



Western Water Policy: The Challenges and Opportunities of Our Times

— *Our Legacy for the Next Generation* —



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Protecting and enhancing
Western irrigated agriculture



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Policy Recommendations

- ◆ The U.S. must adopt an overriding national goal of remaining self-sufficient in food production. Food security is homeland security. Policy decisions on a wide range of issues should then be evaluated to be sure they are consistent with that goal.
- ◆ State and local governments must consider the impacts of continued growth that rely on water transfers from agriculture and rural areas and to identify feasible alternatives to those transfers.
- ◆ When water laws and environmental laws conflict, balanced solutions that respect both the socioeconomic realities of the West and the long-term needs of ecosystem must be found.
- ◆ State laws and institutions must be given deference in issues relating to water resource allocation, use, control and transfer. The best decisions on water issues happen at the state and local level, as “one size fits all” national policies cannot reflect the unique and diverse circumstances encountered throughout the West.
- ◆ Aging water infrastructure must be addressed promptly and with priority commitments, as failure to do so will create a failed legacy for the next generation.
- ◆ New water supplies must be developed to provide for recreational and environmental needs, allow for population growth and protect the economic vitality of the West.
- ◆ Western water research needs must be prioritized and coordinated.
- ◆ Real management is needed in the real “reservoir” of the West – our federally-owned forest lands in upper watershed areas.



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Our Legacy for the Next Generation



Water is the key to the American West. Food security is as vital to our homeland security as our nation's other strategic interests, and the production of food and fiber on Western irrigated lands is critical to our nation's ability to feed itself. You cannot visit the West and not talk about water. No other commodity holds so much power or so much promise, and no other commodity has the often realized potential to cause so much conflict.

As the West has grown, water issues have become increasingly polarized. We face a number of significant challenges in the Western water arena. Growing urbanization and increased public demand for available supplies to provide recreational and environmental benefits are placing heavy demands on Western water, the key ingredient in the production of agricultural products.

Some argue that Western irrigated agriculture uses too much water. Others insist that a healthy rural economy is driven by farmers and their production of food and fiber. Everyone can agree, however, that reallocating scarce water supplies from farms to cities and instream demands will alter the rural West's fabric. Although the debate is often divisive, these challenges can be addressed by thoughtful, motivated and reasonable parties.

Inaction in this regard really is action. By not seeking creative ways to streamline the regulatory process associated with repairing existing facilities and creating new water infrastructure, the inevitable and foreseeable action that will follow is a deterioration of the status quo. Lack of active planning will allow water-short cities and new recreational and environmental demands to absorb farmers' water supplies. It will significantly diminish domestic food production at exactly the same time climate change may severely and adversely impact food production worldwide. We must plan for that now, and not wait until we are forced to make decisions during a crisis.

The Family Farm Alliance believes the West can find solutions to our conflict which assure that we can feed ourselves, export food to others, and continue to lead the world in agricultural production while finding ways to accommodate urban growth, recreational demands, and environmental requirements.

Solutions will not come easily. They will require visionary leadership and a firm commitment to a balanced, workable policy. But opportunities exist, if we are prepared to seize them.

We believe society will reject an approach which leads to shuttering farming communities to meet urban growth, recreational demands and environmental requirements. Our nation needs a stable domestic food supply, just as it needs a stable energy supply.

Now is the time for a consistent and thoughtful federal water policy that looks to meet all of the needs of the West and the nation. The Family Farm Alliance believes the recommendations in this paper can form the basis for that policy.



Background

Over the past 20 years, we have moved toward a new paradigm when it comes to Western water policy. That paradigm assumes that the policies of the past, the policies that enabled the West to be settled and to flourish, have now outlived their usefulness and practicality. It is a belief that we no longer need to manage Western water resources in a manner that continues to encourage investment in agricultural production. And many times, it is also a paradigm that embeds a belief that the continued development and use of Western water resources for agriculture is inconsistent with the nation's goals to protect and steward the environment.

The Family Farm Alliance strongly believes that with visionary leadership, we can find balanced solutions to today's issues. We believe it can be done without destroying the successes of the past.

Family Farm Alliance Background

The Family Farm Alliance is a grassroots organization of family farmers, ranchers, irrigation districts and allied industries in 16 Western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. We are also committed to the fundamental proposition that Western irrigated agriculture must be preserved and protected for a host of economic, sociological, environmental and national security reasons – many of which are often overlooked in the context of other policy decisions.

Food and Fuel Prices are Rising in an Era of Rapid Change

Prices of virtually all food commodities have increased substantially over the past year. Things are rapidly changing, and many complex factors, including economic growth, international trade, currency markets, oil prices, government policies and bad weather



(including the 2008 Midwest floods) have contributed to higher food prices. The dollar has depreciated, which is linked to higher demand for U.S. agricultural commodity exports and higher oil prices. Higher oil prices, in turn, have driven up the demand for biofuels. A burgeoning class of consumers in countries like China and India is increasing food demand at the same time that agricultural productivity growth is declining.

For the first time in over 30 years, the world food reservoir is dwindling as consumption exceeds production. Over the past four to eight years, depending on the commodity, growing demand and sluggish productivity growth led to the change from a surplus to a shortage era and set the stage for commodity price increases. When weather and crop disease shocks hit commodity markets in 2006 and 2007, stocks of many agricultural commodities were already low, thus exacerbating the price impacts. The policy actions of some countries to isolate their domestic markets through export restraints made the situation even worse¹.

Lost in all of this is the role of the American family farmer and rancher, where the domestic production of food and fiber ultimately begins. The very farmers and ranchers who can play a positive part in keeping food available and costs affordable are also



part of Western communities who may most keenly feel the impacts of the faltering economy.

Higher energy and food prices disproportionately impact the poor, especially in rural areas. Fertilizer and fuel costs are already going through the roof, and livestock operations are also seeing higher costs for feed such as alfalfa and corn. Those increased costs likely will mean higher prices at the cash register of grocery stores. A survey by the Oil Price Information Service earlier this year found that the fuel crisis is hitting people hardest – as a percentage of income - in rural areas of the South, New Mexico, Montana, Wyoming and the Dakotas. In Colorado, a recent study found that homeless families with children cited high energy bills as one main reason they became homeless.

The rural West faces challenges today that demand strong citizen engagement and aggressive, outspoken leadership by our elected officials. When Western food and fiber producers begin to disappear, the ripple effect will extend far beyond their communities. In the last 12 months, we have already witnessed this. As a country, we have become complacent, and food production

has been taken for granted too long. The United States for nearly four decades helped defeat world hunger through its massive production output of affordable food. Western family farmers and ranchers can continue this campaign, but they need to be told – through leadership and development of priority policy – that what they do matters to this country.

Strong Leadership is Needed to Protect Family Farms and Ranches

Legislative gridlock and lack of political will are partly to blame for the West's inability to cope with water conflicts. For example, in California, the inability of leadership in the State Legislature has recently prevented water supply enhancement initiatives from moving forward. This is unfortunate, since new supply and conveyance facilities can actually improve management flexibility that benefits fish, farmers and urban dwellers. Doing nothing pits these interests against each other.

As food and fuel prices soar, more and more Americans are beginning to realize that the fundamental foundations for their well-being are beginning to erode. Amazingly absent in the growing public dialogue about these matters is a demonstration of leadership and courage by our elected officials to confront the root causes of the epidemic of problems hitting us at once. Our political leaders need to step up fast and address the “big picture” crisis. Western farmers and ranchers can play a part in a solution to that crisis – if we can keep them on the farm.

Disappearing Small Family Farms

The number of farms is declining throughout the West². According to the U.S. Department of Agriculture (USDA), the total number of farms nationally is 2.08 million, a 0.6 percent drop from a year ago. Nationally 930.9 million acres are in farmland, a 1.5 million-acre drop from a year ago.

For example, at the start of 2008 in Oregon,



California, Idaho and Washington, there were 170,800 farms, a decline of 2 percent compared to one year ago. California, Oregon and Washington each lost 1,000 farms since the last USDA annual report on farm numbers. There are 500 fewer farms in Idaho, according to the USDA report.

In the West, Oregon, California and Idaho each lost 100,000 acres compared to a year ago.

USDA attributes the decline in the number of farms and land in farms to a continuing consolidation in farming operations and diversion of agricultural land to nonagricultural uses.

Meanwhile, according to USDA's Economic Research Service statistics, Americans are spending, on average, 9.7 percent of their disposable income on food. To put this into perspective, consider what citizens living in other countries pay. For example, in Brazil, 22.7% of annual expenditures go for food. In other countries, people spend even more on food:

Country	Percent of Annual Income Spent on Food
Mexico	26.6%
Argentina	32.8%
Lithuania	40.4%
Indonesia	50.6%
Vietnam	64.7%
Tanzania	73.2%

At a time when average Americans are feeling the pinch in their pocket books, the foundation of our country's ability to provide safe and affordable food and fiber is at risk. Ironically, it is because Western irrigated agriculture has been so adaptive and successful at providing plentiful, safe and affordable food that it is now jeopardized – nobody believes there can be a problem. The last Americans to experience food shortages are members of the Greatest Generation and their parents. For the most part, they have



Roosevelt Dam, part of the Salt River Project in Arizona.

left us, taking with them the memories of empty supermarket shelves. When the issue has never been personalized, it's easy to be complacent.

Agricultural Water Cannot Continue to be the Default Water Supply for the Modern West

The West is the most rapidly growing part of the United States. Yet, water supplies there are essentially static. In some areas, urban demand for water -- and land -- is straining agriculture and rural communities to the breaking point. New environmental water demands imposed by regulatory agencies or courts also first look to agriculture, as evidenced by the water supply crisis farmers in California's San Joaquin Valley are facing this year. Conversion of agricultural land and water to other uses is happening in every state, but farmers and ranchers point to some striking examples:

A report released in 2006 by Environment Colorado found that, from 1987-2002, Colorado lost an average of 460 acres per day of agricultural land. The report predicts 3.1 million more acres will be lost to development by 2022.

Arizona's massive Salt River Project (SRP) in a few years will cease to provide water to agriculture in order to meet new urban growth demands.



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In Las Vegas, Nevada, over 70,000 new residents are moving in every year, and urban water officials are looking to rural areas to satisfy its growing thirst.

A restoration agreement developed for the Platte River could potentially dry up hundreds of thousands of acres of farmland in Nebraska and Wyoming, in order to reallocate water to meet the needs of imperiled fish and wildlife.

The California Department of Conservation indicates that more than 1 million acres of farmland in the state was converted to new residential and commercial uses between 1988 and 1998. In 2005, California's population officially topped 37 million, a growth rate of 1.4 percent, representing 500,000 new residents in the last fiscal year. With the state's population growing rapidly and developers responding with new housing subdivisions and commercial centers, farmers and ranchers are getting pinched, particularly in the Central Valley. In some of California's most productive farm counties, these pressures have eroded the agricultural land base and impacted dwindling water supplies.

Admittedly, many of the transactions involving agricultural land and water conversions include "willing" buyers and sellers. How many of those sellers, though, were truly "willing"? Farmers and ranchers are exposed to overlapping and inconsistent mandates from different regulatory agencies

that are piled on year after year. Pressure is building on farmers to give up the lifestyle and preserve the remaining equity in their property for their families, or move farming operations to other countries where labor is plentiful, environmental concerns relaxed and economic development is welcomed³.

Farmers, ranchers and rural communities cannot provide the water supplies need for the Western population boom without ruining their own communities and businesses.

Farmland is disappearing at a time when the U.S. needs a stable domestic food supply (just as it needs a stable energy supply). A reliable, safe and sustainable domestic food supply is just as important as a strong military to the protection of our national interests. The post 9/11 world of terrorist threats makes the stability of domestic food supply even more pressing. We are concerned that this critical issue – which becomes even more serious when viewed in the context of projected climate-change impacts to water supplies - is being overlooked by our national leaders.

For farmers to survive; for food to be produced in America; a stable water supply must be available. In many areas of the West, water resources are available and waiting to be developed⁴.

However, the policies of the federal government make development of that water nearly impossible. Water conflicts are erupting throughout the West simply because we have not had the vision to develop new, environmentally sound, sources of water.

We cannot continue to downplay or ignore the negative implications of reallocating more agricultural water supplies to meet new urban and environmental water demands. At what point will too much agricultural land be taken out of production? Do we want to rely on imported food for safety and security? The Europeans, who have starved within memory, understand the



importance of preserving their food production capability. They recognize it for the national security issue that it is. If our elected leaders want to do something truly meaningful, they too, should look at the bigger picture.

Our Crumbling Water Infrastructure

The Bureau of Reclamation (Reclamation) built and manages the largest part of the critical water supply infrastructure that is the foundation of the economic vitality of the 17 Western States. Most of this federally-owned infrastructure is over 50 years old^{5,6}, approaching the end of its design life, and needs to be rebuilt and rehabilitated for future generations. The Congressional Research Service has calculated the original development cost of this infrastructure to be over \$20 billion, and Reclamation estimates the current replacement value of its water supply and delivery infrastructure at well over \$100 billion.

Our water supply infrastructure is not only in disrepair, but it is also outdated. Dams and canals that are more than half a century old were conceived of and designed using projections from the early 1900s. As visionary as the water infrastructure planners were a century ago, they could not have foreseen the explosion of population and resource utilization in the West of the past several decades. Even if repaired, our water supply infrastructure is based on demonstrably inaccurate assumptions. Would American's tolerate a highway system designed in 1920 that had never been expanded? While the answer is obvious, we are in effect relying on a 1920 water supply system in much of the West.

In the American West, Federal water supply systems are essential components of communities, farms, and the environment. These facilities are part and parcel of the nation's food-production system and their operation helps ensure our ability to provide reliable and secure food for our own citizens and the



rest of the world. Reclamation estimates that \$3 billion will be needed from project users in the near-term to provide for essential repairs and rehabilitation of Reclamation facilities.

Aging public infrastructure across the Nation is a growing critical problem. For example, throughout Reclamation's history, canals have been constructed in the West to deliver project benefits. When these canals were constructed, they were located generally in rural areas, where the major impact of canal failure was the loss of project benefits. However, with increased urbanization occurring on lands below many canals, loss of life or significant property/economic damage can now result from failure.

Water projects constructed in rural areas, with limited ability to pay for massive rehabilitation, also pose a problem. For example, Reclamation's St. Mary Facilities of the Milk River Project (MONTANA) are in urgent need of rehabilitation. Most of the structures have exceeded their design life and are in need of major repairs or replacement. The St. Mary dilemma is seen by many as the "poster child" example of an aging water project that must be modernized soon, with potentially catastrophic implications if the problems are not addressed.

Similarly, much of the 55-year old Mancos Project in the southwest corner of Colorado was constructed by local interests prior to

FFA Executive Director Dan Keppen, Montana Governor Brian Schweitzer and Bureau of Reclamation regional director Mike Ryan at 2005 press conference on aging infrastructure challenges facing the St. Mary facilities on the Milk River, Montana.



1900. The Mancos Project has retained most of its structural integrity and functionality. However – as noted in an alarming number of other aging water facilities in the West – significant potentially catastrophic problems have been identified that threaten the future working life of this important project.

Like many other parts of the West, these single-purpose projects put the financial burden of repairs on the irrigators they serve, who simply do not have the resources to solely pay for such an expensive repair. The solutions developed at St. Mary and Mancos

may very well provide successful templates that can be used in other parts of the West.

Voters Support Water for Farmers

Our elected officials are on solid ground when they stand up for farmers and their water. A 2006 survey released by Colorado State University⁷ is remarkable for the strong support average citizens give agriculture in that state. For example, agriculture was seen as the most important economic sector in Colorado, beating out tourism & recreation, high tech industries, and mining and petroleum. Nearly all respondents (96.8%) felt that maintaining agricultural land and water in agricultural production was “very” or “moderately” important. And, notably, nearly 3 of 4 respondents indicated that agriculture should be the top priority for water allocation in dry years, as compared to 1 in 5 respondents who said in-stream flow levels should be top priority. Rafting and fishing were seen as low priorities.

Many Western irrigators believe the Colorado findings are indicative of how other Westerners view irrigated agriculture and should encourage positive political action to protect and enhance Western irrigated agriculture. A similar survey conducted by CSU in all 17 western states supports this belief. In a study soon to be released, preliminary results indicate that western households support water storage projects and irrigation over environmental and recreational water needs in times of shortage.

Policy Recommendations

Western water supplies are already inadequate to the demands of agriculture, urban growth and environmental enhancement. Global climate change, we’re told, will further reduce those supplies. So how will we meet the ever-increasing demand for water in the West in an era when there will be an ever-decreasing supply? Improved conservation, water reuse and efficiency by

urban and agricultural water users are certainly parts of the solution, but only a part. Resolving these issues without destroying what we worked so hard to achieve is the challenge that we all face. To be successful, we must face them together. No resolution will be found unless we find a way to balance all competing needs.



We believe that within the policies outlined in this paper lay the foundation upon which to build for the future. It will be a foundation that allows for resolution of significant conflicts in a way that supports continued growth of irrigated agriculture.

Policy 1 - The U.S. must adopt an overriding national goal of remaining self-sufficient in food production. Food security is homeland security. Policy decisions on a wide range of issues should then be evaluated to be sure they are consistent with that goal.

Remarkably absent from the newly-ignited dialogue about fuel and food costs and food safety is recognition of the importance of a secure and sustainable domestic food supply. Politicians from both parties now routinely urge us to end our reliance on foreign energy sources, but nobody is talking about food independence. A national response should include as one of its goals self-sufficiency in food production. It is time for our national leaders to stand up and focus on improving the security, stability, and economic aspects of domestic food production so that our food remains readily available, ample, affordable, and safe.

An obvious solution to address this alarming development would be to increase agricultural productivity and output. In our own country, that means finding ways to keep farmers and ranchers doing what they do best, and to further encourage young farmers to follow in their footsteps.

Europeans aggressively protect their farms and food production capability because they still remember the hungry years during and after World War II when they relied on other nations, America in particular, to feed them. The time has come – indeed, it’s long overdue – for the United States to similarly adopt an overriding national goal of remaining self-sufficient in food production. Policy decisions on a wide range of issues ranging from taxation to the management of natural

resources should then be evaluated to be sure they are consistent with that goal. It’s hard to imagine a simpler or more important step to safeguard the American public.

Policy 2 - State and local governments must consider the impacts of continued growth that rely on water transfers from agriculture and rural areas and to identify feasible alternatives to those transfers, including reuse.

There is growing recognition that states and local governments must consider the impacts of continued growth that relies on water transfers from agriculture and rural areas and to identify feasible alternatives to those transfers. For example, a 2006 report released by the Western States Governors Association (WGA) states “there is understandable support for the notion of allowing markets to operate to facilitate transfers from agricultural to municipal and urban use as a means to accommodate the needs of a growing population. While such transfers have much to commend them, third party impacts should be taken into account, including adverse effects on rural communities and environmental values. Alternatives that could reasonably avoid such adverse impacts should be identified.”

The Family Farm Alliance is working with WGA and Western States Water Council to develop a report on successful and unsuccessful agricultural-to-urban water transfers to determine how transfers can be accomplished in a manner that avoids or at least





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mitigates damage to agricultural economies and environmental values, while at the same time avoiding infringement on private property rights. The Alliance position will be built upon a policy founded in fundamental truths:

Although water is lost to evaporation in surface reservoirs that serve agricultural, environmental and urban uses, there is very little “wasted water” associated with moving and applying irrigation water.

Water not directly

consumed through evapo-transpiration often serves other purposes, such as replenishing groundwater, buffering soil salinity and supporting riparian vegetation.

Further tightening of urban water conservation measures, in essence, “hardens” those urban demands. Some degree of flexibility must be embedded in urban water conservation programs to allow these areas to employ more restrictive water conservation measures during drought periods. Without having the ability to save water during drought periods via drought conservation measures, the resulting hardened demand will force urban water managers to more quickly look to secure water from other areas; namely, agriculture and the environment.

A multitude of unique solutions exist for Western communities wrestling with growing urban water use. The Northern Colorado Water Conservation District is currently

seeking to develop new offstream storage to protect agriculture as urbanization sweeps into Northern’s traditional service area. Farmers in the Klamath Irrigation Project (**California/Oregon**) are paid through an environmental water bank to temporarily fallow land or pump groundwater in place of using Klamath River water. On the other hand, unsuccessful implementation of Central Valley Project Improvement Act water transfer provisions in California suggests that water markets cannot be legislated.

There will be nothing done with water in the West without there being winners and losers. Cities may expect to buy water from farms, but that is not a long term solution as global food shortages make farming a crucial national need.

Policy 3 – When water demands and environmental laws conflict, balanced solutions that respect the socioeconomic realities of the West must be found.

Environmental enhancement and mitigation programs are competing for existing sources of water. Across the West, environmental activists have attempted to redirect water to environmental uses through litigation and negative media campaigns, without adequate public process or regard for prior commitments. These actions have caused major conflicts, costly lawsuits and delayed benefits for endangered species and the environment.

In recent years, many in the environmental community have focused on irrigation projects and dams as the source of all woes facing Western fisheries. This distracts policy makers from employing a balanced, comprehensive approach to all factors that limit the abundance of at risk, native fish species. In California’s Bay-Delta, for example, environmental activists have focused almost exclusively on state and federal water pumps in the Delta that supply water for millions of



acres of the most productive farmland in the world, not to mention drinking water for millions of Southern Californians. They ignore or downplay many other factors that stress fish, including the loss of plants located in the Delta; the introduction of non-native species, including predator species like the striped bass, the decline of food availability; and the discharge of toxins into Delta waterways and streams tributary to the Delta. Over the course of the last eighteen years, the effort to recover native species in the Delta has been heavily focused on limiting operations of the state and federal projects. Tens of millions of acre-feet have been managed in order to protect and enhance populations of Delta smelt, salmon and steelhead. Yet, these efforts have failed, and abundance indices for these species are at record lows⁸.

There is a better way. Solutions to these complex issues can be found by reasoned, well intentioned people. Water users care about the environment. Creative, successful solutions can be found by motivated, unthreatened parties. Incentives that create reasons to succeed will do more good for the environment in a shorter period of time than actions that rely on threats of government intervention. Successful incentives will ultimately reduce occasions for judges to be forced to substitute their own judgment for that of professionals and stewards of the land.

Policy 4 – State laws and institutions must be given deference in issues relating to water resource allocation, use, control and transfer. The best decisions on water issues happen at the state and local level.

The federal government has repeatedly recognized this fact. In 1952, Congress passed the McCarran Amendment. This law specifically waives the sovereign immunity of the United States in matters that pertain to state water right adjudications. This system may be frustrating for federal agencies but it

works.

Solutions to conflicts over the allocation and use of water resources must begin with a recognition of the traditional deference to state water allocation systems. Federal agencies must acknowledge that they are required to adjudicate water rights for federal purposes according to state law and abide by state decrees defining both federal and non-federal rights.

Recently, in many areas of the West, federal agencies have attempted to redirect water to solve environmental issues, without regard for state law or prior commitments, via implementation of federal laws that have the effect of overrunning state statutes. These actions cause far more problems than they resolve. Environmental issues must be resolved through a cooperative process that respects state water law.

A simple commitment by federal agencies to work within the framework of existing appropriative systems instead of attempting to fashion solutions which circumvent current water rights allocation and administration schemes would form the foundation for eliminating the gridlock that now paralyzes federal water management decisions.

Such a commitment would encourage states and water right holders to proactively address water allocation issues by eliminating the now omnipresent fear that a subsequent federal mandate will either undermine local efforts to address an allocation issue or suddenly require unexpected additional reallocations of water which render local cooperation impossible.

In the future, we may see more Native Americans and non-Indians beginning to





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farm on tribal lands. Land use planners at the county and other local levels should coordinate with these parties so that plans actually protect interest in agricultural lands and production.

Policy 5 - Aging water infrastructure must be addressed promptly and with priority commitments, as failure do to so will create a failed legacy for the next generation.

Specific action can be taken in Washington, D.C. to tackle the looming water

infrastructure problems plaguing the West:

Direct more funding to the Department of Interior Water 2025 Challenge Grant program to implement (i.e. "build") projects that have been submitted but not approved for funding.

Reaffirm the loan guarantee authority provided in the Rural Water Supply Act. Congress should specifically direct funding and implementation of the loan guarantee program authorized by The Rural Water Supply Act of 2006. Unfortunately, Reclamation loan guarantees, a long-awaited critical financing tool for water users across the West, are now being held up because of incorrect interpretations of clear Congressional direction by the Office of Management and Budget (OMB). It is unfortunate that further legislation is required on this matter, since we do not believe that this is what Congress intended. However, Senator Harry Reid (**Nevada**) earlier this year introduced a bill (S. 2842) designed to make

aging federal-owned canals and levees safer across the West. This bill, with appropriate amendments, could provide a vehicle to facilitate implementation of the loan guarantee program.

Establish a direct loan program for local agricultural water districts. This would require full appropriation by Congress, over and above what Reclamation already funds. The program would provide low interest loans to irrigators and repaid by them.

Any economic stimulus package contemplated by Congress should be used to draw attention to critically important water-related infrastructure. Congress should consider options to provide financial assistance for major water infrastructure repairs, updating and expansion.

It is imperative that we find creative ways to provide for the operation, maintenance, and modernization of existing water supply infrastructure. Implementation of these recommendations would provide important first steps towards solving our aging water infrastructure problems.

Policy 6 – New water supplies must be developed to provide for recreational and environmental needs, allow for population growth and protect the economic vitality of the West.

We believe that it is possible to meet the needs of cities and the environment in a changing climate without sacrificing Western irrigated agriculture. To achieve that goal, we must expand the water supply in the West⁹. There must be more water stored and available to farms and cities. Maintaining the status quo simply isn't sustainable in the face of unstoppable population growth, diminishing snow pack, increased water consumption to support domestic energy, and increased environmental demands.

It strains credibility to believe that conservation alone will supply enough water for the tens of millions of new residents expected to



arrive in Western cities during the coming decades. Farmers and ranchers understand that conserved water cannot realistically be applied to instream uses, as it will more likely be put to beneficial use by the next downstream appropriator or held in carryover storage for the following irrigation season.

Many water projects are ready and waiting to be developed in the West. While conservation and recycling programs have done a tremendous job of meeting new growth, still, only a small amount of new water has been developed in the past 30 years. We cannot continue to “conserve just a little more” forever.

The federal government must adopt a policy of supporting new projects to enhance water supplies while encouraging state and local interests to take the lead in the implementation of those projects. It’s time to start developing and implementing the water infrastructure needed to cope with a changing climate, meet the needs of a burgeoning population, and support a healthy agricultural base in the West. While on-stream storage should not be seen as unacceptable, off-stream storage, groundwater banking, and countless other forms of water development should be encouraged as a matter of federal policy and law.

Local and state interests have shown enormous creativity in designing creative water development projects. For example, the State of Wyoming has initiated its Dam and Reservoir Program, where proposed new dams with storage capacity of 2,000 acre feet or more and proposed expansions of existing dams of 1,000 acre feet or more qualify for state funding. Wyoming water managers and policy makers recognize that dams and reservoirs typically provide opportunities for many potential uses. While water supply is emphasized in the Wyoming program, recreation, environmental enhancement, flood control, erosion control and hydropower uses are also explored as secondary purposes.

Modern, integrated water storage and

distribution systems can provide tremendous physical and economic flexibility to address climate transformation and population growth. However, this flexibility is limited by legal, regulatory, or other institutional constraints, which can take longer to address than actually constructing the physical infrastructure¹⁰.

The often slow and cumbersome federal regulatory process is a major obstacle to realization of projects and actions that could enhance Western water supplies. The Family Farm Alliance wants to work with the new Administration, Congress, and other interested parties to build a consensus for improving the regulatory process.

Policy 7 - We Must Coordinate and Prioritize Western Water Research Needs

Our country has tremendous, but limited, resources available to fix our problems, so we must prioritize. One priority research item should be a comprehensive validation of West-wide changes in climate change-driven streamflow. This should be followed by quantification of the amount of additional reservoir storage, conservation targets, etc required to re-regulate this change in hydrology. This would quickly illustrate to policy makers the need to start modernizing our water infrastructure. This assessment should be accompanied by a comprehensive study of the collective impacts of agricultural land and water changes in Western states over the last 10 years, as well as predicted trends. A study of this sort may provide the type of hard findings that may help wake up policy makers on the “big picture” ramifications of this issue.

The potential water impacts associated with use of alternative fuels must also be studied.





Western Water Policy: The Challenges and Opportunities of Our Times



Throughout the West, we are seeing proposals to build plants to make ethanol, another “answer” that may (or may not) lower greenhouse gas emissions. An April 2007 *Sacramento Bee* editorial provides a reality check on how much water it would take to grow all the corn required to meet California’s goal of producing a billion gallons of ethanol a year. According to the *Bee*’s calculations, that’s about 2.5 trillion gallons of water for 1 billion gallons of ethanol, which is more than all the water from the Sacramento-San Joaquin Delta that now goes to Southern California and valley farms. Because there is only so much water for agriculture in California and other Western states, this means that some other existing crops will not be grown, thus furthering our dependence on imported food sources.

Another growing demand that will be placed on Western water resources is driven by power requirements. The total water consumed by electric utilities accounts for 20 percent of all the nonfarm water consumed in the United States. By 2030, utilities could account for up to 60 percent of the nonfarm water, to meet the water needs required for cooling and pollutant scrubbing. This new demand will likely have the most serious impacts in fast-growing regions of the U.S., such as the Southwest.

There are also risks and opportunities to manage water associated with petroleum development. Across the western United States alone, more than five billion gallons per day of “produced water” is brought to the surface during petroleum production¹¹. This wastewater has historically been re-injected back into the ground and “lost” to further uses. Recovering usable water from sources contaminated by oil and gas drilling operations could significantly help our farmers, ranchers and recreational users, not to mention the habitats of many plants and animals.

Earlier this year, President Bush signed a measure sponsored by U.S. Senator Ken Salazar (**Colorado**), the “More Water, More Energy, Less Waste Act of 2007,” (S. 1116) which could lead to the clean-up and usability of produced water from oil and gas drilling and coal-bed methane extraction. The President signed the bill which was a part of the Consolidated Natural Resources Act of 2008. This bipartisan bill is co-sponsored by Senators Jeff Bingaman (**New Mexico**), Pete Domenici (**New Mexico**) and Mike Enzi (**Wyoming**) and it would direct the Department of Interior to evaluate the feasibility of recovering and cleaning produced water for use in irrigation and other purposes. The bill would also authorize a grant program to test produced water recovery technologies. The grants would help fund pilot projects for this technology in Colorado, Utah, Wyoming and New Mexico, plus one additional site in Arizona, Nevada or California.

Meanwhile, with the growing emphasis on opening up oil shale production in the Rocky Mountain West, new oil and gas techniques are expected to use large amounts of water under pressure to extract the oil and gas from underground. Recovered “produced water” could help satisfy this new demand.

Even without warming climate conditions, continued growth in the West will put the squeeze on both water and power use. When you throw in climate change and energy considerations, the projections are alarming¹².



Priority 8 - Real management is needed in the real “reservoir” of the West – our federally-owned forest lands in upper watershed areas.

Federal agencies must improve management of the West’s biggest “reservoir” – our watersheds. In most Western states, much of the water used derives from snowmelt in mountainous areas. We are hearing more frequent reports from state and local governments and water users who question how the federal government is managing the watersheds.

The Yellowstone fires that occurred 20 years ago provided a wakeup call to many that nearly a century of federal forest firefighting may have actually made the forests more flammable and more dangerous. The U.S. Forest Service policy of putting out all fires may have actually filled the forests with fuel, making them harder to protect¹³.

During the early 1990’s, forest management practices underwent a drastic change¹⁴. In 1994, at the behest of environmental organizations claiming to protect the forest habitat of the northern spotted owl, a “threatened” species under the Endangered Species Act, 25 million acres of federal forests were put off limits to commercial timber harvesting. The federal government also greatly expanded “wilderness areas,” closed hundreds of miles of national forest roads long used by firefighters to reach isolated wildfires, and terminated salvage timber sales. As a result of minimizing the mechanical-thinning approach to forest management – coupled with 100 years of a flawed federal fire suppression policy - the national forests became overgrown with underbrush and overfueled with dead or dying trees. They also became less accessible to firefighting crews.

A July 2008 report released by the National Research Council¹⁵ – one of the first major studies on forest and water since a U.S. Forest Service project in 1976 – underscores the importance of forests to the nation’s water supplies:



Forested lands cover about one-third of the nation’s land area, and although they have roles in timber production, habitat, recreation and wilderness, their most important output may be water.

Forests provide natural filtration and storage systems that process nearly two-thirds of the water supply in the U.S.

Demand for water continues to rise due to population growth, while forest acreage is declining and remaining forest lands are threatened by climate change, disease epidemics, and fire.

Forest vegetation and soils, if healthy and intact, can benefit human water supplies by controlling water yield, peak flows, low flows, sediment levels, water chemistry and quality.

One of the biggest threats to forests, and the water that derives from them, is the permanent conversion of forested land to residential, industrial and commercial uses.

The report finds that modern forest practices have helped to protect streams and riparian zones, but more needs to be learned about the implications of such practices as thinning or partial cuts. This understanding can lead to the development of “best management” practices could help balance timber harvest with sustainable water flow and quality¹⁶.



Summary

Western water policy over the past 100 years stands out as one of the modern era's great successes. Over 180 federal water projects serve 17 Western states. These provide water to more than 31 million people, and deliver irrigation water to 140,000 farmers and 10 million acres of farmland. These lands produce 60% of the nation's vegetables and 25% of its fruits and nuts. Millions of acres of arid Western desert have been transformed into the world's most efficient and productive agricultural system.

Irrigated agriculture is an incredible investment¹⁷. It continues to be a leading Western economic driver. Now is not the time to retreat. Sound policies are needed that encourage continued investment in irrigated farming rather than risking diminished domestic food production because cities are taking farm water. Relying on agriculture to be a "shock absorber" to soften or eliminate the impending water shortage is not planning. Rather, it is a choice to effectively put our heads in the sand and hope for the best. It will worsen the overall impact of climate change on our nation's economy and security.

Western irrigated agriculture is a strategic and irreplaceable national resource. It must be protected by the federal government in the 21st Century.

Now is the time for leadership at all levels – local, state, and federal – to face the challenges and create opportunities that will define the future of the West. Recognizing the value of irrigated agriculture is vital. Understanding the current and future role of irrigated agriculture in the West through aggressive action to repair aging infrastructure and create new water supply enhancement projects is imperative. Properly managing federal watersheds and encouraging federal agencies to work with the agricultural community to solve local water challenges are equally crucial. Through thoughtful planning, the new Administration can play a truly important role in helping find the solutions that have proved so elusive to date.



Footnotes

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