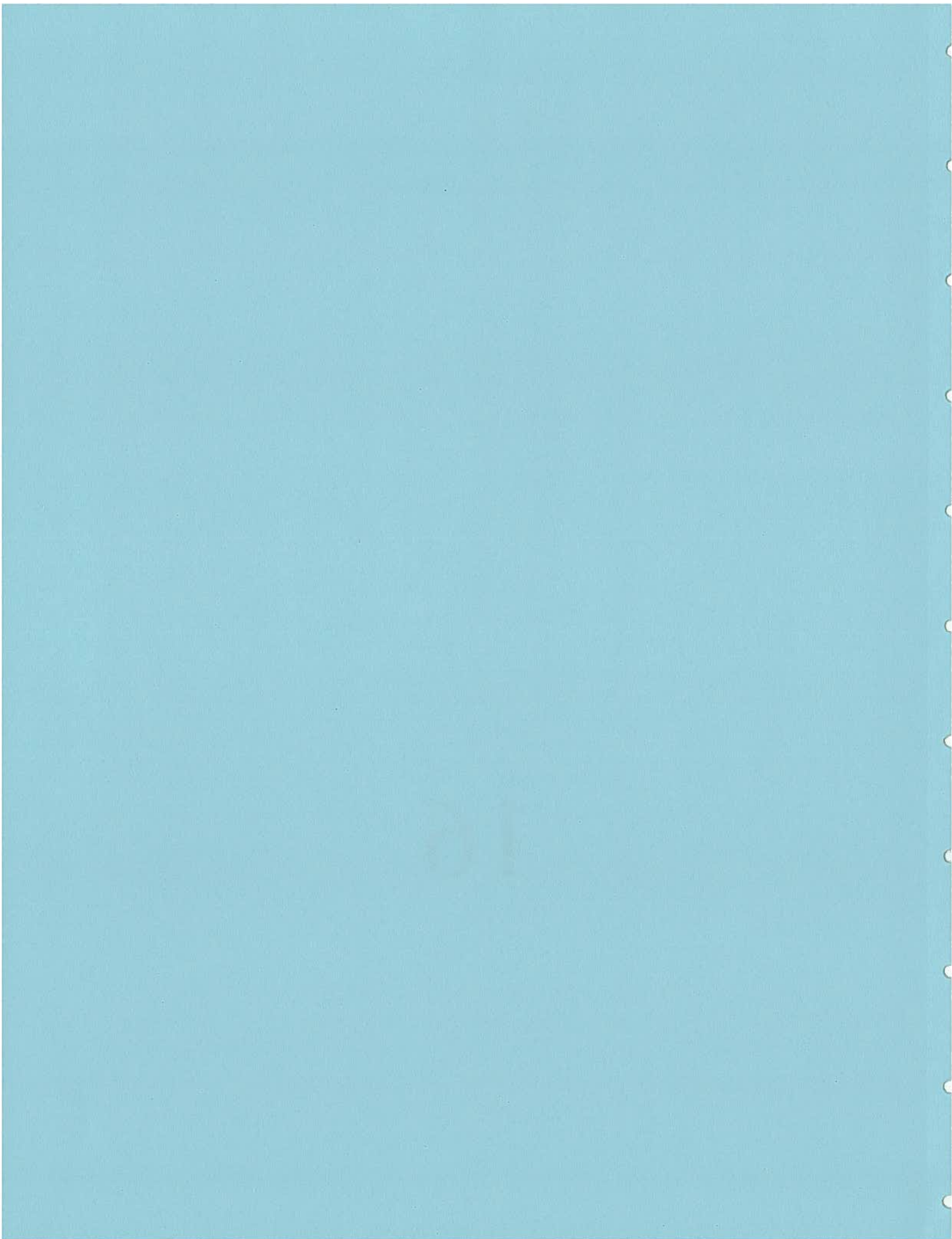


16



OC Print-Mail Center

From: Halter, Amanda (OC)
Sent: Saturday, March 07, 2009 9:40 AM
To: 'Catherine Hagan (George)'; Chiara Clemente; Deborah Woodward
Cc: Garrett, Christopher (SD); Singarella, Paul (OC); PMacLaggan@poseidon1.com; dmayer@tenera.com; Philip Wyels
Subject: RE: Poseidon: Preliminary Draft Supplemental ImpingementStatement
Attachments: Preliminary Draft Revised Supplemental Nordby Statement.pdf

Catherine,

I think you are asking for an updated version of Chris Nordby's supplemental statement, which calculates the projected biological productivity of the mitigation sites under the MLMP and compares that to the estimated impingement associated with the CDP's stand-alone operations. It is attached. This is not yet in final form (and will be incorporated into the revised Min Plan submitted on Monday) but this should provide the analysis necessary for the order and staff report.

I am in the office all day today so don't hesitate to call if you have any questions. We appreciate your working over the weekend for the benefit of the project.

Best regards,
Amanda

Amanda Halter

LATHAM & WATKINS ^{LLP}
650 Town Center Drive, 20th Floor
Costa Mesa, CA 92626
Direct Tel: 714-755-2238
Fax: 714-755-8290
Email: amanda.halter@lw.com

From: Catherine Hagan (George) [mailto:CHagan@waterboards.ca.gov]
Sent: Saturday, March 07, 2009 9:31 AM
To: Halter, Amanda (OC); Chiara Clemente; Deborah Woodward
Cc: Garrett, Christopher (SD); Singarella, Paul (OC); PMacLaggan@poseidon1.com; dmayer@tenera.com; Philip Wyels
Subject: Re: Poseidon: Preliminary Draft Supplemental ImpingementStatement

All,

As Phil and I discussed with Chris yesterday, following on our Thursday conference call, we are expecting an analysis of how the impingement impacts under different scenarios are accounted for with the 37/55.4 acres in the MLMP. In order to have time to review and modify the draft order and staff report, I would like to have this analysis no later than mid-afternoon today. Our documents need to be finalized tomorrow for posting Monday morning. I would appreciate an update as to when we can expect to receive the information. In addition, we are expecting a response about any concerns with the proposed changes to Chapter 6 regarding the Regional Board's role in the MLMP process. Please

4/1/2009



advise as soon as possible if you have any concerns with the proposed changes.
Thank you.

Catherine George Hagan
Senior Staff Counsel
Office of Chief Counsel
State Water Resources Control Board
chagan@waterboards.ca.gov

9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
Telephone: 858.467.2958
Facsimile: 858.571.6972

>>> <Amanda.Halter@lw.com> 3/5/2009 7:30 PM >>>

All,

Attached for your review and comment is the preliminary draft supplemental impingement statement evaluating the three approaches to estimating CDP's projected impingement based on the EPS data. As discussed, this was generated in response to the position that no adjustment should be made to EPS's impingement when estimating CDP's, which was expressed to us on Monday. This statement is still being revised and will be submitted in a final form on Monday.

Best regards,
Amanda

Amanda Halter

LATHAM & WATKINS ^{LLP}
650 Town Center Drive, 20th Floor
Costa Mesa, CA 92626
Direct Tel: 714-755-2238
Fax: 714-755-8290
Email: amanda.halter@lw.com

<<Preliminary Draft Supplemental Impingement Statement.pdf>>

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Latham & Watkins LLP

4/1/2009

ATTACHMENT

Revised Supplemental Expert Opinion Regarding Biological Productivity of Mitigation
Site(s) Under the Marine Life Mitigation Plan

Mr. Chris Nordby- Nordby Biological Consulting

My name is Chris Nordby of Nordby Biological Consulting and I am an expert in the field of tidal wetlands restoration. Poseidon Resources Corporation asked me to prepare this revised supplemental statement to explain that the Marine Life Mitigation Plan will more than adequately account for CDP's estimated impingement.

CDP's Estimated Impingement Based on a Flow-Proportioned Calculation Is 3.74 kg/day

The Encina Power Station hired Tenera Environmental to conduct an Impingement Mortality and Entrainment (IM&E) Study to comply with new 316(b) rules that the EPA promulgated in 2004. In 2004-2005, Tenera collected impingement and entrainment data pursuant to the Board-approved IM&E Study.

Since CDP will use EPS's existing intake structure, Tenera used the data it collected for the IM&E Study to estimate CDP's impingement-related impacts. In order to isolate and account for impacts related to CDP's stand-alone efforts, Tenera's data has been pro-rated, i.e., flow-proportioned in accordance with CDP's daily flow needs of 304 MGD. Based on this analysis, which is described in Chapter 5 of CDP's Flow, Entrainment and Impingement Minimization Plan, CDP's projected stand-impingement of fishes and invertebrates is estimated to be approximately 3.74 kg/day or approximately 1,363 kg/year when operating in stand-alone mode should EPS ever shut down.

Poseidon's Mitigation Project Will Zero Out the CDP's Estimated Stand-Alone Impingement

As is set forth in the MLMP, Poseidon's mitigation project will restore up to 55.4 acres of estuarine wetlands. The primary/express objective of this project is to mitigate for unavoidable entrainment. In addition to mitigating for entrainment, the mitigation project will provide the incidental benefit of completely offsetting CDP's estimated stand-alone impingement. That is, the MLMP accomplishes two objectives: it mitigates for both entrainment and impingement.

Fish productivity in shallow tidal wetlands is extremely high due to high primary productivity, efficient transfer of energy, and nursery functions that promote rapid growth and provide refugia from predators. The biomass of fishes in estuaries is often among the greatest biomass of higher trophic levels in natural ecosystems in the world (Day et al., 1989).

Allen (1982) conducted a study of fish productivity of the littoral zone of Upper Newport Bay where he calculated fish productivity at 9.35 gDW/m²/yr. The mudflats and tidal channels that Allen sampled in Upper Newport Bay are analogous to the habitat that would be created by Poseidon as mitigation for impacts associated with the CDP. Allen's measurements were conservative in that he did not include mullet, an abundant but difficult to sample species whose large size would have increased biomass estimates; and he reported very low densities of arrow goby, a small but extremely abundant species in many southern California wetlands.

There are few studies of fish productivity in southern California wetlands that are similar to Allen's; however, there are fish density data available from the other southern California systems from the same time period that can be compared to Upper Newport Bay. Nordby and Zedler (1991) sampled

Revised Supplemental Expert Opinion Regarding Biological Productivity of Mitigation
Site(s) Under the Marine Life Mitigation Plan

Mr. Chris Nordby- Nordby Biological Consulting

fishes at Tijuana Estuary and Los Penasquitos Lagoon from 1986 to 1989 and from 1987 to 1989, respectively. Allen sampled monthly while Nordby and Zedler sampled quarterly. Fish densities are compared for summer months when densities are highest (Table 1). While there is considerable variability to from month to month and year to year, the densities of the dominant estuarine fishes in Allen's Newport Bay studies are typical of southern California estuaries. Tijuana Estuary consistently had the highest fish densities. Typified by continuous tidal flushing and shallow, dendritic channels, Tijuana Estuary serves as the model estuarine system to be created by Poseidon compared to Upper Newport Bay. Although density is an indirect indicator of productivity, it is reasonable that systems with similar densities of these species would have similar productivities.

Because the density of fishes sampled in Allen's study was typical of the density of fishes in other southern California coastal wetlands, it is reasonable to assume that his conservative productivity measurement for Upper Newport Bay would be applicable to Poseidon's mitigation. Based on Allen's estimate of approximately 9.35 g/m²/yr, 37 acres of restored coastal wetland habitat would yield approximately 1,400 kg/yr fish biomass; 55.4 acres would yield 2,096 kg/yr fish biomass.

As described above, CDP's operations will result in the impingement of no more than 3.74 kg of organisms per day or 1363 kg per year, so that its mitigation project fully offsets CDP's stand-alone impingement at 37 acres. If 55.4 acres of mitigation wetlands are constructed, the mitigation project will generate significantly more biomass than that impinged.

Literature Cited:

1. Larry Glen Allen, *Seasonal Abundance, Composition and Productivity of the Littoral Fish Assemblage in Upper Newport Bay, California*, 80 Fishery Bulletin 4, 769-90 (1982).
2. John W. Day et al., *Estuarine Ecology* (John Wiley and Sons, Inc.) (1989).
3. C.S. Nordby & J.B. Zedler, *Responses of Fish and Macrobenthic Assemblages to Hydrologic Disturbances in Tijuana Estuary and Los Penasquitos Lagoon, California*, 14 Estuaries 1, 80-93 (1991).