

**COMING TOGETHER FOR CLEAN WATER:
EPA's STRATEGY FOR ACHIEVING CLEAN WATER
Public Discussion Draft – August 2010**

On April 15, 2010, Environmental Protection Agency (EPA) Administrator Lisa P. Jackson brought together a diverse group of individuals to discuss and explore opportunities for reinvigorating EPA's approaches to achieving clean water in America. At this forum, *The Coming Together for Clean Water*, Administrator Jackson stated her desire "to see a huge leap forward in water quality as we saw in the 1970s after the passage of the Clean Water Act." The forum was one of many drivers for this strategy which charts EPA's path to achieve that leap forward in our nation's water quality and outlines a sustainable approach to meet our economic needs and improve the quality of the nation's water for generations to come.

EPA's approach focuses around our two thematic lines: 1) healthy watersheds, and 2) sustainable communities – both critical Administration and EPA priorities. It relies on the concepts and ideas generated at the Coming Together for Clean Water forum and also incorporates the bold new approaches identified from the October 2009 *Clean Water Action Plan*, which initiated efforts to revamp the National Pollutant Discharge Elimination System (NPDES) compliance and enforcement program.

CLEAN WATER CHALLENGES

The Clean Water Act (CWA) set a vision for all the waters of the United States to be fishable and swimmable. While we have certainly made progress toward that vision since 1972, we face challenges in attaining it completely; legacy pollution problems and new sources and contaminants are compounded by factors such as population growth, continued urbanization, and the effects of climate change.

In 1972 when the CWA was enacted, traditional point sources were the dominant cause of pollution. Much of the progress made over the last 30 to 40 years has come by addressing those problems through broad, consistent implementation of national programs for municipal and industrial point sources, developing effluent guidelines, and significant federal, state, and local investments in water infrastructure. Despite our best efforts and many local successes, our aquatic ecosystems are declining nationwide¹. The rate at which new waters are being listed for water quality impairments exceeds the pace at which restored waters are removed from the list.

Over the last 30 years, stressors have shifted, as demonstrated by EPA's National Aquatic Resource Surveys. These recent surveys found that nutrient pollution, excess sedimentation, and degradation of shoreline vegetation affect upwards of 50 percent of our lakes and streams. In addition, recent National Water Quality Inventories have documented pathogens as a leading cause of river and stream impairments. Sources of these stressors vary regionally, but the main national sources of water degradation are: agriculture, stormwater runoff, habitat, hydrology and landscape modifications, municipal wastewater, and air deposition. EPA's strategy must now meet these shifting needs and priorities.

¹ This trend has been documented by The Heinz Center (State of the Nation's Ecosystems, 2008), American Fisheries Society, and the EPA Wadeable Streams Assessment (2006).

Our waters face other challenges as well, loss of habitat and habitat fragmentation, hydrologic alteration, the spread of invasive species, and climate change are impacting aquatic ecosystems. This degradation not only impacts surface waters, it can also threaten our drinking water supplies. For example, increased nutrient pollution can decrease drinking water quality, increase drinking water treatment costs, and can generate disinfection byproducts that can threaten human health and ecosystems. Moreover, pollutants have been detected in virtually all tested stream water and streambed sediment and about three-quarters of groundwater wells and human health benchmarks were exceeded in one-fifth of all stream samples and one-third of all groundwater wells. In sufficient quantities, pollutants can create ecological and human health problems, affecting the safety of the fish we eat, the water we drink or swim in, and even the land we live on.² Impacts on human health are amplified in disadvantaged communities that heavily rely on local waters for subsistence fishing, bathing, consumption, and recreation.

The need for a revitalized approach has long been acknowledged. The nationally significant sources of pollution are more diverse than ever, and we know that there is no single approach to address them. Challenges are compounded by fiscal pressure on states, dwindling resources, and the demands of economic growth and climate adaptation and require a more pragmatic and systematic approach that will address the most critical water quality problems and effectively deliver measurable results. This proposed strategy outlines EPA's plans to address the most critical stressors, sources, and threats. It will build on EPA's core programs and emphasize implementation of both existing and new tools and approaches in an effort to catalyze a leap forward in water quality improvement nationally.

This strategy is by no means the end of the discussion; it is the beginning of a more meaningful conversation with our partners and the first step together on a new path towards more sustainable and healthy waterbodies, watersheds and communities.

A NEW PATH TO CLEAN WATER

The vision outlined in the CWA—fishable, swimmable waters—has not changed. In fact, this strategy is about how we can achieve a leap forward in our nation's water quality to move us closer to realizing this vision.

From several decades of strong, science-based research, we know the primary causes and sources of impairments to our waters. Now, in cooperation with tribal, state, and local partners, we can attack these problems with a set of targeted actions designed to address these main stressors in the full range of waterbodies. This will require us to build on the strong foundation of existing clean water programs; as well we must identify and implement new opportunities under current authorities. Most importantly, it will require us to “come together for clean water.”

There is no silver bullet – no single program or regulation will allow us to accomplish our goal. Carrying out all of these principles is where the true “coming together” must happen to address the primary stressors from multiple angles: smarter regulations, stronger partnerships, more balanced

² U.S. Geological Survey, National Water Quality Assessment Program, referenced in *The State of the Nation's Ecosystems 2008*, The Heinz Center.

and coordinated compliance and enforcement, more integrated approaches to capitalize on synergies, improved communication with a broader audience, and greater leveraging of programs. Just as EPA will have to employ all of its tools, so too must all our partners—state, local, tribal, and federal—play their roles.

EPA must improve and adapt regulations, permitting and compliance/enforcement efforts as a key first step to change our current path. EPA will also work to greatly increase cooperation, partnerships and communication to achieve victories in areas where regulatory approaches are not appropriate. We will support legislation and consider administrative action to restore the CWA protections to wetlands and headwater streams that provide clean water for human and ecological uses. We will take action to ensure all major point sources of pollution have permits that require clear, verifiable results. And by implementing new enforcement approaches per the *Clean Water Action Plan*, including more integrated problem solving, collaboration across standards setting, permitting and enforcement programs, EPA will bring violators into compliance.

Another key element of this strategy is improvement of assessment and classification of waters. And building on this, EPA will increase cooperation with states to identify and protect those waters that are healthy; a far more cost effective approach than cleaning up a waterbody after it has been polluted. EPA also seeks to find ways to better integrate new technologies and approaches into our clean water programs. For example, green infrastructure provides an important set of tools for changing the way stormwater discharges are viewed—from being treated as a waste product that comes with high-cost infrastructure systems – to realizing and using it as a valued resource. Green infrastructure can also have positive effects on sanitary sewer overflows and combined sewer overflows, which are major urban water concerns. EPA will also explore opportunities to better integrate other sustainable practices into our policies and programs; for instance: energy-neutral wastewater treatment, water efficiency, energy efficiency, and water reuse.

EPA will seek solutions and implement programs to address recent, emerging, and growing threats to water quality including increased mining activities, drilling, aging infrastructure and increased urbanization and development. Invasive species are also a significant threat to aquatic ecosystems. Using both regulatory and non-regulatory programs, EPA is taking meaningful steps to reduce the likelihood that invasive species are able to spread from one waterbody to another. Additionally, as excess nutrient pollution continues to be a major concern, EPA sees a better means to addressing this problem on the critical path to success. EPA will work in partnership with states to better manage excess nutrient enrichment in surface waters and promote state accountability frameworks that include publicly-available, science-based, state nutrient reduction implementation activities that are watershed-based and have locally-binding mechanisms to achieve the reductions.

STRATEGIES TO ACHIEVE CLEAN WATER GOALS

This strategy’s success depends on many factors working together. Local governments, states, and tribes must join us, each working under their own authorities and capacities, to ensure waters in their jurisdiction are clean. It is up to EPA to bring these groups together to more smoothly coordinate and harmonize our efforts in order to optimize the results.

EPA has identified several key strategies to guide our efforts, and actions that respond to the challenges we face:

- Systematically assess the nation’s waters to provide a baseline for transparently tracking progress;
- Increase focus on protection of healthy waters;
- Enhance EPA’s ability to restore degraded waters, restore ecosystems, and take action to increase the number of restored waterbodies;
- Reduce pollution entering our waters; and
- Enhance watershed resiliency and revitalize communities through multi-benefit, sustainable technologies and approaches that will ensure resiliency to increased threats associated with climate change, development, urbanization and other factors.

KEY ACTIONS FOR STRENGTHENING WATER PROTECTIONS

By approaching the most significant clean water challenges facing the nation from a more holistic perspective and using resources creatively, we will undertake a range of actions to implement these strategies to get a better understanding of the state of our nation’s waters, work to protect what we’ve got, fix what’s broken, expand our work to keep waters clean, and build for the future while ensuring we are meeting our economic and community needs. In doing so, EPA will expand existing partnerships and develop new, locally-based partnerships, and implement tools and policies that will foster tailored approaches. In addition to strengthening and expanding partnerships, to achieve the next level of protection, we will work within EPA and outside EPA to strategically leverage funding opportunities to reduce pollution from unregulated sources.

In implementing these actions, EPA remains committed to the following principles:

- Use bold, new, creative, more effective ways to implement CWA and other programs, more strategically deploy existing regulatory authorities and enforcement programs, as well as voluntary approaches and market-based incentives;
- Rely on robust science and cutting-edge technologies, particularly in emerging areas of concern such as climate adaptation, ecosystem services, integrated watershed approaches, and emerging pollutants of concern;
- Increase focus on improving environmental quality in disadvantaged communities that have historically suffered severe degradation of water quality and habitats that provide key ecosystem services;
- Engage a broader range of stakeholders in decision-making and provide the public and other stakeholders with reliable information about their waters and the pollution impacting their waters; and
- Achieve and document measurable results.

Know What You’ve Got – Systematically Assess the Nation’s Waters to Provide a Baseline for Progress

Effective management of water resources requires reliable information and an informed public. To better inform our efforts, improve accountability, policy, planning, increase stewardship, and better measure progress of ongoing efforts to improve the quality of data in the long-term; EPA will focus on systematically assessing the nation’s waters. The National Aquatic Resource Surveys for streams, lakes and coastal waters already provide the baseline for the condition of waters across the

nation against which we can track changes in water condition at the national and regional scales. In the next several years, EPA will complete the first set of five Aquatic Resource Surveys that will give us a complete picture of the condition of all waterbody types across the nation. EPA, working with our partners, will also explore opportunities to build on existing monitoring and assessment efforts to better identify, classify, and track the status of our waters. This multi-scaled approach to monitoring and assessment will give policy makers the information they need to make informed decisions about how best to manage water resources and help the public understand the effectiveness of federal and state investments in clean water.

Key EPA Actions:

- Complete cycle of National Aquatic Resource Surveys to provide baseline for documenting trends in degradation and major stressors in the next several years,
- Complement existing impaired waters listings with identification of healthy watersheds across the U.S.; and
- Explore opportunities for increasing strategic information attained from and integrity of the Integrated Water Quality Monitoring and Assessment Reports to provide a more comprehensive picture.

Protect What You Have – Increased Focus on Protection of Healthy Waters

EPA's water quality protection program has long focused on the remediation of impaired waterbodies and the reduction of specific pollutant levels in waterbodies. While EPA and our state partners have made and are continuing to make considerable progress in this important work, we recognize the need to protect and maintain healthy waterbodies as well. Healthy watersheds provide our communities with drinking water, recreational opportunities, environmental benefits and services, including clean water for healthy aquatic ecosystems, habitat for fish and wildlife, and better resilience against storms and floods, climate change and future land-use changes. Protecting healthy watersheds will result in considerable savings over time if the need for costly restoration can be avoided in watersheds that would otherwise become impaired by cumulative impacts of multiple stressors.

EPA will utilize a range of tools to ensure that healthy waters are sufficiently protected and to prevent further pollution of lakes, rivers and streams. EPA will explore, develop, and make available more effective tools to conduct ecological assessments, to classify and list healthy watersheds. By developing, along with our state partners, a science-based structure on a national level, EPA hopes to provide the tools to help them inventory and then take action to protect their healthy waters. EPA will also enhance public awareness and, together with better equipped and organized State action, will ultimately lead to increased protection of their ecological assets.

EPA will utilize CWA tools to increase protection of high quality waters, including revisions to water quality standards to strengthen antidegradation provisions, and focus on protecting those waters that are threatened by coal and hard rock mining activities.

Key EPA Actions:

- Through the new Healthy Watershed Initiative, develop a common set of comprehensive metrics to create a national list of healthy watersheds (e.g., linking watershed protection and species diversity); use the latest state-of-the-science, peer-reviewed methods to conduct

- assessments to identify healthy watersheds across states using CWA funds (e.g., 604(b), 319, and 106) in partnership with other Federal agencies. With these assessments, help set States set priorities and implement protection and conservation programs;
- Support legislation and consider administrative action to restore the CWA protections for our waters and the ecological systems;
 - Use the full suite of CWA tools to protect high-quality streams from destruction and degradation caused by mining activities;
 - Propose changes to the federal water quality standard regulations that would clarify and strengthen antidegradation regulations to protect high-quality waters; and
 - Ensure States are – and, where EPA has permitting authority, EPA is – applying antidegradation effectively in NPDES permitting programs.

Fix What's Broken – Enhance EPA's Ability to Restore Degraded Waters, Restore Ecosystems, and Take Action to Increase the Number of Restored Waterbodies

The restoration of impaired water bodies will also be critical to making significant progress in clean water. In order to do so EPA will use the Chesapeake Bay as a demonstration for strengthening total maximum daily load (TMDL) pollution reduction plans and improved monitoring of restoration progress. Success in cleaning up the Chesapeake Bay watershed will be a model for watershed protection in other parts of the country. This combined approach of protecting healthy watersheds and restoring impaired waters will ultimately improve the overall state of our nation's waters.

Key EPA Actions

- Work with states to carry out more strategic and effective implementation of TMDL pollution reduction plans and watershed-based nonpoint source plans;
- Develop and implement reasonable assurance guidelines regarding non-point source reductions identified in TMDLs;
- Coordinate funding opportunities with USDA to accelerate nutrient and sediment reductions and tackle key agriculture challenges through an integrated approach using 319 Program, Clean Water State Revolving Fund (CWSRF), CWA section 117, STAR grants and USDA Conservation programs;
- Use trading offsets and other market-based tools where appropriate, to improve cost-effective clean up of impaired watersheds;
- Implement all of the above actions in conjunction with states in the Chesapeake Bay watershed and other federal agencies to execute the President's Executive Order to clean up the Chesapeake Bay. In addition, in the Chesapeake Bay watershed, EPA will:
 - Implement federal land management practices that protect forests and wetlands, and incorporate sustainable practices;
 - Create a system for tracking and reporting for TMDL pollution reduction commitments and two-year milestone commitments;
 - Implement current regulations for concentrated animal feeding operations (CAFOs) and propose new regulations to more effectively achieve pollutant reductions necessary to meet the Chesapeake Bay TMDL; and
 - Implement improvements to the current stormwater program and initiate new national stormwater rulemaking with Chesapeake Bay watershed provisions.

Keep it Clean – Reduce Pollution Entering Our Waters

EPA seeks to increase protection of our waters from pollution by reducing current loadings and preparing for substantial predicted increases associated with development, urbanization, climate change and other factors. Across the board, under the CWA, EPA will more fully utilize regulatory tools and enforcement to address a number of water quality challenges. Where problems are identified, EPA seeks to apply the best cost-effective standards available, eliminate loopholes, increase the regulatory universe, and set performance standards through robust modifications to current regulations.

For example, in addition to the work underway in Chesapeake Bay as part of the President's recent Executive Order, EPA will use its authority robustly to protect and restore threatened natural treasures such as the Great Lakes and the Gulf of Mexico. EPA is heading up a multi-agency effort to restore and protect the Great Lakes, one of America's great waters, through the Great Lakes Restoration Initiative. In other parts of the nation, we will focus on nutrient pollution, which threatens the long-term health of important ecosystems such as the Mississippi River Basin. Further, given the environmental catastrophe resulting from the Deepwater BP oil spill, EPA will take all necessary actions to support efforts to clean up and restore the Gulf of Mexico ecosystem.

Key EPA Actions:

- Strengthen the National Pollutant Discharge Elimination System (NPDES) to significantly reduce pollution entering our waters; for instance, propose a national rule which will streamline the regulatory authority to designate an animal feeding operating (AFO) as a concentrated animal feeding operation (CAFO);
- Develop requirements for publicly owned treatment works (POTWs) to protect the public and the environment from the harmful effects of sanitary sewer overflows and the release of partially treated wastewater from treatment facilities. Potential regulatory approaches include additional reporting and public notice when overflows occur, increased responsibilities for properly operating and maintaining sewer systems, clarifying the requirements for satellite collection systems, and addressing peak wet weather flows at the treatment plant. EPA will also explore more widespread use of green infrastructure techniques in combined sewer overflow control plans;
- Expand municipal stormwater permitting coverage to currently unregulated areas and establish performance standards for stormwater discharges from newly developed and redeveloped sites that result in reduced discharge of pollutants, including through the use of green infrastructure techniques;
- Develop NPDES permit requirements to reduce pesticide discharges to waters of the U.S.;
- Audit point source programs (CAFOs, stormwater, water quality based permits) that have significant nutrient reduction potential to assure full CWA tools implementation;
- Evaluate implications of study currently underway within EPA's Office of Research and Development on the relationship between hydraulic fracturing and water resources for taking further action to protect water quality;
- Develop regulations to save trillions of aquatic organisms per year that would otherwise be withdrawn by cooling water intakes at over 1200 power plants and manufacturing facilities; and
- Work in partnership with states to better manage excess nutrient enrichment in surface waters, including:

- Initiating scientific report(s) based on best available science and subject to peer review to determine necessary nutrient loads to restore and maintain water quality in key areas;
- Developing and implementing guidance to assist permitting authorities in establishing protective limits for point sources based on narrative water quality standards for nutrients;
- Improving public understanding of the seriousness of nutrient pollution including impacts on drinking water and other public health, environmental impacts, and economics; and
- Leveraging federal funding to assist communities in implementing targeted nutrient reduction strategies.

Build for the Future – Enhance Watershed Resiliency and Revitalize Communities

In order to maximize clean water protection under current authorities, EPA is making a substantial shift in our programmatic approaches to identify and implement multi-benefit solutions that will help communities plan and be more responsive to changing factors such as population growth, increased urbanization and climate change. A more holistic and systemic approach will facilitate capitalizing on existing programs, tools, policies and available funding to achieve measurable results. A collaborative approach to community-based programs – within as well as beyond EPA – will achieve multiple objectives, break down traditionally stovepipe divisions, and broadly engage local communities in decisions that impact local and state waters. For example, capitalizing on green infrastructure, water/energy synergies and integrated water management are key features in this new approach.

EPA will develop and implement a renewed strategy on green infrastructure to identify and target the next set of actions that need to be undertaken to promote and support green infrastructure practices. EPA will also develop a framework for encouraging and facilitating more integrated water management approaches at the state and local level, and will support solutions that reduce infrastructure costs and promote more efficient, regionally coordinated resource use. These more integrated solutions, ultimately, lead to long-term sustainability, community buy-in, better water quality, and more robust ecosystem services.

Key EPA Actions:

- Promote green infrastructure more broadly. Consider policy options to make green infrastructure solutions an available tool for meeting CWA requirements by: ensuring that MS4 permits include cost-effective green infrastructure approaches, including green infrastructure in CSO long-term control plans, considering the incorporation of non-traditional or green infrastructure alternatives in enforcement orders/consent decrees, and other policies to increase adoption of green infrastructure practices;
- Encourage integrated water management approaches. Implement policies and help direct national attention toward more sustainable water management practices that better integrate traditionally siloed areas such as: water quantity, quality, energy requirements, carbon emissions, development and land use at the watershed/aquifer level. Building on synergies within the water sector, integrated approaches can allow communities to more sustainably manage water infrastructure and supply costs and investments and adapt to climate change,

- as well as potentially reduce overall energy consumption, and both utilize renewable energy and/or create new energy sources;
- Encourage states to use their Clean Water State Revolving Funds (CWSRF) for projects that will best advance these policies and are consistent with EPA's sustainability policy. Additionally, EPA will continue to work with States to ensure that all CWSRF programs meet the mandated requirement to use at least 20% of FY 2010 appropriated funds for green projects such as green stormwater infrastructure, water efficiency projects, energy efficiency projects, and other innovative environmental projects;
- Develop policies that will facilitate greater collaboration and accelerate the commercialization of cutting-edge technologies that help deliver clean water such as energy self-sufficient wastewater treatment;
- Develop comprehensive approaches, including all of the above actions, to help transform previously degraded urban waters into community assets by:
 - Linking environmental programs with existing priorities such as economic development;
 - Adding environmental components to economic programs in pilot areas
 - Facilitating water clean-up efforts; and
- Work to ensure the overall sustainability and climate resiliency of drinking water and wastewater utilities by better incorporating adaptation and mitigation strategies and other cost-efficient infrastructure practices into planning and operations.

CONCLUSION

Without clean water, no part of a community—its ecology, its economy, its health—can thrive. It is at the core of our communities and is crucial to the vitality of our rural areas. Realizing this imperative for clean water in every waterbody in our nation will require the balanced, organized, and thoughtful effort and collaboration of all levels of government. We will make the most of all of the resources, authorities and programs available to us.

The only way to bring the Clean Water Act's vision into reality is for EPA to strengthen and expand the national conversation on protecting and maintaining our waters. Growing our partnerships will be vital in solving these challenging problems. The call to action has never been more urgent especially in light of national trends in water quality and recent environmental disasters. EPA invites all tribes, all states, all communities, all Americans to come together for clean water and re-commit to our national quest to achieve the promise of the CWA. Together, we can build sustainable communities and restore and protect the quality of our nation's streams, rivers, lakes, bays, oceans and aquifers.