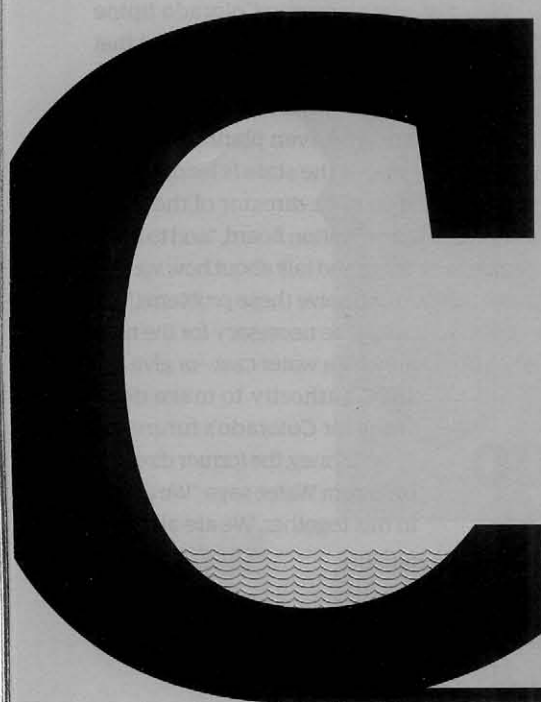


## AGRI-WARS

# Buying (and drying) the farm



**COLORADO COULD SOLVE ITS WATER CRISIS** tomorrow with a simple measure: Municipalities and industrial users could buy up all the water rights from farmers. Ag-urban transfers\*, as they're known, have been popular for decades: It's a helluva lot cheaper to buy water from the farmer down the road than dropping millions (or billions) to divert it from the Western Slope with a massive pipeline. Considering that more than 80 percent of the state's water goes to agriculture, there's plenty of water available for buying.

If we buy out agricultural water, though, most of those farms will dry up, and we'll have Dust Bowl-like conditions on farms that have been around since the settling of Colorado. Besides destroying a historical part of the state's economy, this also means that we'd have to ship most of our food from out of state, disemboweling the "eat local" movement and food security.

"Buying and drying" of some land is inevitable—more than a couple of farmers view the future sale of their water rights as their 401(k)s—but nearly everyone in the water business would like to avoid the destruction of farming. "Are there incentives we can give people to keep farming and stay in the industry?" asks Jennifer Gimbel, the director of the Colorado Water Conservation Board. "Or at least preserve their most productive land?"

While conservation techniques such as drip irrigation\*, the growing of less water-intensive crops, and rotational fallowing hold promise, some municipalities are working with farmers to buy water only

**80%**  
of our  
water is  
used by  
farming



### Ag-urban Transfer

When a farmer sells his water rights to a city for municipal use.

### Drip Irrigation

Farmers use irrigation pipes to deliver water directly to the roots of their crops. The equipment is costly but loses less water to evaporation than crop flooding or overhead sprinklers.

## BREAKDOWN

### The price of our aging infrastructure

The call woke Bob Steger, Denver Water's manager of raw water supply, at 4:45 a.m. one morning this past summer. A heavy rainfall—an inch or two—miles upstream was working into Strontia Springs Reservoir and down Waterton Canyon in south Denver. With it, debris and sediment from old fires was turning the pristine mountain water into a muddy mess. Working fast, Denver Water stopped the mucky water.

Since the 1996 Buffalo Creek Fire and 2002 Hayman Fire, tons of debris have settled in reservoirs and continue to wreak havoc on Denver Water's transportation system. To boot, dredging this sediment is just part of the upkeep. Colorado's freeze-and-thaw cycles torment Denver



I-25 sinkhole in 2008.

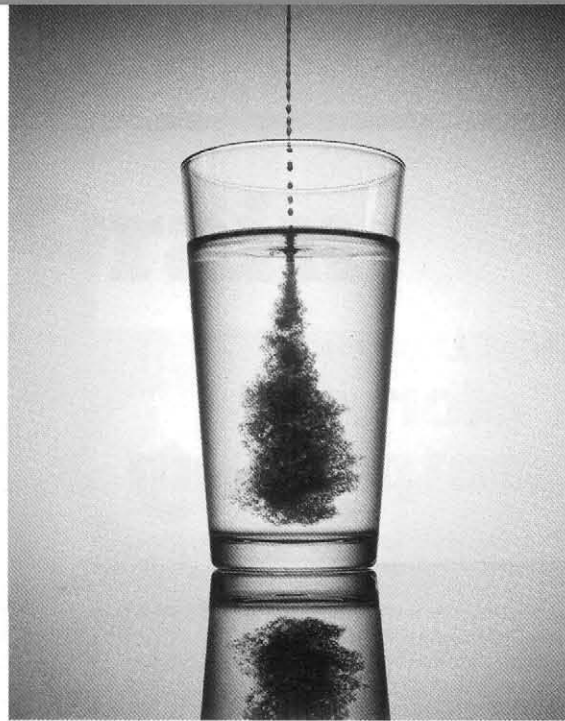
Water's more than 3,000 miles of pipe—some made of cast iron and dating back to the 1800s. When breaks happen, like in 2008 when a 66-inch conduit pipe carrying water to north Denver ruptured and tore a sinkhole larger than a volleyball court in I-25, they're front-page news.

Still, Denver Water only loses about 50 million gallons of water a year because of leaks—a relative drop in the bucket. "We spend \$7 million annually on preventative repairs," says Brian Good, Denver Water's director of operations and maintenance. "We try to do as much predictive and preventative work as possible, but like a car, eventually we're going to have to replace the engine."

during relatively dry years, which would allow them to maintain crops during wetter periods of time. Large-scale projects also hold potential to bolster agriculture: The Northern Colorado Water Conservancy District is pushing forward the Northern Integrated Supply Project (NISP), which will help provide those cities and towns with 40,000 acre-feet of water while saving 69,000 acres of farmland. Environmental groups are worried about the effect on the Cache la Poudre River—which would be partly diverted into new reservoirs during wet years—but agriculture groups have signed on with the cities.

"NISP is a project that embodies what agriculture is looking for—a way to continue to exist with urban development," says Jim Miller, the deputy commissioner of Colorado's Department of Agriculture. "The best part is that it doesn't siphon water from the Western Slope; it's simply developing water from eastern supplies."

Still, count on more farms to disappear, while others transition from water-intensive crops like alfalfa (cultivated for cattle feed) and corn (grown for cattle feed and ethanol) to crops that require less water. "The agricultural industry that we have now is not the same one that we had 75 years ago," says Miller, pointing out that Colorado was once home to more hogs, corn, and oats, before switching to beef. "And 75 years from now, it's probably not going to be the same as today."



## WE LOVE THAT DIRTY WATER Contamination stains Colorado's crystal-clear reputation

From salmonella poisoning to kitchen water that ignites because of methane, let's face it: Water can make us sick. In 2008 alone, 150,000 Coloradans drank from contaminated sources. "Our ability to detect these things exceeds our ability to explain why they are there and how they affect us," says Denver Water's Brian Good. "Even the most sophisticated of treatment systems can't treat everything." Our snow-fed water sources, nevertheless, are quite clean. The Environmental Protection Agency—which tracks water supplies nationwide—even praises Colorado's water standard program "as one of the most innovative in the country." We'll drink to that.



## Liquid Gold Despite its scarcity, water is a steal

Denver Water increased rates—again—this year, meaning that the average customer will cough up an additional \$40, for a total of \$340, in 2010. But don't complain. "The price of water is so cheap that people don't value it properly," says Brad Udall, Western Water Assessment's director. Nailing down a proper price for water that incorporates the environmental, economic, and social costs is a difficult, if not impossible, task. Water experts applaud efforts made by big utilities like Denver Water and Aurora Water, which bill big-time users more than the typical customer.

## FOOD, FUEL, AND THIRST Do we want to drink our water? Or turn it into gasoline?

Since farmers started growing corn for ethanol use, we've witnessed the exploitation of one precious commodity (water) to create another (energy). Here in Colorado, we produce around 125 million gallons of ethanol annually, which requires billions of gallons of water.

Meanwhile, on the Western Slope, energy companies are once again considering construction of plants to mine oil from shale deep below the Earth's surface. The extraction is

both energy and water intensive, requiring vast quantities of water for cooling the equipment.

Environmental groups are concerned that oil shale extraction will waste water and potentially damage the environment, but there's little they can do: Energy companies bought water rights decades ago. While that water is currently unused, oil shale production could use as much as 400,000 acre-feet of water annually by 2050, leaving the Colorado River dry.



Oil shale threatens Colorado water.