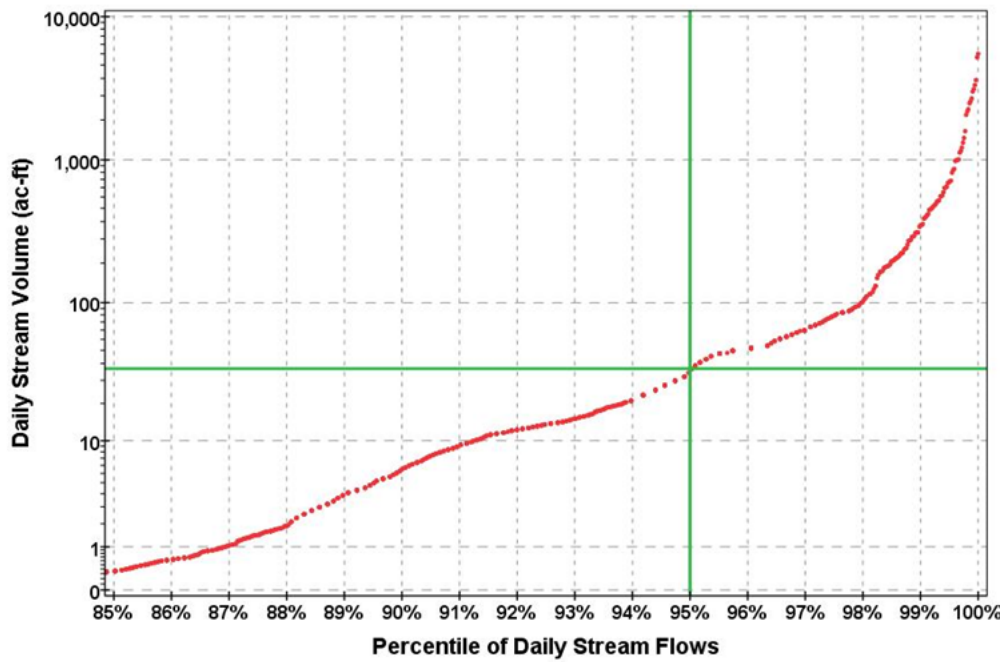
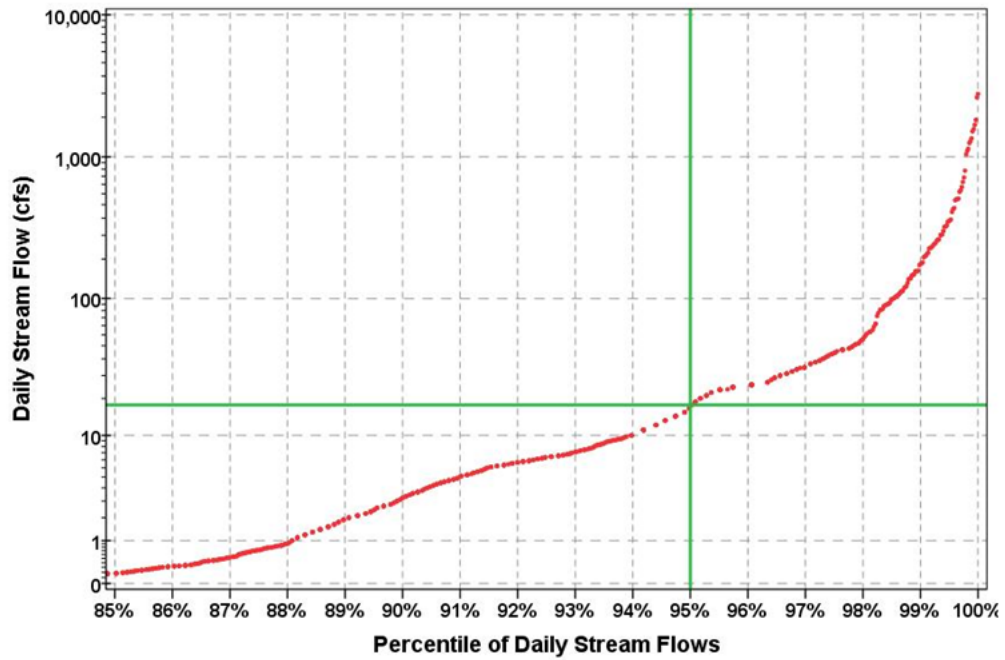
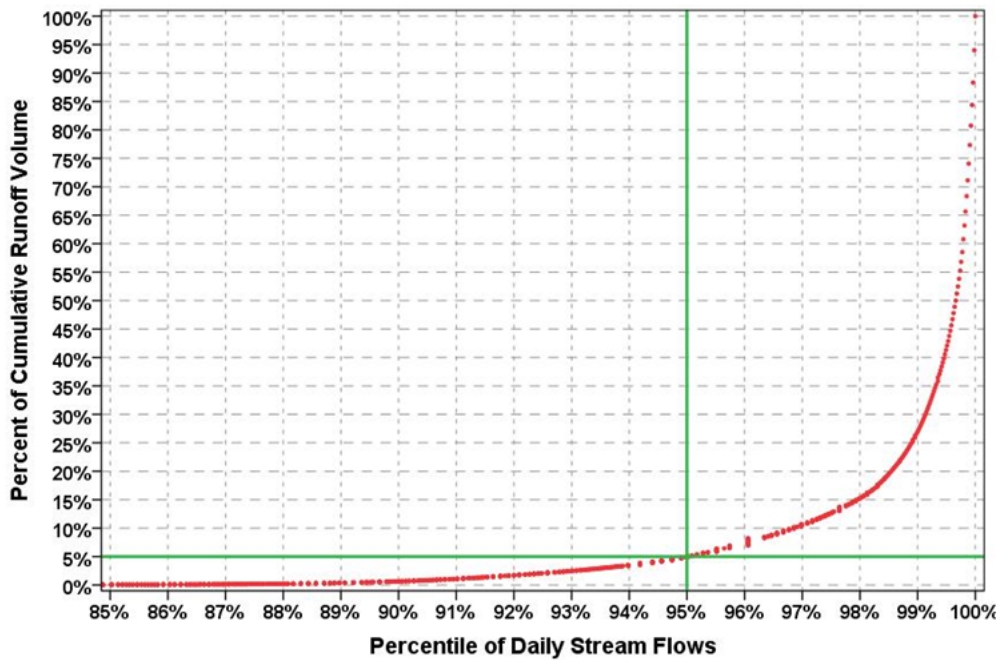




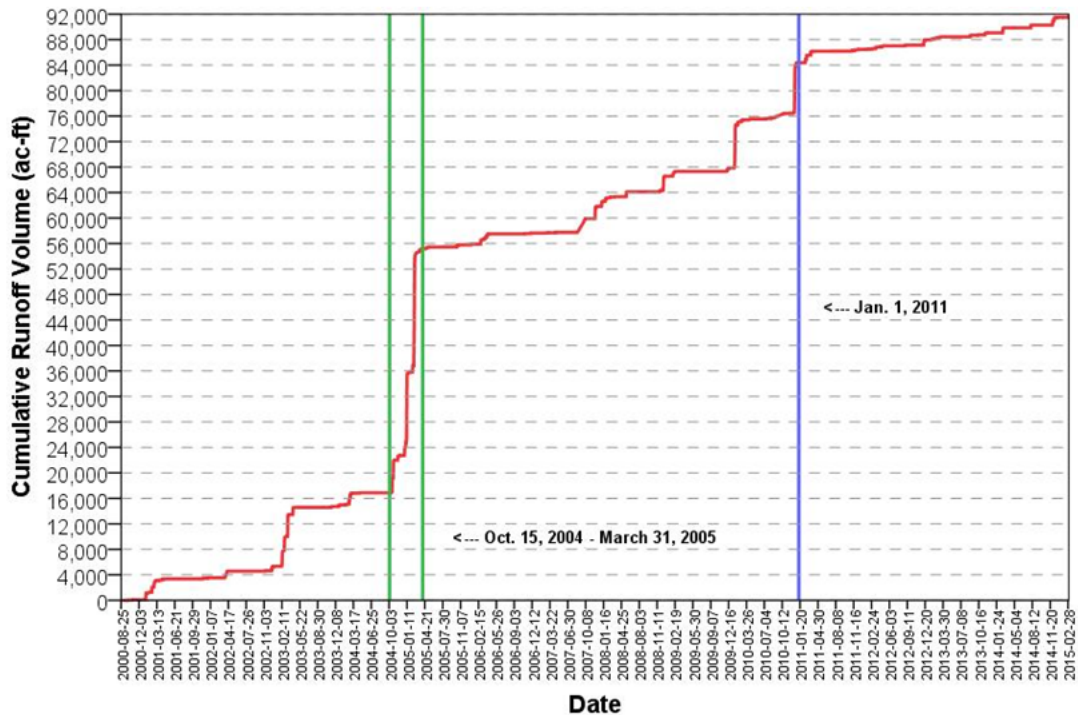
San Jacinto River Above Canyon Lake (USGS Gauge #11070365; 8/25/2000 - 3/4/2015)



San Jacinto River Above Canyon Lake (USGS Gauge #11070365; 8/25/2000 - 3/4/2015)



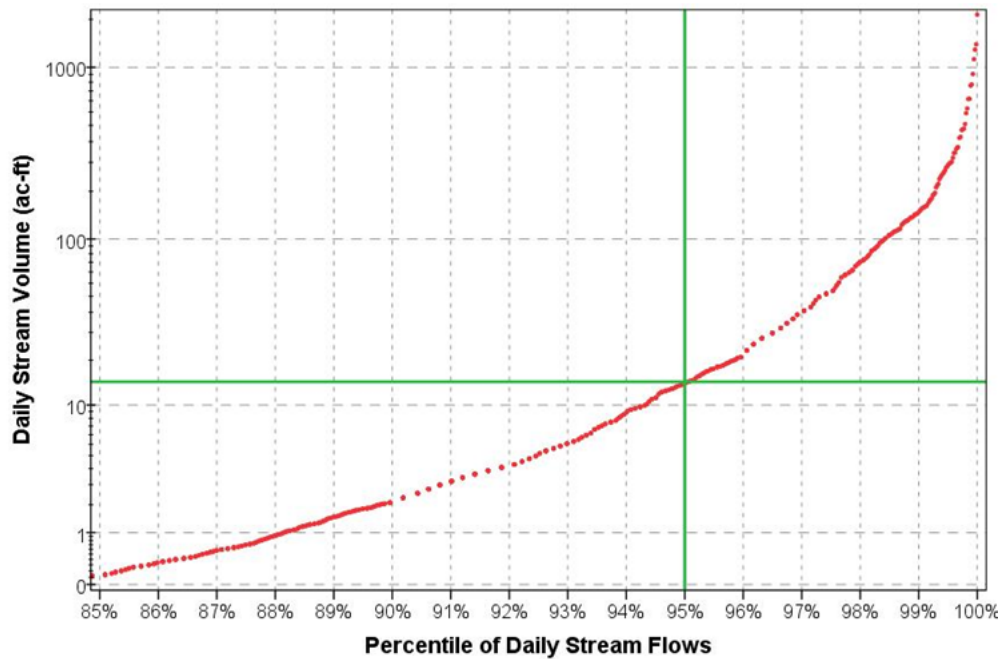
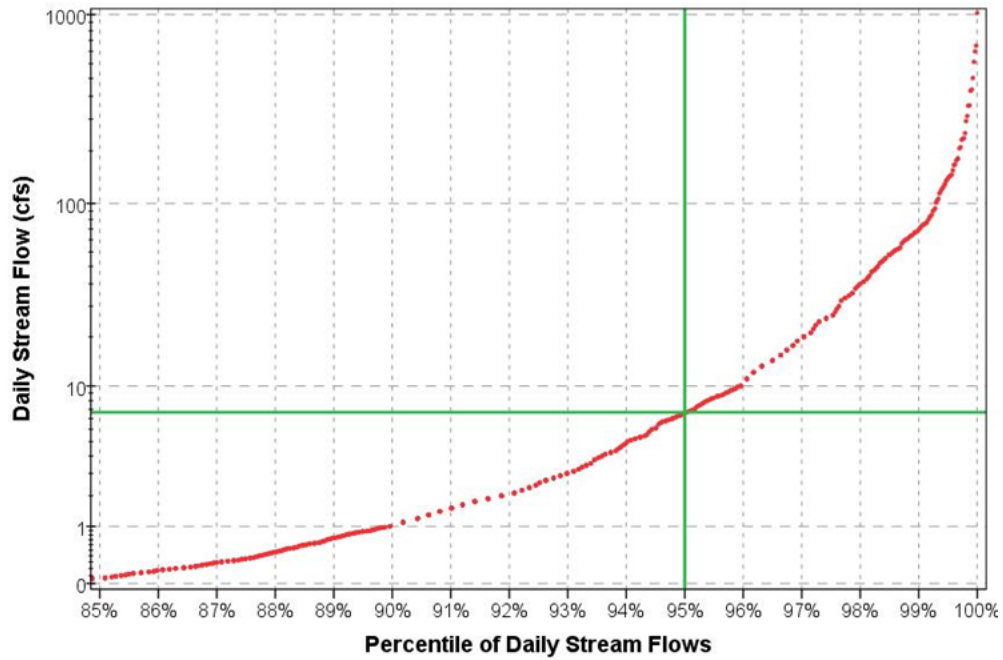
95% of the total flow volume from the San Jacinto River comes in just 5% of the days. And, 95% of the days contribute less than 5% of the total flow from the San Jacinto River.



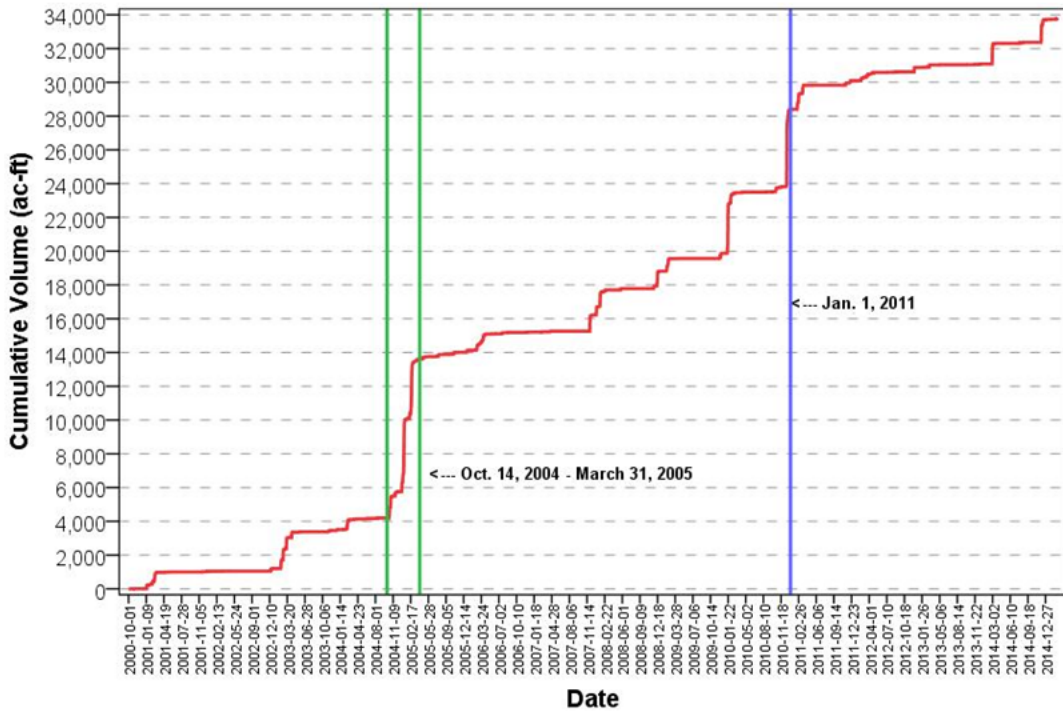
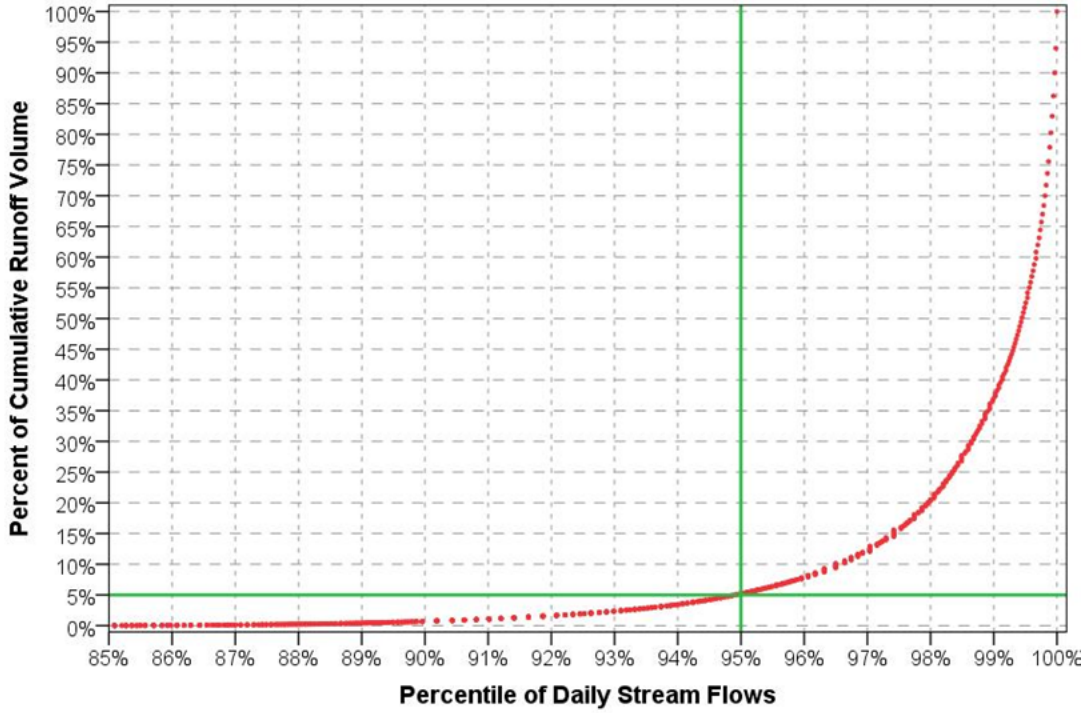
Nearly 50% of all runoff volume received in the last 15 years occurred in just one El Niño winter.



Salt Creek Above Canyon Lake (USGS Gauge #11070465; 10/1/2000 - 3/4/2015)

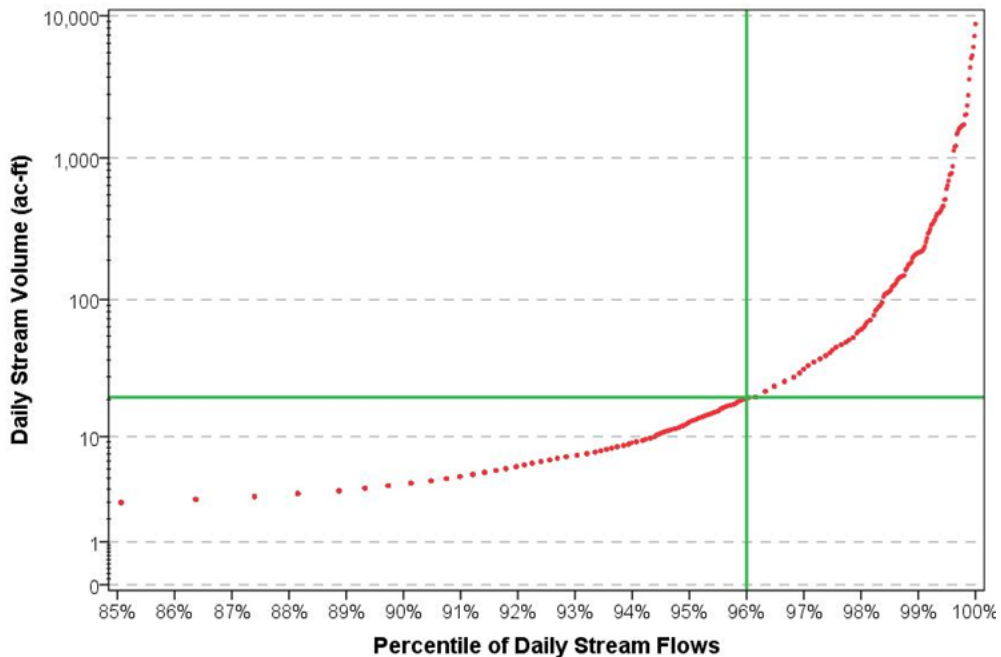
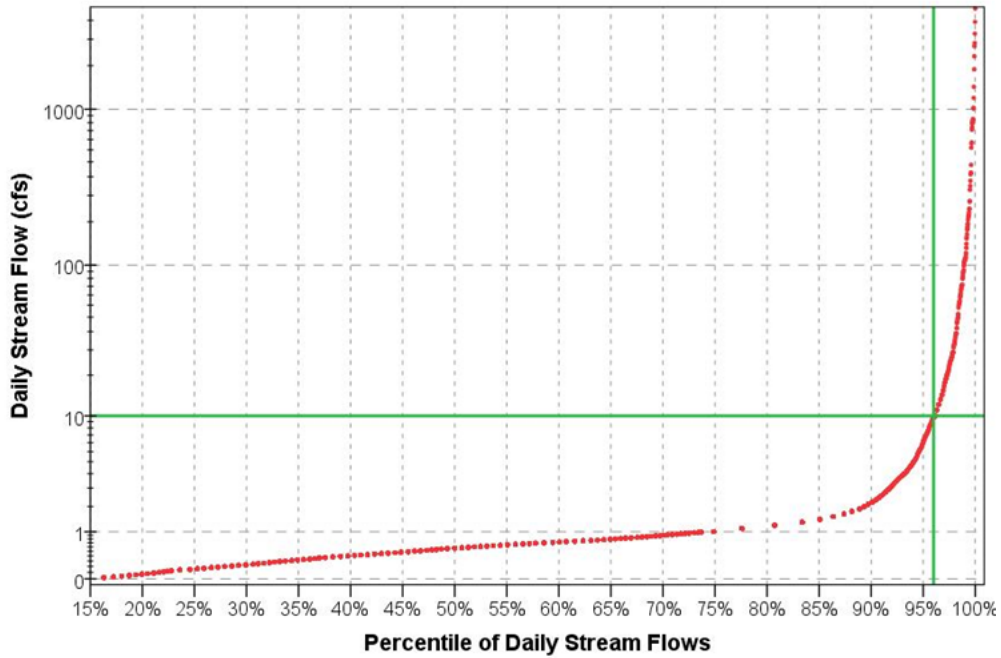


Salt Creek Above Canyon Lake (USGS Gauge #11070465; 10/1/2000 - 3/4/2015)

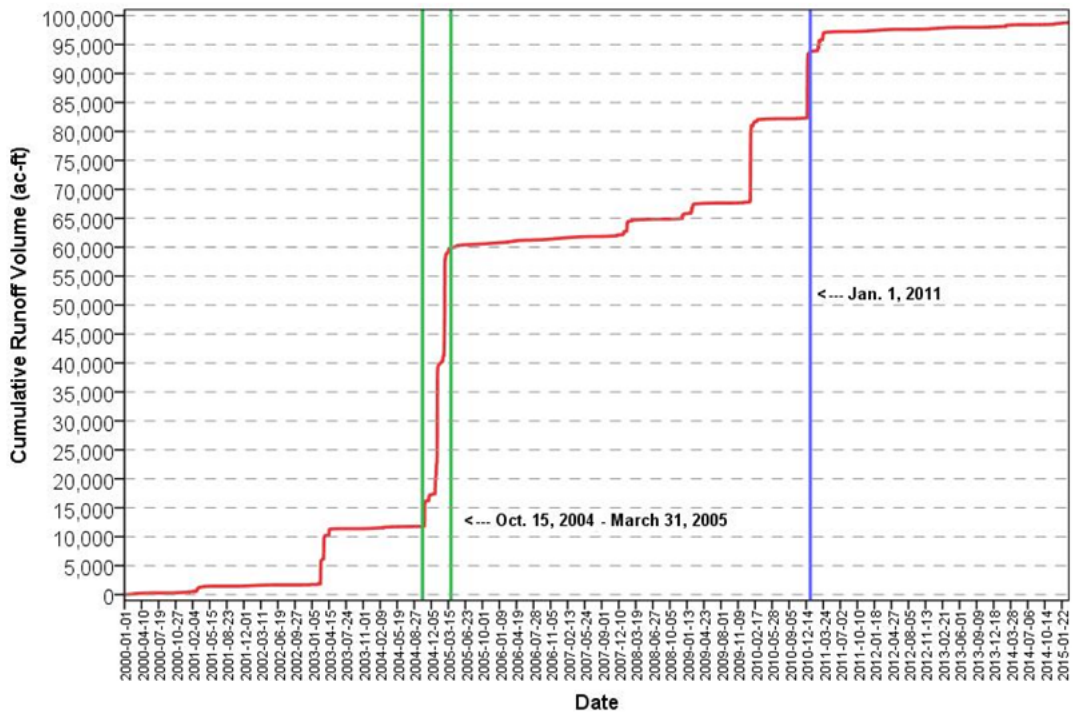
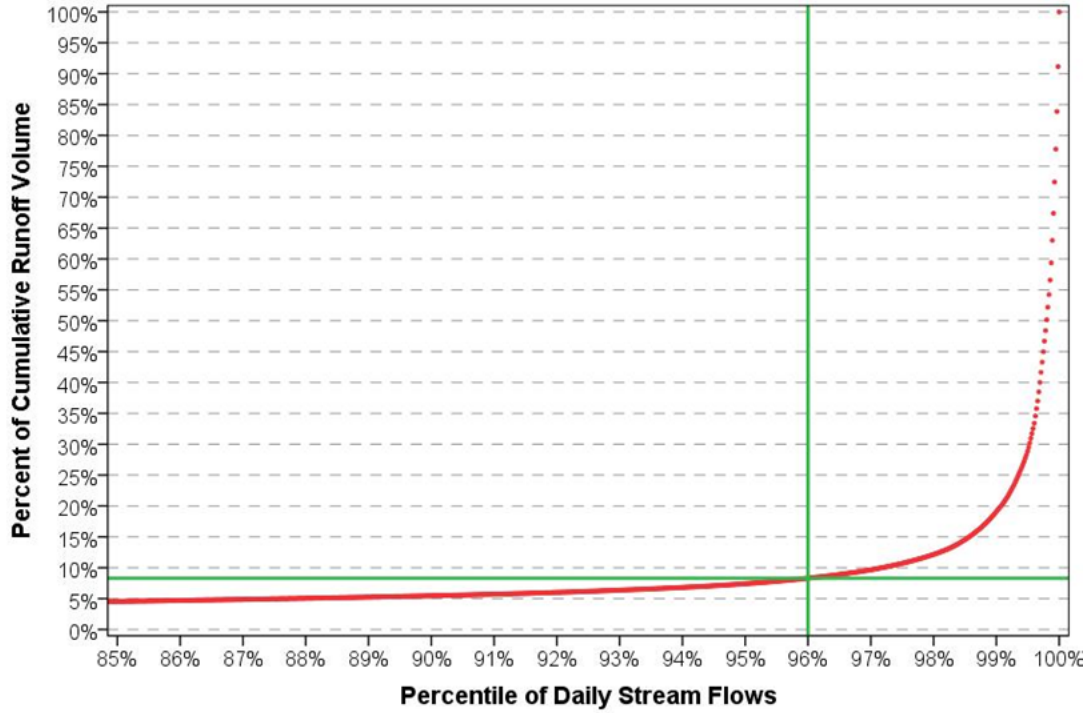




San Jacinto River BELOW Canyon Lake and ABOVE Lake Elsinore (USGS Gauge #11070500; 6/27/2000 - 3/4/2015)



San Jacinto River BELOW Canyon Lake (USGS Gauge #11070500; 6/27/2000 - 3/4/2015)



LAKE ELSINORE & CANYON LAKE TMDL COMPLIANCE MONITORING PROGRAM

CORE MONITORING:

Watershed Monitoring

Watershed-Wide Core Monitoring: Collection of Stormwater Samples

Stormwater samples for analytical chemistry collected at 4 stations (San Jacinto River at Goetz Rd., Salt Creek at Murrieta Rd., San Jacinto River below Canyon Lake Dam, and a 4th site (rotating station designed to address issues of concern, which may vary from year to year)) during 3 storm events. Includes field mobilization, sample collection, sample transport to lab, chemical analysis, quality assurance/quality control (QA/QC) and reporting. Water quality YSI (or equivalent) for obtaining real-time measurements at all stations on the same day. No dry weather sampling included.

In-Lake Monitoring

In-Lake Core Monitoring: Collection of Lake Water Samples

Core Monitoring: Lake Elsinore (LE): Collection of depth integrated samples (Sampling the entire vertical water column) at Station 2. At Canyon Lake (CL), separate distinct strata will be sampled at 3 depths (below, at and above the hypolimnion) at CL Stations 7, 8, and 10. Includes field mobilization, collection, courier transport to lab, chemical analysis, QA/QC, and reporting. Water Quality YSI real-time measurements at all stations: LE (Stations 1, 2, and 3); CL (Stations 7, 8, and 10).

In-Lake Core Monitoring: Real-time Water Quality Monitoring in LE using Existing Data Sondes for the Lake Water Circulation Pumps:

Analysis of existing Lake Elsinore water quality sonde data (Bi-monthly receive and process data downloads from EVMWD staff who currently conduct this monitoring).

In-Lake Core Monitoring: Year End Overall Project Final Report

Separate from the individual bi-monthly reports, this final report is a comprehensive analysis of the yearlong trends and recommendations for Year 2 of the project.

Blue Water Satellite Imagery Mapping

Blue Water Satellite Imaging to Determine Chlorophyll-a in Both Lakes:

Bi-monthly satellite images showing images of chlorophyll-a concentrations in Canyon Lake and Lake Elsinore (12 total images, 6 for each lake) within a 100-acre "tenderloin" section of each lake.

SPECIAL STUDIES:

Water Quality Special Studies to Research Zooplankton and Salinity in Canyon Lake and/or Lake Elsinore

During the first year, conduct an initial literature review to scope alternative special studies. A list of candidate special studies have been identified based on known existing data gaps (available as a stand-alone attachment). The specific choice of annual special studies however will be determined based on the results of additional literature review and input from the Task Force. It is recommended that these studies be conducted over the next three years, with details to be worked out annually.

SALT CREEK NUTRIENT SOURCE IDENTIFICATION STUDY

STORMWATER SAMPLING RESULTS

STORM EVENT OF DECEMBER 12, 2014

Analyte (mg/L)		Sample Location*							
		South State Street	Sanderson	California/Olive	Hemet Channel	HC-A (dup)	Lindenberger	Antelope	Murrieta
Cations	Total Hardness	120	92	210	82	94	1800	250	100
	Calcium	19	13	28	17	19	360	64	26
	Magnesium	17	14	33	9.7	11	220	21	9.2
Anions	Nitrate as N	0.59	1.1	4.1	0.4	0.46	3	0.84	1
Solids	TDS	120	200	270	86	49	5000	510	220
	TSS	1500	880	1300	660	710	52	46	90
Aggregate Organic Compounds	BOD	ND ¹	ND ¹	ND ¹	ND ¹	84	ND ¹	ND ¹	ND ¹
	COD	110	78	160	69	55	120	25	39
Nutrients	Nitrite as N	ND ²	ND ²	ND ²	ND ²	ND ²	ND ²	ND ²	ND ²
	Ammonia-Nitrogen	0.28	0.2	0.78	0.2	0.15	ND ³	0.18	0.36
	Kjeldahl Nitrogen	2.9	2.1	5.9	1.4	1.3	2.4	1.1	2.4
	Organic Nitrogen	2.6	1.9	5.1	1.2	1.2	2.4	0.9	2
	Inorganic Nitrogen as N	0.9	1.3	5	0.4	0.6	3.1	1.1	1.4
	Ortho Phosphate Phosphorus	0.28	0.22	0.81	0.14	0.23	0.3	0.34	0.43
	Total Phosphorus	2.1	1.7	4.6	1.1	1	0.53	0.56	0.77

Notes:

ND: Analyte NOT DETECTED at or above Method Detection Limit (if MDL is reported); otherwise at or above the Reportable Detection Limit (RDL)

ND¹: RDL for BOD is 20 mg/L

ND²: RDL for Nitrate as N is 0.10 mg/L

ND³: RDL for Ammonia-Nitrogen is 0.10 mg/L

* Sample locations listed in order from upstream to downstream
Shaded cells indicate highest observed concentrations by analyte