RESOLUTION NO. R5-2006-XXX
ATTACHMENT 1

AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS FOR THE CONTROL OF DIAZINON AND CHLORPYRIFOS RUNOFF INTO THE SACRAMENTO-SAN JOAQUIN DELTA

Additions to the Basin Plan are shown as underlined text, and text removals are shown in strikeout below.

ADDITIONS TO CHAPTER III, WATER QUALITY OBJECTIVES

Add the following text to table III-2A:

TABLE III-2A
SPECIFIC PESTICIDE OBJECTIVES

PESTICIDE	MAXIMUM CONCENTRATION AND AVERAGING PERIOD	APPLICABLE WATER BODIES
Chlorpyrifos	0.025 µg/L ; 1-hour average (acute) 0.015 µg/L ; 4-day average (chronic) Not to be exceeded more than once in a three year period.	San Joaquin River from Mendota Dam to Vernalis (Reaches include Mendota Dam to Sack Dam (70), Sack Dam to Mouth of Merced River (71), Mouth of Merced River to Vernalis (83)) , Delta Waterways listed in Appendix -.)
Diazinon	0.16 µg/L ; 1-hour average (acute) 0.10 µg/L ; 4-day average (chronic) Not to be exceeded more than once in a three year period.	San Joaquin River from Mendota Dam to Vernalis (Reaches include Mendota Dam to Sack Dam (70), Sack Dam to Mouth of Merced River (71), Mouth of Merced River to Vernalis (83)) , Delta Waterways listed in Appendix -.)

ADDITIONS TO CHAPTER IV, IMPLEMENTATION

To the "Regional Water Board Prohibitions" section, after 8. Control of Diazinon and Chlorpyrifos Runoff into the San Joaquin River, add:

9. Control of Diazinon and Chlorpyrifos Runoff into Delta Waterways (as identified in Appendix -)

Beginning December 1, 2011, the direct or indirect discharge of diazinon or chlorpyrifos into Delta Waterways is prohibited during the dormant season (1 December through 1 March) if any exceedance of the chlorpyrifos or diazinon water quality objectives, or diazinon and chlorpyrifos loading capacity occurred during the previous dormant season.

Beginning March 2, 2012, the direct or indirect discharge of diazinon or chlorpyrifos into Delta Waterways is prohibited during the irrigation season (2 March through 30 November) if any exceedance of the chlorpyrifos or diazinon water quality objectives, or diazinon and chlorpyrifos loading capacity occurred during the previous irrigation season.

These prohibitions do not apply if the discharge of diazinon or chlorpyrifos is subject to a waiver of waste discharge requirements implementing the diazinon and chlorpyrifos water quality objectives and load allocations for diazinon and chlorpyrifos for the Delta Waterways, or governed by individual or general waste discharge requirements.

These prohibitions apply only to dischargers causing or contributing to the exceedance of the water quality objective or loading capacity.

These prohibitions do not apply to direct or indirect discharges to the Sacramento or San Joaquin Rivers upstream of the legal boundary of the Delta (as defined in Section 12220 of the Water Code).

To the Pesticide Discharges from Nonpoint Sources Add

Diazinon and Chlorpyrifos Runoff into the Sacramento-San Joaquin Delta Waterways (as identified in Appendix -)

1. The pesticide runoff control program shall:
   a. Ensure compliance with water quality objectives applicable to diazinon and chlorpyrifos in the Sacramento-San Joaquin Delta Waterways through the implementation of management practices.
   b. Ensure that measures that are implemented to reduce discharges of diazinon and chlorpyrifos do not lead to an increase in the discharge of other pesticides to levels that cause or contribute to violations of applicable water quality objectives and Regional Water Board plans and policies, and
   c. Ensure that discharges of pesticides to surface waters are controlled so that pesticide concentrations are at the lowest levels that are technically and economically achievable.

2. Dischargers must consider whether any proposed alternative to the use of diazinon or chlorpyrifos has the potential to degrade ground or surface water. If the alternative has the potential to degrade groundwater, alternative pest control methods must be considered. If

the alternative has the potential to degrade surface water, control measures must be implemented to ensure that applicable water quality objectives and Regional Water Board plans and policies are not violated, including State Water Resources Control Board Resolution 68-16.

3. Compliance with applicable water quality objectives, load allocations, and waste load allocations for diazinon and chlorpyrifos in the Delta Waterways is required by December 1, 2011.

   The water quality objectives and allocations will be implemented through one or a combination of the following: the adoption of one or more waivers of waste discharge requirements, and general or individual waste discharge requirements. To the extent not already in place, the Regional Water Board expects to adopt or revise the appropriate waiver(s) or waste discharge requirements by **December 31, 2009.**

4. The Regional Water Board intends to review the diazinon and chlorpyrifos allocations and the implementation provisions in the Basin Plan at least once every five years, beginning no later than December 31, 2010.

5. Regional Water Board staff will meet at least annually with staff from the Department of Pesticide Regulation and representatives from the California Agricultural Commissioners and Sealers Association to review pesticide use and instream pesticide concentrations during the dormant spray and irrigation application seasons and to consider the effectiveness of management measures in meeting water quality objectives and load allocations.

6. The waste load allocations (WLA) for all NPDES-permitted dischargers, load allocations (LA) for nonpoint source discharges, and the loading capacity (LC) of each of the Sacramento-San Joaquin Delta Waterways defined in Appendix - shall not exceed the sum (S) of one (1) as defined below.

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

   where

   C_D = diazinon concentration in μg/L of point source discharge for the WLA; nonpoint source discharge for the LA; or a Delta Waterway for the LC.
   C_C = chlorpyrifos concentration in μg/L of point source discharge for the WLA; nonpoint source discharge for the LA; or a Delta Waterway for the LC.
   WQO_D = acute or chronic diazinon water quality objective in μg/L.
   WQO_C = acute or chronic chlorpyrifos water quality objective in μg/L.

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the sum (S) above, analytical results that are reported as "non-detectable" concentrations are considered to be zero.

7. The established waste load and load allocations for diazinon and chlorpyrifos, and the water quality objectives for chlorpyrifos and diazinon in the Delta Waterways represent a maximum allowable level. The Regional Water Board shall require any additional reductions in diazinon and chlorpyrifos levels necessary to account for additional additive or synergistic toxicity effects or to protect beneficial uses in tributary waters.

8. Pursuant to CWC Section 13267, the Executive Officer will require dischargers to submit a management plan that describes the actions that the discharger will take to reduce diazinon and chlorpyrifos discharges and meet the applicable allocations by the required compliance date. The management plan may include actions required by State and Federal pesticide regulations. The Executive Officer will require the discharger to document the relationship between the actions to be taken and the expected reductions in diazinon and chlorpyrifos discharges. The Executive Officer will allow individual dischargers or a discharger group or coalition to submit management plans. The management plan must comply with the provisions of any applicable waiver of waste discharge requirements or waste discharge requirements. The Executive Officer may require revisions to the management plan if compliance with applicable allocations is not attained or the management plan is not reasonably likely to attain compliance.

9. If the loading capacity in one or more Delta Waterways is not being met by the compliance date, direct or indirect dischargers to the those waterways whose discharge exceeds their load allocation will be required to revise their management plans and implement an improved complement of management measures to meet the loading capacity.

10. Any waiver of waste discharge requirements or waste discharge requirements that govern the control of pesticide runoff that is discharged directly or indirectly into the Delta Waterways must be consistent with the policies and actions described in paragraphs 1 – 9.

11. In determining compliance with the waste load allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharger, including any diazinon and chlorpyrifos present in precipitation and other available relevant information; and any applicable provisions in the discharger's NPDES permit requiring the discharger to reduce the discharge of pollutants to the maximum extent possible.

12. The above provisions for control of diazinon and chlorpyrifos discharges to the Delta Waterways do not apply to discharge~~r~~s to the Sacramento and San Joaquin Rivers upstream of the Delta.

To the "Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing" section, add:

The total estimated costs for management practices to meet the diazinon and chlorpyrifos objectives for the Delta Waterways range from $5.9 to $12.7 million. The estimated costs for discharger compliance monitoring, planning and evaluation range from $500,000 to $1.8 million. The estimated total annual costs range from $6.4 to $14.4 million (2005 dollars).

Potential funding sources include:

1. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program and the Pesticide Control Program.

ADDITIONS TO CHAPTER 5, SURVEILLANCE AND MONITORING

The Regional Water Board requires a focused monitoring effort of pesticide runoff from orchards and fields discharging to the Sacramento-San Joaquin Delta Waterways (as identified in Appendix -).

The monitoring and reporting program for any waste discharge requirements or waiver of waste discharge requirements that addresses pesticide runoff into the Delta Waterways must be designed to collect the information necessary to:

1. Determine compliance with established water quality objectives and loading capacity, applicable to diazinon and chlorpyrifos in the Delta Waterways.

2. Determine compliance with the load allocations applicable to discharges of diazinon and chlorpyrifos into the Delta Waterways.

3. Determine the degree of implementation of management practices to reduce off-site movement of diazinon and chlorpyrifos.

4. Determine the effectiveness of management practices and strategies to reduce off-site migration of diazinon and chlorpyrifos.

5. Determine whether alternatives to diazinon and chlorpyrifos are causing surface water quality impacts.

6. Determine whether the discharge causes or contributes to a toxicity impairment due to additive or synergistic effects of multiple pollutants.

7. Demonstrate that management practices are achieving the lowest pesticide levels technically and economically achievable.

Dischargers are responsible for providing the necessary information. The information may come from the dischargers' monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

With Regional Water Board Executive Officer approval, monitoring can be performed in a subset of the Delta Waterways listed in Appendix -, and the tributaries of those waterways, to determine compliance with the water quality objectives, loading capacity and load allocations.

ADDITIONS TO APPENDICES

Add a new Appendix titled "Sacramento-San Joaquin Delta Waterways" containing the text and figures below (Since the entire appendix would be added the text is not underlined).

Appendix XXX Sacramento-San Joaquin Delta Waterways

This Appendix lists the Sacramento-San Joaquin Delta Waterways (Delta Waterways)(1) to which the site-specific diazinon and chlorpyrifos water quality objectives and implementation and monitoring provisions apply. The following are distinct, readily identifiable waterbodies within the boundaries of the "Legal" Delta that are hydrologically connected by surface water flows (not including pumping) to the Sacramento and/or San Joaquin rivers. Figures 1 and 2 show the locations of the Delta Waterways.

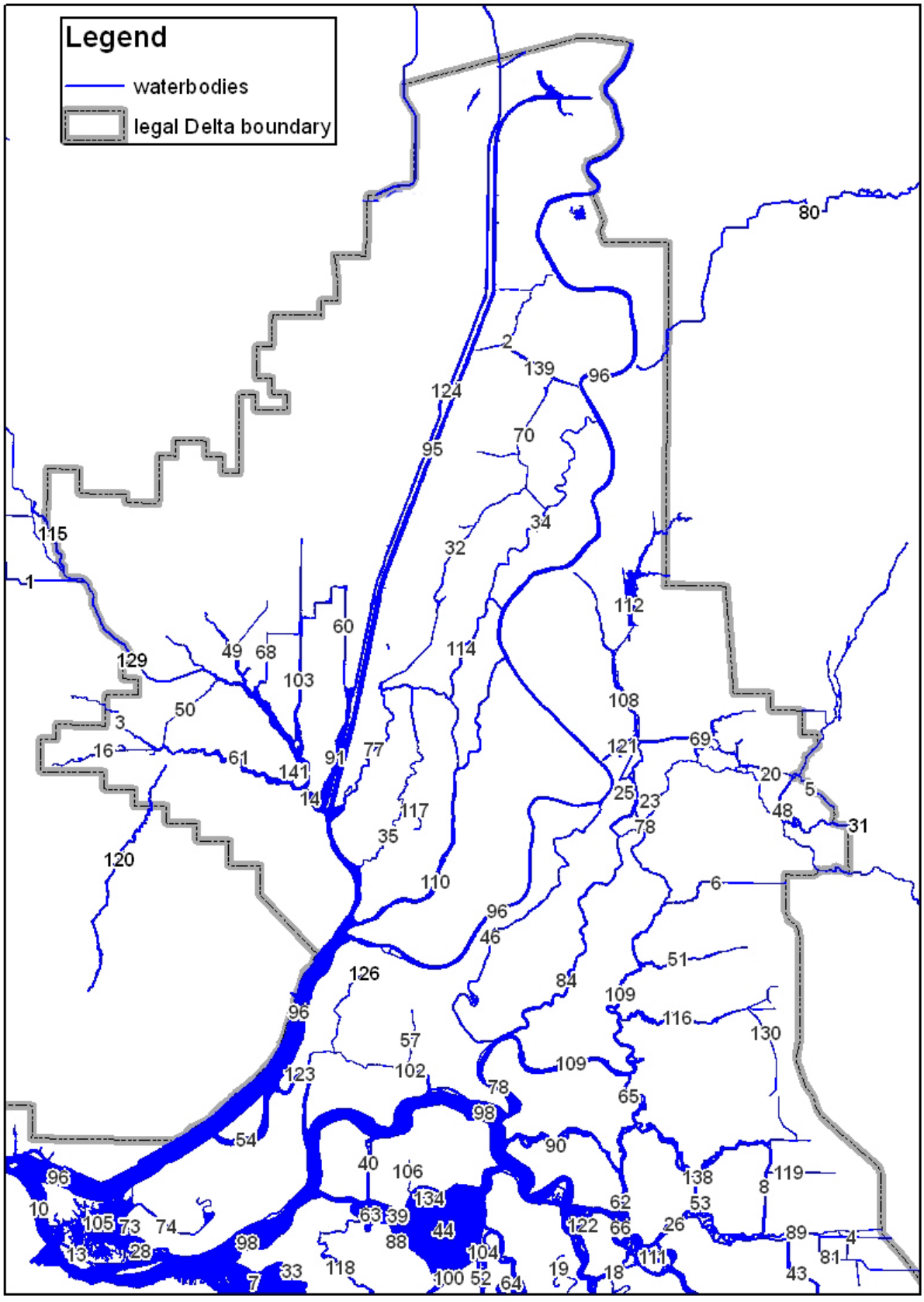
1. Alamo Creek
2. Babel Slough
3. Barker Slough
4. Bear Creek
5. Bear Slough
6. Beaver Slough
7. Big Break
8. Bishop Cut
9. Black Slough
10. Broad Slough
11. Brushy Creek
12. Burns Cutoff
13. Cabin Slough
14. Cache Slough
15. Calaveras River
16. Calhoun Cut
17. Clifton Court Forebay
18. Columbia Cut
19. Connection Slough
20. Cosumnes River
21. Crocker Cut
22. Dead Dog Slough
23. Dead Horse Cut
24. Deer Creek (Tributary to Marsh Creek)
25. Delta Cross Channel
26. Disappointment Slough
27. Discovery Bay
28. Donlon Island
29. Doughty Cut
30. Dry Creek (Marsh Creek tributary)
31. Dry Creek (Mokelumne River tributary)
32. Duck Slough
33. Dutch Slough
34. Elk Slough
35. Elkhorn Slough
36. Emerson Slough
37. Empire Cut

38. Fabian and Bell Canal
39. False River
40. Fisherman's Cut
41. Fivemile creek
42. Fivemile Slough
43. Fourteenmile Slough
44. Franks Tract
45. French Camp Slough
46. Georgiana Slough
47. Grant Line Canal
48. Grizzly Slough
49. Haas Slough
50. Hastings Cut
51. Hog Slough
52. Holland Cut
53. Honker Cut
54. Horseshoe Bend
55. Indian Slough
56. Italian Slough
57. Jackson Slough
58. Kellogg Creek
59. Latham Slough
60. Liberty Cut
61. Lindsey Slough
62. Little Connection Slough
63. Little Franks Tract
64. Little Mandeville Cut
65. Little Potato Slough
66. Little Venice Island
67. Livermore Yacht Club
68. Lookout Slough
69. Lost Slough
70. Main Canal (Duck Slough tributary)
71. Main Canal (Italian Slough tributary)
72. Marsh Creek
73. Mayberry Cut
74. Mayberry Slough
75. Middle River
76. Mildred Island
77. Miner Slough
78. Mokelumne River
79. Mormon Slough
80. Morrison Creek
81. Mosher Slough
82. Mountain House Creek
83. North Canal
84. North Fork Mokelumne River
85. North Victoria Canal
86. Old River
87. Paradise Cut
88. Piper Slough
89. Pixley Slough
90. Potato Slough
91. Prospect Slough
92. Red Bridge Slough
93. Rhode Island
94. Rock Slough
95. Sacramento Deep Water Channel
96. Sacramento River
97. Salmon Slough
98. San Joaquin River
99. Sand Creek
100. Sand Mound Slough
101. Santa Fe Cut
102. Sevenmile Slough
103. Shag Slough
104. Sheep Slough
105. Sherman Lake
106. Short Slough
107. Smith Canal
108. Snodgrass Slough
109. South Fork Mokelumne River
110. Steamboat Slough
111. Stockton Deep Water Channel
112. Stone Lakes
113. Sugar Cut
114. Sutter Slough
115. Sweany Creek
116. Sycamore Slough
117. Taylor Slough (Elkhorn Slough tributary)
118. Taylor Slough (near Franks Tract)
119. Telephone Cut
120. The Big Ditch
121. The Meadows Slough

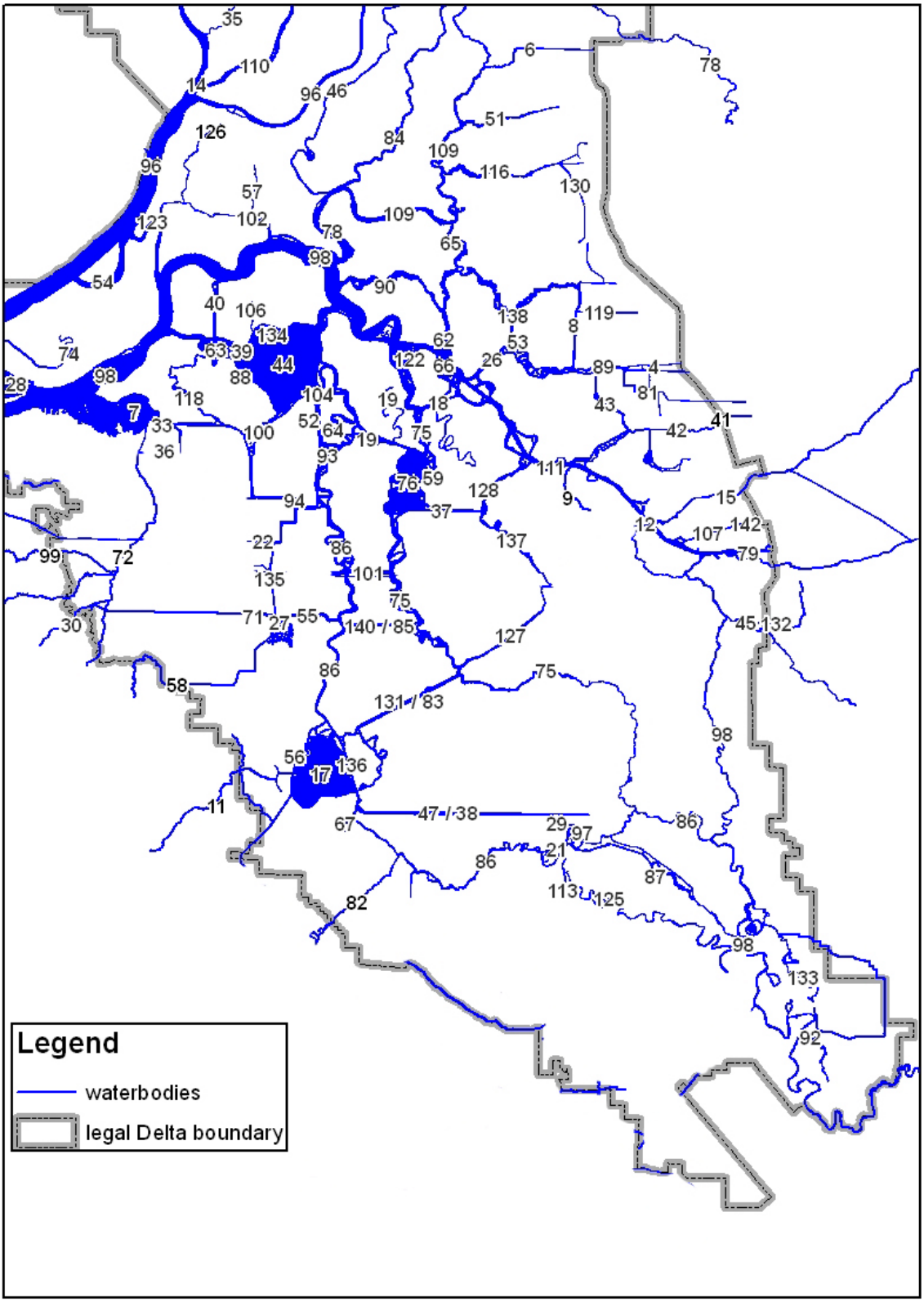
122. Three River Reach
123. Threemile Slough
124. Toe Drain
125. Tom Paine Slough
126. Tomato Slough
127. Trapper Slough
128. Turner Cut
129. Ulatis Creek
130. Upland Canal
(Sycamore Slough Tributary)
131. Victoria Canal
132. Walker Slough
133. Walthall Slough
134. Washington Cut
135. Werner Dredger Cut
136. West Canal
137. Whiskey Slough
138. White Slough
139. Winchester Lake
140. Woodward Canal
141. Wright Cut
142. Yosemite Lake
143. Yolo Bypass (not labeled)(2)

Footnotes:
(1) The Delta Waterways include only those reaches that are located within the "Legal" Delta, as defined in Section 12220 of the California Water Code.

(2) When flooded, the entire Yolo Bypass is a Delta Waterway. When the Yolo Bypass is not flooded, the Toe Drain is the only Delta Waterway within the Yolo Bypass.



Appendix X Figure 1. Delta Waterways, Northern Panel



Appendix X Figure 2. Delta Waterways, Southern Panel