

# STATE OF COLORADO

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## Colorado Water Conservation Board

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TO: Colorado Water Conservation Board Members

FROM: Todd Doherty, Water Supply Planning Section

DATE: January 14, 2013

SUBJECT: **Agenda Item 26, January 28-29, 2013 Board Meeting**  
**Water Supply Planning Section**  
**Presentation on WGA report, *Water Transfers in the West***

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John W. Hickenlooper  
Governor

Mike King  
DNR Executive Director

Jennifer L. Gimbel  
CWCB Director

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### Staff Recommendation

This is an informational agenda item only and no Board action is being requested. Western Governors' Association staff will provide the Board a presentation on a year-long effort focused on water transfers in the western U.S.

### Background Information

The Western Governors' Association and the Western States Water Council have led an effort to identify ways to allow for water-sharing among urban, environmental, and agricultural uses while minimizing impacts on rural communities. This project was funded through support from the Walton Family Foundation and consisted of three stakeholder workshops with over 100 participants from July to December of 2011 held in Bend, OR, Denver and Las Vegas. These meetings drew state administrators, environmental and other non-governmental organizations (NGOs), farmers, academics, water managers and other water resource professionals from across the West, providing diverse perspectives on water transfers. In addition to the stakeholder workshops a literature review on the topic was conducted, surveys of the western states were performed, and a set of case studies were compiled.

Based on this work, the report, *Water Transfers in the West: Projects, Trends, and Leading Practices in Voluntary Water Trading* (December 2012), was prepared to provide states and other entities with the tools and capacity to improve water transfers or water sharing practices in the West, while avoiding or mitigating damages to agricultural economies, rural communities, and environmental values. The report's intent is to recognize the potential benefits of voluntary market-based transfers, share lessons and tools, and identify specific steps that states may take to improve water transfer outcomes.

Attached is an executive summary of the report. An electronic copy of the full report is available on the WGA website at: <http://www.westgov.org/>.



# Water Transfers in the West



**PROJECTS, TRENDS,  
*and* LEADING PRACTICES *in*  
VOLUNTARY WATER TRADING**

**EXECUTIVE SUMMARY**



**WESTERN  
GOVERNORS'  
ASSOCIATION**





### **WHY THE GOVERNORS CARE ABOUT WATER TRANSFERS**

The Western Governors have a tradition of working together to provide clean, reliable water supplies for the West. As new demands stretch the West's limited water resources, cities, industry, environmentalists and other water users increasingly turn to voluntary, market-based water transfers. The Governors passed a policy in 2011 specifically recognizing the potential benefits of water transfers as well as concerns about the impacts of shifting water uses on rural communities, stating:

**“Western Governors believe states should identify and promote innovative ways to allow water transfers from agricultural to other uses (including urban, energy and environmental) while avoiding or mitigating damages to agricultural economies and communities.”**

**POLICY 11-7**

Western states play a primary and fundamental role in the management and allocation of water, including in the administration of water transfers. While water transfers are happening across the West as a result of voluntary agreements among water users, the leadership of the states and Governors is essential to carefully balance the benefits and drawbacks of these arrangements, to ensure sound administration of transfers, and to promote positive outcomes through water sharing.

This report identifies a set of leading practices for transferring water and highlights successful case studies from around the West. Western states and water users can take advantage of voluntary market-based water transfers as one tool to optimize the use of our precious water resources.



# Why Water Transfers?

Scarcity is the defining characteristic of water in the western United States. Freshwater is naturally limited to precipitation, runoff and aquifer storage. Climate variability and extreme weather events — especially drought — increase uncertainty across timescales, from days to decades. And yet demands for water continue to grow, along with the population and economy of the West. As cities, industry, energy developers and other users seek new secure water supplies, they increasingly turn to voluntary water transfers.

Water transfers are occurring throughout the West (Figure 1), and they will become increasingly important as new demands stress limited supplies. The goal of this report is to suggest ways to make water transfers more efficient and equitable, while not promoting or opposing individual transfer proposals. This report examines water transfer practices across the western states, highlighting successful models, analyzing case studies, and identifying leading practices. The goal is to share lessons and tools and to identify specific steps that states can consider in order to improve water transfer outcomes.

## THE HISTORY OF WATER TRANSFERS IN THE WEST

Policy makers and economists have long advocated for the use of voluntary water markets. As long ago as 1986, the Western Governors' Association promoted water transfers as a mechanism for efficient water use in its report, "Tuning the System." Current WGA Policy Resolution 11-7 reflects the continuing importance of this issue to the West.

Given the new demands and water management challenges facing the West, one might expect a higher level of transfer activity. But despite their important role in western water allocation for the past several decades, transfers can be time consuming, costly and contentious. The public and private benefits provided by transfers may be accompanied by concerns about impacts on third parties not directly participating in transfers, nor well represented by any public interest review.

Not all water supply needs will be met by water transfers. Western states will continue to pursue new storage and infrastructure, conservation and efficiency, water reuse projects, and other opportunities. That said, water transfers can complement these other strategies in a multi-faceted approach to meeting new demands in the West.

### *defined* : WATER TRANSFER

A water transfer is a voluntary agreement that results in a temporary or permanent change in the type, time, or place of use of water and/or a water right.

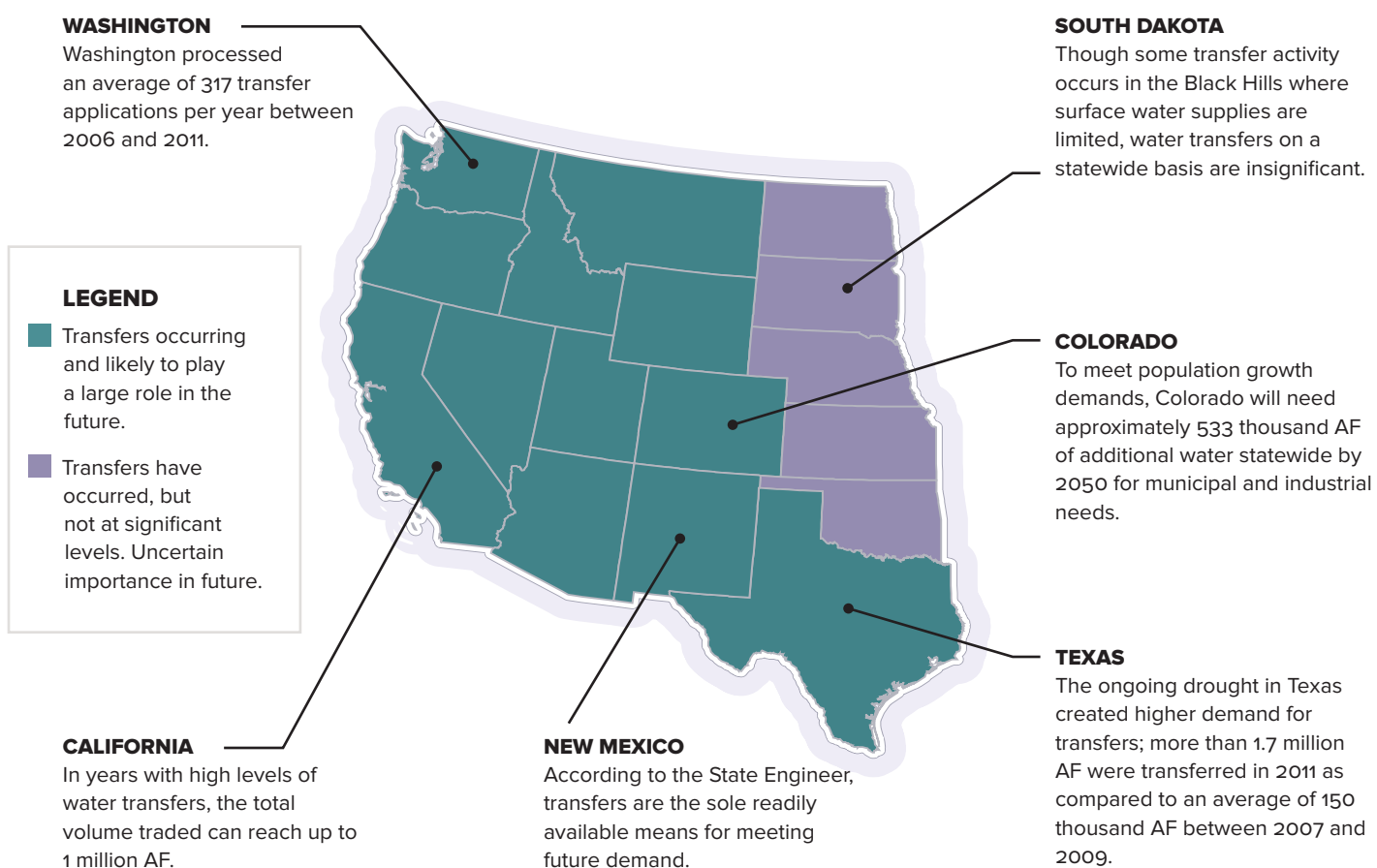
Water transfers can be local or distant; they can be a sale, lease, or donation; and they can move water among agricultural, municipal, industrial, energy, and environmental uses.





*figure 1*

## CURRENT AND FUTURE ROLE OF WATER TRANSFERS IN THE WEST



## THE BENEFITS OF WATER TRANSFERS

Ever since Adam Smith's "invisible hand," markets have been viewed as a tool to achieve an optimal allocation of a scarce resource. For private goods and services, markets generally set prices at the intersection of supply and demand. Public goods are typically harder to value and allocate using this supply and demand framework. Water is a complex mixed good, with both public and private attributes, and it provides myriad services to its users.

Recently, however, markets have been used to address public policy challenges, such as air quality emissions trading, open space protections, and oil leasing on federal lands. Voluntary water transfers offer an array of potential benefits:

- **VOLUNTARY:** The seller and buyer enter into a transfer agreement only when it is in each party's interest, and any conflicts are resolved through direct negotiation.
- **DECENTRALIZED:** Resource decisions are made by the resource users themselves, so that local conditions and unique needs are accommodated.
- **FLEXIBLE:** Water transfer markets provide flexibility to accommodate new and emerging uses over time, rather than locking water into a single use in perpetuity. They can be a mechanism for "real-time" adaptive management.
- **INCENTIVIZE CONSERVATION:** Prices established by transfers may provide an incentive for farmers to shift to lower water-using crops, invest in improved irrigation technology, and implement other water-saving practices.
- **ALLOCATE WATER TO NEW USES:** Transfers allocate water to meet emerging water demands through a voluntary market framework rather than regulations and mandates.
- **DRIVE INVESTMENT:** Prices for voluntary transfers will rise with increased demand for water. Higher market prices will support investment in water conservation, improved water resource management, and new infrastructure required to implement water transfers.

The voluntary nature of transfers is a distinct advantage. Non-voluntary water conservation or reallocation through regulation would be time and resource intensive. Mandates seldom promote the most efficient or effective resource management outcomes.



Water transfer markets provide **FLEXIBILITY**. They are a mechanism for 'real-time' adaptive management.







## ADDRESSING WATER TRANSFER ISSUES

While water transfers offer a mechanism for reallocating water to its highest valued use, changes in water use patterns can have unintended consequences. The use of water is often not exclusive or exhaustive, and government intervention may be necessary to minimize externalized costs and avoid or mitigate injury to other parties. States should consider how to address these impacts in order to improve the outcomes of transfers:

- **IMPACTS ON OTHER USERS:** Other water users may depend on return flows from a particular water diversion. When water is transferred, those return flows could be affected. Other water users' rights are legally protected from "injury" caused by a transfer; but quantifying those impacts can be difficult and time consuming.
- **COMPLEX INSTITUTIONS:** While water rights can be owned exclusively by individuals, many rights are owned by organizations such as canal companies or irrigation districts. In such circumstances, transfers impact other shareholders and involve more than individual decision-making.
- **ENVIRONMENT:** Transfers can be used to enhance the river environment, as demonstrated by water trusts across the West that restore instream flows with water rights transfers and donations. However, transfers can also degrade the environment. For example, redirecting water to new uses can dry up streams or wetlands that depend on current irrigation practices, or allow invasive species to take hold in formerly irrigated farmland.
- **LOCAL ECONOMIES:** Many rural areas in the West depend on irrigated agriculture. For these places, agricultural water use is the backbone of the local economy and an important part of the cultural heritage. The impacts of a transfer to the local economy and community must be considered.
- **SPECULATION:** Transfer activity sometimes involves private investment in acquiring and developing water rights. As in any economic endeavor, private investors anticipate earning a future return commensurate with investment risk. But state water law and administrative practices are designed to limit speculation, assure that private investment promotes efficient solutions to water resource problems, and avoid negative outcomes such as artificial price increases.

One strategy to mitigate these third party impacts is to employ alternative transfer methods (ATMs). These can include a suite of tools, like leases, rotational fallowing, split-season uses, and water banks. The key and uniting feature is that they avoid the permanent dry-up of agricultural land, and many of the economic and environmental impacts that can occur when land goes out of irrigated agriculture forever. This report highlights alternative transfer methods that states can consider to support voluntary market-based water transfers.

## THE ROLE OF STATES IN WATER TRANSFERS

Western states have a critical role in water transfers, as well as the management and allocation of water generally. As clearly set forth in the policy of the Western States Water Council, “western states have primary authority and responsibility for the appropriation, allocation, development, conservation and protection of water resources” (WSWC Resolution #331). Put simply, Western states administer and regulate water rights and water uses within their borders.

Like any other market transaction, a water transfer requires clearly defined property rights governing who owns or controls the water, any use conditions or protections, and terms under which it can be leased or sold to other parties. Because of the complexities of water as both a public and private good, the state plays a critical role in defining and enforcing property rights in water in order to ensure markets serve society.

Beyond that, states face important public policy decisions with respect to water transfers, as described in this report. Questions relate to the role of water transfers in meeting future water supply needs, balancing the demand for new water supplies with the preservation of the environment, agricultural economies and rural communities, and assessing the proper role for private sector investment in developing limited water resources. This report describes tools states may use to improve water transfer outcomes, and frames key policy questions for states to consider.

*The state plays a critical role in defining and enforcing property rights in water in order to ensure markets serve society.*

## WHAT THIS REPORT SAYS

This report provides an overview of water transfers in the West. It looks only at intra-state water transfers, not transfers between states. Additionally, only voluntary transfers are considered; regulatory or other involuntary means of reallocating water are beyond the scope of this analysis. The report reviews the history of water transfers, flags the benefits and drawbacks of various types of transfers, surveys states and on-the-ground practitioners, examines leading case studies, and identifies tools to improve transfer practices and outcomes.

**BACKGROUND AND HISTORY:** Chapters 1 and 2 provide background on the WGA, the role of states in water transfers, and the history, drivers and trends in water transfers. These chapters review available data on water transfers and discuss the future of water transfers in the West.

**PUBLIC POLICY CONSIDERATIONS:** Chapter 3 reviews the potential impacts of water transfers to rural communities, local economies, agricultural production, the environment, and Indian tribes, and discusses how these issues can be addressed.

**STATE ROLES AND PERSPECTIVES:** Chapter 4 outlines the legal framework that states use to administer water right

transfers. Additionally, this section highlights the programs that states use to facilitate effective transfers, such as water banks or grant programs for researching alternative transfer methods.

**WATER TRANSFER MECHANISMS:** Chapter 5 takes an in-depth look at some typical arrangements for transfer agreements: sales, long-term leases, one-year leases, and arrangements that allow changes to farming practices so that some irrigation water can be transferred.

**CASE STUDIES:** Three case studies in the report illustrate successful transfers from across the West, all of which employ stakeholder involvement in reaching a mutually beneficial outcome from a major transfer arrangement in the community. One case study, from the Deschutes River Basin in Oregon, shows how investing in new infrastructure on farms was able to increase the amount of water available for irrigation while also helping to restore instream flows.

**APPENDIX:** The Appendix is a resource for practitioners who want to quickly reference the legal requirements for transfers in their own state and across the West. State frameworks for water banks, conservation programs, temporary transfers and third party protections are all collected in this quick-reference section.



## KEY FINDINGS

Water transfers have been occurring for decades, and a variety of programs and policies have evolved to administer these agreements. During the course of this project, a number of practices emerged that states can employ today to improve transfer outcomes:

- **PROVIDE BASIC DATA AND EFFICIENT**

**ADMINISTRATION:** States can collect and share data on water uses and water rights and take steps to fairly and efficiently administer proposed water transfers. These steps can increase transparency, inform market participants, clarify injury and impacts, quantify mitigation, and reduce transaction costs associated with transfers.

- **ENHANCE INSTITUTIONS THROUGH FUNDING, CONNECTIONS AND COLLABORATION:** Transfers can be complex and unique. States can provide technical or financial support to water users contemplating agreements, particularly alternative transfer methods.

- **PROMOTE CONSERVATION AND EFFICIENCY:** Water transfers can provide a financial incentive for more efficient use of water. States can clarify policies regarding conserved, saved or salvaged water and provide incentives to reduce the consumptive use of water in agriculture.

- **PROTECT AND ENHANCE RURAL COMMUNITIES**

**THROUGH TRANSFERS:** Water transfers can have negative impacts to the environment and economy of rural communities. States can seek to mitigate these impacts, and even enhance rural communities, by addressing issues such as local infrastructure needs associated with transfers, the tax base, and revegetation. Community mitigation funds have been used to enable local decision-makers to address local priorities.

- **DEVELOP INFRASTRUCTURE TO SUPPORT BENEFICIAL**

**TRANSFERS:** Transfers often require infrastructure to move or treat water. States can promote access to existing infrastructure or support the development of new infrastructure that facilitates alternative transfer mechanisms.

- **COORDINATE WITH THE FEDERAL GOVERNMENT IN WATER TRANSFER PRACTICE:**

The Bureau of Reclamation has a significant interest in water supplies and infrastructure in the West. Similarly, the Environmental Protection Agency (EPA) and the Army Corps of Engineers have a stake in water in the West. States can work with the federal government to clarify and improve policies and programs in order to facilitate voluntary and beneficial water transfers.

## HOW THIS REPORT WAS DEVELOPED

This report is the result of a year-long project to provide the Governors information on how water transfers and their alternatives are used in the West. The Walton Family Foundation provided support for the project. The WGA and WSWC convened three stakeholder workshops with over 100 participants from July to December of 2011. These meetings drew state administrators, environmental and other non-governmental organizations (NGOs), farmers, academics, water managers and other water resource professionals from across the West, providing diverse perspectives on water transfers.

This report is based on the three expert workshops described above, a literature review, surveys of the western states, and a set of case studies. The report is intended to provide states with the tools and capacity to improve water transfers or water sharing practices in the West, while avoiding or mitigating damages to agricultural economies, rural communities, and environmental values. This report is not intended to make value judgments regarding individual transfer proposals, develop universal consensus, or establish a fixed "blueprint" for transfers. It is intended to recognize the potential benefits of voluntary market-based transfers, share lessons and tools, and identify specific steps that states may take to improve water transfer outcomes.