



"THE FUTURE OF WATER FUTURES"

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We are very lucky in New York to have ample supplies of fresh water. Except for extreme drought conditions, we rarely have to worry about how we will supply enough water. We are geographically blessed. Other parts of the country, especially Southern California, are not as lucky when it comes to this resource.

Southern California imports more than half of their water supply and a large portion of this water comes from the Colorado River. A 1922 agreement between seven southwest states, the Colorado River Compact, governs the allocation of Colorado River water rights amongst the participating states. The Colorado River Compact combined with numerous other contracts and regulatory guidelines have become known as "the Law of the River." The compact divided the region into two divisions. The upper division is comprised of Colorado, New Mexico, Utah, and Wyoming, while the lower division is comprised of Nevada, Arizona, and California. The compact outlined that the upper division would not deplete the water supply and that each division would receive roughly half of the water that could be sustainably taken from the river. The divisions would then allocate the water between themselves. Currently, the lower basin divides their allotment of 7.5-million-acre ft/year of water as follows: California gets 58.7%, Arizona gets 37.3%, and Nevada gets 4.0%.

A lot has changed since 1922. The Colorado River Compact allowed for the widespread irrigation of the southwest and southern California has seen large population increases in the last 98 years. Since the inception of the compact, California has been able to use any surplus water not used by Nevada and Arizona, but as the population grows in those two states, the amount of surplus water available has begun to dwindle. The strain of increased population and agricultural needs combined with decades of drought have strained the water supply for the region. This leads many to believe there is a looming shortage of water supply for the states.

While politicians work to come to an agreement on proper management and allocation of the water supply during a shortage, another contender looking to manage the water market has entered the ring: Wall Street.

In December of 2020, the Chicago Mercantile Exchange (CME) began trading water futures. This makes water a commodity that can be traded just like oil, coffee, and gold. This is the first time that water has ever been traded in this fashion and this treatment of a

necessity for life has been met with mixed reactions.

Futures trading is a very old aspect of economics. So old in fact, that the Babylonian king Hammurabi outlined them in his legal codes: "The Code of Hammurabi". In its simplest form, a future is a contract where a buyer agrees to purchase a certain amount of a good at a certain price on a later date. Let's say, for example, you make corn syrup and you think next year's corn crop will be pretty slim. You could buy a corn future at today's price instead of next year's higher price when the supply is lower. You could then sell your corn syrup next year at an increased profit because your material costs were lower than your competitors. In this example your wager on the corn crop has paid off, but if next year was a bumper crop you would be locked into paying a higher price than other corn purchasers.

It is felt that trading water futures could clear up some of the uncertainty in water prices during a shortage. Municipalities and agricultural entities could better budget for water prices when they know that they will have a set price at a certain time in the future. But trading water futures on the open market will also let hedge funds and investors into the market.

The water futures are being traded in contracts of 25 units and each unit is 10-acre-feet of water. This unit represents the amount of water to cover one acre of land with 10 feet of water. A single acre foot is 326,000 gallons of water and in December of 2020 had a price of \$496. Purchasing a full water contract would cost \$12,400 and would represent 81.5 million gallons of water. Luckily for those wagering in the water futures market, no water will physically change hands so storage will not be an issue.

A United Nations water expert has already voiced his concerns about the water market. Pedro Arrojo-Agudo, Special Rapporteur on the human rights to safe drinking water and sanitation, expressed that the water market may invite speculators and challenges basic human rights. He further explained that, "In this context, the risk is that the large agricultural and industrial players and large-scale utilities are the ones who can buy, marginalizing and impacting the vulnerable sector of the economy such as small-scale farmers." Mr. Arrojo-Agudo is concerned that smaller-rural water purchasers will be edged out of the market.

The protection of water supply is essential to our survival, but it may not be a job that Wall Street is best suited to handle. 