























Once-Through Cooling (OTC) Policy

- May 4, 2010 State Water Board adopted Water
 Quality Control Policy on the Use of Coastal and
 Estuarine Water for Power Plant Cooling (OTC Policy)
 - Implements federal Clean Water Act Section 316(b)

























OTC Policy

- Intent
 - Protect beneficial uses of State's coastal and estuarine waters
 - Ensure State's electrical power needs are met
- 13 existing power plants still withdraw coastal and estuarine waters for cooling purposes using OTC single-pass system

























Interim Mitigation Requirements

- Owners or operators of existing power plants shall implement measures to mitigate interim impingement and entrainment impacts resulting from cooling water intake structures
- Begin October 1, 2015 and continue up to and until final compliance is achieved

























- Demonstrate compensation for interim impingement and entrainment impacts through existing efforts
- Provide funding to Coastal Conservancy, which will work with Ocean Protection Council, to apply funds to appropriate mitigation project
- Develop and implement mitigation project for facility to compensate for interim impingement and entrainment impacts























Proposed Resolution

- Delegate authority to Executive Director to approve mitigation measures on case-by-case basis
 - All three options for compliance include components that would vary by facility → would need to approve mitigation on individual basis



























- **Public Notice**
 - June 12, 2015: Notice of Opportunity to Comment and Notice of Public Meeting and Consideration of Adoption
 - Comments due by noon on July 13, 2015
- Majority of written comments pertain to fee-based approach to interim mitigation

























- CalDesal
 - Use OTC fee-based interim mitigation approach for Desalination Amendment mitigation requirements.
 - OTC mitigation fee calculations are based on expert review panel work conducted jointly for OTC Policy and Desal Amendment, but critical differences in purpose and type of mitigation preclude a single approach to both.























- General public
 - Do not approve proposed resolution if this would result in no consideration being given to opinions of members of State Water Board.
 - Executive Director would continue to work in close consultation with Board Members.
 Proposed resolution does not preclude Board Members' ability to voice concerns with Executive Director.























- Non-governmental organizations
 - Request that all OTC power plants submit past and present data and future projections of intake volume and velocity.
 - Not necessary. Intake volume already reported to Board, stored in CIWIQS and is available to public. Calculation for cost of impingement does not require velocity input value.























- Non-governmental organizations
 - Clarify that average entrainment fee included in the Information Sheet is only an example to illustrate the calculation for cost of entrainment.
 - Average cost of entrainment in Information Sheet (\$5.17 per million gallons) is incorrect and should be \$4.60 per million gallons. This average would serve as default method for calculating entrainment fee, unless power plant has suitable entrainment data available to calculate habitat production foregone (HPF) and entrainment fee.
 - Using average cost of entrainment still will require site-specific information (e.g. flow rate, impingement amount, etc.) for calculation of final interim mitigation fees.























- Non-governmental organizations
 - Recalculate the average cost of entrainment using a 95 percent confidence level.
 - Use of 95 percent confidence level in Desalination Amendment was policy decision to provide greater certainty that mitigation by desalination facilities would meet more specific and detailed requirements of Desalination Amendment.
 - Recalculating HPF estimates for average entrainment cost and reconvening expert review panel would delay determination until after October 1, 2015 deadline.
 - However, a 95 percent confidence level may be applied in cases where Executive Director decides that it would be more appropriate to use available entrainment data to calculate plant's HPF and entrainment fee.























- Non-governmental organizations
 - Provide guidance for assessing existing or future mitigation projects.
 - OTC Policy includes sufficient guidance for assessing future and existing mitigation projects.
 - Allow public comment on individual determinations approving power plants' interim mitigation efforts.
 - Proposed Resolution has been modified to include opportunity for public comment.























- Los Angeles Department of Water and Power
 - Decrease management and monitoring fee in OTC interim mitigation fee calculation.
 - Management and monitoring fee is based on expert review panel guidance and has been discussed with Coastal Conservancy. Twenty percent is reasonable amount to ensure sufficient funding, particularly given that specific mitigation projects have not yet been identified.
 - Use greater value for estimated life span of mitigation project.
 - Thirty years was used for estimated life of mitigation project in recognition that fees will be collected only during interim mitigation period and shorter timeframe is appropriate to ensure adequate funding.

OTC interim mitigation delegation























- Los Angeles Department of Water and Power
 - Remove indirect economic value from impingement fee calculation.
 - HPF method used in calculation of entrainment cost accounts for both direct effects to entrained species and indirect effects to associated species. Since calculation for impingement cost does not already account for indirect effects, incorporation of the indirect economic value is necessary.























- Los Angeles Department of Water and Power
 - Incorporate discounting into OTC interim mitigation fee calculation.
 - Calculation that ERP II developed for interim mitigation fee did not include discounting. There continues to be debate regarding how discounting can be appropriately applied to mitigation projects in the State. Therefore, it is not recommended to incorporate discounting into interim mitigation fee.
 - Employ resource economist to determine fee-based approach for OTC interim mitigation.
 - Staff does not object to the proposal, but it is not feasible at this point due to the impending start of interim mitigation for the OTC Policy.





Thank You







Kim Tenggardjaja, Ph.D.





kimberly.tenggardjaja@waterboards.ca.gov











