



## Section 316(b) Benefits Valuation Study



The §316(b) Rule requires facilities withdrawing >125 MGD of cooling water submit a Benefits Valuation Study (40 C.F.R. 122.21(r) (11)). This study evaluates the biologic and economic benefits of entrainment technologies and operational measures. Each category of benefits is described narratively, and when possible, quantified in physical or biological units and monetized using economic valuation methods. A Benefits Valuation Study typically includes a discussion of:

- Incremental changes in fish and shellfish loss due to impingement and entrainment.
- Basis for estimates of changes to stock sizes or harvest levels of commercial and recreational species.
- Basis for monetized values assigned to changes and to any other ecosystem or non-use benefits.
- Mitigation efforts completed prior to October 14, 2014.
- Benefits expected from reductions in thermal discharges from entrainment technologies.
- Other benefits expected to accrue.

### What ASA can do for you?

**ASA** is recognized as a national leader in Benefits Valuation Studies having completed more than 60 throughout the US and Canada. Our approach to these studies has been confirmed as consistent with the methods used by USEPA in the 2014 Rulemaking efforts. Our national experience and involvement authoring multiple technical support documents on the Rule for industry groups such as EPRI provides our clients with:

- An excellent reputation with federal and state representatives.
- Focused evaluation of facility-specific needs and data to support alternatives selection.
- Benefits valuation methods that have been accepted by USEPA.
- Partnerships with engineering firms, economic consultants and research organizations enabling ASA to apply the best experience and deliver effective solutions.

**ASA** delivers key services to help our clients operate and maintain their facilities in full compliance with applicable regulatory requirements under the Rule. **ASA's** experienced scientists can help you navigate the benefits valuation process with an integrated, cost-effective approach tailored to your facility's unique needs.



# Service Areas and Experience

## FEATURES

- Over 40 years of experience providing §316(b) compliance services.
- Senior staff are leading experts for the power and utility industry.
- Strategic compliance and research support to the Electric Power Research Institute (EPRI), power, utility and industrial clients on the §316(b) Rule.

## BENEFITS

- Extensive knowledge of facilities affected by the Rule and insight to frame tailored and successful compliance strategies.
- Access to the best-qualified staff serving the industry and organizations such as EPRI.
- In-house specialty capabilities to perform required monitoring, develop BTA controls, and reporting.
- Proactive, science-based solutions built in cooperation with our clients regardless of project or staff location.

## BTA Evaluation

- Conducted biological evaluations of intake alternatives at more than 40 facilities nationwide.
- Developed state-of-the-art techniques to calculate entrainment mortality reductions associated with flow reductions and fine mesh screening.

## Benefits Valuation Approach

- Calculated biological and economic benefits using accepted EPA approach.
- Conducted benefits valuations for more than 30 fish and shellfish species in fresh, estuarine and marine waters.
- Developed rigorous QA procedures to ensure agency and peer reviewer acceptance.
- Performed quantitative uncertainty analysis to add rigor to the benefits estimates.
- Authored benefits valuation technical support documents for EPRI.

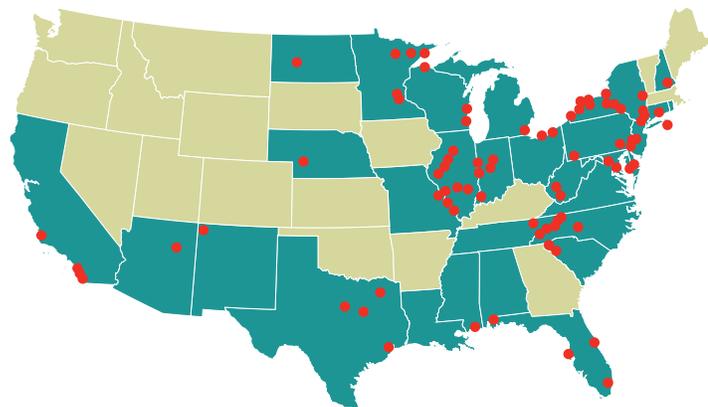
## Agency Consultation

- Successfully negotiated NPDES permit control measures and monitoring requirements.
- Conducted pre-application meetings and consultations with the USFWS and NMFS.

## Data Management and Analysis

- Developed and managed a large-scale biological monitoring databases.
- Developed statistical modeling techniques to analyze entrainment and impingement survival data.

**ASA has delivered successful solutions for over 100 facilities throughout the United States**



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