



WESTCAS – The Voice of Water Quality in the Arid West

**Report on the 3rd International WATARID Conference
Paris, France, May 30 – June 2, 2011**

WESTCAS Annual Conference, June 23, 2011

Ed Curley, Strategic Planning Manager, Pima County Regional Wastewater Reclamation Department

WATARID 3, Paris 2011

WATARID 3

3^{ème} conférence internationale
Eau, écosystèmes et développement
durable en zones arides et semi-arides

USAGES ET POLITIQUE DE L'EAU

Pays Invité : EGYPTÉ

Du 30 Mai au 1 juin 2011

3rd International Conference:
Water, Ecosystems and Sustainable Development
in Arid and Semi-arid Zones

USES AND POLICIES OF WATER

Guest Country: EGYPT

30 May to 1 June 2011

Pavillon de l'eau, 77 avenue de Versailles, Paris 16^{ème}



WATARID 3rd International Conference



WATARID 3, Paris 2011



Topic Highlights

Design and implementation of Taihu Lake Basin water-quality management system based on TMML



China spends over 14 billion dollars to clean up Taihu Lake

Updated: 27 Oct 2007

Share this news?... Click box

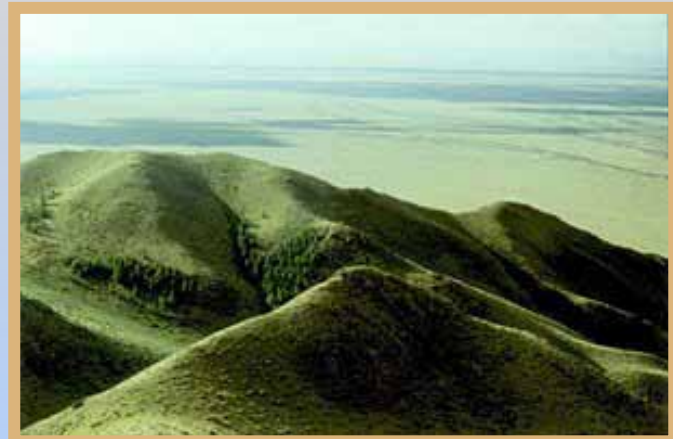


Read more on [Smoking boosts breast cancer risk](#) [breast cancer risk](#)

China will invest more than 14 billion dollars to clean up its third-largest freshwater lake, which has been devastated by the unchecked waste from thousands of factories, state media said Friday.

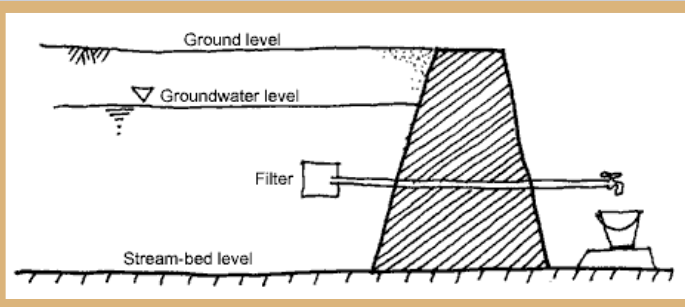
Over the next five years, east China's Jiangsu province will spend 108.5 billion yuan (14.4 billion dollars) on improving the quality of the water in the Taihu Lake and nearby tributaries, the Beijing News reported.

Climate change impact on water resources in arid regions of Russia

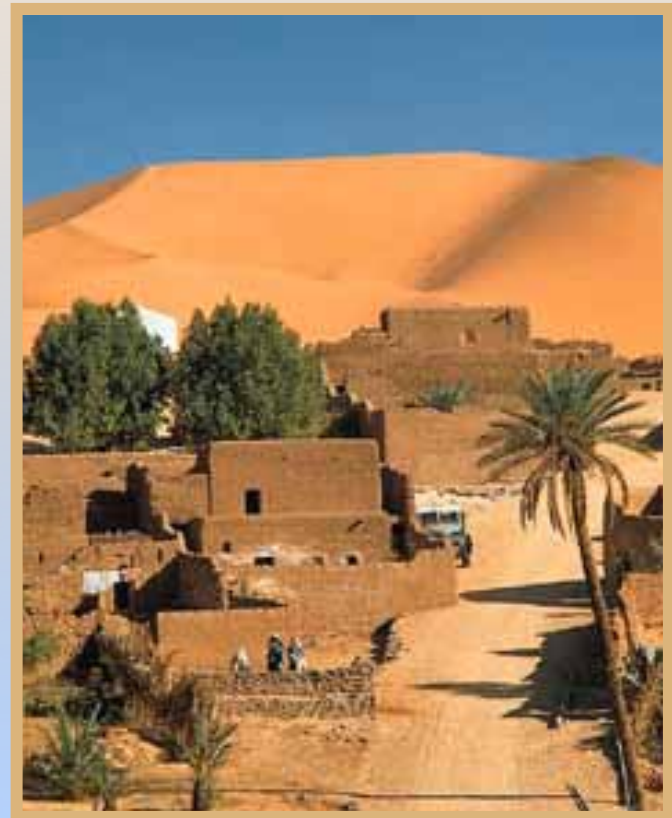


Topic Highlights

The role of groundwater dams in providing water in arid and semiarid areas



Irrigation waters and behaviour of cultures under palm trees in the Oued-Righ oases (south-east of Algeria)



Topic Highlights

Economic, social and environmental justification study of Dehdasht City's sewage project [Iran]



The management of water in the Etang de Montady: Historical perspective and current issues



Topic Highlights

Integrated water resources management for a good carrying capacity of population in arid regions

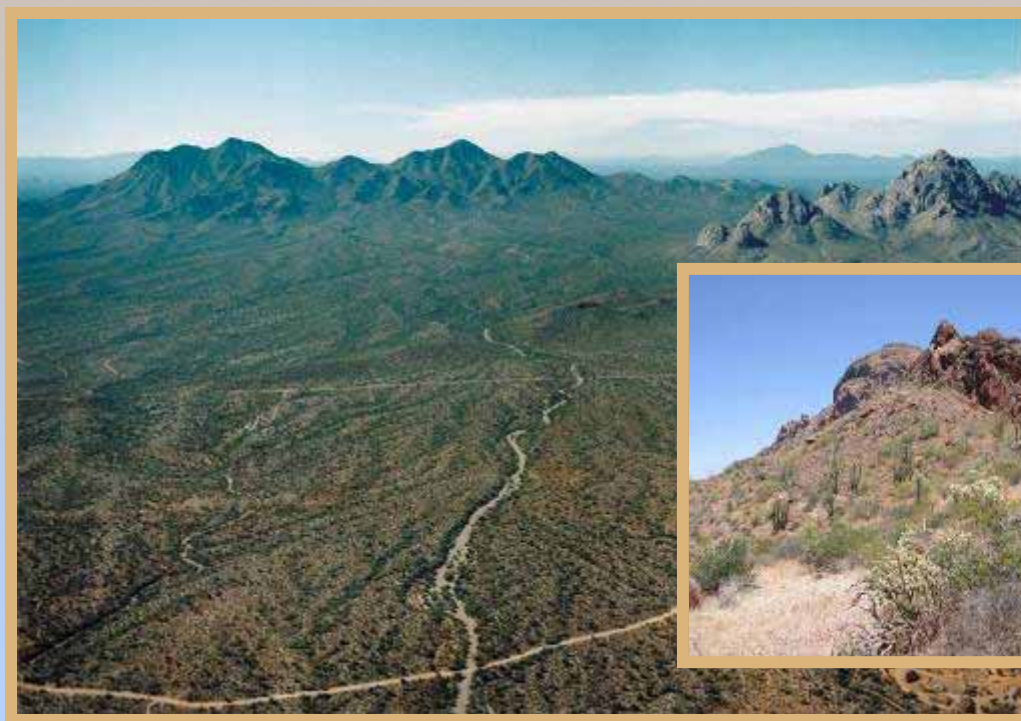


**WESTCAS –
The Voice of Water
Quality in the Arid
West**

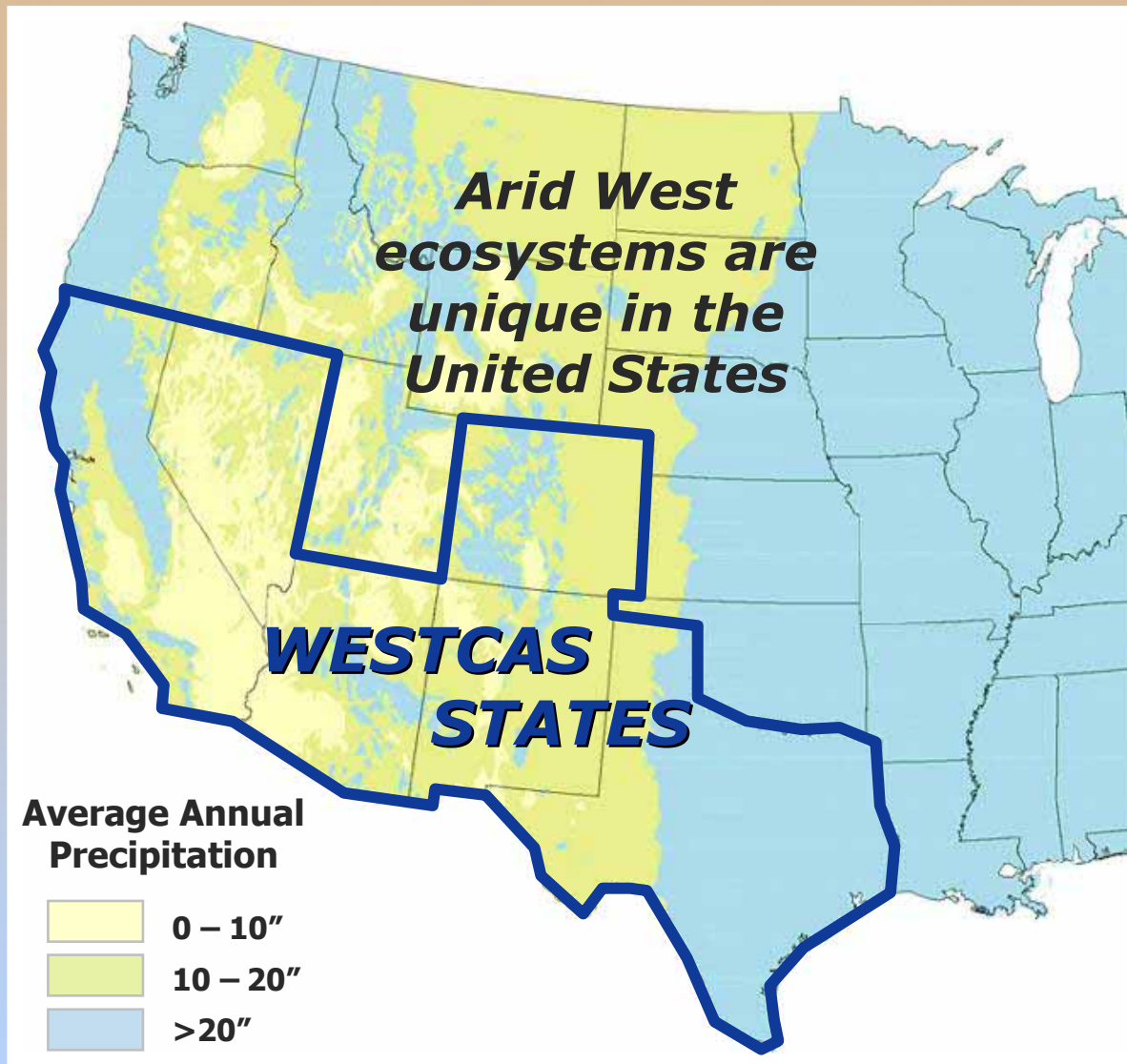


<http://www.pima.gov/wwm/pubs/pdf/westcas2011.pdf>

The Arid West is Different!



The Arid West - Defined by Rainfall



Critical Issues in the Arid West

Water Quantity



Water Quality



Water Reliability



Regulatory Challenges



Arid West Water Quantity – Allocation



Colorado River water rights

All surface water in the Arid West is fully allocated to federal, state, tribal, municipal or private (farms and ranches) interests.

Groundwater levels are declining across the West.

As a result, effluent has become very valuable as a water source, and regulatory standards for effluent are critical issues!



Existing groundwater rights

Arid West Water Quantity – Effluent Utilization

Aquifer recharge



Riparian restoration

Urban uses



Arid West Water Quality



Salinity

Pollutants

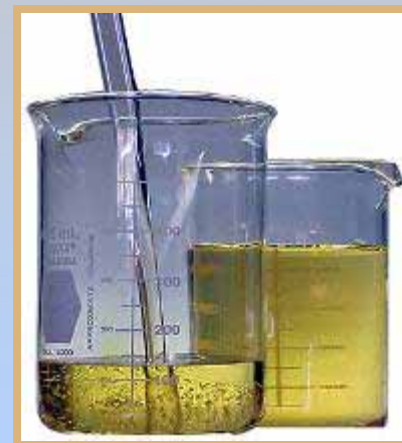


Nutrients



Endocrine
disrupter
compounds
(EDCs)

Pesticides



Perchlorate

Arid West Stormwater Quality/Quantity

**Erosion hazards /
sediment transport**



Debris flows and sediment



**Wildfires that alter
watershed
conditions**



**Inadequate
stormwater
facilities in
urban core**

Arid West Water Reliability



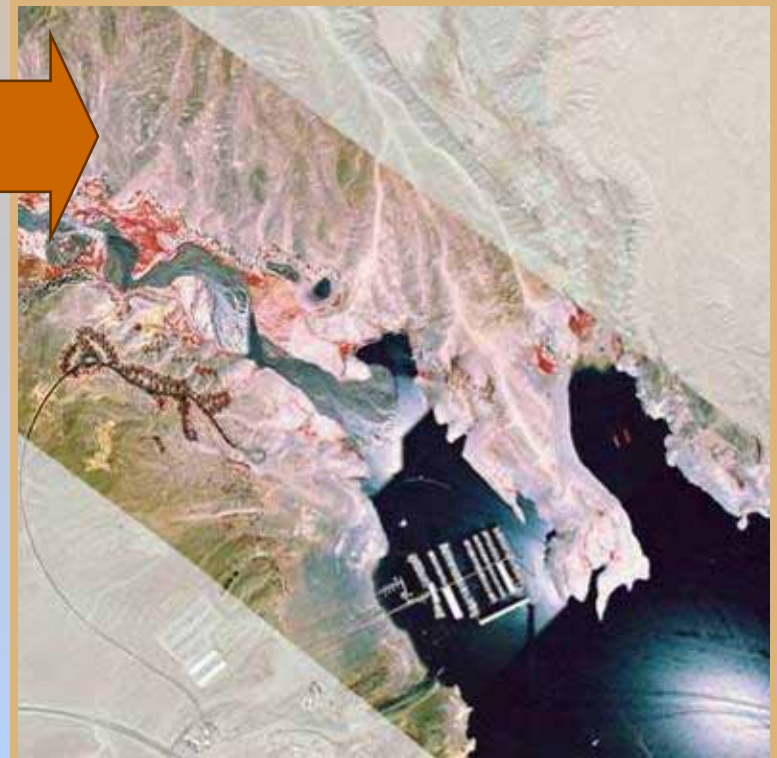
Lake Mead, Sept 1998 - Elevation 1215 Feet



Photo by Craig Moran, LV Review Journal

Drought

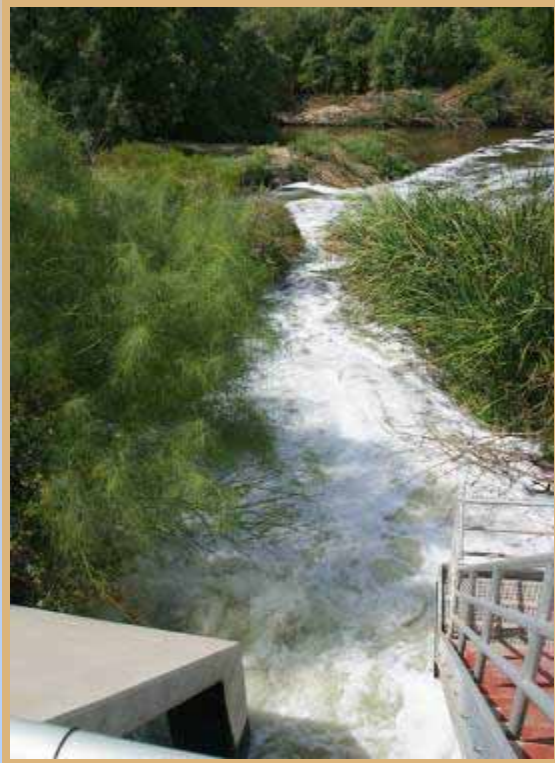
Lake Mead, August 2003 - Elevation 1142 Feet



Southern Nevada Water Authority

Arid West Regulatory Requirements – Challenges

- Federal regulations restricted local options and solutions to quantity/reliability issues
- Improved science and policy were needed for effluent-dependent and ephemeral streams



Arid West Regulatory Requirements – Challenges

- Clean Water Act standards were largely created for non-arid lands
- 1990 – State and federal regulators considered requiring ephemeral and effluent-dependent streams of the Arid West to meet water quality standards for fishing and swimming
 - Could cost millions of dollars for compliance
 - Extremely high costs for no environmental benefit



Versus



Arid West Regulatory Requirements – Challenges



- 1991 – Water and wastewater agencies from throughout the Arid West met in Phoenix, San Diego and Las Vegas to address this regulatory crisis
- 1992 – WESTCAS formally established with over 100 members from Arizona, Nevada and California
 - Colorado, New Mexico and Texas agencies joined later
 - First grassroots organization to focus on regional Arid West water quality issues

The WESTCAS Mission is to be...

- The premier, grass-roots organization for providers of water, wastewater and reclaimed water services in the Arid West
- A responsive coalition on behalf of our members and their customers
- A reliable source of information about water quality issues to our members and the public
- An advocate for environmentally sound management of water resources and the protection of public health
- A contributor to policy, regulations, science, legislation, and appropriations on Arid West water quality issues



Photo by James Baskin (CC)

What Does WESTCAS Provide?

- A powerful presence in Washington D.C. and in federal, regional and state regulatory and legislative decision-making
- An effective vehicle for information exchange through meetings and publications
- The opportunity to help draft federal, regional, state and local legislation and regulations about water quality and supply
- A voice to promote awareness of Arid West ecosystems and water quality issues

WORKING TOGETHER
to create policies and practices
for

A SUSTAINABLE WATER FUTURE

How Does WESTCAS Work?

- WESTCAS sponsors three conferences each year with distinguished regional and national speakers, including
 - Senators and Congressmen
 - Senior officials from federal agencies
 - Environmental Protective Agency (EPA)
 - Agriculture Department
 - Bureau of Reclamation
 - Senior officials from state agencies
 - Water resource departments
 - Regional water boards
 - Renowned authors and scientists
 - Mark Reisner (*Cadillac Desert*)



WESTCAS has formed coalitions with...

- Association of California Water Agencies (ACWA)

www.acwa.com



- Texas Water Conservation Association (TWCA)

www.twca.org



- Federal Water Quality Coalition (FWQC)

www.fwqc.org

- National Association of Clean Water Agencies (NACWA)

www.nacwa.org



- Water Environment Federation (WEF)

www.wef.org



- Water Environment Research Foundation (WERF)

www.werf.org



- National Water Resources Association (NWRA)

www.nwra.org


- Clean Water America Alliance

www.cleanwateramericaalliance.org



WESTCAS Produces...

- Detailed technical and policy papers
 - Comments on federal and state regulations
 - Technical papers on water quality issues
 - Policy papers on federal programs and appropriations
- Testimony on water quality issues
 - State and federal regulatory panels
 - Congressional committees and sub-committees



Hicks-Ray Associates

washington dc update

August 7, 2009

Bureau of Reclamation Stakeholders Meeting


Earlier today, Bureau of Reclamation Commissioner Mike Connor hosted a "Reclamation Stakeholders Meeting" this morning at the Department of Interior. Mike was joined by Anne Castle, Assistant Secretary for Water and Science and several other Bureau personnel in presenting updates for those in attendance. We were especially interested in the following three issues:

1. Mike Connor noted that the following schedule is being followed by the White House Council on Environmental Quality as it revises "principals and guidelines" for all Federal agencies who manage water projects. Outside stakeholder comments were due on July 17. Federal agencies have until August 26 to forward their comments to the CEQ. After that, CEQ will submit the comments and findings to the National Academy of Science for their review. This is the point that the process will probably slow down since this review may take a while. And this will be the point when WESTCAS and other advocacy organizations can begin to have an impact on this issue.

Connor was asked what he thought about CEQ's decision to revise the Executive Order issued during the Carter Administration concerning Federal activities on floodplains. The Commissioner replied that he would like to see the issue. Several of the stakeholders suggested that any time the government expands its reach to activities on the 500 year floodplain, it is no way that the Bureau would not be affected. This is another area of how much this issue has flown under the radar screen.

A summary sheet was passed out (see attached) which gives House and Senate funding figures for the Bureau for the FY10 Interior and Related Agencies appropriations bill. There is optimism that this bill will be conferenceed as a stand-alone bill in September or October. We have attached the budget sheet that was passed this morning for your review.


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WESTCAS
Western Environmental Coalition of the States

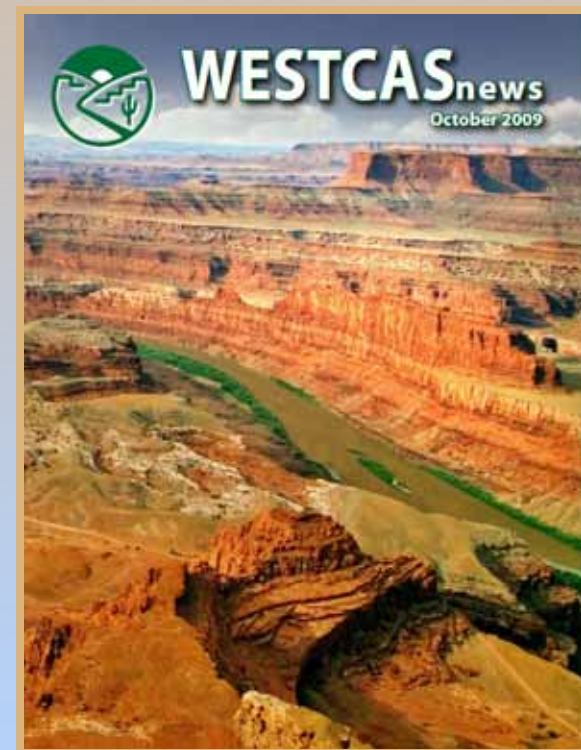
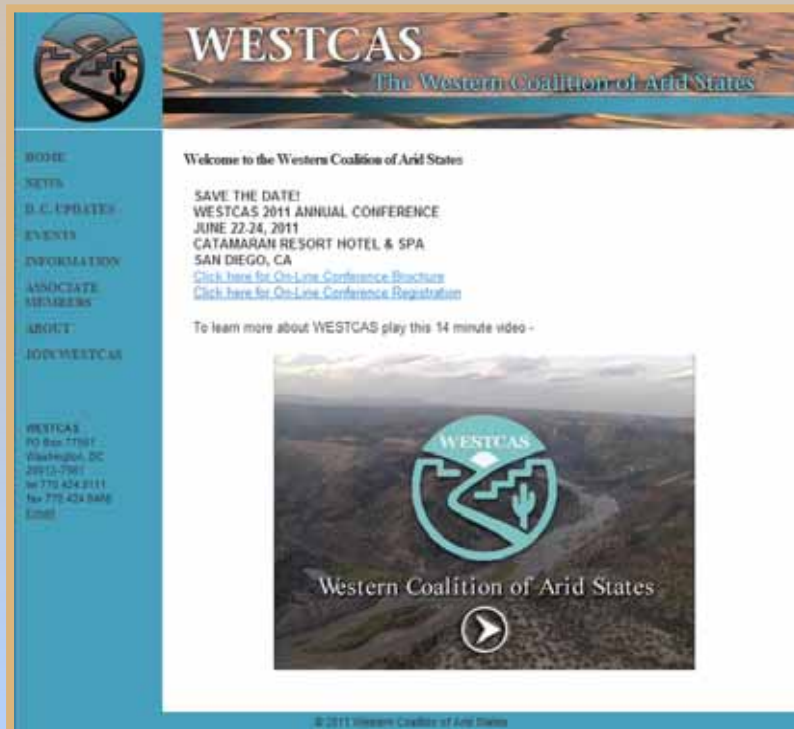
The Coalition's concerns about the Proposed Rule include the following:

1. **LACK OF AUTHORITY:** The Proposed Rule lacks clear legal authority in the CWA. Section 106(b) directs EPA to make grant allotments "in accordance with regulations promulgated by him on the basis of the extent of the pollution problem in respective states." Basing allotments on the extent that states use permit fees for program funding would be inconsistent with that statutory requirement: it has nothing to do with the "extent of the pollution problem."
2. **LACK OF NEED:** EPA has not shown a need for the changes to the Section 106 program that would be accomplished by the Proposed Rule, or that the Proposed Rule would directly address an identified problem in the program. If EPA believes that the CWA program being implemented by the States are not adequately funded, then it has the ability to address that concern, including by asking Congress to appropriate more funds for those programs. The Proposed Rule, which addresses an amount equal to only 1% of the total Section 106 funding allotment, would not do anything significant to address those funding concerns.
3. **NO CLEAR FUNDING INCREASE:** EPA has not shown that the Proposed Rule will result in more total funds being spent in State NPDES programs. While some States may receive slightly larger Section 106 allotments, it is very possible that the legislatures of those States will then reduce funding from general revenues accordingly, leaving the permitting agencies no better off than they were without the Proposed Rule.
4. **POSSIBLE DECREASES IN FUNDING:** While the Proposed Rule is structured to apply only if the total Section 106 funding increases, this does not guarantee that States will not actually suffer decreases in their Section 106 allotments due to the rule. As EPA is aware, in the last several years, substantial portions of the total Section 106 allotment have been earmarked for specific purposes, such as monitoring activities, leaving less money for other, fundamental State CWA activities, such as permitting and compliance. The Proposed Rule would lead to another amount being subtracted from the overall funding pool, to be divided up among a small number of States. Even if there is an increase in the overall allotment for this coming year, or any subsequent year, a given State could still receive less money than it did before, due at least in part to its not meeting EPA's definition of an "adequate" permit fee program.
5. **REDUCED STATE CHOICES:** The Proposed Rule intrudes on the States' flexibility to make their own choices as to how best to fund their CWA programs. Each State government has to make those decisions based on a number of factors that are specific to its situation, and EPA has no basis for making States change those decisions. The Act provides, in Section 101(b), that "[i]t is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution." As long as a State is performing its environmental responsibilities adequately, EPA should not tell the State how to collect the funds needed for the permitting agency to do its job.



WESTCAS Produces...

- A Comprehensive website – www.westcas.org
 - State, federal and congressional testimony statements
 - Comments on state and federal legislative and regulatory issues
 - Presentation, news and updates from WESTCAS conferences
- Newsletters



WESTCAS Accomplishments

- 1994 – Initiated the “Arid West Amendments” for the reauthorization of the Clean Water Act
- 1995 – Testified before the Senate Environment and Public Works Committee on Arid West issues
- 1995-2007 – Established the Arid West Water Quality Research Project in Pima County, Arizona, with \$5.5 million EPA grant
 - Research and science for ephemeral and effluent-dependent streams in the Arid West
 - Nutrients, arsenic, perchlorate, hexavalent chromium, mercury and selenium



Habitat Characterization Study

Increasingly stringent water quality standards for the nation's surface waters raise questions about the applicability of such nationally-derived standards to the West, where water users are different and the value of water is intrinsically greater. Treated effluent discharged to arid areas of the West often produces the only surface water available, thus creating unique riparian and aquatic environments, or effluent-dependent waters, that are best as a variety of aquatic and riparian species while also providing water for agricultural and recreational uses.

Project Purpose & Objectives
The Habitat Characterization Study was commissioned to document the physical, chemical, and biological characteristics of ten effluent-dependent waters in the arid West. Effluent-dependent waters are created by the discharge of treated effluent into generally arid regions. What are important water quality parameters in effluent-dependent waters, what are we trying to protect?

The physical, chemical and biological characteristics of habitats at each of the ten case study sites were documented regarding the location and dimensions of the wastewater treatment plant (WWTP) discharge point. The objectives of this effort were to: (1) assess existing physical, chemical and biological data; (2) conduct a site reconnaissance level survey to characterize habitats using established protocols and protocols adapted for arid West conditions; (3) identify similarities and differences among sites; (4) discuss potential approaches to protect these habitats in the context of existing regulatory programs; and (5) recommend areas for additional work.

Compilation and Evaluation of Case Study Data
Historical and site reconnaissance data were collected at the following ten case study sites: Santa Cruz River below Nogales and Tucson, AZ; Salt River below Phoenix, AZ; Santa Ana River below Los Banos, CA; Fontana Canal below Corona del Mar, CA; South Flume below Phoenix, AZ; Las Vegas Wash below Las Vegas, NV; Santa Fe River below Santa Fe, NM; Cattle Creek below Canyon Springs, TX; and Cose Canal below Cheyenne, WY.

Physical Data Summary – Historical physical data included streamflow, amount of streamflow upstream and downstream of WWTP outfalls, and channel and stage-discharge relationship data. If available, results from site specific hydrology and geomorphology studies were also reported, and a reconnaissance level field geomorphology assessment was conducted at each site.



Figure One One
Pima County, Arizona

normally dry conditions or events that would have minimal flow during part of the year in the absence of effluent discharge. These ten sites represent case studies, and as such, the study was not conducted to scientifically verify any particular hypothesis, but to collect data to directly describe and characterize effluent-dependent ecosystems. The need for this activity was glossed by the fact

• PCRWRD Home

AWWQRP

- AWWQRP Home
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- Presentations
- Work Plans
- QAPP
- QIWP
- Bibliography
- References
- Contacts
- Related Sites

The Arid West Water Quality Research Program (AWWQRP)

Developing Water Quality Criteria for the Arid West



www.pima.gov/wwm/wqrp

WESTCAS Accomplishments

- 2005-present – Support ongoing research at the University of Arizona and other centers on contaminants of emerging concern (CECs) such as pharmaceuticals and personal care products
- 2009-present – Develop and advocate for Arid West Wastewater Grants Program as part of National Water Trust Fund proposal



Alert 2009-1

January 16, 2009

The Clean Water Exchange is pleased to provide you with this Action Alert, providing updates on important legislative, regulatory, and legal issues affecting the clean water community.

House Stimulus Package Includes Significant Wastewater Funding

Yesterday, Congressman David Obey (D-Wisc.), Chairman of the House Appropriations Committee, released an executive summary and legislative language for the spending portion of the proposed Economic Recovery Package that the House Appropriations Committee will mark up next week. The American Recovery and Reinvestment Act of 2009 is on the House Appropriations website and is available by [clicking here](#).

The overall infrastructure investment portion of the package is approximately \$63.5 billion with nearly 20% or approximately \$11.8 billion targeted for community water and wastewater infrastructure: \$6 billion for wastewater projects funded through the Clean Water State Revolving Fund (CWSRF), \$2 billion for drinking water projects funded through the Drinking Water State Revolving Fund, and \$3.8 billion for rural water and wastewater systems. In addition, the package includes \$500 million for western water supply projects, including water reuse projects, through the Bureau of Reclamation and \$400 million for watershed protection projects through the Natural Resources Conservation Service.

The breakdown of the \$6 billion for the CWSRF is as follows. Half of the funding is to be disbursed by the states as loans. States are required to use the additional 50 percent (\$3 billion) to provide assistance, "in the form of additional subsidization, including forgiveness of principal, negative interest loans, and grants, to municipalities (as defined in section 502 of such Act) for projects that are included on the State's priority list established under section 603(g)." Eighty percent of the grant money would be for projects "to benefit municipalities that meet affordability criteria as determined by the Governor of the State," and 20 percent for projects "to address water-efficiency goals, address energy-efficiency goals, mitigate stormwater runoff, or encourage environmentally sensitive project planning, design, and construction, to the extent that there are sufficient project applications eligible for such assistance."

Municipal organizations, including NACWA, WEF, and APWA worked to ensure that a significant portion of the overall infrastructure investment package is targeted to wastewater projects, including green infrastructure projects, with instructions for states to distribute 50 percent in the form of grants or grant-equivalents. This draft bill is a vital step in the recognition that the federal government is receiving the message that it must be a key partner in addressing the growing wastewater infrastructure funding gap.

Exchange Readers Asked to Make the Case for Grants

The water sector will continue to advocate strongly that funding for wastewater infrastructure projects remain a significant part of the overall stimulus package as it progresses through the House, the Senate, and the incoming Administration. It is also important for readers of the Exchange to continue to make the case with their Representatives and Senators that these funds be distributed in the form of grants. Speaker of the House Nancy Pelosi (D-Calif.) has indicated that she wants to wrap up work on this package prior to the Presidents Day recess beginning February 9. The release of the House draft bill is only the beginning of the vital process of getting stimulus legislation passed and we must continue to advocate for the municipal position and build on this momentum!

For more information, contact:

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NACWA
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WESTCAS – Recipe for Success

- Grassroots origin
 - Membership and conference fees are affordable
 - Continually recruiting new members, while long-time members provide continuity and community
 - Program and project information are shared with member agencies
- High profile conferences and speakers



JOIN WESTCAS!



New for 2011!!! WESTCAS is now offering a "Get to Know Us" rate for 2011. Current non-members may join now at the Regular or Associate Member levels and receive a special 50% discount on dues for 2011 - just note the special rate on your application. Offer valid for first time members only. Click on Membership Brochure below for details.

Please see the attached Membership Brochure and Application. If you have any questions, please contact Dawn Moore at 770-424-0111 or westcas@mindspring.com.

[WESTCAS Membership Brochure](#)
[WESTCAS Membership Application](#)

WESTCAS – Recipe for Success

- Detailed technical policy papers and presentations
- Strong relationships with federal and state agencies, regulators and elected officials
 - Has a seat at the table for national and regional task forces and work groups
 - Has become an indispensable member of the water/wastewater community in the Arid West



WESTCAS provides a structural and organizational model for successful grassroots involvement in policy and advocacy on a regional basis, which can be utilized by other organizations and agencies



"Good
Deserts
are hard
to
find"

