

**DRAFT DETERMINATION TO APPROVE MITIGATION MEASURES
FOR THE WATER QUALITY CONTROL POLICY ON THE USE OF
COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING:**

**DIABLO CANYON NUCLEAR POWER PLANT
OCTOBER 1, 2018 THROUGH SEPTEMBER 30, 2019**

Interim Mitigation Requirements and Determinations

The State Water Resources Control Board's (State Water Board) Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (also known as the Once-Through Cooling or OTC Policy) requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period commenced on October 1, 2015, and continues up to and until owners or operators achieve final compliance with the OTC Policy.

The State Water Board approved Diablo Canyon Nuclear Power Plant's (Diablo Canyon Plant) continued request to comply with the interim mitigation measures described in Section 2.C(3)(b) of the OTC Policy in the Final Determination for the October 1, 2017 to September 30, 2018 interim mitigation period (2017-2018 Final Determination). Consistent with [Resolution No. 2015-0057](#)ⁱ and the recommendations in the [Expert Review Panel's Final Report](#)ⁱⁱ, the interim mitigation payment is comprised of an entrainment payment, an impingement payment, and a management and monitoring payment.

In the sections below, the State Water Board has calculated Diablo Canyon Plant's interim mitigation payment for October 1, 2018, through September 30, 2019 (also known as the 2018-2019 determination period). This calculation is consistent with the methods and calculations applied in the 2017-2018 Final Determination.

Interim Mitigation Payment Calculation for Diablo Canyon Nuclear Power Plant

Entrainment Payment Calculation

In its January 17, 2019 email, Pacific Gas and Electric Company (PG&E) stated that \$3.12 per million gallons (MG) should be the starting point for determining the facility-specific cost of entrainment for Diablo Canyon Plant. However, in the Final Determination for the October 1, 2015 to September 30, 2016 interim mitigation period, the State Water Board approved the facility-specific average adjusted entrainment cost of \$3.88/MG for Diablo Canyon Plant. The \$3.88/MG is an average of entrainment fees calculated from two past entrainment studies (1996 to 1999 and 2008 to 2009) using the habitat production foregone method and adjusted to more accurately reflect current estimates for reef construction costs. Therefore, \$3.88/MG is the starting site-specific entrainment cost for Diablo Canyon Plant for entrainment payment calculations, the first of which was calculated for the October 1, 2015 through September 30, 2016 interim

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mitigation period. For each year going forward from the first interim mitigation period, a three percent escalator is applied as described below to account for inflation.

To calculate the portion of the interim mitigation payment associated with entrainment impacts for October 1, 2018, through September 30, 2019, the State Water Board used the facility-specific cost of entrainment for Diablo Canyon Plant approved in the 2017-2018 Final Determination. Consistent with Resolution No. 2015-0057 and the Expert Review Panel's Final Report, the State Water Board used a three percent escalator to update the facility-specific cost of entrainment from the 2017-2018 Final Determination to 2019 dollars to account for inflation. The resulting entrainment cost for October 1, 2018, through September 30, 2019, increased from \$4.12/MG to \$4.24/MG:

$$(\$4.12/MG \times 0.03) + \$4.12/MG = \$4.24/MG$$

In its January 17, 2019 email, PG&E provided the intake volume for Diablo Canyon Plant for the 2018-2019 determination period of 848,655 MG. The State Water Board verified the intake volume with the data submitted in the National Pollution Discharge Elimination System permit monitoring reports for Diablo Canyon Plant.

To calculate the entrainment payment, the State Water Board multiplied the intake volume by the updated cost of entrainment:

$$\$4.24/MG \times 848,655 MG = \$3,598,297.20$$

Impingement Payment Calculation

In its January 17, 2019 email, PG&E confirmed use of the established annual average of pounds of fish impinged stated in the [Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling - Final Substitute Environmental Document](#)ⁱⁱⁱ for calculating the impingement payment, which is 710 pounds. The State Water Board calculated the impingement payment for Diablo Canyon Plant using 710 pounds of impinged fish multiplied by the average indirect economic value of the fisheries as determined in the Expert Review Panel's Final Report of \$0.80 per pound:

$$\$0.80/pound \times 710 pounds = \$568.00$$

Management and Monitoring Payment Calculation

The State Water Board calculated the management and monitoring payment by taking twenty percent of the sum of the entrainment and impingement payments:

$$0.20 \times (\$3,598,297.20 + \$568.00) = \$719,773.04$$

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State Water Board's Draft Determination for Diablo Canyon Plant

Based on the sum of the entrainment, impingement, and management and monitoring payment calculations, the total payment to fulfill the interim mitigation obligation for PG&E's Diablo Canyon Plant for the interim mitigation period of October 1, 2018, to September 30, 2019, is \$4,318,638.24.

$$\text{\$3,598,297.20} + \text{\$568.00} + \text{\$719,773.04} = \text{\$4,318,638.24}$$

ⁱ State Water Board Resolution No. 2015-0057.

<https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/rs2015_0057.pdf>

ⁱⁱ Final Report from the Expert Review Panel.

<https://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/erp_intake052512.pdf>

ⁱⁱⁱ State Water Resources Control Board, *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling – Final Substitute Environmental Document*, May 4, 2010. Table 3, Page 34.

<https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/cwa316may2010/sed_final.pdf>