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STATE OF CALIFORNIA
Fish and Game Commission

November 5, 2008

TO ALL AFFECTED AND INTERESTED PARTIES:

This is to provide you with a copy of the notice of proposed emergency regulatory action relating to incidental take of longfin smelt.

Sincerely,

Sherrie Fonbuena

Sherrie Fonbuena
Associate Governmental Program Analyst

Attachments

TITLE 14. Fish and Game Commission
Notice of Proposed Emergency Changes in Regulations

NOTICE IS HEREBY GIVEN that the Fish and Game Commission (Commission), pursuant to the authority vested by sections 200, 202, 205, and 2084, of the Fish and Game Code (FGC) and to implement, interpret or make specific said sections of said Code, proposes to re-adopt Section 749.3, Title 14, California Code of Regulations (CCR), relating to incidental take of longfin smelt during candidacy.

Informative Digest/Policy Statement Overview

FGC Section 2070 requires the Commission to establish a list of endangered species and a list of threatened species. FGC Section 2074.2 provides that, if the Commission finds that the petition provides sufficient information to indicate that the petitioned action may be warranted, the petition is accepted for consideration and the species that is the subject of the petition becomes a "candidate species" under the California Endangered Species Act (CESA). CESA prohibits unauthorized take of a candidate species, just as it prohibits such take of threatened and endangered species, from the time the Commission notifies interested parties and the general public of its acceptance of the petition.

FGC Section 2085 provides that once the Commission gives notice pursuant to FGC Section 2074.4 that it has designated a species a candidate under CESA, all activities, whether new or ongoing, that cause incidental take of the candidate species are in violation of the prohibition on unauthorized take of listed or candidate species found in FGC Section 2080 unless the take is authorized in regulations adopted by the Commission pursuant to FGC Section 2084 or the Department of Fish and Game (Department) authorizes the take through the issuance of an incidental take permit under FGC Section 2081 or by other means authorized by the California Endangered Species Act (CESA).

CCR Section 749.3 would authorize and provide for take of longfin smelt during its candidacy subject to certain terms and conditions. The objective of these regulations is to allow specified activities to continue on an interim basis, subject to the measures in the regulations designed to protect longfin smelt, while the Department focuses its efforts on further evaluating the status of the species. The status report provides the basis for the Department's recommendation to the Commission before the Commission takes final action on the petition and decides whether the petitioned action may or may not be warranted.

The regulations as proposed in strikeout-underline format are attached to this notice. Notice of the proposed action shall be posted on the Fish and Game Commission website at http://www.fgc.ca.gov.

Section 240 Finding

Pursuant to Section 240 of the Fish and Game Code, the Commission must make the finding that the adoption of this regulation is necessary for the immediate preservation of the public peace, health and safety, or general welfare.

Public Comments on Proposed Emergency Regulations

In order to be considered, public comments on proposed emergency regulations must be submitted in writing to the Office of Administrative Law (OAL), 300 Capitol Mall, Room 1250, Sacramento, CA 95814; AND to the Fish and Game Commission, 1416 Ninth Street, Room 1320, Sacramento, CA 95814, or via fax to (916) 653-5040 or via e-mail to fgc@fgc.ca.gov. Comments must identify the emergency topic and may address the finding of emergency, the standards set forth in sections 11346.1 and 11349.1 of the Government Code and Section 240 of the Fish and Game Code. Comments must be received within five calendar days of filing of the emergency regulations. Please refer to OAL's website (www.oal.ca.gov) to determine the date on which the regulations are filed with OAL.

Specific Agency Statutory Requirements

The Commission has complied with the special statutory requirements for its emergency regulations found at Section 240 of the Fish and Game Code. A public hearing on these regulations will be held November 14, 2008, and the above finding that these regulations are necessary for the immediate preservation of the public peace, health and safety, or general welfare meets the requirements of Section 240.

Local Mandate Determination

The Commission has determined that the proposed emergency regulations do not impose a mandate on local agencies or school districts.

Fiscal Impact

The Commission has determined that the proposed emergency regulations will not result in any cost to any local agency or school district for which Government Code sections 17500 through 17630 require reimbursement. The Commission has determined that the proposed emergency regulations will provide cost savings to local agencies in an undermined amount. The Commission has determined that the proposed emergency regulations will provide cost savings to the state in an undetermined amount. The Commission has determined that the proposed emergency regulations will not result in costs or savings in federal funding to the State.

FISH AND GAME COMMISSION

John Carlson, Jr.
Executive Director

Dated: November 5, 2008

FISH AND GAME COMMISSION
REQUEST FOR RE-ADOPTION OF EMERGENCY REGULATIONS

Emergency Action to Re-adopt Section 749.3, Title 14, CCR,
Re: Special Order Relating to Incidental Take of Longfin Smelt
(Spirinchus thaleichthys) During Candidacy Period

Request for Re-adoption of Emergency Regulation:

The Fish and Game Commission ("Commission") requests to re-adopt Section 749.3, Title 14, California Code of Regulations ("CCR") [Office of Administrative Law (OAL) file number 2008-0220-02EE] with minor modifications. The Findings of Emergency for this file containing the following information: Statement/Finding of Emergency; Authority and Reference Citations; Informative Digest; Fiscal Impact Statement; Standard Form 399, is hereby incorporated by reference. The objective of this regulation is to allow specified activities to continue on an interim basis, subject to the measures in the regulation designed to protect longfin smelt, while the Department of Fish and Game ("Department") focuses its efforts on further evaluating the status of longfin smelt.

Emergency Regulation in Effect to Date:

On February 7, 2008, the Commission accepted a petition to list longfin smelt as threatened or endangered under the California Endangered Species Act ("CESA"), thereby designating the longfin smelt a candidate species. On February 7, 2008, the Commission adopted an emergency regulation pursuant to Fish and Game Code ("FGC") section 2084 to provide coverage for the take of longfin smelt during its candidacy period ("2084 regulation"). The 2084 regulation was approved by OAL and became effective on February 29, 2008. Pursuant to Government Code ("GC") sections 11346.1(e) and (h) emergency regulations are effective for 180 days. OAL may approve two re-adoptions, each for a period not to exceed 90 days. On August 27, 2008, OAL approved a re-adopted 2084 regulation. In the absence of a second re-adoption, the 2084 regulation will expire on November 25, 2008.

Statement of Emergency:

Pursuant to FGC sections 2080 and 2085, take of a candidate species is prohibited, unless: (1) the take is authorized in a regulation adopted by the Commission pursuant to FGC section 2084; or (2) the Department authorizes the take through incidental take permits or other limited mechanisms issued on a project-by-project. Therefore, in the absence of a 2084 regulation, individuals engaged in otherwise lawful research and monitoring, dredging and extraction of sand or gravel resources, or water diversion that may result in take of longfin smelt would have to obtain a permit from the Department in order avoid liability

and potential criminal violations of CESA for actions or activities that result in take of the candidate species.

The issuance of individual permits authorizing incidental take is a complicated and lengthy process, and the Commission specifically finds that it is not feasible for the Department to issue incidental take permits on a project-by-project basis for the above-referenced activities that will otherwise be prohibited during the longfin smelt's candidacy period. For these reasons, re-adoption of the 2084 regulation is necessary to allow the continued export of water for agricultural, municipal and industrial use along with the other specified scientific and commercial activities. This regulation will ensure appropriate interim protections for longfin smelt within the area covered by the petition while the Department continues its12-month review of the status of the candidate species.

Given that the emergency circumstances that necessitated the original 2084 regulation are continuing and unchanged, the Commission requests that the previous Finding of Emergency and Supplement to Statement of Emergency Action be used to supplement this justification.

Compliance with Re-adoption Criteria

(1) Same or Substantially Equivalent:

Pursuant to GC section 11346.1(h), the text of a re-adopted regulation must be the "same or substantially equivalent" to the text of the original emergency regulation. The proposed language for the re-adopted 2084 emergency regulation is substantially equivalent to the language of the original 2084 emergency regulation. The text of both regulations provides coverage for the take of longfin smelt subject to certain conditions for the following activities: research and monitoring, dredging and extraction of sand or gravel resources, local water diversions and operation of the State Water Project and Central Valley Project export facilities. Modifications have been made to the text of the original 2084 regulation to provide additional clarification, technical accuracy, improved organization, or to adjust certain take-risk assessment or abatement criteria to reflect the different time-period this regulation will be covering, and thus remain protective of the different life stages of the longfin smelt that will occur during this time period.

No doubt, during the period covered by this regulation, other factors are impacting the population of longfin smelt. These include, but are not limited to, invasive species, water quality and pollution and other factors. The Commission could have considered a 2084 regulation that addressed take that is likely to occur from other activities that are stressors for which there are identifiable responsible parties. However, because of the need to re-adopt a regulation that is "substantially similar" to the existing regulation, the Commission is not addressing such other stressors through a 2084 regulation. The Commission

and the Department are looking at other means to address such activities, and other stressors for which there may not be identifiable responsible parties (e.g., invasive species and water quality), that could be adversely impacting longfin smelt.

Specifically, the following changes have been made to the text of section 749.3, Title 14, CCR[1]:

(1) Research and Monitoring:

The language in sections (a)(1)(B)1 and (a)(1)(B)2 describing project proposals has been modified to require that the proposals are "approved by" the Regional Manager as opposed to "provided to" the Regional Manager. This language was added to clarify that the Department, not the project proponent, decides if the efforts described in the project proposals to minimize adverse effects to longfin smelt are sufficiently protective.

(2) Dredging and Extraction of Sand or Gravel Resources:

The following exception was added to section (a)(2): "any dredging activity in the Sacramento-San Joaquin Delta east of river kilometer 90 (Sherman Island), is prohibited during the effective period of this regulation." This language was added because longfin smelt are known to occur after October 1 (during the period of the proposed regulation) in the area described, and therefore preventing disruptive activities from proceeding in the area is beneficial to longfin smelt.

The following criterion has been added to the information that must be reported when take of longfin smelt occurs: "length of any longfin smelt." This requirement was inadvertently omitted in the original 2084 regulation, and was added because it is critical information used by the Department to decipher the age of longfin smelt, and thus make important conclusions about the range and life-cycle of the species.

(3) Local Water Diversions:

Section (a)(3)(A) has been modified to require only diversions of 250 cfs or more to request take authorization. The addition of this 250 cfs threshold ties the requirements of the regulation to an existing distinction in the FGC about diversions above and below 250 cfs (see FGC sections 5980 et seq. and 6020 et seq.) The Department believes that this consistency with existing provisions of law will minimize confusion.

[1] Revisions to the original text made to correct spelling errors, update phone numbers or realize other minor technical edits will not be discussed.

Section (a)(3)(B) has been modified to clarify that diversions must only be screened if it is determined by the Department that there is potential for take of longfin smelt. This clarification was made to require screening only where necessary to protect longfin smelt.

As in section (2), the following criterion has been added to the information that must be reported when take of longfin smelt occurs: "length of any longfin smelt."

(4) State Water Project and Federal Central Valley Project Export Facilities:

The content of this section in the proposed 2084 regulation is substantially the same as the content in the original 2084 regulation. However, edits were made to the protective measures to reflect the fact the longfin smelt encounter different conditions and obstacles in fall and early winter, and different longfin smelt life stages may be present in the system during the effective period of the proposed regulation.

Language was added to the introductory section of (a)(4) to update the status of the *Kempthorne*[2] requirements. The language previously informed that the court directed the Fish and Wildlife Service ("FWS") to issue its new biological opinion (BO) by September 15, 2008, however that date has since been extended to December 15.

The proposed 2084 regulation modifies certain conditions because all longfin smelt life stages are found in the system in fall and winter, and different surveying methods occur during these times. For example, the original and proposed 2084 regulation both require monitoring for the presence of adult and larval smelt, but the proposed regulation modifies section (a)(4)(A) to include monitoring for juveniles and includes additional monitoring locations and surveying methods while removing those that are no longer relevant. In addition, both the original and proposed 2084 regulations include procedures for the Department of Water Resources (DWR) and Bureau of Reclamation (Reclamation) to follow when collecting adult and larval longfin smelt, but the proposed 2084 regulation includes more clearly defined procedures, removes the need to count and preserve larval longfin smelt, and includes juvenile longfin smelt.

The original and proposed 2084 regulation both require measures to protect larval and juvenile longfin smelt, but the proposed 2084 regulation modifies section (a)(4)(B) to coincide the triggering event with the survey that occurs

[2] In *Natural Resources Defense Council v. Kempthorne*, the United States Eastern District Court issued an Interim Remedial Order Following Summary Judgment and Evidentiary Hearing which required specific limitations on the joint operations of the State Water Project (SWP) and the Federal Central Valley Project (CVP) in order to prevent the extinction of delta smelt until a new delta smelt biological opinion is issued by the United States Fish and Wildlife Service.

during this time period (Smelt Larva Survey). Additionally, suspension actions and resuming actions have been modified to both remain protective and better identify late fall and winter flow conditions when longfin smelt are not at risk and export restrictions can be eased. The proposed 2084 regulation adds section (a)(4)(C) to provide specific measures to protect adult longfin smelt. The format of section (a)(4)(C) follows the format found in the original 2084 regulation for the protection of larval longfin smelt: flow requirements based on identified triggers that can be suspended or resumed based on the conditions in the system. Finally, the proposed 2084 regulation adds section (a)(4)(D) to increase transparency in and add flexibility based on credible science to the decision-making process. The process outlined in (a)(4)(D) is followed by the Department when determining flow requirements. As a part of that process, it is anticipated that the Department, as well as the Smelt Work Group, FWS, DWR and Reclamation, will work with the Longfin Smelt Risk Assessment Matrix (LSRAM) and use all available tools that are appropriate under the circumstances, including the Particle Tracking Modeling and the Particle Entrainment Index, to determine appropriate biological flow objectives.

(2) Substantial Progress:

GC section 11346.1(h) specifies that the emergency rulemaking agency must demonstrate that it is making "substantial progress and has proceeded with due diligence" to comply with the standard rulemaking provisions. The Commission has complied with this requirement by proceeding with due diligence to determine whether or not listing the longfin smelt as a threatened or endangered species is warranted. The Commission's forthcoming final decision regarding the status of the longfin smelt obviates the need for permanent 2084 measures.

A 2084 regulation is an appropriate mechanism to authorize take for "candidate" species. Pursuant to FGC sections 2080 and 2085, take of a candidate species is prohibited, unless: (1) the take is authorized in a regulation adopted by the Commission pursuant to FGC section 2084 or (2) the Department authorizes the take through incidental take permits or other limited mechanisms issued on a project-by-project basis. Therefore a 2084 regulation is an appropriate mechanism to authorize take of a candidate species. However, a species is only a "candidate" until the Commission decides whether listing the species as threatened or endangered "is warranted" or "is not warranted" (FGC section 2075.5). This determination immediately follows the conclusion of the 12-month review of the species' status by the Department (FGC section 2074.6). Therefore, after the Commission makes the determination that listing the species is or is not warranted, a 2084 regulation is no longer necessary or appropriate[3] because the species is no longer a candidate for listing. At that point, the species is either protected under CESA by virtue of its listed status or is no

[3] FGC section 2084 states: "The Commission may authorize, subject to terms and conditions it prescribes, the taking of any *candidate* species...." [emphasis added]

longer protected under CESA because it is not listed and is no longer a candidate for listing.

If the Commission decides that listing the longfin smelt "is warranted," the former candidate species then becomes a listed species and all the activities resulting in take of longfin smelt currently covered by the 2084 regulation will be required to obtain an Incidental Take Permit (ITP) pursuant to FGC section 2081 or otherwise obtain take coverage. ITPs are authorized for certain activities if specified criteria are met, including minimization and full mitigation of the impacts of the take. ITP's are issued on a project-by-project basis to ensure the mitigation and minimization measures are narrowly tailored to the individual project and protective of the species covered. The measures set forth in the 2084 regulation may or may not be appropriate for a specific ITP. As such, the provisions of the proposed regulation are not necessarily a precedent for any requirement of any future ITP.

If the Commission decides that listing the longfin smelt "is not warranted," take of the former candidate species would no longer be prohibited under CESA. Absent protected status, no mechanism, including a permanent regulation, would be needed to authorize take of longfin smelt.

In summary, the Commission has complied with this requirement by diligently pursuing its determination of whether or not listing of longfin smelt is warranted. The inherent temporary nature of a 2084 regulation makes pursuing its permanent status unnecessary and contrary to statute. The Commission's final decision regarding the status of the longfin smelt will either mandate that CESA listing protections prohibiting take unless otherwise authorized are afforded the species or not.

FISH AND GAME COMMISSION
SUPPLEMENT TO STATEMENT OF EMERGENCY ACTION

Emergency Action to Add Section 749.3, Title 14, CCR,
Re: Special Order Relating to Incidental Take of Longfin Smelt
(Spirinchus thaleichthys) During Candidacy Period

I. Impact of Regulatory Action:

In the statement of emergency action approved on February 29, 2008, the Commission concluded that adoption of section 749.3, Title 14, California Code of Regulations as an emergency regulation pursuant to Fish and Game Code section 2084 would provide cost savings to state and local agencies as a result of avoiding the expense of obtaining individual incidental take permits from the Department of Fish and Game. However, the Commission has received information from the state's water purveyors that their cost savings could be potentially offset by a loss in revenue from the diminished water supply that could result from imposition of the protective measures outlined in the 2084 regulation. The State Water Contractors (SWC) project a potential loss of 256,000 acre feet (AF) in December and 256,000 AF in January through February if the maximum protective measures outlined in the 2084 regulation are activated. Their projected water losses are in addition to those anticipated as a result of the pumping restrictions in *Kempthorne*[1]. The SWC project even higher losses if conditions are dry.

The Department believes that the water costs identified by the SWC are higher than will likely result from the implementation of the 2084 protective measures. The projected SWC water costs assumed that the most restrictive measures of the 2084 would be in place for the maximum amount of time possible under the regulation. In light of conditions this year, while that is possible, it is extremely unlikely that such measures will be required.

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[1] In *Natural Resources Defense Council v. Kempthorne*, the United States Eastern District Court issued an Interim Remedial Order Following Summary Judgment and Evidentiary Hearing which required specific limitations on the joint operations of the State Water Project (SWP) and the Federal Central Valley Project (CVP) in order to prevent the extinction of delta smelt until a new delta smelt biological opinion is issued by the United States Fish and Wildlife Service.

§ 749.3 Special Order Relating to the Incidental Take of Longfin Smelt (Spirinchus thaleichthys) During Candidacy Period

The Commission finds that, based on current knowledge and the protection and management efforts outlined in this regulation, including Exhibits A through E, the level of habitat loss and take of longfin smelt, which is likely to occur during the period that this regulation is in effect, will not cause an appreciable reduction in the species' ability to survive and reproduce.

(a) Take Authorization

(1) Research and Monitoring

(A) Take of longfin smelt by Department personnel in the course of research and monitoring is authorized pursuant to Section 783.1(c), Title 14, CCR.

(B) Take of longfin smelt in the course of research and monitoring by public agencies and private parties is authorized subject to the following:

1. For ongoing research, a written, detailed project proposal describing objectives, methods (gear, sampling schedules and locations), efforts to minimize adverse effects to the species, and estimated level of take of the species shall be ~~provided to~~ approved by the Regional Manager of the Bay Delta Region at the address specified in subsection (4) below within 45 days of this regulation becoming effective.
2. For research which has not yet commenced, a written, detailed project proposal describing objectives, methods (gear, sampling schedules and locations), efforts to minimize adverse effects to the species, and estimated level of take of the species shall be ~~provided to~~ approved by the Regional Manager at the address specified in subsection (4) below.
3. The research or monitoring may commence once the Department issues written concurrence that the research and monitoring activities conducted are consistent with the Department's research and monitoring programs and are sufficient to protect longfin smelt. The Department may specify additional terms and conditions for the protection of longfin smelt and the reporting of all data collected to the Department.
4. Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599 -- ~~(707) 944-5500~~ (707) 944-5517.

(C) Notwithstanding the foregoing, at the discretion of the Department, research and monitoring activities not addressed by the above procedures may receive separate authorizations for take of longfin smelt pursuant to Fish and Game Code section 2081.

(2) Dredging and Extraction of Sand or Gravel Resources

Take of longfin smelt incidental to otherwise lawful dredging or extraction of sand or gravel resources in a stream or river is authorized for the longfin smelt candidacy period except any dredging activity in the Sacramento-San Joaquin Delta east of river kilometer 90 (Sherman Island) is prohibited during the effective period of this regulation provided that any activity already required to monitor and report the take of any fish species to the Department or a federal wildlife agency also include the following information weekly: the date, location, ~~and~~ number and length of any longfin smelt taken during the candidacy period. A copy of the report shall be mailed to: Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599 -- ~~(707) 944-5500~~ (707) 944-5517.

(3) Local Water Diversions

Incidental take of longfin smelt resulting from diversion of water by any local agency, private party, or the State Water Project North Bay Aqueduct or Suisun Marsh facilities is authorized during the candidacy period subject to the following conditions:

(A) Existing unscreened diversions of 250 cfs or more may continue in operation through the candidacy period if take authorization is requested and approved by the Regional Manager, Bay Delta Region at the address specified in subsection (D) below. Upon any future determination by the commission that longfin smelt shall be added to the list of threatened or endangered species, incidental take for such diversions must be authorized under Fish and Game Code Section 2081(b) or, if longfin smelt becomes listed pursuant to Section 1533 of Title 16 of the United States Code, be determined exempt from the permitting requirement under Fish and Game Code Section 2080.1.

(B)Diversions approved and constructed after the effective date of this section ~~shall be screened and shall use~~ will be evaluated by the Department for the potential to take longfin smelt and may be required to install fish screens using the Department of Fish and Game Fish Screening Criteria for delta smelt (*Hypomesus transpacificus*) in Exhibit A as the fish screening criteria for longfin smelt.

(C) Existing fish screens that are repaired, upgraded, or reconstructed during the candidacy period must screen for longfin smelt by meeting the Department of Fish and Game Fish Screening Criteria for delta smelt in Exhibit A.

(D) Any activity already required to monitor and report the take of any fish species to the Department or a federal wildlife agency shall also include the following information weekly: the date, location, ~~and~~ number and length of any longfin smelt taken during the candidacy period. A copy of the report

shall be mailed to: Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599 -- ~~(707) 944-5500~~ (707) 944-5517.

(4) State Water Project and Federal Central Valley Project Export Facilities

In *Natural Resources Defense Council v. Kempthorne* (*Kempthorne*), the United States Eastern District Court issued an Interim Remedial Order Following Summary Judgment and Evidentiary Hearing which required specific limitations on the joint operations of the State Water Project (SWP) and the Federal Central Valley Project (CVP) in order to prevent the extinction of delta smelt or destruction or adverse modification of its critical habitat until a new delta smelt biological opinion (BO) is issued by the United States Fish and Wildlife Service (FWS). The court ~~has~~ directed FWS to issue its new opinion by ~~September~~ December 15, 2008. When the new biological opinion is issued, the *Kempthorne* requirements will terminate. The *Kempthorne* requirements are triggered by environmental conditions and the presence of specific delta smelt life stages, and are focused on minimizing ~~the~~ negative ~~entrainment~~ effects caused when the combined export pumping of the SWP, operated by the Department of Water Resources (DWR) and the CVP, operated by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) reverses the flow in Old and Middle River (OMR). ~~A series of~~ The *Kempthorne* OMR flow requirements began in late-December 2007 and continued until June 20, 2008, sequentially ~~targeting~~ protecting adult delta smelt during migration prior to spawning, spawning delta smelt, larvae and juveniles.

The Commission recognizes that there are statistical correlations between negative OMR flows and take of different longfin smelt life stages, as there are for delta smelt. There is substantial overlap in the periods when the two species are taken by the SWP and CVP. However, adult longfin smelt can be taken a month or more earlier than delta smelt (potentially in December). Because longfin smelt typically spawn earlier than delta smelt, the larvae may be present earlier as well (potentially in ~~February~~ January). Consequently, concurrent take of both delta smelt and longfin smelt may include different life stages and magnitudes and *Kempthorne* requirements ~~keyed to~~ triggered by delta smelt presence may not ~~match~~ be protective of longfin smelt ~~timing~~. The following measures will protect longfin smelt during the candidacy period when OMR limits required under *Kempthorne* for delta smelt may not be in effect or adequately protective. The Commission therefore authorizes take of longfin smelt incidental to the coordinated operations of the SWP and CVP export facilities subject to ~~in accordance with~~ the following conditions ~~OMR limits~~, or the conditions ~~OMR limits~~ set in *Kempthorne* or the BO when its issued, whichever are more protective of longfin smelt:

(A) Monitoring for the presence of adult (~~>85~~ ≥80 mm Fork Length (FL)), juvenile (≥20 mm FL and <80 mm FL), and larval longfin smelt (<20mm FL) shall be achieved as follows:

1. For adults and juveniles by standard field sampling intervals, methods and locations of the Department's *Fall Midwater Trawl Survey*, the Department's *San Francisco Bay Study Survey*, ~~and~~ the Department's *Spring Kodiak Trawl Survey*, the USFWS *Chipps Island Trawl*, and salvage at the SWP and CVP.

2. For larvae~~,~~ and juveniles by the Department's *Smelt Larva Survey sampling* using a standard 500-micron mesh net beginning in the first two weeks of January ~~by initiating the *20mm Survey* beginning in the first two weeks of March~~ and conducting single tows at sampling locations 405, 411, 418, ~~602,~~ 501, 504, ~~519,~~ 508, 513, 519, 520, 602, 606, 609, 610, 703, 704, 705, 706, 707, 711, 716, ~~705,~~ 723, 801, ~~802,~~ 804, 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919 (Exhibit D)~~;~~ ~~In the last two weeks in March the full 20mm Survey will begin using standard survey protocol, sampling three tows per sampling location at all 41 standard locations.~~ and continuing every other week until the Department's full *20mm Survey* starts in the last two weeks of March.

3. DWR and Reclamation shall ensure that all longfin smelt ~~collected~~ counted at the SWP and the CVP, respectively, are preserved in formalin or ethanol, labeled with the date and location of collection, and transferred to the Department's Bay-Delta Region Stockton office, 4001 ~~N~~ North Wilson Way, Stockton, CA 92405, within ~~two business days to the attention of Marty Gingras for a determination of sex and reproductive status (i.e., egg stage or spent).~~ one week of collection. Identification of any ~~larval~~ adult or juvenile longfin smelt greater than 20mm in size ~~collected~~ counted at either facility shall be completed and the fish measured and reported within ~~one~~ two business days to ~~Marty Gingras~~ Robert Fujimura or Geir Aasen at the Department's Bay Delta Region Stockton office at the address specified above.

(B) If any of the triggering conditions identified in (C) or (D) below are met and actions are required, the Smelt Work Group will convene each week to review all available data in preparation to make recommendations to the Water Operations Management Team (WOMT). The WOMT will discuss the recommendation and will either accept, modify or reject it. The Director of the Department will have the final approval for any actions. Recommendations may include that no action be taken.

(C) Subject to (B) above, on or after December 1, 2008, DWR and Reclamation shall protect pre-spawning adult longfin smelt by coordinating operation of the SWP and the CVP to achieve a daily average net upstream (reverse) OMR flow not to exceed 5,000 cfs on a 14-day running average. Simultaneously, the 7-day running average shall be within 1,000 cfs of the applicable 14-day running average objective. The combined CVP and SWP

southern Delta diversions shall remain as stable as possible during the 14-day period and shall not increase more than 1,000 cfs over the previous day's SWP and CVP southern Delta diversion on any day unless the projected daily OMR flow is above the targeted 14-day mean OMR flow. This action will begin when: (i) 8 or more adult longfin smelt are found in the December *Fall Midwater Trawl Survey* when sampling at stations 809, 810, 812, 813, 814, 815, 902, 903, 904, 905, 906, 908, 909, 910, 911, 912, 913, 914, or 915 (Exhibit B); or (ii) 8 or more adult longfin smelt are found in the December *San Francisco Bay Study Survey* when sampling at stations 863, 864, or 865 (Exhibit C); or (iii) the sum of SWP and CVP salvage of adult longfin smelt in December exceeds 24. This action shall be suspended any time the three-day average of flow in the San Joaquin River at Vernalis reaches or exceeds 8,000 cfs or Sacramento River at Rio Vista reaches or exceeds 55,000 cfs. The action shall be resumed when (1) the three-day average flow at Vernalis declines below 5,000 cfs or the Rio Vista flow declines below 40,000 cfs, whichever initiated the suspension, and (2) adult longfin smelt are again detected as described earlier in this paragraph. This action terminates upon implementation of the action set forth in D below or alternatively when the Department determines that the longfin smelt entrainment risk at each facility is abated.

~~(B)~~ (D)~~Commencing on the effective date of this regulation~~ Subject to (B) above, on or after January 1, 2009, DWR and Reclamation shall protect spawning, larval, and juvenile longfin smelt by jointly operating the CVP and SWP to achieve a daily average net upstream (reverse) OMR flow ~~(as computed for *Kempthorne* compliance)~~ between 750 and 5,000 cfs on a ~~seven~~ 14-day running average. Simultaneously, the 7-day running average shall be within 1,000 cfs of the applicable 14-day running average objective. The combined CVP and SWP southern Delta diversions shall remain as stable as possible during the 14-day period and shall not increase more than 1,000 cfs over the previous day's SWP and CVP southern Delta diversion on any day unless the projected daily OMR flow is above the targeted 14-day average OMR flow. This action will ~~beginning~~ begin when larval or juvenile longfin smelt ~~spawning is indicated by: (i) the presence of spent female longfin smelt (>85mm FL) in the Spring Kodiak Trawl (stations 809, 812, 815, 902, 906, 910, 912, 914, 915 on Exhibit B) or in the San Francisco Bay Study Otter Trawl or Midwater Trawl surveys (stations 863, 864, 865 on Exhibit C), all of which are located east or south of Jersey Point in the San Joaquin River, or south Delta channels or at either the SWP or CVP fish salvage facilities or (ii) when larval longfin smelt (<20mm FL) are detected in the 20mm Survey (stations 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918 on Exhibit D) east or south of Jersey Point in the San Joaquin River or in south Delta channels or at the SWP or CVP fish salvage facility.~~ are detected in a single *Smelt Larva Survey* sampling period at six or more of the following stations: 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919 (Exhibit D).

The specific biological flow objective within this range shall be set by the Department, after consultation with the FWS, DWR and Reclamation, to be determined on a weekly basis based upon ~~a~~ the Longfin Smelt Risk Assessment Matrix (LSRAM) (Exhibit E) ~~to be refined by the Department in consultation with FWS, DWR, and Reclamation and the~~. Specific flow objectives will be based upon the best available scientific and commercial information concerning the distribution and status of longfin smelt and including an assessment of entrainment and population risk evaluated by the Smelt Work Group using the LSRAM. The LSRAM is patterned after the Delta Smelt Risk Assessment Matrix and is only modified to reflect longfin smelt biology and life stages and available information. This action is suspended during any time: (i) the three-day average of flow in the Sacramento River at ~~Freeport~~ Rio Vista exceeds ~~80,000 cfs~~ 55,000 cfs or (ii) the three-day average of flow in the San Joaquin River at Vernalis reaches or exceeds 8,000 cfs or (iii) the distribution of larval longfin smelt and juvenile longfin smelt based on recent monitoring shows that increasingly negative OMR flows will not jeopardize the continued existence of the species. ~~and is~~ This action is resumed when (1) the three-day average ~~Delta outflow~~ flow at Vernalis falls below 5,000 ~~40,000~~ cfs or Rio Vista flow declines below 40,000 cfs, whichever initiated the suspension, and (2) ~~adult or~~ larval or juvenile longfin smelt are again detected ~~east or south of Jersey Point~~ as described in the previous paragraph. ~~above, or (ii) the Vernalis Adaptive Management Plan is being implemented (31 days, typically in mid-April to mid-May).~~ This action shall continue until, in the reasonable discretion of the Department, after consultation with the Smelt Work Group, FWS, DWR, and Reclamation, the longfin smelt entrainment risk at each facility is abated~~, or November 24, 2008 whichever occurs first.~~

~~(C)~~(E) Notwithstanding the foregoing, this regulation shall not prevent DWR or Reclamation from taking any action in operating the projects that is reasonably necessary to protect human health or safety of the public, including, but not limited to, any act or omission reasonably necessary to protect the structural integrity of any SWP or CVP facility.

~~(D)~~(F) In the event DWR receives a permit from the Department pursuant to Fish and Game Code section 2081, which governs the take of longfin smelt, those requirements under Section 749.3(a)(4) which apply to DWR shall be superseded by the terms of such permit.

~~(E)~~(G)This emergency regulation shall be in effect for 90 days. ~~It does not contain measures to protect pre-spawning longfin smelt or their larvae after June 20, 2008 from the effects of project operations, which effects can occur as early as late November or early December 2008. If this regulation is extended, operational requirements for this December – February period may be added by amending this regulation prior to expiration or extension.~~

EXHIBIT A
DEPARTMENT OF FISH AND GAME
FISH SCREENING CRITERIA
June 19, 2000

1. STRUCTURE PLACEMENT

A. Streams And Rivers (flowing water): The screen face shall be parallel to the flow and adjacent bankline (water's edge), with the screen face at or streamward of a line defined by the annual low-flow water's edge.

The upstream and downstream transitions to the screen structure shall be designed and constructed to match the bankline, minimizing eddies upstream of, in front of, and downstream of, the screen.

Where feasible, this "on-stream" fish screen structure placement is preferred by the California Department of Fish and Game.

B. In Canals (flowing water): The screen structure shall be located as close to the river source as practical, in an effort to minimize the approach channel length and the fish return bypass length. This "in canal" fish screen location shall only be used where an "on-stream" screen design is not feasible. This situation is most common at existing diversion dams with headgate structures.

The National Marine Fisheries Service - Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997" shall be used for these types of installations.

C. Small Pumped Diversions: Small pumped diversions (less than 40 cubic-feet per second) which are screened using "manufactured, self-contained" screens shall conform to the National Marine Fisheries Service - Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997."

D. Non-Flowing Waters (tidal areas, lakes and reservoirs): The preferred location for the diversion intake structure shall be offshore, in deep water, to minimize fish contact with the diversion. Other configurations will be considered as exceptions to the screening criteria as described in Section 5.F. below.

2. APPROACH VELOCITY (Local velocity component perpendicular to the screen face)

A. Flow Uniformity: The design of the screen shall distribute the approach velocity uniformly across the face of the screen. Provisions shall be made in the design of the screen to allow for adjustment of flow patterns. The intent is to ensure uniform flow distribution through the entire face of the screen as it is constructed and operated.

B. Self-Cleaning Screens:[1]

The U.S. Fish and Wildlife Service has selected a 0.2 feet per second approach velocity for use in waters where the Delta smelt is found. Thus, fish screens in the Sacramento-San Joaquin Delta and San Francisco Estuary should use this criterion for design purposes. In addition:

1. Streams and Rivers (flowing waters) - exposure to the fish screen shall not exceed fifteen minutes.

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[1] Approach velocities in the June 19, 2000 Fish Screening Criteria that are inapplicable if delta smelt are present are omitted.

2. In Canals (flowing waters) - a bypass entrance shall be located every one-minute of travel time along the screen face.

3. Non-Flowing Waters (tidal areas, lakes and reservoirs) - The specific screen approach velocity shall be determined for each installation, based on the delta smelt life stage being protected. Velocities which exceed those described above will require a variance to these criteria (see Section 5.F. below).

C. Screens Which Are Not Self-Cleaning: The screens shall be designed with an approach velocity one-fourth that outlined in Section B. above. The screen shall be cleaned before the approach velocity exceeds the criteria described in Section B.

D. Frequency Of Cleaning: Fish screens shall be cleaned as frequently as necessary to prevent flow impedance and violation of the approach velocity criteria. A cleaning cycle once every 5 minutes is deemed to meet this standard.

E. Screen Area Calculation: The required wetted screen area (square feet), excluding the area affected by structural components (i.e., pore space or open area), is calculated by dividing the **maximum** diverted flow (cubic-feet per second) by the allowable approach velocity (feet per second). Example:

1.0 cubic-feet per second / 0.2 feet per second = 5.0 square feet of pore space

Unless otherwise specifically agreed to, this calculation shall be done at the **minimum** stream stage.

3. SWEEPING VELOCITY (Velocity component parallel to screen face)

A. In Streams And Rivers: The sweeping velocity should be at least two times the allowable approach velocity.

B. In Canals: The sweeping velocity shall exceed the allowable approach velocity. Experience has shown that sweeping velocities of 2.0 feet per second (or greater) are preferable.

C. Design Considerations: Screen faces shall be designed flush with any adjacent screen bay piers or walls, to allow an unimpeded flow of water parallel to the screen face.

4. SCREEN OPENINGS

A. Porosity: The screen surface shall have a minimum open area of 27 percent. We recommend the maximum possible open area consistent with the availability of appropriate material, and structural design considerations.

The use of open areas less than 40 percent shall include consideration of increasing the screen surface area, to reduce slot velocities, assisting in both fish protection and screen cleaning.

B. Round Openings: Round openings in the screening shall not exceed 3.96mm (5/32in). In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 2.38mm (3/32in).

C. Square Openings: Square openings in screening shall not exceed 3.96mm (5/32in) measured diagonally. In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 2.38mm (3/32in) measured diagonally.

D. Slotted Openings: Slotted openings shall not exceed 2.38mm (3/32in) in width. In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 1.75mm (0.0689in).

EXHIBIT A
DEPARTMENT OF FISH AND GAME
FISH SCREENING CRITERIA
June 19, 2000

5. SCREEN CONSTRUCTION

A. Material Selection: Screens may be constructed of any rigid material, perforated, woven, or slotted that provides water passage while physically excluding fish. The largest possible screen open area which is consistent with other project requirements should be used. Reducing the screen slot velocity is desirable both to protect fish and to ease cleaning requirements. Care should be taken to avoid the use of materials with sharp edges or projections which could harm fish.

B. Corrosion and Fouling Protection: Stainless steel or other corrosion-resistant material is the screen material recommended to reduce clogging due to corrosion. The use of both active and passive corrosion protection systems should be considered. Consideration should be given to anti-fouling material choices, to reduce biological fouling problems. Care should be taken not to use materials deemed deleterious to fish and other wildlife.

C. Project Review and Approval: Plans and design calculations, which show that all the applicable screening criteria have been met, shall be provided to the Department before written approval can be granted by the Regional Manager, Bay Delta Region.

The approval shall be documented in writing to the project sponsor, with a copy to the Deputy Director, Resource Management and Policy Division. Such approval may include a requirement for post-construction evaluation, monitoring and reporting.

D. Assurances: All fish screens constructed after the effective date of these criteria shall be designed and constructed to satisfy the current criteria. Owners of existing screens, approved by the Department prior to the effective date of these criteria, shall not be required to upgrade their facilities to satisfy the current criteria unless:

1. The controlling screen components deteriorate and require replacement (i.e., change the opening size or opening orientation when the screen panels or rotary drum screen coverings need replacing),

2. Relocation, modification or reconstruction (i.e., a change of screen alignment or an increase in the intake size to satisfy diversion requirements) of the intake facilities, or

3. The owner proposes to increase the rate of diversion which would result in violation of the criteria without additional modifications.

E. Supplemental Criteria: Supplemental criteria may be issued by the Department for a project, to accommodate new fish screening technology or to address species-specific or site-specific circumstances.

F. Variances: Written variances to these criteria may be granted with the approval of the Regional Manager, Bay Delta Region and concurrence from the Deputy Director, Resource Management and Policy Division. At a minimum, the rationale for the variance must be described and justified in the request. Evaluation and monitoring may be required as a condition of any variance, to ensure that the requested variance does not result in a reduced level of protection for the aquatic resources.

EXHIBIT A
DEPARTMENT OF FISH AND GAME
FISH SCREENING CRITERIA
June 19, 2000

It is the responsibility of the project sponsor to obtain the most current version of the appropriate fish screen criteria. Project sponsors should contact the Department of Fish and Game and the U.S. Fish and Wildlife Service (for projects in anadromous and fresh waters) for guidance.

Copies of the current criteria are available from the Department of Fish and Game Bay Delta Region; 7329 Silverado Trail/P.O. Box 46, Yountville, CA 94599, (707) 944-5500.

Technical assistance can be obtained directly from the Habitat Conservation Branch; 1416 Ninth Street, Sacramento, CA 95814 - (916) 653-1070.

The National Marine Fisheries Service Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997" is available at: http://swr.ucsd.edu/hcd/fishscrn.htm and from their Southwest Region, 777 Sonoma Avenue, Room 325, Santa Rosa, CA 95402 - (707) 575-6050.

Exhibit B

California Department of Fish and Game

Fall Midwater Trawl Survey stations

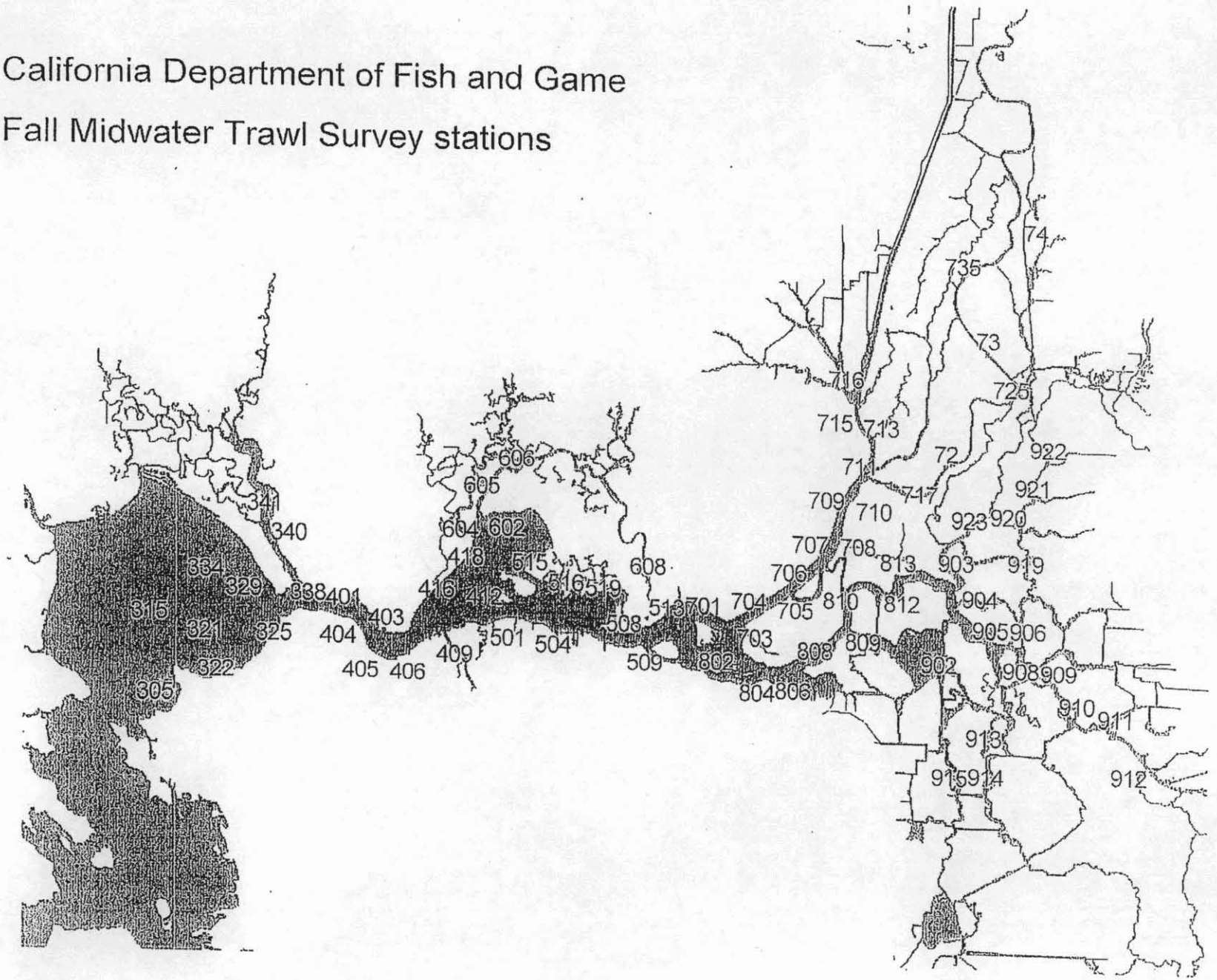


Exhibit C

Emergency Action to Add Section 749.3, Title 14, CCR,
Re: Special Order Relating to Incidental Take of Longfin Smelt
(Spirinchus thaleichthys) During Candidacy Period

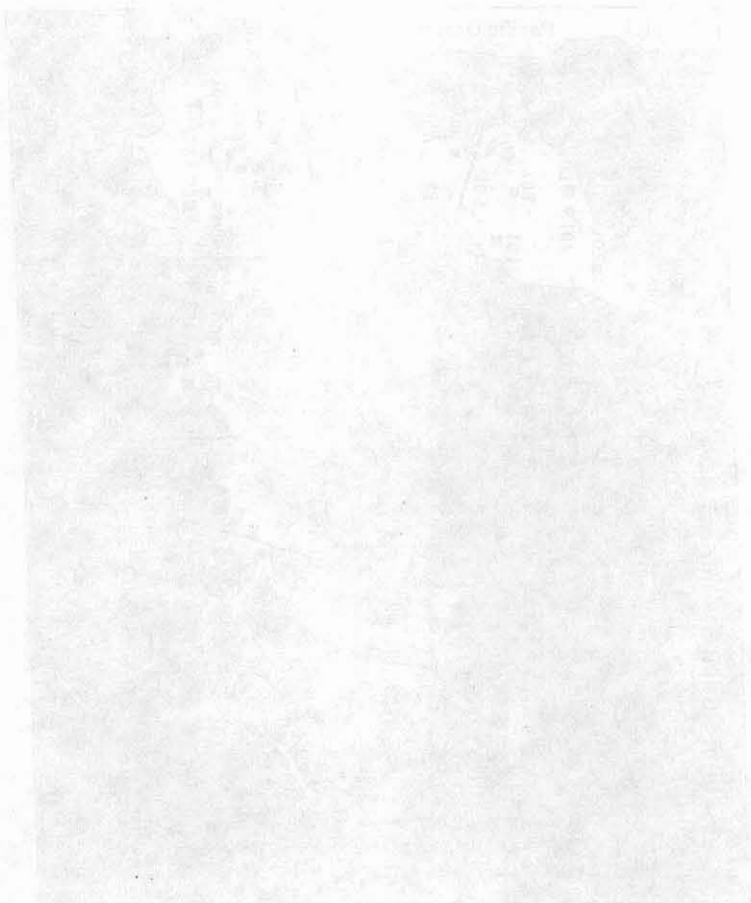
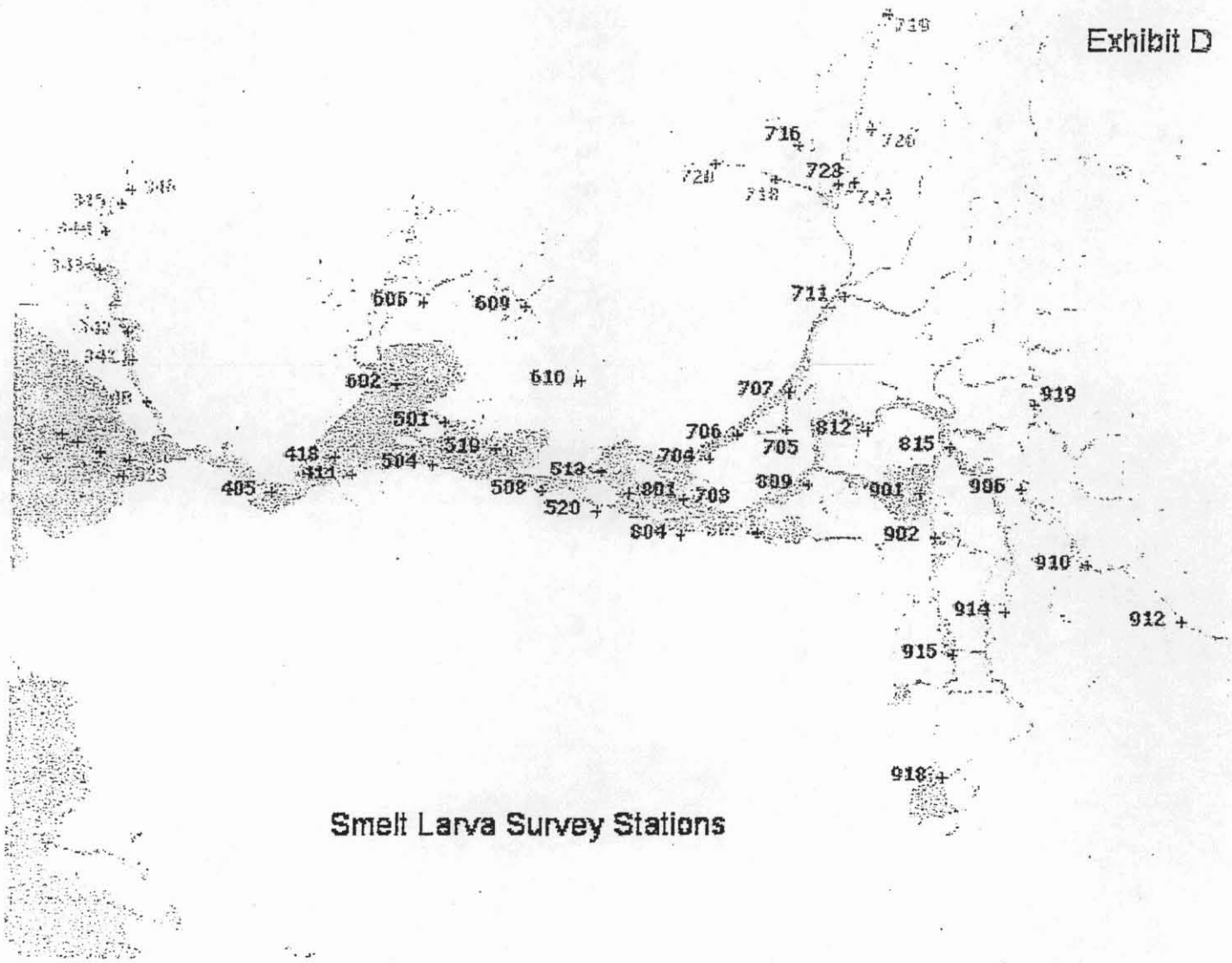


Exhibit D



Smelt Larva Survey Stations

Longfin Smelt Risk Assessment Matrix (LSRAM) REVISED October 30, 2008

	December	January	February	March	April	May	June/July
Life Stage(s) Present in or near the Delta	Adults, Juveniles, Eggs and some Larvae	Adults, Age-1 Juveniles, Eggs and Larvae	Adults, Age-1 Juveniles, Eggs and Larvae	Few Adults and Age-1 Juveniles; Eggs, Larvae and few Age-0 Juveniles	Few Eggs; Larvae and Age-0 Juveniles	Larvae and Age-0 Juveniles	Few Larvae; Age-0 Juveniles
Previous Two Year's Fall Midwater Trawl Indices, **Concern Level** (1)	Index below 240 for one or both years	Index below 240 for one or both years	Index below 240 for one or both years	Index below 240 for one or both years	Index below 240 for one or both years	Index below 240 for one or both years	Index below 240 for one or both years
Risk of Entrainment, **Concern Level** (2)	Increasing as X2 moves upstream of Chipps Island; reduced if Sac R. flows ≥55k cfs, SJR ≥8k cfs	Increasing as X2 moves upstream of Chipps Island; reduced if Sac R. flows ≥55k cfs, SJR ≥8k cfs	Increasing as X2 moves upstream of Chipps Island; reduced if Sac R. flows ≥55k cfs, SJR ≥8k cfs	Increasing as X2 moves upstream of Chipps Island; reduced if Sac R. flows ≥55k cfs, SJR ≥8k cfs	Increasing as X2 moves upstream of Chipps Island; reduced if Sac R. flows ≥55k cfs, SJR ≥8k cfs (a)	Increasing as X2 moves upstream of Chipps Island and mean delta-wide temps <18°C and south delta temps below 21.5°C (a)	Increasing as X2 moves upstream of Chipps Island and temps are below 21.5°C
Adults present as determined by FMWT, Bay Study, **Concern Level** and **Trigger**(3)	Presence of 8 or more Adults (≥ 80mm) east or south of Jersey Point	Presence of Adults ≥ 80mm	Presence of Adults ≥ 80mm				
Distribution, **Concern Level** and **Trigger** (4)	See footnote #4	See footnote #4	See footnote #4	See footnote #4 or negative 20mm centroid	Negative 20mm centroid (a)	Negative 20mm centroid (a)	Negative 20mm centroid
Salvage, **Concern Level and Trigger** (5)	Adult	Adult or Juvenile	Adult or Juvenile	If salvage is above zero	If salvage is above zero (a)	If salvage is above zero(a)	If salvage is above zero

Tools for Change (6)	December	January	February	March	April	May	June/July
Export reduction at one or both facilities	X	X	X	X	X	X	X
Change in barrier operations						X	X
Change in Sacramento River flows	X	X	X	X	X	x	x
Change in San Joaquin River flows	X	X	X	X	X	X	X
Change position of cross channel gates	X	X	X	X	X	X	X

(a) Actions in response to triggers suspended when the Vernalis Adaptive Management Plan is being implemented (31 days, typically in mid-April to mid-May).

Longfin Smelt Risk Assessment Matrix Footnotes

Initiation of Smelt Work Group consideration of longfin smelt data: *Commencing* on or after December 1, *the Smelt Work Group will convene to discuss fish distribution and hydrodynamic data in preparation to make recommendations to the Department in the event a trigger it tripped.*

1 Abundance: Concern increases with declining Fall Midwater Trawl (FMWT) abundance indices for longfin smelt. Concern evaluation uses FMWT longfin smelt total indices (all ages) from the two-years previous to the calendar year of the larva/juvenile loss risk being evaluated (e.g., in 2008, the concern index would be FMWT 2006 and 2007 LFS indices). High concern exists when one or both previous indices are below the **critical concern index of 240** (the approximate index value at the lower limit of the 1988-2000 outflow-abundance relationship, Figure 1). *No actions are triggered by one or more indices below 240.* For recovery, indices at or above the 1988-2000 regression line are targeted (Log_{10} Abundance = 1.1224*(Log_{10} Outflow) – 2.0045).

Fall Midwater Trawl data are located at: http://www.delta.dfg.ca.gov/data/mwt/

2 Risk of Entrainment: Concern increases the farther X2 is located above river kilometer 70 during winter and spring and abates during periods of high outflow. *No actions are triggered by the location of X2.* We hypothesize that the location of X2 approximates where pre-spawning adults congregate and influences the distance they migrate into the Delta to spawn, and thus their vulnerability to entrainment in south Delta exports, as well as that of their offspring. Salvage of longfin smelt is highest in "dry years" (Sommer et al 1997). The highest and most consistent salvage of adult longfin smelt occurs when X2 is upstream of river kilometer (rkm) 70, and little salvage occurs when X2 is below 60 rkm (Figure 2). Sacramento River flow (3-day running average) of 80,000 cfs or greater pushes X2 well below rkm 60 (Kimmerer and Monismith 1993), moving water conditions suitable for longfin smelt spawning downstream of the Delta and transporting larvae downstream, away from the Delta as well (Baxter 1999, Dege and Brown 2004). Longfin smelt spawn in winter when water temperature is below 16°C and declining into 13-15°C range (Figure 3). These temperature relations were derived from plotting catches of yolk-sac larvae on water temperature measurements, both of which were taken by the Bay Study field crews at western Delta locations 535, 736 and 837, 1980-1989 (Figure 4). Larvae are typically present in colder temperatures and few early stage larvae continue to be present after water temperatures surpass 16.5°C in spring. Young juveniles avoid temperatures > 21.5°C and are rarely caught at temperatures over 22°C (Figure 5).

Critical thermal maxima for longfin smelt is unknown.

3 Adults in the Delta: Concern level increases when adult longfin smelt are found in the Delta by either the DFG Fall Midwater Trawl or the Bay Study Survey. We assume that adult longfin smelt (≥80 mm FL) move into the Delta when spawning is eminent (see Nobriga and Castillo 2008), so identification of "spawning stage" is of secondary importance for concern level and spawning stage information will not be requested. The adult spawning stage is determined from longfin smelt (≥80 mm FL) captured by one of the trawl surveys and/or

one of the salvage facilities. A stage greater than or equal to 4 indicates female longfin smelt are ripe and ready to spawn or have already spawned (following Mager 1996 for delta smelt).

4 Distribution of adults (December through February): Concern level increases with the number of adult longfin smelt (≥80 mm FL, whether spent or not) collected within the Delta east or south of Jersey Point in the San Joaquin River or in south Delta channels (Figure 4) AND as X2 moves east of rkm 70. These fish are presumed to be on their spawning migration and to have deposited eggs near their collection sites (see also footnote 5). Collection of adults east or south of Jersey Point or in south Delta channels is a rare event and not statistically related to salvage; nonetheless, the following trawl catches of adults in December will **trigger action:** 1) catch of 8 or more adults from Fall Midwater Trawl stations south and east of Jersey Point, San Joaquin River (3% occurrence; n=38 yrs); or 2) catch of 8 or more adults from Bay Study stations south and east of Jersey Point, San Joaquin River (0% occurrence; n=14 yrs). Adult in-Delta distribution information is obtained from several monitoring surveys: the Fall Midwater Trawl in December, the Bay Study otter and midwater trawls in December, January and February, and the Spring Kodiak Trawl Survey in January and February. The Spring Kodiak Trawl does not effectively capture adult longfin smelt, but does detect them. The Chipps Island Trawl Survey (fixed location sampling at rkm 75) catches adults migrating upstream to stage and spawn, and can provide information on when and how many adult longfin smelt are entering or near the Delta. The December-February concern increases when adult longfin smelt (≥80 mm FL), indicating that spawning may have occurred in the area, are detected east or south of Jersey point in the San Joaquin River or south Delta channels (Figure 4); however risk is substantially reduced when Sacramento River flows at Rio Vista surpass 55,000 cfs in a 3-day running average or those of the San Joaquin River at Vernalis surpass 8,000 cfs in a 3-day running average, and remains low until Rio Vista flows drop below 40,000 cfs or Vernalis flows drop below 8,000 for a 3-day running average, whichever occurred to reduce risk (see Figure 2).

Larvae and small juveniles (January-June): Sampling will commence in the first two weeks of January with a standard egg and larva net possessing 500 micron mesh and sample (a single tow) every 2 weeks at a subset of 20mm survey stations though the first 2 weeks in March (Figure 6); in mid-March sampling will switch to the 20mm Survey net and protocol, and continue into July. January through April concern increases and **action is triggered** if during any single survey longfin smelt larvae (<20mm FL) or juveniles are captured at 6 or more of the 12 Smelt Larva Survey stations located east or south of Jersey Point or in south Delta channels: 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919 (Figure 6). The level of response is determined by the distribution of larvae and juveniles within the system (see for example http://www.delta.dfg.ca.gov/data/20mm/CPUE_Map3.asp for longfin smelt; Figure 7). In particular, as the Smelt Larva Survey or 20mm Survey longfin smelt centroid moves toward zero from the west, concern increases and becomes very high as the centroid reaches zero or moves east of zero. If Sacramento River flow at Rio Vista surpasses 55,000 cfs or the San Joaquin River flow at Vernalis surpasses 8,000 cfs in a 3-day running average, concern abates and remains low until Rio Vista flow drops below

40,000 cfs or Vernalis flow drops below 8,000 for a 3-day running average (whichever relaxed the risk), and adults, larvae or juveniles are again found east or south of Jersey Point.

The 20-mm Survey centroid is calculated by multiplying the observed smelt station CPUE by a distance parameter in km from the confluence. The summed result (summed over a survey) is divided by the survey CPUE which gives the survey centroid position (see Figure 7 and http://www.delta.dfg.ca.gov/data/20mm/CPUE_Map3.asp, selecting longfin smelt).

5. Salvage: the adult **salvage trigger** for December is initiated by combined SWP and CVP cumulative salvage surpassing 24 adults (15%, n=26 yrs). In addition, during December and subsequent months the level of concern increases as the ratio of total longfin smelt salvage (December-March, all ages except larva) to the previous FMWT abundance index (all ages) increases past the 50th percentile (Figure 8) and concern becomes very high if the ratio exceeds the 70th percentile of those observed during 1980-2007 period (see Figure 8 for more explanation of the calculation). If Sacramento River at Rio Vista flow surpasses 55,000 cfs or San Joaquin River flow at Vernalis surpasses 8,000 cfs in a 3-day running average concern abates and remains low until Rio Vista flow drops below 40,000 cfs or Vernalis flow drops below 5,000 cfs for a 3-day running average (whichever reduced concern), and longfin smelt begin to be salvaged once again.

6. The tools for change are actions that the Smelt Working Group can recommend to help protect longfin smelt. Recommendations on negative or reversed Old and Middle River flows can be made; such reverse flows are directly related to longfin smelt salvage. Exports may be reduced at one or both of the south Delta export facilities and a proposed level and duration of the reduction would be recommended by the Smelt Working Group. Barrier operations can be changed to allow more or less water to move directly through Old River to the pumps; San Joaquin River water moving directly to the pumps reduces the volume drawn south through the Delta. Changes in Sacramento River flows affect the position of X2, potentially adult spawning locations, and the flows available for downstream transport of larvae and juveniles out of the Delta. Changes in San Joaquin River flows, in concert with export pumping, directly influence the magnitude and direction of Old and Middle River flows, which are related to longfin smelt salvage. Cross channel gate operations influence how much Sacramento River water moves directly south through the Delta, and can potentially affect the transport direction of larval and young juvenile longfin smelt.

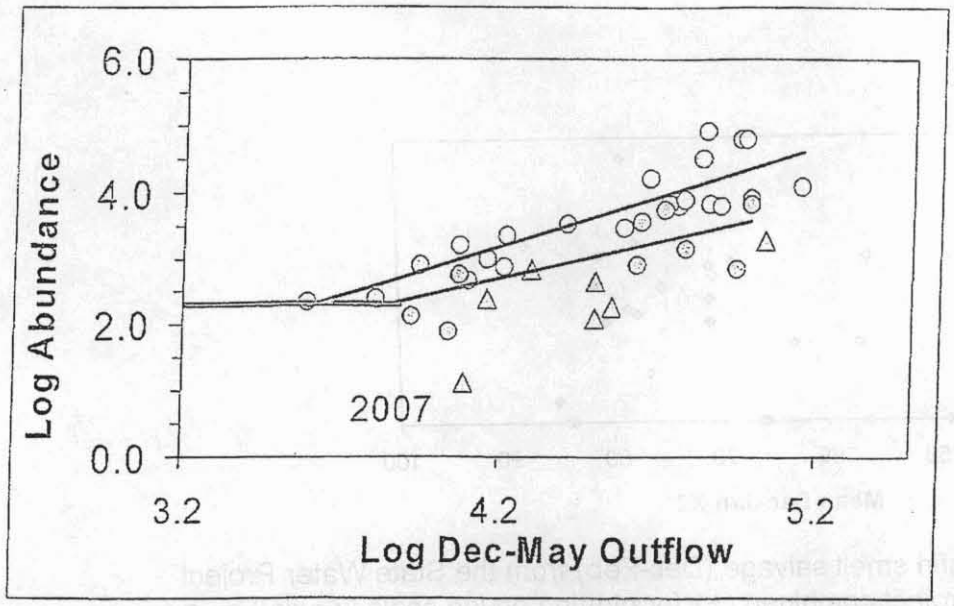


Figure 1. Longfin smelt outflow abundance relationships where Fall Midwater Trawl total longfin smelt abundance indices (1967-2007, log_{10} transformed) are plotted against mean December through May outflow at Chipps Island (cfs, log_{10} transformed). The red line represents the log_{10} transformed critical concern index of 240. The two relationships plotted are: 1967-1987 before the overbite clam *Corbula amurensis* became extremely abundant (open circles); and, 1988-2000, the period subsequent to *Corbula amurensis* (filled circles). The equation for the 1988-2000 relationship is Log_{10} Abundance = 1.1224*(Log_{10} Outflow) – 2.0045. Outflow-abundance points for the POD years 2001-2007 are represented by filled triangles and are not part of either relationship.

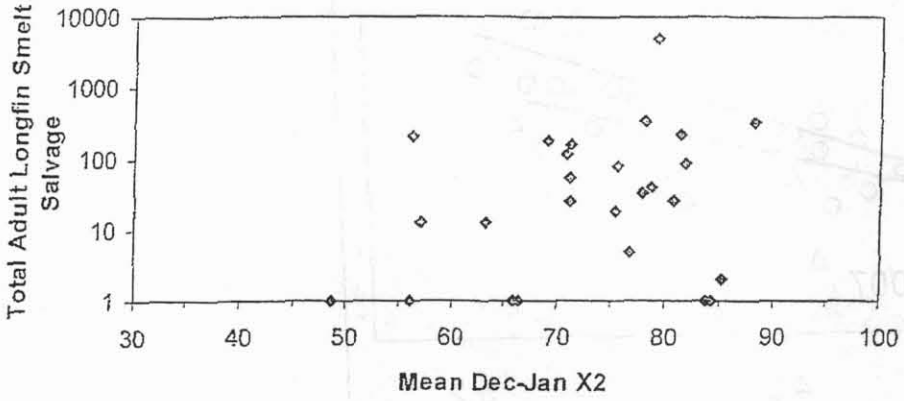


Figure 2. Total adult longfin smelt salvage (Dec-Feb) from the State Water Project and the Central Valley Project combined (+1 for plotting on log scale [y-axis]) as a function of mean daily X2 location for December and January (Chris Enright, DWR data) for 1982-2007. This time range includes a period (1982-1992) before both species identification and length measurements were sufficient to develop complete age-specific salvage. All December through February longfin smelt counts where no fish were measured were assumed to be all adults. Lengths used to classify measured fish into age groups follow Baxter (1999). Delta outflow requirements for steady state X2 at rkm 60 is 43,000 cfs, at rkm 70 is 18,000 cfs and at rkm 80 is 7500 cfs; less outflow is required if X2 is allowed to vary about the target river kilometer location (Kimmerer and Monismith 1993).

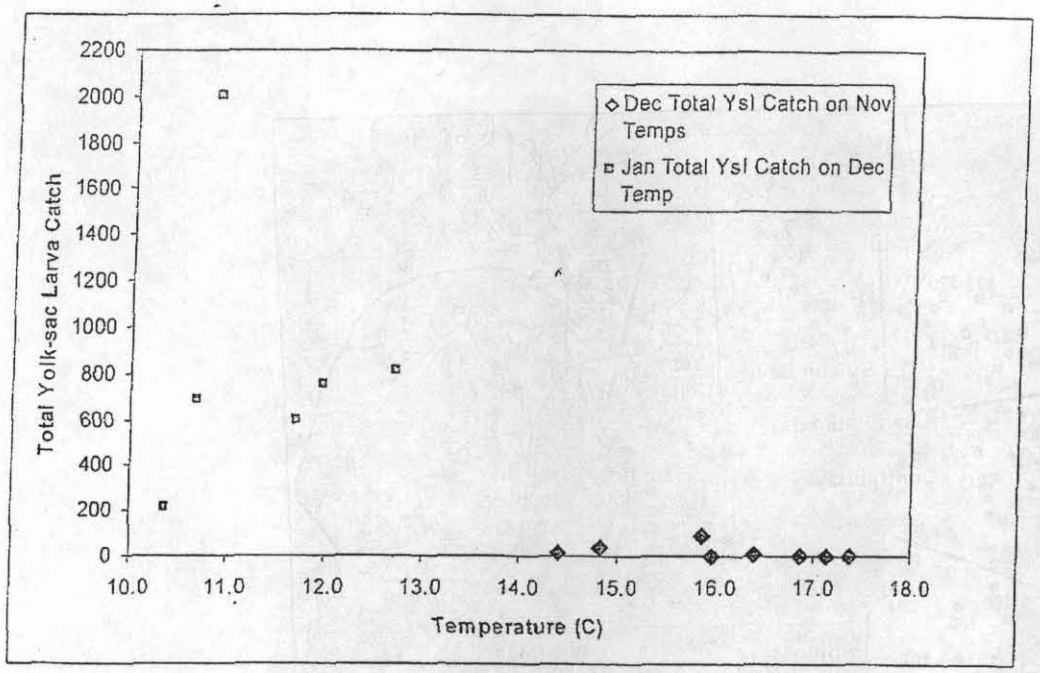


Figure 3. Total catch of longfin smelt yolk-sac larvae (YSL) by month and year for December and January plotted against average bottom temperature measured the previous month by the San Francisco Bay Study at stations 535, 736 and 837 located in the western Delta (1981-1988). This assumes longfin smelt incubation takes about 25 days at 10°C (Moulton 1970); warmer temperatures should reduce incubation time, so larva numbers were plotted against temperatures from the previous month. Temperatures displayed were averaged measures taken at the bottom of the water column from Bay Study. The stations selected were presumably near where longfin smelt spawned.

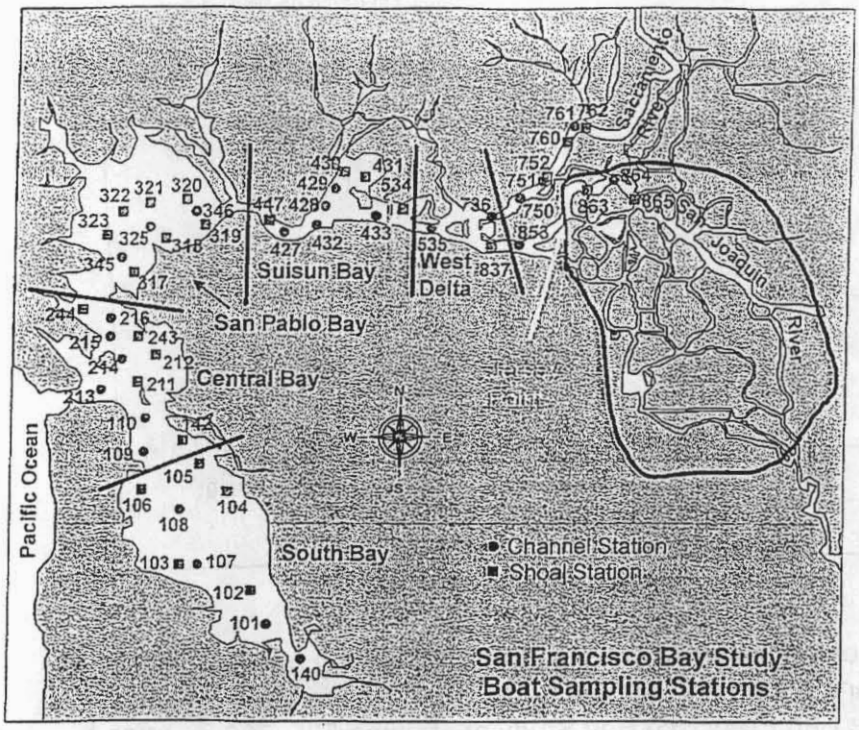


Figure 4. San Francisco Bay Study sampling station map showing the location of Jersey Point (yellow arrow) and region of concern for longfin smelt east and south of Jersey Point (black line delimited). River kilometer 70, located in Suisun Bay is depicted in light blue.

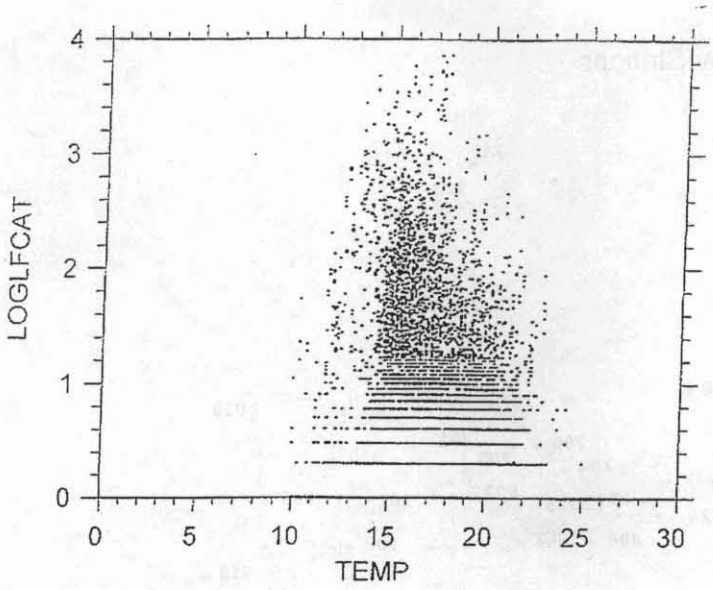


Figure 5. Longfin smelt (larva and juveniles <40 mm FL) temperature (°C) distribution weighted by Log_{10} (Total Catch+1) for all valid 20mm Survey samples, 1995-2007. The upper 95th percentile of the temperature distribution is 21.2 °C (99th = 22.3°C). The 20mm Survey initiates sampling in mid-March, after the annual water temperature minima.

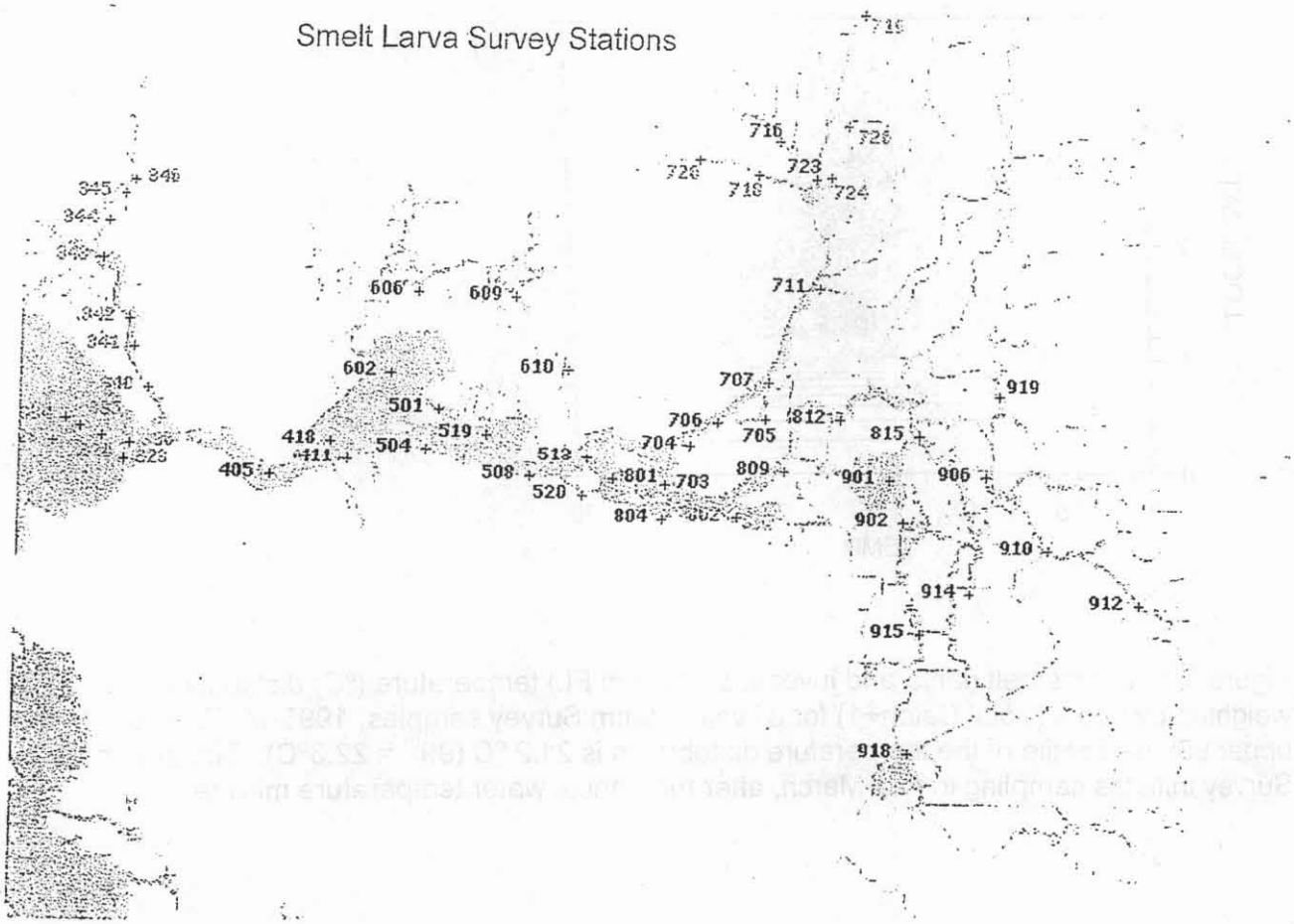


Figure 6. Smelt Larva Survey Map. Sampling begins in the first two weeks in January and continues every other week until the middle of March.

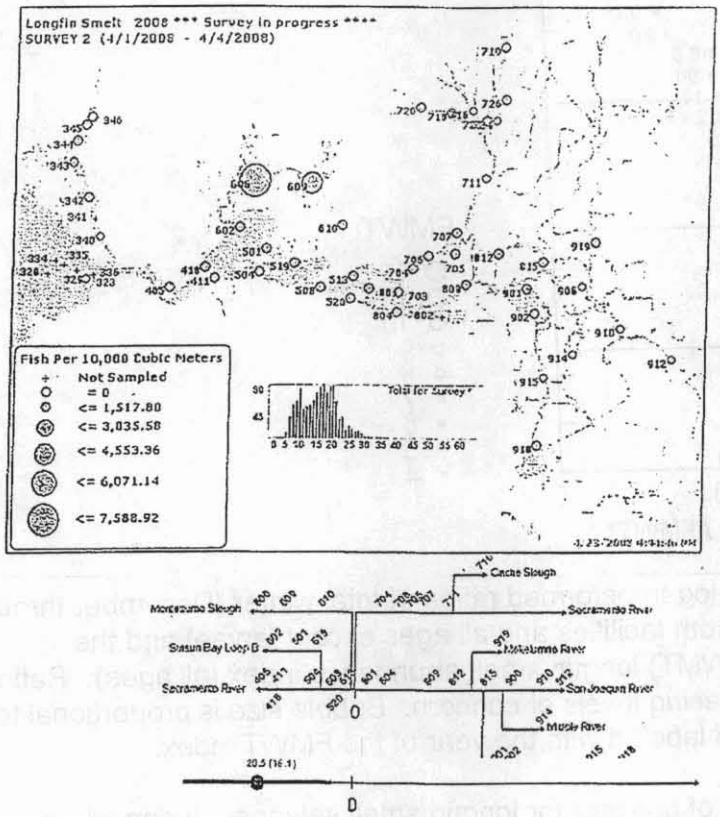


Figure 7. Longfin smelt distribution from 20mm Survey number 2, April 1-4, 2008 (http://www.delta.dfg.ca.gov/data/20mm/CPUE_Map3.asp#GraphImage). Distribution map sits above a schematic representation of Delta and upper Estuary channels with stations positioned proportionally away from the confluence zero-point based on river kilometer distance. The blue dot and line in the bottom portion of the figure depict a catch-per-unit-effort weighted mean distribution or "centroid" and standard deviation. A favorable distribution includes a centroid well west of the confluence (as depicted) and few larvae captured east or south of Jersey Point in the San Joaquin River or south Delta channels.

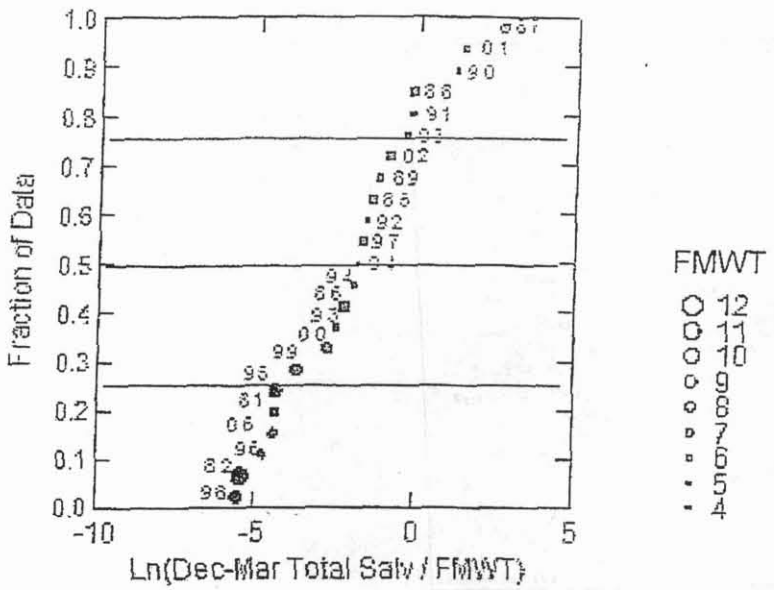


Figure 8. Quantile plot of natural-log transformed ratios of total winter (December through March) salvage of longfin smelt (both facilities and all ages except larvae) and the preceding Fall Midwater Trawl (FWMT) longfin smelt abundance index (all ages). Ratios above the 0.5 line constitute increasing levels of concern. Bubble size is proportional to the FMWT longfin smelt index and labeled with the year of the FMWT index.

The objective is to quantify a level of concern for longfin smelt salvaged during winter, based upon not only the number of fish salvaged, but also their overall abundance. The ratio quantifier reflects that when the abundance is low and salvage is high concern is high and conversely, when abundance is high and salvage is low that concern is low. The resulting quartiles were approximately: 25% = -4.330; 50% = -1.851; 75% = -0.366.

If we were to use this approach to calculate winter concern levels based on the median value, then all years above the 2004 point in the graph would have been years of concern. In other words, additional protections would have been recommended in years above the 2004 point.

The median, selected as the measure of concern, results in a salvage concern level calculated as:

concern level = anti ln(-1.851)* FMWT total abundance index

where anti ln(-1.851) = $e^{-1.851}$

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FISH AND GAME COMMISSION
STATEMENT OF EMERGENCY
ACTION

Emergency Action to Add Section 749.3, Title 14, CCR,
Re: Special Order Relating to Incidental Take of Longfin Smelt
(Spirinchus thaleichthys) During Candidacy Period

I. Statement of Facts Constituting Need for Emergency Action:

The Fish and Game Commission ("Commission") is the decision-making body that implements the California Endangered Species Act ("CESA"). As described in greater detail below, CESA authorizes the Commission to establish lists of threatened and endangered species, and to add or remove species from the lists if it finds, upon receipt of sufficient scientific information, that the action is warranted. Pursuant to Section 2084 of the Fish and Game Code ("FGC"), the Commission may authorize, subject to the terms and conditions it prescribes, the taking of any candidate species while the Department of Fish and Game (Department) and Commission evaluate whether the species should be listed as threatened or endangered under CESA. The Commission has relied on the authority in Section 2084 to permit take of candidate species on five previous occasions: in 1994 for the southern torrent salamander, in 1994 for the coho salmon south of San Francisco, in 1997 and 1998 for the spring-run chinook salmon, in 2000 for coho salmon throughout its range in California, and in 2002 for the Xantus's murrelet.

On August 14, 2007, the Commission received a petition from The Bay Institute, Center for Biological Diversity, and Natural Resources Defense Council (collectively referred to as "Petitioners") to take action to list longfin smelt as threatened or endangered under CESA. The petition describes: 1) the record low population abundance in the last four years for the San Francisco Bay-Delta population; 2) new analyses of Bay-Delta population trends over the last 40 years; 3) evidence suggesting reduced genetic integrity of the species; 4) evidence for a significant stock recruitment relationship for the species; and 5) the significant threat posed to the population abundance by water management and Delta exports. The petition also sought action by the Commission to list the longfin smelt on an emergency basis. The Commission denied the request for an emergency action at its October 11, 2007 meeting in Concord.

The Commission referred the petition to the Department on August 21, 2007 for a 90-day review period, as required by FGC Section 2073. The Department determined on November 16, 2007 that there was sufficient information in the petition to indicate that the longfin smelt's listing may be warranted and, based on that determination, recommended that the Commission accept the petition. As described in the evaluation report, the Department relied on information and data in its files to interpret information in the petition.

On February 7, 2008 the Commission decided to accept the longfin smelt as a candidate species based on the Department's evaluation report, public testimony, and the information in the petition. The petition identifies the following activities as factors in the decline of longfin smelt: reductions in freshwater inflow, loss of larval, juvenile, and adult fish from direct and indirect effects of water diversions and export facilities, competition from non-natives species, and toxic chemicals.

FGC Sections 2080 and 2085, prohibit the take of candidate species, unless: (1) the take is authorized in a regulation adopted by the Commission pursuant to FGC Section 2084 or (2) the Department authorizes the take through incidental take permits issued on a project-by-project basis pursuant to FGC 2081. Because the Commission designated the longfin smelt as a candidate species on February 7, 2008, individuals and entities engaged in any activity that may result in incidental take of longfin smelt, including the activities listed above, are at risk of violating the FGC for unauthorized take. In the absence of these regulations, individuals engaged in otherwise lawful research and monitoring, dredging and extraction of sand or gravel resources, or water diversion that may result in take of longfin smelt would have to obtain a permit from the Department in order avoid liability and potential criminal violations of CESA for actions or activities that result in take of the candidate species.

The issuance of individual permits authorizing incidental take is a complicated, lengthy, and expensive process, and the Commission specifically finds that it is not feasible for the Department to issue incidental take permits on a project-by-project basis for the above-referenced activities that will otherwise be prohibited during the longfin smelt's candidacy period. The Department has testified that with the following measures the species will not, in its opinion, become immediately at risk of extinction. For these reasons, adoption of the emergency regulation is necessary to allow the continued export of water for agricultural, municipal and industrial use along with the other specified scientific and commercial activities. These regulations will ensure appropriate interim protections for longfin smelt within the area covered by the petition while the Department conducts a 12-month review of the status of the candidate species.

The Department requests that the Commission take emergency action to add Section 749.3, to Title 14, CCR.

II. Express Finding of Emergency

Pursuant to the authority vested in it by FGC Section 240 and for the reasons set forth above in the "Statement of Facts Constituting Need for Emergency Action," the Commission expressly finds that the adoption of these regulations is necessary for the immediate preservation of the general welfare. The Commission specifically finds that the adoption of these regulations will allow

activities that may affect longfin smelt to continue during the candidacy period, including the diversion and export of water for agricultural, municipal and industrial use, as long as those activities are conducted in a manner consistent with the protections specified in these regulations.

III. Authority and Reference Citations

Authority: FGC Sections 200, 202, 205, 240, and 2084.
Reference: FGC Sections 200, 202, 205, 240 and 2084.

IV. Informative Digest

The sections below describe laws relating to listing species under CESA, the effect of these emergency regulations, a description of related federal law, and a policy statement overview.

A. Laws Related to the Emergency Regulations - Listing under CESA

1. Petition and Acceptance

FGC Section 2070 requires the Commission to establish a list of endangered species and a list of threatened species. Any interested person may petition the Commission to add a species to the endangered or threatened list by following the requirements in Fish and Game Code Sections 2072 and 2072.3. If a petition is not factually incomplete and is on the appropriate form, it is forwarded to the Department for evaluation.

FGC Section 2073.5 sets out the process for accepting or rejecting a petition to list a species and, if the petition is accepted, a process for actually determining whether listing of the species as threatened or endangered is ultimately warranted. The first step toward petition acceptance involves a 90-day review of the petition by the Department to determine whether the petition contains sufficient information to indicate that the petitioned action may be warranted. The Department prepares a report to the Commission that recommends rejection or acceptance of the petition based on its evaluation.

FGC Section 2074.2 provides that, if the Commission finds that the petition provides sufficient information to indicate that the petitioned action may be warranted, the petition is accepted for consideration and the species that is the subject of the petition becomes a "candidate species" under CESA. CESA prohibits unauthorized take of a candidate species, just as it prohibits such take of threatened and endangered species, from the time the Commission notifies interested parties and the general public of its acceptance of the petition. FGC Section 86 states "Take" means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. Killing of a candidate, threatened, or endangered species under CESA that is incidental to an otherwise lawful activity

and not the primary purpose of the activity constitutes take under state law. (Department of Fish and Game v. Anderson-Cottonwood Irrigation District (1992) 8 Cal.App.4th 1554.)

FGC Section 2085 provides that once the Commission gives notice pursuant to FGC Section 2074.4 that it has designated a species a candidate under CESA, all activities, whether new or ongoing, that cause incidental take of the candidate species are in violation of the prohibition on unauthorized take of listed or candidate species found in FGC Section 2080 unless the take is authorized in regulations adopted by the Commission pursuant to FGC Section 2084 or the Department authorizes the take through the issuance of an incidental take permit under FGC Section 2081 or by other means authorized by CESA.

2. Status Review Final Action on the Petition

The Commission's acceptance of a petition initiates a 12-month review of the species' status by the Department, pursuant to FGC Section 2074.6. This status review helps to determine whether the species should be listed as threatened or endangered. Unlike the Department's initial evaluation, which focuses largely on the sufficiency of information submitted in the petition, the 12-month status review involves a broader inquiry into and evaluation of available information from other sources. The Commission is required to solicit data and comments on the proposed listing soon after the petition is accepted, and the Department's written status report must be based upon the best scientific information available.

Within 12 months of the petition's acceptance, the Department must provide the Commission a written report that indicates whether the petitioned action is warranted (FGC Section 2074). The Commission must schedule the petition for final consideration at its next available meeting after receiving the Department's report (FGC Section 2075). In its final action on the petition, the Commission is required to decide whether listing the species as threatened or endangered "is warranted" or "is not warranted"; if listing is not warranted in the Commission's judgment, take of the former candidate species is no longer prohibited under CESA (FGC Section 2075.5).

B. Effect of the Emergency Action

Section 749.3, Title 14, CCR regulations would authorize and provide for take of longfin smelt during its candidacy subject to the following terms and conditions:

(1) Research and Monitoring

(A) Take of longfin smelt by Department personnel in the course of research and monitoring is authorized pursuant to Section 783.1(c), Title 14, CCR.
(B) Take of longfin smelt in the course of research and monitoring by public agencies and private parties is authorized subject to the following:

1. For ongoing research, a written, detailed project proposal describing objectives, methods (gear, sampling schedules and locations), efforts to minimize adverse effects to the species, and estimated level of take of the species shall be provided to the Regional Manger of the Bay Delta Region at the address specified in (iv) below within 45 days of this regulation becoming effective.
2. For research which has not yet commenced, a written, detailed project proposal describing objectives, methods (gear, sampling schedules and locations), efforts to minimize adverse effects to the species, and estimated level of take of the species shall be provided to the Regional Manger at the address specified in (iv) below.
3. The research or monitoring may commence once the Department issues written concurrence that the research and monitoring activities conducted are consistent with the Department's research and monitoring programs and are sufficient to protect longfin smelt. The Department may specify additional terms and conditions for the protection of longfin smelt and the reporting of all data collected to the Department.
4. Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599.

(C) Notwithstanding the foregoing, at the discretion of the Department, research and monitoring activities not addressed by the above procedures may receive separate authorizations for take of longfin smelt pursuant to Fish and Game Codes Section 2081.

(2) Dredging and Extraction of Sand or Gravel Resources

Take of longfin smelt incidental to otherwise lawful dredging or extraction of sand or gravel resources in a stream or river is authorized for the longfin smelt candidacy period provided that any activity already required to monitor and report the take of any fish species to the Department or a federal wildlife agency also include the following information: the date, location and number of any longfin smelt taken during the candidacy period. A copy of the report shall be mailed to: Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599 -- (707) 944-5500.

(3) Local Water Diversions

Incidental take of longfin smelt resulting from diversion of water by any local agency, private party, or the State Water Project North Bay Aqueduct or Suisun Marsh facilities, is authorized during the candidacy period, subject to the following conditions:

(A) Existing unscreened diversions may continue in operation through the candidacy period. Upon any future determination by the commission that longfin smelt shall be added to the list of threatened or endangered

species, incidental take for such diversions must be authorized under Fish and Game Code Section 2081(b) or, if longfin smelt become listed pursuant to Section 1533 of Title 16 of the United States Code, be determined exempt from the permitting requirement under Fish and Game Code Section 2080.1.

(B) Diversions approved and constructed after the effective date of this section shall be screened and shall use the Department of Fish and Game Fish Screening Criteria for delta smelt (*Hypomesus transpacificus*) in Exhibit A as the fish screening criteria for longfin smelt.

(C) Existing fish screens that are repaired, upgraded, or reconstructed during the candidacy period must screen for longfin smelt by meeting the Department of Fish and Game Fish Screening Criteria for delta smelt in Exhibit A.

(D) Any activity already required to monitor and report the take of any fish species to the Department or a federal wildlife agency shall also include the following information: the date, location and number of any longfin smelt taken during the candidacy period. A copy of the report shall be mailed to: Regional Manager, Bay Delta Region, P.O. Box 47, Yountville, CA 94599 -- (707) 944-5500.

(4) State Water Project and Federal Central Valley Project Export Facilities

In *Natural Resources Defense Council v. Kempthorne* (Kempthorne), the United States Eastern District Court issued an Interim Remedial Order Following Summary Judgment and Evidentiary Hearing which required specific limitations on the joint operations of the State Water Project (SWP) and the Federal Central Valley Project (CVP) in order to prevent the extinction of delta smelt until a new delta smelt biological opinion is issued by the United States Fish and Wildlife Service (FWS). The court has directed FWS to issue its new opinion by September 15, 2008. When the new biological opinion is issued, the *Kempthorne* requirements will terminate. The *Kempthorne* requirements are triggered by environmental conditions and the presence of specific delta smelt life stages and are focused on minimizing the negative entrainment effects caused when the combined export pumping of the SWP, operated by the Department of Water Resources (DWR) and the CVP, operated by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) reverses the flow in Old and Middle River (OMR). A series of *Kempthorne* OMR flow requirements began in late-December 2007 and will continue until June 20, 2008, sequentially targeting adult delta smelt during migration prior to spawning, spawning delta smelt, larvae and juveniles.

The Commission recognizes that there are statistical correlations between negative OMR flows and take of different longfin smelt life stages, as there are for delta smelt. There is substantial overlap in the periods when the two species are taken by the SWP and CVP. However, adult longfin smelt can be taken a month or more earlier than delta smelt (potentially in December).

Because longfin smelt typically spawn earlier, the larvae may be present earlier as well (potentially in February). Consequently, concurrent take of both delta smelt and longfin smelt may include different life stages and magnitudes and Kempthorne requirements keyed to delta smelt presence may not match longfin smelt timing. The following measures will protect longfin smelt during the candidacy period when OMR limits required under *Kempthorne* for delta smelt may not be in effect or adequately protective. The Commission therefore authorizes take of longfin smelt incidental to the coordinated operations of the SWP and CVP export facilities in accordance with the following OMR limits, or the OMR limits set in *Kempthorne*, whichever are more protective:

(A) Monitoring for the presence of adult (≥85mm Fork Length (FL)) and larval longfin smelt (<20 mmFL) shall be achieved as follows:
   1. For adults by standard field sampling intervals, methods and locations of the Fall Midwater Trawl Survey, the San Francisco Bay Study Survey and the Spring Kodiak Trawl Survey.
   2. For larvae, by initiating the 20mm Survey beginning in the first two weeks of March and conducting single tows at sampling locations 405, 411, 418, 602, 501, 504, 519, 508, 513, 520, 703, 704, 706, 707, 711, 716, 705, 801, 802, 804, 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919; In the last two weeks in March the full 20mm Survey will begin using standard survey protocol, sampling three tows per sampling location at all 41 standard locations.
   3. DWR and Reclamation shall ensure that smelt collected at the SWP and the CVP, respectively, are preserved in formalin or ethanol, labeled with the date and location of collection, and transferred to the Department's Bay-Delta Region Stockton office within two business days to the attention of Marty Gingras for a determination of sex and reproductive status (i.e., egg stage or spent). Identification of any larval longfin smelt collected at either facility shall be reported within one business day to Marty Gingras at the Department's Bay-Delta Region Stockton office. The Department may modify the requirements of this subsection with the mutual agreement of DWR and Reclamation for the SWP and the CVP, respectively.

(B) Commencing on the effective date of this regulation, DWR and Reclamation shall protect spawning, larval, and juvenile longfin smelt by jointly operating the CVP and SWP to achieve a daily average net upstream (reverse) OMR flow (as computed for *Kempthorne* compliance) between 750 and 5,000 cfs on a seven-day running average beginning when longfin smelt spawning is indicated by: (i) the presence of spent female longfin smelt (≥85mm FL) in the Spring Kodiak Trawl (stations 809, 812, 815, 902, 906, 910, 912, 914, 915 on Exhibit B) or in the San Francisco Bay Study Otter Trawl or Midwater Trawl surveys (stations 863, 864, 865 on Exhibit C), all of which are located east or south of Jersey

Point in the San Joaquin River, or south Delta channels or at either the SWP or CVP fish salvage facilities or (ii) when larval longfin smelt (<20mm FL) are detected in the 20mm Survey (stations 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918 on Exhibit D) east or south of Jersey Point in the San Joaquin River or in south Delta channels or at the SWP or CVP fish salvage facility.

The specific biological flow objective within this range shall be set by the Department, after consultation with the FWS, DWR and Reclamation, to be determined on a weekly basis and based upon a Longfin Smelt Risk Assessment Matrix (LSRAM)(Exhibit E) to be refined by the Department in consultation with FWS, DWR, and Reclamation and the best available scientific and commercial information concerning the distribution and status of longfin smelt. The LSRAM is patterned after the Delta Smelt Risk Assessment Matrix only modified to reflect longfin smelt biology and life stages and available information. This action is suspended during any time: (i) the three-day average of flow in the Sacramento River at Freeport exceeds 80,000 cfs and is resumed when the three-day average Delta outflow falls below 40,000 cfs and adult or larval longfin smelt are again detected east or south of Jersey Point as described above, or (ii) the Vernalis Adaptive Management Plan is being implemented (31 days, typically in mid-April to mid-May). This action shall continue until, in the reasonable discretion of the Department, after consultation with the FWS, DWR, and Reclamation, the longfin smelt entrainment risk at each facility is abated, or June 20, 2008 whichever occurs first.

(C) Notwithstanding the foregoing, this regulation shall not prevent DWR or Reclamation from taking any action in operating the projects that is reasonably necessary to protect human health or safety of the public, including, but not limited to, any act or omission reasonably necessary to protect the structural integrity of any SWP or CVP facility.

(D) In the event DWR receives a permit from the Department pursuant to Fish and Game Code Section 2081, which governs the take of longfin smelt, those requirements under Section 749.3(a)(4) which apply to DWR shall be superseded by the terms of such permit.

(E) This emergency regulation shall be in effect for 180 days. It does not contain measures to protect pre-spawning longfin smelt or their larvae after June 20, 2008 from the effects of project operations, which effects could occur as early as late November or early December 2008. If this regulation is extended, operational requirements for this December – February period may be added by amending this regulation prior to expiration or extension.

C. Existing, Comparable Federal Regulations or Statutes

The Federal Endangered Species Act (FESA)(16 U.S.C. Section 1531 et seq.) includes a listing process that is comparable to the listing process under CESA.

Petitioners submitted a petition to the FWS to list the longfin smelt under FESA at the same time they submitted a petition to the Department. The FWS has not taken action on the petition.

FESA Section 4(d) (16 USC Section 1533 (d)) is similar in some respects to Section 2084 of FGC. Section 4(d) authorizes the National Marine Fisheries Service (NMFS) or the FWS to issue protective regulations prohibiting the take of species listed as threatened. These regulations, also called "4(d) rules," may include any or all of the prohibitions that apply to protect endangered species and may include exceptions to those prohibitions. The 4(d) rules give the NMFS and the FWS the ability to craft comprehensive regulations to apply to particular activities that may result in a take of a threatened species, in a manner similar to the Commission's authority to prescribe terms and conditions pursuant to Section 2084 during the species candidacy period.

Similarly, the Migratory Bird Treaty Act provides for protection of migratory birds with a definition of "take" which includes all portions of the FGC Section 86 definition of "take". In addition, the Act provides for the Secretary of the Interior to adopt regulations determining the extent to which "take" will be allowed.

D. Policy Statement Overview

The objective of these regulations is to allow specified activities to continue on an interim basis, subject to the measures in the regulations designed to protect longfin smelt, while the Department focuses its efforts on further evaluating the status of the species. The Department's evaluation of the species during the candidacy period will result in the status report described in Section IV.A.2 above. The status report provides the basis for the Department's recommendation to the Commission before the Commission takes final action on the petition and decides whether the petitioned action may or may not be warranted.

E. Update

A non-substantive change was made to the regulatory text which was mailed to interested and affected parties on February 7, 2008. The mailing address for the Regional Manager, Bay Delta Region, was changed from the street address to the Post Office Box for that Department of Fish and Game office due to concerns regarding mail theft.

V. Specific Agency Statutory Requirements

The Commission has complied with the special statutory requirements for its emergency regulations found at FGC Section 240. A public hearing on these regulations was held on February 7, 2008, and the above finding that these

regulations are necessary for the immediate preservation of the general welfare meets the requirements of Section 240.

VI. Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States;

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; and,

(c) Cost Impacts on a Representative Private Person or Business:

The Commission has determined that adoption of Section 749.3, Title 14, CCR as an emergency regulation pursuant to FGC Section 2084 allows continued scientific research and monitoring; dredging, gravel and sand extraction; and deliveries of water for agricultural municipal, industrial, and residential use during the longfin smelt candidacy, subject to specified terms and conditions. The Commission has determined that this emergency regulation will prevent potentially significant local and statewide adverse impacts that might result from the disruption of water deliveries and other activities. In the absence of this emergency regulation private persons and business could be required to obtain individual take permits for longfin smelt, on a project-by-project basis during the candidacy period and would have to cease existing on-going activities pending receipt of a CESA authorization or be at risk of enforcement actions including fines and other penalties.

(d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State; and,

(e) Nondiscretionary Costs/Savings to Local Agencies:

The Commission has determined that adoption of Section 749.3, Title 14, CCR as an emergency regulation pursuant to FGC Section 2084 will provide cost savings to the state and local agencies in an undetermined amount. In the absence of the emergency regulation, the Department would have to authorize take by permit on a project-by-project basis for the Department of Water Resources, affected local water agencies, and others.

(f) Programs Mandated on Local Agencies or School Districts:

The Commission has determined that the adoption of Section 749.3, Title 14, CCR as an emergency regulation does not impose a mandate on local agencies or school districts.

(g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4; and

(h) Effect on Housing Costs:

The Commission has determined that the adoption of Section 749.3, Title 14, CCR as an emergency regulation will not result in any cost to any local agency or school district for which Government Code sections 17500 through 17630 require reimbursement and will not affect housing costs.

FISH AND GAME COMMISSION
SUPPLEMENT TO STATEMENT OF EMERGENCY ACTION

Emergency Action to Add Section 749.3, Title 14, CCR,
Re: Special Order Relating to Incidental Take of Longfin Smelt
(Spirinchus thaleichthys) During Candidacy Period

I. Need for Emergency Action for Research and Monitoring Activities:

Subsection 749.3(a)(1) Research and Monitoring

This section of the 2084 Regulation is necessary to avoid serious harm to the general welfare. If the 2084 Regulation is not adopted to include this section, the Department of Fish and Game, public entities and private parties will be deprived of critical information and knowledge regarding the longfin smelt and other imperiled species. Studies that have been going on for the last 40 years and that form the basis for critical decision making in the Delta will be put at risk if the 2084 Regulation is not approved. These studies operate on a continuous basis and rely on that predictability in coming to scientific conclusions about the data they acquire. It is critical that each year the Department track where various fish species are in the Delta system and at which life stage they are at critical times of the year. Those critical times include the period immediately following the effective date of the regulation making longfin smelt a candidate.

The conclusions from these data are used to make important environmental and policy decisions that rely on the most complete and current information. The decisions often have huge implications for the general welfare. For example, the Department is relying on being able to conduct research and monitoring studies to complete its status review of the longfin smelt to determine if listing of the species under the California Endangered Species Act (CESA) as threatened or endangered is warranted, as required by Section 2074.6 of the Fish and Game Code. Whether or not this species becomes listed will have significant implications for members of the public that rely on the Delta for water, food or business. If the 2084 Regulation is not approved, adequate evaluation and protection of longfin smelt, which are in an unprecedented state of decline, would be severely impaired, years of data would be in jeopardy of becoming ineffectual or irrelevant and the public will be disserved by decisions being made without the best possible science.

Further, the Department and other entities are under a legal mandate under the *Natural Resources Defense Council v. Kempthorne* (Kempthorne) decision to conduct various research and monitoring studies for the delta smelt, and it is certain that the bycatch of those studies will include longfin smelt. The Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) have additional duties to conduct monitoring studies per the conditions in their water right permits (Decision 1641 issued by the State Water Resources Control Board (SWRCB)). These monitoring activities include: (1) Environmental Monitoring Program (EMP) for the Sacramento-San Joaquin Delta, Suisun Bay, and San Pablo Bay, (2) Fall Midwater Trawl surveys, (3) Summer Tow Net surveys and (4) Bay studies. Without the ability to conduct this monitoring, the SWRCB can restrict State Water Project (SWP) diversions thereby further impacting all SWP water users. It is therefore imperative that the 2084 Regulation include research and monitoring among the authorized activities.

II. Need for Emergency Action for Dredging and Extraction of Sand and Gravel Resources

Subsection 749.3(a)(2) Dredging and Extraction of Sand or Gravel Resources
This section of the 2084 Regulation is necessary to avoid serious harm to the public health, safety and the general welfare. Dredging activities are utilized to clear waterways and water conveyance structures from unnecessary silt and debris. Without the 2084 Regulation in place water delivery would be burdened, and water quality would deteriorate resulting in serious harm to the public who rely on a dependable, unpolluted source of water. Additionally, dredging is often used, most notably by the Army Corps of Engineers, to clear waterways or marinas for safe ship passage. If the waterways cannot be cleared for transportation purposes, then serious harm to public safety will result as unobstructed passage cannot be guaranteed for travel or docking.

Most extraction activities involve removing sand that may be used as a component of concrete. The concrete may then be used by public and private parties to develop infrastructure and enhance transportation systems. As is evident by the wide passage of Propositions 1B[1], 1C[2] and 1D[3] in November of 2007, the public considers improved transportation capacity and construction of roads, housing and schools (all requiring concrete) to be an important component of maintaining the general welfare of the populace.

The 2084 Regulation must include protection for dredging and sand/gravel extraction activities to avoid serious harm to public health and safety by keeping water resources moving efficiently and free of impairments, ensuring unimpaired waterways are available for transportation purposes and facilitating the production of concrete to maintain and create critical infrastructure.

III. Need for Emergency Action for Local Water Diversions:

Subsection 749.3(a)(3) Local Water Diversions
This section of the 2084 Regulation is necessary to avoid serious harm to public health and the general welfare. If the 2084 Regulation is not adopted, existing on-going activities would cease, resulting in disruption of water deliveries to private persons, businesses and local water agencies. The majority of local water diversions are used for agricultural purposes. Absent a reliable water source, most crops cannot survive. If a large percentage of the California agricultural industry cannot sustain crops, then California will be faced with a food shortage resulting in much higher food prices. The 2084 Regulation is necessary to avoid serious harm to the general welfare by maintaining a sustainable supply of affordable food. Other local water diverters include local water agencies. Absent the 2084 Regulation, these diverters must halt or reduce water delivery to customers. As discussed in Section IV below, the ability to deliver water is necessary to avoid serious harm to the public health due to lack of water for drinking and sanitation purposes.

IV. Need for Emergency Action for Central Valley Project and State Water Project Operations:

Subsection 749.3(a)(4) State Water Project and Federal Central Valley Project Export Facilities.

This section of the 2084 Regulation is necessary to avoid serious harm to public health and the general welfare. If the 2084 Regulation is not adopted, the operation of the Central Valley Project and the State Water Project (Projects), which deliver water to central valley agriculture and twenty-two million Californians in the central and southern portions of the State, would become unlawful and subject to possible injunction and other serious legal sanctions immediately upon publication of the candidacy status of longfin smelt on February 29, 2008. The twenty-two million Californians that rely on this water for drinking, sanitation, food production and other purposes may experience halted water delivery or reductions in water delivery. Further, dry conditions and high demand for water in 2007 have reduced water reserve in storage thereby limiting the ability of storage to satisfy water demand this year. DWR, the agency that operates the SWP, requested the adoption of a 2084 regulation to address these critical concerns.

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[1] Proposition 1B (Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006), which was approved by 61.4% of the voters, provided $19.9 billion in bonds to pay for construction projects for increased capacity on state highways, upgrades to local transit and intercity rail service, air quality improvement projects, and safety and security projects on public transit, railroad crossings, highways, and ports.

[2] Proposition 1C (Housing and Emergency Shelter Trust Fund Act of 2006), which was approved by 57.8% of the voters, provided $2.85 billion in bonds to pay for construction of new housing in already developed areas, new apartments with some set-aside for low-income tenants, and new shelters for battered women and homeless people.

[3] Proposition 1D (Kindergarten-University Public Education Facilities Bond Act of 2006), which was approved by 56.9% of the voters, provided $10.4 billion in bonds to pay for construction of new schools, modernization of existing schools, and improved facilities at community colleges and state universities.