

Using the NHD to Corral Water Quality Data

California Water Resources Control Board
GIS Unit

Stephanie Bucknam

Jeff Kapellas



WATER QUALITY CONTROL PLAN
OCEAN WATERS OF CALIFORNIA

WATER QUALITY CONTROL PLAN
FOR THE
NORTH COAST REGION

THE WATER QUALITY CONTROL PLAN (BASIN PLAN)
FOR THE
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
FOURTH EDITION
Revised June 2015 (with Approved Amendments)
THE SACRAMENTO RIVER BASIN AND
THE SACRAMENTO-SAN JOAQUIN RIVER DELTA

Water Quality

California Regional Water Quality Control Board
Central Valley Region

Water Quality Control Plan for the
Tulare Lake Basin
Second Edition

Revised January 2015 (with Approved Amendments)

SAN FRANCISCO BAY BASIN
WATER QUALITY CONTROL BOARD
(BASIN PLAN)

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
SAN FRANCISCO BAY REGION

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CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Statutory

Water
And Related
(As amended)



Porter-Cologne
Water Quality Control Act
Water Code Division 7 and Related Sections
(As amended, including Statutes 2016)

WATER QUALITY CONTROL PLAN FOR
THE LAHONTAN REGION
NORTH AND SOUTH BASINS



WATER QUALITY CONTROL PLAN
COLORADO RIVER BASIN- REGION 7
Includes Amendments Adopted by the Regional Board through March 2014

Water Quality Control Plan
for the
Central Coastal Basin



WATER QUALITY CONTROL PLAN
Los Angeles Region

Basin Plan
for the
Coastal Watersheds of
Los Angeles and Ventura Counties

Regional



California Regional Water Quality Control Board
Los Angeles Region (4)

WATER QUALITY CONTROL PLAN
SANTA ANA RIVER BASIN (8)

TABLE OF CONTENTS

Chapter 1 - INTRODUCTION
The Water Quality Control Plan (Basin Plan) for the Santa Ana River Basin
Jurisdiction of the Basin Plan
Legal Basis and Authority
California Water Code
Clean Water Act
Environmental Setting
Regional Structures
Geological Factors
History of Water Development
Original Conditions
Early Settlement
Regional Development
Santa Ana River Riparian Judgment
Basin Plan
The Santa Ana River
Basin Plan
Flows and Water Quality
Health, Environment and the Santa Ana River
Water Quality and Watershed Rehabilitation
Flood Control
Adoption of the Basin Plan - Amendments to the Basin Plan
Contents of the Basin Plan
Revisions

Chapter 2 - PLANS AND POLICIES
Restoration
State Basin Plans
National Plan (Resolution No. 75-60)
Coastal Plan
Nonpoint Source Management Plan (Res. No. 88-123)

TABLE OF CONTENTS

FEDERAL WATER POLLUTION CONTROL ACT
TITLE 33--NAVIGATION AND RELATED PROGRAMS
CHAPTER 26--WATER POLLUTION PREVENTION AND CONTROL
(As Amended Through P.L. 111-274, January 4, 2010)
33 U.S.C. 1251 et seq.

SUBCHAPTER 1--RESEARCH AND RELATED PROGRAMS
Sec. 330 (33 U.S.C. 1251) Comprehensive investigation of waste and pollution
Sec. 332 (33 U.S.C. 1252) Comprehensive program for water pollution control
Sec. 333 (33 U.S.C. 1253) Research projects, water storage, modification, storage for other than the water quality
purpose of Federal agency, cooperative treatment of approved purposes applicable to projects with certain
approved water quality benefits in relation to the water quality
Sec. 334 (33 U.S.C. 1254) Research, investigation, training and education
Sec. 335 (33 U.S.C. 1255) Grants for research and development
Sec. 336 (33 U.S.C. 1256) Grants for pollution control programs
Sec. 337 (33 U.S.C. 1257) Other water pollution control development
Sec. 338 (33 U.S.C. 1258) Other programs for cleaning of abandoned sites for use as water disposal sites
Sec. 339 (33 U.S.C. 1259) Pollution control in Great Lakes
Sec. 340 (33 U.S.C. 1260) Navigation, other
Sec. 341 (33 U.S.C. 1261) Subchapter
Sec. 342 (33 U.S.C. 1262) Subchapter
Sec. 343 (33 U.S.C. 1263) Subchapter
Sec. 344 (33 U.S.C. 1264) Subchapter
Sec. 345 (33 U.S.C. 1265) Subchapter
Sec. 346 (33 U.S.C. 1266) Subchapter
Sec. 347 (33 U.S.C. 1267) Subchapter
Sec. 348 (33 U.S.C. 1268) Subchapter
Sec. 349 (33 U.S.C. 1269) Long Island Sound
Sec. 350 (33 U.S.C. 1270) Lake Champlain
Sec. 351 (33 U.S.C. 1271) Subchapter
Sec. 352 (33 U.S.C. 1272) Research and development
Sec. 353 (33 U.S.C. 1273) Environmental development
Sec. 354 (33 U.S.C. 1274) Lake Washington
Sec. 355 (33 U.S.C. 1275) Subchapter
Sec. 356 (33 U.S.C. 1276) Subchapter
Sec. 357 (33 U.S.C. 1277) Subchapter
Sec. 358 (33 U.S.C. 1278) Subchapter
Sec. 359 (33 U.S.C. 1279) Subchapter
Sec. 360 (33 U.S.C. 1280) Subchapter
Sec. 361 (33 U.S.C. 1281) Subchapter
Sec. 362 (33 U.S.C. 1282) Subchapter
Sec. 363 (33 U.S.C. 1283) Subchapter
Sec. 364 (33 U.S.C. 1284) Subchapter
Sec. 365 (33 U.S.C. 1285) Subchapter
Sec. 366 (33 U.S.C. 1286) Subchapter
Sec. 367 (33 U.S.C. 1287) Subchapter
Sec. 368 (33 U.S.C. 1288) Subchapter
Sec. 369 (33 U.S.C. 1289) Subchapter
Sec. 370 (33 U.S.C. 1290) Subchapter
Sec. 371 (33 U.S.C. 1291) Subchapter
Sec. 372 (33 U.S.C. 1292) Subchapter
Sec. 373 (33 U.S.C. 1293) Subchapter
Sec. 374 (33 U.S.C. 1294) Subchapter
Sec. 375 (33 U.S.C. 1295) Subchapter
Sec. 376 (33 U.S.C. 1296) Subchapter
Sec. 377 (33 U.S.C. 1297) Subchapter
Sec. 378 (33 U.S.C. 1298) Subchapter
Sec. 379 (33 U.S.C. 1299) Subchapter
Sec. 380 (33 U.S.C. 1300) Subchapter
Sec. 381 (33 U.S.C. 1301) Subchapter
Sec. 382 (33 U.S.C. 1302) Subchapter
Sec. 383 (33 U.S.C. 1303) Subchapter
Sec. 384 (33 U.S.C. 1304) Subchapter
Sec. 385 (33 U.S.C. 1305) Subchapter
Sec. 386 (33 U.S.C. 1306) Subchapter
Sec. 387 (33 U.S.C. 1307) Subchapter
Sec. 388 (33 U.S.C. 1308) Subchapter
Sec. 389 (33 U.S.C. 1309) Subchapter
Sec. 390 (33 U.S.C. 1310) Subchapter
Sec. 391 (33 U.S.C. 1311) Subchapter
Sec. 392 (33 U.S.C. 1312) Subchapter
Sec. 393 (33 U.S.C. 1313) Subchapter
Sec. 394 (33 U.S.C. 1314) Subchapter
Sec. 395 (33 U.S.C. 1315) Subchapter
Sec. 396 (33 U.S.C. 1316) Subchapter
Sec. 397 (33 U.S.C. 1317) Subchapter
Sec. 398 (33 U.S.C. 1318) Subchapter
Sec. 399 (33 U.S.C. 1319) Subchapter
Sec. 400 (33 U.S.C. 1320) Subchapter
Sec. 401 (33 U.S.C. 1321) Subchapter
Sec. 402 (33 U.S.C. 1322) Subchapter
Sec. 403 (33 U.S.C. 1323) Subchapter
Sec. 404 (33 U.S.C. 1324) Subchapter
Sec. 405 (33 U.S.C. 1325) Subchapter
Sec. 406 (33 U.S.C. 1326) Subchapter
Sec. 407 (33 U.S.C. 1327) Subchapter
Sec. 408 (33 U.S.C. 1328) Subchapter
Sec. 409 (33 U.S.C. 1329) Subchapter
Sec. 410 (33 U.S.C. 1330) Subchapter
Sec. 411 (33 U.S.C. 1331) Subchapter
Sec. 412 (33 U.S.C. 1332) Subchapter
Sec. 413 (33 U.S.C. 1333) Subchapter
Sec. 414 (33 U.S.C. 1334) Subchapter
Sec. 415 (33 U.S.C. 1335) Subchapter
Sec. 416 (33 U.S.C. 1336) Subchapter
Sec. 417 (33 U.S.C. 1337) Subchapter
Sec. 418 (33 U.S.C. 1338) Subchapter
Sec. 419 (33 U.S.C. 1339) Subchapter
Sec. 420 (33 U.S.C. 1340) Subchapter
Sec. 421 (33 U.S.C. 1341) Subchapter
Sec. 422 (33 U.S.C. 1342) Subchapter
Sec. 423 (33 U.S.C. 1343) Subchapter
Sec. 424 (33 U.S.C. 1344) Subchapter
Sec. 425 (33 U.S.C. 1345) Subchapter
Sec. 426 (33 U.S.C. 1346) Subchapter
Sec. 427 (33 U.S.C. 1347) Subchapter
Sec. 428 (33 U.S.C. 1348) Subchapter
Sec. 429 (33 U.S.C. 1349) Subchapter
Sec. 430 (33 U.S.C. 1350) Subchapter
Sec. 431 (33 U.S.C. 1351) Subchapter
Sec. 432 (33 U.S.C. 1352) Subchapter
Sec. 433 (33 U.S.C. 1353) Subchapter
Sec. 434 (33 U.S.C. 1354) Subchapter
Sec. 435 (33 U.S.C. 1355) Subchapter
Sec. 436 (33 U.S.C. 1356) Subchapter
Sec. 437 (33 U.S.C. 1357) Subchapter
Sec. 438 (33 U.S.C. 1358) Subchapter
Sec. 439 (33 U.S.C. 1359) Subchapter
Sec. 440 (33 U.S.C. 1360) Subchapter
Sec. 441 (33 U.S.C. 1361) Subchapter
Sec. 442 (33 U.S.C. 1362) Subchapter
Sec. 443 (33 U.S.C. 1363) Subchapter
Sec. 444 (33 U.S.C. 1364) Subchapter
Sec. 445 (33 U.S.C. 1365) Subchapter
Sec. 446 (33 U.S.C. 1366) Subchapter
Sec. 447 (33 U.S.C. 1367) Subchapter
Sec. 448 (33 U.S.C. 1368) Subchapter
Sec. 449 (33 U.S.C. 1369) Subchapter
Sec. 450 (33 U.S.C. 1370) Subchapter
Sec. 451 (33 U.S.C. 1371) Subchapter
Sec. 452 (33 U.S.C. 1372) Subchapter
Sec. 453 (33 U.S.C. 1373) Subchapter
Sec. 454 (33 U.S.C. 1374) Subchapter
Sec. 455 (33 U.S.C. 1375) Subchapter
Sec. 456 (33 U.S.C. 1376) Subchapter
Sec. 457 (33 U.S.C. 1377) Subchapter
Sec. 458 (33 U.S.C. 1378) Subchapter
Sec. 459 (33 U.S.C. 1379) Subchapter
Sec. 460 (33 U.S.C. 1380) Subchapter
Sec. 461 (33 U.S.C. 1381) Subchapter
Sec. 462 (33 U.S.C. 1382) Subchapter
Sec. 463 (33 U.S.C. 1383) Subchapter
Sec. 464 (33 U.S.C. 1384) Subchapter
Sec. 465 (33 U.S.C. 1385) Subchapter
Sec. 466 (33 U.S.C. 1386) Subchapter
Sec. 467 (33 U.S.C. 1387) Subchapter
Sec. 468 (33 U.S.C. 1388) Subchapter
Sec. 469 (33 U.S.C. 1389) Subchapter
Sec. 470 (33 U.S.C. 1390) Subchapter
Sec. 471 (33 U.S.C. 1391) Subchapter
Sec. 472 (33 U.S.C. 1392) Subchapter
Sec. 473 (33 U.S.C. 1393) Subchapter
Sec. 474 (33 U.S.C. 1394) Subchapter
Sec. 475 (33 U.S.C. 1395) Subchapter
Sec. 476 (33 U.S.C. 1396) Subchapter
Sec. 477 (33 U.S.C. 1397) Subchapter
Sec. 478 (33 U.S.C. 1398) Subchapter
Sec. 479 (33 U.S.C. 1399) Subchapter
Sec. 480 (33 U.S.C. 1400) Subchapter
Sec. 481 (33 U.S.C. 1401) Subchapter
Sec. 482 (33 U.S.C. 1402) Subchapter
Sec. 483 (33 U.S.C. 1403) Subchapter
Sec. 484 (33 U.S.C. 1404) Subchapter
Sec. 485 (33 U.S.C. 1405) Subchapter
Sec. 486 (33 U.S.C. 1406) Subchapter
Sec. 487 (33 U.S.C. 1407) Subchapter
Sec. 488 (33 U.S.C. 1408) Subchapter
Sec. 489 (33 U.S.C. 1409) Subchapter
Sec. 490 (33 U.S.C. 1410) Subchapter
Sec. 491 (33 U.S.C. 1411) Subchapter
Sec. 492 (33 U.S.C. 1412) Subchapter
Sec. 493 (33 U.S.C. 1413) Subchapter
Sec. 494 (33 U.S.C. 1414) Subchapter
Sec. 495 (33 U.S.C. 1415) Subchapter
Sec. 496 (33 U.S.C. 1416) Subchapter
Sec. 497 (33 U.S.C. 1417) Subchapter
Sec. 498 (33 U.S.C. 1418) Subchapter
Sec. 499 (33 U.S.C. 1419) Subchapter
Sec. 500 (33 U.S.C. 1420) Subchapter

Title 40--Protection of
Environment

(Title from continuation page 61-62)

CHAPTER 1--Environmental Protection Agency (Continued)

Page 61

TABLE 2-1. BENEFICIAL USES OF SURFACE WATERS OF THE LAHONTAN REGION

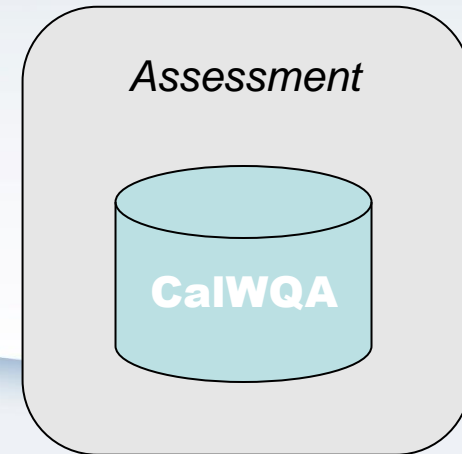
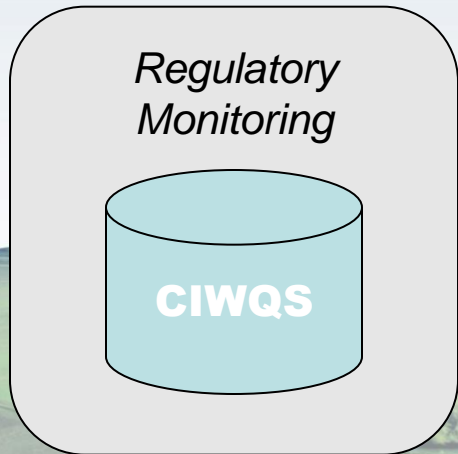
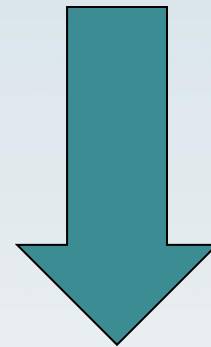
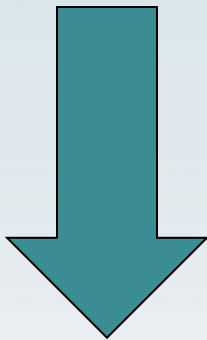
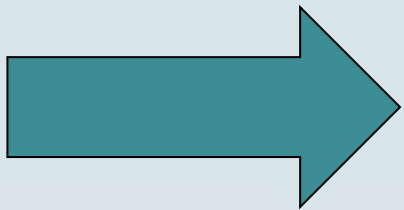
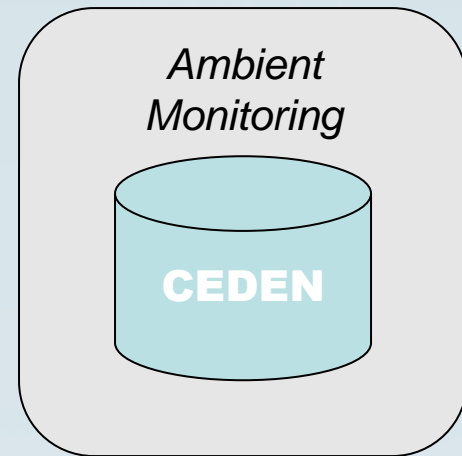
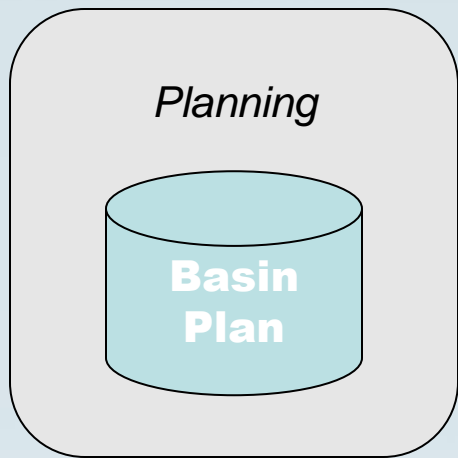
Unless otherwise specified, beneficial uses also apply to all tributaries of surface waters identified in Table 2-1.

HU No.	HYDROLOGIC UNIT/SUBUNIT DRAINAGE FEATURE	WATERBODY CLASS MODIFIER	BENEFICIAL USES																	RECEIVING WATER					
			MIN	AGR	PRO	IND	GW/R	FRSH	NAV	POW	REC-1	REC-2	COMM	AQUA	WARM	COLD	SAL	W/LD	BIOL		FARE	MGR	SP/N	W/OE	FLD
634.20	NORTH TAHOE HA (continued)																								
	GRIFF CREEK	PERENNIAL STREAM	X				X				X	X	X			X		X				X			LAKE TAHOE
	MINOR SURFACE WATERS		X	X			X	X			X	X	X			X		X				X			LAKE TAHOE
	MINOR WETLANDS	SPRINGS/SEEPS/EMERGENT/MARSHES	X	X			X	X			X	X	X			X		X			X	X	X	X	
634.30	TAHOE LAKE BODY HYDROLOGIC AREA																								
	LAKE TAHOE	LAKE	X	X			X		X		X	X	X			X		X	X		X	X			TRUCKEE RIVER
	MINOR SURFACE WATERS		X	X			X	X			X	X	X			X		X	X		X	X			



**Table 3-12
WATER QUALITY OBJECTIVES FOR CERTAIN WATER BODIES
LAKE TAHOE HYDROLOGIC UNIT**

See Fig. 3-6	Surface Waters	Objective (mg/L except as noted) ^{1,2}						
		TDS	Cl	SO ₄	B	N	P	Fe
1	Lake Tahoe	60 65	3.0 4.0	1.0 2.0	0.01 -	0.15 -	0.008 -	-



Basin Plan

Water Body	Beneficial Uses
Blue Lake	MUN, R1, R2, COMM
Clear River (below Blue L.)	AGR, MIGR
Clear River (above Blue L.)	COMM, COLD, SPWN

USGS NHD

Water Body	Reachcode
Blue Lake	1802001001
Clear River	1802002001
Clear River	1802003001

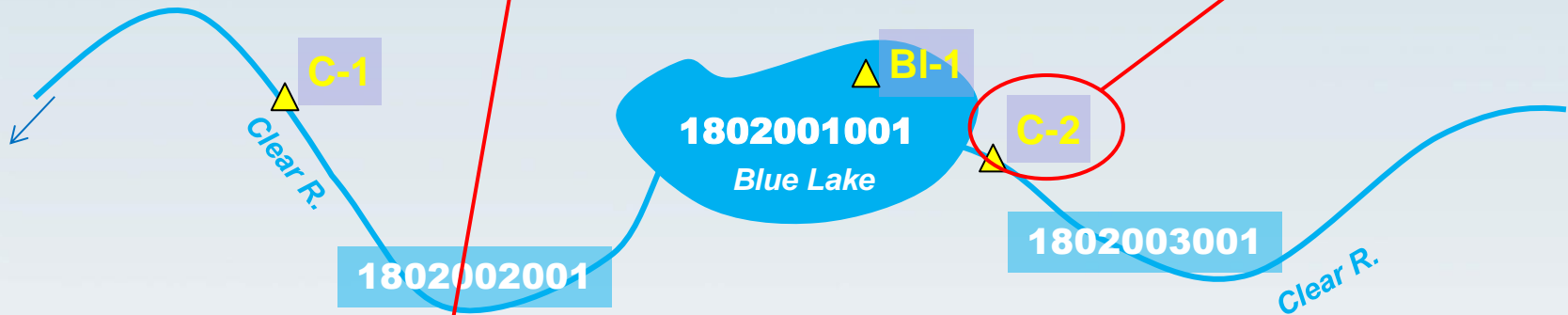


Basin Plan

Water Body	Beneficial Uses	Reachcode
Blue Lake	MUN, R1, R2, COMM	1802001001
Clear River (below Blue L.)	AGR, MIGR	1802002001
Clear River (above Blue L.)	COMM, COLD, SPWN	1802003001

Monitoring Sites

Station ID	Reachcode
C-1	1802001001
C-2	1802003001
BI-1	1802002002



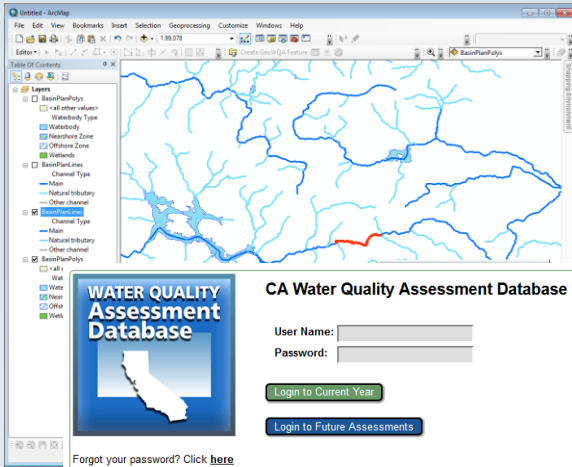
Water Quality Thresholds

Limit	Source
0.07 ug	IRIS RfD
0.15 ug	Prop 65
0.3 mg/kg	NTR

C-2 Data

Date	Constituent	Sample
1/15/12	MeHg	ND
3/15/12	MeHg	0.1 mg/kg
6/15/12	MeHg	0.6 mg/kg
10/15/12	MeHg	0.35 mg/kg

Basin Plan & CalWQA



Basin Plan Database



GeoWQA

- ArcGIS 10.x add-in
 - VB.NET
 - ArcObjects
- USGS HEM tool
- XML

CalWQA



NHD



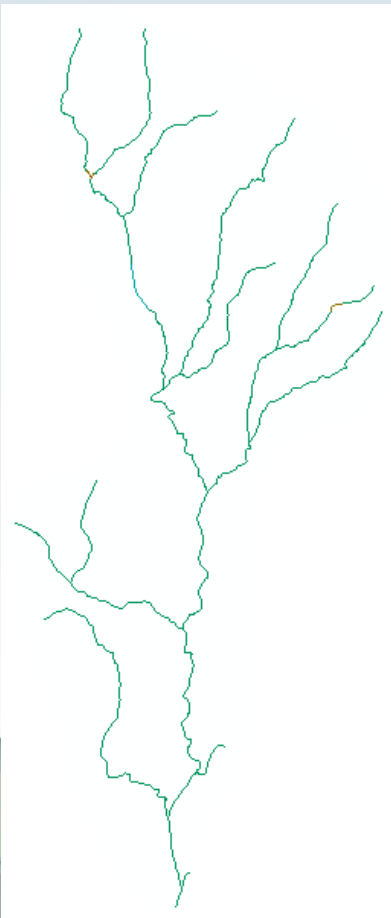
Managing Differences in Water Body Definitions

Santa Clara River

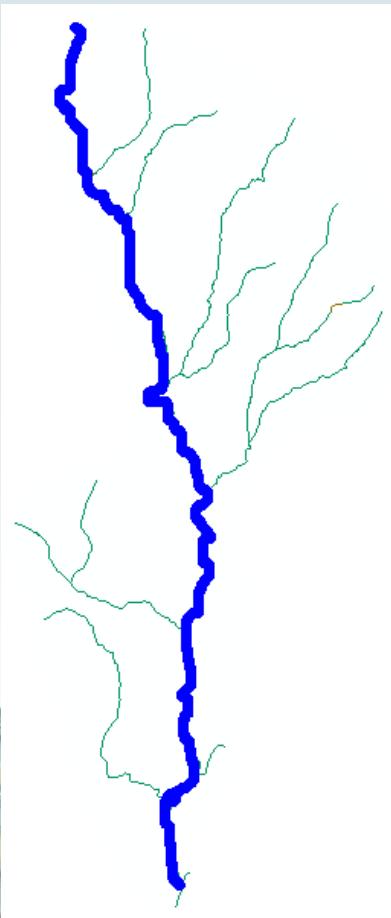


Named Feature Mapping: Linear Referencing

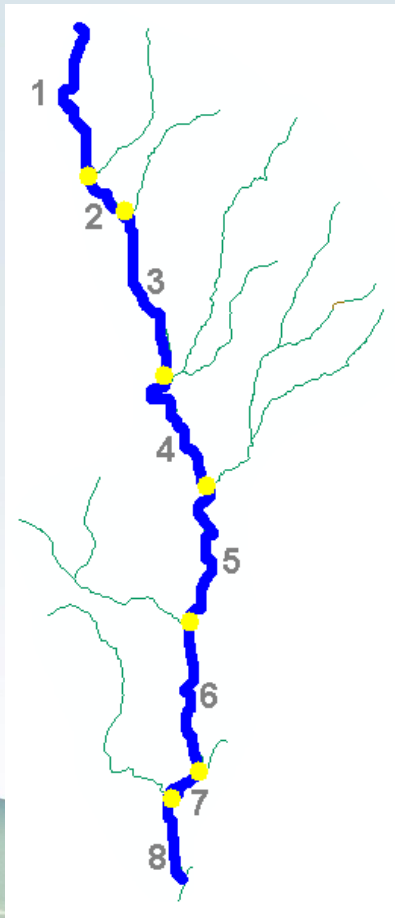
NHD Flowline Network



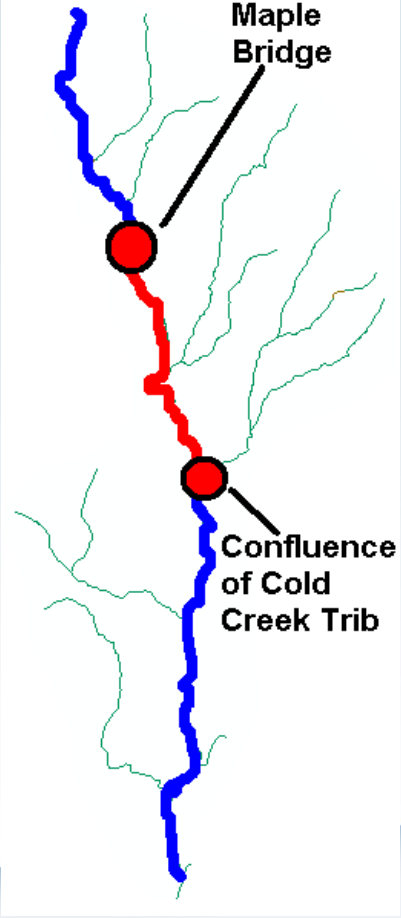
NHD: Oak River



NHD Reaches for Oak River



BP Reach Example:
Oak River: From Maple Bridge to Confluence of Cold Creek



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Water Body Detail

LOEs

Last Saved: SEP 05, 2014 17:13:04

* = required

Water Body ID:

CAR1142201020130919048280

Water Body Name:*

Russian River HU, Middle Russian River HA, Santa Rosa HSA, mainstem Santa Rosa Creek

Water Body Description:

(Maximum characters: 255)

Water Body Type:*

River & Stream

Water Body Subtype:

Water Body Size:

21.22 Miles

County:

Shasta
Sierra
Siskiyou
Solano
Sonoma

Beneficial Use:*

Preservation of Areas of Special Biological Significance
Commercial or recreational collection of fish, shellfish, or organisms
Cold Freshwater Habitat
Estuarine Habitat
Subsistence Fishing
Freshwater Replenishment
Limited Warmwater
Marine Habitat

Water Body Cataloging Unit:

Regional Board Name:*

Regional Board 1 - North Coast Region

CALWNUM:

1114.210002 | 1114.220102 | 1114.220103 | 1114.220104

HEM Permanent Ids:

{EFC3D46B-3B18-4B7C-885F-C54D6B1B7715}

Reach Codes:

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18010110000042 | 18010110001339 | 18010110001343 | 18010110001346 | 18010110001415

WBD Codes:

180101100702 | 180101100703 | 180101100704

Basin Plan Water Body Name:

To be determined

Next Monitoring Year:

2030

Cycle Last Assessed:

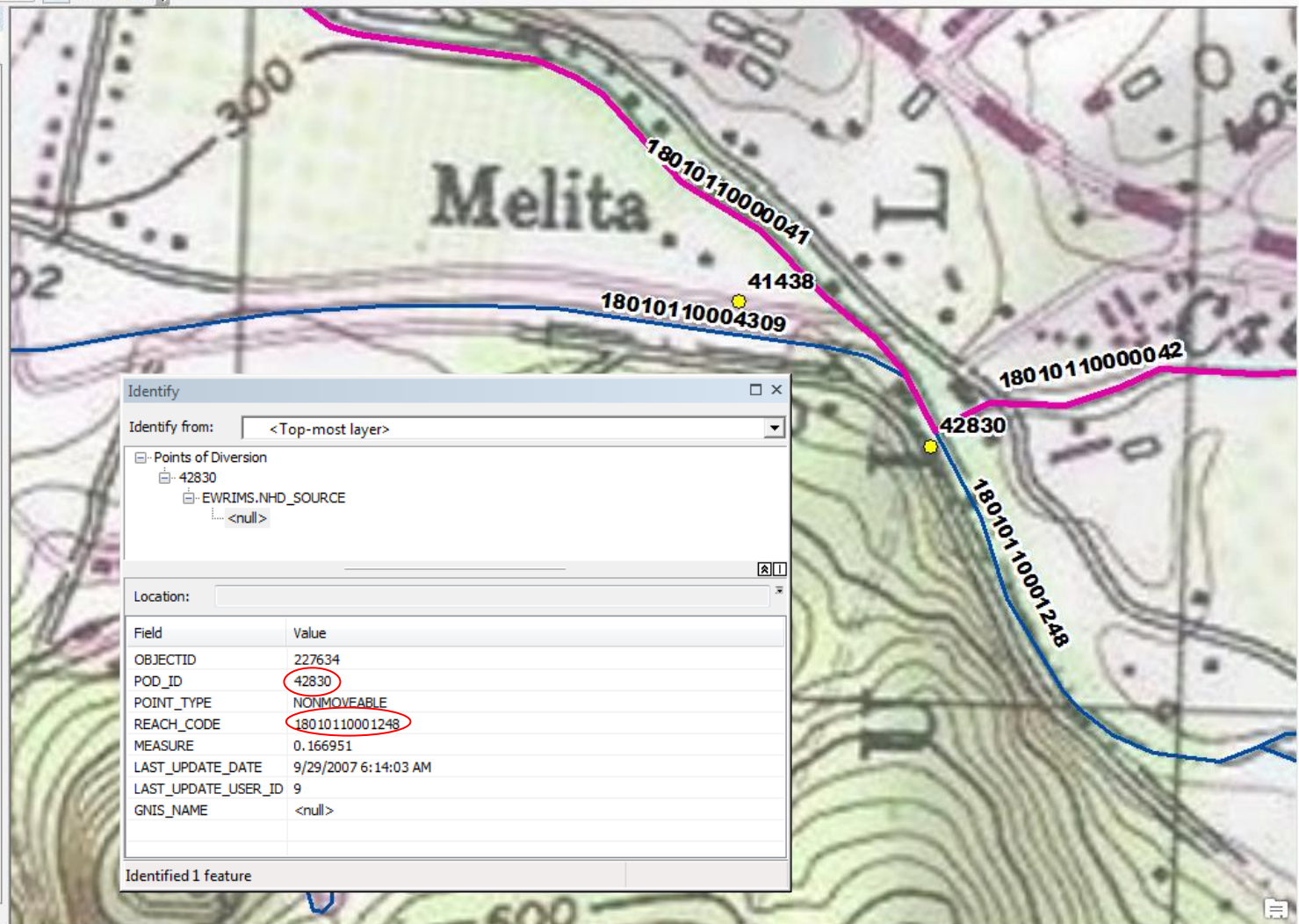
2012

Assessor Comments:

(Maximum characters: 4000)

Table Of Contents

- Layers
 - Points of Diversion
 - CAR1142201020130919048280
 - HYD1801 Flowline
 - CALWQA.GEOWQALINE
 - Basemap
 - USA_Topo_Maps



Identify

Identify from: <Top-most layer>

- Points of Diversion
 - 42830
 - EWRIMS.NHD_SOURCE
 - <null>

Location:

Field	Value
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POD_ID	42830
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LAST_UPDATE_DATE	9/29/2007 6:14:03 AM
LAST_UPDATE_USER_ID	9
GNIS_NAME	<null>

Identified 1 feature

Known issues

- Need to synchronize reach code changes
- Indexing features to the correct reach code
- NHD Area does not have reachcode
- Incorporating non-NHD features



SWRCB GIS Resources

Data Map Index:

http://www.waterboards.ca.gov/data_maps/index.shtml

GIS Services:

<http://gispublic.waterboards.ca.gov/arcgis/rest/services>

GIS Contact:

GIS@waterboards.ca.gov





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