## The Extended NAWAPA: Project Overview

The implementation of NAWAPA means making the bold decision to solve the long-term needs of mankind for the next 50 years, in the management of water and other presently known and new resources. It means a civilization taking its destiny into its own hands, by managing continental and global characteristics instead of local ones.

True Water Management: Due to North America's specific topographical shape, and ocean air currents, a quarter of all the rain or snow that hits the ground there each year falls in a narrow corridor of the continent, with 800 MAFY (million acre feet per year) running directly into the Pacific and Arctic Oceans, unused by the biosphere on land, and wasted. Meanwhile, a large swath of the western half of the continent remains dry, and barren.

NAWAPA will remedy this presently inefficient distribution of precipitation: Utilizing 20% of this runoff, 160 MAFY, strategically placed dams and tunnels will create a collection system of major new reservoirs and canals, taking advantage of the natural topography of the Rocky Mountain Chain, and effecting a distribution of water to parched lands and strategic waterways.

Through 22 MAFY to the Canadian Prairie Provinces, 69 MAFY to U.S. states, and 21 MAFY to Northern Mexico, 86,000 square miles will be irrigated, doubling the current irrigable acreage west of the Mississippi, and replacing the increasingly inefficient and limited sources of well water with a permanent source from gravity flow, relieving agriculture of pumping costs and restoring its productivity.

It is a known fact, that 40% of precipitation over continents (Category A) returns directly as runoff or groundwater discharge to oceans, while 60% of precipitation over continents (Category B) re-evaporates, and falls back onto land, recycling itself roughly 2.7 times over land before returning to oceans. By building NAWAPA, the 160 MAFY of normal Category A precipitation will be brought into participation with Category B, being used not once, but multiple times as it

recycles as rainfall across the continent, before exiting the system.

**Rail Lines:** For an efficient construction of NAWAPA and an efficient use of the northern regions:

 Various Union Pacific and Burlington Northern Santa Fe rail lines from the Midwest into Idaho will need immediate double- and triple-tracking.

The Canadian Pacific routes servicing the Fraser River and Rocky Mountain Trench areas will need immediate double-tracking.

- The Alaskan-Canadian rail system must finally be completed, with two routes of double-tracked line connecting Prince George to Fairbanks, and Dawson Creek to Fairbanks, for a total of 2,200 miles of track.
- 975 miles of double track to connect Fairbanks, Alaska with Egvekinot, Chukotka, including a 60-mile long tunnel and/or bridge crossing the Bering Strait.

**Employment:** NAWAPA itself creates, directly and indirectly, 4 million jobs, plus close to an additional 1.5 million jobs through application of nuclear technologies for the 30,000 MW pumping requirement of the system, for a total of 5.5 million new jobs.

Canadian-Great Lakes Revolution: On par with the revolutionary transformation brought about by the Erie Canal, which opened the Midwest to commerce and made New York City a metropolis, NAWAPA's barge canals, connecting Lake Superior to the Pacific; and Hudson Bay, Georgian Bay, the ore fields of Labrador, and Quebec to the Great Lakes, will turn once inefficient or inaccessible resource deposits, into easily accessible regions of development, leading to an explosion of new mining, processing, and industrial and research potentials, all along its banks, like the once great industrial corridors of the Mississippi.

**Efficiency of Design:** The NAWAPA design has the least amount of reservoirs and distribution systems for the greatest effect:

- 3,150 individual water resource projects authorized or proposed by the U.S. Army Corps of Engineers in 1966, with 2.7 billion acre feet of water storage capacity created;
- 369 individual water resource projects proposed

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in NAWAPA, with **4.3** billion acre feet of water storage capacity created.

**Industrial Bill of Materials and Processes:** Constructing NAWAPA's dams, canals, reservoirs, aqueducts, and tunnels, will involve, at the least:

- Hundreds of millions of sacks of cement, nearly 100 million tons of steel, tens of millions of tons of copper and aluminum, and a vast array of new machinery required to construct the project and move approximately 32 billion cubic yards of earth;
- Drilling 50 tunnels with a total distance of over 1,000 miles displacing 860 cubic yards of rock, employing an unprecedented use of tunnel boring machines, and possibly new techniques;
- An undefined quantity of orders for the production of heavy electrical equipment, involved in:

   a) power generation stations, including forebay, penstocks, head gates, turbine wheels, generating units, and switchgear and, b) pumping stations, including large motors, large capacity pumps, valving, fittings, intake & discharge headers.

**Nuclear Renaissance:** The 2,450 foot Idaho Saw Tooth Lift, necessitating 26,000 MW of power, will require sixty-five 400 MW modular nuclear plants, such as the GE-Hitachi PRISM. The settlement of northern and remote regions of the continent will lead to the long-awaited use of ultra-efficient, high-temperature nuclear process heat for synthetic hydrocarbon fuels, efficient chemical processing, and water desalination.

**Hydropower:** Because of its continental design approach, NAWAPA annually generates 38,000 MW of power for Canada, and 30,000 MW for the U.S., from gravity flow.

Hemispheric and Planetary Reorganization: NAWAPA's approach signifies a change in the organization of the planet as a whole, and its application will set off a pattern of sovereign nation-states, acting as sovereign nation-states, utilizing the full compass of their own territories for the scientific benefit and increasing power of their citizens. The increase of the infrastructural density and land management techniques will lead to a guaranteed increase in the productive powers of labor, per unit of relevant territory, and in

greater rates than ever before, for every continent where the principle is applied.

**Scientific Advancements:** Along with its planetary effects as a continental water-management system, NAWAPA is a science driver in the true sense of the term:

- The implementation of a reservoir management system of its scale, over one continuous, active corridor of scientific coordination, will lead to unpredictable, but guaranteed qualitative effects in overall technological and scientific management.
- The creation of 50 large tunnels, totaling 1,000 miles, typifies the great advancements to be made in geological mapping, as well as fundamental discoveries in the understanding of life's creation of the Earth's crust, and the nature of its useful biogenic ores.
- Creating a permanent presence of civilization in the northern regions will transform our current scientific perspective of the Arctic from isolated research stations in remote and dangerous conditions into an active scientific capability. With the Arctic's unique proximity to the singular electromagnetic conditions of the Polar regions, the complex of electromagnetic relationships, which define the Earth-Sun-Solar System magnetic interactions, and have determined the evolutionary processes of the biosphere, will finally be integrated into the power of man's understanding and economy.
- With a restored, non-crisis-management approach to the hydrological cycle, breakthroughs will be made in the biospheric engineering of climate, plant life, ground water, and soils.
- Through the close management of NAWAPA's 240 reservoirs, not only will the continent's production of fish and aquatic protein multiply several-fold, but new frontiers will be breached in reservoir science and water treatment methods, mastering the use and engineering of micro-organisms, fish, and plant control.

In accomplishing NAWAPA, man will be poised to begin mastering and making use of the integrated relationships which define life on Earth, and participate in creating its continued evolution, rather than being subject to the whims of nature and local conditions.

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