Chairman Rostin Behnam
Commissioner Dawn DeBerry Stump,
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC, 20581

cc: David Gillers,
Summer Mersinger

Submitted by email and U.S. mail on December 20, 2021.

Dear Chairman Behnam and Commissioner Stump:

Pursuant to Section 5c(c)(5)(C)(ii) of the Commodity Exchange Act ("CEA"), codified at 7 U.S.C. 7a-2(c)(5)(C)(ii) (2020), and Commission Regulation § 40.11(a)(1)-(2), please take the following letter as a request for the Commission to immediately suspend the exchange of self-certified Nasdaq Veles California Water Index Futures contracts (hereinafter "Water Index Futures") and hold a hearing on the matter.

Ultimately, we urge the Commissioners to issue an order barring the buying and selling of these futures contracts because:

1) They are not consistent with the CEA definition of "commodity[;]"

2) They relate to the trading of water entitlements not authorized under California law;

3) Their trading is susceptible to manipulation and thus contrary to the Commission's Core Standard 3, including because of the thin and opaque underlying market involving any water entitlement trades that do occur in California; and

4) They are contrary to the public interest, including because allowing them reads the CEA in a way that undermines public trust obligations, and could drive up prices for water, the impacts of which would most acutely be felt by those who are worse off, particularly small farmers.

Introduction and Background on Water Index Futures

In December 2020, in anticipation of major drought, the Chicago Mercantile Exchange ("CME") announced it had certified Water Index Futures as the world's first water futures contracts, allowing investors to purchase and sell them based on the NQH2O Index that purportedly tracks the spot-rate price of water entitlements in California.

Pursuant to the Commodity Futures Modernization Act,[1] Water Index Futures were self-certified by the Chicago Mercantile Exchange ("CME"), without the Commission's review, approval, and ultimate determination that they meet the requirements of the CEA and Commission regulations.

At first blush, Water Index Futures appear similar to other futures contracts over which the Commission has jurisdiction. The NQH2O Index is a benchmark for the cash price for the exchange of water allocations in California and is updated weekly. Each contract is for 10 acre-feet of water,[2] up to a maximum of two years, and is only cash settled. If, at the time of the expiration of the contract, the index value is higher than the agreed-upon price set forth on the contract, then the long-position hedgers and speculators get paid the difference from the short-position hedgers and speculators. If the index price is below the contract price, those parties holding the short positions get paid the difference from the long-position parties.[3]

But the underlying "commodity" at issue with Water Index Futures is unlike any other that the Commission has allowed as a basis for a futures contract. Not only is water necessary and essential for life, it is a common public resource managed by the state for the public welfare and without substitution. Because of its unique nature, financial instruments that could affect water's availability and affordability need special care and review.

Further, as argued below, California "water entitlements" are not a CEA "commodity" at all. Even if the NQH2O Index was considered a commodity, it would be an exempt commodity that in many instances is based on an interest that is not a lawfully traded fungible interest under California law. Further, the futures product is susceptible to manipulation and contrary to the public interest because of the serious detrimental impact that excess speculation in water futures contracts based on the price benchmark for water may have for all who depend on the underlying, fundamental resource for drinking, hygiene, and sanitation.

As some observers have pointed out, an inherent weakness of the Commission's self-certification process is that it "allows exchanges—who have a financial incentive to list new products, regardless of how risky they may be—to quickly list complex commodity derivatives with no public or market input, and minimal regulatory review."[4] Given the nature and importance of the underlying supposed "commodity" involved in Water Index Futures, however, we urge the Commission to not let any such weaknesses be the basis for the continued availability of this product for trade. Instead, the Commission should formally review Water Index Futures, and determine that they are inconsistent with Core Principle 3 and the public interest.

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[1] 7 U.S.C. § 1 (2000).

[2] An acre foot is the amount of water that would cover one acre one foot deep, or about 43,560 cubic feet. and 325,851 gallons.

[3] *See* Submission by CME Group, CFTC Regulation 40.2(a) Certification. Notification Regarding the Initial Listing of the Nasdaq Veles California Water Index Futures Contract, CME Submission No. 20-399, at 2 (Nov. 19, 2020), https://www.cftc.gov/sites/default/files/filings/ptc/20/11/ptc113020cmedcm001.pdf,

[4] Lee Reiners, *Bitcoin Futures: From Self-Certification to Systemic Risk*, 23 N.C. Banking Inst. 61, 106. (2019), https://scholarship.law.unc.edu/ncbi/vol23/iss1/8.

The Commission Has No Jurisdiction to Regulate Water Index Futures Contracts Under the CEA.

Whether the Water Index Futures product was properly self-certified turns on two issues: first, whether the "water entitlements" underlying the NQH2O Index or the index itself are in fact "commodities" under the CEA; and if so, whether the trading of the such commodities are allowed under the act. As demonstrated below, Water Index Futures pass neither of these tests.

A. The Water Entitlements Upon Which the NQH2O Index Is Based Are Not "Commodities" Under the Act.

Under the CEA, the term "commodity" is extremely broad, covering the following:

> wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, Solanum tuberosum (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles, except onions (as provided by the first section of Public Law 85-839 (7 U.S.C. 13-1)) and motion picture box office receipts (or any index, measure, value, or data related to such receipts), and all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in.[5]

But the very expansive statute is not without limits.[6] First, non-listed commodities must be either "other goods and articles" such as those already listed. Or, they must be "services," "rights," or "interests," "in which contracts for future delivery are presently or in the future dealt in."[7]

The California water entitlements underlying the NQH2O Index are obviously not "goods" or "articles" similar to the others the act lists. As courts have repeatedly said, "water in its natural state cannot be owned by any private person."[8] "Property interests in water instead take the form of a usufruct, *i.e.,* a right to use."[9] This ancient rule dates back at least to the times of Roman law, which denied the existence of property in water altogether and deemed the use of rivers and lakes to be the common right of everyone, like the sea and the air.

But the "entitlement transactions," represented by the NQH2O Index as "the current valuation of water . . . from the state of California's surface water market and the four most actively traded adjudicated groundwater basins[,]"[10] also aren't rights or interests "in which contracts for future delivery are presently or in the future dealt in" under the CEA's definition of a "commodity." This is because there is no such things as contracts for future delivery of "water entitlements" in California.

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[5] 7 U.S.C. § 1a(9) (2020).

[6] Otherwise, the agency's approval would certainly be lawful, the statute would not articulate the intelligible principle required under the U.S. Constitution. *See Gundy v. United States*, 139 S. Ct. 2116, 2142 (2019).

[7] 7 U.S.C. § 1a(9).

[8] *Orange Cty. Water Dist. v. Sabic Innovative Plastics US,* 14 Cal. App. 5th 343, 403 (Cal.Ct.App. 2017) (citing *State of California v. Superior Court*, 78 Cal.App.4th 1019, 1025 (Cal.Ct.App.2000)).

[9] *Id.*

[10] *See* CME Group, *supra* n. 3, at 2.

In this way, CME's marketing materials are quite misleading, as it is neither true that "the chasms between supply and demand paved the way for *a system* of water allocation . . . ." nor that there is even a "spot rate price of water rights in the state of California."[11]

Instead, there is no formal state market for water entitlements.[12] Instead, California water entitlements are complicated, depending on the water's source (surface versus groundwater); when and how the right was originally acquired; whether the right is for the use of riparian property on or overlaying the groundwater source; or whether it is for the use or storage of the water (appropriative). Grafted on such rights are particular limits based on the location of the water and whether the rights have been settled through court adjudications. Further, there are separate rules that govern the transfers of water under these rights. Complicating this even more is that much of California water comes from contracts acquired from the State Water Project and U.S. Bureau of Reclamation's Central Valley Project, which are large projects to facilitate the long-distance transfer of water from north of the Sacramento-San Joaquin River Delta to the south.[13]

The water entitlements that the NQH2O Index represents all involve appropriative rights holders (or "use" rights) for various surface waters, as well as adjudicated rights to water from the identified groundwater basins.[14] While parties do engage in some trading of these entitlements,[15] "groundwater and surface water are used for the same purpose, they are not the same commodity, i.e., they are not fungible." [16] As CME's own self-certification materials illustrate, surface and groundwater entitlements are distinct, and they involve two types of rights that cannot be exchanged.[17] The entitlements involve both leases and permanent sales, which obviously are not valued the same.[18] And, even within groundwater rights, the definition and scope of entitlements are different depending on which adjudicated water basins to which they pertain.[19] As has developed through adjudications and settlements, some groundwater rights are based on California water law, while others are based on other factors such as prior use and need.[20] Water rights are often based on calculations of base water use, safe yield, and overdraft that are established differently in the various water basins. Finally, different conditions are placed on water rights such as those aimed at reducing demand, approaches

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[11] *Id.*, at 1-2 (emphasis added).

[12] Water Education Foundation, *Is the California Water Market Open for Business?* Western Water, March/April 2001, https://www.watereducation.org/western-water-excerpt/california-water-market-open-business.

[13] A particularly helpful resource for Commissioners interested in a more comprehensive review of water rights is: Bartkiewicz, Kronick & Shanahan, A Summary of the California Law of Surface Water and Groundwater Rights (2006), https://www.norcalwater.org/wp-content/uploads/bks_water_rights.pdf.

[14] *See* Nasdaq Veles California Water Index at 2-3 (Mar. 2019) (hereinafter, "Methodology"), https://indexes.nasdaqomx.com/docs/methodology_NQH2O.pdf.

[15] Compared to how much water is allocated, however, there is little trading of water entitlements in California. From 2009-18, on average, only about 1.1 million acre-feet of water (1.6% of the supply) was traded annually in the form of leases, and 29,000 acre-feet (.004%) was traded in the form of permanent sales. *See* Kurt Schwabe, *et al.*, *Water Markets in the Western United States: Trends and Opportunities*, *Water* 12, at 6 (Jan. 14, 2020), https://www.mdpi.com/2073-4441/12/1/233.

[16] *Stockton E. Water Dist. v. United States*, No. 04-541L, 2012 U.S. Claims LEXIS 2267, at *35 (Fed. Cl. Aug. 24, 2012).

[17] *See* Methodology*, supra* n. 14, at 2-3.

[18] *Id.*; *see* Schwabe, *et al.*, *supra* n. 15, at 6.

[19] Ruth Langridge, *et al.*, An Evaluation of California's Adjudicated Water Basins, at 3 (2016), https://www.waterboards.ca.gov/water_issues/programs/gmp/docs/resources/swrcb_012816.pdf.

[20] *Id.*

to replenishment if water rights are exceeded, carryover credits, and whether a water rights can be transferred differ depending on the basin.[21] And many groundwater rights cannot be transferred outside of basins.[22]

Thus, the various water allocations that are exchanged in California are diverse, and they depend on the usufructuary interest involved and how and by whom they are regulated. One can no more purchase a "water entitlement" for future delivery in California than they can go to their doctor or hospital and request to purchase a "medical care." These water entitlements are not in fact "commodities" under the CEA, as they are not "services, rights, and interests . . . in which contracts for future delivery are presently or in the future dealt in."[23]

Since the "water entitlements" underlying the NQH2O Index are not in fact commodities under the CME, the Commission should deem that it has no jurisdiction to allow for the trade of Water Index Futures on the CME and should suspend their trade immediately.

B. Regardless of Whether the Commission Finds California "Water Entitlements" to Be "Commodities," under the CME, the NQH2O Index Could Only Be an "Excluded" Commodity, and the Exchange of Water Index Futures Based on It Are Contrary to 7 U.S.C. § 7a-2(c)(5)(C) and 17 C.F.R. § 40.11(a)(1)-(2).

The Commission could only find that Water Index Futures involve "commodities" if it determines that they involve "excluded commodit[ies]." The CEA defines these to include the following: "any other rate, differential, index, or measure of economic or commercial risk, return, or value that is . . . based solely on 1 or more commodities that have no cash market[.]"[24]

As demonstrated above, California "water entitlements" themselves have no cash market, even though the exchange of Water Index Futures contracts have real-world implications for the trades of the various water rights that are allowed and do take place under California law. Thus, to the extent that Water Index Futures were to involve "commodities," it would only be because the NQH2O Index is a measure of commercial risk, return, or value between the various parties that exchange the various water entitlements in California.

But the CME's materials do not actually assert, no less demonstrate, what value any Water Index Futures will have for the holders and purchasers of bona fide water entitlements in California. Further, not all such exchanges in "excluded commodit[ies]" may be exchanged under the CEA. Section 1(a)(19) of the CEA provides that the Commission may determine that agreements, contracts, or transactions "in excluded commodities that are based upon the occurrence, extent of an occurrence,

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[21] *Id.*

[22] Nell Green Nylen, *et al.*, Trading Sustainably, Critical Considerations For Local Groundwater Markets Under the Sustainable Groundwater Management Act, at 22 (2017), https://www.law.berkeley.edu/wp-content/uploads/2017/06/CLEE_Trading-Sustainably_2017-06-21.pdf.

[23] 7 U.S.C. § 1a(9). Indeed, this makes water entitlements and the index based on it far different than other commodities that the agency has asserted jurisdiction over, such as bitcoin and other virtual currencies. Implicit in those is that their value is derived from the creation of the currency, and then trades are made based in this value. The price of any given water entitlement in California, on the other hand, is largely a function of the nature of the specific water right under California law, not the value from securing the entitlement.

[24] *Id.* § 1a(19)(II)(ii).

or contingency . . . by a designated contract market or swap execution facility . . . are contrary to the public interest if the agreements, contracts, or transactions involve—(I) activity that is unlawful under any Federal or State law; (II) terrorism; (III) assassination; (IV) war; (V) gaming; or (VI) other similar activity determined by the Commission, by rule or regulation, to be contrary to the public interest."[25]

The Commission's regulations bar trading of such excluded commodities that "involves, relates to, or references terrorism, assassination, war, gaming, or an activity that is unlawful under any State or Federal law;" or that is "similar to" such an activity.[26]

As demonstrated above, while there is some trading that is allowed between holders of some types of water entitlements in California, parties cannot trade all types of entitlement under state law. For example, the holder of a water entitlement in the Mojave Water basin, which is covered by the NQH2O Index, could not sell it to users outside of the basin, as this would violate the court-enforced settlement decree applicable to the basin.[27] Such a trade would be a "contract" or "transaction" that is unlawful under California law. Inter-basin transfers raise particular concerns, as they allow the financial interests of the trading parties to undermine community interests in maintaining water within natural watersheds to avoid economic, social, and environmental harms.

Such trades are tacitly incorporated into the NQH2O Index, however, as a user can purchase a contract with any other entitlement holders (as well as non-entitlement-holder speculators) regardless of their connection to the basin. These trades of futures contracts based on an index for entitlements that otherwise could not be traded in the spot market are likely to distort the futures contracts prices, thus raising substantial doubt about their economic value to those involved in the legitimate trade of entitlements in the spot market.

Moreover, Water Index Futures undermine the state's "beneficial use" legal doctrine, which requires that water entitlements not be used solely for speculation, such as "to store water for monopoly."[28] Under this doctrine, the exchange of an appropriative water right where the only use is impoundment for future sale to an undefined user it would be impermissible. Instead, the doctrine "presupposes an actual appropriation of a specified and reasonable amount of water for use for a beneficial purpose at a designated place."[29] Insofar as the trading in futures may lead to excess speculation and thus hoarding of the various entitlements that are can be exchanged under state law, as demonstrated below, the futures market will aid and abet violations of state law—an outcome the Commission should not permit.

That such Water Index Futures contracts are only cash settled is of little legal consequence to the Commission's decision on whether to suspend the futures contracts. The Commission's regulations bar all trading "relat[ing] to" to or "referenc[ing]" unlawful activity.[30] Even if there is never any prospect of delivery of any commodity under the contracts, the Commission has been unwilling to sanction the trading of futures contracts where they have no real final economic connection to a

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[25] *Id.* § 7a-2(c)(5)(C).
[26] 17 C.F.R. § 40.11(a)(1)-(2) (2021).
[27] *See City of Barstow, et al v. City of Adelanto, et al.*, Case No. 208568, Judgment After Trial, at 23 (Cal. Super. Ct. Jan. 10, 1996), http://www.mojavewater.org/files/Judgment.pdf.
[28] *Meridian, Ltd. v. San Francisco*, 13 Cal. 2d 424, 465 (May 5, 1939).
[29] *Cent. Delta Water Agency v. State Water Res. Control Bd.*, 124 Cal. App. 4th 245, 263 (2004).
[30] 17 C.F.R. § 40.11 (a)(1)-(2).

legal cash market. For example, the Commission prohibited the trading of binary option contracts with payouts based upon the results of the various U.S. federal elections in 2012, in no small part because some state laws prohibited betting on political events in their gaming laws, regardless of the fact that no actual "delivery" of any underlying commodity was ever contemplated with the product.[31]

C. Water Index Futures Violate CFTC's Core Standard 3, as Its Contracts Are Readily Susceptible to Manipulation

Even if a product passes muster under Regulation 40.11, it also must satisfy all the other requirements of Regulation 40.2, including compliance with the CEA core principles and the Commission's regulations.

The CEA strictly prohibits any board of trade such as CME from allowing trades of futures that are "readily susceptible to manipulation of the price of such contract,"[32] and this is embodied in the Commission's Core Standard 3.[33]

Here, Water Index Futures violate Core Standard 3. as the contracts are readily susceptible to manipulation.[34] There is virtually nothing in CME's materials submitted in support of the Water Index Futures contracts that demonstrates that they will not be susceptible to manipulation. Instead, CME merely asserts that "[t[he Contract is based on a transaction-based Index that is reflective of the underlying cash market. All transactions are confirmed and verified prior to their inclusion in the Index. Furthermore, the Index is supported by a governance and control framework overseen by Nasdaq's US Oversight and Index Management Committees."[35]

While this *may* ensure that the index is not manipulated based on fraudulent trades, it is a far cry from ensuring that investors won't not engage in trades that are real but no less aimed at manipulation. According to the CFTC's Core Standard 3, "situations susceptible to manipulation include those in which the volume of cash market transactions and/or the number of participants contacted in determining the cash-settlement price are very low."[36] This is because "[c]ash-settled contracts may create an incentive to manipulate or artificially influence the data from which the cash-settlement price is derived or to exert undue influence on the cash-settlement price's computation in order to profit on a futures position in that commodity."[37] As a result, "[t]he utility of a cash-settled

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[31] *See, e.g.*, CFTC, ORDER PROHIBITING THE LISTING OR TRADING OF POLITICAL EVENT CONTRACTS, https://www.cftc.gov/stellent/groups/public/@rulesandproducts/documents/ifdocs/nadexorder040212.pdf; *but. cf.* Statement of Commissioner Dan M. Berkovitz Related to Review of ErisX Certification of NFL Futures Contracts, https://www.cftc.gov/PressRoom/SpeechesTestimony/berkovitzstatement040721#_ftn16 (indicating that it would allow for futures based on the outcome of NFL games in part because of the increasing number of states legalizing sports gambling).

[32] 7 U.S.C. § 2(a)(1)(c)(ii)(II) (2020).

[33] 17 C.F.R. Part 38 App. C (2021).

[34] At least one observer has detailed how rampant bench-mark manipulation is in cash-settled contracts. *See* Andrew Verstein, *Benchmark Manipulation*, 56 B.C. L. Rev. 215 (2015).

[35] *See* CME Group, *supra* n. 3, at 3.

[36] 17 C.F.R. Part 38 App. C(c)(2).

[37] *Id.*

contract for risk management and price discovery would be significantly impaired if the cash settlement price is not a reliable or robust indicator of the value of the underlying commodity or instrument."[38]

Here, the NQH2O Index is based on a particularly thin spot market. The CME has sought to prevent price manipulation by establishing a position limit of 35,000 contracts that any individual trader can acquire per month, which is about 19% of the estimated deliverable supply of water underlying the NQH2O Index.[39] But just one trader's acquisition of the maximum number of 10 acre-feet contracts, totaling 350,000 acre-feet of water, would be equivalent to 31% of the total annual average amount of water traded in California between 2009-18.[40] Since the volume of futures contracts settled based on the benchmarks may end up being much larger than the volume of trades used to calculate the benchmark, those with large positions in the futures market would have a strong incentive to engage in the trading of a relatively small amounts of the underlying resource in ways that would contradict supply and demand in order to influence payoffs on their much larger contract positions.[41]

Further, the underlying cash market is particularly opaque. California does not have any price transparency in its water markets, as there is no central repository that tracks the value of water trades. How the NQH2O index is derived also is not public, other than it is a "volume-weighted average of the prevailing prices in the underlying markets after adjusting for idiosyncratic pricing factors specific to each of the eligible markets and transaction types."[42] It is unclear how the prices are known for compiling the index and then how these prices are adjusted. Presumably some of this information is in Appendices A & B of CME has deemed this confidential business information.[43] This is therefore unlike the prices of commodities underlying some other futures contracts, which are tracked by government agencies. Contrary to the Commission's regulations, the CME has not given appropriate consideration to the public availability of the price series used to calculate the cash settlement price, as there is little transparency to ensure that the cash transactions underlying the index are an accurate and representative reflection of the actual water-allocation sales and leases in the state. This cash sales price opacity alone renders Water Index Futures susceptible to manipulation. [44]

While CME presumably has access to some of the proprietary information underlying the NQH2O Index, the product's self-certification has meant that neither the Commission nor its staff have in fact evaluated whether the futures contracts are susceptible to market manipulation. We urge the Commission to not simply wait to evaluate this product after there are more than 10,000 open interest contracts, as the CFTC's staff have indicated is their usual course.[45] This would require 100,000 acre-feet-worth of open interest contracts, or close to 9% of the total annual average water

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[38] *Id.*

[39] CME Group, *supra* n. 3, at 15.

[40] *See* Schwabe, *et al.*, *supra* n. 15, at 6.

[41] *See*, *generally*, Anthony Lee Zhang, Competition and Manipulation in Derivative Contract Markets, at 8-9, R&R, Journal of Financial Economics (May 2021), https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID3662854_code2397012.pdf?abstractid=3413265&mirid=1.

[42] *See* Methodology*, supra* n. 14, at 1.

[43] Letter from Christopher Bowen, CME Group, to Christopher J. Kirkpatrick, Office of the Secretariat, Commodity Futures Trading Commission, FOIA Confidential Treatment Request (Nov. 20, 2020), https://www.cftc.gov/sites/default/files/filings/ptc/20/11/ptc113020cmedcm002.pdf.

[44] *See* 17 C.F.R. Part 38 App. C(c)(2).

[45] Meeting with CFTC staff, Apr. 22, 2021.

traded in all of California from 2009 to 2018.[46] This is far too much trading before the Commission engages in a serious evaluation of the potential for price manipulation.

Among other harms, such price manipulations would cause financial losses for the bona fide commercial participants in the futures market, including any real-world-rights holders simply seeking to hedge the price risk of buying and selling water entitlements. It could also erode participants' trust in Commission and drive up the costs of participating, including increased margin collateral.[47]

Detrimental investor participation in water rights markets occurred very recently in Australia in 2018 and 2019, which had developed a highly unregulated water market along with complex financial products market, that involved many financial instruments, including water options and forward contracts.[48] Professional traders who had actively traded different types of water rights were able to profit from water-price spikes due to wildfires and drought.[49] Such institutional investors accounted for an estimated 11% of the volume of water allocations purchased and 21% of the volumes of water allocations sold from 2018-19.[50] Four large investors and some small investors were among the largest water rights sellers, collectively accounting for 45% of all the water traded in one basin area over this time period.[51] While Australia's antitrust authority ultimately found no price manipulation, it concluded that concerns about investor behavior had shaken participants' confidence in the reliability of the market.[52]

D. Trades of Water Index Futures Contracts Are Contrary to the Public Interest.

Even if contracts for California "water entitlements" are not deemed unlawful or subject to manipulation by the Commission, their trade is contrary to the public interest.

Fundamentally, usufructuary interests in water are uniquely a public resource that can never be relinquished under California's Public Trust doctrine. As the U.S. Supreme Court has recognized, the Public Trust doctrine established that "[t]he State can no more abdicate its trust over property in which the whole people are interested, like navigable waters and soils under them, . . . than it can abdicate its police powers in the administration of government and the preservation of the peace."[53] As another court has put it, "because the state holds such property in trust for the public's use, the state is simply without power to dispose of public trust property when it is not in the public's

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[46] *See* Schwabe, *et al.*, *supra* n. 15, at 6.

[47] *See, generally*, Gina-Gail S. Fletcher, *Legitimate Yet Manipulative: The Conundrum of Open-Market Manipulation*, 68 Duke L.J. 479, 491-493 (2018). Gina-Gail S. Fletcher, *Macroeconomic Consequences of Market Manipulation*, 83 Law & Contemp. Prob. 123,124,134 (Jan. 1, 2020).

[48] Scott Hamilton and Stuart Kells, *Australia's Water Tragedy Has Urgent Lessons for America*, https://pursuit.unimelb.edu.au/articles/australia-s-water-tragedy-has-urgent-lessons-for-america (first published June 29, 2021): Australian Competition & Consumer Commission, Darling Basin Water Markets Inquiry, Final Report, at 81, 166, 297 (Feb. 21, 2021) https://www.accc.gov.au/publications/murray-darling-basin-water-markets-inquiry-final-report.

[49] Scott Hamilton and Stuart Kells, *supra* n. 48, Ben Ryder Howe, *Wall Street Eyes Billions in the Colorado's Water*, New York Times, Jan. 3, 2021, https://www.nytimes.com/2021/01/03/business/colorado-river-water-rights.html?action=click&module=RelatedLinks&pgtype=Article.

[50] Australian Competition & Consumer Commission, *supra* n. 48, at 204.

[51] *Id.* at 200.

[52] *Id.* at 212.

[53] *Ill. C. R. Co. v. Illinois,* 146 U.S. 387 at 453 (1892).

interest."[54] Thus, even under the CEA's admittedly broad definition of commodity, the Commission should not read the CEA' public interest requirement in a way that would undermine the Public Trust doctrine.

Given that water entitlements cannot be freely traded under state law under this doctrine, it can hardly be in the public interest for the Commission to allow for trades of futures contracts for such a resource, while wearing blinders to their impacts. There are serious considerations about what the threat of excess speculation can have for all people dependent on a reliable source of affordable water for their health, hygiene, sanitation, ecosystems, and economic livelihoods.

The primary concern is the effect that large institutional speculators could have if they invest in water futures to diversify their investments, since they have become the dominant investors in many commodity derivatives markets.[55] When financial-institution speculators get into futures, they have typically employed an investment strategy that assumes that prices will always increase, and they roll-over their "long only" position in the futures market, a practice referred to as "massive passive" or "synthetic hoarding."[56]

In response, sellers may be more likely to hoard the actual commodity.[57] As commenters have remarked:

> If the very act of investing in physical commodities via derivatives impacts prices (as the data suggest it does), then investors may simply end up interpolating the costs of physical storage into their contracts (paying "synthetic" storage). And if investing via derivatives pushes up physical prices over time (as again, the analysis suggests it is likely to), then hoarding by other participants with access to physical storage becomes a low-risk arbitrage strategy. In such a scenario, the price rise would precede the "hoarding," but the net effect would remain the same: storage costs paid by investors, and negative externalities generated in the form of higher prices and hoarding.[58]

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[54] *Lawrence v. Clark Cty.*, 127 Nev. 390, 400-01 (Nev. 2011) (citing *Kootenai Environ. Alliance v. Panhandle Yacht*, 105 Idaho 622, 671 P.2d 1085, 1088 (Idaho 1983) ("[A] state, as administrator of the trust in navigable waters on behalf of the public, does not have the power to abdicate its role as trustee in favor of private parties."); *Coxe v. State*, 144 N.Y. 396 (N.Y. 1895) ("The title of the state to the seacoast and the shores of tidal rivers is different from the fee simple which an individual holds to an estate in lands. It is not a proprietary, but a sovereign, right; and it has been frequently said that a trust is ingrafted upon this title for the benefit of the public, of which the state is powerless to divest itself.").

[55] Myriam Vander Stichele, *et al.*, *Feeding the Financial Hype - How Excessive Financial Investments Impact Agricultural Derivatives Markets*, at 7 (Dec. 20, 2011), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1974405.

[56] Rene Carmona, Financialization of the Commodities Markets: A Non-technical Introduction, Fields Institute Communications, 74, 3-37, at 9-13, (2015); Vander Stichele, *at al.*, *supra* n. 55, at 29, Field, Sean, *The Financialization of Food and the 2008-2011 Food Price Spikes*, at 8, 15-16. Environment and Planning A (2016), https://www.researchgate.net/publication/305364197_The_financialization_of_food_and_the_2008-2011_food_price_spikes.

[57] David Frenk and Wallace Turbeville, Commodity Index Traders and Boom/Bust in Commodities Prices, at 9, 12 (2011), https://bettermarkets.com/sites/default/files/Better%20Markets-%20Commodity%20Index%20Traders%20and%20Boom-Bust%20in%20Commodities%20Prices.pdf.

[58] *Id.* at 9.

When this happens, demand for the underlying commodity rises, even as its prices rise, the results of which are volatility in commodity prices and finally market crash, when actual supply and demand take over the synthetic speculation-driven economic forces.[59] As index-fund speculation drives prices upwards, it becomes more expensive for the commercial participants to hedge the prices of the commodities they produce, process, or transport. If commercial hedgers have to put down more margin collateral to hedge price, they are likely to pass on those costs and the costs of ineffective price hedging, eventually increasing prices of industrial and consumer goods.[60]

A large presence of massive-passive speculators in the California water-rights market-—others have mapped out how this might happen in with water futures[61]— could send price signals to water rights' sellers that water prices are bound to increase and that they should not sell their water rights any time soon. Synthetic hoarding would force hedgers to turn to physical hoarding and drive prices upward, as occurred to commodity markets in 2007 and 2008.[62]

The impacts of such price increases would be most acutely felt by those who are worse off, particularly smaller-scale farmers. As a report by the U.N. Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation recently wrote:

> If the speculative dynamics of the futures markets were to have an impact on the price of water on the ground, as has been happening with food, these costs would be passed on to water and sanitation charges, increasing the risk of non-payment and water cuts among the poorest and, therefore, violations of the human rights to water and sanitation. In the agricultural-to-urban transactions that often occur, in this case in California, especially during periods of drought, price increases could range from the $0.07 per m3 that California farmers can pay currently to more than $1 per m3, taking the cost of desalination as a benchmark.[63]

These costs could also lead to concentration in the underlying cash market and even less proportional hedging the futures market. Farms use a large amount of water in California. The greater-than-nine-million acres of irrigated farmland in California amounts to roughly 80% of the water used for businesses and homes.[64] Farms once relied on unregulated groundwater during drier periods. Now, with extreme drought and the prospects of a new law that would regulate non-

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[59] Velmurugan P. Shanmugam, *et al.*, Impact of U.S Financial Market Deregulation on Commodity Derivatives Market: An Overview, at 15, (May 26, 2017), https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2975264_code2605047.pdf?abstractid=2975264&mirid=1.

[60] Frenk and Turbeville, *supra* n. 57, at 7.

[61] *See* Dr. Steve Suppan, *Futurizing water prices: How, why and who may benefit?* Institute for Agriculture and Trade Policy, (Mar. 9, 2021), https://www.iatp.org/blog/202103/futurizing-water-prices-how-why-and-who-may-benefit.

[62] *See* Testimony of Michael W. Masters, Managing Member / Portfolio Manager Masters Capital Management, LLC before the Commodities Futures Trading Commission, (Aug. 5, 2009) https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/hearing080509_masters.pdf.

[63] Risks and impacts of the commodification and financialization of water on the human rights to safe drinking water and sanitation, Note by the Secretary-General, A/76/159, Jul. 16, 2021, https://contrattoacqua.it/public/upload/1/2/tab_elms_docs/1633699965a_76_159_e.pdf.

[64] Jeffrey Mount, *et al.*, *Water Use In California*, Public Policy Institute of California (May 2019) https://www.ppic.org/publication/water-use-in-california/.

adjudicated groundwater pumping, farmers are seeking other options for their water, such as purchasing additional surface-water allocations or planting higher-value crops, such as almonds. But these alternatives, which are already too expensive for many smaller farms, would be out of the question were excess speculation to further increase water entitlement prices. Larger farms, on the other hand, with their existing access to water and water rights and economies of scale would be in a better position despite excess speculation. Agricultural users remain the largest existing water rights sellers.[65] Should farm rights holders sell them before the bubble burst, they may even profit from a water-price bubble.

CFTC has few backstops in place to prevent excess speculation with Water Index Futures. With a position limit of 35,000 contracts per month, or 350,000 acre-feet, only four speculators purchasing the maximum number of contracts could possess futures in an amount representing more than all of the water that was actually traded on average annually between 2009-18 in California. It would only take 1 additional speculators at 35,000 contracts at the current $700 value per contract (as of the opening of trade on Dec. 10, 2021)[66] to purchase contracts equaling the average annual value of trading water entitlements in the cash market in California from 2009-2018.[67]

Conclusion

Neither "water entitlements" nor the NQH2O Index underlying Water Index Futures are "commodities" under the CEA and are related to trades that would not be allowed under state law, including between those not connected or the basin or for non-beneficial uses. What's more, Water Index Futures trades are contrary to the public interest as they involve the trade of an essential resource. Both manipulation and excess speculation related to water futures could have real-world negative impacts, undermining participants' confidence in the cash and futures market and driving up the costs of participating in both. More importantly, excessive speculation could drive up cash prices for water, the impacts of which would most acutely be felt by those who are worse off, particularly small farmers.

When the Commission approves a product, its approval "definitive[ly]" resolves whether the product meets the standards of § 40.11(a)(1). However, when a product is self-certified, as here, the Commission has indicated it can review a product that "may violate the prohibitions in § 40.11(a)(1)-(2)" and request the registered entity suspend the trading or clearing of the contract pending the completion of a 90-day extended review. [68]

Based on the above, we urge the Commission to do precisely this and hold a hearing on Water Index Futures. After such a hearing, "the Commission must issue an order, pursuant to Section 745(b) of the Dodd-Frank Act, finding either that the product violates or does not violate the prohibitions in § 40.11(a)(1)-(2)."[69]

For the reasons stated above, we are confident that after reviewing the Water Index Futures product, the Commission will issue an order barring the buying and selling of these futures contracts.

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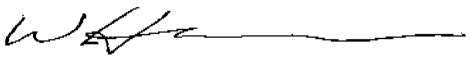
[65] *See* Schwabe, *et al*, *supra* n. 15, at 11.
[66] https://veleswater.com/h2o/.
[67] *See* Schwabe, *et al.*, *supra* n. 15, at 10.
[68] 76 Fed. Reg. 44,776, 44,786 (July, 27, 2011).
[69] *Id.*

Please do not hesitate to contact Zach Corrigan, Senior Staff Attorney for Food & Water Watch, at 202-276-0159 and zcorrigan@fwwatch.org if you or your staff have any questions. We look forward to hearing from you on this important matter.

Sincerely,



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