct, Nov, Dec	No	No	No
	3	Yes	3-4	No	No	Jan, Feb, Mar, Oct, Nov, Dec	No	Yes	No
<i>Ayers</i>	1	No	5-6	No	No	Jan, Feb, Mar, Apr, Oct, Nov, Dec	No	No	No
	2	No	0	No	No	Jan, Oct, Dec	No	No	No
	3	No	1-2	No	No	Jan, Feb, Mar, Oct, Dec	No	No	No
	4	No	1-2	No	No	Jan, Feb, Mar, Oct, Dec	No	No	No
	A-1	No	0	No	No	Jan, Apr, Oct, Dec	No	No	No
	B-1	No	0	No	No	Jan, Oct, Dec	No	No	No
<i>Del Norte</i>	1	No	5-6	Yes	No	Jan, Feb, Apr, Sep, Oct, Nov, Dec	Yes	No	No
	2	No	3-4	Yes	No	Jan, Feb, Oct, Dec	Yes	No	No
	3	No	0	Yes	No	Jan, Feb, Oct, Dec	No	No	No
	4	No	3-4	Yes	Yes	Jan, Feb, Oct, Dec	No	Yes	No
	A-1	No	0	Yes	No	Jan, Feb, Oct, Dec	No	Yes	No
	B-1	No	1-2	Yes	No	Jan, Feb, Sep, Oct, Dec	No	Yes	No
<i>East End</i>	1	Yes	1-2	No	No	Jan, Oct, Dec	No	Yes	No
<i>Fox Canyon</i>	1	No	5-6	Yes	Yes	Jan, Feb, Mar, Apr, May, Jun, Oct, Nov, Dec	Yes	Yes	Yes
	2	No	0	Yes	No	Jan, Feb, Jun, Oct, Nov, Dec	Yes	No	No
	3	No	0	No	No	Jan, Feb, Oct, Dec	Yes	No	No
	4	No	1-2	Yes	No	Jan, Feb, Oct, Dec	No	Yes	No
	A-1	No	1-2	No	No	Jan, Oct, Nov, Dec	No	Yes	No
	B-1	No	1-2	No	Yes	Jan, Oct, Dec	No	Yes	No
<i>Grandview-Park</i>	1	No	1-2	No	No	Jan, Mar, Oct, Dec	No	No	No
	2	No	1-2	Yes	No	Jan, Mar, Oct, Dec	No	No	No
<i>Nordhoff</i>	1	Yes	1-2	No	No	Jan, Feb, Mar, Oct, Nov, Dec	No	No	No
<i>Oak</i>	1	Yes	1-2	No	Yes	Jan, Feb, Oct, Nov, Dec	No	Yes	No

Table 30. Summary of Favorable Conditions for Determining Spawning and Rearing Potential in the Ojai Creeks (continued)

Creek Name	Reach No.	Morphology: Reach is 95-100% Natural?	No. of Instream Cover Types in Natural Portions of Creek	Satisfactory Riparian Habitat?	Riparian Canopy Shading in Natural Portions of Creek 76% to 90%?	Months Flows Present	Favorable Water Velocity when Flows are Present?	Spawning/ Rearing Substrate Present?	Potential Spawning/ Rearing Habitat Present?
<i>Ojai</i>	1	No	5-6	Yes	Yes	Jan, Feb, Sep, Oct, Nov, Dec	No	Yes	Yes
	2	No	0	No	No	Jan, Feb, Oct, Nov, Dec	No	No	No
	3	No	1-2	No	Yes	Jan, Feb, Oct, Dec	No	No	No
	4	No	0	No	No	Jan, Feb, Oct, Dec	No	No	No
	5	No	0	No	No	Jan, Feb, Mar, Oct, Dec	No	No	No
	A-1	No	1-2	No	No	Jan, Oct, Dec	No	No	No
	B-1	No	0	No	No	Jan, Oct, Dec	No	No	No
	B-2	No	0	No	No	Jan, Oct, Dec	No	No	No
	B-3	No	0	No	No	Jan, Oct, Dec	No	No	No
A of B-1	No	0	No	No	Jan, Oct, Dec	No	No	No	
<i>Post Office</i>	1	Yes	3-4	No	Yes	Jan, Feb, Oct, Nov, Dec	No	Yes (lower portion)	Yes (lower portion only)
<i>San Antonio</i>	1	Yes	5-6	Yes	Yes	Jan, Feb, Mar, Apr, May, Jun, Oct, Nov, Dec	Yes	Yes	Yes
	2	Yes	5-6	Yes	Yes	Jan, Feb, Mar, Apr, May, Jun, Oct, Nov, Dec	Yes	Yes	Yes
	3	Yes	3-4	Yes	Yes	Jan, Feb, Oct, Nov, Dec	Yes	Yes	Yes
<i>Soule Park</i>	1	Yes	.	.	.	.	.	.	No
<i>West Soule Park</i>	1	Yes	.	.	.	.	.	.	No
<i>Stewart Canyon</i>	1	Yes	5-6	Yes	Yes	Year Round	Yes	Yes	Yes
	2	No	1-2	No	No	Jan, Feb, Mar, Apr, May, Oct, Nov, Dec	Yes	No	No
	3	No	0	No	No	Jan, Feb, Mar, Apr, May, Oct, Nov, Dec	Yes	No	No
	4	No	0	No	No	Jan, Feb, Mar, Dec	Yes	No	No
	5	Yes	5-6	Yes	Yes	Jan, Feb, Mar, Apr, May, Oct, Nov, Dec	Yes	Yes	Yes
<i>Thacher</i>	1	Yes	3-4	Yes	No	Jan, Feb	No	Yes	No
<i>Villanova</i> Note: Reach 1 is outside the City limits	2	No	1-2	Yes	Yes	Jan	No	Yes	No
	3	No	1-2	No	No	Jan	No	No	No
	B-1	No	1-2	No	No	Jan	No	No	No



Photograph 63 (left). Arbolada Creek Reach 1 (7 December 2004).
Photograph 64 (right). Arbolada Creek Reach 2, view north (30 September 2004).

Ayers Creek

Ayers Creek is in the northeastern portion of the City limits and is a tributary to San Antonio Creek. Its confluence with San Antonio Creek is located just upstream from the Thacher Creek confluence at the northeastern end of the Soule Park Golf Course. Ayers Creek moves northwest from San Antonio Creek (moving upstream) and crosses SR 150 at Shady Lane, and then runs parallel to Ayers Street.

Ayers Creek includes four primary reaches and two tributary reaches. Reach 1 is above ground with natural substrate for a distance of 229 feet within the City limits. Reach 2 is below ground by an impervious culvert/pipe for 4,076 feet. Reach 3 is above ground with a compacted impervious creek bottom for 2,786 feet. Reach 4 is also above ground, but has natural substrate for 511 feet. Ayers Creek Tributary A includes only one reach, which is above ground with a compacted channel bottom for 521 feet, and this tributary drains into Ayers Creek Reach 2. Ayers Creek Tributary B has one above ground reach with compacted soil for 2,073 feet, and this tributary drains into Ayers Creek Reach 3.

Ayers Creek Reach 1 includes one water quality sampling station (Station 11), which is located at the end of Fairway Lane and drains south to San Antonio Creek (Figure 5). Station 11 water sampling tests indicate that this portion of the creek is favorable for parameters such as temperature, dissolved oxygen, and pH; however, this creek's water tests do not show favorable conditions for parameters including turbidity, salinity, and coliform bacteria.

In general, the reaches of Ayers Creek are predominantly impervious and/or compacted. This creek includes minimal instream cover for aquatic vertebrates, it does not provide suitable riparian habitat, and consequently, it generally has insufficient shading (percent canopy shading less than 76%). Flows are present in Reach 1 for at least seven months out of year making this an intermittent reach; however, the remaining ephemeral reaches only have rain event surface flows three to five months out of the year.

Although flows may be present during the appropriate time of the year for Steelhead, and although water quality is satisfactory for Steelhead, water velocity, spawning and rearing substrate, instream cover, riparian vegetation, and shading are all lacking from the reaches of this creek. Therefore, no reaches of Ayers Creek were determined to have suitable spawning or rearing habitat for Steelhead.



Photograph 65 (left). Ayers Creek (27 May 2004).



Photograph 66 (right). Ayers Creek (3 January 2005).

Del Norte Creek

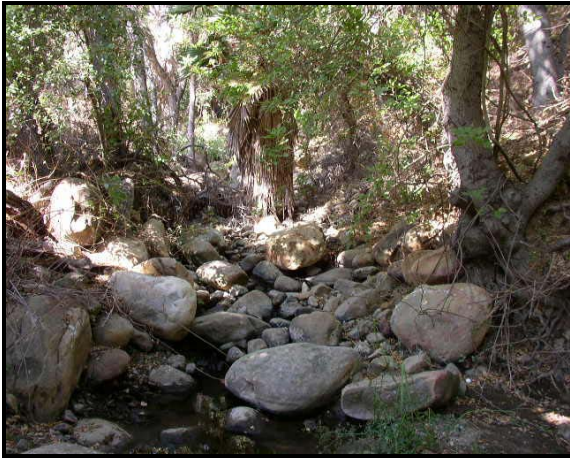
Del Norte Creek is in the western half of the City limits and is a tributary to San Antonio Creek. Its confluence with San Antonio Creek is located just a short distance upstream of the San Antonio Creek crossing at the Hermosa Road bridge. Del Norte Creek's path moves directly north (moving upstream) on the east side of Hermosa Road and crosses SR 150 at the 33/150 "Y-intersection". Del Norte Creek then continues north along Del Norte Road.

Del Norte Creek consists of four reaches and two tributary reaches. Reach 1 is above ground with a mixed compacted substrate for 5,355 feet within the City limits. Reach 2 is also above ground with mixed compacted and natural substrate for 1,034 feet. Reach 3 is below ground by an impervious plastic pipe (High-density polyethylene pipe [HDPE]) for 899 feet. Reach 4 is above ground with a natural channel bottom for a distance of 159 feet. Del Norte Creek Tributary A is one above-ground reach consisting of compacted lawn for 445 feet, and this tributary drains into Del Norte Creek Reach 1. Tributary B is also one above-ground reach consisting of natural substrate for a distance of 35 feet, and this tributary drains into Del Norte Creek Reach 1.

Del Norte Creek has two water quality sampling stations. Reach 1 includes Station 18, and Reach 2 includes Station 17. Station 18 is located at the lower end of Del Norte Creek near Hermosa Road, just upstream of San Antonio Creek (see Figure 5). Station 18 water testing results show favorable water conditions for parameters including temperature, pH, and salinity; however, this reach of creek does not test favorably for conductivity, dissolved oxygen, turbidity, and coliform bacteria. Station 17 of Del Norte Creek Reach 2, is located north of the intersection of Ojai Avenue and Del Norte Street (Figure 5). Station 17 water testing shows favorable conditions for temperature, dissolved oxygen, turbidity, and pH, and indicates unfavorable conditions for conductivity, and coliform bacteria.

Most Del Norte Creek reaches have compacted surfaces (approximately 75% compacted), while only a small percentage (4%) is natural. Instream cover varies from several cover types in Reach 1 to three or four in Reaches 2 and 4, to less than two in Reaches 3, A-1, and B-1. All reaches of Del Norte Creek are occupied by satisfactory riparian habitat (predominantly native functional plant communities); however, only Reach 4 provides sufficient shading (percent canopy shading in the natural portions of the creek reach is at least 76%). Flows are present in Del Norte Creek Reach 1 for at least seven months out of the year making this an intermittent reach. The remaining ephemeral reaches only have rain event surface flows for approximately four months out of the year. Water velocities are generally unfavorable for Steelhead in most reaches, and suitable spawning and rearing

substrate exist in Reaches 4, A-1, and B-1. In general, no reaches of Del Norte Creek were determined to have potentially suitable Steelhead habitat



Photograph 67 (left). Del Norte Creek view north. Photograph 68 (right). Del Norte Creek view south. Photos taken 19 August 2004.

East End Creek

East End Creek is a tributary to San Antonio Creek. East End Creek enters the City from the east on the north side of SR 150, where SR 150 and Boardman Road intersect. East End Creek flows west until its confluence with San Antonio Creek.

East End Creek consists of one above ground, natural reach for a distance of 339 feet within the City limits. Although this creek has all natural channel morphology, this creek flows through orchards and is occupied by segmented patches of riparian vegetation, including Arroyo Willow and Mulefat. No water quality sampling was conducted in this creek. East End Creek has minimal instream cover and minimal shading. Flows are only present in this ephemeral channel during the winter months, and velocity is unfavorable when flows are present. East End Creek does contain some suitable spawning and rearing substrate; however, due to generally unfavorable conditions, East End Creek is not determined to be suitable Steelhead habitat.

Fox Canyon Barranca

Fox Canyon Barranca is located more or less in the middle of the City limits, and its path moves downstream in south/southwesterly direction. Fox Canyon Barranca has one main tributary, which is Ojai Creek. Fox Canyon Barranca is a tributary to Stewart Canyon Creek, and its confluence with Stewart Canyon Creek is located south of the intersection of South Ventura Street and South Montgomery Street. Moving upstream, Fox Canyon Barranca goes north from Stewart Canyon Creek, running northeast and along Fox Street. Fox Canyon Barranca crosses SR 150 between Fox Street and Bald Street, and heads straight north to Grand Avenue. North of Grand Avenue, it flows generally from the north-northwest.

Fox Canyon Barranca includes four reaches and two tributaries. Reach 1 is above ground with natural pervious substrate for a distance of 2,810 feet within the City limits. Reach 2 is also above ground, but consists of an impervious concrete channel for 3,407 feet. Reach 3 is undergrounded by an impervious, concrete channel for a length of 3,212 feet. Reach 4 is a natural, above ground

channel for 4,541 feet. Fox Canyon Barranca Tributary A is one above ground reach with a mixed natural and compacted channel for a distance of 2,471. Tributary A drains into Fox Canyon Barranca Reach 3. Fox Canyon Barranca Tributary B is also one above ground reach with a natural channel bottom for 985 feet, and this tributary drains into Fox Canyon Barranca Reach 3. Fox Canyon Barranca Reach 1 includes three water quality stations (Stations 8 and 14) (see Figure 5):

- Station 8 is located upstream of the creek confluence near the intersection of Ventura Street and South Montgomery-Buckboard Lane bridge at Montgomery. Station 8 water testing indicates favorable water quality conditions for parameters including temperature, pH, and salinity, but does not indicate favorable conditions for conductivity, dissolved oxygen, turbidity, and coliform bacteria.
- Station 14 is located at the south end of Fox Street under a walking bridge on the Athletics Club facility premises. Station 14 shows favorable average measurements for parameters including conductivity, temperature, dissolved oxygen, and pH. Station 14 does not show favorable measurements for turbidity, salinity, and coliform bacteria.

Fox Canyon Barranca has only approximately 45% natural morphology. Reach 1 is a perennial channel that includes several instream cover types, Reach 2 is an intermittent channel with no instream cover, and the remaining ephemeral reaches contain minimal instream cover. Only Reaches 1, 2, and 4 are still inhabited by satisfactory riparian plant communities, and shading is only adequate in Reach 1 and B-1. Water flows for nine out of 12 months in Reach 1 of Fox Canyon Barranca, and flows less than half a year in the rest of the reaches. Water velocity is only favorable in Reach 1, 2, and 3, while required substrate materials are present only in Reach 4, A-1, and B-1.

Reach 1 and 4 of Fox Canyon Barranca are determined to contain potential spawning and rearing habitat for Steelhead, based predominantly on good water quality and favorable riparian habitat, shading, and substrate; however, spawning and rearing are precluded by significant migration barriers (debris dam, long flat-bottomed concrete channel, and significant reaches mostly underground).



Photograph 69 (left). Fox Canyon Barranca Reach 1 above S. Ventura St. bridge (27 November 2004).

Photograph 70 (right). Fox Canyon Barranca Reach 4 above N. Montgomery St. (27 May 2004).

Grandview-Park Drain

Grandview-Park Drain a tributary to Fox Canyon Barranca. Grandview-Park Drain starts just northeast of the end of Park Road. It continues south, crossing Pleasant Avenue and Mountain View Avenue. Grandview-Park Drain is undergrounded at Grand Avenue, and then heads west until it empties into the underground Reach 3 of Fox Canyon Barranca.

Grandview-Park Drain consists of two reaches. Reach 1 is below ground by an impervious reinforced concrete pipe (RCP) for a distance of 1,180 feet within the City limits. Reach 2 is an aboveground, impervious, concrete channel for a length of 2,980 feet. No water quality sampling was conducted in this creek. Grandview-Park Drain is an ephemeral drainage that is completely channelized with no natural surfaces. Instream cover, riparian habitat, and shading are all minimal. During the four months that water was present (January, March, October, and December), water velocity was slow and spawning and rearing substrate material is absent. Grandview-Park Drain does not contain potential spawning or rearing habitat for Steelhead.



*Photograph 71 (left). Grandview-Park Drain above housing tract.
Photograph 72 (right). Grandview-Park Drain near Topa Topa Elementary School. Photos taken 27 May 2004.*

Nordhoff Drain

Nordhoff Drain is in the westernmost portion of the City limits, and is a tributary to Happy Valley Drain. Nordhoff Drain's confluence with Happy Valley Drain is located just south of Basant Road in the southwest corner of the Ojai Meadows Preserve. Moving upstream, Nordhoff Drain moves northeast across the Meadow and crosses State Route 33 midway between Church and Cuyama Roads, and then dissipates.

Nordhoff Drain consists of only one above ground reach with an all-natural substrate channel bottom for a length of approximately 837 feet within the City limits. No water quality sampling was conducted in this creek. Although this creek is an intermittent natural channel, it contains minimal instream cover and unsatisfactory riparian habitat and shading. Water flows six of the twelve months; however, when water is present, flow velocity is low and spawning and rearing substrate is absent. Since Nordhoff Drain does not contain satisfactory conditions for any of the vital parameters studied, this creek does not contain potential spawning and rearing habitat for Steelhead.



Photograph 73. Confluence of Happy Valley Drain (veering to the left) and Nordhoff Drain (veering to the right), view northeast (15 January 2005).

Oak Creek

Oak Creek is a tributary to Stewart Canyon Creek. Oak Creek starts as Freshwater Marsh habitat southwest of the junction of the Ojai Bike Path and Country Club Drive. It flows east under Country Club Drive, crossing San Antonio Street, and continues southeast to its confluence with Stewart Canyon Creek.

Oak Creek consists of one reach for a distance of 1,720 feet within the City limits. Oak Creek is all above ground and is an all-natural channel. No water quality sampling was conducted in this creek. This ephemeral creek has minimal instream cover and unsatisfactory riparian habitat, but has favorable shading due to only the predominantly introduced ornamental plant species. Water flows in this creek during the first fall rains and into the winter. Oak Creek has insufficient water velocity, but does contain spawning and rearing substrate required by Steelhead. Since instream cover, riparian habitat, and velocity are not adequate, and since water does not flow for a long enough period of time to support Steelhead activities, Oak Creek does not contain Steelhead spawning and rearing habitat.



Photograph 74 (left). Oak Creek view upstream, at the end of San Antonio Street. **Photograph 75 (right).** Oak Creek view downstream, at the end of San Antonio Street. Photos taken 11 January 2005.

Ojai Creek

Ojai Creek is in the middle of downtown Ojai, and is a tributary to Fox Canyon Barranca. Ojai Creek runs on the west side of, and parallel to, the Montgomery Street, and it drains into Fox Canyon Barranca just south of South Montgomery Street.

Ojai Creek includes five primary reaches and five tributary reaches. Reach 1 is an above-ground natural reach for a distance of 1,955 feet within the City limits. Reach 2 is below ground by impervious RCP for 813 feet. Reach 3 is above ground with a mixed compacted channel for 786 feet. Reach 4 is undergrounded again by impervious pipe for a distance of 1,067 feet. Reach 5 is above ground with an impervious masonry channel for 1,668 feet. Ojai Creek Tributary A consists of one aboveground reach with mixed compacted channel for 324 feet that drains into Ojai Creek Reach 4. Tributary B of Ojai Creek includes three reaches that all drain into Ojai Creek Reach 4. Reach 1 of Tributary B is undergrounded by impervious corrugated metal pipe (CMP) for 204 feet; Reach 2 of Tributary B is an aboveground impervious gutter for 474 feet; and Reach 3 of Tributary B is above ground with a natural soil bottom for 562 feet. Tributary A of Tributary B is one aboveground channel with natural soil for 163 feet.

Ojai Creek includes one water quality sampling station (Station 7), which is located in Reach 1, upstream of the confluence with Fox Canyon Barranca, north of South Montgomery Street, near the lower Libbey Park Tennis Courts (see Figure 5). Station 7 shows favorable average test measurements for parameters including temperature, pH, and salinity; however, it shows unfavorable measurements for conductivity, dissolved oxygen, turbidity, and coliform bacteria.

Reaches 1 through 5 of Ojai Creek are all intermittent, while Reach A-1; B-1, -2, and -3; and A of B-1 are all ephemeral channels. Only approximately 35% of Ojai Creek is natural with approximately 65% impervious/compacted surfaces. Reach 1 includes several instream cover types and is inhabited by functional riparian habitat; however, the remaining reaches all have minimal instream cover and unsatisfactory riparian habitat. Ojai Creek Reaches 1 through 5 all have water flowing from four to six months out of the year, and they all have generally favorable water velocity when water is present. Reaches 1 and 3 include adequate shading. Only Reach 1 was determined to contain potentially suitable spawning and rearing habitat for Steelhead based on satisfactory measurements for parameters including riparian habitat, shading, and substrate.



Photograph 76 (left). Ojai Creek Reach 1 at lower end next to lower Libbey Park tennis courts (5 January 2005).
Photograph 77 (right). Ojai Creek Reach 3 at Lion Street, high flows during winter storm event (5 January 2005).

Post Office Creek

Post Office Creek is parallel to, and is a tributary to, Ojai Creek in downtown Ojai. Post Office Creek begins at the Ojai Post Office, and flows south along the east side of Signal Street to Ojai Creek. Post Office Creek has one aboveground reach consisting of an all-natural channel bottom for a distance of 1,036 feet within the City limits.

No water quality sampling was conducted in this creek. The results of the Streams characterization study show that instream cover and shading is adequate throughout this creek; however, most shading is a result of predominantly invasive exotic plant species. Water flows during the months of fall and winter. When flows are present in the upper portions of this creek, water velocity is slow and no Steelhead-required spawning and rearing substrates are present. The most potential for fish habitat exists at the lower end of this creek, which consists of adequate measurements of most vital parameters, including instream cover, satisfactory riparian habitat and shading, and favorable water velocity and spawning/rearing substrate. Therefore, the lower portion of Post Office Creek is determined to potentially support suitable spawning and rearing habitat for Steelhead.



Photograph 78 (left). Post Office Creek just above confluence with Ojai Creek. **Photograph 79**. (right) Confluence of Ojai and Post Office Creeks with Ojai Creek prominent in photograph. Photos taken 11 January 2005.

San Antonio Creek

The stretch of San Antonio Creek that occurs within the City limits is located in the southeastern portion of the City. San Antonio Creek is the primary stream making up the Ojai Valley Watershed in which all other Ojai streams empty, except Nordhoff/Happy Valley Drains. San Antonio Creek, within the City of Ojai, flows in a southwesterly direction from Ojai Avenue (SR 150) to Hermosa Road.

The portion of San Antonio Creek that exists within the City limits consists of three aboveground, natural channel reaches (Reach 1 = 1,227 feet, Reach 2 = 5,554 feet, and Reach 3 = 5,314 feet). San Antonio Creek includes four separate water quality sampling stations (Stations 3, 4, 5, and 12):

- Station 3 is located in Reach 1 just upstream from its confluence with Del Norte Creek (see Figure 5). Station 3 sampling indicates favorable average measurements for water quality parameters including temperature, dissolved oxygen, turbidity, and pH. Station 3 indicates unfavorable average measurements for conductivity, salinity, and coliform bacteria.

- Station 4 is also located in Reach 1 and is just below the confluence of Villanova Creek under the Creek Road bridge at Hermosa Road (see Figure 5). Station 4 shows more favorable conditions than Station 3, including temperature, dissolved oxygen, turbidity, pH, and salinity, while showing unfavorable conditions for only conductivity and coliform bacteria.
- Station 5 is located in Reach 2 below the confluence of Fox Canyon Barranca and below the Creek Road bridge (see Figure 5). Station 5 indicates favorable average measurements for the same parameters as Station 4 including temperature, dissolved oxygen, turbidity, pH, and salinity.
- Station 12 is located within Reach 3 under the bridge on Ojai Avenue between Gridley and Boardman Roads (see Figure 5). Station 12 shows favorable conditions for temperature, dissolved oxygen, pH, and salinity; however, it shows unfavorable conditions for conductivity, turbidity, and coliform bacteria.

Reaches 1, 2, and 3 of San Antonio Creek are intermittent. Instream cover, riparian habitat, shading, water flows, water velocity, and required spawning and rearing substrate are all satisfactory to high-quality in all three reaches. Therefore, Reaches 1, 2, and 3 are all determined to have potentially suitable habitat for Steelhead.



Photograph 80 (left). San Antonio Creek showing high-quality riparian/aquatic habitat with summer flows (16 July 2004). **Photograph 81** (right). San Antonio Creek with peak flows during winter storm (9 January 2005).

Soule Park Creek & West Soule Park Creek

Soule Park and West Soule Park Creeks are in the southeastern portion of the City limits, and are tributaries to San Antonio Creek. Soule Park and West Soule Park Creeks are more or less parallel to each other, and flow from the southeast to northwest. West Soule Park Creek is west of Soule Park Creek, and both creeks enter San Antonio Creek from the south. Only a small portion of each creek (the northern extent) is within the limits of the City.

Soule Park Creek and West Soule Park Creek are both completely aboveground ephemeral channels, and they consist of predominantly natural channel morphology. Soule Park Creek consists of one reach for a distance of 1,561 feet within the City limits, and West Soule Park Creek consists of one reach for a distance of 1,305 feet within the City limits; however, the lower end of this creek was obliterated decades ago by agricultural development, and no streambed has existed below Black Mountain since. No water quality sampling was conducted in these creeks. Suitable habitat is lacking in both creeks for Southern Steelhead.

Stewart Canyon Creek

Stewart Canyon Creek more or less bisects the City, and is a tributary to San Antonio Creek. Stewart Canyon Creek flows from north to south and is generally parallel to, and west of, Fox Canyon Barranca. If moving upstream, Stewart Canyon Creek moves north along the west side of South Ventura Street, crosses SR 150 at Cañada Street, and then follows Cañada Street north through the City.

Stewart Canyon Creek consists of five stream reaches. Reach 1 is above ground with a natural channel bottom for a distance of 3,092 feet within the City limits. Reach 2 is also above ground, but consists of an impervious concrete channel for 719 feet. Reach 3 is undergrounded by impervious RCB for 2,554 feet. Reach 4 is above ground again, but is an impervious cement channel for a distance of 1,468 feet. Reach 5 is above ground with a natural channel bottom for 970 feet, and north of and beyond the City.

Stewart Canyon Creek includes four water quality sampling stations (Stations 6 and 15 are in Reach 1, while Stations 10 and 10A are in Reach 5):

- Station 6 is located upstream from a narrow bridge on Creek Road (at the 10 mph curve). This station is not within the city limits of Ojai, but provides valuable information. Station 6 water sampling results show favorable conditions for parameters including temperature, dissolved oxygen, turbidity, and *pH*. Station 6 tests do not show favorable conditions for conductivity, salinity, and coliform.
- Station 10 is the inflow into the Stewart Debris Basin at the top of the logical extension of Cañada Street at the Pratt Trailhead (see Figure 5). Station 10 indicates favorable average sampling measurements for parameters for only temperature and *pH*, while showing unfavorable conditions for conductivity, dissolved oxygen, turbidity, salinity, and coliform bacteria.
- Station 10A is located where the Foothill Road bridge crosses Stewart Canyon Creek, upstream from Station 10 (see Figure 5). This station indicates favorable average measurements for only *pH* and salinity, but shows unfavorable conditions for all other vital parameters measured including conductivity, temperature, dissolved oxygen, turbidity, and coliform bacteria.
- Station 15 is located just upstream from Stewart Canyon Creek's confluence with Fox Canyon Barranca (west of South Ventura Street) (see Figure 5). Station 15 has favorable conditions for water quality parameters including conductivity, temperature, dissolved oxygen, *pH*, and salinity. Station 15 shows unfavorable conditions for turbidity, and coliform bacteria.

Stewart Canyon Creek Reach 1 is a perennial channel, and is one of the most favorable locations for potentially suitable Steelhead habitat. Reach 1 is the only reach of this creek that flows through Ojai that has natural morphology. In addition to natural morphology, Reach 1 has satisfactory to high-quality measurements for all parameters studied for this project, including favorable instream cover, riparian habitat, shading, water flows, water velocity, and substrate materials.

Reach 5 is also determined to consist of potentially suitable habitat for Steelhead spawning and rearing. Reach 5 has natural channel morphology, consists of an intermittent channel, has flows present eight months out of the year, and has favorable conditions in almost all other parameters studied. Reaches 2, 3, and 4 (with perennial and intermittent flows) are not determined to have potentially suitable Steelhead habitat. These middle reaches are lacking in all parameters studied except that they have favorable water velocity when flows are present.



Photograph 82 (left). Stewart Canyon Creek Reach 5 with functional riparian habitat (24 January 2005).
Photograph 83 (right). Stewart Canyon Creek channelized Reach 4 showing peak flows during winter storm, view north (9 January 2005).

Thacher Creek

A small portion of Thacher Creek exists within the City of Ojai. It is a tributary to San Antonio Creek and its confluence is at the northeastern end of the Soule Park Golf Course. Thacher Creek runs through a portion of the Soule Park and its golf course. Thacher Creek enters San Antonio Creek from the east. Thacher flows into the City from the east, while San Antonio flows in from the northeast.

Thacher Creek includes just one aboveground, natural reach for a distance of 2,445 feet within the City limits. Thacher Creek Reach 1 includes one water quality sampling station (Station 13). Water Quality Station 13 is located under the bridge on Boardman Road south of the entrance to Soule Park (Figure 5). Station 13 indicates favorable conditions for water quality parameters including temperature, dissolved oxygen, pH, and salinity; however, this station shows unfavorable conditions for conductivity, turbidity, and coliform bacteria.

Thacher Creek is an intermittent creek channel with flows present only during the winter months. It contains natural channel morphology, adequate instream cover, satisfactory riparian plant communities, and suitable spawning and rearing substrate materials; however, due to the lack of flows throughout most of the year, Thacher Creek is not determined to contain potentially suitable habitat for Steelhead.



Photograph 84 (left). Thacher Creek below Boardman Road (9 January 2005).
Photograph 85 (right). Thacher Creek at Siete Robles Tract (12 January 2005).

Villanova Creek

Villanova Creek is in the southwestern portion of the City limits, and is a tributary to San Antonio Creek. Villanova Creeks confluence with San Antonio Creek is located just south of the intersection of Hermosa Road and Creek Road. Villanova Creek generally flows in a southeasterly direction. If moving upstream, it runs along the southwest side of Hermosa Road and crosses it just before SR33. Villanova Creek then crosses SR33 north of Hermosa Street.

Villanova Creek consists of three primary reaches within the City limits, one of which is a tributary to Villanova Creek. Tributary B-1 is an aboveground, natural channel for a distance of 852 feet that drains into Villanova Creek Reach 2. Reach 2 is also an aboveground, natural channel for 816 feet. Reach 3 is above ground with a channel consisting of primarily compacted soil for 1,410 feet.

Villanova Creek Reach 1 includes Water Quality Station 2, which is located at the lower end of Villanova Creek at Hermosa Road, just upstream from San Antonio Creek (see Figure 5). Station 2 indicates favorable average measurements for most parameters tested, including temperature, dissolved oxygen, turbidity, pH, and salinity. This station only shows unfavorable measurements for conductivity and coliform bacteria.

Flows were only present in this ephemeral creek during the month of January. Villanova Reach 2 has satisfactory riparian habitat and shading and includes suitable spawning and rearing substrate material; however, water velocity and instream cover are not favorable. Reach 3 and Tributary B-1 do not have any favorable conditions based on the parameters studied. Based on these findings, no reaches within Villanova Creek were determined to have potentially suitable spawning and rearing habitat for Steelhead.



Photograph 86 (left). Drainage to Villanova Creek at Hermosa Rd along Ojai Bike Path.

Photograph 87 (right). Drainage to Villanova Creek (upper end) along Ojai Bike Path. Photos taken 8 January 2005.