'Won't you please let your grandchildren have a drink of fresh water?'

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The following is excerpted from a National Democratic Policy Committee draft policy discussion paper prepared for a National Conference on Water from Alaska sponsored by the NDPC to be held in Houston, Texas on Feb. 27. Mr. LaRouche chairs the committee's advisory board.

Next to a general thermonuclear war, the greatest single environmental danger to the American people over the coming two decades is the danger that whole regions of our nation will simply run out of usable fresh-water supplies. This is an acute danger in a region within a hundred-mile radius of New York City. The greatest area of present danger lies west of the Mississippi.

This problem has been seen coming, at least by more far-sighted people, for most of the post-war period. Unfortunately, the general public has been kept in ignorance of this policy issue, and certain among influential political circles have sabotaged sound policies and programs, each for one of a variety of reasons.

Now, unless we act quickly, the Great American West is going to die, suffocated by a swirl of dust and sewage. Already much of our agriculture is in danger, as the drought of 1980 ought to warn us. A few more years ahead, the water shortage will grow to become the most acute environmental danger to many facets of our life, as well as to our nation's supplies of food and fiber.

There are three basic approaches which must be combined to overcome this problem.

First, there is the approach which Texas's Representative Jim Wright supported in a book he published in 1966, *The Coming Water Famine,* the so-called North American Water and Power Alliance (NAWAPA). That is the immediate action on which this National Democratic Policy Committee (NDPC) policy outline concentrates. Better management of the available fresh-water supplies of the North American continent will not only solve this particular problem over the decades ahead, but will also become the foundation for an explosion in wealth throughout a region west of the line of the Mississippi River, in Canada, the United States, and northern Mexico.

Second, by creating the conditions for growing denser populations of crops, shrubbery, and trees in presently arid regions, the vapor transpiration from plant-life will recycle fresh water through improved rainfall patterns. This would occur largely as a by-product of implementing NAWAPA and related regional and local fresh-water management actions.

Third, over the longer period, nuclear-energy technologies will provide us unlimited fresh-water supplies, as improvements in technology lower the costs of desalinating sea-water on a large scale, and aid us in turning polluted waste-water into pure fresh water for reuse many times over on the way to the sea. With such technologies, the vast Sahara region can be transformed into a rich, habitable region, together with the Gobi desert in Asia.

As the NAWAPA example shows, the investment in improvement of fresh-water supplies is a highly profitable investment. Every dollar wisely spent on NAWAPA will increase the production of wealth in our Western states many times over during the course of the coming decades. It is the same with nuclear-energy technologies.

There are no practical or economic reasons not to proceed. The obstacles have been and continue to be only political wrong-headedness. Once the facts are considered, we must also say that the political obstacles are downright immoral. There is no morally acceptable reason to argue against taking those steps which are absolutely necessary to ensure that our grandchildren, and their children, can walk to the kitchen cold-water tap and draw a glass of clean fresh water.

Let's begin with plain common sense

My associates and I have therefore pulled together this background report in support of the proposed fresh-water management policy. Most of the detailed work we report—and support—was done by others, not ourselves, over decades. We give credit directly to a few of the most prominent among these persons and agencies, as we have already cited Jim Wright's efforts. Only lack of printed space, not want of respect or affection, prevents us from giving credit to many more. Our job has been to pull the essential work of that sort together, and to supply as the product of our own efforts the glue needed to bring all such elements into one single policy-outline.

Each average year, moisture from the oceans delivers approximately 10 billion acre-feet to the continental United States and Canada by means of rain and snow. Of this total, these nations' continental streams deliver an estimated 4,510 million acre-feet to the combined Arctic, Pacific, and Atlantic oceans. Of this total outflow into the oceans, at least 4000 acre-feet flows into the oceans, especially from Alaska and Canada, without being significantly available to the needs of human populations.

Meanwhile, chiefly because policy-makers have refused, so far, to do the obvious, to bring some of the largely wasted run-off from Alaska and Canada's North to where it is needed, large regions of our continent have been using up underground water-supplies faster than they are replaced. The net loss is currently estimated to be about 90 million acre-feet per year.

This waste of available water is lunacy. It must stop. It is past time to bring the wasted Northern fresh-water supplies south, to where the water is needed. It is necessary to manage the flow of fresh water much better, once it is brought into agricultural and populated regions.

Except for the water directly embodied in living organisms and in underground water reservoirs, the water consumed by plants, animals, and peoples passes through living organisms, either as evaporation or as fluid components of excretions. Our policy must be to increase the throughput of water into the streams, lakes, and other reservoirs of populated and agricultural and forest regions, slowing the rate at which water flows "out of the system" into the oceans, while keeping the levels and rates of flow of streams, lakes, and so forth at proper values.

So, in the simplest and broadest terms, what we must do is to increase the amount of fresh-water input into urban and agricultural regions directly, chiefly by bringing a significant part of the wasted surface-water flow of Alaska and Canada into Canadian, U.S., and Mexican channels of usage. We must accompany this with improved water-management programs, including action on the long-postponed Delaware water management project in the Northeast.

Weather management

The most obvious and largest direct undertaking to be begun now is the North American Water and Power Alliance project (NAWAPA). This is the largest single chunk of the work on water development to be done under governmental sponsorship and coordination. This complements other waterways and other water-management programs, including the Delaware project, the Tenn-Tombigbee project, and a new canal from Lake Erie into the Pittsburgh-centered water-system nexus. Regional and state initiatives should complement and interface the federally sponsored major projects.

The largest increase in water-flow within the United States, Canada, and Mexico, apart from canals and other fluid conduits, is through increased rainfall. A chief source of this increased rainfall will be evaporation of moisture from trees and other plant-life.

By increasing the flow of fresh water into arid and semi-arid regions, we produce a number of interrelated effects, chiefly increasing the vegetation. This increase in vegetation converts solar radiation into useful biomass (and oxygen production). For each kilogram of oxygen produced from carbon dioxide by vegetation, approximately 165 kilograms of vapor is released into the atmosphere by plants.

The columns of vapor released by vegetation are a marginal, but critical element in the determination of weather-systems. That is, on condition that the volume of such increased vapor-flow is great enough, and over a sufficiently large area, new local weather-systems tend to develop, through which evaporated moisture is recirculated by means of rainfall. At the same time, the weather is moderated through absorption of an increased percentile of solar radiation in the work represented by biomass-growth and moist weather-systems.

Over the coming decades, this secondary benefit of NAWAPA and related engineering works will become cumulatively an increasingly important benefit.

Water management

One of the best tools of fresh-water management is a nuclear-energy plant.

Before a nuclear-energy plant uses water taken in for cooling and other purposes, that water must be thoroughly cleaned. A nuclear plant which produces approximately 1 gigawatt (a billion watts) of electrical output cleans and discharges approximately 75,000 acre-feet of fresh water each day.

This cleaning of the water of our streams and lakes (where fresh water is used by the plant) is accomplished at no net cost to the nation. A nuclear-energy plant produces heat and electricity at a lower cost per kilowatt than any other form of energy-production, a cost which includes the costs of cleaning the water used. Incidentally, the nuclear plant puts less radioactivity into the environment than a coal-burning plant of the same capacity! In fact, the most economical way to decrease the population's exposure to radioactivity would be to greatly increase the use of nuclear-energy production.

If the fresh-water discharge from a nuclear-energy plant is used most intelligently, i.e., most economically, we use the heated water for either industrial or agricultural production, including greenhouse production near the nuclear plants, or to increase fish production in streams and along coastal regions. Meanwhile, the cheapest way in which to clean up a stream or lake is to

emplace the appropriate number of nuclear-energy plants to clean its waters as a by-product of its basic operations. Along ocean coastal sites for nuclear-energy plants, we should cease to waste the benefits of fish-farming potentials available to us.

The case of nuclear-energy production's role in cleaning and otherwise managing our water resources is only the most obvious example of a broad range of many high-technology approaches to economical management of fresh-water throughput. If we concentrate on making energy cheaper, as only nuclear technologies enable us to do this, cheaper energy, especially energy available for use at higher operating temperatures (or equivalent), permits us to deploy various mechanical and chemical approaches to purifying water, and to increasing fresh-water supplies with large-scale, and, ultimately, acceptably economical desalination of ocean water.

To the extent the NAWAPA and related engineering work develops relatively large-scale throughputs of fresh water, we must foresee the development of new urban centers in our Western states in particular. Our emphasis ought to be on developing the kinds of agro-industrial centers of urban activity most useful to the agriculture and forestry of the adjoining regions, for both the immediate years ahead and the more distant future.

Some of this must involve initiatives by the federal and state governments, especially in such important matters as political decisions setting aside various portions of federal lands and state lands for assigned categories of future use and development, and for establishing priorities for steering credit and encouragement to investment.

With modern energy technologies, especially in the nuclear-technologies' spectrum, "urban" need no longer

The lineup on the NAWAPA plan

The North American Water and Power Alliance (NAWAPA) Plan was developed in 1964 by the Ralph M. Parsons Company of Pasadena, California. The plan would use a natural reservoir, a 500-mile-long valley high in the Canadian Rockies, which contains the headwaters of major U.S. and Canadian rivers. NAWAPA would catch and store the water at this high elevation and transport it down in a series of irrigation canals on both sides of the Rockies.

To the east of the two irrigation canals, through the Great Plains, would run a north-south canal between the Rockies and the Mississippi, with a lateral branch into Lake Superior.

The natural east-flowing rivers would then be used as multiple connecting links between the perimeter canal directly east of the Rockies, the navigation canal passing through the heart of the great Plains, and the Mississippi River.

NAWAPA would move 130 million acre-feet of water per year (MAFY) for U.S. irrigation; another 20 MAFY for navigation; and 100 MAFY for Canada and Mexico. It would cost $130 billion in 1979 dollars. Instead of being a net user of power, it would supply over 50,000 Megawatts Electric (MWE) in hydroelectric capacity *above the amount of power used to move the water.*

Recent lobbying efforts by the National Democratic Policy Committee, led by its Southwestern coordinator, Nicholas Benton, have caused various public figures to again look at NAWAPA.

Kansas State Rep. Keith Farrar who has endorsed legislation to restudy NAWAPA, is a member of the official governmental body charged with finding new water sources to replace the Ogallala aquifer, which is being rapidly depleted, the High Plains Study Council. He prefers the continental approach of NAWAPA to the "regionally limited approach" of the High Plains Council. Democratic Senatoral candidate in California Will Wertz, has released a White Paper endorsing the Peripheral Canal Project in that state, stating: "a victory for the Peripheral Canal will strengthen the nationwide fight for NAWAPA . . . the benefits are . . . enormous stimulation of the U.S. economy as well as the associated advantages from the agricultural development in the Mexican state of Sonora, which would receive 40 MAFY of water."

Robert Delano, President of the American Farm Bureau (AFB), said at the AFB annual convention in San Diego Jan. 12: "There is a great need for a national water policy that clearly spells out this priority while allowing the development of major water supplies to meet present and future needs of the entire North American continent."

But Interior Secretary James Watt's response to a question about NAWAPA at the press conference was: "The economic costs would be staggering and the environmental consequences would be beyond calculation. . . . There are lots of things we can do for better conservation of water resources."

mean "dirty," "slums," or any of the other ugly things we associate with urban life today. Clean water, clean air, clean energy-production, and cleaner forms of industrial technology, are now becoming economical propositions.

It is by looking at policy questions, such as water management, as a division of efforts among government, business, farms, and private households, that the citizen is able to judge efficiently what federal government variously should and should not do, and what is better left to other agencies: state governments, local governments, and private institutions and individuals.

What the federal government must do in this case, which no state government or private agency could do, is to sponsor and coordinate a project on which the national security of our nation depends over the coming years, the water-management project associated with the North American Water and Power Alliance, NAWAPA.

NAWAPA under depression conditions

At this moment of writing, the United States has entered a new worldwide depression. Unless profound changes in U.S. policy occur more or less immediately, the present depression will become worse at an accelerating rate. This depression, unless stopped, will be much deeper, longer, and more savage than the Great Depression of the 1930s.

Therefore, only an ivory-tower lunatic would think of discussing NAWAPA under present conditions, unless he were presenting NAWAPA as part of a package which will assist us substantially in getting out of this depression.

Whether they know much about economics or not, a growing number of citizens are in a mood to demand projects like NAWAPA as economic-recovery projects. With private employment-levels collapsing, citizens will demand that the federal government "do something" to set the economy moving upward again. Politicians who attempt to buck that growing mood in a desperate population will find themselves somewhat less popular than Herbert Hoover was during the 1932-36 period.

The federal government must take drastic action, and not wait too long about it, either. However, the federal government must not adopt any of those crackbrained schemes now rattling around in the mouths of some among our Democratic Party liberals. We need sound economic projects, wealth-creating projects that will return to the economy far more than they cost.

In general, the following recovery measures must be taken immediately. Later might be much too late.

Domestically, the federal government must do the following immediately:

1. Remonetize the gold reserves of the U.S. Treasury. Gold should be priced at approximately $500 an ounce, the fair price for average production of gold by mines. This gold reserve should be used solely to back U.S. currency deficits in international markets, with payments in gold made only to governments and central banks which make firm agreements to establish a new gold-reserve-based international monetary system, to replace the International Monetary Fund.

2. The Congress must authorize creation of a new series of U.S. Treasury currency-notes, denominated on an internatinal gold-reserve basis. These notes are not for government spending; they are solely for government lending, at lending-rates of not higher than 4 percent.

3. The new issues of notes shall be lent only on the basis of government participation in private-bank loans for high-technology goods-producing investments.

4. Part of this issue shall be used to provide long-term credit to governmental projects of wealth-creation, such as NAWAPA.

5. A short list of federal government activities and federally sponsored projects must be set quickly into motion. NAWAPA is one of these projects.

Just to provide the reader with a sense of the general kinds of governmental activities and economic projects we propose, the following outline is provided. It is not all-inclusive, but it does illustrate our thinking.

1. Complete construction of approximately 100 gigawatts of nuclear-energy-generated electrical generation capacity within approximately eight years. (This will be a net saving to the national economy, since nuclear energy is the cheapest and safest energy source, as well as the environmentally cleanest available to us. It won't cost us a net nickel over the period of operating and constructing the plants; and it will stimulate exactly the right parts of our steel and other industries, which we must retool to meet nuclear-construction requirements.)

2. The federal government must directly undertake crash combined "basic" and "applied" research efforts in the full spectrum of fusion-energy technology and relativistic-beam physics.

3. The federal government must sponsor or cosponsor a spectrum of combined transportation-development and water-management development projects, chiefly as public corporations in which the federal government has either a permanent or temporary equity-participation, borrowing lending-issues of U.S. gold-reserve notes through private banks for the operations of these projects.

A short list of such efforts, combined with directed flow of cheaper credit and tax-incentives giving significant economic advantages to high-technology investments in agriculture and goods-producing industry, can easily generate five to eight million goods-producing work-places, while expanding the nation's tax-revenue base sufficiently to bring the federal expenditures budget back into balance with revenues.