# STIPULATION OF SETTLEMENT

## NRDC v. RODGERS

## DRAFT LEGISLATION

## EXHIBIT A

**Title __: SAN JOAQUIN RIVER RESTORATION SETTLEMENT ACT**

**Section 101. Short Title.**

This Title may be cited as the "San Joaquin River Restoration Settlement Act."

**Section 102. Purposes.**

The purpose of this title is to authorize implementation of the Stipulation of Settlement dated [insert date] (the "Settlement") in the litigation entitled NATURAL RESOURCES DEFENSE COUNCIL, et al. v. KIRK RODGERS, et al., United States District Court, Eastern District of California, No. CIV. S-88-1658-LKK/GGH.

**Section 103. Definitions.**

As used in this Title, the terms "Friant Division long-term contractors," "Interim Flows," "Restoration Flows," "Recovered Water Account," "Restoration Goal," and "Water Management Goal" shall have the meaning as defined in the Settlement referenced in Section 102 of this Title.

**Section 104. Implementation of Settlement.**

(a) The Secretary of the Interior ("Secretary") is hereby authorized and directed to implement the terms and conditions of the Settlement in cooperation with the State of California, including but not limited to the following measures as these measures are prescribed in the Settlement:

(i) Design and construct channel and structural improvements as described in Paragraph 11 of the Settlement; *provided, however*, that the Secretary shall not make or fund any such improvements to facilities or property of the State of California without the approval of the State of California and the State's agreement in one or more Memoranda of Understanding to participate where appropriate;

(ii) Modify Friant Dam operations so as to provide Restoration Flows and Interim Flows;

(iii) Acquire water, water rights, or options to acquire water as described in Paragraph 13 of the Settlement;

(iv) Implement the terms and conditions of the Settlement related to recirculation, recapture, reuse, exchange or transfer of water

released for Restoration Flows or Interim Flows, for the purpose of accomplishing the Water Management Goal of the Settlement; and

(v) Develop and implement the Recovered Water Account as specified in the Settlement, including the pricing and payment crediting provisions described in Paragraph 16(b)(3) of the Settlement, provided that all other provisions of Reclamation Law shall remain applicable.

(b) In order to facilitate or expedite implementation of the Settlement, the Secretary is authorized and directed to enter into appropriate agreements, including cost sharing agreements, with the State of California. The Secretary is further authorized to enter into contracts, memoranda of understanding, financial assistance agreements, cost sharing agreements and other appropriate agreements with state, tribal, and local governmental agencies, and with private parties, including, but not limited to, agreements related to construction, and operation and maintenance of facilities, all of which shall be on terms and conditions that the Secretary deems necessary to achieve the purposes of the Settlement.

(c) The Secretary is further authorized to accept and expend non-federal funds in order to facilitate implementation of the Settlement.

(d) The Secretary is further authorized to conduct any design or engineering studies that are necessary to implement the Settlement.

**Section 105. Acquisition and Disposal of Property; Title to Facilities**

(a) Unless acquired pursuant to Section 105(b) of this Title, title to any facility or facilities, stream channel, levees, or other real property modified or improved in the course of implementing the Settlement authorized by this Title, and title to any modifications or improvements of such facility or facilities, stream channel, levees, or other real property shall remain in the owner of the property and shall not be transferred to the United States on account of such modifications or improvements.

(b) The Secretary is authorized to acquire through purchase from willing sellers any property, interests in property, or options to acquire real property needed to implement the Settlement authorized by this Title. The Secretary is authorized, but not required, to exercise all of the authorities provided in Section 2 of the Act of August 26, 1937, Ch. 832, 50 Stat. 844, to carry out the measures authorized in Sections 104 and 105 of this Title.

(c) Upon the Secretary's determination that retention of title to property or interests in property acquired pursuant to this Title is no longer needed to be held by the United States for the furtherance of the Settlement, the Secretary is authorized to dispose of such property or interest in property on such terms and conditions as the Secretary deems appropriate and in the best interest of the United States, including but not limited to, possible transfer of such property to the State of California. Proceeds from the disposal by sale of any such property or interests in property shall be deposited in the fund established by Section 109(c) of this Title.

**Section 106. Compliance with Applicable Law.**

(a) In undertaking the measures authorized by Section 104 of this Title, the Secretary shall comply with all applicable federal and state laws, rules and regulations, including the National Environmental Policy Act and the Endangered Species Act, as necessary. The Secretaries of the Interior and Commerce are authorized and directed to initiate and expeditiously complete applicable environmental reviews and consultations as may be necessary to effectuate the purposes of the Settlement. Nothing in this Title shall modify any existing obligation of the United States under federal reclamation law to operate the Central Valley Project in conformity with State law.

(b) In undertaking the measures authorized by Section 104 of this Title, and for which environmental review is required, the Secretary may provide funds made available under this Title to affected Federal agencies, State agencies, and Indian tribes if the Secretary determines that such funds are necessary to allow the Federal agencies, State agencies, or Indian tribes to effectively participate in the environmental review process. For purposes of this section, environmental review is defined to include any consultation and planning necessary to comply with paragraph (a) of this section. Such funds may be provided only to support activities that directly contribute to the implementation of the terms and conditions of the Settlement.

(c) The United States' share of the costs of implementing this Title shall be non-reimbursable under Reclamation law, provided that nothing in this subsection shall limit or be construed to limit the use of the funds assessed and collected pursuant to Sections 3406(c)(1) and 3407(d)(2) of Title XXXIV of Pub. L. No. 102-575, for implementation of the Settlement, nor shall it be construed to limit or modify existing or future Central Valley Project Ratesetting Policies.

**Section 107. Compliance with Central Valley Project Improvement Act.**

Congress hereby finds and declares that the Settlement satisfies and discharges all of the obligations of the Secretary contained in Section 3406(c) (1) of Title XXXIV of Public Law 102-575; *provided, however*, that the Secretary shall continue to assess and collect the charges provided in Section 3406(c)(1) as provided in the Settlement and Section 109(d) of this Title.

**Section 108. No Private Right of Action.**

Nothing in this Title shall confer upon any person or entity not a party to the Settlement a private right of action or claim for relief to interpret or enforce the provisions of this Title or the Settlement.

**Section 109. Appropriations; Settlement Fund.**

(a) The costs of implementing the provisions of Section 104(a)(i) of this Title shall be shared by the State of California pursuant to the terms of a Memorandum of Understanding executed by the State of California and the Parties to the Settlement on [date]. In addition, the Secretary shall enter into one or more agreements to fund or implement improvements on a project-by-project basis with the State of California, which agreements shall provide for recognition of either monetary or in-kind contributions toward the State of California's share of the cost of implementing the provisions of Section 104(a)(i).

(b) In addition to the funds provided in Sections (c)(1), (c)(3), and (c)(5) below, there are also authorized to be appropriated not to exceed $ 250 million (October 2006 price levels) to implement this Title and the Settlement, to be available until expended.. The Secretary is authorized to use monies from the Fund created under Section 3407 of Title XXXIV of Public Law 102-575 for purposes of this Title.

(c) There is hereby established within the Treasury of the United States the "San Joaquin River Restoration Fund," into which shall be deposited, and which shall be used solely for the purpose of implementing the Settlement:

(1) Subject to Section 109(d) below, at the beginning of the fiscal year following enactment of this Title, all payments received pursuant to Section 3406(c)(1) of Title XXXIV of Public Law 102-575, which shall be available for expenditure without further appropriation;

(2) Subject to Section 109(d) below, the capital component (not otherwise needed to cover operation and maintenance costs) of

payments made by Friant Division long-term contractors pursuant to long-term water service contracts for 9 years beginning the first fiscal year following enactment of this Title. The capital repayment obligation of such contractors under such contracts shall be reduced by the amount paid pursuant to this Section 109(c)(2).

(3) Proceeds from a bond issue, federally guaranteed loan or other appropriate financing instrument, to be issued or entered into by an appropriate public agency or subdivision of the State of California, which funds shall be available for expenditure without further appropriation.

(4) Proceeds from the sale of water pursuant to the Settlement, or from the sale of property or interests in property as provided in Section 105 of this Title, which funds shall be available for expenditure without further appropriation.

(5) Any non-federal funds, including but not limited to State cost-sharing funds, contributed to the United States for implementation of the Settlement, which the Secretary may expend without further appropriation for the purposes for which contributed.

(d) The Secretary is authorized to enter into agreements with appropriate agencies or subdivisions of the State of California in order to facilitate a bond issue, federally guaranteed loan or other appropriate financing instrument, for the purpose of implementing this Settlement. If the Secretary and an appropriate agency or subdivision enter into such an agreement, and if such agency or subdivision issues one or more revenue bonds, procures a federally secured loan, or other appropriate financing to fund implementation of the Settlement, and if such agency deposits the proceeds received from such bonds, loans or financing into the Fund pursuant to Section 109(c)(3), monies specified in Sections 109(c)(1) and (2) shall be provided by the Friant Division long-term contractors directly to such public agency or subdivision to repay the bond, loan or financing rather than into the Fund. After the satisfaction of any such bond, loan or financing, the payments specified in Sections 109(c)(1) and (2) shall be paid directly into the Fund authorized by this Section 109.

(e) Payments made by long-term contractors who receive water from the Friant Division and Hidden and Buchanan Units of the Central Valley Project pursuant to §§ 3406(c)(1) and 3407(d)(2)(a) of Title XXXIV of Pub. L. No. 102-575 and payments made pursuant to Paragraph 16(b)(3) of the Settlement and Section 109(c)(2) of this Title shall be the limitation of such entities' direct financial contribution to the Settlement, subject to the terms and conditions of Paragraph 21 of the Settlement.

(f) Nothing in this Act shall be construed to require a federal official to expend federal funds not appropriated by Congress, or to seek the appropriation of additional funds by Congress, for the implementation of the Settlement.

**STIPULATION OF SETTLEMENT NRDC v. RODGERS**

**EXHIBIT B**

**[Restoration Hydrographs]**

This Exhibit B sets forth the hydrographs which constitute the "Base Flows" referenced in paragraph 13 of the Stipulation of Settlement. For purposes of implementing the hydrographs, the following provisions shall apply:

1. Buffer Flows.

Paragraph 13 of the Stipulation of Settlement provides for the Base Flows to be augmented by Buffer Flows of up to 10% of the applicable hydrograph included in this Exhibit B. Except as provided in Paragraph 4 of this Exhibit B, such Buffer Flows are intended to augment the daily flows specified in the applicable hydrograph. For purposes of this Exhibit, Base Flows and Buffer Flows shall collectively be referred to as Restoration Flows.

2. Water Year Types.

The Base Flows are presented in Tables 1A-1F as a set of six hydrographs that vary in shape and volume according to wetness in the basin. The six year types are described as "Critical Low", "Critical High", "Dry", "Normal-Dry", "Normal-Wet", and "Wet." The total annual unimpaired runoff at Friant for the water year (October through September) is the index by which the water year type is determined. In order of descending wetness, the wettest 20 percent of the years are classified as Wet, the next 30 percent of the years are classified as Normal-Wet, the next 30 percent of the years are classified as Normal-Dry, the next 15 percent of the years are classified as Dry, and the remaining 5 percent of the years are classified as Critical (represented by the "Critical High" hydrograph). A subset of the Critical years, those with less than 400 TAF of unimpaired runoff, are identified for use of the "Critical Low" hydrograph. The hydrographs, Tables 1A-1F, depict an annual quantity of water based upon the flow schedules identified. Components of the hydrograph are plotted for each water-year type, with various types of flows (Fall Base and Spring Run Incubation Flow; Fall Run attraction Flow; Fall-Run Spawning and Incubation Flow; Winter Base Flows; Spring Rise and Pulse Flows; Summer Base Flows; Spring-Run Spawning Flows) in specified amounts throughout the year, some of which vary in amount and duration depending upon year type classification. To avoid a moving distribution of year-type assignment, water years 1922-2004 will be used to establish year types.

3. Continuous Line Hydrographs.

The Parties agree to transform the stair step hydrographs to more continuous hydrographs prior to December 31, 2008 to ensure completion before the initiation of Restoration Flows, provided that the Parties shall mutually-agree that transforming the hydrographs will not materially impact the Restoration or Water Management Goal.

4. Flexibility in Timing of Releases.

(a) In order to achieve the Restoration Goal and to avoid material adverse impacts on existing fisheries downstream of Friant Dam, the Parties agree to the following provisions to provide certain flexibility in administration of the hydrographs and Buffer Flows.

(b) The distribution of Base Flow releases depicted in each hydrograph is intended to allow flexibility in any given year for the Restoration Administrator, in consultation with the

Technical Advisory Committee, to recommend to the Secretary appropriate ramping rates and precise flow amounts on specific dates as provided for in this subparagraph and consistent with the flow measurement and monitoring provisions of the Settlement. Base Flow releases allocated during the period from March 1 through May 1 (the "Spring Period") in any year may be shifted up to four weeks earlier and later than what is depicted in the hydrograph for that year, and managed flexibly within that range (i.e. February 1 through May 28), so long as the total volume of Base Flows allocated for the Spring Period is not changed. The Base Flows depicted in each hydrograph from October 1 through November 30 (the "Fall Period") likewise are intended to allow flexibility in any given year for the Restoration Administrator, in consultation with the Technical Advisory Committee, to recommend to the Secretary precise flow amounts on specific dates, and may be shifted up to four weeks earlier or later so long as the total volume of Base Flows allocated during that Period of the year is not changed.

(c) The process for determining and implementing Buffer Flows is set out in Paragraphs 13 and 18 of the Settlement, as implemented by this Exhibit B. The Restoration Administrator, in consultation with the Technical Advisory Committee, may recommend to the Secretary that the daily releases provided for in the hydrographs, or as modified pursuant to Paragraph 4(b) above, be augmented by application of the Buffer Flows up to 10% of the daily flows. From October 1 through December 31, the Buffer Flows shall be defined as 10% of the total volume of Base Flows during that period, and may be managed flexibly as a block of water during the Fall Period and four weeks earlier or later, as provided in Paragraph 4(b) above. Up to 50% of the Buffer Flows available from May 1 to September 30 not to exceed 5,000 acre feet may be moved to augment flows during the Spring or the Fall Periods.

(d) The Restoration Administrator may recommend additional changes in specific release schedules within an applicable hydrograph (beyond those described in subparagraphs (b) and (c) above) to the extent consistent with achieving the Restoration Goal without changing the total amount of water otherwise required to be released pursuant to the applicable hydrograph or materially increasing the water delivery reductions to any Friant Division long-term contractors.

5. Flushing Flows.

In Normal-Wet and Wet years, the stair-step hydrographs, Exhibits 1A-1F, include a block of water averaging 4,000 cfs from April 16-30 to perform several functions, including but not limited to geomorphic functions such as flushing spawning gravels ("The Flushing Flows"). Therefore, unless the Secretary, in consultation with the Restoration Administrator, determines that Flushing Flows are not needed, hydrographs in Normal-Wet and Wet years will also include Flushing Flows during that period. Working within the constraints of the flood control system, the Restoration Flow releases from Friant Dam to provide these Flushing Flows shall include a peak release as close to 8,000 cfs as possible for several hours and then recede at an appropriate rate. The precise timing and magnitude of the Flushing Flows shall be based on monitoring of meteorological conditions, channel conveyance capacity, salmonid distribution, and other physical/ecological factors with the primary goal to mobilize spawning gravels, maintain their looseness and flush fine sediments, so long as the total volume of Restoration Flows allocated for Flushing Flows for that year is not changed. Nothing in this Paragraph 5 is intended to limit the flexibility to move or modify the Flushing Flows as provided in Paragraph 4 above, so long as the total volume of Base Flows allocated during the Spring Period is not changed.

6. Riparian Recruitment Flows.

In Wet Years, in coordination with the peak Flushing Flow releases, Restoration Flows should be gradually ramped down over a 60-90 day period to promote the establishment of riparian vegetation at appropriate elevations in the channel. The precise timing and magnitude of the riparian recruitment release shall be based on monitoring of meteorological conditions, channel conveyance capacity, salmonid distribution and other physical/ecological factors with the primary goal to establish native riparian vegetation working within the constraints of the flood control system, so long as the total volume of Restoration Flows allocated for Riparian Recruitment for that year is not exceeded.

Table 1A. Proposed restoration flow release schedule and accounting for critical low year type on the San Joaquin River

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - October 31 | 160 | 160 | 80 | 300 | 5 | 0 | 0 | 0 | 300 |
| Fall Run Attraction Flow | Nov. 1- 6 Pulse | 130 | 130 | 100 | 300 | 5 | 0 | 0 | 0 | 300 |
| Fall-Run Spawning and Incubation Flow | Nov. 7 - Dec 31 | 120 | 120 | 80 | 400 | 5 | 0 | 0 | 0 | 400 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 100 | 100 | 80 | 500 | 5 | 0 | 0 | 0 | 500 |
| Spring Rise and Pulse Flows | March 1-15 | 130 | 130 | 90 | 500 | 5 | 0 | 0 | 0 | 500 |
| | March 15-31 | 130 | 130 | 150 | 475 | 5 | 0 | 0 | 0 | 475 |
| | April 1-15 | 150 | 150 | 80 | 400 | 5 | 0 | 0 | 0 | 400 |
| | April 16 - 30 | 150 | 150 | 80 | 400 | 5 | 0 | 0 | 0 | 400 |
| Summer Base Flows | May 1 - June 30 | 190 | 190 | 80 | 400 | 5 | 0 | 0 | 0 | 400 |
| | July 1 - Aug 31 | 230 | 230 | 80 | 275 | 5 | 0 | 0 | 0 | 275 |
| Spring-Run Spawning Flows | Sept. 1 - Sept. 30 | 210 | 210 | 80 | 275 | 5 | 0 | 0 | 0 | 275 |
| | Total Annual (acre ft.) | 116,662 | 116,662 | 60,568 | 276,012 | 3,614 | 0 | 0 | 0 | 275,468 |
| | Assumed Riparian Release | 116,662 | | | | | | | | |
| | Restoration Release (af) | 0 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs. at every diversion point during all seasons.

2. Reach 2 Losses. Determined by flow at head of Reach 2. Assumed relatively constant, steady-state conditions. Flows less than 300 cfs at the head of the reach lose 80 cfs, consistent with 1995-2000 data including the 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs. Flows above 400 and below 800 cfs lose 100 cfs. Used flow lose curve at Figure 2-4 of the Background Report for flows above 1,000 cfs. That curve was based upon non-steady-state flow conditions, and thus likely overestimate steady-state conditions. Assumed no losses in Reach 2B below the Bifurcation.

3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.

4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.

5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.

6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.

7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.

8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.

9. Riparian release total slightly different in critical years due to variations in the length of the November pulse flow and rounding of riparian release averages during the November 1-December 31 time period.

**Table 1B. Proposed restoration flow release schedule and accounting for critical high year type on the San Joaquin River**

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - Oct. 31 | 160 | 160 | 80 | 300 | 5 | 0 | 0 | 0 | 300 |
| Fall Run Attraction Flow | Nov. 1- 6 Pulse | 400 | 130 | 100 | 300 | 275 | 175 | 175 | 175 | 475 |
| Fall-Run Spawning and Incubation Flow | Nov. 7 - Dec 31 | 120 | 120 | 80 | 400 | 5 | 0 | 0 | 0 | 400 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 110 | 100 | 80 | 500 | 15 | 0 | 0 | 0 | 500 |
| Spring Rise and Pulse Flows | March 1-15 | 500 | 130 | 90 | 500 | 375 | 285 | 285 | 285 | 785 |
| | March 15-31 | 1500 | 130 | 150 | 475 | 1375 | 1225 | 1225 | 1225 | 1700 |
| | April 1-15 | 200 | 150 | 80 | 400 | 55 | 0 | 0 | 0 | 400 |
| | April 16 - 30 | 200 | 150 | 80 | 400 | 55 | 0 | 0 | 0 | 400 |
| Summer Base Flows | May 1 - June 30 | 215 | 190 | 80 | 400 | 30 | 0 | 0 | 0 | 400 |
| | July 1 - Aug 31 | 255 | 230 | 80 | 275 | 30 | 0 | 0 | 0 | 275 |
| Spring-Run Spawning Flows | Sept. 1 - Sept. 30 | 260 | 210 | 80 | 275 | 55 | 0 | 0 | 0 | 275 |
| | Total Annual (acre ft.) | 187,457 | 116,662 | 60,568 | 276,012 | 74,408 | 49,352 | 49,352 | 49,352 | 325,364 |
| | Assumed Riparian Release | 116,662 | | | | | | | | |
| | Restoration Release (af) | 70,795 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs. at every diversion point during all seasons.
2. Reach 2 losses - Determined by flow at head of Reach 2. Assume relatively constant, steady-state conditions. Flows at head of reach less than 300 lose 80 cfs consistent with 1995-200 data including 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs; flows above 400 and below 800 cfs lose 100 cfs; consistent with 1995-2000 data. Above 1000 cfs used flow lose curve on fig 2-4 of the Background Report. That curve was based upon non- steady-state flow conditions and thus likely overestimate steady-state conditions. Assume no losses in Reach 2B below the Bifurcation.
3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.
4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.
5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.
6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.
7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.
8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.
9. Flows in the May 1 to June 30, July 1 to Aug 30 and Sept 1 to Sept 31st have elevated flows of 25 to 50 cfs reflecting 3TAF blocks of water to be used for riparian vegetation irrigation
10. Riparian release total slightly different in critical years due to variations in the length of the November pulse flow and rounding of riparian release averages during the November 1-December 31 time period.

**Table 1C. Proposed restoration flow release schedule and accounting for dry year type on the San Joaquin River**

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - 31 | 350 | 160 | 80 | 300 | 195 | 115 | 115 | 115 | 415 |
| Fall Run Attraction Flow | Nov. 1 - 10 | 700 | 130 | 100 | 300 | 575 | 475 | 475 | 475 | 775 |
| Fall-Run Spawning and Incubation Flow | Nov. 11 - Dec 31 | 350 | 120 | 80 | 400 | 235 | 155 | 155 | 155 | 555 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 350 | 100 | 80 | 500 | 255 | 175 | 175 | 175 | 675 |
| Spring Rise and Pulse Flows | March 1 - 15 | 500 | 130 | 90 | 500 | 375 | 285 | 285 | 285 | 785 |
| | March 16 - 31 | 1,500 | 130 | 150 | 475 | 1,375 | 1,225 | 1,225 | 1,225 | 1,700 |
| | April 1-15 | 350 | 150 | 80 | 400 | 205 | 125 | 125 | 125 | 525 |
| | April 16 - 30 | 350 | 150 | 80 | 400 | 205 | 125 | 125 | 125 | 525 |
| Summer Base Flows | May 1 - June 30 | 350 | 190 | 80 | 400 | 165 | 85 | 85 | 85 | 485 |
| | July 1 - Aug 31 | 350 | 230 | 80 | 275 | 125 | 45 | 45 | 45 | 320 |
| Spring-Run Spawning Flows | Sept. 1 - Sept. 30 | 350 | 210 | 80 | 275 | 145 | 65 | 65 | 65 | 340 |
| | Total Annual (acre ft.) | 300,762 | 116,741 | 60,727 | 275,220 | 187,635 | 126,908 | 126,908 | 126,908 | 402,128 |
| | Assumed Riparian Release | 116,741 | | | | | | | | |
| | Restoration Release (af) | 184,021 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs. at every diversion point during all seasons.

2. Reach 2 losses - Determined by flow at head of Reach 2. Assume relatively constant, steady-state conditions. Flows at head of reach less than 300 lose 80 cfs consistent with 1995-200 data including 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs; flows above 400 and below 800 cfs lose 100 cfs; consistent with 1995-2000 data. Above 1000 cfs used flow lose curve on fig 2-4 of the Background Report. That curve was based upon non- steady-state flow conditions and thus likely overestimate steady-state conditions. Assume no losses in Reach 2B below the Bifurcation.

3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.

4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.

5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.

6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.

7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.

8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.

**Table 1D. Proposed restoration flow release schedule and accounting for normal-dry year type on the San Joaquin River**

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - 31 | 350 | 160 | 80 | 300 | 195 | 115 | 115 | 115 | 415 |
| Fall Run Attraction Flow | Nov. 1 - 10 | 700 | 130 | 100 | 300 | 575 | 475 | 475 | 475 | 775 |
| Fall-Run Spawning and Incubation Flow | Nov. 11 - Dec 31 | 350 | 120 | 80 | 400 | 235 | 155 | 155 | 155 | 555 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 350 | 100 | 80 | 500 | 255 | 175 | 175 | 175 | 675 |
| Spring Rise and Pulse Flows | March 1 - 15 | 500 | 130 | 90 | 500 | 375 | 285 | 285 | 285 | 785 |
| | March 16 - 31 | 1,500 | 130 | 150 | 475 | 1,375 | 1,225 | 1,225 | 1,225 | 1,700 |
| | April 1-15 | 2,500 | 150 | 175 | 400 | 2,355 | 2,180 | 2,180 | 2,180 | 2,580 |
| | April 16 - 30 | 350 | 150 | 80 | 400 | 205 | 125 | 125 | 125 | 525 |
| Summer Base Flows | May 1 - June 30 | 350 | 190 | 80 | 400 | 165 | 85 | 85 | 85 | 485 |
| | July 1 - Aug 31 | 350 | 230 | 80 | 275 | 125 | 45 | 45 | 45 | 320 |
| Spring-Run Spawning Flows | Sept. 1 - Sept. 30 | 350 | 210 | 80 | 275 | 145 | 65 | 65 | 65 | 340 |
| | Total Annual (acre ft.) | 364,617 | 116,741 | 63,548 | 275,220 | 251,490 | 187,942 | 187,942 | 187,942 | 463,162 |
| | Assumed Riparian Release | 116,741 | | | | | | | | |
| | Restoration Release (af) | 247,876 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs. at every diversion point during all seasons.

2. Reach 2 losses - Determined by flow at head of Reach 2. Assume relatively constant, steady-state conditions. Flows at head of reach less than 300 lose 80 cfs consistent with 1995-200 data including 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs; flows above 400 and below 800 cfs lose 100 cfs; consistent with 1995-2000 data. Above 1000 cfs used flow lose curve on fig 2-4 of the Background Report. That curve was based upon non- steady-state flow conditions and thus likely overestimate steady-state conditions. Assume no losses in Reach 2B below the Bifurcation.

3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.

4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.

5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.

6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.

7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.

8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.

**Table 1E. Proposed restoration flow release schedule and accounting for normal-wet year type on the San Joaquin River**

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - 31 | 350 | 160 | 80 | 300 | 195 | 115 | 115 | 115 | 415 |
| Fall Run Attraction Flow | Nov. 1 - 10 | 700 | 130 | 100 | 300 | 575 | 475 | 475 | 475 | 775 |
| Fall-Run Spawning and Incubation Flow | Nov. 11 - Dec 31 | 350 | 120 | 80 | 400 | 235 | 155 | 155 | 155 | 555 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 350 | 100 | 80 | 500 | 255 | 175 | 175 | 175 | 675 |
| Spring Rise and Pulse Flows | March 1 - 15 | 500 | 130 | 90 | 500 | 375 | 285 | 285 | 285 | 785 |
| | March 16 - 31 | 1,500 | 130 | 150 | 475 | 1,375 | 1,225 | 1,225 | 1,225 | 1,700 |
| | April 1-15 | 2,500 | 150 | 175 | 400 | 2,355 | 2,180 | 2,180 | 2,180 | 2,580 |
| | April 16 - 30 | 4,000 | 150 | 200 | 400 | 3,855 | 3,655 | 3,655 | 3,655 | 4,055 |
| Summer Base Flows | May 1 - June 30 | 350 | 190 | 80 | 400 | 165 | 85 | 85 | 85 | 485 |
| | July 1 - Aug 31 | 350 | 230 | 80 | 275 | 125 | 45 | 45 | 45 | 320 |
| Spring Run Spawning Flows | Sept. 1 - Sept. 30 | 350 | 210 | 80 | 275 | 145 | 65 | 65 | 65 | 340 |
| | Total Annual (acre ft.) | 473,022 | 116,741 | 67,112 | 275,220 | 359,895 | 292,783 | 292,783 | 292,783 | 568,003 |
| | Assumed Riparian Release | 116,741 | | | | | | | | |
| | Restoration Release (af) | 356,281 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs, at every diversion point during all seasons.

2. Reach 2 losses - Determined by flow at head of Reach 2. Assume relatively constant, steady-state conditions. Flows at head of reach less than 300 lose 80 cfs consistent with 1995-200 data including 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs; flows above 400 and below 800 cfs lose 100 cfs; consistent with 1995-2000 data. Above 1000 cfs used flow lose curve on fig 2-4 of the Background Report. That curve was based upon non- steady-state flow conditions and thus likely overestimate steady-state conditions. Assume no losses in Reach 2B below the Bifurcation.

3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.

4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.

5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.

6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.

7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.

8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.

**Table 1F. Proposed restoration flow release schedule and accounting for wet year type on the San Joaquin River**

| Hydrograph Component | | Friant Release | Gain and Loss Assumptions: Riparian Releases | Reach 2 losses | Salt and Mud Slough Accretions | Flow at Upstream End of Reach: Reach 2 | Reach 3 | Reach 4 | Reach 5 | Confluence |
|---|---|---|---|---|---|---|---|---|---|---|
| Fall Base and Spring Run Incubation Flow | Oct. 1 - 31 | 350 | 160 | 80 | 300 | 195 | 115 | 115 | 115 | 415 |
| Fall Run Attraction Flow | Nov. 1 - 10 | 700 | 130 | 100 | 300 | 575 | 475 | 475 | 475 | 775 |
| Fall-Run Spawning and Incubation Flow | Nov. 11 - Dec 31 | 350 | 120 | 80 | 400 | 235 | 155 | 155 | 155 | 555 |
| Winter Base Flows | Jan. 1 - Feb. 28 | 350 | 100 | 80 | 500 | 255 | 175 | 175 | 175 | 675 |
| Spring Rise and Pulse Flows | March 1 - 15 | 500 | 130 | 90 | 500 | 375 | 285 | 285 | 285 | 785 |
| | March 16 - 31 | 1,500 | 130 | 150 | 475 | 1,375 | 1,225 | 1,225 | 1,225 | 1,700 |
| | April 1-15 | 2,500 | 150 | 175 | 400 | 2,355 | 2,180 | 2,180 | 2,180 | 2,580 |
| | April 16 - 30 | 4,000 | 150 | 200 | 400 | 3,855 | 3,655 | 3,655 | 3,655 | 4,055 |
| Summer Base Flows | May 1 - June 30 | 2,000 | 190 | 165 | 400 | 1,815 | 1,650 | 1,650 | 1,650 | 2,050 |
| | July 1 - Aug 31 | 350 | 230 | 80 | 275 | 125 | 45 | 45 | 45 | 320 |
| Spring-Run Spawning Flows | Sept. 1 - Sept. 30 | 350 | 210 | 80 | 275 | 145 | 65 | 65 | 65 | 340 |
| | Total Annual (acre ft.) | 672,309 | 116,741 | 77,378 | 275,220 | 559,182 | 481,803 | 481,803 | 481,803 | 757,023 |
| | Assumed Riparian Release | 116,741 | | | | | | | | |
| | Restoration Release (af) | 555,568 | | | | | | | | |

1. Riparian releases - Riparian releases for current conditions average from 117- to 126 TAF/YR. Assumed approx 117 TAF/YR to be consistent with Steiner declaration which is derived from CALSIM and WSS estimates; adjusted monthly estimates to add to approx 117 TAF and to be more consistent with data from last 5 years; rounded to nearest 10 cfs . The Nov/Dec period 120 cfs estimate is an average of the assumed 130 cfs average in Nov and 110 cfs in Dec; the May/June period average of 190 cfs is an average of 175 cfs in May and 200 cfs in June. Friant base releases in recent years (2001 - 2005 have actually average of approximately 124,000 acre feet in order to meet 5 cfs. at every diversion point during all seasons.

2. Reach 2 losses - Determined by flow at head of Reach 2. Assume relatively constant, steady-state conditions. Flows at head of reach less than 300 lose 80 cfs consistent with 1995-200 data including 1999 pilot project. Flows between 300 and 400 cfs lose 90 cfs; flows above 400 and below 800 cfs lose 100 cfs; consistent with 1995-2000 data. Above 1000 cfs used flow lose curve on fig 2-4 of the Background Report. That curve was based upon non- steady-state flow conditions and thus likely overestimate steady-state conditions. Assume no losses in Reach 2B below the Bifurcation.

3. Salt and Mud Slough Accretions - From Sum of Mud and Salt Slough flow in Table 2-15 of the Background Report. Additional accretions occur in reach 4B and 5 but small (up to 50 cfs) relative to total Mud and Salt Slough inflow.

4. Reach 2 flow- Flow at head of Reach 2 is equal to Friant release minus riparian release plus Gravelly Ford base flow of 5 cfs. The Gravelly Ford base flow is usually higher in winter because of local tributary inflow, return flow and requirement to meet 5 cfs flow at every diversion point. Summer base flow is often higher than 5 cfs because of irrigation return flow and requirement to meet 5 cfs flow at every diversion point.

5. Reach 3 flow - Equal to Reach 2 flow minus Reach 2 losses. Reach 3 flow ignores contributions from Delta Mendota Canal added at Mendota Pool which is subsequently diverted at the bottom of Reach 3 at Sack Dam into the Arroyo Canal and therefore assumes no net gain. Actual inflows could be greater particularly during the irrigation season.

6. Reach 4 flows - Equal to the net Reach 3 flows. Additional flow in Reach 3 is on "top" of existing irrigation supply flows and no losses are assumed although Reach 3 appears to be a small losing reach at this time. May become gaining reach over time if losses in Reach 2 fill sufficient aquifer storage.

7. Reach 5 flow - Assume equal to Reach 4 flow. Seasonal losses in Reach 4A and gains in Reach 4B. Although likely a net gain in Reach 4 flow, assumed no gain for simplicity.

8. Confluence - Reach 5 flow plus Mud and Salt Slough. Does not include up to another 50 cfs of accretion upstream of Mud and Salt Slough that the WOST hydrograph included.

9. May - June flow of 2,000 c.f.s. is block of water for shaping as riparian recruitment recession flow.

STIPULATION OF SETTLEMENT

NRDC v. RODGERS

PARAGRAPH 11 MILESTONE DATES

EXHIBIT C

# EXHIBIT C

The Parties have collectively developed the following timeline for the development and implementation of the improvements described in Paragraph 11 of the Stipulation of Settlement. In so doing, the Parties have considered a variety of factors including, but not limited to, the desire to commence Restoration Flows (and other restoration-related activities) at the earliest possible date, as well as the challenges associated with the development and implementation of these improvements. For these reasons, the dates set forth below represent milestones for purposes of implementing the Settlement. The enforceable deadlines are set forth in the Stipulation of Settlement.

These dates were drawn from a schedule the Federal Defendants developed to assess the estimated minimum period to complete the Paragraph 11 improvements. The Parties recognize that this schedule is ambitious and reflects the Parties' intent to complete the improvements in an expeditious manner. Many assumptions were made in developing this schedule and include, but are not limited to: technical understanding of the nature of the improvements given the current limited availability of detailed site-specific information, availability of sufficient funding and resources, timely acquisition of necessary land and entry rights, timely availability of detailed information and survey results for environmental analysis, timely issuance of necessary permits, and no reduction in the estimated annual 120-day construction period due to weather, in-stream flows events, environmental or permitting requirements.

**Program Environmental Compliance**

| | |
|---|---|
| September, 2009: | Complete necessary and appropriate NEPA, NHPA, ESA, CEQA review |

**Phase 1 Improvements**

| | |
|---|---|
| December, 2011: | Complete modification of Reach 4B to route at least 475 cfs |
| December, 2012: | Complete Reach 2B-Mendota Pool 4,500 cfs bypass channel |
| | Complete modifications of Sand Slough Control Structure and San Joaquin River headgate for routing 500-4,500 cfs and fish passage |
| | Complete screening of Arroyo Canal and construction of fish ladder at Sack Dam |
| | Complete modification of structures in the East Side and Mariposa Bypasses for fish passage |

| | |
|---|---|
| | Complete construction of low-flow channel in East Side and Mariposa Bypasses, if necessary |
| | Complete steps to enable deployment of fish barriers at Salt and Mud Sloughs |
| December, 2013: | Complete Reach 2B channel capacity increase to 4,500 cfs with floodplain and riparian habitat |

**Phase 2 Improvements**

| | |
|---|---|
| December, 2016: | Complete modification of Reach 4B for routing 4,500 cfs |
| | Complete filling and isolating gravel pits in Reach 1 |
| | Complete modifications to Bifurcation Structure for fish passage and to prevent entrainment, if necessary |

# STIPULATION OF SETTLEMENT

## NRDC v. RODGERS

## EXHIBIT D

[Technical Advisory Committee and Restoration Administrator]

This Exhibit D describes the duties and tasks identified for the Restoration Administrator and the Technical Advisory Committee in the Stipulation of Settlement (the "Settlement").

**A. Selection And Term Of Restoration Administrator**

1. Within 60 days of the effective date of this Settlement, the Plaintiffs and Friant Defendants will decide upon a mutually agreed upon selection for Restoration Administrator. The Restoration Administrator shall have technical qualifications related to the Restoration Goal and, at the time of appointment, shall have no relationship to any of the Parties. In the event the Plaintiffs and Friant Defendants do not agree upon a Restoration Administrator selection within 60 days of the effective date of this Settlement, the Plaintiffs will appoint two individuals and the Friant Defendants will appoint two individuals to a selection committee, which will then select a fifth individual member who is not currently employed by any Party and has relevant technical background. This committee will confer no later than 90 days after the effective date of this Settlement and select by majority vote an individual to serve as the Restoration Administrator and submit such selection to the Court for appointment.

2. If the individual serving as Restoration Administrator resigns, is discharged by the non-federal Parties or is unable to perform the duties of the Restoration Administrator, then the process described in Paragraph 1 will be used to select a replacement within 60 days of the date the Restoration Administrator resigns, or is discharged or is unable to perform the duties of the Restoration Administrator. The selection shall be submitted to the Court for appointment. Any Party may petition the Plaintiffs and the Friant Defendants to replace the individual serving as Restoration Administrator for non-performance of duties. If the Parties do not agree about whether the Restoration Administrator should be discharged, the non-federal Parties shall form a selection committee as described in Paragraph 1 to make findings and recommend the retention or discharge of the Restoration Administrator. A majority vote recommendation of the committee will be binding on the Parties.

3. The appointment of the Restoration Administrator pursuant to Paragraph 1 above shall be for an initial term of 6 years. The Restoration Administrator may be reappointed, or a new Restoration Administrator may be appointed, by the Plaintiffs and Friant Defendants pursuant to the procedure set forth in Paragraph 1 above, each for a term of 6 years. The Restoration Administrator shall continue to advise the Secretary of the Interior ("Secretary") as specified in this Settlement and this Exhibit D until December 31, 2026, unless extended by mutual agreement of the Parties.

**B. Composition and Selection of the Technical Advisory Committee**

4. The Friant Defendants and Plaintiffs agree to establish a Technical Advisory Committee ("TAC") to assist the Restoration Administrator as set forth in this Settlement and Exhibit D.

5. The membership of the TAC shall not be federal employees. Accordingly, the TAC will consist of two Plaintiffs' designees and two Friant Defendants' designees. The TAC will also include two designees mutually agreed upon by the Plaintiffs and Friant Defendants. In order to provide the greatest assistance to the Restoration

Administrator regarding the implementation of the Settlement, it is agreed that all TAC members should have relevant technical or scientific background or expertise in fields related to river restoration or fishery restoration.

6. Within 60 days of the effective date of this Settlement, the Plaintiffs and the Friant Defendants shall (1) provide to all Parties the names and contact information for their two initial designees for the TAC; and (2) confer on a list of potential nominees for the two mutually-agreed upon designees for the TAC. If Plaintiffs and Friant Defendants cannot mutually agree on the two additional members of the TAC, then each of the two parties will submit three names along with supporting qualifications to the Restoration Administrator to select the two most qualified candidates for the positions.

7. All members of the TAC will be appointed for 3 year terms, which shall be renewable pursuant to the procedure set forth in Paragraph 5 and 6. Vacancies shall be filled pursuant to Paragraph 5 above. The TAC will continue until 2026, unless terminated sooner or extended further by mutual agreement of the Plaintiffs and Friant Defendants. The Secretary will not fund or manage the activities of the TAC. The work of the TAC will be coordinated by the Restoration Administrator, and the Restoration Administrator shall be authorized to create a separate account in a financial institution mutually agreeable to the Plaintiffs and Friant Defendants ("Restoration Administrator Account"), and accept funding into that account from the State or other non-federal sources, to support the work of the TAC. The Restoration Administrator, with the assistance of the Plaintiffs and Friant Defendants, shall ensure that the work of the TAC is funded at appropriate levels through this separate account, including appropriate compensation for the members of the TAC.

**C. Duties of the Restoration Administrator and Technical Advisory Committee**

8. The Restoration Administrator's general duties are set forth in Paragraphs 9, 11, 12, 13, 14, 15, 16, 17, 18 and 19 of the Stipulation of Settlement, and within this Exhibit D. In carrying out these duties, the Restoration Administrator shall consult with the TAC, and, as provided in Paragraphs 9 and 10 below, consult with such Federal agency technical and regulatory staff as have been designated in accordance with Paragraph 19 of the Stipulation of Settlement.

9. The TAC's primary role will be to advise the Restoration Administrator. The Parties intend that the TAC and the Restoration Administrator will work closely together. In addition to the specific obligations referenced in Paragraph 10 below, the Restoration Administrator and TAC shall, as appropriate, consult with technical representatives of those State agencies with whom the Secretary of Interior and Secretary of Commerce (the Secretaries) have entered into cooperative agreements or memoranda of understanding, and those Federal agency representatives designated in accordance with Paragraph 18 of the Settlement, on matters including, but not be limited to, pre-permitting and pre-ESA consultation activities, sharing of information, and technical assistance during initial project development, planning, design, and implementation phases, and monitoring.

10. In addition to the general duties set forth in the Settlement, the Restoration Administrator shall:

a. schedule and attend meetings of the TAC, coordinate or facilitate the completion and/or production of any reports of the TAC, receive and consider any recommendations of the TAC, and ensure that meetings of the TAC are open to Federal and State staff designated to assist in the implementation of this Settlement.

b. in consultation with the TAC, make recommendations to the Secretaries regarding stock selection, re-introduction strategies, and other significant decisions relating to reintroduction and management of restored Chinook salmon below Friant Dam.

c. on or before February 1st of each year, provide an annual written report to the Parties about progress made over the previous calendar year in implementing the Settlement, and the Plaintiffs and Friant Defendants shall furnish a copy of this report to the Court. The report shall include but not be limited to a summary of settlement implementation activities of the previous year, findings of research and data collection, any additional recommended measures to achieve the Restoration Goal, a summary of progress and impediments in meeting targets established pursuant to Paragraph 11 below, and a summary of expenditures from the Restoration Administrator Account. The TAC shall assist in the preparation of this report. The report shall be made available to the Parties, and 30 days thereafter shall be publicly released.

d. if in the implementation of any of the tasks set out in the Settlement or in this Exhibit D, the Restoration Administrator reasonably determines there is a need for technical assistance beyond the primary assistance provided by the TAC, the Restoration Administrator, in consultation with the TAC, shall obtain such technical assistance.

11. In order to achieve the Restoration Goal, the Restoration Administrator, in consultation with the TAC, shall as soon as possible, but not later than one year after the effective date of the Settlement, make recommendations to the Secretary regarding the following:

a. stock selection, re-introduction strategies, and other significant decisions relating to reintroducing and managing spring run and fall run Chinook salmon below Friant Dam;

b. appropriate use of existing and enhanced hatchery facilities and trap and haul for the sole purpose of accelerating the reintroduction of self-sustaining Chinook salmon fisheries below Friant Dam. Beyond the use of hatcheries and trap and haul to facilitate reintroduction, the Restoration Administrator shall only recommend the use of hatcheries and trap and haul for operations essential to protect fish populations from dropping below a level of low risk of extirpation;

c. appropriate interim targets, goals and milestones for annual escapement of wild adult Chinook salmon, including interim targets designed to achieve continual population growth and the long-term population target

for spring and fall run Chinook salmon by 2025. Interim goals shall include objective criteria to prevent restored populations of wild salmon from dropping below a level of low risk for extirpation;

d. appropriate long-term targets for annual escapement of wild adult Chinook salmon, which shall reflect the potential of the restored River to support robust populations of wild Chinook salmon; and

e. coordination of releases from Friant Dam with fishery restoration actions on the Merced, Tuolumne, and Stanislaus Rivers.

**EXHIBIT E**

**PROPOSED ORDER APPROVING**
**STIPULATION OF SETTLEMENT**

**NRDC v. RODGERS**

HAMILTON CANDEE (SBN 111376)
JARED W. HUFFMAN (SBN 148669)
KATHERINE S. POOLE (SBN 195010)
MICHAEL E. WALL (SBN 170238)
NATURAL RESOURCES DEFENSE COUNCIL
111 Sutter Street, 20th Floor
San Francisco, CA 94104
Tel: (415) 875-6100; Fax: (415) 875-6161
Attorneys for Plaintiffs NRDC *et al.*

PHILIP F. ATKINS-PATTENSON (SBN 94901)
SHEPPARD MULLIN RICHTER & HAMPTON, LLP
4 Embarcadero Center, Suite 1700
San Francisco, CA 94111
Tel: (415) 434-9100; Fax: (415) 434-3947
Attorneys for Plaintiffs NRDC *et al.*

FRED H. ALTSHULER (SBN 43878)
SCOTT L. SHUCHART, *pro hac vice* (NY 4345617)
ALTSHULER, BERZON, NUSSBAUM, RUBIN & DEMAIN
177 Post Street, Suite 300
San Francisco, CA 94108
Tel: (415) 421-7151; Fax: (415) 362-8064
Attorneys for Plaintiff NRDC

**UNITED STATES DISTRICT COURT**
**FOR THE EASTERN DISTRICT OF CALIFORNIA**

| | |
|---|---|
| NATURAL RESOURCES DEFENSE COUNCIL, *et al.*,<br><br>Plaintiffs,<br><br>v.<br><br>KIRK RODGERS, as Regional Director of the UNITED STATES BUREAU OF RECLAMATION, *et al.*<br><br>Defendants,<br><br>ORANGE COVE IRRIGATION DISTRICT, *et al.*,<br><br>Defendants-Intervenors. | Case No.<br>CIV-S-88-1658 LKK/GGH<br><br>**[PROPOSED] ORDER APPROVING STIPULATION OF SETTLEMENT** |

Plaintiffs NRDC, *et al.* ("Plaintiffs"), defendants Kirk. Rodgers, *et al.* (the "Federal Defendants"), and defendants-intervenors Orange Cove Irrigation District, *et al.* (the "Friant Defendants") have jointly requested approval by this Court of a proposed settlement of this litigation on the terms and conditions set forth in the Stipulation of Settlement (including Exhibits A – F thereto, which are incorporated by reference as part of the Stipulation of Settlement). The Court, which has presided over this complex case for the past 18 years and is intimately familiar with the issues and the parties' positions with respect thereto, has carefully reviewed the Stipulation of Settlement, and the arguments of counsel for the parties.

Accordingly,

IT IS HEREBY ORDERED, ADJUDGED AND DECREED that the Stipulation of Settlement, attached hereto as Exhibit 1 and incorporated herein by reference, be and hereby is approved.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that all obligations set forth in the Stipulation of Settlement shall be performed in accordance with the terms of the Stipulation of Settlement.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that this Court shall retain jurisdiction, as provided in the Stipulation of Settlement, for purposes of resolving disputes that may arise in connection with the interpretation of the Stipulation of Settlement or the implementation of the settlement. This Court's continuing jurisdiction shall continue until the later of (i) July 1, 2026, or (ii) a motion is brought pursuant to Paragraph 20 of the Stipulation of Settlement, and the matter is finally resolved as provided therein. In the event that a party exercises its right under Paragraph 8 of the Stipulation of Settlement prior to that date to declare the settlement provided therein void, the Judgment shall be vacated, and the Court will convene a Status Conference.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the Plaintiffs and the Friant Defendants are directed to meet and confer concerning the selection of the Restoration Administrator, as provided in the Stipulation of Settlement and Exhibit D thereto, and to submit a Proposed Order Appointing Restoration Administrator to the Court for approval as provided in the Stipulation of Settlement and Exhibit D thereto.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the parties shall attempt to negotiate an award of Plaintiffs' reasonable attorneys' fees and costs as provided in Paragraph 45 of the Stipulation of Settlement. To facilitate such negotiations, and notwithstanding the time limit of Local Rule 54-292(b), Plaintiffs may file a Notice of Motion and Motion for Attorneys' Fees and Costs within 30 days of the entry of the Judgment in this action in order to meet the timeliness requirements of 28 U.S.C. § 2412(d)(1)(B) and Local Rule 54-293; provided, however, within 60 days thereafter, if agreement has not been reached among the parties as to Plaintiffs' Motion for Fees and Costs, then Plaintiffs shall file a brief and supporting materials addressing the remaining requirements for a motion for attorneys' fees and costs as provided in Local Rules 54-293 and 54-292. The Federal Defendants and Friant Defendants may have 30 days following service of Plaintiffs' brief and supporting materials to file papers in opposition, in whole or in part, to Plaintiffs' Motion for Fees and Costs. Plaintiffs may file reply papers within 14 days of service of any opposition papers. Any amount of Plaintiffs' attorneys' fees and costs not resolved by negotiations among the parties shall be determined by the Court through a separate Order on Plaintiffs' Motion.

DATED: _____

_____
THE HONORABLE LAWRENCE K. KARLTON
SENIOR UNITED STATES DISTRICT JUDGE

**EXHIBIT F**

**PROPOSED JUDGMENT**

**NRDC v. RODGERS**

HAMILTON CANDEE (SBN 111376)
JARED W. HUFFMAN (SBN 148669)
KATHERINE S. POOLE (SBN 195010)
MICHAEL E. WALL (SBN 170238)
NATURAL RESOURCES DEFENSE COUNCIL
111 Sutter Street, 20th Floor
San Francisco, CA 94104
Tel: (415) 875-6100; Fax: (415) 875-6161
Attorneys for Plaintiffs NRDC *et al.*

PHILIP F. ATKINS-PATTENSON (SBN 94901)
SHEPPARD MULLIN RICHTER & HAMPTON, LLP
4 Embarcadero Center, Suite 1700
San Francisco, CA 94111
Tel: (415) 434-9100; Fax: (415) 434-3947
Attorneys for Plaintiffs NRDC *et al.*

FRED H. ALTSHULER (SBN 43878)
SCOTT L. SHUCHART, *pro hac vice* (NY 4345617)
ALTSHULER, BERZON, NUSSBAUM, RUBIN & DEMAIN
177 Post Street, Suite 300
San Francisco, CA 94108
Tel: (415) 421-7151; Fax: (415) 362-8064
Attorneys for Plaintiff NRDC

**UNITED STATES DISTRICT COURT**
**EASTERN DISTRICT OF CALIFORNIA**
**SACRAMENTO DIVISION**

| | |
|---|---|
| NATURAL RESOURCES DEFENSE COUNCIL, INC., *et al.*<br><br>Plaintiffs<br><br>vs.<br><br>KIRK RODGERS, Regional Director, UNITED STATES BUREAU OF RECLAMATION, *et al.*,<br><br>Defendants.<br><br>---<br><br>ORANGE COVE IRRIGATION DISTRICT, *et al.*,<br><br>Defendants-Interventors | **CV-S-88-1658 LKK/GGH**<br><br>**[PROPOSED] JUDGMENT** |

In accordance with the Parties' Stipulation of Settlement and the Court's Order of this date approving the Stipulation of Settlement, it is hereby ORDERED that judgment is entered in this case.

Dated: _____

_____
HON. LAWRENCE K. KARLTON
Senior United States District Judge

LAW OFFICES OF
BEST BEST & KRIEGER LLP
400 CAPITOL MALL, SUITE 1650
SACRAMENTO, CALIFORNIA 95814

**PROOF OF SERVICE**

I, Mary Ann Vitry, declare:

I am a resident of the State of California and over the age of eighteen years, and not a party to the within action; my business address is Best Best & Krieger LLP, 400 Capitol Mall, Suite 1650, Sacramento, California 95814. On September 13, 2006, I served the within document(s):

NOTICE OF LODGMENT OF STIPULATION OF SETTLEMENT

☐ by transmitting via facsimile the document(s) listed above to the fax number(s) set forth below on this date before 5:00 p.m.

☐ by placing the document(s) listed above in a sealed envelope with postage thereon fully prepaid, in the United States mail at Sacramento, California addressed as set forth below.

☐ by causing personal delivery by _____ of the document(s) listed above to the person(s) at the address(es) set forth below.

☐ by personally delivering the document(s) listed above to the person(s) at the address(es) set forth below.

☐ I caused such envelope to be delivered via overnight delivery addressed as indicated on the attached service list. Such envelope was deposited for delivery by _____ following the firm's ordinary business practices.

**Via U.S. District Court, notice will be electronically mailed to:**

| | |
|---|---|
| Fred H. Altshuler | faltshuler@altshulerberzon.com, tmason@altshulerberzon.com, sshuchart@altshulerberzon.com, hmiller@altshulerberzon.com |
| Philip F. Atkins-Pattenson | patkinspattenson@sheppardmullin.com |
| J. Mark Atlas | jma@jmatlaslaw.com, matlas@mhalaw.com |
| Hamilton Candee | hcandee@nrdc.org, macaux@nrdc.org |
| Ernest Albert Conant | econant@youngwooldridge.com, waterlaw@youngwooldridge.com |
| Daniel M. Dooley | ddooley@dhlaw.net, mparten@dhlaw.net, apeltzer@dhlaw.net, ccarlson@dhlaw.net, jblack@dhlaw.net,vacosta@dhlaw.net |
| Denslow Brooks Green | dengreen@sbcglobal.net |
| Douglas Blaine Jensen | djb@bmjlaw.com |
| Jan Leslie Kahn | jkahn@kschanford.com, agarcia@kschanford.com |
| Jeffrey A. Meith | jmeith@minasianlaw.com, j.meith@att.net, judy@minasianlaw.com, cmecf@minasianlaw.com |
| Mark William Poole | mark.poole@doj.ca.gov |
| Jon David Rubin | jrubin@diepenbrock.com, llawrie@diepenbrock.com, jonishi@diepenbrock.com |
| Michael Victor Sexton | msexton@minasianlaw.com, cmecf@minasianlaw.com, anna@minasianlaw.com |

| | |
|---|---|
| Lee N. Smith | lnsmith@stoel.com, mmsykes@stoel.com, vlballew@stoel.com |
| James E. Thompson | james.thompson@bbklaw.com, astrid.watterson@bbklaw.com, rebecca.lerma@bbklaw.com |
| Gregory K. Wilkinson | gregory.wilkinson@bbklaw.com |
| Jennifer Buckman | jennifer.buckman@bklaw.com |
| David B. Glazer | david.glazer@usdoj.gov, efile_sf.enrd@usdoj.com |
| Clifford Thomas Lee | Cliff.Le@doj.ca.gov, Voneciel.Gaines@doj.ca.gov |
| Stephen M. Macfarlane | Stephen.Macfarlane@usdoj.gov, efile-sacramento.enrd@usdoj.com, deedee.sparks@usdoj.gov |
| James A. Maysonett | James.A.Maysonett@usdoj.gov, Leatha.Johnson@usdoj.gov |
| Leo Patrick O'Brien | leo@baykeeper.org |
| Katherine Scott Poole | kpoole@nrdc.org |
| Mark William Poole | mark.poole@doj.ca.gov |
| Richard Roos-Collins | rrcollins@n-h-i-org |
| Daniel Joseph O'Hanlon | Dohanlon@kmtg.com, DGentry@kmtg.com, Calendar8@kmtg.com |
| Gary William Sawyers | gsawyers@sawyerslaw.com |
| Danial Zackary Smith | zsmith@visalialaw.com |
| Timothy O'Laughlin | towater@olaughlinparis.com |
| William C. Paris | Bparis@olaughlinparis.com |

**Notice will be delivered via first-class U.S. mail to:**
Dante John Nomellini, Jr.
Nomellini Grilli & McDaniel
P.O. Box 1461
Stockton, CA 95201-1461

I am readily familiar with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare that I am employed in the office of a member of the bar of this court at whose direction the service was made.

Executed on September 13, 2006

Mary Ann Vitry

LAW OFFICES OF
BEST BEST & KRIEGER LLP
400 CAPITOL MALL, SUITE 1650
SACRAMENTO, CALIFORNIA 95814