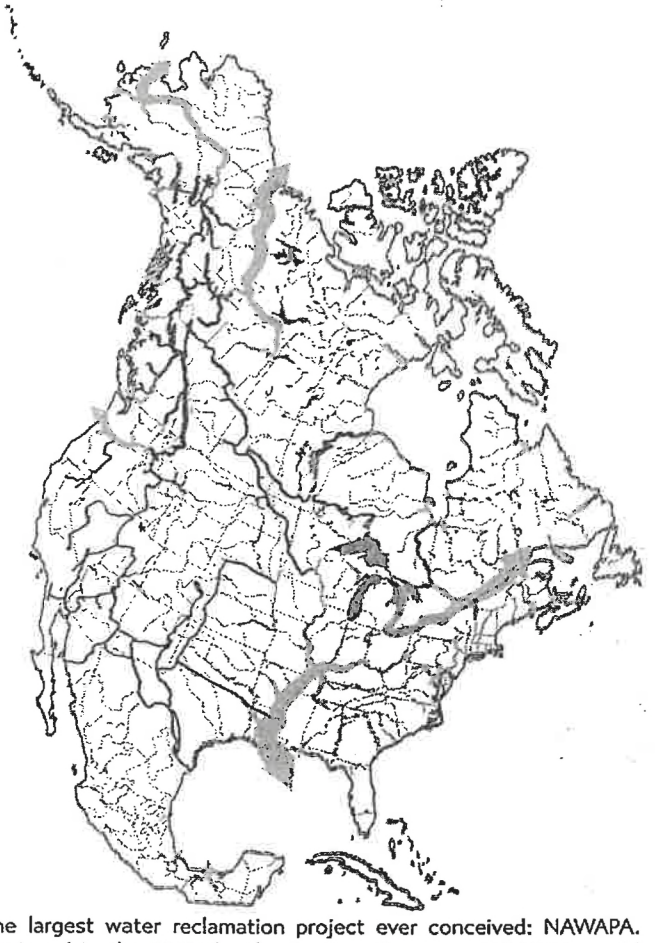
Nuclear NAWAPA XXI

Devastating floods in Germany! Hurricanes drowning New Yorkers in their basements! Historic drought and fires in the West! What do all of these events have in common? If you agree with politicians blaming "climate change," you've been had. In fact, these all are instances of insufficient human intervention into the environment—instances where foreseeable events of nature occurred and caught us unprepared. The difference between a natural disaster that wreaks havoc and one that is merely routine, lies in mankind's degree of mastery over the forces of nature around us, and our preparedness for them.

Civilizations have always been defined by their ability to control and defend against variations in nature. Whether it be extreme flooding, catastrophic volcanic eruptions, droughts, fires, plagues or ice ages, the universe is testing mankind as to its fitness to survive. Those civilizations which haven't advanced to a sufficient level, perish, while those that have achieved a sufficient degree of mastery over the variations of nature, survive.

Today, the Western United States is gripped by drought and in desperate need of water. More than 50 years ago, JFK wanted to build the North American Water and Power Alliance, NAWAPA, the largest water management system ever envisioned. Here we begin by summarizing this shovel-ready proposal.



The largest water reclamation project ever conceived: NAWAPA. Designed in the 1960s by the Parsons Company, NAWAPA would have fundamentally addressed drought in the Western States. The arrows indicate approximate river runoff by region.

NAWAPA and Continental Water Management

Since the beginning of the 20th Century, comprehensive water management for the West has been an obvious necessity. During the Franklin Roosevelt Administration, California's Central Valley Project was built, bringing water into what is now one of the most productive farmlands in the country. Later, during the 1950s and 1960s, the State Water Project was built, transforming California and the Southwest into an exemplary case of modern biospheric engineering. It's population growth reflected this, as did its agriculture, soon making California the nation's biggest food producer.

With the success of these projects, and even more growth expected for the region, plans were made to continue the task of further water management for the Western states. The Kennedy Administration was perhaps the biggest proponent of this, implementing many projects of this sort. In a speech at the dedication of South Dakota's Oahe Dam in

1962, Kennedy said: "When we are inclined to take these wonders for granted, let us remember that only a generation or two ago all the great rivers of America—the Missouri, the Columbia, the Mississippi, the Tennessee—ran into the sea unharnessed and unchecked. Their power potential was wasted. Their economic benefits were sparse. And their flooding caused an appalling destruction of life and of property... This nation began to develop its rivers systematically, to conserve its soil and its water, and to channel the destructive force of these great rivers into light and peace. And today, as a result of this, the face of this nation has been changed. Forests are growing where there was once dirt and waste. Now there is prosperity where our poorest citizens once lived."

The next step was obvious: water-management on a national and continental scale. In 1964, a proposal was brought to the U.S. Senate to put in place the most far-sighted project ever imagined. The North American Water and Power Alliance (NAWAPA) proposed to redirect 20% of the runoff from a number of major rivers in Alaska and Canada's Yukon Territory southward, to fulfill the needs of the rest of the continent. This included the Southwest, the plains states, refilling the Great Lakes, and even northern Mexico. Unused water in the northwest part of North America—water that fell as precipitation on the mountainous coastline and then ran "unharnessed and unchecked" right back to the ocean—would instead be utilized where it was actually needed, to green the continent and benefit mankind.

Enjoying enormous support, both bipartisan support in the United States as well as substantial support in Canada, NAWAPA was introduced as a U.S. Senate resolution in 1965, with an accompanying resolution in the House.

President John F. Kennedy initiated the largest number of water infrastructure projects since FDR, a direction that was rapidly extinguished after his assassination in 1963.

Then-Senator Robert F. Kennedy was one of the co-sponsors. However, with the commencement of American involvement in Vietnam, NAWAPA was soon pushed to the back-burner and never revisited. Subsequently, NAWAPA became the subject of increasing attacks from the environmentalist lobby to "protect nature."

Since that time, the population of California has more than doubled, and its agricultural industry has soared. But no significant water-management project has been implemented in the West—only insane policies of "water conservation" and "wilderness preservation." Now the water scarcity is being blamed on "climate change" instead of hte obvious culprit—an anti-development economic policy. Are we surprised, then, that the West today is having water problems?

What an impotent fraud! And an un-American one at that. In reality, the idea that we are "running out of water" is a farce and shows precisely the problem in thinking that is our greatest impediment.

The North American continent's water cycle is not equally distributed. A hugely disproportionate amount falls in the upper Northwest, as weather from the Pacific Ocean gets funneled up the coast by the steep mountains from Oregon all the way up through British Columbia to Alaska, dumping inordinate amounts of precipitation there. This region's water runoff makes up fully one-half of the runoff of the entire continent. At the same time, the Southwest, with its exceptionally fertile land and large population, is water-starved, with 40 times less runoff as the similarly-sized Northwest region. After having been evaporated from the ocean through tremendous solar energy, then travelling thousands of miles to make landfall on the continent, this water in the northern basins runs immediately back to the ocean without having been used by any living processes at all. What a waste! Redirecting the water in the way NAWAPA proposes will radically increase the productivity of that water and its relationship with the continent.

Take another consideration. It is estimated that 60% of water that falls as precipitation on land is incorporated in some way before it runs off to the ocean, either by filling aquifers and water tables, or by being consumed by living processes. This means that most of the water which is added in this way will be absorbed, evaporated, and then precipitated back at least once before it makes its way back to the ocean to start the process over. Further, as it is consumed by plant life, it actually becomes a living part of the biosphere, increasing the transpiration (solar

evaporation given off by plants) overall in that region, thereby putting more moisture in the atmosphere, and in turn cooling the surrounding temperature. This water will later fall again as rain, further cycling into more life-giving processes. Through NAWAPA, we will actually increase the productivity of the water cycle. Thus, mankind will have mastered a natural process, and improved it.

Nuclear NAWAPA

The construction of NAWAPA itself will be a tremendous step in rebuilding the U.S. economy. In total, it will require the construction of 1,200 miles of tunnels, 8 large pumping stations, 5,400 miles of canals, dozens of locks, and 45 dams in a massive series of reservoirs and distribution systems. If it is upgraded to a nuclear-powered NAWAPA, as proposed by the LaRouche movement in 2013, an additional 52 GW of nuclear power plants will need to be built. All told, the construction of NAWAPA would create 7-10 million productive jobs over the course of 25–30 years, and another 10 million building the power plants to run it, **making it the largest project ever undertaken by man.**

By using nuclear power to run the pumps, primarily at the base of the Sawtooth Mountains in Idaho, raising the water to a sufficient elevation to flow to the rest of the continent, we save all the water which would have been needed merely to run the hydropower plants. The original plan would have collected 200 million acre-feet of water per year (MAFY), and used 130 MAFY to produce hydroelectricity for pumping, leaving 70 MAFY for use (still double the amount of currently existing runoff in the Southwest at 23 trillion gallons/year). However, by using nuclear energy to power the system, all of the water can flow to its destination, allowing more water for each route, and opening up more routes such as to the high plains and Ogallala extension, the California/Oregon extension, and the PLHINO and PLHIGON in Mexico.

The introduction of nuclear energy raises another obvious opportunity: the efficient and affordable desalination of ocean water. As a supplement to the NAWAPA system, desalination plants could be built anywhere they are needed, especially in Western coastal states gripped by water emergencies. The recently completed Carlsbad desalination plant in San Diego, though only a fraction the size of what a nuclear-powered one would be, was built in only three years (we could likely increase that speed dramatically as part of a genuine economic mobilization). Doing this in parallel with the larger continental system of water management will allow further increases and fine-tuning of mankind's capabilities to control and improve the surrounding environment. Smaller desalination plants will also be needed throughout the interior of the country to clean up existing freshwater sources from decades of neglect, removing the destructive salt intrusion from many rivers, agricultural water sources, and source waters for cities and industry.

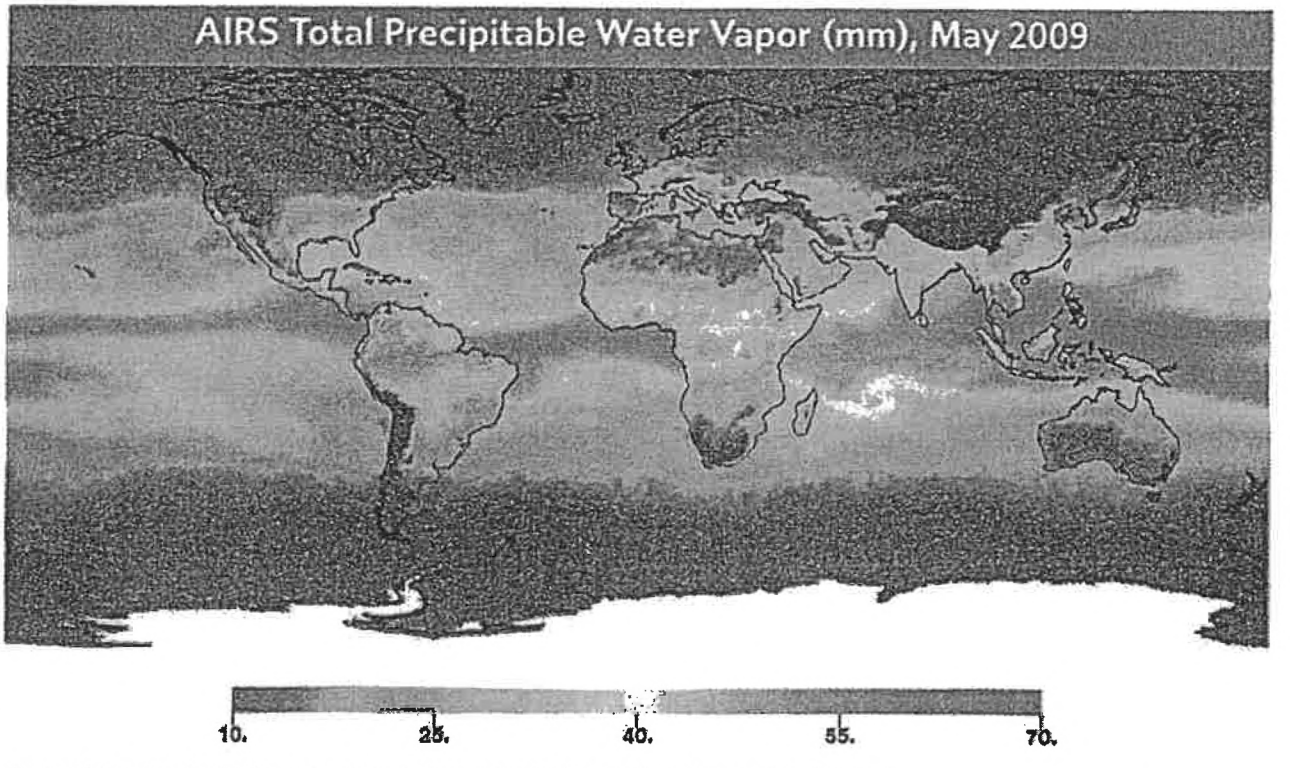
This is how to build a nation. Throughout this process, raw material mining and processing will create enormous amounts of work, as will the construction and operation of NAWAPA and related systems. New infrastructure will also need to be built, from railroads for transporting material, to new power lines. New cities will begin to pop up around the major zones of work, with new steel mills, cement factories, manufacturing facilities, and specialized institutions for nuclear energy and other high-tech areas required in the process, leading into new research centers at the frontiers of science. As this happens, states will be redefined in their economic and trade relationships. New agricultural lands will open up with the newly available water sources, further increasing the relationship between what will become thriving agro-industrial-scientific cities and regions of growth. In turn, this will feed discoveries in new applications of materials and technologies to all these fields. Multiple generations of Americans will gain skilled and meaningful employment, transforming their relationship to the future, to each other, and to themselves. All this taken together, will return the United States to its proper identity as a beacon of hope for the world, and with a commitment to the common aims of mankind.

Weather Ionization and Atmospheric Water Management

We must go further, however. NAWAPA fills a void up to a certain level—utilizing and managing the available water resources of the continent. But where does this water come from? What causes this cycle, and can we improve?

At any given moment, there are 1000 Mississippi Rivers flowing upward into the atmosphere driven by the Sun's evaporation, in a grand engine that is the global water cycle. Of this, approximately 10% falls back as precipitation onto land, while the rest falls onto the oceans and is concentrated around the tropics. That 10% is what fuels all of our water systems—our precipitation, snowpack, lakes, and rivers. Even slight changes in this process would have enormous impacts for potentially increasing precipitation in arid regions, or, conversely, decreasing it for saturated regions.

As we learn more about the Earth's climate and weather systems, it increasingly becomes evident that there are substantial electromagnetic characteristics involved. Cloud formation, and specifically the formation of water droplets that eventually fall as rain, have a close rela-



Source: https://sealevel.jpl.nasa.gov/ocean-observation/understanding-climate/air-and-water/
This figure shows the estimated concentration of water vapor worldwide, a consequence of evaporation by the Sun. A forward-looking mankind would consider how to influence this vastly unequal distribution, bringing future precipitation from water-rich to water-starved parts of the globe. The unit of measurement in this figure is millimeters of pressure from a column of water (mm).

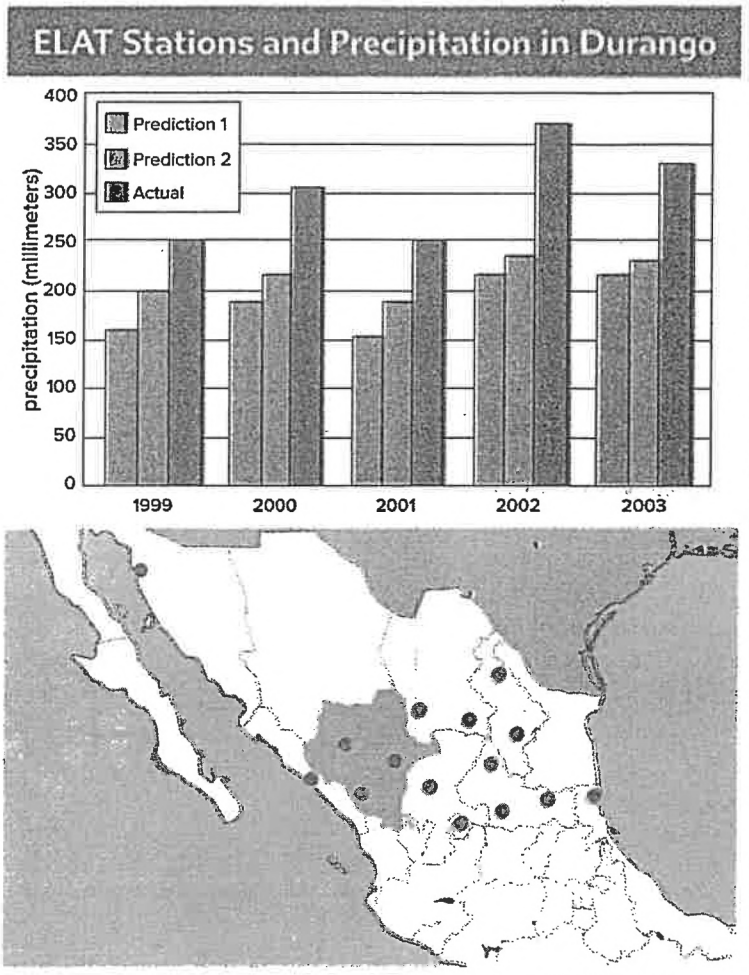
tionship with the electrical properties of the atmosphere around it, as well as larger electromagnetic and charged particle phenomena such as cosmic radiation. Can mankind understand these processes? Could we begin to influence and control them?

Starting in the mid-1990s, a number of countries have installed sets of electrical towers in arid regions to ionize the air around them. The thought was to catalyze the electrical properties of cloud systems to form water droplets and fall as rain, clouds which otherwise were not in the proper context to precipitate. While the technology is still not well understood, the results have been amazing. In Mexico, where these "ELAT" systems were installed in drought-stricken Sonora, average rainfall was increased from 10.6 inches to 51 inches in the first year, and then 47 inches the next year it was used.[1] Similar success has been shown with this technology in the United Arab Emirates and Australia, to differing degrees.

These phenomena are promising, and point toward the direction which a sane society should go. Whether or not ionization technology is the answer we are searching for, it opens the door to investigating the real-life laboratory of the electromagnetic environment in which our weather operates. There is still much to be learned about our weather and water cycles, and the influence that electromagnetic radiation has on them, but ionization technology and others like it should urgently be implemented and studied for a multi-pronged approach to water management.

The history of mankind shows a history of increasing mastery and control of this type over our "environment" (even if our environment extends outward to the solar system and the galaxy). Beyond having a simple pairwise relationship to our so-called "scarce resources" which we consume, mankind's power is a conceptual one, in which we discover those processes which create and transform resources. This is what we act upon, not the resource itself, or even simply the Earth, but the process which creates the resource, much like the farmer who first cares for his land then plants and waters a seed, in order to later harvest the desired product at the end of the season. When there is actual "climate change"—not scare-stories about human carbon emissions causing catastrophic warming, but climate change as has annihilated countless civilizations before us—this is how we must approach it. A society which does not do this, and gets trapped into thinking they must conserve a limited quantity of fixed resources, is doomed to fail.

Therefore as Senator Frank Moss, sponsor of the 1965 Senate NAWAPA resolution, said at the time: "Many efforts have been and are continuing to be made to solve the problem of limited water supply, and although great strides have been achieved, so great is the problem and so important its solution that it now has become imperative that consideration be given to what at one time seemed unachievable proposals. The time has passed during which this problem can be solved through traditionally local or piecemeal approaches. The solution must be equal in magnitude to the problem."



Adapted from Phillip Kauffman and Arquimedes Ruiz-Columbié

1. *Nuclear NAWAPA XXI: Gateway to the Fusion Economy*, 21st Century Science & Technology, 2013. p. 39