

Redwood National and State Parks

Water Quality and Aquatic Communities Monitoring

PRESENT MONITORING

Water Quality

- Streamflow, suspended sediment and turbidity (see table for station locations and length of record)
 - Redwood Creek mainstem and tributaries gaging stations
 - Prairie Creek tributaries
- Stream temperature monitoring (1997-present)
- Rainfall – Orick (1985-present), Little Lost Man Creek (1990-present), Lacks Creek (1993-present), Redwood Valley (1985-present)
- Estuary water elevations

Aquatic Communities

- Fish presence/absence and size in tributaries
- Summer steelhead snorkel counts (1981 to present)
- Estuary fish population and growth estimates (1980 to present)
- Freshwater Mussel Monitoring (2004 to present)
- Redwood Creek Downstream migrant trapping of salmonid smolts CDFG (2000 to present)
- Spawning/carcass surveys

PAST MONITORING

- Thermal Infrared Imaging Redwood Creek mainstem (about 70 miles; 2003). Measured surface water temperature.
- Assessing changes in stream health of park tributaries (30-year time period between sampling; early 1970's and 2004-05). Parameters sampled: macro invertebrates, periphyton, amphibians, fish condition, pools/riffles, riparian canopy closure)
- Large woody debris (LWD) studies in Prairie Creek and selected tributaries.
- LWD inventories in Bridge Creek, and Lost Man Creek.
- Macroinvertebrates (101 Bypass study – Prairie Creek watershed, USGS, park surveys, HSU theses and senior projects – Prairie Creek watershed, Redwood Creek tributaries)
- USGS Water Quality studies in Redwood Creek early 1970's (Iwatsubo and others)
- Redwood Creek Tributaries water quality and aquatic communities 1980-81 (Water temperature, specific conductance, dissolved oxygen, flow, fish presence/absence, fish, macroinvertebrates, habitat)
- Redwood Creek estuary water quality 1980-90s (Temperature, salinity, specific conductivity, and pH)

- Marine water quality along shoreline (temperature, salinity, turbidity, and suspended solids) Summers 2006-2008
- Redwood Creek/Prairie Creek downstream migrants – salmonid smolts (1980s)
- Prairie Creek fish studies (Fish Coop Unit @ HSU)

Table 1. RNSP stream gaging stations and attributes.				
Name	USGS Number (code)	Drainage Area (mi ²)	Present Variables Collected*	Period of Record
Gaging Stations Not Within RNSP				
Redwood Creek at Orick**	11482500 (ORK)	278	STA, MSS, BDL, ARN, MTU	1911-13; 1953-present
Redwood Creek nr Blue Lake**	11481500 (OKN)	67.7	STA, MSS, BDL, ARN, MTU	1953-58; 1972-present
Lacks Creek	11482110 (LAC)	16.9	STA, MSS, AUS, ARN, MTU	1980-present
Panther Creek	11482125 (PAN)	6.1	STA, MSS, AUS, ATU	1979-present
Gaging Stations Within RNSP (all are in the Prairie Creek watershed)				
Prairie Creek above May Creek	N/A (PRW)	12.6	STA, MSS, AUS, MTU, ATU	1991-present
Prairie Creek above Boyes Creek	N/A (PAB)	8.0	STA, MSS, AUS, MTU, ATU	2003-present
Prairie Creek below Brown Creek: DISCONTINUED	N/A (PRL)	6.4	STA, MSS, AUS, MTU	1990-2006
Prairie Creek above Brown Creek	N/A (PRU)	4.1	STA, MSS, AUS, MTU, ATU	1990-present
Godwood Creek	N/A (GOD)	1.7	STA, ATU, MSS, MTU	2000-present
Lost Man Creek at Hatchery Site	N/A (LMC)	12.1	STA, ATU, MSS, MTU	2002-present
Larry Damm Creek	N/A (LDC)	1.9	STA, ATU, MSS, MTU	2003-present
North Fork Lost Man Creek	N/A (NFL)	2.4	STA, ATU, MSS, MTU	2003-present
Middle Fork Lost Man Creek	N/A (MFL)	2.4	STA, ATU, MSS, MTU	2003-present
South Fork Lost Man Creek	N/A (SFL)	4.3	STA, ATU, MSS, MTU	2002-present
Little Lost Man Creek	11482468 (LLM)	3.5	STA, MSS, AUS, MTU, ARN, ATU	1974-1988; 1993-present
*Abbreviations: STA = stage; MSS = manual suspended sediment; AUS = automated suspended sediment; BDL = bedload; ARN = automated rain gage; SRN = storage rain gage; ATU = automated turbidity; MTU = manual turbidity				
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