



**TURLOCK IRRIGATION DISTRICT**

333 EAST CANAL DRIVE  
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TURLOCK, CALIFORNIA 95381  
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Don Pedro Dam and  
Powerhouse

March 25, 2009

VIA E-MAIL

Tim Heyne  
California Dept. of Fish and Game  
P.O. Box 10  
La Grange, CA 95329

Deborah Giglio  
U.S. Fish and Wildlife Service  
2800 Cottage Way, W-2605  
Sacramento, CA 95825

RE: Project 2299 – Minimum Flow Coordination Process for 2009-2010 Fish Flow Year

Dear Fishery Agency representatives:

The 1996 FERC Order, Amended Article 37, contained a Water Year Classification Index for determining the volume of scheduled stream flows for each fish flow year. The classifications are based on the San Joaquin Basin 60-20-20 Indices for water years. The index has been updated in a continuous fashion based on the Department of Water Resources (DWR) monthly forecasts and updates of those forecasts are provided in Table 1. We are in another below average year so far and as such each update changes the fish flow volume at the 50% and 90% exceedence levels.

TID has again been tracking the forecasts and providing your agencies with corresponding flow volume information in e-mails sent on Feb 23, Feb 27, Mar 18, and Mar 19. The volumes resulting from the Mar 1 forecast were reviewed at the Mar 12 TRTAC meeting. TID also supplied preliminary dry and average scenario daily schedules for initial Vernalis Adaptive Management Program (VAMP) pulse flow schedules that were provided to your agencies in a Mar 19 e-mail from the VAMP Hydrology Coordinator and at the Mar 19 VAMP technical meeting. At that meeting, the selection for the VAMP period timing was initially determined to be from April 22 through May 22, the same as last year. The corresponding start of that period at La Grange would be April 20, 2008 using the customary 2-day lead time for flow to arrive at Vernalis on the San Joaquin River. Consideration could be made to adding to the base flow during the April 15-19 period.

Based on applying the current DWR April-July runoff forecast update of March 17 to the DWR March 1 60-20-20 basin index, the annual minimum Article 37 flow requirements are 125,253 AF (Intermediate Critical-Dry) in the 90% Exceedence case and 163,149 AF (Intermediate Dry-Below Normal) in the 50% Exceedence case. These values are also shown on Table 1 with the respective 60-20-20 index. Those present forecast values for the 50% (average) and 90% (dry) cases for the 2009-2010 Fish Year are shown in Figures 2 through 4 along with the different flow components within each classification. Due to the present dry year, the 50% and 90% levels are considered at present.



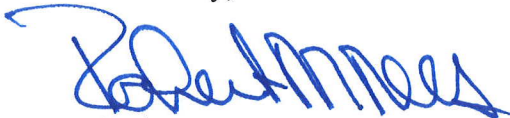
Based on the above, two daily schedules are presented as examples (Tables 2 & 3). The schedules have the following features:

- 1) The base flow and pulse flow amounts are based on those specified for the year types in Article 37.
- 2) The timing of the spring pulse flow is consistent with the proposed VAMP period.
- 3) The spring pulse flows are shown here as steady with a rampdown. However a varied pattern with about two peaks as has been used in past years is recommended as coordinated schedules are refined over the next few weeks.
- 4) Rampdown (transition) flows after VAMP and leading into the June flow are shown.
- 5) The "interpolation water" volume for these two cases is shown at the bottom of the schedule. Allocating this variable category could be considered in subsequent schedules when there is more information
- 6) The initial timing of a fall pulse flow is shown as based on a default schedule of October 6 thorough 10 that was established in 1996. The actual timing and pattern could be determined after July if applicable when the final 2008-2009 fish flow year volume is known.

We will need rapid consensus and approval as in 2008 to (1) implement a FERC flow schedule starting April 15 and for the VAMP scheduling process, and (2) for all subsequent schedule adjustments so that any flow modifications can be conducted in a timely manner, including adequate advance notice for the Districts to implement such operations.

If you have any questions, please contact Wes Monier at 209-883-8321.

Sincerely,



Robert M. Nees  
Directory of Water Resources and Regulatory Affairs

C: Larry Weis - TID  
Allen Short - MID  
Michael Carlin - CCSF  
Maria Rea - NMFS  
FERC Secretary



Table 1

SAN JOAQUIN VALLEY WATER YEAR HYDROLOGIC CLASSIFICATION  
602020 INDEX

| YEAR            | APRIL-JULY RUNOFF (AF) |         |           |           | STANISLAUS | OCTOBER-MARCH RUNOFF (AF) |         |         |           | TOTAL     | 602020 INDEX | TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT | San Joaquin Index (not the FERC Index) |
|-----------------|------------------------|---------|-----------|-----------|------------|---------------------------|---------|---------|-----------|-----------|--------------|-----------------------------------------|----------------------------------------|
|                 | TUOLUMNE               | MERCED  | FRIANT    | TOTAL     |            | TUOLUMNE                  | MERCED  | FRIANT  | TOTAL     |           |              |                                         |                                        |
| Feb 1 Forecast  |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 200,000                | 180,000 | 400,000   | 1,180,000 | 150,000    | 305,000                   | 130,000 | 210,000 | 795,000   | 1,279,899 | 1,279,899    | 94,000                                  | Critical                               |
| Average         | 500,000                | 430,000 | 910,000   | 2,730,000 | 270,000    | 470,000                   | 220,000 | 340,000 | 1,300,000 | 2,310,899 | 2,310,899    | 136,214                                 | Dry                                    |
| Wet             | 960,000                | 900,000 | 1,730,000 | 5,270,000 | 450,000    | 735,000                   | 380,000 | 550,000 | 2,115,000 | 3,997,899 | 3,997,899    | 300,923                                 | Wet                                    |
| Feb 10 Update   |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 210,000                | 190,000 | 430,000   | 1,250,000 | 150,000    | 305,000                   | 130,000 | 210,000 | 795,000   | 1,321,899 | 1,321,899    | 94,000                                  | Critical                               |
| Average         | 490,000                | 430,000 | 910,000   | 2,700,000 | 270,000    | 470,000                   | 220,000 | 340,000 | 1,300,000 | 2,292,899 | 2,292,899    | 134,989                                 | Dry                                    |
| Wet             | 930,000                | 850,000 | 1,660,000 | 5,050,000 | 450,000    | 735,000                   | 380,000 | 550,000 | 2,115,000 | 3,865,899 | 3,865,899    | 300,923                                 | Wet                                    |
| Feb 17 Update   |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 260,000                | 260,000 | 530,000   | 1,590,000 | 150,000    | 305,000                   | 130,000 | 210,000 | 795,000   | 1,525,899 | 1,525,899    | 104,430                                 | Critical                               |
| Average         | 520,000                | 470,000 | 960,000   | 2,890,000 | 270,000    | 470,000                   | 220,000 | 340,000 | 1,300,000 | 2,406,899 | 2,406,899    | 142,782                                 | Dry                                    |
| Wet             | 940,000                | 850,000 | 1,650,000 | 5,070,000 | 450,000    | 735,000                   | 380,000 | 550,000 | 2,115,000 | 3,877,899 | 3,877,899    | 300,923                                 | Wet                                    |
| Feb 24 Update   |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 300,000                | 300,000 | 580,000   | 1,780,000 | 150,000    | 305,000                   | 130,000 | 210,000 | 795,000   | 1,639,899 | 1,639,899    | 107,707                                 | Critical                               |
| Average         | 540,000                | 500,000 | 990,000   | 2,990,000 | 270,000    | 470,000                   | 220,000 | 340,000 | 1,300,000 | 2,466,899 | 2,466,899    | 147,359                                 | Dry                                    |
| Wet             | 940,000                | 840,000 | 1,620,000 | 5,010,000 | 450,000    | 735,000                   | 380,000 | 550,000 | 2,115,000 | 3,841,899 | 3,841,899    | 300,923                                 | Wet                                    |
| Mar 1 Forecast  |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 350,000                | 320,000 | 620,000   | 1,960,000 | 230,000    | 410,000                   | 190,000 | 285,000 | 1,115,000 | 1,811,899 | 1,811,899    | 112,652                                 | Critical                               |
| Average         | 560,000                | 500,000 | 980,000   | 3,020,000 | 270,000    | 465,000                   | 225,000 | 355,000 | 1,315,000 | 2,487,899 | 2,487,899    | 148,961                                 | Dry                                    |
| Wet             | 950,000                | 850,000 | 1,570,000 | 4,970,000 | 261,304    | 443,544                   | 218,333 | 360,063 | 1,283,245 | 3,651,548 | 3,651,548    | 300,923                                 | Above Normal                           |
| Mar 10 Forecast |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 450,000                | 390,000 | 750,000   | 2,470,000 | 230,000    | 410,000                   | 190,000 | 285,000 | 1,115,000 | 2,117,899 | 2,117,899    | 124,392                                 | Dry                                    |
| Average         | 650,000                | 550,000 | 1,060,000 | 3,470,000 | 270,000    | 465,000                   | 225,000 | 355,000 | 1,315,000 | 2,721,899 | 2,721,899    | 172,308                                 | Below Normal                           |
| Wet             | 1,000,000              | 870,000 | 1,570,000 | 5,140,000 | 261,304    | 443,544                   | 218,333 | 360,063 | 1,283,245 | 3,753,548 | 3,753,548    | 300,923                                 | Above Normal                           |
| Mar 17 Forecast |                        |         |           |           |            |                           |         |         |           |           |              |                                         |                                        |
| Dry             | 480,000                | 390,000 | 750,000   | 2,500,000 | 230,000    | 410,000                   | 190,000 | 285,000 | 1,115,000 | 2,135,899 | 2,135,899    | 125,253                                 | Dry                                    |
| Average         | 640,000                | 530,000 | 1,030,000 | 3,330,000 | 270,000    | 465,000                   | 225,000 | 355,000 | 1,315,000 | 2,673,899 | 2,673,899    | 163,149                                 | Below Normal                           |
| Wet             | 960,000                | 820,000 | 1,490,000 | 4,900,000 | 261,304    | 443,544                   | 218,333 | 360,063 | 1,283,245 | 3,609,548 | 3,609,548    | 300,923                                 | Above Normal                           |

SCHEDULE FOR 2009 - 20010 Fish Flow Year

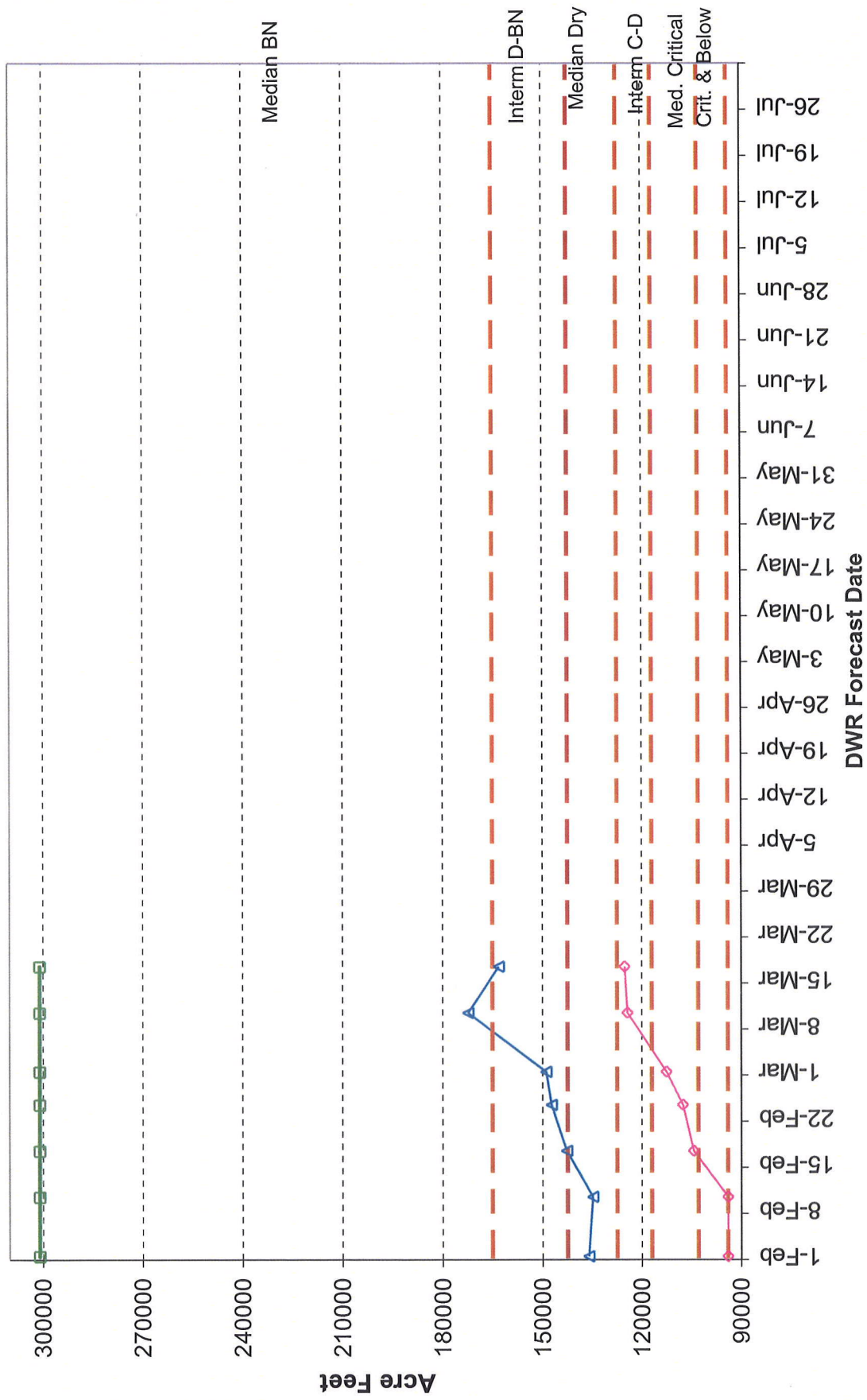
|             |                                 |       |         |         |
|-------------|---------------------------------|-------|---------|---------|
| No. of days | 365 (April 15 through April 14) | 8,237 | Total = | 125,253 |
|-------------|---------------------------------|-------|---------|---------|



**TABLE 3**  
**Tuolumne River Flow Schedule**  
**SCHEDULE FOR 2009 - 20010 Fish Flow Year**

| DATE        |             | Number of<br>DAYS | Flow                        |        |                | Pulse Flows |       |                | Flow for Average |    |                | Other Adjusted Flow |      |                | Total FERC Flow |                |
|-------------|-------------|-------------------|-----------------------------|--------|----------------|-------------|-------|----------------|------------------|----|----------------|---------------------|------|----------------|-----------------|----------------|
|             |             |                   | CFS                         | AF     | ACCUM.<br>A.F. | CFS         | AF    | ACCUM.<br>A.F. | CFS              | AF | ACCUM.<br>A.F. | CFS                 | AF   | ACCUM.<br>A.F. | CFS             | ACCUM.<br>A.F. |
| 15-Apr-2008 | 15-Apr-2008 | 1                 | 180                         | 357    | 357            | 0           | 0     | 0              | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 357            |
| 16-Apr-2008 | 16-Apr-2008 | 1                 | 180                         | 357    | 714            | 0           | 0     | 0              | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 714            |
| 17-Apr-2008 | 17-Apr-2008 | 1                 | 180                         | 357    | 1,071          | 0           | 0     | 0              | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 1,071          |
| 18-Apr-2008 | 18-Apr-2008 | 1                 | 180                         | 357    | 1,428          | 0           | 0     | 0              | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 1,428          |
| 19-Apr-2008 | 19-Apr-2008 | 1                 | 180                         | 357    | 1,785          | 513         | 1,018 | 1,018          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 2,803          |
| 20-Apr-2008 | 20-Apr-2008 | 1                 | 180                         | 357    | 2,142          | 513         | 1,018 | 2,036          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 4,178          |
| 21-Apr-2008 | 21-Apr-2008 | 1                 | 180                         | 357    | 2,499          | 513         | 1,018 | 3,054          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 5,553          |
| 22-Apr-2008 | 22-Apr-2008 | 1                 | 180                         | 357    | 2,856          | 513         | 1,018 | 4,072          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 6,928          |
| 23-Apr-2008 | 23-Apr-2008 | 1                 | 180                         | 357    | 3,213          | 513         | 1,018 | 5,090          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 8,303          |
| 24-Apr-2008 | 24-Apr-2008 | 1                 | 180                         | 357    | 3,570          | 513         | 1,018 | 6,108          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 9,678          |
| 25-Apr-2008 | 25-Apr-2008 | 1                 | 180                         | 357    | 3,927          | 513         | 1,018 | 7,126          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 11,053         |
| 26-Apr-2008 | 26-Apr-2008 | 1                 | 180                         | 357    | 4,284          | 513         | 1,018 | 8,144          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 12,428         |
| 27-Apr-2008 | 27-Apr-2008 | 1                 | 180                         | 357    | 4,641          | 513         | 1,018 | 9,162          | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 13,803         |
| 28-Apr-2008 | 28-Apr-2008 | 1                 | 180                         | 357    | 4,998          | 513         | 1,018 | 10,179         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 15,178         |
| 29-Apr-2008 | 29-Apr-2008 | 1                 | 180                         | 357    | 5,355          | 513         | 1,018 | 11,197         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 16,553         |
| 30-Apr-2008 | 30-Apr-2008 | 1                 | 180                         | 357    | 5,712          | 513         | 1,018 | 12,215         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 17,928         |
| 01-May-2008 | 01-May-2008 | 1                 | 180                         | 357    | 6,069          | 513         | 1,018 | 13,233         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 19,303         |
| 02-May-2008 | 02-May-2008 | 1                 | 180                         | 357    | 6,426          | 513         | 1,018 | 14,251         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 20,678         |
| 03-May-2008 | 03-May-2008 | 1                 | 180                         | 357    | 6,783          | 513         | 1,018 | 15,269         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 22,053         |
| 04-May-2008 | 04-May-2008 | 1                 | 180                         | 357    | 7,140          | 513         | 1,018 | 16,287         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 23,428         |
| 05-May-2008 | 05-May-2008 | 1                 | 180                         | 357    | 7,498          | 513         | 1,018 | 17,305         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 24,803         |
| 06-May-2008 | 06-May-2008 | 1                 | 180                         | 357    | 7,855          | 513         | 1,018 | 18,323         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 26,178         |
| 07-May-2008 | 07-May-2008 | 1                 | 180                         | 357    | 8,212          | 513         | 1,018 | 19,341         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 27,553         |
| 08-May-2008 | 08-May-2008 | 1                 | 180                         | 357    | 8,569          | 513         | 1,018 | 20,359         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 28,928         |
| 09-May-2008 | 09-May-2008 | 1                 | 180                         | 357    | 8,926          | 513         | 1,018 | 21,377         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 30,303         |
| 10-May-2008 | 10-May-2008 | 1                 | 180                         | 357    | 9,283          | 513         | 1,018 | 22,395         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 31,678         |
| 11-May-2008 | 11-May-2008 | 1                 | 180                         | 357    | 9,640          | 513         | 1,018 | 23,413         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 33,053         |
| 12-May-2008 | 12-May-2008 | 1                 | 180                         | 357    | 9,997          | 513         | 1,018 | 24,431         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 34,428         |
| 13-May-2008 | 13-May-2008 | 1                 | 180                         | 357    | 10,354         | 513         | 1,018 | 25,449         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 35,803         |
| 14-May-2008 | 14-May-2008 | 1                 | 180                         | 357    | 10,711         | 513         | 1,018 | 26,467         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 37,178         |
| 15-May-2008 | 15-May-2008 | 1                 | 180                         | 357    | 11,068         | 513         | 1,018 | 27,485         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 38,553         |
| 16-May-2008 | 16-May-2008 | 1                 | 180                         | 357    | 11,425         | 513         | 1,018 | 28,503         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 39,928         |
| 17-May-2008 | 17-May-2008 | 1                 | 180                         | 357    | 11,782         | 513         | 1,018 | 29,520         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 41,303         |
| 18-May-2008 | 18-May-2008 | 1                 | 180                         | 357    | 12,139         | 513         | 1,018 | 30,538         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 42,678         |
| 19-May-2008 | 19-May-2008 | 1                 | 180                         | 357    | 12,496         | 513         | 1,018 | 31,556         | 0                | 0  | 0              | 0                   | 0    | 0              | 693             | 44,053         |
| 20-May-2008 | 20-May-2008 | 1                 | 180                         | 357    | 12,853         | 650         | 1,289 | 32,846         | 0                | 0  | 0              | 0                   | 0    | 0              | 830             | 45,699         |
| 21-May-2008 | 21-May-2008 | 1                 | 180                         | 357    | 13,210         | 500         | 992   | 33,837         | 0                | 0  | 0              | 0                   | 0    | 0              | 680             | 47,047         |
| 22-May-2008 | 22-May-2008 | 1                 | 180                         | 357    | 13,567         | 400         | 793   | 34,631         | 0                | 0  | 0              | 0                   | 0    | 0              | 580             | 48,198         |
| 23-May-2008 | 23-May-2008 | 1                 | 180                         | 357    | 13,924         | 300         | 595   | 35,226         | 0                | 0  | 0              | 0                   | 0    | 0              | 480             | 49,150         |
| 24-May-2008 | 24-May-2008 | 1                 | 180                         | 357    | 14,281         | 200         | 397   | 35,622         | 0                | 0  | 0              | 0                   | 0    | 0              | 380             | 49,903         |
| 25-May-2008 | 25-May-2008 | 1                 | 180                         | 357    | 14,638         | 100         | 198   | 35,821         | 0                | 0  | 0              | 0                   | 0    | 0              | 280             | 50,459         |
| 26-May-2008 | 26-May-2008 | 1                 | 180                         | 357    | 14,995         | 50          | 99    | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 230             | 50,915         |
| 27-May-2008 | 27-May-2008 | 1                 | 180                         | 357    | 15,352         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 51,272         |
| 28-May-2008 | 28-May-2008 | 1                 | 180                         | 357    | 15,709         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 51,629         |
| 29-May-2008 | 29-May-2008 | 1                 | 180                         | 357    | 16,066         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 51,986         |
| 30-May-2008 | 30-May-2008 | 1                 | 180                         | 357    | 16,423         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 52,343         |
| 31-May-2008 | 31-May-2008 | 1                 | 180                         | 357    | 16,780         | 0           | 0     | 35,920         | 0                | 0  | 0              | -35                 | (69) | (69)           | 145             | 52,631         |
| 01-Jun-2008 | 01-Jun-2008 | 1                 | 75                          | 149    | 16,929         | 0           | 0     | 35,920         | 0                | 0  | 0              | 35                  | 69   | 0              | 110             | 52,849         |
| 02-Jun-2008 | 02-Jun-2008 | 1                 | 75                          | 149    | 17,078         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 52,998         |
| 03-Jun-2008 | 03-Jun-2008 | 1                 | 75                          | 149    | 17,226         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 53,146         |
| 04-Jun-2008 | 04-Jun-2008 | 1                 | 75                          | 149    | 17,375         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 53,295         |
| 05-Jun-2008 | 30-Jun-2008 | 26                | 75                          | 3,868  | 21,243         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 57,163         |
| 01-Jul-2008 | 31-Jul-2008 | 31                | 75                          | 4,612  | 25,855         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 61,775         |
| 01-Aug-2008 | 31-Aug-2008 | 31                | 75                          | 4,612  | 30,466         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 66,386         |
| 01-Sep-2008 | 10-Sep-2008 | 10                | 75                          | 1,488  | 31,954         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 67,874         |
| 11-Sep-2008 | 13-Sep-2008 | 3                 | 75                          | 446    | 32,400         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 68,320         |
| 14-Sep-2008 | 30-Sep-2008 | 17                | 75                          | 2,529  | 34,929         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 75              | 70,849         |
| 01-Oct-2008 | 05-Oct-2008 | 5                 | 180                         | 1,785  | 36,714         | 0           | 0     | 35,920         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 72,634         |
| 06-Oct-2008 | 10-Oct-2008 | 5                 | 180                         | 1,785  | 38,499         | 169         | 1,676 | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 349             | 76,095         |
| 11-Oct-2008 | 24-Oct-2008 | 14                | 180                         | 4,998  | 43,498         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 81,094         |
| 25-Oct-2008 | 26-Oct-2008 | 2                 | 180                         | 714    | 44,212         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 81,808         |
| 27-Oct-2008 | 27-Oct-2008 | 1                 | 180                         | 357    | 44,569         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 82,165         |
| 28-Oct-2008 | 28-Oct-2008 | 1                 | 180                         | 357    | 44,926         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 82,522         |
| 29-Oct-2008 | 31-Oct-2008 | 3                 | 180                         | 1,071  | 45,997         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 83,593         |
| 01-Nov-2008 | 16-Nov-2008 | 16                | 180                         | 5,712  | 51,709         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 89,305         |
| 17-Nov-2008 | 30-Nov-2008 | 14                | 180                         | 4,998  | 56,707         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 94,303         |
| 01-Dec-2008 | 31-Dec-2008 | 31                | 180                         | 11,068 | 67,775         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 105,371        |
| 01-Jan-2009 | 31-Jan-2009 | 31                | 180                         | 11,068 | 78,843         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 116,439        |
| 01-Feb-2009 | 28-Feb-2009 | 28                | 180                         | 9,997  | 88,840         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 126,436        |
| 01-Mar-2009 | 31-Mar-2009 | 31                | 180                         | 11,068 | 99,907         | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 137,503        |
| 01-Apr-2009 | 14-Apr-2009 | 14                | 180                         | 4,998  | 104,906        | 0           | 0     | 37,596         | 0                | 0  | 0              | 0                   | 0    | 0              | 180             | 142,502        |
| No. of days |             | 365               | (April 15 through April 14) |        |                |             |       |                | 20,647           |    |                |                     |      |                | Total =         |                |
|             |             |                   |                             |        |                |             |       |                |                  |    |                |                     |      |                | 163,149         |                |

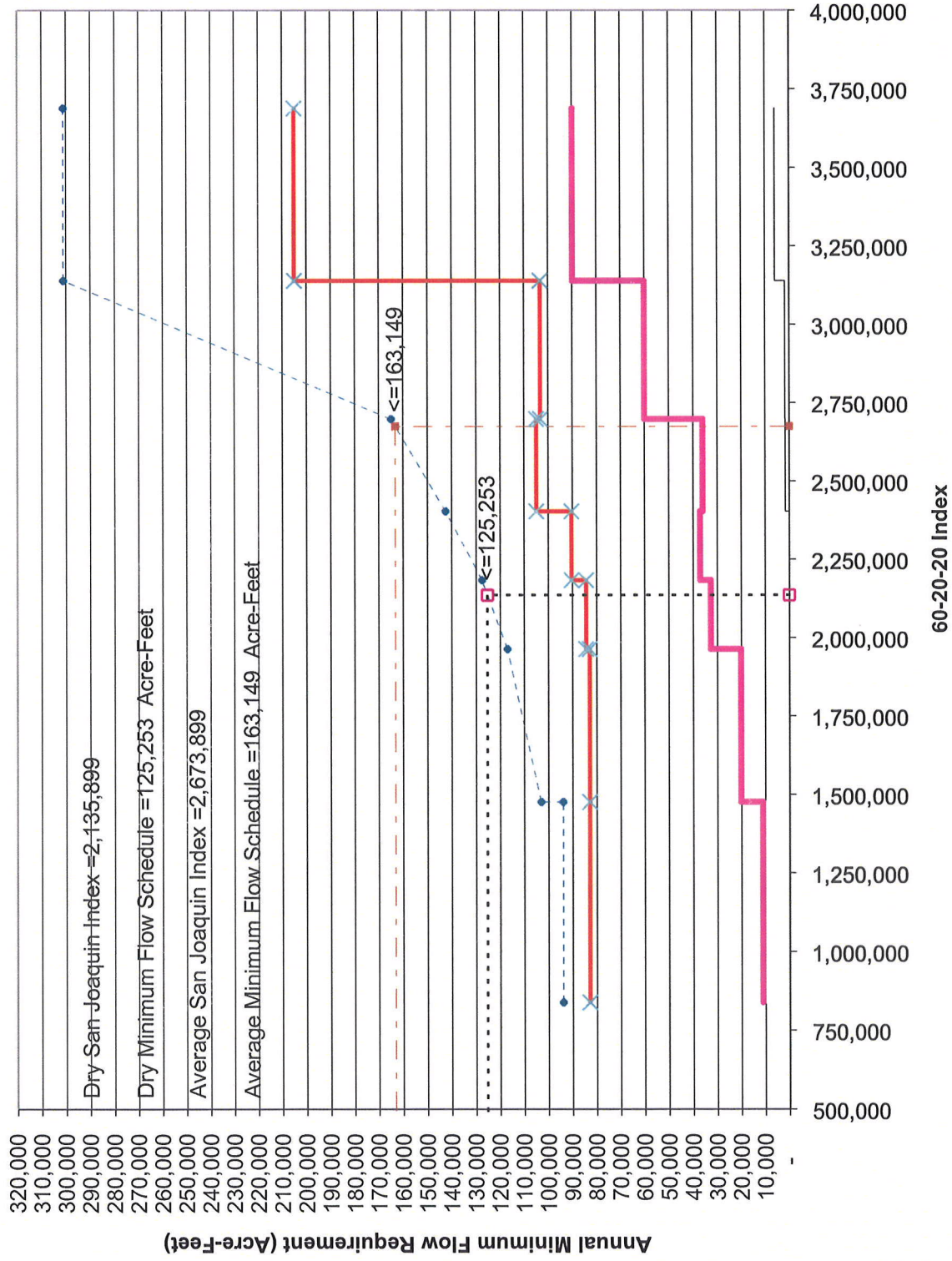
2008-2009 FERC Flow Volumes (10%, 50% 90% exceedence values)





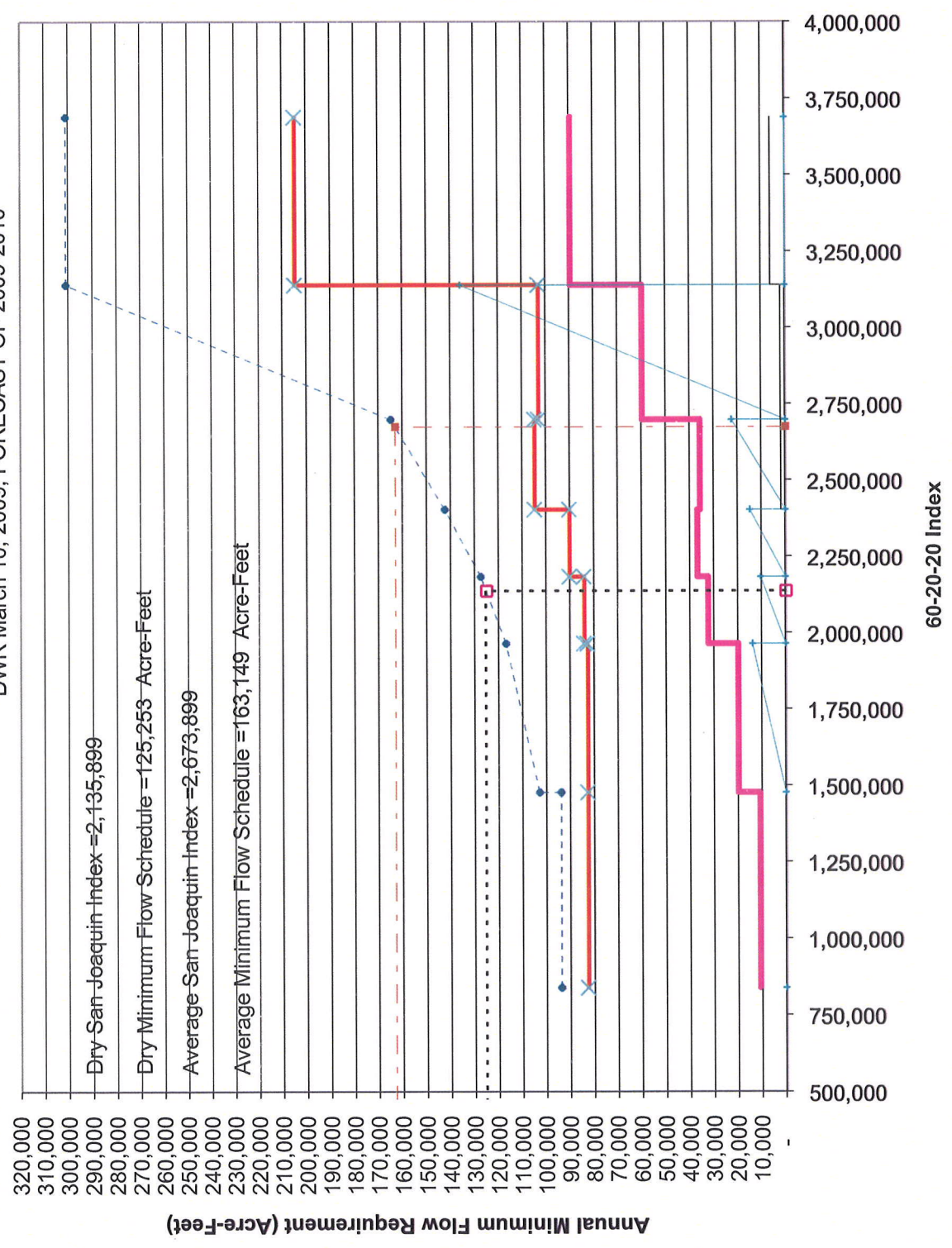
# TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 2)

DWR March 10, 2009; FORECAST OF 2009-2010 FISH



TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 3)

DWR March 10, 2009; FORECAST OF 2009-2010





# TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Summer Base Flow) (Figure 4)

DWR March 10, 2009; FORECAST OF 2009-2010 FISH YEAR

