San Diego Water Board Practical Vision

Healthy Waters, Healthy People

Why This Practical Vision Matters

Adequate availability of clean water for human and environmental health is a growing concern worldwide. We grapple with changes in our climate, sea level rise, legacy pollution, and the dilemma of ever increasing costs and decreasing resources to address all of these issues.

The San Diego Region enjoys a climate and location that supports many agricultural and industrial uses of water, while also inviting people to enjoy water in a myriad of ways. From avocado orchards to cooling water, from shipping and boating to surfing and fishing, from drinking water to wildlife, all of these uses demand and deserve clean water.

The San Diego Regional Water Quality Control Board (Water Board) serves as stewards of the public trust in protecting and restoring the waters of the State; and also in the judicious use of authorities and resources to achieve that goal in the most efficient manner practicable. The Practical Vision is the means to those ends. It sets forth plans to achieve healthy waters through collaboration, reliance on the latest science, prioritization of issues and actions, and prudent use of authorities in service to the people of California.

The Water Board has come to understand over many years that we can best accomplish our Mission and meet the needs of our region for clean, healthy, reliable waters with the willing support and partnership of the community we serve. Moreover, the Water Board can only succeed through continual learning and innovation and the application of sound science in decision making.

The Mission of the California Water Boards is this:

"To preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use, for the benefit of present and future generations. "

Since the Clean Water Act was adopted in 1972, there have been many significant accomplishments and improvements in water quality especially in reducing pollutants from point source discharges of sewage and industrial wastes that have reduced discharges of targeted toxic substances from these sources by more than 95 percent, despite a doubling in southern California's coastal population[1]. With the initial focus on these point sources, however, the Clean Water Act has been often implemented through the lens of chemistry alone as if the goal were to have distilled water flowing

[1] K. Setty, K. Schiff, and S. Weisberg (eds.) (2012). *Forty Years after the Clean Water Act: A Retrospective Look at the Southern California Coastal Ocean*. Technical Report 727. Southern California Coastal Water Research Project. Costa Mesa, CA.

in concrete channels without necessarily considering the costs, the environmental context of the discharges, or the biological and physical integrity of the receiving waters.[2]

Building on the continued successes of point source control, we are now faced with the twin challenges of addressing the pollutants from many thousands of small, dispersed sources (non-point sources) and restoring and maintaining healthy ecosystems that support the beneficial uses of waters. According to the US EPA, over 80 percent of the pollutants of concern are from non-point sources including agricultural and urban runoff; these pollutants and sources are not easily controlled through permits or technology. We now realize that healthy waters that are characterized by the chemical, physical, and biological integrity called for by the Clean Water Act are not simply the result of chemistry, engineering nor permits, but one best measured through biological condition of water body health and achieved through collaborative efforts on a watershed scale.

To restore and maintain water quality in the next forty years, the Water Board must shift to new, community-based strategies to restore and protect water quality and beneficial uses. To make this transition, the Water Board will need to augment the expertise of its staff by seeking the very best legal, scientific, and procedural advice available on the matters before it, to ensure that its actions are credible and durable and represent the goals of our communities. These actions need to institute new methods of measuring and reporting our progress to the communities that have empowered us to accomplish our Mission.

This Practical Vision is a way forward for the San Diego Region that respects the many interests and values of our communities, envisions credible and durable improvements to water quality and environmental health, and offers pragmatic solutions and the tools necessary to surmount challenges to attain healthy waters. The Values of the Water Board are:

Leadership **Stewardship** **Communication** **Transparency**

[2] Karr, J (1995) "Protecting Aquatic Ecosystems: Clean Water is Not Enough" in Biological Assessment and Criteria, Tools for Water Resource Planning and Decision Making, W.S. Davis and T.P. Simon, eds. CRC Press. Boca Raton, FL

Our Practical Vision statement is this:

Healthy waters realized through collaborative, outcome-focused efforts that support both human uses and sustainable ecosystems.

The Water Board staff is a highly trained and experienced team who bring creativity and a multidisciplinary approach to the Mission of the Water Boards. The Practical Vision represents a cultural change to address the water quality challenges facing our communities. The chapters of the Practical Vision are not simply a task or priority list, but a road map for this transition. Equally important and necessary in this transition are internal changes in the Water Board staff culture that make the Water Board a place where people are inspired to be and do the best they can as scientists, engineers, geologists, and Mission Support team members in achieving our goals.

Who We Are and What We Do

In 1949, the Dickey Act created the State Water Pollution Control Board to set statewide policy for pollution control and to coordinate the actions of State agencies in controlling water pollution. The Legislature also recognized that California's water issues were regional and a function of varying precipitation, topography, hydrology, and population and thus established nine regional Water Boards to represent each of the major California watersheds. In 1969, the State Legislature enacted the cornerstone of today's water protection efforts in California, the Porter-Cologne Water Quality Control Act (Porter-Cologne). The new State law was so influential that Congressional authors used sections of Porter-Cologne as the basis of the Federal Water Pollution Control Act Amendments of 1972, known as the Clean Water Act.

The Water Boards have responsibility for implementing and enforcing both Porter-Cologne and the federal Clean Water Act in California. Seven gubernatorial appointees, subject to Senate confirmation, serve on each Water Board and together perform adjudicatory and legislative duties to achieve the goals of the State and federal water quality laws. The San Diego Region represents the westward draining watersheds from southern Riverside and Orange Counties to the Tijuana River mouth in Imperial Beach.

As stated by Congress, the objective of the Clean Water Act is "...to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Forty years later, through tremendous efforts, we have achieved notable successes by focusing on large point source discharges like sewage and industrial waste discharges. Many bays, rivers, and streams, such as San Diego Bay are healthier now than any time in the last century. Recreational water quality has greatly

improved and many communities take for granted almost limitless access to safe drinking water and sanitary sewage treatment and disposal.

Nonetheless, the objectives of Porter-Cologne and the Clean Water Act, are far from being realized even after 40 years of effort. While point source discharges have been well addressed, pollutants and stressors from non-point sources, such as agricultural and urban runoff are still largely problematic. Affected by many thousands of small pollutant sources, hundreds of water bodies in the San Diego Region are listed as impaired and many more are added to that list with each new assessment of water quality conditions. Most urban streams suffer from the chemical, physical, and biological degradation associated with "Urban Stream Syndrome"[3] and do not support the beneficial uses expected of them.

Trash and sediment in the Tijuana River Valley

[3] Walsh et al (2005) *The urban stream syndrome: current knowledge and the search for a cure.* J. N. Am. Benthol. Soc. 24(3):706–723.

Smarter Together

Too often we take for granted those resources that seem in endless supply. Water in the West was once thought of as such a commodity. We are gaining a clearer understanding that many of society's activities produce negative impacts on the quality and supply of water resources. Now we know that because our limited supplies are stressed, usage patterns and protective measures must be changed. The challenge of managing stressors that emanate from each and every person in the region is daunting and must be met with a unified effort.

We are all in this together. While the Water Board serves the public, we also need public involvement to succeed. Two major theme of the Practical Vision are communication and learning. We want to share our knowledge, resources and experience to facilitate restoration, appropriate permitting and smart growth. Just as importantly, we need to learn from the experts in the fields of science and engineering; we need to collaborate with the cities and counties and benefit from their practical, local experience. We need to interact with all stakeholders to understand their priorities and to share our goals of healthy water for healthy people. We must be a learning organization that incorporates those lessons to preserve and enhance the quality of our waters.

To achieve our Mission, we must advance the strategy of community-based management of non-point source pollution through partnerships, collaboration, relationships, and above all, stewardship balanced by the judicious and appropriate use of our authorities. The tools used by the Water Board during the past 40 years must be augmented and adjusted to meet these challenges and to ensure that community values and economic health are supported in turn by healthy waters. It is incumbent upon the Water Board to provide the leadership to engender that culture in the communities of the San Diego Region to meet these challenges. This is the primary purpose of the Practical Vision.

The theme of the Practical Vision is ***Healthy Waters, Healthy People***. Over the next seven years, the Practical Vision will guide the efforts of the Water Board to usher in a new era of community involvement, public resource stewardship, and healthy community environments. The Practical Vision establishes the framework to identify the environmental outcomes important to both the Water Board and its stakeholders. Above all, it allows the Water Board to establish strategic priorities, work in the most effective manner, and communicate with the public it serves.

> *"...maintaining the quality of water and the functional integrity of aquatic ecosystems is essential to the health, economic status, and long term survival of the human race"*
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> - C.D. Becker and D.A. Neitzel
> Water Quality in North American River Systems p 3 (1992)

A Way Forward

Chapter 1: Strategizing for Healthy Waters

The Water Board's very reason for being is to protect and restore the chemical, physical, and biological integrity (i.e., the health[4]) of waters in the San Diego Region. This Practical Vision is about ensuring that the staff, funding, authority, tools, and influence of the Board, are put to the *best* possible use for that purpose. This will be accomplished by having clear overarching goals, and established region-wide strategic priorities, by remaining committed to those goals and priorities over an extended period of time, and by evaluating success in terms of meaningful environmental outcomes.

The Water Board is committed to using all of its staff and funding to conduct the work that is the *most* important, useful, and worthwhile for the purpose of protecting and restoring the health of waters in the San Diego Region. The Water Board will ensure its staff and funding are put to the best possible use by: 1) establishing and implementing strategic priorities for its work and the work it requires of the entities it regulates; 2) establishing measurable goals for meaningful environmental outcomes; and 3) establishing and using a set of performance metrics to evaluate success in meeting those goals. The key projects to be implemented during the next seven years are:

- Initial Assessment of Key Places
- Setting Region Wide Strategic Priorities and Goals
- Staying on Course – Monitoring, Assessment, and Adaptation
- San Diego Bay Strategy

[4] Healthy waters are surface and ground waters that fully support use and enjoyment by the people of the state. Such "beneficial uses" of waters in the San Diego Region include water supply (domestic, municipal, industrial, and agricultural), fishing (commercial and sport) and shellfish harvesting, recreation, and support of habitats and ecosystems. Beneficial uses of waters in the San Diego Region are identified and described in the San Diego Water Board Basin Plan and in State Water Resources Control Board water quality control plans that apply to the San Diego Region.

Chapter 2: Monitoring and Assessment

To be strategic and effective in carrying out its Mission of protecting and restoring the health of waters in the San Diego Region, the Water Board needs information from appropriate monitoring and assessment. The collection, use, and sharing of that information with the community and partners is consistent with the Practical Vision Values of Stewardship, Leadership, Communication, and Transparency. In December 2012, the Water Board endorsed "A Framework for Monitoring and Assessment in the San Diego Region." To achieve the objectives of that Framework and the Practical Vision, the following projects or actions that include monitoring will be implemented during the next seven years:

- San Diego River Monitoring and Assessment Coordination and Improvement
- South Orange County Beach Water Quality Monitoring and Assessment Coordination and Improvement
- Contaminant Bioaccumulation and Risk Evaluation for San Diego Bay
- Enclosed Coastal Waters Monitoring and Assessment Coordination and Improvement
- Tijuana River Valley Bi-National Monitoring and Assessment Project
- Irrigated Lands Monitoring and Assessment
- Non-Perennial Streams Monitoring and Assessment
- Regional Groundwater Monitoring and Assessment

Chapter 3: Recovery of Stream, Wetlands, and Riparian Systems

Healthy stream, wetland, and riparian systems are essential to important beneficial uses and other ecosystem functions. Stewardship and Communication are core Values of the Practical Vision that are fundamental to restoring and maintaining the health of these areas as measured by their physical, hydrological, and biological integrity. Recovery of these systems involves both protecting areas that have remained relatively unscathed and restoring the extent and the functionality of all kinds and parts of damaged and lost stream, wetland, and riparian systems, including floodplains.

The Water Board regulates fill and dredge activities in these habitats through the Clean Water Act section 401 Water Quality Certification Program. Its effectiveness is critical to the recovery of stream, wetland, and riparian systems since these activities can have severe, long-term effects if not properly regulated and mitigated. Important considerations include effectiveness of mitigation, increased public participation and customer service for permit applicants, and transparency of Water Board decisions. Accordingly, the projects to achieve the Practical Vision include:

- Stronger Protection and Restoration Policy
- More Incentives for and Better Outreach in Support of Protection and Restoration
- Comprehensive Assessment of Conditions and Restoration Opportunities
- Earlier Community and Water Board Input in Planning, Environmental Review, and Regulatory Processes

- Improved Collaboration with Governmental Agencies, Nongovernmental Organizations, and the Scientific Community

Chapter 4: Proactive Public Outreach and Communication

Public engagement and participation in the decision making process of the Water Board is essential to our success and are represented in our Practical Vision Values. Accordingly, greater efforts must be made in community outreach and information sharing. A key goal of our Practical Vision is increasing Environmental Justice Community access to the Water Board, its staff, programs, and decision making. Increasing the Water Board's presence and accessibility through the internet, via our website and social media, is an effective way to share information with the public and solicit their participation. We strive to be a learning organization that considers the knowledge, expertise and insights of others and thus value the open sharing of ideas. This Practical Vision will begin to address these needs through the following projects:

- Website Update
- Social Media Plan
- Community Outreach Strategy

Chapter 5: Strategy for Achieving a Sustainable Local Water Supply

In order to maintain and improve water quality and provide sufficient water to meet the demands of the Region, the Water Board must use its leadership and regulatory authority to achieve a sustainable local water supply while concurrently ensuring that water quality supports beneficial uses. Reducing the Region's dependence on imported water is needed to improve water quality within and outside of our Region and to reduce greenhouse gas emissions associated with the transport of water. The creation of a sustainable local water supply includes three aspects: 1) the environmentally responsible use of groundwater and surface water; 2) the creation of new sources of fresh water through desalination and increased use of recycled water including potable reuse; and 3) conservation efforts to reduce water demand. This Practical Vision describes the means by which the Water Board, in keeping with its Values of Stewardship, Leadership, and Communication, will help water and waste water agencies achieve the goal of a sustainable local water supply. A multi-phase approach will be used to increase the supply of local water and decrease the Region's water demand through the following projects:

- Water Purveyor Outreach
- Salt and Nutrient Management Planning Implementation Project
- Investigate Revisions of the Nitrate Water Quality Objective for Ground Water Resources
- Recycled Water Reuse
- Low Impact Development
- Desalination
- Water Conservation

The Challenge of Leadership

Protecting human and environmental health is vital to our quality of life and requires leadership at all levels in the Water Board and our communities. Leadership is not simply telling people what to do, but creating a vision and bringing people and communities together to realize that vision through many leadership styles and tools in which everyone has a part in achieving our shared goals. Bringing science together with the best available analysis and objective advice is a critical component of leadership in protecting water quality and beneficial uses. To achieve this vision, the Water Board is called to a leadership role that must expand far beyond the traditional command and control approach that it has relied on for the last forty years. The Water Board sees the shift to community engagement, collaboration, and scientifically based environmental outcomes as the essential job of leadership through the Practical Vision. The way we achieve these outcomes will be as important to the communities we serve as the outcomes themselves.

Boulder Creek in the upper San Diego River Watershed

David W. Gibson
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