

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

**REDONDO BEACH GENERATING STATION
OCTOBER 2016 THROUGH SEPTEMBER 2017**

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 (Once-Through Cooling [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 Redondo Beach Generating Station's request to comply with the interim mitigation measures described in Section 2.C(3)(b) and Section 2.C(3)(e) of the OTC Policy in the Final Determination¹ for the October 1, 2015, to September 30, 2016, interim mitigation period (2015-2016 Final Determination). The 2015-2016 Final Determination also included the interim mitigation payment for the period of October 2015 through September 2016, comprised of an entrainment fee, an impingement fee and a management and monitoring fee, consistent with Resolution No. 2015-0057² and the recommendations in the Expert Review Panel's Final Report³.

The State Water Board calculated Redondo Beach Generating Station's interim mitigation payment for October 1, 2016, through September 30, 2017, consistent with the methods and calculations applied in the 2015-2016 Final Determination.

Interim Mitigation Payment Calculation for Redondo Beach Generation Station

Entrainment Payment Calculation

To calculate the interim mitigation payment to offset entrainment impacts, the State Water Board used the default average cost of entrainment. 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 average cost of entrainment from the 2015-2016 Final Determination to 2017 dollars to account for inflation. The resulting average default entrainment cost for October 2016 through September 2017 increased from \$4.73 per million gallons (MG) to \$4.87/MG:

¹ State Water Board 2015-2016 Final Determination for Redondo Beach Generating Station.

<https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/redondobeach_1516mitigation_letter.pdf>

² State Water Board Resolution No. 2015-0057.

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

³ Final Report from the Expert Review Panel.

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

$$(\$4.73/MG \times 0.03) + \$4.73/MG = \$4.87/MG$$

In their February 8, 2018 letter⁴, AES Southland provided the intake volume for units five through eight from October 2016 through September 2017, totaling 49,306.53 MG. The State Water Board verified intake volume with the data submitted in the National Pollution Discharge Elimination System permit monitoring reports for Redondo Beach Generating Station.

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

$$\$4.87/MG \times 49,306.53 \text{ MG} = \$240,122.80$$

Impingement Payment Calculation

In their February 8, 2018 letter, AES Southland provided an estimate of fish impingement biomass for units five through eight from October 2016 to September 2017, totaling 502.6 pounds. AES Southland calculated its estimate of fish impingement by using the flow for the 2016-2017 mitigation period and an impingement rate that was derived from impingement data collected from October 2016 through September 2017. The State Water Board calculated the impingement payment using the estimated total pounds of fish impinged 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:

$$\$0.80/\text{pound} \times 502.6 \text{ pounds} = \$402.08$$

Management and Monitoring Payment Calculation

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

$$0.20 \times (\$240,122.80 + \$402.08) = \$48,104.98$$

State Water Board's Draft Determination for Redondo Beach Generating Station

Based on the sum of the entrainment, impingement, and management and monitoring payment calculations, the total payment is \$288,629.86 to fulfill the interim mitigation obligation for AES Southland's Redondo Beach Generating Station for the operating period of October 1, 2016, to September 30, 2017.

$$\$240,122.80 + \$402.08 + \$48,104.98 = \$288,629.86$$

⁴ Letter from Weikko Wi, AES Southland, to Karen Larsen, State Water Board on February 8, 2018.
<https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/redondo_beach/docs/redondo_1617inforequest_resp.pdf>