



Call for Change – Addressing Climate Change

Association of State and Interstate Water Pollution Control Administrators (ASIWPCA)
1221 Connecticut Avenue, NW Washington, DC 20036 www.asiwPCA.org

For further information contact:
Linda Eichmiller, 202-756-0600

The Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) has developed a set of recommendations believed necessary to maintain and continue to improve the water quality in the United States. This "Call for Change: Water Quality Improvement in the 21st Century" is an invitation to the Federal government to reestablish an effective partnership and forge a new course of action to protect and improve the nation's water resources. ASIWPCA looks forward to an on-going constructive dialogue with the US Environmental Protection Agency (EPA), the incoming Administration, and interested stakeholders to meet this challenge.

General Overview and Background:

Climate change will have a profound impact on water systems. Water supply, water quality, in stream flow, flood hazard areas and riverine corridors, estuaries, and aquatic communities will be affected. While the States and Interstate organizations are already working on many of these issues, climate change will accentuate the extremes. The nation can expect changing precipitation patterns, rising temperatures, sea level rise, diminishing snow packs, and changing vegetation patterns. While some areas of the country will receive less rain, others will receive slightly more, likely in the form of intense storms. All areas have an increased potential for extended periods of drought. It will be difficult to develop strategies to address these changes due to uncertainty factors (lack of stationarity). States and Interstate Agencies will work together, learn from each other and have a strong role as a national direction is established. The challenges are intensified because the 1972 Clean Water Act is not well suited to address impacts of climate change.

Reason for Change:

Water is the medium under greatest threat from climate change.

Uncertainty: There is a high level of uncertainty associated with climate change projections. Water resource models using historic record (e.g. drought of record, flood of record) will no longer be adequate predictive tools. How much will the systems change and how fast? What infrastructure changes are required in order to be prepared? Can critical ecological communities be protected?

Water Demand – Energy Production: Many of the modes of energy production currently gaining favor due to the need for reductions in CO₂ require large quantities of water – e.g. - nuclear power cooling towers, biofuels, and natural gas shale fracking. Changes in energy generation may also cause increased degradation to water quality and aquatic habitat. States and EPA need more adequate information so gains in CO₂ reduction are not negated by irrevocable impacts to water systems. Conversely, more information is needed on the energy efficiency of water treatment technologies.



Multi-media Impacts: Currently air pollution and waste disposal are managed under separate enabling laws that do not adequately address impacts to waterways from air deposition and runoff/leachate from hazardous waste sites. These impacts to water quality and fisheries will potentially be intensified due to climate change. States and EPA should look holistically at managing natural systems.

Issues to be addressed in States include:

- Monitoring and modeling to recognize changes in water quality and quantity dynamics due to climate change.
- Understanding:
 - Localized impacts including sea level rise and storm surge inundation, and the impacts to wetlands and coastal/estuary communities and
 - How changes to terrestrial systems (seasonality, changing forest species, invasive species, and increased fires) will impact water systems.
- Preserving natural areas as ecological reference areas.
- Preparing for:
 - Extended droughts and impacts to water supply and water quality and
 - More frequent, intense storm events.
- Mapping expanding flood hazard areas.
- Protecting and/or redesigning vulnerable infrastructure.
- Protecting vulnerable ecological communities.
- Adapting to deteriorating water quality – temperature, dissolved oxygen, suspended sediments, etc.
- Creating program flexibility and providing adequate funding to facilitate responsiveness.

Recommendations:

- ASIWPCA should play a lead role in developing a national water strategy to address changes due to climate change by:
 - Working with other water and environment NGOs to build focus on the climate change impacts to water systems,
 - Coordinating with State and Federal agencies,
 - Holding technical workshops on flow and quality modeling, uncertainty factors, downscaling of climate models, etc., and
 - Sharing approaches among the States.
- Federal agencies need to coordinate their activities and provide the technical tools to help States adapt to and mitigate the effects of climate change.
- States and Federal agencies should proactively:



- Anticipate and deal with regulatory gaps and legal barriers so that States can undertake necessary adaptation measures to protect water resources.
- Improve the predictive science and increase monitoring at a State, Regional and Local scale.
- Seek the increased resources needed by the resource agencies (EPA, USGS, NOAA, USF&W, USDA, NASA) and the States to address climate change issues.
- ASIWPCA and EPA should be engaged:
 - As new and expanding forms of energy generation are considered to ensure that positive gains in CO₂ reduction are not negated by significant impacts on water systems and
 - To ensure adequate protection of the nation's water resources as new comprehensive multi-media laws are developed.

NOTE: *Throughout this document reference to States also refers to Interstate Water Pollution Control Agencies.*

For more information on ASIWPCA's Call for Change, go to www.asiwpca.org