

Marin County Flood Control and Water Conservation District

Corte Madera Creek Flood Risk Management Project, Phase 1

Final Environmental Impact Report

Volume 2: Revisions to the Draft Environmental Impact Report State Clearinghouse No. 2020080353

July 2021



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Prepared for:

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Table of Contents

Exec	utive Summary	ES-1
ES.1	Summary of Project	ES-1
ES.2	Summary of Impacts and Mitigation Measures	ES-2
ES.3	Summary of Significant and Unavoidable, Growth-Inducing, and Cumulative Impacts	ES-9
ES.4	Summary of Plan and Policy Consistency	ES-10
ES.5	Summary of Alternatives to the Project	ES-10
ES.6	Significant Irreversible Environmental Changes	ES-12
ES.7	Areas of Known Controversy	ES-12
ES.8	Major Conclusions and Issues to be Resolved	ES-14
ES.9	Other Social and Economic Impacts Found not to be Significant	ES-16
ES.10	Mitigation Monitoring and Reporting Program	ES-16
ES.11	References	ES-31
Acro	nyms, Abbreviations, and Glossary	i
Acro	nyms and Abbreviations	i
Glos	sary	viii
1	Introduction	1-1
1.1	Planning and Project Review Process	1-1
1.2	Project History	1-2
1.3	Purpose of the EIR and Approach to Environmental Analysis	1-4
1.4	Responsible and Trustee Agencies	1-4
1.5	Notice of Preparation and Scoping	1-6
1.6	Organization of the EIR	1-8
2	Project Description	2-1
2.1	Introduction	2-1
2.2	Project Location	2-1
2.3	Background	2-4
2.4	Project Objectives	2-7
2.5	Project Elements and Design	2-8
2.6	Project Construction	2-26

2.7	Project Operation and Maintenance	2-42
2.8	Permits and Approvals	2-45
2.9	Distinction Between Review of Environmental Issues and Project Merits	2-46
2.10	References	2-46
3	Environmental Setting, Impacts, and Mitigation Measures	3-1
3.0	Introduction	3-1
3.1	Aesthetics and Visual Resources	3.1-1
3.2	Air Quality	3.2-1
3.3	Biological Resources	3.3-1
3.4	Cultural Resources	3.4-1
3.5	Energy	3.5-1
3.6	Geology and Soils	3.6-1
3.7	Greenhouse Gas Emissions	3.7-1
3.8	Hazards and Hazardous Materials	3.8-1
3.9	Hydrology and Water Quality	3.9-1
3.10	Noise	3.10-1
3.11	Public Services	3.11-1
3.12	Recreation	3.12-1
3.13	Transportation and Circulation	3.13-1
3.14	Tribal Cultural Resources	3.14-1
3.15	Utilities and Service Systems	3.15-1
3.16	Agriculture and Forestry Resources, Mineral Resources, Land Use and Planning, Population and Housing, Wildfire, and Socioeconomics	3.16-1
4	Growth-Inducing and Cumulative Effects	4-1
4.1	Growth Inducement Potential and Secondary Effects of Growth	4-1
4.2	Significant Irreversible Changes	4-1
4.3	Cumulative Impacts	4-2
4.4	Cumulative Impact Analysis	4-15
4.5	References	4-35
5	Alternatives	5-1
5.1	Introduction	5-1
5.2	Approach to Alternatives Selection	5-2
5.3	Alternatives Selected for Analysis in the EIR	5-13
5.4	Comparison of Alternatives	5-51

5.5	Environr	nentally Superior Alternative	5-59
5.6	Referen	ces	5-59
6	Report P	reparation	6-1
6.1	List of P	reparers	6-1
6.2	Agencie	s and Organizations Contacted	6-3
List	of Tabl		
			EC 12
Table	ES- 1 2	Summary of Scoping Comments and Areas of Potential Controversy Summary of Impacts and Mitigation for the Project	
Table	_	Summary of Scoping Comments	
Table		Corte Madera Creek Units within the Project Area	
Table		Proposed Project Elements by Creek Unit	
Table		Temporary Work Area and Permanent Modifications by Element	
	2.6-2	Tree Removal by Unit	
	2.6-3	Estimated Cut and Fill Volumes	
	2.6-4	Tree Planting List	_
	2.6-5	Construction Schedule	
	2.6-6	Project Truck Trip Estimates	
Table		Construction Water Requirements	
Table		Required Permits or Approvals for the Project	
Table		Aesthetics and Visual Resources Scoping Comments	
	3.1-2	Approach to Determining Significance of Visual Impacts	
Table		Air Quality Scoping Comments	
	3.2-2	NAAQS and CAAQS for Criteria Air Pollutants and SFBAAB Attainment Status	
	3.2-3	Air Quality Data Summary (2014–2018) for the Project Vicinity	
	3.2-4	Significance Thresholds	
	3.2-5	Estimated Construction Emissions (Pounds)	
	3.2-6	Estimated Average Daily Operational Emissions (Pounds/Day)	
Table	-	Estimated Unmitigated Construction Health Risk	
Table		Estimated Mitigated Construction Health Risk	
Table	3.2-9	Estimated Unmitigated Operational Health Risk	
Table		Biological Resources Scoping Comments	
	3.3-2	Habitat Types within Project Area (acres)	
	3.3-3	Special-Status Species with a Low, Moderate, or High Likelihood to Occur	
		in the Project Area	3.3-20
Table	3.3-4	Sensitive Natural Communities with a Low, Moderate, or High Likelihood to	0.0 _0
		Occur in the Project Area	3.3-26
Table	3.4-1	Cultural Resources Scoping Comments	
	3.4-2	NWIC Records Search Results – Resources	
	3.4-3	NWIC Records Search Results – Studies in the APE	
	3.4-4	Built Environment Resources Identified by the USACE	
Table		Built Environment Resources Evaluated for the Current Project	
Table		Geology and Soils Scoping Comments	
_		· ·	

Table 3.7-1	Greenhouse Gas Emissions Scoping Comments	3.7-1
Table 3.7-2	Greenhouse Gas Emissions Sources and GWP	
Table 3.7-3	California Greenhouse Gas Inventory	3.7-5
Table 3.7-4	SFBAAB Greenhouse Gas Inventory	
Table 3.7-5	SFBAAB Greenhouse Gas Inventory (Percent)	3.7-6
Table 3.7-6	Marin County Greenhouse Gas Inventory	
Table 3.7-7	Estimated GHG Emissions (metric tons CO2e)	3.7-13
Table 3.7-8	Consistency with Applicable State Greenhouse Gas Reduction Strategies	3.7-15
Table 3.7-9	Consistency with Applicable Local Greenhouse Gas Reduction Policies,	
	Actions, and Programs	3.7-16
Table 3.8-1	Hazards and Hazardous Materials Scoping Comments	3.8-1
Table 3.8-2	Hazardous Sites Within 0.25 Mile of Project Area	
Table 3.9-1	Hydrology and Water Quality Scoping Comments	3.9-1
Table 3.9-2	Comparison of Peak Flood Discharges	
Table 3.9-3	San Francisco Bay Sea Level Rise Estimates	3.9-20
Table 3.9-4	Beneficial Uses and Impairment Status	3.9-22
Table 3.9-5	Projects Included in Future Condition Scenarios	3.9-36
Table 3.9-6	Project Impacts on Beneficial Uses	
Table 3.9-7	Summary of Project Flood Reduction Benefits, Existing Condition Scenario,	
	25-Year Event	3.9-62
Table 3.10-1	Noise Scoping Comments	1
Table 3.10-2	Approximate Relationship Between Increases in Environmental Noise Level	
	and Human Perception	4
Table 3.10-3	Approximate Reaction of People and Damage to Buildings from Construction	
	Vibration Levels	7
Table 3.10-4	Ambient Noise Levels at Noise Monitoring Locations	9
Table 3.10-5	Sensitive Receptors within 1,000 Feet of the Project Area	11
Table 3.10-6	Town of Ross and Marin County Municipal Code Construction Requirements	15
Table 3.10-7	Maximum Noise Levels Generated by Construction Equipment	16
Table 3.10-8	Estimated Noise from Equipment Required for Construction Phases	17
Table 3.10-9	Vibration Thresholds	22
Table 3.10-10	Vibration Velocities for Construction Equipment	22
Table 3.11-1	Public Services Scoping Comments	1
Table 3.12-1	Recreation Scoping Comments	3.12-1
Table 3.12-2	Parks and Recreational Facilities Located near the Town of Ross and Kentfield	
	Area	
Table 3.13-1	Transportation and Circulation Scoping Comments	1
Table 3.13-2	Applicable Transportation Programs, Plans, and Policies	9
Table 3.14-1	Tribal Cultural Resources Scoping Comments	
Table 3.14-2	Native American AB 52 Consultation	2
Table 3.16-1	General Plan Land Use Designations and Zoning in Project Vicinity	3.16-3
Table 3.16-2	Population and Growth Rates of Marin County and Town of Ross	3.16-4
Table 3.16-3	Marin County Housing Demographics	3.16-4
Table 3.16-4	Applicable Land Use Policies Adopted to Avoid or Mitigate an Environmental	
	Effect	
Table 4.3-1	Projects Considered in Cumulative Impact Analysis	4-5

Table 4.4-1	Estimated Cumulative Health Risk at the Maximally Exposed Individual Receptor	
Table 5.2-1	Alternatives Screening Results	
Table 5.3-1	Alternatives Areas of Comparison	
Table 5.3-2 Table 5.3-3	Alternative 1 Estimated Unmitigated Construction Health Risk	
Table 5.4-1	Alternative 1 Estimated Mitigated Construction Health Risk	
	Comparison of Alternatives and Environmental Considerations	
Table 6.1-1	Marin Flood Control District and Planning Department	
Table 6.1-2 Table 6.2-1	Consultant TeamsAgencies and Organizations Consulted	
Table 0.2-1	Agencies and organizations consulted	0-ა
List of Figu	res	
Figure ES-1	Project Location	ES-3
Figure ES-2	Project Elements (Map 1 of 3)	ES-5
Figure ES-3	Project Elements (Map 2 of 3)	ES-6
Figure ES-4	Project Elements (Map 3 of 3)	ES-7
Figure 2.2-1	Project Location	
Figure 2.2-2	USACE Creek Units	
Figure 2.3-1	Ross Valley Flood Protection and Watershed Project Study Work Plan Timeline	
Figure 2.3-2	Corte Madera Creek Historical Annual Peak Discharges	
Figure 2.5-1	Project Elements (Map 1 of 3)	
Figure 2.5-2	Project Elements (Map 2 of 3)	
Figure 2.5-3	Project Elements (Map 3 of 3)	
Figure 2.5-4	Frederick Allen Park Site Plan	
Figure 2.5-5	Stormwater Pump Station Plan View	
Figure 2.5-6	Stormwater Pump Station Cross-Section View	
Figure 2.5-7	Proposed Fish Pool Design	
Figure 2.5-8	Lower College of Marin Concrete Channel Removal Habitat Creation	
Figure 2.6-1	Staging, Stockpile, and Temporary Work Areas	
Figure 2.6-2	Tree Removal Unit 4 and Frederick Allen Park	
Figure 2.6-3	Tree Removal Unit 3	
Figure 2.6-4	Tree Removal Unit 2	
Figure 2.6-5	Tree Removal Lower College of Marin Concrete Channel Removal Unit 2	
Figure 2.6-6	Project Access	
Figure 3.1-1	Representative Photograph and Key Observation Point Location Map	
Figure 3.1-2	Photograph 1: View of Unit 4 from Lagunitas Road Bridge, Looking Southeast	
Figure 3.1-3	Photograph 2: View of Unit 3, Frederick Allen Park, Looking Southeast	3.1-8
Figure 3.1-4	Photograph 3: View of Unit 3, Frederick Allen Park, Looking Southeast from	
	Marin County Bicycle Route 20	3.1-8
Figure 3.1-5	Photograph 4: View of Upper Unit 3 Fish Pools from Kentfield Hospital Bridge,	04.
Fig. 1. 0.4.6	Looking Southeast	3.1-8
Figure 3.1-6	Photograph 5: View of Unit 3 From Marin County Bicycle Route 20, Looking	010
Fig. 120 0 1 7	Northeast at Proposed Pumping Station Location	
Figure 3.1-7	Photograph 6: View of Lower Unit 3 from Science-Math-Nursing Building Bridge,	
	Looking Northwest	ა. I-9

Figure 3.1-8	Photograph 7: View of Unit 2 from Marin County Bicycle Route 20 near	
	Stadium Way Bridge, Looking South	3.1-9
Figure 3.1-9	Photograph 8: View of Unit 2 from Bike Route 20, Looking South from Left Bank	3.1-9
Figure 3.1-10	Photograph 9: View of Unit 2 from Unnamed Path Adjacent to College of	
	Marin Athletic Fields, Looking Northwest from Right Bank	3.1-10
Figure 3.1-11	KOP 1: Existing View of Frederick Allen Park, Unit 3	3.1-34
Figure 3.1-12	KOP 1: Visual Simulation of Frederick Allen Park, One Year After Construction	3.1-35
Figure 3.1-13	KOP 1: Simulation of Frederick Allen Park, 10 Years After Construction	3.1-36
Figure 3.1-14	KOP 1: Simulation of Frederick Allen Park, 20 Years After Construction	3.1-37
Figure 3.1-15	KOP 2: Existing View of Pump Station Location, Unit 3	3.1-38
Figure 3.1-16	KOP 2: Visual Simulation of Pump Station, Unit 3	3.1-39
Figure 3.1-17	KOP 3: Existing View of Floodwall Location, Unit 2	3.1-40
Figure 3.1-18	KOP 3: Visual Simulation of Floodwall with Trees Removed, Unit 2	3.1-41
Figure 3.1-19	KOP 3: Visual Simulation of Floodwall with Trees Retained, Unit 2	3.1-42
Figure 3.1-20	Existing View of Lower College of Marin Concrete Channel Removal, Unit 2	3.1-43
Figure 3.1-21	Visual Simulation of Lower College of Marin Concrete Channel Removal, Unit 2.	3.1-44
Figure 3.2-1	San Francisco Bay Area Air Basin Boundary	
Figure 3.2-2	Sensitive Receptors within 1,000 Feet of the Project Area	
Figure 3.3-1	Habitat Types within Project Area (Map 1 of 3)	
Figure 3.3-2	Habitat Types within Project Area (Map 2 of 3)	
Figure 3.3-3	Habitat Types within Project Area (Map 3 of 3)	
Figure 3.6-1	Geologic Units	
Figure 3.6-2	Faults in the Local Region	
Figure 3.9-1	Corte Madera Creek – Waterbodies in Project Vicinity	
Figure 3.9-2	Corte Madera Creek Historical Peak Annual Discharge	
Figure 3.9-3.	Floodway and Tsunami Inundation Zones	
Figure 3.9-4	Project Changes in Velocity from Future Conditions, 10-Year Flood Event	
Figure 3.9-5	Project Changes in Velocity from Future Conditions, 25-Year Flood Event	
Figure 3.9-6	Project Changes in Velocity from Future Conditions, 100-Year Event	
Figure 3.9-7	Project Changes in Water Surface Elevation from Future Conditions,	
J	10-Year Flood Event	3.9-57
Figure 3.9-8	Project Changes in Water Surface Elevation from Future Conditions,	
· ·	25-Year Flood Event	3.9-58
Figure 3.9-9	Project Changes in Water Surface Elevation from Future Conditions,	
· ·	100-Year Flood Event	3.9-59
Figure 3.9-10	Reduction in Water Surface Elevation by Parcel, Existing Condition	
· ·	25-Year Flood Event	3.9-65
Figure 3.10-1	Typical Noise Levels	
Figure 3.10-2	Point Source Spreading with Distance	
Figure 3.10-3	Noise Measuring Sites and Sensitive Receptors within 1,000 Feet of the	
J	Project Area	. 3.10-10
Figure 3.12-1	Recreational Facilities	
Figure 3.12-2	Parks and Recreational Facilities in the Project Area	
Figure 3.13-1	Local Transportation Network	
Figure 3.15-1	Utilities and Service Systems in the Project Area (Map 1 of 3)	
Figure 3.15-2	Utilities and Service Systems in the Project Area (Map 2 of 3)	
-		

Figure 3.15-3	Utilities and Service Systems in the Project Area (Map 3 of 3)	3.15-5
Figure 4.3-1	Cumulative Projects Locations	4-14
Figure 5.3-1	Alternative 1: Reduced Footprint-Avoid Frederick Allen Park	5-20
Figure 5.3-2	Alternative 1 Changes in Velocity from Future Conditions - 10-Year Flood Event	5-27
Figure 5.3-3	Alternative 1 Changes in Velocity from Future Conditions - 25-Year Flood Event	5-28
Figure 5.3-4	Alternative 1 Changes in Velocity from Future Conditions - 100-Year Flood Event.	5-29
Figure 5.3-5	Alternative 1 Changes in Water Surface Elevation, Future Conditions,	
	10-Year Flood Event	5-30
Figure 5.3-6	Alternative 1 Changes in Water Surface Elevation, Future Conditions,	
	25-Year Flood Event	5-31
Figure 5.3-7	Alternative 1 Changes in Water Surface Elevation, Future Conditions,	
	100-Year Flood Event	5-32
Figure 5.3-8	Difference in Future Water Surface Elevation Between Alternative 1 and	
	Proposed Project – 100-Year Flood Event	5-33
Figure 5.3-9	Alternative 2 Layout	5-39
Figure 5.3-10	Alternative 2 Visual Representation Looking North from the Tennis Courts at	
	Frederick Allen Park	5-40

List of Appendices

Appendix A	Notice of Preparation and Scoping Summary Report
Appendix B	Tree Removal Table and Landscaping Planting Plans
Appendix C	Air Quality Supporting Information
Appendix D	Biolological Resouces Supporting Information
Appendix E	Supplemental Water Surface Elevation Change Maps
Appendix F	Tribal Consultation Supporting Information
Appendix G	Mitigaiton Monitoring and Reporting Program

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Acronyms, Abbreviations, and Glossary

Acronyms and Abbreviations

μPa micro-Pascals

AB Assembly Bill

ABAG Association for Bay Area Governments

ACC Advanced Clean Cars

BAAQMD Bay Area Air Quality Management District

Basin Plan Water Quality Control Plan

Bay Area San Francisco Bay Area

BMPs best management practices

CAA Clean Air Act

CAAQS California Ambient Air Quality Standards

CalRecycle California Department of Resources Recycling and Recovery

Cal OSHA California Occupational Safety and Health Administration

CalEEMod California Emissions Estimator Model®

CANAGPRA California Native American Graves Protection and Repatriation Act

CARB California Air Resources Board

CBC California Building Code

CCAA California Clean Air Act

CCC Central California Coast

CCR California Code of Regulations

CDFW California Department of Fish and Wildlife

CEC California Energy Commission

CESA California Endangered Species Act

CEQA California Environmental Quality Act

cfs cubic feet per second

CGS California Geological Survey

CH₄ methane

CIP Capital Improvement Plan

CMCFCP Corte Madera Creek Flood Control Project

CMP Congestion Management Program

CNEL Community Noise Equivalent Level

CNDDB California Natural Diversity Database

CNPS California Native Plant Society

CO₂e equivalent CO₂

COM College of Marin

COPCs contaminants of potential concern

CPUC California Public Utilities Commission

CRPR California Rare Plant Rank

CRS Community Rating System

CUPA Certified Unified Program Agency

CWA Clean Water Act

cy cubic yard

dB decibels

dBA A-weighted sound levels

dbh diameter at breast height

DPM diesel particulate matter

DTSC Department of Toxic Substances Control

EAP Energy Action Plan

EFH Essential Fish Habitat

EIR Environmental Impact Report

EIS Environmental Impact Statement

ER Engineering Regulation

ESCP erosion and sediment control plan

ESLs Environmental Screening Levels

ESU Evolutionarily Significant Unit

EWOP Existing Condition without Project

EWP Existing Condition with Project

FDS flood diversion and storage

FESA Federal Endangered Species Act

FHWG Fisheries Hydroacoustic Working Group

FIGR Federated Indians of Graton Rancheria

FWOP Future Condition without Project

FWP Future Condition with Project

g gravity

GASGEM California Statewide Groundwater Elevation Monitoring

GHG greenhouse gas

GWP global warming potential

GPS global positioning system

HCP Habitat Conservation Plan

HFCs hydrofluorocarbons

HMBP Hazardous Materials Business Plan

HWMs high water marks

Hz Hertz

I-580 Interstate 580

in/sec inches per second

IPCC International Panel on Climate Change

IWMA Integrated Waste Management Act

KFPD Kentfield Fire Protection District

KOPs key observation points

LCFS Low Carbon Fuel Standard

Leq Equivalent Sound Level

LEV Low-Emission Vehicle

L_{dn} Day-Night Average Level

LID low-impact development

L_{max} Maximum Sound Level

L_{min} Minimum Sound Level

LOS Level of Service

MBTA Migratory Bird Treaty Act

MCE Maximum Credible Earthquake

MCSTOPPP Marin County Stormwater Pollution Prevention Program

MMWD Marin Municipal Water District

MPOs Metropolitan Planning Organizations

MS4s Small Municipal Separate Storm Sewer Systems

msl mean sea level

MTC Metropolitan Transportation Commission

MTCO₂e metric tons of CO₂ equivalent

N₂O nitrous oxide

NAHC Native American Heritage Commission

NCCP Natural Community Conservation Plan

NFIP National Flood Insurance Program

NGVD National Geodetic Vertical Datum

NMFS National Marine Fisheries Service

NOI notice of intent

NOP Notice of Preparation

NPDES National Pollutant Discharge Elimination System

NRHP National Register of Historic Places

NTDE National Tidal Datum Epoch

OPR Office of Planning and Research

OSHA Occupational Safety and Health Administration

PBF physical or biological features

PFCs perfluorocarbons

PGA peak ground acceleration

PG&E Pacific Gas and Electric

PPV peak particle velocity

PRDs permit registration documents

Program Ross Valley Watershed Flood Protection and Watershed Program

RCRA Resource Conservation and Recovery Act

RVFD Ross Valley Fire Department

RWQCB Regional Water Quality Control Board

SAFZ San Andreas Fault Zone

SARA Superfund Amendments and Reauthorization Act

SCAQMD South Coast Air Quality Management District

SCS Sustainable Communities Strategy

SEL sound exposure levels

sf square feet

SF₆ sulfur hexafluoride

SFBAAB San Francisco Bay Area Air Basin

SFHA Special Flood Hazard Areas

SIP State Implementation Plan

SLC seal level change

SMN Science-Math-Nursing building

SMP Stream Maintenance Program

SOD Sudden Oak Death

SPF standard project flood

SPL sound pressure level

SRA State Responsibility Area

SWPPP Stormwater Pollution Prevention Plan

SWRCB State Water Resources Control Board

The District Marin County Flood Control and Water Conservation District

The project Corte Madera Creek Flood Risk Management Project, Phase 1

TACs toxic air contaminants

TCP traditional cultural property

TMDL Total maximum Daily Load

TMP Traffic Management Plan

TSCA Toxic Substances Control Act

TTLCs Total Threshold Limit Concentrations

US 101 U.S. Highway 101

USACE U.S. Army Corps of Engineers

USDOT U.S. Department of Transportation

USEPA U.S. Environmental Protection Agency

USGS U.S. Geological Survey

VbD vibration decibels

VHFHSZ very high fire hazard severity zones

VMT vehicle miles traveled

WDRs Waste District Requirements

WSE water surface elevation

Glossary

100-year flood event: A flood that statistically has a one-percent chance of occurring in any given year.

Aggradation: The act of raising the grade or level of a stream bed by depositing detritus, sediment, or the like.

Alluvial strata: Consists of unconsolidated mixtures of gravel, sand, clay, and silt typically deposited by streams.

Anadromous: Characterizes the life cycle of a fish that spawns in fresh water and spends a significant portion of its adult life in the ocean. Salmon and steelhead are anadromous.

A-weighted decibel (dBA): Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," expressed as "dBA." The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies.

Backwater flooding: Upstream flooding caused by downstream conditions such as channel restriction and/or high flow in a downstream confluence stream.

Bankfull: The term bankfull refers to the water level stage that just begins to spill out of the channel into the floodplain.

Beneficial reuse: The use of byproducts or waste materials rather than discarding them.

Coarse sediment load: Particulate sediment, varying in size from sand to gravel, that is carried in the body of the flow.

Cofferdam: A watertight enclosure pumped dry to permit construction work below the waterline.

Dam inundation area: The specific areas of land that would become flooded and covered with water if a particular dam were to break or fail.

Emergent groundwater: Groundwater that emerges to the surface of the ground naturally, by an increase in infiltration from stormwater or other water source.

Floodplain: An area of low-lying ground adjacent to a river, formed mainly of river sediments and subject to flooding.

Floodwalls: A primarily vertical artificial barrier designed to temporarily contain the waters of a river or other waterway that may rise to unusual levels during seasonal or extreme weather events.

Groundwater basin: An area underlain by permeable materials capable of furnishing a significant supply of groundwater to wells or storing a significant amount of water.

Hydraulic capacity: The amount of water that can pass through a structure or watercourse.

Hydraulic constriction: A short reach of a creek where the cross-section is reduced.

Left bank: refers to the east or north side of the channel.

Level of service (LOS): A qualitative description of a facility's performance based on average delay per vehicle, vehicle density, or volume-to-capacity ratios. Levels of service range from LOS A, which indicates free-flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays.

Manning's 'n' factor: The Manning's 'n' is a coefficient which represents the roughness or friction applied to the flow by the channel.

Perennial safe yield: The amount of groundwater that can be withdrawn from a groundwater basin over a period of time without exceeding the long-term recharge of the basin or unreasonably affecting the basin's physical and chemical integrity.

Regulatory floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Right bank: Refers to the west or south side of the channel.

Riparian: The land adjacent to a natural watercourse such as a river or stream. Riparian areas support vegetation that provides important wildlife habitat as well as important fish habitat when sufficient to overhang the bank.

Scour protection: Rock, riprap, or similar materials added to edge of a waterway to protect the banks.

Sediment deposition: The process by which sediment, including soil and rocks, is deposited on the creek bottom due to a loss of kinetic energy in the water.

Sheetflow flooding: Floodwater flows that spread out over a large area at a uniform depth.

Special-status species: Several species known to occur within the general region of the program area are accorded "special status" because of their recognized rarity or vulnerability to habitat loss or population decline. Some of these species receive specific protection in federal and/or state endangered species legislation. Others have been designated as "sensitive species" or "species of special concern" on the basis of adopted policies of federal, state, or local resource agencies. These species are referred to collectively as "special-status species."

Streamflow gage: A tool to measure stream-water height and thereby measure the amount of water in the stream.

Threshold conveyance capacity: The flow a creek channel can contain before overtopping its banks.

Vegetated soil lift: A vegetated soil lift consists of soil encapsulated or wrapped in a facing element or fabric such as a rolled erosion control product, or a combination of erosion control products, that also act a reinforcing element.

Watershed: The region or area drained by a river, stream, etc.; drainage area.