

APPENDIX C—CONSTITUENTS OF CONCERN IN LOWER SAN JOAQUIN RIVER

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|--------------|--|---------------------------------|---------------------------------|----------------------------|-------------------------------|---------|---------------------------------|----------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| FIELD | | | | | | | | | | | | | | |
| DO | ILRP annual report | | ILRP, NPDES | DWR, SFEI, USGS | C | DWR | C | USGS/DWR | C | DWR | C | DWR | M | DWR |
| EC | 303(d) Integrated Report, ILRP annual report, Central Valley Water Board One-day Synoptic, Sanitary Survey | TMDL (2019 expected completion) | DDW, ILRP, NPDES | DWR, GBP, SFEI, USBR, USGS | C | DWR | C | USGS/DWR | C | DWR | C | DWR | M | DWR |
| pH | Central Valley Water Board One-day Synoptic | | DDW, ILRP, NPDES | DWR, GBP, USGS | C | DWR | C | USGS/DWR | C | DWR | C | DWR | M | DWR |
| Temperature | 303(d) Integrated Report | TMDL (2021 expected completion) | ILRP, NPDES | DWR, GBP, SFEI, USBR, USGS | C | DWR | C | USGS/DWR | C | DWR | C | DWR | M | DWR |
| Turbidity | Central Valley Water Board One-day Synoptic, Sanitary Survey | | DDW, ILRP, NPDES | DWR, USBR, USGS | C | DWR | C | USGS/DWR | C | DWR | C | DWR | M | DWR |

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|---------------------|---|---------------------------------|---------------------------------|--------------------------|-------------------------------|---------|---------------------------------|---------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| GENERAL CHEM | | | | | | | | | | | | | | |
| Boron | 303(d) Integrated Report, ILRP annual report, Central Valley Water Board One-day Synoptic | TMDL (2019 expected completion) | ILRP, NPDES | GBP, USGS | D | GBP | W | USGS | | | M | NPDES | | |
| Chloride | Central Valley Water Board One-day Synoptic | | DDW, NPDES | DWR | | | M | NPDES | | | C | DWR | M | DWR |
| Perchlorate | Central Valley Water Board One-day Synoptic | | DDW | | | | | | | | | | A | DDW |
| Sodium | Central Valley Water Board One-day Synoptic | | DDW | DWR | | | | | | | BW | DWR | A | DDW |
| Sulfate | Central Valley Water Board One-day Synoptic | | DDW, NPDES | DWR | | | M | NPDES | | | C | DWR | Q | NPDES |
| TDS | ILRP annual report, Central Valley Water Board One-day Synoptic, Sanitary | | DDW, NPDES | DWR | | | M | NPDES | | | BW | DWR | M | DWR |

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|-------------------|--|---------------------------------|---------------------------------|--------------------------|-------------------------------|-------------|---------------------------------|---------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| | Survey | | | | | | | | | | | | | |
| BACTERIA | | | | | | | | | | | | | | |
| <i>E. coli</i> | ILRP annual report, Central Valley Water Board One-day Synoptic, Sanitary Survey | TMDL (2021 expected completion) | ILRP, NPDES | | O ^A | ILRP | O | ILRP | | | O | NPDES | | |
| METALS | | | | | | | | | | | | | | |
| Aluminum (Total) | Central Valley Water Board One-day Synoptic | | DDW, NPDES, SWAMP | SFEI | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| Arsenic | Sanitary Survey | TMDL (2021 expected completion) | DDW, ILRP, NPDES, SWAMP | SFEI | O/T BD | SWAMP /ILRP | M | NPDES | | | M | NPDES | Q | NPDES |
| Iron (Total) | Central Valley Water Board One-day Synoptic | | DDW, NPDES | SFEI | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Manganese (Total) | Central Valley Water Board One-day Synoptic | | DDW, NPDES, SWAMP | SFEI | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| Mercury | 303(d) Integrated Report | TMDL (2021 expected completion) | DDW, NPDES, SWAMP | SFEI | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|------------------------------------|--|---------------------------------|---------------------------------|--------------------------|-------------------------------|---------|---------------------------------|---------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| Selenium | 303(d) Integrated Report | TMDL | DDW, ILRP, NPDES | GBP, USGS | D | GBP | M | NPDES | | | M | NPDES | Q | NPDES |
| ORGANICS | | | | | | | | | | | | | | |
| alpha-BHC/alpha-HCH | 303(d) Integrated Report | TMDL (2022 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Bis (2-ethylhexyl) phthalate | Central Valley Water Board One-day Synoptic | | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Trihalomethanes | Central Valley Water Board One-day Synoptic | | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| NUTRIENTS | | | | | | | | | | | | | | |
| Total Nitrogen | Sanitary Survey | | NPDES | DWR, GBP, SFEI | | | | | | | M | DWR | M | DWR |
| PESTICIDES/LEGACY CHEMICALS | | | | | | | | | | | | | | |
| Chlorpyrifos | 303(d) Integrated Report, ILRP annual report | TMDL | ILRP, SWAMP | | M | ILRP | M | NPDES | O | ILRP | M | NPDES | Q | NPDES |
| DDE | 303(d) Integrated Report, ILRP annual report | | ILRP, NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| DDT | 303(d) Integrated | TMDL (2011 | ILRP, NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|--------------------|--|---------------------------------|---------------------------------|--------------------------|-------------------------------|---------|---------------------------------|---------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| | Report, ILRP annual report | expected completion) | | | | | | | | | | | | |
| Diazinon | 303(d) Integrated Report | TMDL | ILRP, NPDES | | M | ILRP | M | NPDES | O | ILRP | M | NPDES | Q | NPDES |
| Dimethoate | ILRP annual report | | ILRP | | O | ILRP | | | | | | | | |
| Diuron | 303(d) Integrated Report, ILRP annual report | TMDL (2021 expected completion) | ILRP, NPDES | | | | | | | | | | Q | NPDES |
| Aldrin | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Dieldrin | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| Chlordane | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| Endrin | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |
| Heptachlor | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Heptachlor epoxide | 303(d) Integrated | TMDL (2011 | NPDES | | O | SWAMP | M | NPDES | | | M | NPDES | Q | NPDES |

| Constituent | Reference Source | BMP/Control Program | Water Boards Monitoring Program | Other Monitoring Program | Monitoring Coverage | | | | | | | | | |
|--------------------|--------------------------|---------------------------------|---------------------------------|--------------------------|-------------------------------|---------|---------------------------------|---------|------------|---------|-----------------------------------|---------|---|---------|
| | | | | | SJR @ Sack Dam to Hills Ferry | | SJR @ Hills Ferry to Laird Park | | SJR @ Maze | | SJR @ Vernalis to Rough and Ready | | SJR @ Buckley Cove to City of Stockton intake | |
| | | | | | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program | Frequency | Program |
| | Report | expected completion) | | | | | | | | | | | | |
| Lindane | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Endosulfan (Total) | 303(d) Integrated Report | TMDL (2011 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| Toxaphene | 303(d) Integrated Report | TMDL (2021 expected completion) | NPDES | | | | M | NPDES | | | M | NPDES | Q | NPDES |
| TOXICITY | | | | | | | | | | | | | | |
| Unknown Toxicity | 303(d) Integrated Report | TMDL (2019 expected completion) | ILRP | | O | ILRP | O | SWAMP | | | O | NPDES | A | DDW |

Monitoring Frequency Key

- Indicates no monitoring
- A Annually
- BW Every other week
- C Continuous
- D Daily
- M Monthly
- O Other
- Q Quarterly
- TBD To be determined

Agency and Program Acronyms

- DDW Division of Drinking Water
- DWR Department of Water Resources
- GBP Grassland Bypass Project
- ILRP Irrigated Lands Regulatory Program
- NPDES National Pollutant Discharge Elimination System
- SFEI San Francisco Estuary Institute
- SWAMP Surface Water Ambient Monitoring Program
- TMDL Total Maximum Daily Load
- USBR U.S. Bureau of Reclamation
- USGS U.S. Geological Survey

