



## Securing the Future of Western Agriculture: A Perspective of Western Producers

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**This publication was commissioned by AGree to inform and stimulate dialogue about policy reform; it does not represent official AGree positions. The views expressed here are those of the individual authors.**

## Foreword

AGree drives transformative change by connecting and challenging leaders from diverse communities to stimulate policy innovation and develop initiatives that address critical challenges facing the global food and agriculture system. AGree believes we must elevate food and agriculture policy as a national priority.

AGree's work addresses four broad challenges facing the global food and agriculture system:

- Meet future demand for food;
- Conserve and enhance water, soil, and habitat;
- Improve nutrition and public health; and
- Strengthen farms and communities to improve livelihoods.

We have taken a deliberative, inclusive approach to develop a policy framework and ongoing, complementary initiatives to meet these challenges. To overcome traditional obstacles to change, we engage a broad array of stakeholders whose insights and commitment contribute to meaningful solutions. AGree's work, building on our research to better understand problems and assess options, aims to stimulate creative ideas and encourage new perspectives while fostering the linkages key to catalyzing effective action.

In this paper, leaders of the Family Farm Alliance, which represents irrigators in seventeen Western states, provide insight into the unique challenges and opportunities facing landowners and producers in the Western United States. Flexible, streamlined policies that provide the balance and certainty needed to support collaborative efforts and manage challenges including water scarcity and competition, insufficient water infrastructure, growing populations, endangered species, increasing weather variability and climate change, and energy development are key to maintaining agricultural production and improving conservation and community outcomes in the West. Specific policy recommendations regarding western water issues, the Endangered Species Act, payments for ecosystem services, and other issues such as immigration reform and the Farm Bill are offered to ensure that Western agricultural operations continue to be vibrant and innovative for generations to come.

This publication is part of a series intended to broaden discussion and complement AGree's consensus recommendations on policies and actions focused on food and agriculture. While the concepts presented in this paper have greatly enriched the deliberations of the AGree Co-Chairs and Advisors, the perspectives and positions do not represent consensus among them.

We hope you find this paper a helpful resource.



**Deborah Atwood**  
Executive Director

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## Executive Summary

It is critical to understand the wide variety of types of Western agriculture (defined as those activities occurring west of the 100<sup>th</sup> meridian<sup>1</sup> where rainfall is generally below 20 inches per year) and the unique nature of Western agricultural challenges. Vast differences exist between the circumstances faced by Western producers and their counterparts in the Eastern, Southern and Midwestern regions. These primarily derive from three drivers that have tremendous impacts on Western farmers and ranchers: (1) the large amount of federally-owned lands in the West; (2) explosive population growth in recent decades (expected to continue into the future); and (3) rapid recent and proposed development of energy resources. The unique nature of the West presents challenges and opportunities to find creative solutions. Western food and fiber producers face many core challenges today, including:

- Attempting to align agricultural and food production with improved environmental outcomes;
- Seeking ways to find common ground with the urban public; and
- Water scarcity and competition with other demands, including growing water needs for expanding energy development. Regulatory challenges, climate change, and an aging water infrastructure complicate efforts to find meaningful long-term solutions.

This paper seeks to provide perspective on these matters and offers specific recommendations in several areas important to Western agriculture: water supply, conservation of biological diversity and nature resources, and immigration policy. It also offers reflections on the Farm Bill, food distribution systems, soil health and water quality, and the future role of the government. One of the defining principles underscored in this paper is that policymakers need to change the model from “top-down” federal management to an emphasis on partnerships among private, public and non-governmental interests in order to take care of landscapes and produce food.

The recommendations proposed can help keep Western agriculture productive and profitable, which promotes sound communities, viable economies, and healthy

landscapes in the West. Good policies will drive the programs and activities that lead to great public investments. These will pay for themselves over and over and demonstrate positive long-term impacts.

## Introduction

***“The most insistent and formidable concern of agriculture, wherever it is taken seriously, is the distinctive individuality of every farm, every field on every farm, every farm family, and every creature on every farm.”***  
***Wendell Berry, The Way of Ignorance***

***“We have two choices before us. One is to continue the heated rhetoric of the far right and the far left, spending our time slinging insults and hardening polarization. Or, we can join with the hundreds of watershed and community-based programs around the country and move to the radical center. The point where people will respectfully listen, respectfully disagree, and in the end, find common ground to promote sound communities, viable economies, and healthy landscapes.”***<sup>2</sup>

The year 2012 marked the 150<sup>th</sup> anniversary of the date President Abraham Lincoln and other Washington officials took action in four critical areas that directly contributed to the state of the American West today. First, Congress in May 1862 agreed to establish the U.S. Department of Agriculture. Days later, President

Lincoln signed into law the nation's first Homestead Act. This set into motion a new process for privatizing land, created a unique system for production agriculture, and established a unique integration of production on private and public lands. One month after the Homestead Act was signed into law, Congress passed the Morrill Act, which provided for grants of federal land to states willing to establish a public university with a focus on agriculture. Known as "Land-Grant" institutions, these new centers of research now work in all 50 states. Finally, in July of 1862, President Lincoln signed the Pacific Railway Act, which led to the creation of the first transcontinental railroad. This enabled travelers to journey from coast to coast in a week's time, making it markedly easier to travel west in search of land for settlement. The railroad owners desired to quickly repay their loans, so they encouraged these settlers to grow and sell cash crops. Railroads, then, led to a dramatic increase in settlement by new immigrants and by the westward migration of native-born Americans.

These four visionary governmental initiatives catalyzed the development of Western family farms and ranches, research centers, extension services and a reliable cadre of educated graduates and specialists. Together, and bolstered by private sector innovation, these elements created a system of agricultural production that supported successive generations of increasingly well-fed and well-nourished Americans and in the 20th century became the envy of the world. These forward-looking political actions transformed America and hold promise today as a model of international development and hunger alleviation for the 21st century.

There is a wide variety of types of agriculture carried out in the West (defined as those activities occurring west of the 100<sup>th</sup> meridian). Also, the challenges faced by Western producers are vastly different than those faced by their counterparts in the Eastern, Southern and Midwestern regions. These differences are primarily due to three drivers that have tremendous impacts on Western farmers and ranchers: (1) the large amount of federally-owned lands in the West; (2) explosive

population growth in recent decades (expected to continue into the future)<sup>3</sup>; and (3) rapid recent and proposed future development of energy resources.

The first of these three differences is the most distinctive and the most important as it relates to agricultural policy. The American West, unlike other parts of the United States, is evenly divided between government-owned land and private land. Half of the West is public, owned by and generally open to all Americans. When Americans wake up each morning, they do so believing that half of the West is their birthright. Because of this public-private land dichotomy, some tension will always exist between Westerners and the rest of America<sup>4</sup>. In no other region in the United States do all Americans have a say in half of the region's landmass, its land uses, and its future. The vast federal ownership of Western lands and the synchronicity of public and private lands need to be recognized as critical characteristics of Western agriculture.

The Western United States represents a unique component of the national agricultural scene. As in other regions of the United States, Western farmers and ranchers form the core of the economy. It is a tough business to work in, and policymakers need to keep this foremost in their minds. The difficult, uncertain business of farming and ranching is far removed from the sentimental, romantic way of life portrayed by those who are not actually working the ground.

Currently, only six percent of American farmers and rancher are 35 years old or younger. While this rightfully causes concern, some positive trends may help. Commodity prices are generally good, providing new opportunities for young people. The challenge of finding ways to produce food and fiber while acting as a steward for the land is enticing to many potential new agrarians. We need to cut through all the politically correct talk of "sustainability" and "silos" and focus on finding ways to bolster the next generation of new farmers and ranchers.

The unique nature of the West presents challenges and opportunities. Our initial discussions need to focus on the reality that agriculture is a business, and that, in the current business environment, young farmers and ranchers face

tremendous difficulties obtaining financing or operating capital. Prices for agricultural land are on the rise. We need to find creative solutions. Simple policy changes would allow young and beginning producers the chance to manage the land and produce food and fiber. For example, it should be made easier for newcomers to lease vacant grazing allotments on federal lands as a way to ease their entry into business.

Western food and fiber producers face many core challenges today:

- Attempting to align agricultural and food production with improved environmental outcomes;
- Seeking ways to find common ground with the urban public;
- Water scarcity and competition with other demands, including growing water needs for expanding energy development. Regulatory challenges, climate change, and an aging water infrastructure complicate efforts to find meaningful long-term solutions.

This paper seeks to provide perspective on these important issues, and we have developed specific recommendations in several areas important to Western agriculture: water supply, conservation of biological diversity and nature resources, and immigration policy. We also offer reflections on the Farm Bill, food distribution systems, soil health and water quality, and the future role of the government. One of our defining principles is that policymakers need to change the model from “top-down” federal management to an emphasis on partnerships between private, public, and non-governmental interests in order to preserve and improve landscapes and produce food.

The recommendations we have crafted will help keep Western agriculture productive and profitable. We believe they will help promote sound communities, viable economies and healthy landscapes in the West. Good policies will drive the programs and activities that lead to great public investments. These will pay for themselves over and over and demonstrate positive long-term impacts. As our forefathers did in the past, we should be still thinking that way today.

## Efforts to Align Agricultural and Food Production with Improved Environmental Outcomes

Studies by the United Nations and others assume that an increase in the world human population (an estimated 9.3 billion in 2050) will require a 70 percent increase in food production. In 2012, the Global Harvest Initiative released its Global Agricultural Productivity (GAP) Report, which quantified the difference between the current rate of agricultural productivity growth and the pace required to meet future world food needs. The report predicted that doubling agricultural output by 2050 will require increasing the rate of productivity growth by 25 percent – every year.

Talk of sustainability is thematic in the media and many current policy forums. While sustainability means different things for different parties (for example, there are places in the West where grazing could be seen as a sustainable land use, and from the perspective of many producers, this definition might address economic viability, including the ability to pay back loans). Western producers support a philosophy that works towards ensuring that we have and will continue to have the water, materials, and resources to protect human health and our environment. Policymakers and those who report on policy also need to understand that it is essential to sustain what are likely the most threatened components of Western agriculture: farmers and ranchers, land and water. Western agriculture finds each of these components under threat, thereby weakening the circle that ensures working lands remain in working hands.

Wendell Berry said it best when he wrote, “*You can’t save the land without the people; to save either, you have to save both.*” We seek the continuance of farmers, ranchers, land, soil, and water.

Our decision makers are very good at quantifying benefits associated with growth, environmental proposals, and energy development. However, they often fail to apply a



similar methodology that leads to quantifying the value of food production in these systems. This bias is revealed when policymakers address resource planning matters. The 2012 Colorado River Basin Study released by the Bureau of Reclamation, for example, assumes that certain environmental flow targets, population growth, and energy development will occur over the next 50 years. Reclamation and other water planners continue to assume that future projected urban growth and power needs can simply be assumed and assessed, while the “resulting impact” ends up being a loss of irrigated acreage.

Another more recent example of this type of bias was demonstrated in April 2014 when state and federal agencies released a “drought management” plan for the state of California. The plan was a resounding disappointment and highlights once again the inability of the state and federal governments to respond adequately to the current drought emergency. Interestingly, the plan is subtitled, “Balancing Multiple Needs in a Third Dry Year,” though the term “balance” is undefined; we are left to make our own determination. However, one indication of “balance” is illustrated by the Plan’s four stated purposes: 1) provide for human health and safety, 2) manage Delta water quality, 3) manage temperature, and 4) maintain “minimum” protections for endangered species. Nowhere is it stated that providing for people or the economy of California is a purpose of the Plan. In fact, the word “people” appears in the Plan ZERO times, as does the word “economy.” The word “farmer” appears once. The word “fish” appears 328 times in some form or another (fish, fishery, etc.).

The public needs to understand the ramifications of the mindset reflected in these two examples, and truly understand what life would be like without open space and healthy food. The unique nature of Western agriculture – the challenges associated with a strong federal presence, the arid climate, the burgeoning population and energy development must be reflected upon by policymakers, and used to develop unique solutions that help the West continue to best contribute to overall national agricultural production and conservation.

Rather than isolate and criticize the most important sector of agriculture – the producers – we must look for ways for producers to form coalitions to work on areas of common

interest. In this way, we can improve certainty for Western agricultural producers, which in turn, will improve certainty for conservation opportunities on private property. This philosophy drives the findings and recommendations contained in this paper, which presents a vision to guide us through future decades.

## **The Virtues of Farming and Ranching in the West: Connecting Producers and the Urban Public**

All Westerners, like all Americans, prefer healthy food and prize open space. Farmers and ranchers produce both, though they are only compensated for the first. Likewise, agriculturists need to acknowledge the importance of cities—home to their customers. There is a need to emphasize the virtues of farming and ranching in the West, building upon the growing public appreciation for open space, land trusts, farmer’s markets, interest in local food, and the rapidly growing interest in “local, sustainable, organic, etc.” foods. We need to emphasize that many of our wetlands were created by irrigated agriculture<sup>5</sup>, and that much of the private land adjacent to public lands are ranch lands that provide important buffers from developed areas. We run the risk of losing those wetlands and buffer areas as agricultural lands are taken out of production. And we must show that there are exciting opportunities to develop payment for ecosystem services (PES) programs that create opportunities for partnerships with landowners, businesses, non-governmental organizations, and agencies that can significantly improve the environment, business climate, and quality of life within Western watersheds.

Urban residents repeatedly approve ballot initiatives that protect open space, confounding those elected officials who fail to see the high esteem that those living in cities place on open lands. Between 1998 and 2003, voters passed 76 percent of 802 conservation ballot measures which generated \$24 billion for protecting open space ([www.landvote.org](http://www.landvote.org)). In 2004 alone, 217 initiatives were passed generating \$4 billion for keeping land undeveloped. The



number of land trusts holding conservation easements is keeping pace with dollars dedicated to open space protection. In 1981 there were 370 land trusts in the United States; by 2007 there were more than 1,400 ([www.lta.org](http://www.lta.org)). If urbanites primarily value ranchers and farmers for the open space they protect, then shouldn't we be concerned about the relationship of this private land to the half of the West that is public?<sup>6</sup>

In the last decade, farmer's markets have become a favorite marketing option for many farmers throughout the United States, and a weekly ritual for many shoppers. The number of farmer's markets is doubling every 10 years. For example, in 1994 America had 1,646 markets selling locally produced food; 10 years later the number had swelled to 3,700 ([www.farmersmarkets.net](http://www.farmersmarkets.net)). There are now more than 7,300 farmers markets in the United States. Clearly, urban people and agriculturists are each doing their share in forging an intelligent consumption-intelligent production equation. The farm-to-fork revolution is on.<sup>7</sup>

Irrigation has increased agricultural productivity in the arid American West, but media coverage often focuses only on how it has altered the natural landscape. However, irrigation projects also provide important benefits to wetlands. In California's Sacramento Valley, rice production provides vitally important surrogate habitat and food for waterfowl and other species. In the Klamath Basin of California and Oregon, cereal grains and other wildlife-friendly agricultural production is critical to meeting the needs of Pacific Flyway waterfowl. In fact, a California Waterfowl Association representative testified before a Congressional committee in 2001<sup>8</sup> and stated that removing wildlife-friendly agriculture from the Upper Klamath Basin would "gut our Pacific Flyway waterfowl resource by eliminating roughly half of the food base annually available to these birds." In Northern Colorado, a study by Colorado State University (CSU) researchers found that 92 percent of wetlands were visually connected to the irrigation infrastructure. Though land conversion and water diversions have led to dramatic reductions in historic wetland acreage in some places, it is clear from the CSU study that current agricultural landscapes create wetlands that rely on irrigation water.<sup>9</sup>

Americans should appreciate the fact that Western farming and ranching operations provide valuable open space. In the Southern Rockies, for example, 43 percent of the private land that is located adjacent to public lands has a public grazing lease. The approximately 31,000 grazing leases on BLM and Forest Service lands are connected to more than 100 million acres<sup>10</sup> of private land that ranchers utilize for sheep and cattle grazing during the rest of the year. What would happen to wildlife and open space if public-land grazing were to end and the private lands were developed? Private lands provide most winter and riparian habitat for many wildlife species. Public lands, being less productive, cannot sustain healthy wildlife populations once the private lands rimming their boundaries are developed and reappear as housing subdivisions.<sup>11</sup>

U.S. Secretary of Agriculture Tom Vilsack, who has made the revitalization of rural America one of the hallmarks of his administration, has encouraged farmers to embrace new kinds of markets, work to promote global exports, and replace a "preservation mindset with a growth mindset."

"We need a proactive message, not a reactive message," Vilsack said, in the first term of the Obama presidency. "How are you going to encourage young people to want to be involved in rural America or farming if you don't have a proactive message?"

In a nutshell, we are talking about developing "connections" between rural and urban communities, using open spaces and food production in our messaging. We need to find ways to demonstrate the benefits to both populations of an economically healthy farming and ranching sector, including finding ways to make farming and ranching a viable option for young people.

So, for Western agricultural communities, what is the next great, truly forward thinking thing we can do? As a first step, we need to appeal to a much wider base, and bring more people on board. Urban residents, for the first time in 70 years, are beginning to reconnect to their rural roots. We need to capitalize on that to better explain to urban dwellers and the rest of the country all of the positive things taking place in the countryside. Food and open space likely provide the best opportunities to build those

new connections. Food-conscious urban and suburban voters are increasingly passing open space measures at the ballot box. We need to help them better understand the nexus between conservation and food. Instead of talking about ranching and farming, we should be telling our story in terms of food, and open land space management that helps sage grouse, and riparian conservation actions that improve the habitat for trout and salmon.

Conservation that works is conservation that works not only for natural communities, but for human communities as well. Actions that benefit one at the expense of the other are not truly conservation. City people want rural landowners to protect wildlife habitat, open space, and provide ecosystem services, yet many landowners feel that city people take for granted these societal benefits, without so much as a thankful nod. Meanwhile, the economic reality is that our efforts to produce food and fiber are increasingly placed at risk by our global economy, by increasing regulation, and by cheap - and questionably safe - food from offshore. The rift between the West's rural and urban societies can be overcome only when we appreciate what each contributes to our collective quality of life and the natural inter-dependencies that bind us<sup>12</sup>.

## Western Water

### Overview

Water is the key to economic, social, and environmental prosperity in the American West. Food security is as vital to our homeland security as other national security concerns, and the certainty and stability of the production of food and fiber on Western irrigated lands is critical to our nation's and the world's ability to feed a growing human population. As the West's population has grown, water issues have become increasingly important - and polarized. Growing urbanization has led to increased public demand for available water supplies to provide recreational and environmental benefits. This places heavy demands on Western water supplies, which were historically developed and relied upon for the production of agricultural goods.

Contributing to the loss of productive agricultural land in the Western United States is growing competition to secure agricultural water rights--some of the most senior water rights in the West--to meet growing municipal, energy and environmental demands. In essence, agricultural water has become the default water supply for meeting other demands in the modern West.<sup>13</sup> Unfortunately, the only large potential for moving agricultural water to other uses will come from fallowing great swaths of farmland and transferring that water to meet other demands, which has grave implications for our country's ability to produce food for a growing world population.<sup>14</sup> This factor alone could significantly threaten the luxury Americans currently enjoy - spending a very low percentage of their disposable income on food.<sup>15</sup> Also, because of Native American settlement provisions and for other reasons, opportunities exist for significant expansion of agricultural lands managed by tribes (i.e. Navajo Agricultural Products Industry). These issues and other growing domestic and global food security and scarcity concerns must be considered as federal water policies are developed and implemented.

The federal Bureau of Reclamation (Reclamation) plays a key role in the Western water arena. Established in 1902, it is best known for the dams, power plants, and canals it constructed in the 17 western states. These water projects facilitated homesteading and promoted the economic development of the West. Reclamation has constructed more than 600 dams and reservoirs, including Hoover Dam on the Colorado River and Grand Coulee on the Columbia River. Today, Reclamation is the largest wholesaler of water in the country. Reclamation brings water to more than 31 million people, and provides one out of five Western farmers (140,000) with irrigation water for 10 million acres of farmland that produce 60 percent of the nation's vegetables and 25 percent of its fruits and nuts. Reclamation is also the second largest producer of hydroelectric power in the western United States; 58 power plants annually provide more than 40 billion kilowatt hours, generating nearly a billion dollars in power revenues and produce enough electricity to serve 3.5 million homes.<sup>16</sup>

## Western Water – Legal, Political, and Institutional Issues

Prior appropriation is the fundamental basis of water law in the West. This law is actually reflected in Colorado’s state constitution. In the 20 year period between the gold rush of 1859 and statehood in 1876, both the miners and the farmers found out that water was so scarce that “first in time” came to dictate the way the resource was fairly allocated. The riparian doctrine that worked in the Eastern United States was not suited to the West and its scarcity of water. Early settlers of the West also found that the scarce water was often not located where it was needed for settlements to survive; thus, it became imperative to move that water. Policymakers in today’s world also must recognize the reality that water compacts between Western states must dictate the way to allocate the resource as water crosses state lines.

Recommendations related to some of these legal, political, and institutional considerations include:

- State laws and institutions must be given deference in issues relating to water rights and water resource allocation, use, control and transfer. The best decisions on water issues take place at the state and local level.
  - Solutions to conflicts over the allocation and use of water resources must begin with 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 nonfederal rights.
  - 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.
- States and local governments must consider the impacts of continued growth that relies on water transfers from agriculture and rural areas and identify feasible alternatives to those transfers.
  - 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 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.
  - Water policy in the West will lead to 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.
- When water laws and environmental laws conflict, balanced solutions that respect the socioeconomic realities of the West must be found. 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.

Better management of water resources can always be part of the solution. Good management requires flexibility (and trial and error), yet more regulation usually reduces flexibility. Competing demands by those with interest in water have not done a very good job of creating the opportunity for flexible management. More storage is still a critical piece of the answer. Finding the dollars within the states for creation of new water storage areas for the environment could be a very helpful way to level the field. We need to be concerned that our demand does not get so hardened that a drought can devastate our society. The environment and agriculture can both recover from a temporary water shortage more easily than homes and businesses. These issues are discussed in greater detail in the following sections.

## Western Water – Importance of Headwater Areas

In most Western states, much of the available water derives from snowmelt in mountainous areas. A July 2008 report released by the National Research Council – 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. 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 to, for example, help balance timber harvesting with sustainable water flow and quality.

Recent studies also point to a much underappreciated fact: to wit, many of the wetlands that occur in the upper reaches of the watersheds of the West are a result of delivering water to crops through flood irrigation. With alterations (“efficiencies”) in these systems we stand to lose the majority of our existing wetlands, which serve the role of kidneys in cleansing toxins from our lands and provide critical habitat at critical times for wildlife, including mammals, fish and birds.

## Western Water – Regulatory Challenges

The large federal presence in the West presents unique challenges that producers may not face in other parts of the United States, particularly with respect to the reach of the Endangered Species Act (ESA). This law can have very significant impacts on how producers manage land. Importantly, once-certain federal water supplies that were originally developed by the Bureau of Reclamation primarily to support new irrigation projects have now been targeted and redirected to other uses in recent years. So, in the West, once certain water supplies – one of the few certainties in Western irrigated agriculture – have now been added to the long list of existing “uncertainties.”

The Endangered Species and Clean Water Acts are not working in the West. Environmental pioneers dealt well with the issues of their day, but the tools they built only got us so far. We need the next generation: tools that build on success but also recognize the limitations. Today, more

than a third of the 3.6 million stream miles in this country are designated as impaired under the Clean Water Act (CWA). Under the ESA, 28 types of salmon have been listed and none have recovered. Though listing of waters as impaired and species as endangered might be perceived by some as victories, they have by and large not translated to real improvements on the ground.<sup>17</sup>

It is very clear to those who work the land that the ESA and CWA need to be addressed using a performance-based approach. We need to empower those who can actually implement substantive benefits to their environment; we believe landowners are the key here. Of course, it mostly cannot be done out of their own pockets (these things are societal benefits and thus should be societal expenses) and without appropriate assurances. Secondly, there need to be regulatory and statutory changes in these major acts to empower these environmental markets and to establish proven approaches and data considerations for decision making. The constructive scientists working for federal fish and wildlife agencies are becoming increasingly hamstrung with paperwork and legal deadlines driven by lawsuits from a handful of activist groups. A recent settlement between these groups and the U.S. Fish and Wildlife Service could potentially add hundreds of more Western species to the ESA list.

A growing concern to Western irrigators is the employment of the ESA by federal agencies as a means of protecting single species by focusing on one narrow stressor to fish: irrigation diversions.<sup>18</sup> For the second time in a decade, Congress in 2010 directed that the National Academy of Sciences (NAS) convene a high-level, independent scientific review of federal restrictions on water deliveries affecting thousands of Western farmers and ranchers. In 2009, those restrictions – based in large part on ESA biological opinions in the California Bay-Delta (Delta) – were a primary cause for the water cutbacks and rationing afflicting hundreds of communities throughout California and the resulting economic devastation in the San Joaquin Valley. A similar decision to focus exclusively on one stressor – a federal irrigation project – was made by federal agencies in the Klamath Basin in 2001, and that decision and the science used by federal fish agencies to support the decision, was criticized later in a review conducted by the NAS.



The California and Klamath stories are very similar. The NAS stepped in after Klamath Irrigation Project supplies from Upper Klamath Lake were cut off by federal biological opinions under the ESA in 2001. The Academies' objective scientific review concluded that there was insufficient evidence to support these biological opinions in restricting agricultural diversions from the Klamath system, which had led to the near-collapse of the local agricultural community. In Klamath, the federal regulators looked at only one of the stressors contributing to the fisheries' decline and they focused on only one solution – cutting off water supplies to agriculture. Not surprisingly, the listed species apparently are no better off today than they were in 2001, yet the agricultural community struggles with operating capital, input suppliers and contracts for products due to the lack of a reliable water supply that has been redirected with uncertain benefits to listed fish. Likewise, in California today, the same federal agencies have refused to assess the impacts of the many stressors affecting the health of the Delta. And for more than 15 years, they have been restricting or cutting off water deliveries, even though their experience during those 15 years have conclusively demonstrated that these restrictions have done little to prevent fisheries from declining in the Delta.

As in California, the effects of the Klamath restrictions were immediate and far-reaching– not just losses to the economy but also to wildlife resources as water was diverted from farms and ranches (and two federal wildlife refuges). And yet, the federal regulators failed to perform any environmental impact analysis before they ordered cutbacks in California and Klamath. Clearly, biased ESA implementation by some scientists within federal agencies must also be addressed, primarily with improved peer review and adherence to laws like the Information Quality Act. Best available science must truly be used.

Boots-on-the-ground efforts and actual recovery of species should define success under the ESA, not endless litigation and what appears to be the opportunistic pursuit of attorney's fees by certain environmental groups. According to a recent Congressional report<sup>19</sup>, in just the

past four years, litigating environmental groups have raked in more than \$15 million from taxpayers, with some of these groups' attorneys being paid as much as \$500 per hour from the public treasury. These environmentalist lawsuits are the poster child for what has become an environmental litigation industry. While others are busy fixing the problems outside the courtroom, including implementation of the historic Nez Perce Water Rights Agreement and collaborative efforts by ranchers to prevent listing of the Western sage grouse, litigious groups continue to drain resources and time, distracting everyone from the real goals of the ESA.

The goals of the Endangered Species Act, Clean Water Act, National Environmental Protection Act and other federal laws are laudable. However, these decades-old laws are in need of some targeted reforms, including common-sense changes to make them work better, encourage incentive-driven recovery efforts, and discourage litigation:

- Agencies should focus on applying the ESA in a way that fosters collaboration and efficiency of program delivery and is incentive-driven.
- Standards for scientific and commercial data that are used to make decisions under the ESA must be established.
- Peer review of ESA listing decisions and ESA Section 7 consultations should be provided by a disinterested panel. Administrative guidelines and/or legislation can be crafted to create procedures for that process.
- For ESA settlements involving federal environmental agencies, the federal government can provide better oversight in how attorney fees are distributed.
- Incorporate ideas for improved "Safe Harbor" for landowners, neighboring landowners, and water districts. Programmatic safe harbor ("take" protection) should be provided for anyone conducting normal operations within a certain radius (probably species dependent) of proposed projects.
- Implement recommendations of the NEPA Task Force (2006).<sup>20</sup>

- Implement the recommendations of the 2014 ESA Congressional Working Group.<sup>21</sup>

These are incremental measures that help change the paradigm in Western resource management so that we end up limiting dollars spent on litigation instead of habitat protection and food production.

### Western Water – Opportunities to Work with Energy Producers

Across the western United States alone, astounding amounts of “produced water” is daily brought to the surface during petroleum production. This is considered wastewater by energy producers, and is usually re-injected back into salty aquifers, precluding further uses. Meanwhile, with the growing emphasis on opening up oil shale production in the Rocky Mountain West, new energy extraction 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. Recovering usable water from sources contaminated by oil and gas drilling operations could significantly help our farmers, ranchers and recreational users, as well as enhancing the habitats of many plants and animals. Following are two initial recommendations:

- Develop a study to assess the potential water impacts associated with use of crops grown for alternative fuels production (e.g. ethanol), water used for fracking, coal bed methane production, and other petroleum extraction operations, and new overall power demands in the future (the total water consumed by electric utilities accounts for 20 percent of all the nonfarm water consumed in the United States).
- Ensure sufficient funding to implement and expand the “More Water, More Energy, Less Waste Act of 2007,” which could lead to the clean-up and usability of produced water from oil and gas drilling and coal bed methane extraction. This law directs the Department of Interior to evaluate the feasibility of recovering and cleaning produced water for further use in irrigation and for other purposes. The bill would also authorize a grant program to test produced water recovery technologies in Western states.

### Western Water – Climate Change Challenges

In some areas, Western water supplies are already challenged by the demands of agriculture, urban growth and environmental enhancement. Scientists tell us that global climate change will likely further reduce those supplies.<sup>22</sup> So how will we meet the ever-increasing demand for water in the West in an era when supplies continue to decrease? How do we address climate change as it relates to agricultural production and water management? We recommend an adaptive approach to dealing with the uncertainties of climate change. Even if current efforts to mitigate for greenhouse gas emissions are successful, the climate is still predicted to warm considerably over the next several decades, which will have impacts on water supplies and water users. Western water research needs must be prioritized and coordinated. For example, a comprehensive validation of West-wide projected changes in stream flow should be developed. This should be followed by actions—including the quantification of the amount of additional reservoir storage and clear conservation targets—required to manage this change in hydrology.

Western snow-fed, irrigated agriculture will take on more importance to the nation as climate change sparks more extremes in both flooding and droughts. In the West, we have high elevation moisture and sophisticated storage and conveyance infrastructure, which make us more flexible and adaptive in our management efforts. Western agricultural water users and the infrastructure that was originally constructed to support our communities will become more important as climate change occurs. An essential part of water management in the West lies in the past: visionary development of storage and irrigation under the auspices of the Bureau of Reclamation. This has allowed the production of food and fiber which are crucial to our national food supply. The importance of dams and delivery infrastructure to Western water supply certainty cannot be overstated.

### Western Water – The Need to Modernize and Expand Infrastructure

Aging federal water infrastructure in the West must be addressed promptly and with priority commitments, as failure to reinvest in critical facilities will negate economic

gains of past generations and create a failed legacy for future generations. 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 be important first steps towards solving our aging water infrastructure problems, which include efficiency, modernization, and safety. Our recommendations include:

- Direct more funding to the Department of Interior’s WaterSMART 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.
- 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.
- New water and power supplies must be developed to provide for recreational and environmental needs, allow for population growth, and protect the economic vitality of the West. We must continue to find ways to streamline permitting requirements for low-head, low-impact hydropower proposals. President Obama in August 2013 signed into law a pair of bills endorsed by the Family Farm Alliance and others aimed at promoting small hydropower development by streamlining the federal regulatory process for certain types of projects. The two new laws authorize and streamline permitting for small conduit hydroelectric projects on Bureau of Reclamation owned canals and authorize and streamline Federal Energy Regulatory Commission regulatory actions on small non-federal conduit hydroelectric projects. Streamlining the permitting process will make it easier for Western agricultural water users to pursue practical small-scale hydropower generation projects. Increased revenues from the sale of this renewable energy can result in a new source of funding for operating, maintaining, and rehabilitating our aging water delivery infrastructure

at lower costs to farmers. And, importantly, irrigation water delivery services can continue while utilizing flows for clean, emissions-free energy production.

- Find constructive ways for nonfederal entities to build environmentally-sound water storage projects and/or improve existing federal water facilities to increase water supplies in the West.
- The federal government should adopt a policy of supporting new efforts to enhance water supplies and encouraging state and local interests to take the lead in the formulation of those efforts.
- The existing procedures for developing additional supplies should also be revised to make project approval less burdensome.
- The current mitigation procedure for federal agencies should be reviewed to determine the feasibility of clarifying and standardizing mitigation requirements.
- The federal government should encourage the creation and use of public and private mitigation banks. Under such an approach, applicants faced with excessive mitigation costs would be allowed to pay a reasonable sum per acre to a regional mitigation bank or set aside mitigation lands as a condition for implementation of their project.

Improved conservation and efficiency by urban and agricultural water users is certainly part of the water management solution, but only one part. We must begin to implement a balanced suite of both conservation and supply enhancement actions. Conservation alone will not supply enough water for the tens of millions of existing and new residents expected to live in Western cities during the coming decades.<sup>23</sup> We believe that it is possible to meet the needs of cities and the environment in a changing climate without sacrificing Western irrigated agriculture. It is time to start developing and implementing the water infrastructure needed to cope with a changing climate, meet the needs of a growing population, protect our environment, and support a healthy agricultural base in the West.



## Western Water - Conclusion

Western water users face continued challenges on the ground. Addressing aging water infrastructure needs must become a priority. The destructive tactics of the environmental litigation industry, coupled with biased implementation of federal environmental laws by agencies, has eroded once-certain water deliveries to Western producers. However, Western taxpayers strongly support water for farmers,<sup>24</sup> and elected officials should be bolstered by that fact as they stand up and provide the strong leadership that is needed to protect family farms and ranches.

Our goal is to find solutions to Western water conflicts that protect our ability to feed ourselves, export food to others, and continue to lead the world in agricultural production while finding ways to accommodate the water supply needs of growing urban areas, energy development, recreation, and environmental preservation. Fair, balanced, and long lasting solutions will not come easily. They will require visionary leadership and a firm commitment to sensible, workable policies.

## Working Landscapes and the Protection of Biodiversity

Alongside water, and in many cases directly related to it, Western agriculture also confronts the challenges of increased pressure to maintain biodiversity in working landscapes. Recent analyses and regional case studies<sup>25</sup> suggest that formally-designated protected areas are not sufficient in size, heterogeneity or location to capture the bulk of North America's wild biodiversity within their boundaries. In the West, many elements of this biodiversity are better represented and safeguarded on private and tribal lands than on the highly-protected, specially designated public lands managed by federal agencies. A mosaic of private and public forests and rangelands that include protected areas, but are not limited to them, contributes more to maintaining biodiversity than protected areas alone. Ranch lands already serve as a buffer for public lands against invasive plants, domestic cats and dogs, and the danger of wildfires. We can encourage all appropriate land uses, but importantly, only to the degree that the land can sustainably accommodate those uses.

### Soil Health and Water Quality

"Soil health" is another buzz word that, while worthy to seek as a goal, means different things for different people, especially in the West. Much is made of soil building, involving holistic techniques that, for example, employ cover crops that prevent erosion. However, in some water-short areas of the West, the available water is reserved for the crop, where it is applied in very precise, efficient, controlled amounts. Sufficient and affordable water to support the water requirements of a cover crop simply is not available, so growers shy away from planting competitive plants or other crops that take up moisture. In places like the San Joaquin Valley of California, other practices like aggressive rotation of crops helps preserve the health of the soil.

Each practice is developed based on the individual experience of the grower, type of agricultural operation, and local soil and geologic surroundings. Soil health concerns are one of many factors to manage and do not necessarily dominate watershed management situations in the West. In many places of the West, the problem of excessive nutrient and fertilizer applications are already being proactively addressed through increased monitoring and best management practices. A California farmer recently commented that, because of water limitations and more targeted and precise chemical applications, the amounts applied today are much less than what was applied in previous generations. "Islands of Renaissance" are already occurring all over the West with limited resources. We need to transfer the knowledge of these successful approaches and empower similar locally-driven solutions in other areas.

We need to consider whether working landscapes, rather than nature reserves, are actually functioning as the “core” conservation areas of the West that are required to maintain the continent’s unique elements of biodiversity. If this is so, the public needs to invest in their maintenance through zoning restrictions, tax incentives for establishing conservation easements, and enhancing market value for their ecological goods and services. Public and private lands each play a role in biodiversity protection, and habitats provided by private lands are critical and are also deserving of public investment.

There is nothing wrong, for example, with a rancher undertaking a project that increases hay production and that also provides habitat improvement. Today, the New West is increasingly being led by bottom-up, watershed-based coalitions of rural and urban people coming together over the twin issues of food and open space. What’s critical to realize is that these initiatives are led and inspired by ranchers. Whether it is the Western Agriculture and Conservation Coalition, Malpai Borderlands Group, Diablo Trust, the Blackfoot Challenge, the Madison Valley Ranchlands Group, the Altar Valley Conservation Alliance, the Quivira Coalition, the California Rangeland Conservation Coalition, or the Partnership for Rangeland Trusts, ranchers are providing leadership for land stewardship efforts in the New West.

We do not have to sacrifice production for conservation – we can achieve both objectives. However, we need time to make this happen, and a critical step that could be taken to help would be to place a 10-year moratorium on the loss of grazing Animal Unit Months (AUMs) in order to come up with a long-term balanced plan to integrate food production with conservation practices. We cannot afford to lose any more producers while this process takes place, through which we can:

- Work across administrative boundaries rather than staying within them;
- Integrate social capital with ecological and economic dimensions;
- Encourage bottom-up participation rather than top-down initiatives;

- Acknowledge all biodiversity rather than simply economically valuable species;
- Emphasize economic incentives rather than federal appropriations and unfunded mandates;
- Provide more certainty with grazing leases (such as by extending leases to 20 years);
- Find ways to mitigate for estate tax impacts. Conservation tax issues can affect open space protection (conservation easements);
- Integrate the work of federal agencies on issues like food production, the Endangered Species Act and water quality;

### PES Success Stories

**Colorado Habitat Exchange** is a market-based conservation mechanism that will initially be used for mitigating greater sage grouse and mule deer habitat impacts from energy development. The long-term vision for the Exchange is to support the maintenance, restoration, and enhancement of Colorado’s natural resources. This will be accomplished by creating a scalable, market-based conservation platform that can accommodate a wide array of environmental needs and is usable by multiple investment sectors over time.

**DOI-NRCS agreement.** This 2012 agreement will provide long-term regulatory predictability for up to 30 years to farmers, ranchers and forest landowners participating in USDA’s Working Lands for Wildlife (WLFW) Initiative. Participants voluntarily implement proven conservation practices designed to protect wildlife habitat on private lands, including several at risk species and vulnerable game species. The federal government will grant farmers, ranchers, and forest landowners regulatory predictability in return for voluntarily making wildlife habitat improvements on their private agricultural and forest lands.

- Increase success, reduce expense, and eliminate working at cross-purposes through improved interagency cooperation, which would, for example, complement the role of the NRCS in regards to water quality. The Interior Department Partners for Fish and Wildlife Program demonstrates a workable process to reconcile inherent conflicts brought about by multiple demands and
- Explore the nexus where the federal government owns the land and the states control the water.

Above all, we need to empower local watersheds to provide leadership, and problem-solve in a unique, locally-driven manner. In some Western watersheds, this will mean that the definition of “watershed” may be expanded to include the transbasin diverted area to which water may be moved under the prior appropriation doctrine.

## Payment for Ecosystems Services

Western farmers and ranchers can also play a key role in using their lands, water and management practices as tools to engage in payment for ecosystems services (PES) projects. A PES scheme creates opportunities for partnerships with landowners, business, non-governmental organizations, and agencies that can significantly improve the environment, business climate, and quality of life within Western watersheds. A voluntary system of payments may be more socially acceptable and effective than extensive additional regulation.<sup>26</sup> Critical discussion and reflection in the Western farm and rangelands community about PES and market-based approaches more generally is essential. A well-designed PES program can make a ranching or farming operation even more viable.

We need to determine the role for PES. As experimentation with PES expands in farming communities and rangeland systems across the United States, it will be important for ranchers, practitioners, researchers, companies, public agencies, and other stakeholders to investigate, collaborate, and critically reflect upon PES design, implementation, and evaluation.

Existing programs can inform and expedite the development of new programs. Similarly, pilot tests of new approaches are likely to help existing programs become stronger and identify opportunities for expansion. The adjacent sidebar highlights some specific models.

Alongside PES experimentation, it will be necessary to document and evaluate desirable and undesirable outcomes to determine whether the approach is advancing or compromising rangeland sustainability. For everyone involved, questions must be addressed. Will PES programs actually help society better manage ecosystem services that are integral to human wellbeing? Is it appropriate to “commodify” and price rangeland ecosystem services in the marketplace? What happens if technological substitutes for ecosystem services become cheaper, and therefore the economic argument for ecosystem service protection is removed? Is there a solid scientific basis justifying the ecosystem service benefits that are being paid for? Are landowners in a position to adopt new management practices that will deliver enhanced ecosystem services, and will PES payments lead to more diversified and robust ranch business models?

### Another PES Success Story

#### Water Quality Trading (The Freshwater Trust).

Water quality trading is an affordable way to address America’s freshwater problems today. In Oregon, for example, the city of Medford was returning treated wastewater to the river, but the wastewater was too warm. This is a common problem. Historically, the town’s solution had been to buy expensive cooling structures and equipment, which took badly needed money away from city services. Instead, Medford decided to purchase water quality credits generated from streamside trees planted on nearby farms and ranches – a program that will help cool the water at a fraction of the cost. Now Medford is in compliance with the Clean Water Act, ratepayers will save \$8 million, more than 100 local restoration jobs are being created and landowners are getting paid for growing “bushels of nature.” The Medford model has the potential to radically accelerate the pace and scale of ecosystem restoration.

Are there compelling reasons why ecosystem service beneficiaries will step up to pay into a PES program, and who in society should pay?

Having an engaged group of stakeholders wrestling with these questions will be critical in determining whether PES programs will prove to be an effective tool for advancing sustainable management of rangeland systems.

## The Role of the Federal Government: The Farm Bill, Food Distribution Systems, and Immigration Reform

Throughout the western United States, family farms and ranches have facilitated the conservation and stewardship of the region's natural resources while anchoring the region's rich cultural heritage and identity. It is a landscape and a way of life that works for rural economies and resource conservation. Here, private land stewardship is the key to continued conservation innovation, resource and habitat enhancements, and sustainable working land partnerships. It is a region where farmers and ranchers are finding ways to successfully balance resource stewardship and their bottom line, thanks in part to the availability of Farm Bill conservation programs. Managing water quantity and quality is a key resource concern for the farmers, ranchers and constructive conservation groups.

Unfortunately, these constructive partnerships and the environmental benefits they generate will disappear if we cannot find ways to bring more farmers and ranchers into the fold and encourage young farmers to stay in the business. Nationally, the median age of active farmers and ranchers in America has never been higher, with the percentage of farmers under 50 years old continuing to plummet. More than half of today's farmers are between 45 and 64, and only 6 percent of our farmers are younger than 35 years old. Future Farm Bills need to reflect a philosophy that can attract and retain young farmers for the future of American agriculture, and the stability of America's food supply. They can provide a mechanism to help enable transferability of skills, methods, and successful models to a new generation.

The most important policy for keeping farms and ranches intact and providing the environmental services sought by society is a strong economy. Farm Bill Conservation Programs also fill an essential niche in maintaining a strong quality of life in the rural West. For more than 75 years, American taxpayers have invested in conservation through the Farm Bill. These investments in private lands and waters have delivered cost-effective benefits far beyond the property lines of farmers and ranchers, extending robust returns to every taxpayer. These returns include significantly improved fish and wildlife habitat, improved air, soil and water quality, ensured long-term productivity of our agricultural lands, increased outdoor recreational opportunities, reduced regulatory burdens on farmers and ranchers, and increased financial returns for rural communities.<sup>27</sup>

Partnerships – including the Western Agriculture and Conservation Coalition – are the key to sustaining rural landscapes for agriculture production and conserving water, soil, plant life and wildlife resources. The Regional Conservation Partnership Program (RCCP) in the 2014 Farm Bill is a promising and outstanding vehicle for implementing partnership work on the ground. The RCCP provides the potential for NRCS to combine greater flexibility for administering programs with sufficient program dollars in order meet the needs for producers and resource conservation.

Local and state priorities should be the drivers of conservation. One size does not fit all. The conservation needs of a rice farm in Arkansas are much different than those of a rancher in Wyoming or a coffee producer in Hawaii. Local control for identification of conservation needs and allocation of funding must be restored.

The 2014 Farm Bill gives the Risk Management Agency a clear mandate to focus on developing insurance products for underserved commodities. Immediate priorities are revenue insurance for peanuts, margin insurance for rice, and a specialized irrigated policy for grain sorghum. Studies of insurance for swine and poultry catastrophic disease, poultry business interruption, and food safety are authorized. This is a step in the right direction, but future Farm Bill

programs should include a national safety net that applies to more than just certain commodities and certain regions of the country. This national provision should include a safety net for anybody in agriculture who wants to participate. Crop insurance should be available to all farmers at all levels, and these programs should be developed by those commodity industries for those within the industry who are interested in participating. This would be a great boon to beginning farmers and ranchers, who are the most susceptible to the high risk that one bad occurrence could break them for good. The 2014 Farm Bill does make beginning farmers and ranchers eligible for a higher subsidy rate on crop insurance, which is an improvement. However, a more opportunistic goal would be to provide improved accessibility for new farmers and ranchers to participate in these programs. Future Farm Bills also need stronger provisions that support comprehensive and streamlined disaster aid.

Again, all of agricultural production should be addressed by future Farm Bills, which should include provisions that benefit all farming sectors including organic producers, local producers livestock producers and those who grow commodities using biotechnology. The Farm Bill includes provisions that encourage local production and distribution of food. Provisions should also be included that incentivize a new generation of farmers to transition towards enhancing and expanding their productive capability to feed not only their communities, but the rest of the world. Importantly, the Farm Bill should encourage the various agricultural sectors – commercial, local, organic, etc. – to complement one another. Producers who sell food and fiber that finds its way into national or global markets do not always see themselves as having things in common with those farmers and ranchers who participate at the local level. We need to find ways to bring these two parts of agriculture together.

Meanwhile, as the concentration of food processing and distribution increases, the vulnerability of producers also increases. Western producers need policy leaders to better understand how price pressure from food processors and purveyors and the role of imports impact food distribution systems. The system has to be economically viable if we are to support the foundation of our agricultural economy.

A recent agricultural tour in a Western state visited an organic mill, a vegetable packing house, and a meat packing house. At all of these places, most of the workers were immigrants. This is something that is often overlooked in the national dialogue. Immigrants play a critical role in the entire Western agricultural economy. It is not just work on the farms, it is work that takes place in the processing sector, too. And, we cannot expect that the children of those workers are going to automatically step in and do that same work. Policymakers need to be clear in their understanding that this dependency is recognized and that agriculture cannot ignore the harsh reality and crisis management for agriculture that looms not far into the future. An immigration policy that benefits Western agriculture should be one that provides an affordable, stable, legal workforce, and prevents food from being wasted in the fields due to lack of labor. We need to provide protection for immigrant workers and resident laborers alike. Heavy-handed raids against law-abiding producers and workers need to cease, especially as it is clear that Congress must eventually address immigration policy.

While our policymakers grapple to address immigration issues, Western growers are moving towards growing crops that can also be harvested using mechanical means. For a variety of reasons, farm workers simply are not available to work fields and pastures when and where they are needed. By anyone's terms, this is surely not "sustainable" in the long term. Policy observations and recommendations:

- H-2A works well in many situations in Western agriculture, but should be tweaked to make the program easier to use;
- We need to advocate a "path forward" for legally upstanding immigrants;
- The worker-visa system needs to be improved. A more flexible visa system will help the economy and a path to legal status must be established for those in the country without legal status but who pay taxes and who are of good character; and
- A reasonable law enforcement strategy should be developed that focuses on public safety and prioritizes keeping families together.



## Future Role of the Government

It is critical to assess what the future role of government will be. There is tremendous uncertainty as to the effects of federal budget restraints. Right now, government programs and federal laws are also creating winners and losers. For example, federal ethanol policy works for Midwestern corn growers, but hurts the livestock industry which relies on corn for feed. Laws and regulations like those imposed by the ESA are being implemented differently in different parts of the country depending on judicial circuit rulings. Producers in the Eastern United States have not experienced the regulatory hammer approach employed by ESA administrators in the West. Also, opportunities are likely to arise for an expanded future role for NGO partners, since government can only afford to do less, at least in the near-term. This is one reason why the aforementioned Western Agriculture and Conservation Coalition was formed. Policymakers and resource managers need to assess those opportunities.

## Conclusions

Western irrigated agriculture is an incredible investment. 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 of reduced productive acreage. 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, our political leaders can play a truly important role in helping find the solutions that have proved so elusive to date.

So the question remains – how do we encourage a broader acceptance of this continuing evolution of American agriculture? We must strive to continue to address this question, and hopefully move to the “radical center.” We conclude this paper with the quotation that was used at its beginning.

• ***“We have two choices before us. One is to continue the heated rhetoric of the far right and the far left, spending our time slinging insults and hardening polarization. Or, we can join with the hundreds of watershed and community-based programs around the country and move to the radical center. The point where people will respectfully listen, respectfully disagree, and in the end, find common ground to promote sound communities, viable economies and healthy landscapes.”***

## List of Acronyms

<b>AWEP</b>	Agricultural Watershed Enhancement Program
<b>BFRDP</b>	Beginning Farmer and Rancher Development Program
<b>BLM</b>	Bureau of Land Management
<b>CCPI</b>	Cooperative Conservation Partnership Initiative
<b>CSU</b>	Colorado State University
<b>CWA</b>	Clean Water Act
<b>EQIP</b>	Environmental Quality Incentives Program
<b>ESA</b>	Endangered Species Act
<b>FRPP</b>	Farm and Ranchlands Protection Program
<b>GAP Report</b>	Global Agricultural Productivity Report
<b>GMO</b>	Genetically Modified Organism
<b>GRP</b>	Grasslands Reserve Program
<b>NEPA</b>	National Environmental Policy Act
<b>NMFS</b>	National Marine Fisheries Service
<b>NRCS</b>	Natural Resources Conservation Service
<b>NGO</b>	Nongovernmental Organization
<b>PES</b>	Payment for Ecosystem Services
<b>Reclamation</b>	U.S. Bureau of Reclamation
<b>USDA</b>	U.S. Department of Agriculture
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>WLFW Initiative</b>	Working Lands for Wildlife Initiative
<b>WRP</b>	Wetlands Reserve Program
<b>WHIP</b>	Wildlife Habitat Incentive Program



## Endnotes

- 1 The type of agriculture west of the meridian typically relies heavily on irrigation. Historically the meridian has often been taken as a rough boundary between the eastern and western United States.
- 2 From a New Mexico meeting held by the “Radical Center” group, Quivira Coalition, [www.quiviracoalition.org](http://www.quiviracoalition.org). Richard L. Knight, *Bridging the Great Divide: Reconnecting Rural and Urban Communities in the New West*, ed. L. Pritchett, R. L. Knight, and J. Lee, *Home Land: Ranching and a West That Works* (Boulder, Colorado: Westview Press, 2007).
- 3 The United States Conference of Mayors and the Council on Metro Economies and the New American City, *U.S. Metro Economies Outlook - Gross Metropolitan Product, and Critical Role of Transportation Infrastructure*, IHS Global Insight, July 2012.
- 4 Pritchett, Knight and Lee, *Homeland: Ranching and a West that Works*, Rocky Mountain Land Library, 2007.
- 5 Sueltenfuss, Cooper, Knight, and Waskom, “The creation and maintenance of wetland ecosystems from irrigation canal and reservoir seepage in a semi-arid landscape,” Colorado State University, 2012.
- 6 *A Framework for Payments for Ecosystem Services in the McKenzie River Basin, Oregon*, prepared by Institute for National Resources, for the Eugene Water and Electric Board, April 2011.
- 7 *Ibid.*
- 8 Bill Gaines, Director of Government Affairs, California Waterfowl Association, testimony before the U.S. House of Representatives Committee on Resources, Klamath Water Field Hearing, June 16, 2001.
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- 10 Richard L. Knight, “The Public- Land Grazing Debate is Over (and we won!),” *Working Ranch Magazine*, Spring 2009.
- 11 Gary P. Nabhan, Richard L. Knight, and Susan Charnley, “The Biodiversity that Nature Reserves Can’t Capture: How Western Ranches, Tribal Grazing Lands and Private Forests Sustain Ecosystems and Their Diverse Species” in *Saving the Wide Open Spaces*, 2011.
- 12 Pritchett, Knight and Lee, *Homeland: Ranching and a West that Works*, Rocky Mountain Land Library, 2007.
- 13 Family Farm Alliance, *Western Water Policy Recommendations*, Family Farm Alliance policy report, 2012.
- 14 We often see bold general statements by water transfer proponents about the potential for agricultural water use efficiency to free up water that can be transferred for use in urban areas or to enhance in-stream flows for the environment. However, those statements are usually followed up by a list of the factors that make it a difficult proposition. Those include re-use deficiencies when water is removed upstream in the system, state water rights laws that protect water users from water being taken away, or forfeited, if they conserve water, and transactions that move water between presumably willing buyers and willing sellers, but have the effect of taking farmland out of production. All of those issues are dealt with directly in a major California report released by the Center for Irrigation Technology (CIT) at Fresno State. The report, “Agricultural Water Use in California: A 2011 Update,” refutes some long-standing beliefs about agricultural water usage and confirms others. The full report is available at <http://www.californiawater.org>.
- 15 See “The Economic Importance of Western Irrigated Agriculture: Impacts, Water Values and Strategic Policy Questions,” Pacific Northwest Project, prepared for Family Farm Alliance and Irrigation Association, August 2013. Americans spend a substantially lower amount of disposable income on food, in part due to Western irrigated agriculture’s \$156 billion annual boost to the national economy.
- 16 U.S. Bureau of Reclamation, [www.usbr.gov](http://www.usbr.gov).
- 17 Joe Whitworth, “Water quality trading addresses freshwater problems with economic, environmental unity, *Oregonian*, August 18, 2012.
- 18 Family Farm Alliance, “Endangered Species Act Implementation in the Western U.S.: Looking for Answers to Modernize and Improve the ESA for Species and People,” Family Farm Alliance, April 2014.
- 19 Endangered Species Act Congressional Working Group, “Report, Findings and Recommendations,” February 4, 2014.
- 20 Task Force on Improving the National Environmental Policy Act and Task Force on Updating the National Environmental Policy Act, Committee on Resources, United States House of Representatives. “Recommendations to Improve and Update the National Environmental Policy Act,” presented to Representative Cathy McMorris, Chairwoman, July 31, 2006, [http://www.gelpi.org/gelpi/research\\_archive/nepa/NEPATaskForce\\_FinalRecommendations.pdf](http://www.gelpi.org/gelpi/research_archive/nepa/NEPATaskForce_FinalRecommendations.pdf)
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- 22 Including: California Climate Change Center, “Our Changing Climate – Assessing the Risks to California, Summary Report,” 2006. Tanaka et al., “Climate Warming and Water Management Adaptation for California,” Department of Civil and Environmental Engineering, Department of Agricultural and Resource Economics, University of California, Davis, May 3, 2007. Testimony Submitted on Behalf of The Western Governors’ Association to U.S. House Committee on Science and Technology.
- 23 According to July 2012 projections made by the U.S. Council on Mayors, the overwhelming majority of major metropolitan area population growth (70 areas) by 2042 will occur in the South and West. Approximately 51 percent of the major metropolitan growth is expected in the South, which would add 33 million residents. The West would capture 36 percent of the growth, while adding 22 million residents.
- 24 A 2009 survey released by Colorado State University (Bright Pritchett et al., “Public Perceptions, Preferences, and Values for Water in the West - A Survey of Western and Colorado Residents,” Colorado State University Water Institute Special Report No. 17, February 2009) is remarkable for the strong support average citizens from the American West give agriculture, especially in times of drought. The report provides very interesting findings that underscore Western householders support for water storage projects and irrigation over environmental and recreational water needs in times of shortage. Respondents were keenly aware of the potential for long-term water scarcity and how that could impact farmers and ranchers. For example, among Western respondents to the CSU poll, the most popular strategies for meeting long-term needs were to build reservoirs and reuse water, whether it is on private lawns or public landscapes. The least popular alternative was to buy water from farmers. The survey demonstrated broad support in the Western United States for keeping water in agriculture.
- 25 Nabhan, Knight, and Charnley, “The Biodiversity that Nature Reserves Can’t Capture: How Western Ranches, Tribal Grazing Lands and Private Forests Sustain Ecosystems and Their Diverse Species.”
- 26 *A Framework for Payments for Ecosystem Services in the McKenzie River Basin, Oregon*. Prepared by Institute for National Resources, for the Eugene Water and Electric Board, April 2011.
- 27 Patrick O’Toole, testimony before the U.S. House of Representatives Committee on Agriculture, Subcommittee on Conservation, Energy, and Forestry, Oversight Hearing on “Formulation of the 2012 Farm Bill: Conservation Programs, April 26, 2012.

## About AGree

AGree seeks to drive positive change in the food and agriculture system by connecting and challenging leaders from diverse communities to catalyze action and elevate food and agriculture policy as a national priority. AGree also recognizes the interconnected nature of agriculture policy globally and seeks to break down barriers and work across issue areas.

AGree is a collaborative initiative of nine of the world's leading foundations, including the Ford Foundation, Bill & Melinda Gates Foundation, The David and Lucile Packard Foundation, W.K. Kellogg Foundation, The McKnight Foundation, Robert Wood Johnson Foundation, Rockefeller Foundation, Surdna Foundation, and The Walton Family Foundation, and will be a major force for comprehensive and lasting change.

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