

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-1

Reach Length (miles): 1.66

Reach Limits (downstream to upstream): Confluence with Coyote Creek to North Jackson Avenue Bridge

Flow Regime: Ephemeral to Perennial

Channel Type(s): Earthen levee

Generalized Land Use in Area: Urban

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	Sufficient on primary indicators, additional data on secondary habitat indicators available	Good	Temperature, fish assemblage, macroinvertebrates, habitat conditions	D0214 D0437 D0625	Potentially/Seasonally Supported	B	No winter temperature data; may be Chinook spawning in reach; seasonal support is possible with additional data on temperature; met insect criteria in very wet year (1998)

Local Knowledge Comments:

Limiting Factor(s): High summer temperatures and low or no summer stream flow

Suspected Cause(s): Augmented summer streamflow (as releases from off-channel percolation ponds and Cherry Flat Reservoir) usually does not extend downstream to this reach. Winter and spring streamflow is variable and may be too warm for Chinook spawning and rearing due to relatively open channel; however, more temperature data is needed to fully determine this. FAHCE information notes that habitat is constrained by urban influences, including a limited flood plain and ongoing human disturbance.

Data Gap(s) - No Data: Secondary Indicators = dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, altered channel materials, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, riparian vegetation, water depths and velocities, physical barriers to migration, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

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Reach: UP-1

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Reach Limits (downstream to upstream): Confluence with Coyote Creek to North Jackson Avenue Bridge

Flow Regime: Ephemeral to Perennial

Channel Type(s): Earthen levee

Generalized Land Use in Area: Urban

PFF	Sufficient	Good	Channel capacity, design flow	D0311	Non Support	A	(1) Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators; (2) this reach supports PFF except for a critical urban reach which does not have channel capacity to convey 1% flow (from SCVWD stationing #2300 to 4750)
				D0321			
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			
				D0588			
				D0589			
				D0590			
				D0609			
				D0621			

Local Knowledge Comments:

Limiting Factor(s): Channel does not have adequate capacity to convey expected 100-year flow in one segment of this reach; land uses adjacent to the stream consist of urban industrial and commercial

Suspected Cause(s): (a) Creek may not have sufficient channel capacity to convey flood flows and/or (b) Encroachment of urban industrial and commercial developments into the natural channel floodplain. Problem segment is from SCVWD stationing 2300 to 4750.

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-1

Reach Length (miles): 1.66

Reach Limits (downstream to upstream): Confluence with Coyote Creek to North Jackson Avenue Bridge

Flow Regime: Ephemeral to Perennial

Channel Type(s): Earthen levee

Generalized Land Use in Area: Urban

RARE	Very limited data on species presence and habitat; not sufficient to develop support statement	Poor	Special status species observations, Habitat	D0609	Unable to Determine	N/A	Very limited data notes presence of "wild trout" in 1950s; no other species observation data is available for reach and little habitat characterization data is available; focused surveys for special status species and/or habitat are needed to allow for a support statement in this reach
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Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Primary Indicators = assemblages of special status species. Secondary Indicators = habitat requirements for individual special status species.

Fair/Poor Quality Data: Primary Indicators = special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Poor	Flow (depth)	D0383	Seasonal Support for tertiary indicator; no support statement is able to be made for primary and secondary indicators	D	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicator of water flow (depth); data sets D0383 and D0584 provided limited data, some of which is quite dated and general; high level of uncertainty regarding this reach
				D0584			

Local Knowledge Comments:

Limiting Factor(s): Lack of summer flow in reach

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-2

Reach Length (miles): 2.55

Reach Limits (downstream to upstream): North Jackson Avenue to Alum Rock Park boundary

Flow Regime: Ephemeral to Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Urban

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	Sufficient on primary indicators, additional data on secondary habitat indicators available	Good	Fish assemblage, temperature, riparian vegetation, physical barriers, habitat conditions, macroinvertebrates	D0061	Reach is split into three sub-reaches for COLD assessment: UP-2A: non-support; UP-2B: partial support; UP-2C: full support	UP-CA: UP-2A: North Jackson Ave. upstream to Nobel Ave. C; UP- C; UP- diversion -- may be partial/seasonal support since CB: B; the downstream reach has partial/seasonal support, data doesn't indicate this, so uncertainty level is high; UP-2B: Nobel Ave. diversion to Dorel Rd. -- pools present during some summers; partial support with steelhead sometimes present; UP-2C: Dorel Rd. to Alum Rock Park boundary -- full support as steelhead and temperature criteria are met in this upper portion of UP-2	
				D0214			
				D0311			
				D0312			
				D0315			
				D0328			
				D0419			
				D0422			
				D0423			
				D0437			
				D0625			

Local Knowledge Comments:

Limiting Factor(s): UP-2A: no steelhead, temperature exceeds criteria, may be dry. UP-2B: high summer temperatures exceed criteria, summer flow variability affects presence of juvenile steelhead

Suspected Cause(s): UP-2B: Nobel Ave. diversion to Dorel Rd. -- pools present during some summers; partial support with steelhead sometimes present. Augmented summer streamflow tends to peter out in this stretch, though pools may remain. Low flow causes elevation in stream temperatures.

Data Gap(s) - No Data: Secondary Indicators = dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, altered channel materials, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, water depths and velocities, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-2

Reach Length (miles): 2.55

Reach Limits (downstream to upstream): North Jackson Avenue to Alum Rock Park boundary

Flow Regime: Ephemeral to Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Urban

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
PFF	Sufficient	Good	Channel capacity, design flow	D0311	Non Support	A	(1) Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators; (2) this reach supports PFF except for a critical urban reach which cannot convey the 1% flood from downstream of Capitol Ave to upstream of Piedmont Road (11750 to 17200); the rest can except for downstream of Jackson Ave which is only slightly undersized for 1% flow
				D0321			
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			
				D0588			
				D0589			
				D0590			
				D0609			
				D0621			

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-2

Reach Length (miles): 2.55

Reach Limits (downstream to upstream): North Jackson Avenue to Alum Rock Park boundary

Flow Regime: Ephemeral to Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Urban

Local Knowledge Comments:

Limiting Factor(s): Channel does not have adequate capacity to convey expected 100-year flow in one segment of this reach; land uses adjacent to the stream consist of urban residential

Suspected Cause(s): (a) Creek may not have sufficient channel capacity to convey flood flows and/or (b) Encroachment of urban residential developments into the natural channel floodplain. Problem segment is from downstream of Capitol Ave to upstream of Piedmont Road (11750 to 17200); segment downstream of Jackson Ave is only slightly undersized for 1% flow.

Data Gap(s) - No Data: Primary Indicators = estimated 100 year flood flow, design channel capacity. Secondary Indicators = historic flooding occurrence information.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
RARE	Sufficient	Fair	Special status species observations, Habitat	D0061	Full Support	B	Support status based on steelhead presence; fish data is sporadic and there is a lack of habitat data for this reach
				D0066			
				D0412			
				D0419			
				D0609			

Local Knowledge Comments:

Limiting Factor(s): None identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data: Primary Indicators = assemblages of special status species, special status species. Secondary Indicators = habitat requirements for individual special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Good	Flow (depth)	D0383	Seasonal Support for tertiary indicator in lower part of reach (goes dry in summer); Full Support for tertiary indicator in upper part of reach (remains wet in summer); no support statement is able to be made for primary and secondary indicators	D	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicator of water flow (depth); data sets D0383 and D0603 provided limited data; high level of uncertainty regarding this reach

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-2

Reach Length (miles): 2.55

Reach Limits (downstream to upstream): North Jackson Avenue to Alum Rock Park boundary

Flow Regime: Ephemeral to Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Urban

REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Good	Flow (depth)	D0603	Seasonal Support for tertiary indicator in lower part of reach (goes dry in summer); Full Support for tertiary indicator in upper part of reach (remains wet in summer); no support statement is able to be made for primary and secondary indicators	D	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicator of water flow (depth); data sets D0383 and D0603 provided limited data; high level of uncertainty regarding this reach
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Local Knowledge Comments:

Limiting Factor(s): Lack of summer flow in lower portion of reach

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-3

Reach Length (miles): 2.61

Reach Limits (downstream to upstream): Alum Rock Park boundary to confluence with Arroyo Aguague

Flow Regime: Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Rural

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	Sufficient on primary indicators, additional data on secondary habitat indicators available	Good	Fish assemblage, physical barriers, riparian vegetation, habitat conditions, altered channel materials, width/depth, macroinvertebrates	D0020	Full Support	A	No temperature station in Alum Rock Park; however, temp. station downstream of reach meets criteria so it is assumed that criteria are met within reach as well; insect criteria were met at 2 sites during 1998; trout and steelhead regularly present; low summer streamflows may affect support level in some years
				D0061			
				D0311			
				D0312			
				D0315			
				D0437			
				D0600			
				D0625			

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Secondary Indicators = temperature, dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-3

Reach Length (miles): 2.61

Reach Limits (downstream to upstream): Alum Rock Park boundary to confluence with Arroyo Aguague

Flow Regime: Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Rural

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
PFF	Sufficient	Good	Channel capacity, design flow	D0311	Full Support	A	Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators
				D0321			
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			
				D0600			
				D0609			
				D0621			

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
RARE	Sufficient	Fair	Special status species observations, Habitat	D0058	Full Support	B	There is a limited data record for this reach, but the data indicates potential support for red legged frog and full support for steelhead; therefore, reach is considered to fully support RARE use
				D0061			
				D0066			
				D0111			
				D0437			

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-3

Reach Length (miles):

2.61

Reach Limits (downstream to upstream): Alum Rock Park boundary to confluence with Arroyo Aguague

Flow Regime: Perennial

Channel Type(s): Natural Modified

Generalized Land Use in Area: Rural

RARE	Sufficient	Fair	Special status species observations, Habitat	D0600	Full Support	B	There is a limited data record for this reach, but the data indicates potential support for red legged frog and full support for steelhead; therefore, reach is considered to fully support RARE use
D0609							

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Secondary Indicators = habitat requirements for individual special status species.

Fair/Poor Quality Data: Primary Indicators = assemblages of special status species, special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Good	Flow (depth), access	D0383	Full Support for tertiary indicator; no support statement is able to be made for primary and secondary indicators	B	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicators of water flow (depth) and access; data sets D0383 and D0600 provided data
D0600							

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-4

Reach Length (miles): 2.50

Reach Limits (downstream to upstream): Confluence with Arroyo Aguague to Cherry Flat Reservoir

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	Sufficient on primary indicators, additional data on secondary habitat indicators available	Good	Fish assemblage, riparian vegetation, physical barriers, habitat conditions, macroinvertebrates	D0020 D0311 D0312 D0315 D0437 D0625	Full Support	B	Limited fish data for this reach; temperatures probably meet criteria due to downstream readings but no data available for this reach; insect criteria were met at one site in 1998

Local Knowledge Comments: Natural waterfalls in Alum Rock Park serve as barriers to anadromous fish; an artificial passage barrier was created during the course of streambank protection work in around 1999

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Secondary Indicators = temperature, dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, altered channel materials, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, riparian vegetation, water depths and velocities, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-4

Reach Length (miles): 2.50

Reach Limits (downstream to upstream): Confluence with Arroyo Aguague to Cherry Flat Reservoir

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

PFF	Sufficient	Good	Channel capacity, design flow	D0311	Full Support	A	Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators
				D0321			
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			
				D0609			
				D0621			

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
RARE	Very limited data on species presence and habitat; sufficient only for potential support statement	Fair	Special status species observations	D0066	Potential Support	D	Potential support based on one observation of CA tiger salamander larvae; data on species presence and habitat not sufficient for a finding of full support
				D0111			
				D0437			
				D0609			

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-4

Reach Length (miles): 2.50

Reach Limits (downstream to upstream): Confluence with Arroyo Aguague to Cherry Flat Reservoir

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data: Primary Indicators = assemblages of special status species, special status species. Secondary Indicators = habitat requirements for individual special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Good	Flow (depth), access	D0600	Full Support for tertiary indicator; no support statement is able to be made for primary and secondary indicators	B	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicators of water flow (depth) and access; data sets D0600 provided data

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-5

Reach Length (miles): 1.90

Reach Limits (downstream to upstream): Cherry Flat Reservoir to source

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	No data on primary indicators, very limited on two secondary indicators, not sufficient for support statement	Poor	Riparian vegetation, physical barriers	D0311	Unable to Determine	N/A	No data on primary indicators; limited data on secondary indicator is inconclusive
				D0312			
				D0315			

Local Knowledge Comments: Grazing activities in upper watershed may be impacting suitability of stream for COLD use

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Primary Indicators = fish assemblage, macro-invertebrate data. Secondary Indicators = temperature, dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, altered channel materials, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, riparian vegetation, water depths and velocities, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Local Knowledge Comments: Grazing activities in upper watershed may be impacting suitability of stream for MUN use

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-5

Reach Length (miles): 1.90

Reach Limits (downstream to upstream): Cherry Flat Reservoir to source

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

PFF	Sufficient	Good	Channel capacity, design flow	D0321	Full Support	A	Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
RARE	Insufficient data for support statement; only available data is too old or too general	Poor	Special status species observations, Habitat	D0066	Unable to Determine	N/A	Data notes presence of wild trout in mid 1950s; no other data available to develop a support statement

Local Knowledge Comments:

Limiting Factor(s): None identified

Suspected Cause(s):

Data Gap(s) - No Data: Primary Indicators = assemblages of special status species. Secondary Indicators = habitat requirements for individual special status species.

Fair/Poor Quality Data: Primary Indicators = special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

Waterbody: Upper Penitencia Creek

Reach: UP-5

Reach Length (miles): 1.90

Reach Limits (downstream to upstream): Cherry Flat Reservoir to source

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

REC-1 None

N/A

N/A

No data sets Unable to Determine

N/A No data available on primary, secondary, or tertiary indicators

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Subwatershed: Upper Penitencia

Waterbody: Arroyo Aguague

Reach: UP-6

Reach Length (miles): 4.80

Reach Limits (downstream to upstream): Entire Subwatershed

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
COLD	Limited data on fish assemblage; additional secondary indicators	Fair	Fish assemblage, riparian vegetation, physical barriers, habitat conditions	D0020	Partial Support	B	Pools present during some summers in lower portion of reach; limited fish data and no macroinvertebrate data prevents a finding of full support; temperatures probably meet criteria due to downstream readings but no data available for this reach; low summer streamflows may be limiting in lower portion of reach
				D0311			
				D0312			
				D0315			
				D0437			

Local Knowledge Comments: Grazing activities in upper watershed may be impacting suitability of stream for COLD use

Limiting Factor(s): None Identified

Suspected Cause(s): Probably meets criteria for full support, but insect data lacking. Summer streamflows are low, but relatively persistent upstream in the reach as seepage in the Calaveras Fault zone. Flow present upstream even during 1976-77 drought. FAHCE information notes that fish passage is difficult due to small boulder cascades.

Data Gap(s) - No Data: Primary Indicators = macro-invertebrate data. Secondary Indicators = temperature, dissolved oxygen, TSS, turbidity, stream type, channel substrate, streambank erosion potential, width to depth ratio, bankfull, stage, discharge and width, altered channel materials, instream spawning habitat, instream rearing habitat, shaded riverine aquatic habitat, water depths and velocities, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, PCB, selenium, mercury, nickel.

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
MUN	None	N/A	N/A	No data sets	Unable to Determine	N/A	No data available for either wet or dry weather

Local Knowledge Comments: Grazing activities in upper watershed may be impacting suitability of stream for MUN use

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data: Fecal coliform, turbidity, chlordane, copper, chlorpyrifos, DDT, diazinon, dieldrin, dioxin, MTBE, nitrate, PCB, selenium, mercury, nickel, TDS

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
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Subwatershed: Upper Penitencia

Waterbody: Arroyo Aguague

Reach: UP-6

Reach Length (miles): 4.80

Reach Limits (downstream to upstream): Entire Subwatershed

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

PFF	Sufficient	Good	Channel capacity, design flow	D0311	Full Support	A	Data sets D0380 and D0559 provide data on the direct indicator (ability to convey 100-year flood flows); because of this, it was not necessary to review other data sets on secondary indicators
				D0321			
				D0322			
				D0323			
				D0324			
				D0325			
				D0326			
				D0380			
				D0559			
				D0609			
				D0621			

Local Knowledge Comments:

Limiting Factor(s): None Identified

Suspected Cause(s):

Data Gap(s) - No Data:

Fair/Poor Quality Data:

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
RARE	Insufficient data for support statement; only available data is too old	Poor	Special status species observations	D0066	Unable to Determine	N/A	Data notes presence of wild trout in mid 1950s; no other data available to develop a support statement
				D0609			

Subwatershed: Upper Penitencia

Waterbody: Arroyo Aguague

Reach: UP-6

Reach Length (miles): 4.80

Reach Limits (downstream to upstream): Entire Subwatershed

Flow Regime: Perennial

Channel Type(s): Natural Unmodified

Generalized Land Use in Area: Rural

Local Knowledge Comments:

Limiting Factor(s): None identified

Suspected Cause(s):

Data Gap(s) - No Data: Secondary Indicators = habitat requirements for individual special status species.

Fair/Poor Quality Data: Primary Indicators = assemblages of special status species, special status species.

Use/Interest	Data Quantity	Data Quality	Criteria Used	Data Sets Used	Support Status	Uncertainty Level	Assessment Comments
REC-1	No data on primary or secondary indicators; limited data on tertiary indicator (aesthetics/access)	Fair	Flow (depth), access	D0060	Seasonal Support for tertiary indicator in lower portion of reach (within Alum Rock Park); Non Support for tertiary indicator in upper portion of reach; no support statement is able to be made for primary and secondary indicators	B	No data sets are available on the primary, secondary indicators; limited support statement was developed based ONLY on tertiary indicators of water flow (depth) and access; data sets D0060 and D0600 provided data
				D0600			

Local Knowledge Comments:

Limiting Factor(s): Low summer flow in lower end of reach; access is not available above the confluence with Upper Penitencia Creek

Suspected Cause(s): Natural infiltration of already low summer streamflows as water moves through reach causes low/no flow at lower end; private property and rugged, steep topography discourages access to this reach.

Data Gap(s) - No Data:

Fair/Poor Quality Data: