

EW RISINGER

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Week 26

The American Water and Energy Corridor — Western Water

1. The Problem

Lake Mead sits at approximately 30-35% capacity as of mid-2026 per Bureau of Reclamation data. Seven states fight over a shrinking Colorado River. The 1922 compact allocated more water than the river produces in an average year. The western United States is running out of water and the policy response for decades has been to fight over who gets less. America has never attempted to solve the problem by adding water to the system. The solution already exists in geography: the Pacific Ocean is an unlimited source of water. Vandenberg Space Force Base sits on the California coast on federal land with direct Pacific access. Interstate 15 runs northeast from the Los Angeles basin through the Mojave Desert to Las Vegas and Lake Mead. No foreign government negotiation. No private land acquisition. No new corridor through untouched desert. The infrastructure to solve the western water crisis already exists. The platform uses it.

2. The Governing Principle

America does not solve a water shortage by moving scarcity around. America solves a water shortage by creating new water. The Pacific Ocean is the source. Vandenberg Space Force Base is the intake. The I-15 corridor is the route. Lake Mead is the destination. The governing commitment: on the day the Corridor comes online, Lake Mead stops declining. From that day forward it recovers permanently. The ocean does not run dry. The pipeline runs every day. The Southwest has water security as long as the Corridor operates.

3. The Specific Policy

I. The Corridor — From the Pacific to Lake Mead

The American Water and Energy Corridor runs from Vandenberg Space Force Base on the Pacific Coast northeast through the Mojave Desert, following the I-15 federal right-of-way corridor through Barstow and Las Vegas to Lake Mead — approximately 400 miles on existing federal land and existing federal right-of-way. The specific transmission system engineering — pipe diameter, number of parallel conduits, pumping station configuration, and intermediate storage — is determined by the Army Corps of Engineers feasibility study commissioned in Year 1.

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Base — the Pacific

intake:

Vandenberg is already federal land with

an existing federal security perimeter, deep Pacific Ocean access, and established federal infrastructure. No foreign government agreement required. No private land acquisition. Desalination facilities are constructed on the Vandenberg federal installation or on immediately adjacent BLM land. Vandenberg covers 98,000 acres — the desalination plant footprint of 150-250 acres is less than 0.25% of the base.

- **The I-15 corridor — existing federal right-of-way:** Interstate 15 from the Los Angeles basin through Barstow, across the Mojave, through Las Vegas to Lake Mead provides the primary corridor route. High-capacity water transmission infrastructure and solar arrays are built alongside the existing highway — not through untouched desert. Right-of-way acquisition cost is eliminated.
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Environmental permitting is accelerated.

- **Six integrated components:** (1) High-capacity water transmission system alongside I-15 from Vandenberg to Lake Mead. (2) Utility-scale solar generation along the corridor powering desalination and pumping operations and generating significant surplus for the western grid. (3) High-voltage electrical transmission connecting western power markets. (4) Fiber and communications infrastructure along the full corridor. (5) Federal GOCO industrial and logistics development zones at designated corridor sites. (6) A federal transportation corridor connecting campus and development sites.
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II. The Desalination Plant — Proven Technology at Scale

The Vandenberg desalination facility uses proven Seawater Reverse Osmosis technology — the same technology that produces 85% of Israel's municipal water and operates the world's largest desalination complexes in the UAE. The Taweelah plant in the UAE currently produces approximately 240 million gallons per day from a single facility. The Vandenberg facility targets 1 billion gallons per day by operating as a mega-cluster of 30-40 parallel SWRO trains, each the size of a current world-class plant.

This is not experimental technology deployed at unprecedented scale — it is proven technology deployed in parallel at proven scale.

- **Plant specifications:** 30-40 parallel SWRO trains. Approximately 300,000-400,000 individual 8-inch spiral-wound membrane elements. Surface footprint: approximately 150-250 acres of Vandenberg federal land. Operating pressure: 800-1,000 PSI. Recovery rate: approximately 40-45% — the plant intakes approximately 2.2-2.5 billion gallons of seawater per day to produce 1 billion gallons of fresh water.

- **Energy consumption:** approximately 470-500 MW of continuous power at best-practice Specific Energy Consumption of 3.0 kWh per cubic meter using isobaric energy recovery devices — current industry standard capturing 40-50% of pressurization energy from the brine outlet stream.

- **Brine discharge:** the plant outputs approximately 1.2-1.5 billion gallons per day of hypersaline brine at approximately double natural ocean salinity. Discharged through an engineered multi-port diffuser system extending into deep ocean currents offshore of Vandenberg — standard practice for large coastal desalination plants worldwide. Army Corps feasibility study designs the specific diffuser system for Vandenberg oceanographic conditions.

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capture — feasibility

research question: as seawater flows

through the intake system, a turbine on the inlet line captures kinetic energy from the flowing water without competing with membrane pressure requirements. The pressurized receiving tank equilibrates to system pressure independently — the ocean continuously replenishes pressure. The

Army Corps feasibility study evaluates practical energy yield at this scale.

- **Capital cost:** approximately \$5-7 billion for the desalination facility based on modern large-scale

SWRO benchmarks of \$1-1.20 per gallon of daily capacity.

III. Solar Power — Self-Sufficient Operations and Federal Revenue

The corridor solar array is the energy foundation that makes the entire system operationally self-sufficient and generates significant federal revenue every day it operates — before a single gallon

of water is sold.

- **Solar generation capacity:** a quarter-mile wide solar installation along the 400-mile I-15 corridor — 100 square miles on existing federal right-of-way in the highest solar irradiance region of the United States — generates approximately 3,840 MW of average continuous output at a 30% desert capacity factor.

- **What the Corridor needs to operate:** desalination plant — approximately 470-500 MW continuous. Pipeline pumping over the Transverse Ranges and across the Mojave — approximately 600-800 MW total continuous. The corridor solar generates approximately 3,840 MW. Operations consume approximately 600-800 MW. The solar pays for all operations and generates approximately 3,000-3,200 MW of surplus power for sale to the western grid every day.

- **Federal revenue from surplus power:** at wholesale power prices of \$40-60 per megawatt-hour, 3,000 MW of continuous surplus generates approximately \$1 billion to \$1.6 billion per year in power revenue to the federal Treasury. For reference — 3,000 MW is sufficient to power approximately 2.5 million American homes. The Corridor is not just the largest water infrastructure project in American history. It is also the largest federal renewable energy project in American history.

- **Waterless panel cleaning — mandatory:** dust accumulation in the Mojave reduces solar panel efficiency by up to 30-40%. All corridor solar panels must use waterless self-cleaning systems. The

Corridor does not consume water to generate the power that moves water.

IV. Water Production — The Governing Commitment

- **The governing commitment:** on the day the Corridor comes online, Lake Mead stops declining. Every day the Corridor operates, new water enters the Colorado River Basin that was not there before. The ocean does not run dry. The pipeline does not turn off. Western water security is permanent as long as the Corridor operates.

- **Phase 1 target:** 1 billion gallons per day of new fresh water entering the Colorado River Basin. Lake Mead begins measurable recovery within 18-24 months of full Phase 1 operation.

- **Full buildout target:** sufficient new water to fully offset demand deficits across all seven Colorado River compact states while maintaining Lake Mead at or above 50% capacity on a sustained basis.

- Lake Mead elevation published monthly at usbr.gov — verifiable by every American. The

Corridor is judged by

one number:

is the lake

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or falling?

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V. Economic and National Security Benefits

- **Federal revenue:** solar surplus power — approximately \$1-1.6 billion per year at Phase 1 operation. Water sales to municipalities and agricultural users at cost-recovery-plus rates. Corridor land lease, communications access, and GOCO development zone revenue. The Corridor is designed to generate net federal revenue within 10-15 years of full operation.

- **Construction employment:** tens of thousands of jobs during the build period. Permanent operations and maintenance employment once operational.

- **Seven-state compact transformation:** the fight over who gets less becomes a negotiation over how to distribute more. The federal government enters compact renegotiation from a position of abundance rather than managed scarcity.

- **National security:** water scarcity in the American Southwest is a strategic vulnerability. The

Corridor is defense infrastructure as much as water infrastructure.

4. Estimated Cost

Vandenberg SWRO desalination facility: \$5-7 billion capital based on \$1-1.20 per gallon per day of capacity. I-15 corridor water transmission system: \$50-150 billion capital — determined by Army Corps feasibility study. Solar arrays along corridor: \$10-30 billion capital. Power transmission and fiber: \$10-20 billion capital. Development zones: \$5-15 billion capital. Total Corridor capital investment: \$80-220 billion over 15-20 years. Revenue offset beginning when solar array comes online — approximately \$1-1.6 billion per year from power sales — before water delivery begins. Independent Army Corps feasibility study and GAO cost assessment required before Congressional authorization of construction funding.

5. Year 1 Implementation and Measurable Result

Year 1 measurable result: Army Corps of Engineers Corridor feasibility study contracted within 90 days; Vandenberg coordination agreement initiated within 60 days; I-15 corridor right-of-way and utility assessment completed within 180 days; Corridor legislation introduced within 30 days; initial solar array construction contracts awarded within 180 days — solar revenue begins flowing to Treasury before water delivery is complete. Lake Mead baseline: approximately 30-35% capacity mid-2026 per Bureau of Reclamation. The governing metric: on the day the Corridor comes online the decline stops. Published monthly. Verifiable by every American.

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