

**APPENDIX C**  
**STUDY AREA DESCRIPTIONS**

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## APPENDIX C

### 1.0 STUDY AREA DESCRIPTIONS

This appendix contains detailed descriptions of each of the 10 areas studied and analyzed for the Arid West Water Quality Research Project Habitat Characterization Study. Each of these descriptions includes the following information:

- *Study Area Overview* – Describes the study area and its U.S. Environmental Protection Agency-defined ecoregion, including climate, geography, historic flow patterns, historic land uses, and characteristic plant and animal species.
- *Water Quality Standards* – Defines the designated uses for the study reaches and water quality standards that apply for those designated uses.
- *Wastewater Treatment Plants Discharging to the Study Area* – Identifies wastewater treatment facilities that discharge to each study reach, provides selected National Pollutant Discharge Elimination System permit parameters for the facilities, presents historic data on effluent quality for each facility, describes each facility's treatment processes in place, and describes each facility's discharge pattern and effluent reuse programs in place.
- *Physical Data Overview* – Summarizes available hydrological and geomorphological data and summarizes the geomorphological site reconnaissance effort.
- *Physical Analysis* – Provides an analysis of available data and the site reconnaissance effort, including a flow assessment and depth and velocity information for the study reach.
- *Chemical Data Overview* – Summarizes available chemical data for the study reach.
- *Chemical Analysis* – Identifies the gaging stations used in the chemical analysis, summarizes the chemical data available at these stations, and describes results of the different assessment methods used to characterize data during the site reconnaissance.
- *Aquatic Habitat and Species Overview* – Summarizes historical fish community data available for the study area and their relevance to this project and summarizes the site reconnaissance summary, including a comparison of the results of habitat scoring

methods, evaluation of the aquatic community, and summary of changes in the macroinvertebrate community downstream of the effluent outfall.

- *Aquatic Biology Analysis* – Compares historical data to data collected during the site reconnaissance effort, including a comparison of methods and comparison of data sets, and presents the results of the data analysis.
- *Terrestrial Habitat and Species Overview* – Summarizes available data on terrestrial species and habitat as well as the terrestrial biology site reconnaissance efforts.
- *Terrestrial Biology Analysis* – Presents the results of the data review and site reconnaissance efforts, including a characterization of the study area in terms of the riparian classification system.

Each of these study area descriptions is presented herein as a separate report, with its own Table of Contents and supporting tables and figures. Each study area description can also be accessed by clicking on the following links:

- **Study Area 1** – Salt and Gila Rivers Near Phoenix, Arizona
- **Study Area 2** – Santa Cruz River Near Nogales, Arizona
- **Study Area 3** – Santa Cruz River Near Tucson, Arizona
- **Study Area 4** – Santa Ana River Near San Bernardino, California
- **Study Area 5** – Fountain Creek Near Colorado Springs, Colorado
- **Study Area 6** – South Platte River Near Denver, Colorado
- **Study Area 7** – Las Vegas Wash Near Las Vegas, Nevada
- **Study Area 8** – Santa Fe River Near Santa Fe, New Mexico
- **Study Area 9** – Carrizo Creek Near Carrizo Springs, Texas
- **Study Area 10** – Crow Creek Near Cheyenne, Wyoming

The hydrological, chemical, and aquatic biological data that were gathered from the reconnaissance visits and from the historical record has been retained in the original Excel spreadsheets. These can be found in **Appendix R**.