

Nevada Water Issues 2006

**A Handbook for Public
Officials, the Press, and the Public**



**Nevada Water Network
Progressive Leadership Alliance of Nevada**



Great Basin Water Network

The Great Basin Water Network was created by organizations and individuals dedicated to insuring that decisions being made regarding current and future water development proposals are done cautiously and are based on the best available scientific information. The Network provides information to help decision makers critically examine the direct and indirect costs, benefits, and cumulative impacts, not only of individual water projects within the state of Nevada, but of long range water use and development affecting neighboring states in the west.

For more information or to join the Great Basin Water Network, send an e-mail to: gbwaternet@yahoo.com

Front Cover:

Map: Precipitation Map of Nevada.

Yellow/orange areas: 5-20 inches of rainfall per year

Green/blue) areas: 20-40 inches per year

Spatial Climate Analysis Service, Oregon State University

Cover Photos by Dennis Ghiglieri

Left: Mojave Desert looking toward Three Lakes Valley

Right: Crystal pool spring in Ash Meadows National Wildlife Refuge

Above:

Map of the Great Basin prepared by the Stillwater National Wildlife Refuge

Nevada Water Issues 2006

Nevada is one of the highest population growth regions in the nation, but it is a “land of little rain,” the driest of the fifty states. In anticipation of exponential population growth, municipal governments and private developers are currently engaged in myriad water development projects, each project proposing to put water to “beneficial use,” each posing potential damage to the environment, the economy, and the social and cultural well being of Nevada. If approved, some current projects would require as much as twenty years to develop at a cost of billions of dollars. All would have complex immediate and long-range impacts, including on the neighboring state of Utah.

The Nevada State Engineer, local governments, and the Bureau of Land Management have responsibilities for approval, disapproval, or no action on these proposals. However, these oversight agencies have precisely defined jurisdictions and often treat projects from a limited set of criteria rather than from a comprehensive view. The Great Basin Water Network is comprised of organizations and individuals primarily from Nevada and Utah who are committed to careful assessment of water projects and their environmental, social, and economic consequences. Its mission is to speak on behalf of sustainable water use, natural resource preservation, and the public interest through communication, coordination, research, education, and advocacy.

This briefing book is intended for use by state and national legislators, government officials and policy makers, the media, and concerned citizens. By providing background information and resources, the Great Basin Water Network is optimistic that water development in Nevada and the Great Basin will take place, not only within the letter of the law, but within the spirit of sustainable water development, conservation, and application in the desert west.

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What's at Stake?

As Nevada grows in both urban areas and emerging suburbs, demands for water are increasing dramatically. Developers and water purveyors are applying for and acquiring water rights statewide with the intent of using water for expanded commercial, domestic, speculative, recreational, and entertainment purposes. Briefly outlined on these pages are the major water projects currently in the proposal stage. For additional information, see the resources pages of this booklet, pp. 14-16.

Southern Nevada Water Authority Interbasin Transfer Projects. By far the most ambitious projects with greatest impact are three from the Southern Nevada Water Authority (SNWA) that would transfer water from natural hydrogeologic basins for use in the Las Vegas Valley, supporting over one million new residents in Southern Nevada.

1 Eastern Nevada Pipeline Project. SNWA has applied for water rights in eastern Nevada and proposes to build pipelines of approximately 460 miles at an estimated cost of \$3+ billion to remove and transport 180,000 acre-feet of water per year to Las Vegas. (With typical requirements of one acre-foot for three residents, this pipeline project would support population growth of 540,000 people.) The project has drawn over 4000 protests from ranchers, hunters, farmers, conservation groups, tribes, rural and urban residents, county and local governments, state and federal agencies, and citizens from beyond Nevada. The approval of both the Bureau of Land Management and the State Engineer's office would be required, with construction to take place between 2009 and 2021.

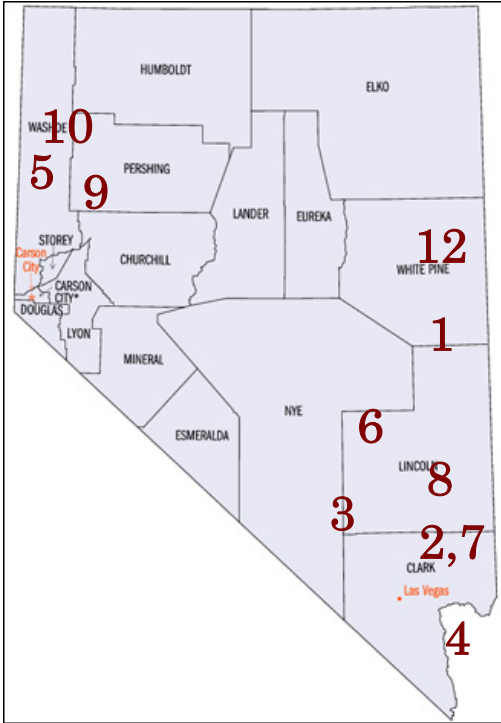
2 The Virgin River and Muddy River. SNWA proposes a diversion system that would pipe up to 190,000 acre-feet per year to Las Vegas (a ten-year average not to exceed 113,000 acre-feet per year). This diverted water would support additional Las Vegas population growth of about 350,000 people. Approval by the State Engineer's office has been given, but BLM approval is being sought in 2006, with construction scheduled for 2008-2013. (See also Colorado River apportionment, #4 below.)

3 Three Lakes/Tikaboo Valley. This application would withdraw 10,600 acre-feet of water annually from the Three Lakes and Tikaboo valleys in northwestern Clark County and southern Lincoln County, supporting population growth of approximately 32,400 people. The State Engineer's office has approved this project but is requiring a groundwater monitoring plan for the area, which is among the driest in Nevada. (See cover precipitation map and photograph of the Three Lakes desert area.)

4 The Colorado River. Presently, Nevada is authorized to withdraw 300,000 acre-feet of Colorado River water annually via Lake Mead, providing 90% of the water needs of the Las Vegas Valley. The current apportionment of the Colorado is being hotly debated by the upper river states as well as by California, all seeking additional sources of water to support population and growth. The Colorado is already over-appropriated, and its flow is exhausted before reaching the river's natural outlet in the Pacific Ocean. SNWA's Virgin River project (#2 above) is particularly subject to debate, since it proposes to divert water that normally contributes to Colorado stream flows and thus is seen as an end run around Nevada's Colorado river allotment. (See back cover for Colorado River views.)

Private Water Appropriation Projects.

5 The Fish Springs Ranch in northern Nevada, with 8,000 acre-feet of permitted water, would be tapped to bring water to the Reno/Sparks area by Vidler Water Company. An additional 2,300 acre-feet would be imported by Intermountain Water Supply. The BLM is preparing an environmental impact statement on the North Valleys corridor that would be used to transport these waters to the Truckee Meadows.



6 Lincoln County and Vidler Water have jointly filed to appropriate nearly 40,000 acre-feet of water from 10 different hydrogeologic basins within Lincoln County for development of approximately 13,500 acres (about 21 square miles) in the southeastern corner of Lincoln County, to promote growth in Mesquite, Nevada.

7 Muddy River. Vidler Water Company has acquired and is acquiring more Muddy River water rights while Nevada Land and Resource Company, a sister Company to Vidler, is involved in land acquisitions that would lead to development projects in southern Nevada. Note that this is a separate project from SNWA's Muddy River diversion project (Map #2).

8 Coyote Springs. This project, 70 miles north of Las Vegas, by developer Harvey Whittemore, includes water resources for six golf courses, vacation villas, residential housing, and commercial space. It has been criticized as an artificial environment in the midst of the arid desert.

9 Aqua Trac. This private development company submitted approximately 100 water rights applications to the State Engineer during the first half of 2005. These are located in Northern Nevada in the vicinity of Pyramid Lake and are intended to support growth in the Truckee Meadows, Truckee Canyon, Fernley, and the Reno North Valleys. Precisely how tapping some or all of these water resources would affect groundwater flows, particularly into Pyramid Lake, is not known. In addition, it is likely that very poor groundwater quality would limit municipal uses of this water without expensive water treatment.

Energy Projects. Proposals have been made for three coal-burning power plants in Nevada, with all power exported to California. In addition to creating concerns about the environment, each of these would require substantial amounts of groundwater for cooling.

10 Sempra Energy of San Diego has proposed the Granite Fox project for Northern Nevada's Smoke Creek Desert. It would draw up to 16,000 acre-feet of groundwater per year for cooling.

11 Toquop Energy (a Vidler Water Company project) proposes to develop and operate an 800-1,000 megawatt power generation facility in southern Lincoln County, Nevada. Water required for the operation of the power facility would come from wells in the Tule Desert and is estimated at 15,000 acre-feet per year.

12 White Pine Energy Project. This project is for the construction and operation of a 800-1,600 Megawatt coal-fired power plant and related facilities north of Ely, Nevada. Water concerns include the withdrawal from groundwater aquifers and water discharges. Note that this is in the same general area as the Southern Nevada Water Authority's pipeline project (#1).

The Approval Process

Approval for water development projects comes from the State Engineer's Office and from the Bureau of Land Management (for projects that are proposed using or crossing BLM land). Both offices, however, are subject to very different legal requirements and procedures.

The State Engineer is charged with the responsibility for developing a plan for management of water resources in the state, including protecting the needs for water in rural areas of the state, as well as preserving the economy and the quality of life. To approve a water rights project, the Engineer must assess for three criteria:

- Is there unappropriated water in the proposed source?
- Would the proposed use impair existing users' rights?
- Would the proposed use prove detrimental to the public interest?

In addition, in the case of interbasin transfer of water (from one natural hydrogeographic basin to another, e.g., from eastern Nevada to southern Nevada), the engineer is legally obligated to ask:

- Is there is a demonstrated need for water to be transported from another area?
- Has the area proposing to import water adopted and effectively carried out conservation measures?
- Is the transfer environmentally sound?
- Will the transfer unduly limit the future growth and development in the basin from which water is exported?

The State Engineer may also evaluate the project on any other factors that he/she "determines to be relevant." This last charge obviously gives the State Engineer great latitude in assessing both the immediate and long-range effects of any given water project.

However, the State Engineer does *not* have to gather public concerns or hold public hearings. Decisions are made exclusively by the Engineer, and decisions do not require production of a document for public review. Public participation in the process is limited to those filing protests, and fees are charged to proposers and protesters. Those who file protests must hire lawyers and hydrological experts to present their cases, and the Engineer is bound to consider only data directly presented in the protest. The Engineer's final decisions can be appealed only through court action, with fees paid by the litigants.

The Bureau of Land Management administers about 48 million acres of publicly owned lands in Nevada, or about 68% of the total state. All proposed actions on public lands, including permits for utility corridors and pipeline rights-of-way, must conform with existing land use plans and comply with the National Environmental Policy Act (NEPA), the Endangered Species Act, and other applicable federal laws and regulations.

NEPA requires federal agencies to study and disclose the environmental effects of major projects on the surrounding community and to include the public in the decision-making process. The environmental impact statement (EIS) is not limited to the natural environment and must also include study of possible economic and cultural effects: how a proposed project may affect a way of life. Regulations further require the BLM to take into account cumulative effects of water projects in a particular region. The law is designed to ensure that both the government and community members are aware of the major consequences of new projects, thus allowing informed decisions about whether and/or how to go forward

In the case of many of the projects outlined on pages 2-3 of this document, the BLM has initiated a “scoping process” including public comment (some 6000 comments from the public have been received for the Southern Nevada Water Authority projects alone) and, as per law, hired independent consulting firms to conduct the full environmental impact statement..

Is the law sufficient? Federal and Nevada laws make clear the will of the people and their legislators to consider and preserve the environment, culture, and the economy. At the same time, the size and complexity of the water proposals now emerging suggest that the present law alone may not be sufficient to protect the people and environment of the Great Basin.

Although the Nevada Office of the State Engineer has broad and flexible criteria for reaching decisions, it considers requests case-by-case rather than as a set of cumulative effects. The Engineer’s decisions are at best loosely tied to Nevada Water Policy, which itself was created in 1995 and has been periodically revised, but is outdated and inaccurate in its description of many water and growth issues.

While the BLM considerations are much broader than those of the State Engineer, its processes fail to identify, in advance, how various factors and studies will be compiled and weighted. Thus it remains unclear how the BLM assesses myriad, complex data to arrive at a final decision.

The Great Basin Water Network argues that, over the long run, the laws and processes must be strengthened to prevent fragmentary and opportunistic use of water resources. Over the short term, GBWN is closely monitoring the present approval processes and informing the public of important issues, problems, and omissions.

The principal issues, problems, and concerns of the Great Basin Water Network are provided on the following two pages.

The Issues

In public hearings and in books and articles, environmental and economic specialists and informed Great Basin citizens have raised numerous issues about pending and future proposals for water development in the region. The Great Basin Water Network believes these issues must be addressed and satisfactory answers provided to the public before approval, disapproval, or modification take place.

The Approval Process

- Have the criteria for final determination of approval or disapproval been clearly described by the agency in advance of any announced decision?
- Can the neutrality and objectivity of the approval decision makers in any way be affected by political and economic pressure groups?
- Does the hearing process favor the applicant in terms of preparation, expenditure, choice of venues, or other elements of the procedure?
- Are data from public hearings and scoping meetings summarized by neutral parties rather than BLM or State Engineer staff? Are summaries comprehensive and detailed? Are they done at no cost to protestors?
- Will the natural and social science data and findings of the BLM or State Engineer be submitted for peer review among scholars and specialists outside of the agencies?
- Are potential damages and costs described accurately? Has the project predicted long-range mitigation costs for violations or damages? Are the bonds required sufficient to cover possible costs of mitigation?
- Does the process provide adequate concern for long-range and sustainable growth and development issues?

Economic Issues

- Do proposals clearly and reliably estimate the damage and negative effects on tourism and recreation as well as loss of potential housing markets in the impacted area?
- Is assessment of economic effects on the impacted region comprehensive, accurate, reliable, and linked to clearly stated criteria for determining negative impacts?
- Does the proposal clearly describe the economic gains to be made by those who make the proposal? Does it identify who stands to profit (whether private citizens, private corporations, or public utilities)?
- Are projections of jobs to be created by a project accurate? Do claims for job creation also include discussion of living conditions and lifestyles for employees? Are created jobs at a living wage level? Will created jobs pay for themselves with revenues sufficient to support infrastructure development and needed and sustained social services?
- Has adequate attention been paid to the economics of possible alternatives to groundwater removal such as developing existing sources, conservation, and restraint of urban growth?
- Is promised growth sustainable both in both the immediate present and the predictable future?

Environmental Issues

- Does the proposal accurately calculate the potential damage due to the permanent removal of water from the watersheds in question?
- Does the proposal describe, adequately document, and justify direct destruction of lands due to the construction of pipelines, supporting structures, power lines, as well as the impact of heavy equipment on desert lands?
- Is sufficient research available from multiple sources to make fair, accurate, and reasoned decisions concerning the inevitable destruction of wetlands and wildlife habitat?
- Has the proposal given adequate attention to the quality of water to be extracted and its suitability for use?
- Does the proposal make sufficient effort to predict the effects of global climate shifts on the areas impacted by this project?
- Does the proposal make adequate effort to predict long-range environmental effects of the project—50, 100, 250 years into the future? Are such projections based on sound science?
- Is the proposal based on study of regional effects and consequences, not simply on localized effects of water removal and transfer?
- Does the proposal make a reasonable effort to anticipate and model effects of natural disasters (e.g., earthquakes, droughts) that might alter the long-range impact of the project?

Cultural Issues

- Does the proposal comprehensively and accurately address the cultural impact on rural towns, communities, and historical sites? Does it discuss such issues as quality of life and preservation of a way of life?
- Does the proposal predict and justify the negative effects of the project on the livelihood of rural Nevadans? Are those predictions validated by impartial social and economic scientists?
- Does the approval process satisfactorily take into account the concerns, history, and culture of affected Native Americans and their tribal spaces and water supplies?
- Does the proposal adequately justify the use of water resources for urban and suburban entertainment, recreation, or leisure (e.g., the development of golf courses or the creation of second or vacation homes)?
- Does the proposal evaluate the negative environmental impacts on urban areas through uncontrolled population growth and resource consumption as a result of groundwater transfer?
- Does the proposal offer sufficient protection to the concrete and present needs of the few—those Nevadans directly and negatively impacted by the project—as opposed to the alleged needs of the many, e.g. the anticipated future populations of Clark and Washoe counties?
- Will projects hold out the prospect of a better quality of life for a *majority* of Nevadans in the immediate and projected future? Or will growth supported by water importation eventually reduce quality of life in Nevada, especially for the less affluent?

Alternatives And Options

Neither the State Engineer nor the Bureau of Land Management can be totally responsible for the overarching philosophy and pragmatics of water use in an arid state like Nevada. There exist enormous conflicts of interest and purpose as people discuss the use and potential misuse of land and water. Economic interests often conflict with environmental concerns. Views of the value of growth differ in conceptions of quality and quantity. Consensus on water issues is extraordinarily difficult to achieve. Yet it is particularly important that the people of Nevada work toward a consensus that satisfies multiple interests while creating a sustainable future. The Great Basin Water Network notes the following as major alternatives to present courses of action.

1. Delay the rush to judgment. Many of the projects described in this briefing book are scheduled for approval or disapproval within the next year or two. Given the magnitude of the decisions, their potential impact, and the need for long-rather than short-range solutions to Great Basin water issues, a moratorium on approval of major water projects may be warranted awaiting further research and the weighing of costs and benefits

2. Conduct needed in-depth research into western water issues. One model for research is the Basin and Range Carbonate Aquifer System Study (BARCASS), a federal mandate to the U. S. Geological Service to evaluate regional groundwater flow systems in White Pine and Lincoln Counties in Nevada and adjacent counties in Utah. This study is due for completion in December 2007. Unfortunately, neither the BLM nor the State Engineer's offices is required to use those data before reaching their decisions. In addition, the BARCASS study does not include a flow model as a way of evaluating impacts to the aquifer from pumping groundwater. Funding for an additional phase of research, which would include the vital flow model, has not been approved in Washington. The completion and extension of BARCASS is a necessary precondition for approving projects in the Great Basin.

3. Update Nevada water policy and law to reflect changing ecological and demographic conditions and projections. The Nevada Natural Resources Division water planning guide was published in 1995 during the incumbency of Governor Bob Miller, using data from 1985, 1990, and 1995. Some information has been updated, but much is inaccurate and out-of-date, particularly projections for population growth in Nevada. Moreover, water policy is not directly tied by law to approval decisions. Given the need for comprehensive and far-sighted decision making, both Nevada water policy and law need to be exhaustively researched and rewritten. Specifically, the GBWN recommends legislation that would:

- Create a statewide water resource inventory.
- Outline a "water budget" that includes precipitation, monitoring of existing wells, groundwater and surface water quantity/quality, geology, surface water quantity and quality.
- Fully describe local needs and issues.
- Estimate each hydrogeologic basin's projected future status.

4. Explore alternatives to interbasin transfer. Unanswered thus far in discussion and debate is whether transfer of water from one natural basin to another is justified on economic, social, and/or environmental grounds. The enormous cost of pipeline projects suggests that other ways of spending such huge sums be considered. Alternatives include purchase or lease of increased Colorado River water rights, increased water conservation, water banking in other states, and the exchange of desalination plants for California rights to the Colorado River. At worst, interbasin transfer should be considered only to be supplemental during a drought. Given the irremediable effects of water removal from natural basins, more alternatives need to be explored before approval is given to pending projects.

5. Study cultural and economic effects of rapid urban growth and slowed rural growth. Many current water proposals are based on the assumption that unlimited urban growth in both northern and southern Nevada is desirable and necessary. Many water proposals also imply that there is more than enough water in Nevada to support such growth. No cumulative impact studies or even discussion have occurred regarding the overarching economic impacts of projects, including per capita costs of health care, education, transportation, infrastructure, and so on. Solid and comprehensive research must be undertaken to look at the real costs of growth and water infrastructure for the state.

6. Examine ways to preserve the future of agriculture and ranching in Nevada. It is well documented that ranching and farming across the nation are in transition and that rural life is threatened by factors ranging from drought to agribusiness, from geography to competition from abroad. Just as the effects of water transfer and diversion must take urban effects into account, studies of the unique culture, ecology, and demography of Nevada farming and ranching need to be explored.

7. Explore what have been described by the BLM as “reasonable alternatives.” These include alternative facilities to lessen interference, impact, and disturbances of the land; decreased groundwater development; enhanced management systems, including conservation plans and improving monitoring and modeling systems; enhanced integration of overall water management programs; and watershed improvement projects that would result in reduced impacts on the Great Basin. Alternatives ranging from minimal to moderate to maximum pumping also need to be considered.

8. Conserve Water. State law requires water purveyors to develop water conservation plans, but it does not require those plans to be updated with any frequency. Furthermore, the Division of Water Planning was abolished, then reinstated under the State Engineer’s office, lessening its independence. Conservation education, efficient indoor and outdoor water use, agricultural efficiencies and drought-tolerant crops and water use restrictions are critical in a water-short state. Nevada is far behind some conservation efforts: For example, the Southern Nevada Water Authority aims to reduce per capita consumption to 250 gallons per day by 2010, but cities like Tucson and San Antonio have already reduced consumption below 150 gallons per day. Clearly water conservation should precede massive and costly water transfer projects. It’s time to add teeth to laws to enforce water efficiency.

9. Encourage and participate in broadened discussion and coordination of problems and plans. The issues described in this booklet are particular to Nevada and the Great Basin but share features with water supply problems across the arid west and, indeed, throughout the continent and around the globe. Because of its unique geology, population, and systems of governance, Nevada is in a position to provide leadership in examining and solving problems that affect billions of people world wide.

Taking Action

FEDERAL LEVEL

For congressional representatives—Senate and House members in Washington

- Fund additional research in the Basin and Range Carbonate Aquifer System Study (BARCASS) to provide genuinely predictive data for estimating drawdown effects if the SNWA pipeline project is approved. Insist that BARCASS results be included in any pending BLM decisions, in particular, the SNWA and Vidler/Lincoln County proposals (See pp. 2-3, #s 1 and 6).
- Extend the concept of BARCASS and fund similar research into the cumulative effects of proposed and anticipated water projects throughout the Great Basin.
- Support the federal agencies' requirements to consider a range of alternatives as well as both natural and social science studies in compiling, assessing, and analyzing data to fully comply with their responsibilities under the National Environmental Policy Act.

For the Bureau of Land Management

- Use the full authority granted the BLM to protect the economic, environmental, and cultural aspects in all EIS processes for the lands and communities within its jurisdiction.
- Maintain public trust through transparency, particularly in synthesizing and summarizing scoping and hearing comments by the public.
- Establish review processes that

investigate, coordinate, and consider the cumulative impacts of multiple mega-projects. Resist project-by-project or piecemeal studies and approvals of the regions under its domain.

STATE LEVEL

For the State Engineer

- Collect and publicize water conservation plans from water purveyors and require regular updates.
- Update publications such as *Nevada Water Facts* and *Nevada Water Policy* noting original or revision dates of adoptions or changes.
- Clarify how overall decisions are being made and how criteria for approval are weighted and synthesized.
- Keep the website fully up-to-date in order to make calendars for hearings and adjudications, applications, and notices available to the public in a timely manner.

For Nevada legislators

- Expand legislation covering the approval process for new water applications and applications for change of water rights. Include requirements for use of the best available scientific data on water, wildlife, other consumptive uses or existing rights, and knowledge of future community needs.
- Include cumulative planning of regional water uses in the approval process.

- Require the Engineer to collect updated conservation plans from each water purveyor and to find ways to mandate urban and rural water efficiencies.
- Strengthen laws requiring the State Engineer to reject applications of water for speculative purposes.
- Strengthen enforcement penalties for water inefficiency or overuse.
- Provide for participation of other state agencies in water hearings without having to file protests. These should include the divisions of Environmental Protection, State Parks and State Lands, Wildlife, Agriculture, and other agencies that have water as a resource under their jurisdiction.
- Fund studies similar to BARCASS to inventory water resources around the state and the region so that new information becomes available to the Engineer.
- Revise laws to allow successors of protestors of water applications to participate in hearings. Currently so much time passes that people die or move on, leaving surviving family members or new owners with no way to protect their current interests in water.
- Revise the definition of “public interest” to include cumulative impacts, water quality, the environment, recreation, and future water needs of rural communities.
- Recognize the cumulative connection between surface and groundwater, including deep carbonate aquifers. Base the approval process on best available scientific data.

For municipal and county officers

- Balance pressures for short-term economic gain and growth with long-term quality of life issues such as health, education, transportation, and cost of living.
- Insist that local decisions be made in the context of scientific research and water availability, all connected to specific lands and locations and comprehensive understanding of state and regional water issues.
- Plan for and enforce water efficiency/conservation.

For individual citizens

- Contact your local, state, and federal representatives to learn their positions on current water appropriation and growth. Insist on concrete answers and proposed actions.
- Attend public hearings. Voice your opinions. Make certain your opinions are included in minutes, environmental studies, or public meeting records.
- Link water issues to larger problems facing the Great Basin: the disconnect between water, air quality, and land; urban sprawl; cost of living and wages; infrastructure and services costs; travel time between work and home; health, education, and other issues.
- Participate actively and vocally in water efficiency/conservation programs in your town or city.
- Write letters and op-eds for your local and regional newspapers.

From the Public and the Press

“States are suing the federal government. States are suing each other. Cities and rural communities are at odds. What is the source of all this controversy? Water rights. . . . A number of conditions have combined to create the current crisis. First, water sources, aging water infrastructure and land development have affected water supply. Second, population growth and trends in water usage are putting higher demands on water sources. To alleviate water supply problems, states can promote transfers of water rights, create drought plans, encourage good water quality through mechanisms such as minimum streamflow requirements, discourage overuse, improve infrastructure quality and integrate water planning with land use planning. On the demand side, there is a wide variety of conservation programs. These include measurement of water usage, pricing structures that promote efficient water use, water audits, promotion of efficient landscaping and irrigation, water reuse and recycling, management of water system pressure, retrofit and replacement of inefficient fixtures and appliances, and conservation education. States should also consider comprehensive water plans that address both supply and demand issues.”

“Water Wars”
Trends Alert

The Council of State Governments, 2005

“We must insist on INDEPENDENT studies to find what the PEOPLE want in the way of more growth, congestion, pollution, crowding, crime, etc., in Southern Nevada AND Nevada as a whole. When did this cease being the State of Nevada?”

Jim Brauer
Indian Springs, Nevada

“A substantial volume of scientific literature published over the past 40 years clearly identifies the existence of a variously integrated aquifer system extending approximately from Great Salt Lake to Death Valley. Removal of a large volume of water from that aquifer system has been shown to have a high probability of impact throughout most of the region. . . . Therefore, on the basis of information contained in the papers cited, and in other literature, [the BLM’s] definition of ‘down gradient’ must include a region extending from at least Sevier Lake, Utah, to Death Valley, California.”

James Deacon
Professor Emeritus, University of Nevada, Las Vegas

“They might complain about their dirty cars and dry fountains, but an overwhelming majority of Clark County residents surveyed support drought restrictions and favor limits on new construction to protect the region's water supply. A *Review-Journal* poll of 381 Clark County voters found that 75 percent support the drought restrictions imposed by the Southern Nevada Water Authority, while 58 percent said they oppose water-use exemptions for resorts on the Strip. In the poll's most lopsided result, 77 percent of Clark County voters said they would support a limit on water permits for new construction until the drought restrictions are lifted.”

Henry Brean, “Drought Concerns”
Las Vegas Review-Journal, March 2004

“I am a native Nevadan and I love our state, its majestic mountains and deserts. Many ranches and farms, as well as towns and thousands of people would be adversely affected by routing water that rightfully belongs in Northern Nevada to what is becoming a virtual octopus seeking to spread its tentacles anywhere to gain water. First of all, a flight over Las Vegas displays a panorama of huge green lawns, golf courses and swimming pools, to say nothing of the flamboyant displays of fountains by the casinos and the need of providing for the tourists who drain our natural resources. . . . My husband spent much of his boyhood in Owens Valley and whenever we drove to Los Angeles we would see the effect of diversion of its water to that huge city. A verdant valley was turned into a virtual wasteland.”

Esther Early
Letter to the Editor
Reno Gazette-Journal, May 2005

“Oops! Here they go again. The severe drought has Las Vegas builders and other water users and suppliers wanting to reach into northern counties to replace dwindling supplies. This isn't a new idea but has, until now, been put on the back burner. Big bucks and the drought have dragged it out of hiding again. . . . Any large amount of water pumped from beneath the ground can have a devastating effect on the natural environment in a dry state like Nevada. We almost destroyed the Las Vegas Valley during the 1950s and early 1960s before the state identified the irreparable damage being done. The valley sank several feet as the water was pumped from it. Local artesian wells dried up and pumps were left standing in the air as the ground sank deeper and deeper. . . . We must remember this lesson before deciding to build a pipeline and water collection system that costs billions of dollars and reaches all the way to White Pine County.”

Mike O'Callaghan
Las Vegas Sun
February 2004

Resources and Contacts

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Websites

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www.crwua.org/nv/crwua_nv.htm
Desert Research Institute
www.dri.edu
Great Basin Water Network
gbwaternet@yahoo.com
National Environmental Policy Act
ceq.eh.doe.gov/nepa/regs/nepa/nepaeqia.htm
Natural Resources News
www.dcnr.nv.gov/press.htm#news001
Nevada Division of Water Resources
www.water.nv.gov
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Owens Valley Committee
www.ovcweb.org
Progressive Leadership Alliance
of Nevada
www.planevada.org
Sempra Energy
sempra.com
Sierra Club Toiyabe Chapter
www.toiyabe.sierraclub.org
Snake Valley Citizens Alliance
www.nvwaterfront.org
Southern Nevada Water Authority
www.snwa.org

US Geological Survey
www.nevada.usgs.gov
Vidler Water Company
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Watermarks: Colorado River Water
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www.crwcd.gov/watmarks.htm
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Nevada Water Facts

- Nevada's total area is 110,560 square miles, with surface water area of only 734 square miles (0.66%). 84% of Nevada (93,000 square miles) is within the Great Basin. Approximately 80% of land in Nevada is under the jurisdiction of the federal government. .
- Within the Great Basin, most waters flow into sinks or lakes with no outlets. The only rivers depositing water into the sea are the Snake River drainage (via the Columbia River) and the Colorado River (which naturally flows to the Gulf of California, but due to over-apportionment and drought, no longer reaches the sea).
- Average precipitation in the state average 9 inches per year (see precipitation map, front cover) —up to 40 inches per year in the thin strip of the Sierra within Nevada, as little as 4 inches per year in the southern Nevada population belt. Precipitation in the entire Great Basin averages 5 inches per year.
- Nevada is among the top ten states in the number of federally listed endangered and threatened species, including the Cui-ui, Ash Meadows Amargosa Pupfish, Virgin River Chub, and a dozen other fish; the Southwestern Willow Flycatcher, Brown Pelican, and other birds; plus numerous insects and plants. Over 300 additional organisms in the state are candidates for inclusion. Most of the listed animals and plants are water-dependent species associated with streams, springs, or wetlands.
- Nevada' annual apportionment of Colorado River water is 300,000 acre-feet per year, a figure negotiated long before the current building and population boom in Clark County. The proposed private and municipal transfer of water from rural Lincoln, White Pine, and Nye Counties to Las Vegas is approximately 343,600 acre-feet per year, supporting a doubling of the population.
- The approximate state population is 2,334,771 (2004 US Census Estimate). Projected population 2020: 3,452,283. Population densities: Washoe County 53 persons per square mile; Clark County, 179 per square mile; White Pine County, 1 person per square mile.
- It has been 130 years since John Wesley Powell, argued that in the arid west, water should not be transferred from one geographical basin to another. His advice has often been ignored, most infamously in the Owens Valley, where water was pumped hundreds of miles to Los Angeles, leaving the Owens Valley high and dry. Powell was also ignored in 1902 with the Newlands Reclamation Act, which lead to the Truckee River diversion, an eighty-foot drop in the water level of Pyramid Lake, and a century of litigation and legislation over the rights, needs, and interests of ranchers and farmers, Native Americans, fish and wildlife, and urban northern Nevadans.



The Progressive Leadership Alliance of Nevada (PLAN) is a non-profit organization dedicated to serving the people of Nevada. PLAN was formed in 1994 to bring people and organizations together who are committed to making a positive difference. PLAN provides a vehicle in Nevada for building consensus and developing collective strategies among progressives on a range of problems including environmental, economic, and social justice issues.

Back cover photos by Dennis Ghiglieri:

Top: Las Vegas Wash above Lake Mead

Bottom Left: Colorado River below Hoover Dam

Bottom Right: Sprinkler runoff

