

Appendix E: Example Data Sources

The tables below provide example data sources that the user could use to develop their conceptual model and develop flow-ecology relationships.

Table 1. Example data sources describing biological conditions.

Existing Dataset/information	Spatial Coverage	Biota Covered	Source
PISCES	Statewide	All native fish	UC Davis
Regional Native Fish Assemblages and Umbrella Species	Statewide	Umbrella fish species for each region of California	Appendix H
Surface Water Ambient Monitoring Program (SWAMP)	Statewide and regional	Surface water bodies and associated ecological conditions	State Water Board
United States Forest Service (USFS) Region 5 clearinghouse	National	Ecology on Forest Service lands	USFS
California Freshwater Species Database	Statewide	Freshwater species	The Nature Conservancy
California Natural Diversity Database, Biogeographic Information and Observation System	Statewide	Rare species and general species distribution data	CDFW
Nature Serve	Varies	Birds, fishes, amphibians, reptiles	Nature Serve
Local reports and data	Local	Varies	Resource Conservation Districts
State and Federal recovery plans	Species' ranges	Listed species	USFWS, NMFS
Museum records	Varies	Various	Museums
Citizen science data (e.g., iNaturalist)	Varies	Various	Citizen science groups (frequently organized by non-profit organizations)

Table 2. Example data sources describing geomorphic and hydraulic conditions.

Dataset Name	Source	Description
Geomorphic Classification	CEFF (dataset), Appendix F	Statewide classification for all streams based on geomorphic characteristics of the channel and valley
SWAMP Physical Habitat (PHAB) dataset	State Water Board (dataset)	Statewide database of physical habitat condition at bioassessment sites

Local data/surveys	Local and regional government; USFS stream condition inventory (SCI) surveys (datasets)	Regional and local data could include topographic channel surveys, habitat characterization, SCI surveys, and experimental studies to determine habitat thresholds
RiverBuilder	CEFF (tool)	Statistical generator of terrain for creating archetypes of geomorphic classes
TuFlow, HSUs, CONCEPTS	(tool)	Hydraulic numerical models can be used with geomorphic characteristics of the stream to simulate hydraulic conditions

Table 3. Example data sources describing land use.

Dataset Name	Source	Description
National Land Cover Database	Multi-Resolution Land Characteristics Consortium	This database provides nationwide data on land cover and land cover change, with 16 land cover types, at a 30m resolution. This database also provides urban imperviousness data.
National Resources Inventory	United States Department of Agriculture (USDA)	These data provide information on land use and natural resource conditions and trends on U.S. non-Federal lands.
Southern California Association of Governments (SCAG) land use data	SCAG	This dataset provides land use policy (general plan) and zoning information for Southern California counties.
Local planning data	Regional/local governments, resource/soil/conservation districts, local watershed councils, non-profits	Regional or local data could include watershed plans, master and general plans, zoning ordinances, environmental impact reviews and/or assessments.

Table 4. Example data sources describing water management infrastructure.

Dataset Name	Source	Description
National Inventory of Dams	US Army Corps of Engineers	Database documenting locations of dams in the United States.
Water Data Library	DWR	Database documenting the location of surface and groundwater monitoring locations, as well as water quality monitoring sites.
Electronic Water Rights Information Management System (eWRIMS)	State Water Board	Database documenting water rights and water use information in California. Contains information on Statements of Water Diversion and Use that have been filed by water diverters, as well as registrations, certificates, and water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors.

Flow Agreements	FERC	Negotiated agreements contain information about dams, diversions, and scheduled water releases.
Groundwater Sustainability Plans (GSPs)	Groundwater sustainability agencies	GSPs contain information providing current conditions and context related to groundwater and groundwater-surface water interactions in a given area.
Passage Assessment Database	CDFW	A spatial inventory of barriers to anadromous fish migration in California.
Local datasets	Regional/local governments, resource/soil/conservation districts, local watershed councils, non-profits	Regional or local data could include watershed plans, master and general plans, zoning ordinances, environmental impact reviews and/or assessments.

Table 5. Example data sources describing water quality conditions.

Dataset Name	Source	Description
Water quality portal	United States Environmental Protection Agency (US EPA), United States Geological Survey (USGS), and National Water Quality Monitoring Council (NWQMC)	Federal database of water quality, integrating publicly available water quality data from USGS NIWIS, EPA STORET, and USDA's STEWARTS
National Water Information System (NWIS)	USGS	National database of water quality observations including specific conductance, temperature, dissolved oxygen, and pH
SWAMP	State Water Board	Statewide database of long-term water quality monitoring
California Environmental Data Exchange Network (CEDEN)	State Water Board	Statewide data system for surface water quality in California