

San Joaquin River from High Ground to San Joaquin River Control Structure

Levees are the only SPFC facilities along this reach (see O&M Manual SJR601). The design capacity of this reach is 8,000 cfs based on the O&M manual. The right-bank levee begins at high ground on Road 21, about 9 miles upstream from the control structure. The left-bank levee begins at high ground about 7.5 miles upstream from the control structure. At the downstream end of the reach, flows are divided between the Chowchilla Bypass (see Section 3.3.1) and the San Joaquin River. The San Joaquin River Control Structure releases water into the San Joaquin River. The levees are maintained by the Lower San Joaquin Levee District.

San Joaquin River Control Structure

The San Joaquin River Control Structure (see O&M Manual SJR601B) is an SPFC facility, identical to the Chowchilla Bypass Control Structure. The structure has four gated bays, each 20 feet wide. Although the gates were designed for automatic operation, the gates are currently operated manually. Approach embankments connect the structure with the levee system. The San Joaquin River Control Structure operates in conjunction with the Chowchilla Canal Bypass Control Structure at the head of the Chowchilla Bypass. The San Joaquin River downstream from the control structure for about 33 miles to near the Sand Slough Control Structure has no SPFC facilities.

San Joaquin River from Control Structure to Fresno Slough

There are no SPFC facilities along the San Joaquin River between the San Joaquin River Control Structure and Fresno Slough. The channel capacity downstream from the control structure is about 2,500 cfs. The Kings River Channel Improvement Project (see O&M Manuals SJR604 and SJR604A) is a non-SPFC project in the Tulare Lake Basin, but federally regulated flows enter the San Joaquin River. During flood release events from Pine Flat Reservoir, the majority of Kings River flows, up to 4,750 cfs, are diverted north into the San Joaquin River through the North Fork and James Bypass. The next 4,750 cfs flow through south through the Kings River. Any flood flows beyond that are evenly split between the James Bypass and the Kings River.



The Sand Slough Control Structure spills San Joaquin River water into the Eastside Bypass

San Joaquin River from Fresno Slough to San Joaquin River Structure at Sand Slough

While local levees extend on both banks of the San Joaquin River downstream from Mendota Dam to near Sand Slough, the only SPFC facilities are near the downstream end of the reach (see O&M Manual SJR601). A 2.2-mile-long right-bank levee and a 1.6-mile-long left-bank levee connect with the Eastside Bypass. The Sand Slough Control Structure spills San Joaquin River water into the bypass. Just upstream from the Sand Slough Control Structure, the San Joaquin River Structure controls flow into the San Joaquin River through operable gates. While the O&M manual describes the flow split between the bypass and the river, the San Joaquin River Structure has remained closed for many years because of limited channel capacity in the San Joaquin River. The design capacity of the San Joaquin River Structure is 1,500 cfs based on the O&M manual. SPFC facilities are maintained by the Lower San Joaquin Levee District.

San Joaquin River from San Joaquin River Structure to Mariposa Bypass

SPFC facilities (see O&M Manual SJR601) along this reach are levees just upstream from the junction with the Mariposa Bypass. The levee design capacity is 1,500 cfs based on the O&M manual. The right-bank levee extends 3 miles upstream from the junction and the left-bank levee extends 2 miles upstream from the junction. Levees are maintained by Lower San Joaquin Levee District.



The design capacity of the San Joaquin River increases downstream from the Mariposa Bypass

San Joaquin River from Mariposa Bypass to Eastside Bypass

SPFC facilities (see O&M Manual SJR601) are levees along both sides of the river. The design capacity of this reach is 10,000 cfs based on the O&M manual. The levees are each about 7 miles long, and maintained by Lower San Joaquin Levee District.

San Joaquin River from Eastside Bypass to Merced River

The San Joaquin River and the Eastside Bypass join about 11.5 miles upstream from the Merced River. SPFC facilities (see O&M Manual SJR601) along this reach include levees. The design capacity of this reach is 26,000 cfs based on the O&M manual. The right-bank levee is continuous from the junction with the Eastside Bypass to the overflow area of the Merced River. The left-bank levee extends from the Eastside Bypass to Salt Slough, about 6 miles downstream. This levee extends upstream on the right bank of Salt Slough for about 2.5 miles. Levees are maintained by Lower San Joaquin Levee District.

San Joaquin River from Merced River to Stanislaus River

The river has discontinuous SPFC levees along both banks of this 44-mile-long reach and one pumping plant. Based on O&M manuals, the design channel capacity is 45,000 cfs between the Merced River and Tuolumne River and 46,000 cfs between the Tuolumne River and Stanislaus River. The design

flow of the Tuolumne River at the confluence with the San Joaquin River is 15,000 cfs.

The right-bank levee (see O&M Manuals SJR4, SJR5, and SJR6) consists of three discontinuous segments totaling 20.4 miles. The levees are intended to reduce flood risk agricultural land in RD 2031, RD 2063, RD 2091, and Dos Rios Ranch. About midway between the Merced and Tuolumne rivers, the Lower San Joaquin River Pumping Plant is an SPFC pumping plant (also known as Gomes Lake Pumping Plant) (see O&M Manual SJR6A) that allows discharge of drainage water from the levee-protected area to the San Joaquin River. The pumping plant (capacity of 30,000 gallons per minute) also has provision for gravity flow of drainage water when the flow in the San Joaquin River is low, and is maintained by RD 2063. The left-bank levee (see O&M Manuals SJR12 and SJR13) consists of four discontinuous segments totaling 16.4 miles. The levees are intended to reduce flood risk to agricultural land in RD 1602, RD 2099, RD 2100, RD 2101, and RD 2102, and are maintained by those agencies.

Stanislaus River

SPFC facilities on the Stanislaus River include levees on both banks upstream from the San Joaquin River. Under flood control conditions, upstream reservoir release operations are designed not to exceed a flow of 8,000 cfs (channel capacity) in the lower Stanislaus River from Goodwin Dam downstream to the San Joaquin River. The local interest project levees (see Section 2) have been identified by USACE as adequate to contain this design capacity. The right-bank levee (see O&M Manual SJR3) is 6.1 miles long from high ground to its connection with the San Joaquin River levee. The left-bank levee (see O&M Manual SJR4) is 7.2 miles long from high ground to its connection with the San Joaquin River levee. Channel maintenance (see O&M Manual SJR614) is included downstream from Goodwin Dam.

San Joaquin River from Stanislaus River to Paradise Cut

SPFC facilities on this reach of San Joaquin River include levees on both banks of the river. The design capacity of this reach is 52,000 cfs based on O&M manuals. The right-bank levee (see O&M Manual SJR3) is 11.3 miles long. This levee is intended to

reduce flood risk to agricultural land in RD 2064, RD 2075, and RD 2094, and is maintained by those agencies. The left-bank levee (see O&M Manual SJR11) begins about 2 miles downstream from the Stanislaus River. This levee is intended to reduce flood risk a State prison, the Deuel Vocational Institution, and agricultural land in RD 2085 and RD 2095. It is maintained by RD 2085 and RD 2095. Paradise Cut is a distributary to the San Joaquin River.

Paradise Cut

SPFC facilities along Paradise Cut include levees on both sides of the channel from the San Joaquin River to the confluence with the Old River. The design channel capacity is 15,000 cfs based on O&M manuals. The right-bank levee (see O&M Manual SJR9) is 5.9 miles long, and is maintained by RD 2062 and RD 2107. This levee is intended to reduce flood risk to Stewart Tract and the developing area of Lathrop. The left-bank levee (see O&M Manual SJR10) is 6.2 miles long, and is maintained by RD 2058 and RD 2095.



SPFC levees along Paradise Cut reduce flood risk to Stewart Tract and the developing area of Lathrop

San Joaquin River from Paradise Cut to Old River

SPFC facilities include levees on both banks of the river and a pumping plant. The design capacity of this reach is 37,000 cfs based on O&M manuals. The right-bank levee (see O&M Manuals SJR2 and SJR3) is about 5.5 miles long and is maintained by RD 17 and RD 2096. The Weatherbee Lake Pumping Plant and Navigation Gate (see O&M Manual SJR3A) is located where the right-bank levee crosses Walthall Slough, about 0.8 miles upstream from Mossdale, and is maintained by RD 2096. The pumping plant has a rated capacity of 22,500 gallons per minute.

The left-bank levee (see O&M Manual SJR9) is 5 miles long and is intended to reduce flood risk Lathrop. It is maintained by RD 2062 and RD 2107.

Old River

SPFC facilities along Old River include levees on both sides of the channel. The right-bank levee (see O&M Manuals SJR7 and SJR8) extends about 7.1 miles from the San Joaquin River to the Grant Line Canal. Based on the O&M manuals, the project design capacity for this reach is 19,000 cfs from the San Joaquin River to the Middle River, 15,000 cfs from the Middle River to Paradise Cut, and 30,000 cfs from Paradise Cut to the Grant Line Canal. The left-bank levee (see O&M Manual SJR9) extends about 5.6 miles from the San Joaquin River to the confluence with Paradise Cut. The project design capacity for this reach is 19,000 cfs. The levee is intended to reduce flood risk Stewart Tract and the urbanizing area of Lathrop. Levees along Old River are maintained by RD 2062, RD 2089, RD 544, and RD 1.

San Joaquin River from Old River to Burns Cutoff

SPFC facilities along this reach of river include levees on both banks. The design capacity of this reach is 18,000 cfs based on O&M manuals. The right-bank levee (see O&M Manuals SJR1 and SJR2) is 12.6 miles long and is maintained by RD 17 and RD 404. French Camp Slough enters the river about 2.3 miles upstream from Burns Cutoff. The left-bank levee (see O&M Manual SJR7) is about 12.4 miles long and is maintained by RD 544.

French Camp Slough

SPFC facilities within the French Camp Slough drainage include a diversion, channel clearing and excavation, and levees. A dike across Duck Creek and a 5,000-foot-long diversion channel (see O&M Manual SJR613B) divert Duck Creek flow to Littlejohns Creek. The channel has a design capacity of 500 cfs based on the O&M manual. The project included cleared and excavated channels along South Littlejohns Creek and both the north and south branches. South Littlejohns Creek has a 2.3-mile-long right-bank levee in two segments and a 2.6-mile-long left-bank levee. The project is intended to reduce flood risk to Stockton and its surrounding urban area. Levees along the Duck Creek Diversion

and South Littlejohns Creek are maintained by San Joaquin County Flood Control and Water Conservation District.

Both the right-bank (see O&M Manual SJR1) and left-bank (see O&M Manual SJR2) levees on French Camp Slough extend about 1.8 miles upstream from the San Joaquin River. The project design capacity for the left-bank levee is 3,000 cfs and the project design capacity for the right-bank levee is 2,000 cfs based on the O&M manuals. The left-bank levee along French Camp Slough is maintained by RD 17, and the right-bank levee is maintained by RD 404.

Calaveras River and Mormon Slough

The Calaveras River is a tributary to the San Joaquin River. SPFC facilities within the Calaveras River drainage include facilities of the Mormon Slough Project, composed of a diversion from Mormon Slough, pumping plants, and levees and improved channels along Mormon Slough, Potter Creek, and the Calaveras River (see O&M Manual SJR611.1 for channels and levees and O&M Manual SJR611.2 for the pumping plants). There is also a diversion from the Calaveras River to Mormon Slough at Bellota that is not shown in the O&M manual as an SPFC facility. The Mormon Slough Project is maintained by the San Joaquin County Flood Control and Water Conservation District.

Intermittent spoil dikes and levees are located along about 11 miles of Mormon Slough. Both banks of Mormon Slough have levees for a distance of about 2.3 miles upstream from the Stockton Diverting Canal. Potter Creek has a 0.9-mile-long left-bank levee upstream from its confluence with Mormon Slough. The Stockton Diverting Canal, about 5 miles long, diverts Mormon Slough water to the Calaveras River. Both banks of the diversion canal have levees. Design capacity is 12,500 cfs based on the O&M manuals. Three pumping plants along the right bank of the Stockton Diverting Canal discharge local drainage water into the canal.

The Calaveras River has levees along both banks for a distance of about 6.5 miles upstream from the San Joaquin River. The design capacity of the river is 13,500 cfs. Levees along the Calaveras River are maintained by the San Joaquin County Flood Control and Water Conservation District.

Bear Creek

Bear Creek is a tributary to the San Joaquin River – the creek is not the same Bear Creek that is tributary to the Eastside Bypass. SPFC facilities include 15.7 miles of channels and 30.1 miles of levees on Bear Creek, Paddy Creek, Middle Paddy Creek, and North Paddy Creek. O&M Manual SJR612.2 covers the project from high ground to U.S. Highway 99. O&M Manual SJR612.1 covers the project from U.S. Highway 99 to Disappointment Slough. Facilities are maintained by the San Joaquin County Flood Control and Water Conservation District.

3.4 Other Flood Projects with Board or DWR Assurances of Cooperation

The Board or DWR has provided the federal government assurances of cooperation for other flood management projects in California, but these projects do not meet the definition (see Section 1.1) of the SPFC because they are not in the Sacramento River or San Joaquin River watersheds; the SPFC is limited to projects within the watersheds of the Sacramento and San Joaquin rivers. Examples of other flood projects with Board or DWR assurances of cooperation that are not in the Sacramento or San Joaquin River watersheds include the following:

- The Truckee River and Tributaries Project was authorized by the Flood Control Act of 1954 (Public Law 780, 83rd Congress). The Truckee River drains into Pyramid Lake in the Great Basin. While the Board provided assurances of cooperation to the federal government, because it is not within the watershed of the Sacramento or San Joaquin rivers, the project is not part of the SPFC.
- The Fairfield Vicinity Streams Project was authorized by House and Senate Public Works Committees' resolutions adopted December 15, 1970, and December 17, 1970, respectively, under provisions of Section 201 of the Flood Control Act of 1965. The authorization was substantially in accordance with a report of the Secretary of the Army and the USACE Chief of Engineers in HD 159 (91st Congress). Section 117 of Public Law 99-190 modified the project authorization. Project authorization was also modified under the Supplemental Appropriations Act of 1987 (Public Law 100-71). The project (see O&M Manual SAC514) is

intended to reduce flood risk to the City of Fairfield and Suisun City. The Fairfield Vicinity Streams Project includes improvements along Union Avenue Creek, a small unnamed tributary near Highway 80, 1 mile of Ledgewood Creek from Highway 12 to Peytonia Slough, Laurel Creek from just south of Gulf Drive to McCoy Creek, and McCoy Creek south to the Buffer Channel.

The peak flow for McCoy Creek upstream to its confluence with Laurel Creek is 3,700 cfs. At this confluence, the peak inflow from McCoy is 2,000 cfs, and 3,700 cfs from the Laurel Diversion. At the Laurel Diversion confluence with the Diversion Stub, the peak inflow is 700 cfs from the Diversion Stub and 2,600 cfs from the channel.

While the Board provided assurances of cooperation to the federal government, the project is not part of the SPFC because it does not meet the SPFC definition – the project drains downstream from River Mile 0.0 for the Sacramento River and is therefore not part of the Sacramento River watershed.



While the Board provided assurances of cooperation to the federal government for The Truckee River and Tributaries Project, it is not part of the SPFC

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