

APPENDIX

ACRONYMS AND ABBREVIATIONS

ABLM	Ambient Bay and Lagoon Monitoring
ADA	Americans with Disability Act
ADT	Average Daily Traffic
APS	American Physical Society
ARF	Aquatic Reclamation Facility
ASBS	Areas of Special Biological Significance
BIA	Building Industrial Association
BIOL	Biological Habitats of Special Significance
BLM	Bureau of Land Management
BMI	Benthic Macroinvertebrate
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BSER	Blue Sky Ecological Reserve
CaCO ₃	Calcium Carbonate
Caltrans	California Department of Transportation
CBI	Conservation Biology Institute
CCA	California Coastal Act
CCC	Civilian Conservation Corps
CDFG	California Department of Fish and Game
CDOC	California Department of Conservation
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act

San Dieguito Watershed Management Plan

CERES	California Environmental Resources Evaluation System
CERT	Community Emergency Response Team
CESA	California Emergency Services Association
CFR	Code of Federal Regulations
CLCA	California Land Conservation Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CNPS List 1B	Plants rare, threatened, or endangered in California and elsewhere
CNPS List 2	Plants rare, threatened, or endangered in California but more common elsewhere
CNPS List 3	Plants about which we need more information – a review list
CNPS List 4	Lists of limited distribution – a watch list
COC	Constituents of Concern
COD	Chemical Oxygen Demand
COLD	Cold Fresh Water Habitat
COMM	Ocean Commercial and Sport Fishing
CREEC	California Regional Environmental Education Community
CREEK	Creek Restoration and Ecology Education for Kids
CSBP	California Stream Bioassessment Procedure
CSC	Species of Special Concern
CTR	California Toxics Rule
CWA	Clean Water Act
CZARA	Coastal Zone Act Reauthorization Amendments
CZMA	Coastal Zone Management Act
DFA	Division of Financial Assistance
DHS	Department of Health Services

San Dieguito Watershed Management Plan

DO	Dissolved Oxygen
DWP	Drinking Water Program
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Areas
ESL	Environmentally Sensitive Lands
ESP	Emergency Storage Project
EST	Estuarine Habitat
FAP	Financial Assistance Program
FEMA	Federal Emergency Management Agency
FMPs	Fishery Management Plans
FPA	Focused Planning Area
FRSH	Fresh Water Replenishment
FSC	Species of Concern
GIS	Geographic Information Systems
GP	General Plan
GWR	Groundwater Recharge
HCF	Hundred Cubic Feet
HEW	High Efficiency Clothes Washer
HSA	Hydrologic Sub Area
IBA	Important Bird Area
ICID	Illicit Connections and Illegal Discharges
IDDE	Illicit Discharge Detection and Elimination Component

San Dieguito Watershed Management Plan

IND	Industrial Service Supply
JPA	Joint Powers Authority
JURMP	Jurisdictional Urban Runoff Management Plan
L	Liter
LACDPW	Los Angeles County Department of Public Works
LARWQCB	Los Angeles Regional Water Quality Control Board
LC50	Concentration that Causes 50 percent Mortality
LCPs	Local Coastal Programs
LGC	Local Government Commission
LID	Low Impact Development
LLC	Limited Liability Company
LRP	Local Resources Program
LUP	Land Use Plan
LWRM	Limited Warm Freshwater Habitat
MAR	Marine Habitat
MBAS	Methylene Blue Activated Substances
MCL	Maximum Contaminant Level
MEP	Maximum Extent Practicable
Mg	milligrams
MHCOSP	Multiple Habitat Conservation and Open Space Program
MHCP	Multiple Habitat Conservation Program
MHPA	Multi-Habitat Planning Areas
MIGR	Migration of Aquatic Organisms
MLS	Mass Loading Station
MPN	Most Probable Number

San Dieguito Watershed Management Plan

MS4	Municipal Separate Storm Sewer System
MSCP	Multiple Species Conservation Program
MTBE	Methyl Tertiary-Butyl Ether
MUN	Municipal and Domestic Supply
MWD	Metropolitan Water District
N	Nitrogen
NCCP	Natural Community Conservation Plan
NCTD	North County Transit District
ND	Not Detectable
NEPA	National Environmental Policy Act
NH ₃	Un-ionized ammonia
NH ₄	Ammonium
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO ₃	Nitrate
NOEC	No Observed Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NTU	Nephelometric Turbidity Unit
O ₂	Oxygen
OH-	Hydroxide
OHVs	Off-Highway Vehicles
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
pH	Hydrogen Ion Concentration of Water

San Dieguito Watershed Management Plan

PIPP	Public Information and Participation Program
POTWs	Publicly Owned Treatment Works
POW	Hydropower Generation
ppt	parts-per-thousand
PROC	Industrial Process Supply
PUD	Planned Urban Development
RARE	Rare, Threatened, or Endangered Species
RCP	Regional Comprehensive Plan
REC1	Water Contact Recreation
REC2	Non-contact Water Recreation
RGS	Regulated Game Species
RMWD	Ramona Municipal Water District
RPO	Resource Protection Ordinance
RWDF	Reclaimed Water Development Fund
RWQCB	Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SAL	Saline Water Habitat
SANDAG	San Diego Association of Governments
SCE	Southern California Edison
SCPA	Standard City Planning Act
SDC	San Diego County
SDCBRR	San Diego County Biological Resource Researchers
SDCDPW	San Diego County Department of Public Works
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric

San Dieguito Watershed Management Plan

SDRP	San Dieguito River Park
SDRVC	San Dieguito River Valley Conservative
SDRWQCB	San Diego Regional Water Quality Control Board
SDV	San Dieguito Valley
SEJPA	San Elijo Joint Powers Authority
SHELL	Shellfish Harvesting
SHPO	State Historic Resources Commission and the Office of Historic Preservation
SMCL	Secondary Maximum Contaminant Level
SMRC	Stormwater Manager's Resource Center
SNAP	Southern Nurserymen's Association Publication
SONGS	San Onofre Nuclear Generating Station
SPV	San Pasqual Valley
SPWN	Spawning, Reproduction, and/or Early Development
SR	State Route
SRF	State Revolving Fund
STPL	Surface Transportation Program Local
SUSMP	Standard Urban Stormwater Mitigation Program
SWAMP	Surface Water Ambient Monitoring Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SZEA	Standard State Zoning Enabling Act
TAC	Technical Advisory Committee
TDS	Total Dissolved Solids
TEA	Transportation Enhancement Activity
TKN	Total Kjeldahl Nitrogen

San Dieguito Watershed Management Plan

TMDL	Total Maximum Daily Loads
TSS	Total Suspended Solids
UBC	Uniform Building Codes
UCLA	University of California Los Angeles
UCSD	University of California San Diego
ULFT	Ultra-low Flush Toilet
umhos	micromhos
uS	microSiemens
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDFG	United States Department of Fish and Game
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
VMPF	Volcan Mountain Preserve Foundation
WAP	Wild Animal Park
WARM	Warm Fresh Water Habitat
WDID	Waste Discharger Identification
WER	Water Effects Ratios
WMP	Watershed Management Plan
WQE	Water Quality Enhancement
WQLSs	Water Quality Limited Segments
WRF	Water Reclamation Facility

San Dieguito Watershed Management Plan

WRP	Wastewater Reclamation Plant
WSS	Water Sanitary Survey
WSIG	San Dieguito Watershed Stewardship Initiative Group
WTP	Wastewater Treatment Plant
WURMP	Watershed Urban Runoff Management Plan

San Dieguito Watershed Management Plan

LIST OF CONCERNS DEVELOPED DURING INITIAL MEETINGS

- Water quality:
 - 303(d) listed impairments.
 - Nutrients and Eutrophication.
 - Silt and Sediments
 - Total Dissolved Solids and Salinity
 - Bacteria/Pathogens
 - Hardscape and Impervious Surfaces
 - Agricultural Use
- Water Supply
 - Stream Channelization
 - Hardscape and Impervious Surfaces
 - Lowered Water Table Levels
 - Saltwater Intrusion to Groundwater
- Native Biological Resources and Habitat.
 - Hardscape and Impervious Surfaces
 - Flood Plain Encroachment
 - Stream Channelization
 - Landuse Policy
 - Erosion
 - Invasive Species
- Social and Community Resource Needs
 - Landuse Compatibility and Buffers
 - Supporting Existing Policy and Efforts
 - Storm Water Pollution Prevention Programs
 - Multiple Species Conservation Program
 - Local Level Planning
 - Unregulated Pollution Sources
 - Education
 - Environmental Stewardship Opportunities
 - Environmental Cleanups
 - Stream Team Monitoring
 - Attending Council, Planning, and Regional Meetings
 - Interpretation and Education Centers
 - San Dieguito Watershed Council
 - Funding

San Dieguito Watershed Management Plan

LIST OF CONCERNS EXPANDED

1. Water Quality

Issues and Concerns

- Cattle grazing around Lake Sutherland is causing cryptosporidium concerns and other water quality concerns.
- There is potential for sedimentation at Sutherland to become an issue.
- Post fire sediment runoff.
- Agricultural runoff contributes nutrient loading to surface waters.
- Agricultural runoff contributes TDS loading to groundwater.
- Surface water recreation contributing toxic pollutants to Lakes.
- Reservoirs vulnerable to urban uses, including sewage, historic gas stations, mining, highways, herbicides, sediments, storm water.
- Reservoir Vegetation contributing organics to water column.
- Additional Roadway construction will contribute car related pollution to surface waters.
- Lack of monitoring makes it difficult to identify problematic sources of pollution.
- North Beach contributing bacterial loading into lagoon/ocean.
- Runoff from landscaped irrigated areas contributing contains fertilizers and pesticides.
- Runoff from horse-intensive uses.
- Nuisance algae cause visual impairment and odors.
- Pesticides, herbicides, and other synthetic organic compound, plus heavy metals, leading to toxicity.
- Where monitored, coliforms and other pathogenic bacteria exceed REC-1 and REC-2 standards for human contact; and, if monitored, would likely exceed standards most locations.
- Clearing and grading are a source of sediment and nutrients.
- Loss of natural filtering capacity when vegetative cover and soil is removed.
- Reduced time of concentration of sheet flow to stream flow results in increased peak concentrations of pollutants and runoff volume.
- Surface water quality in the Santa Maria Creek (pollutants from the upstream Ramona urban area and potentially agricultural use).
- Storm water and urban runoff convey pollutants from streets and freeways that are automotive-related, industrial activities, sewage overflows, failing septic systems, fuel spills, firefighting retardants mixed with water, illicit discharges.
- Pollutants result from residential runoff associated with automotive repairs and leaks, yard waste, car washing, pavement washing, excessive irrigation, and pet waste.
- Pollutants may include runoff from large animals (ranches, equestrian stables, and farms).
- Pollutant runoff is associated with construction activities.
- Pollutants are associated with boating activities.
- Pollutants settle on land and in waters from air pollution.
- Pollutants Impact beneficial uses.
- Specific areas in the watershed experience flooding.
- Wetlands and natural attenuation areas are available to cleanse waters.
- Land is available treat waters if necessary.

San Dieguito Watershed Management Plan

- Multiple copermittees and multiple stakeholders occur in watershed with different priorities.
- Costs for achieving multiple goals will be high, and capital improvement funds are limited.

Watershed Management Considerations

- Water quality improvement projects needs to recognize challenges associated with understanding runoff water quality and modeling.
- Implementation, operation, and maintenance of BMPs will be important.
- The potential for end-of-pipe treatments should be considered for municipal storm drain systems.
- Runoff cleanup should include BMP source controls and treatment or polishing wetlands.
- Locate available land for creating buffers and treatment wetlands, and consider mosquito issue in wetland design.
- Strategies that include and acknowledge different treatment alternatives should be pursued (i.e. provision for flood control, habitat, water cleansing, and recreational opportunities).
- Development should consider land use planning.
- Gain funding partners and put agreements in place.

2. Water Supply

Issues and Concerns

- Water supply in the upper watershed is limited.
- Reduced stream flows affect water quality.
- Invasive plants, specifically Arundo and tamarisk, reduce water yield by evapotranspiration and degrade water quality by mobilization and concentration of soil salts.
- Groundwater recharge and lack of quantity (more information needed, although potentially an issue of concern).
- Can current water supply meet growth demand.
- Colorado River water allocations and other water sources are limited.
- Local aquifers vary in production capability.
- Groundwater quality is affected by seawater intrusion in the lower watershed.
- Conjunctive use of groundwater includes recharge from imported sources.
- Cost of groundwater recharge and establishment of saltwater barriers.
- Cost of land and possible need for infiltration or spreading basins.
- Precipitation is lost to ocean because of imperviousness of developed areas.
- Total dissolved solids concentration in imported water is a water quality concern.
- Negative public perception of recycled water use for residential purposes needs to be addressed.

San Dieguito Watershed Management Plan

Watershed Management Considerations

- Identify areas within the watershed where recharge is possible.
- Manage impervious surfaces.
- Use banked and stored water for drought protection.
- Retiring or reallocating water rights.
- Water reclamation.

3. Habitat and Biological Resources

Issues and Concerns

- Cattle grazing around Lake Sutherland is causing habitat impacts.
- Habitat fragmentation has caused Golden Eagle pairs to be reduced in the unincorporated community of Ramona.
- Habitat connectivity needs to be improved throughout the watershed.
- Drought has made trees more susceptible to beetle infestations and wildfire.
- Reduced stream flows below Lake Hodges impact habitat.
- Excess vegetation in the riverbed has negative impacts on habitat.
- North Beach- Dogs wandering into lagoon/ocean have impact on habitat.
- Oxygen depletion leads to loss of habitat values and loss of species.
- Sedimentation in lower river and lagoon.
- Salinity in lagoon and marsh may be too high or too low; too little or too much salt for saltwater or freshwater marsh, respectively.
- Loss of sediment in river below Hodges Dam.
- Entanglement of animals, specifically water birds, in monofilament line and plastic beverage holders ["six pack tops"].
- Dams prevent the passage of aquatic species; anadromous fish are the known example, but other species as well.
- Loss of habitat.
- Fuels management for the purpose of wildfire protection may reduce or damage ecosystem functions, wildlife habitat, and vegetative cover.
- Presence and spread of invasive species (mostly invasive plants, both in the Santa Maria Creek and surrounding grasslands).

Watershed Management Considerations

- Monitoring Grazing.
- Habitat Preservation.
- Habitat Enhancement and Restoration.
- Stream Flow.
- Litter Education.

San Dieguito Watershed Management Plan

4. Social and Community Resources

Issues and Concerns

- Development increases volume of runoff/flooding potential.
- Excess vegetation in the riverbed has negative impacts on flood control.
- Future development threatens the agricultural character of the River Valley.
- Development increases volume of runoff/flooding potential.
- Small local dairies face increasing hardships and are closing/relocating out of the valley.
- Reduced stream flows below Lake Hodges impact recreational opportunities.
- Development in the floodplain.
- Wild turkeys are perceived as a positive for sport hunters; i.e., a recreational resource.
- Dense stands of Arundo and tamarisk can reduce recreational access to waterways.
- Aesthetic effects, mostly visual but also olfactory.
- Visual aesthetics and dust.

Watershed Management Considerations

- Create agricultural preserves
- Viewshed inventory and management
- Exotic plant reduction
- Floodplain and flood control management