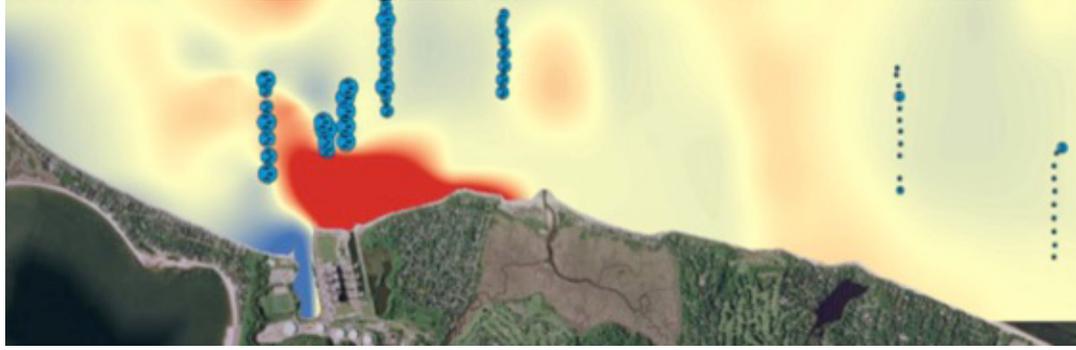




Section 316(a) Thermal Discharge Compliance Services



Thermal Discharge Compliance

Under the Clean Water Act, temperature is a pollutant regulated as part of the NPDES program. Recognizing the unique qualities of temperature, Congress included §316(a) that allows a variance from applicable thermal criteria if balanced indigenous populations of aquatic organisms are maintained in the receiving water body. To receive a variance, an applicant must submit a §316(a) Demonstration that likely includes:

- Field studies to map temperature exposures within the receiving water body and potential effects on the aquatic ecosystem.
- Selection of Representative and Important Species (RIS).
- Interdisciplinary evaluations of biological, engineering, and other data.

In recent years, state and federal regulatory agencies have begun to take a much closer look at thermal discharge issues because of:

- Increased ambient temperatures due to global warming.
- Changing weather patterns resulting in more frequent droughts and low water conditions.
- Finalization of the §316(b) Rule which requires consideration of thermal effects of cooling water discharges.
- Concerns about effects of temperature discharges on Threatened and Endangered Species.

What ASA can do for you?

ASA is a national leader in assessing aquatic systems and has a team of aquatic biologists and compliance experts with specialized experience in the design and implementation of §316(a) thermal impact studies. We have multiple senior level scientists with §316(a) experience who can:

- Evaluate your facility-specific §316(a) requirements.
- Develop a cost-effective, technically defensible compliance approach.
- Maximize the use of available data and apply state-of-the-art modeling tools.
- Design the necessary hydrothermal and biothermal studies.
- Successfully negotiate study parameters and permit terms with federal and state regulators.

ASA has helped address §316(a) issues at over 30 facilities nationwide. **ASA's** excellent reputation with many federal and state agency representatives, coupled with our significant experience and success with all facets of §316(a) and (b) of the Clean Water Act, allows us to provide effective solutions that balance our client's operational objectives with regulatory requirements.



Service Areas and Experience

FEATURES

- Over 40 years of experience providing §316(a) and (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 §316(a) and (b) 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.

Study Design

- Developed sampling plans for biological monitoring studies at more than 50 facilities.
- Evaluated decision-making criteria leading to comprehensive study plans.
- Applied EPA's well-established Ecological Risk Assessment Framework to the task of evaluating potential thermal effects.
- Employed multi-metric biotic indices to assess community structure and function and plan field studies.

Agency Consultation

- Negotiated biological monitoring requirements with state and federal agencies.

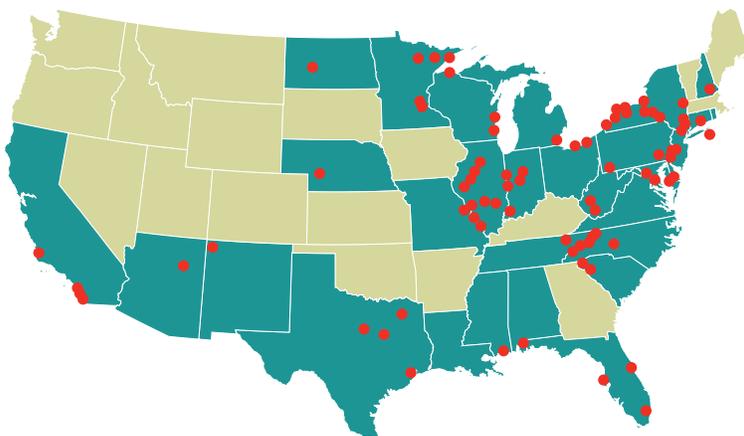
Biological Monitoring

- Completed monitoring at more than 30 facilities.
- Performed biothermal studies at more than 25 facilities.
- Executed BTA alternative performance studies at more than 25 facilities

Data Management and Analysis

- Conducted state-of-the-art statistical modeling techniques to analyze entrainment and impingement survival data.
- Used thermal tolerance data, field sampling, and modeling results to determine protective thermal criteria.

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



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