

LPAC-TV INTERVIEW: WAYNE VOELZ

Top-Down Planning of NAWAPA Demands a Sense of Mission

Wayne Voelz is a land development project manager who spoke at LaRouchePAC's conference on the North American Water and Power Alliance (NAWAPA) in Pasadena, Calif., on Dec. 4, 2010 (see EIR, Dec. 24, 2010). In this interview with LPAC-TV on Jan. 3, he discusses in detail the kind of organizational structure and project management required for NAWAPA. We join the conversation in mid-stream (see <http://www.larouchepac.com/node/17082>).

Q: If we get all of this going, what will it do for the country?

Voelz: Oh, immediately it should snap us out of the doldrums that we're in, the economic down-cycles. And I think once that happens, there'd be a complete shift. If we get the conditions in place, where we finally say, "Ah! Now we can do something! We're really going to go moving into a positive direction," *immediately* I think it would be like, we're all waiting to exhale right now.

It's like the two buzzards, you know?

Well, two buzzards are sittin' out there in the trees, and one buzzard says to the other, "Well, you just have to patient." The buzzard turns to him, looks at him, and says, "Patience, hell! Let's just go out and kill something!"

I think a good percentage of us in the country, we've been patient, and we're starting to recognize that that's not the solution. Even now, we've got this new shift in



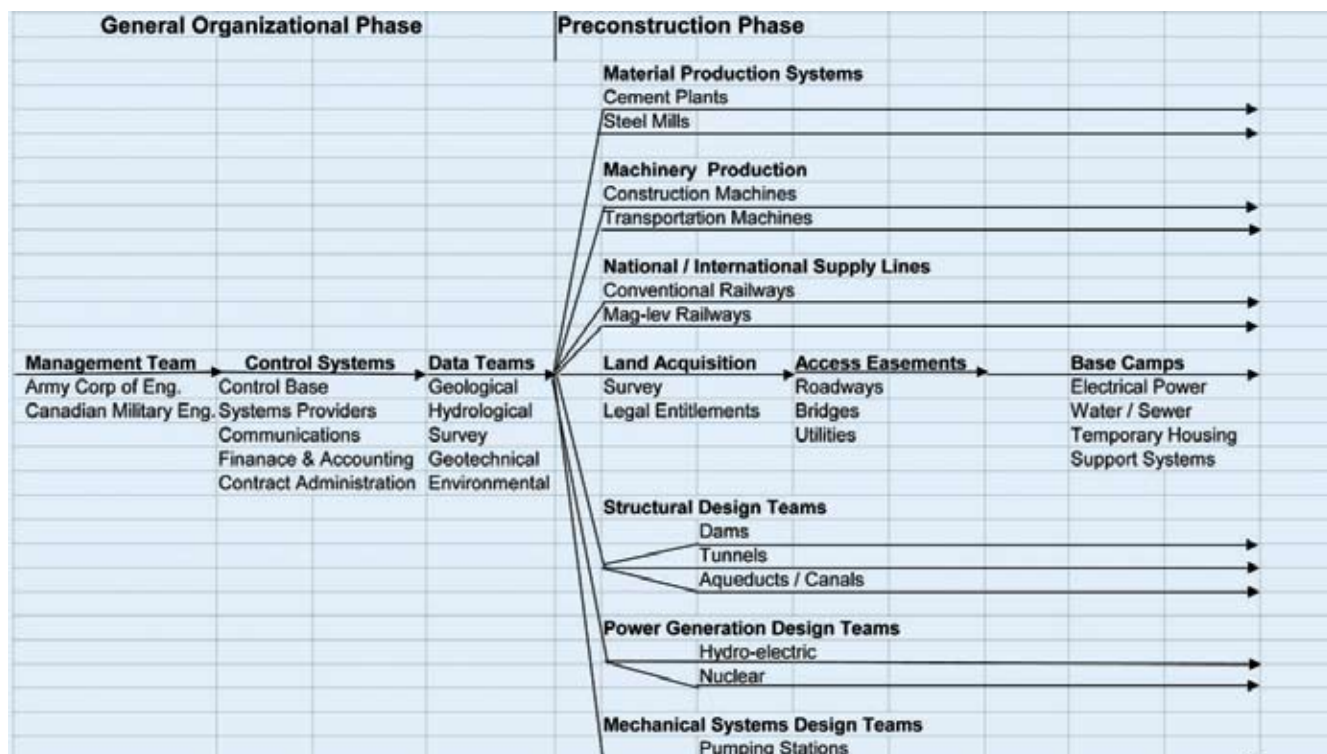
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Wayne Voelz: NAWAPA will require "the most sophisticated organizational structure that will ever be created."

Congress, and the tendency, I'm sure, is to sit back now and see what's going to happen. The hope, I'm sure, especially from the conservative viewpoint, is that they're going to go in there and slash spending and they're going to get everything "under control." And what they're really going to do, is launch us off into a massive austerity program, while the banks continue to bleed us. I don't know if that's the best way to put it, but I mean, they're not cooperating, obviously; they're doing exactly the opposite of that.

So that's in the near term. But [beginning to imple-

FIGURE 1
Sketch of a Critical Path Method (CPM) Outline for NAWAPA



Wayne Voelz

ment NAWAPA], in itself, is a major thing, just to have that! Just to say, “We could cooperate with Canada, and they would sell us water,” and boy that’d be a big shift.

Q: We’ve got to start by getting these fascists out of the government, I guess. It’s not on this chart (Figure 1), but it’s implied.

Voelz: Well, that’s upstream, that’s upstream! You know, we can continue to identify these people, and we can continue to identify the process of construction, that helps to bring reality to it. Even this little chart helps to put some reality on it, say, “Well, how do you get started? What do you really do? The thing’s so big, where do you start?”

Q: How do you get started?

Voelz: Well, there has to be some kind of an organizational structure to any kind of project, and there’s always a sequence of events, and that’s essentially what the Critical Path Method [CPM] does: Just organizes or identifies the various components and activities, and organizes them into a sequence according to a timeframe; identifies duration of activity. You know, you have a

goal for the project, and that would be that we ultimately would want to bring it onstream, or online, functionally, as quickly as possible, I would think.

And so, the critical path is invaluable. I don’t know if there’s any other equal system. It’s an organizational system, and you have to have that, if you’re going to have any kind of efficiency, or any kind of awareness or understanding of where you’re going and how you’re going to get there.

What Should We Do First?

Q: Once Obama is removed and Glass-Steagall reinstated, the credit can begin to flow for NAWAPA. What should we do first?

Voelz: I think it’s important, in order to get some reality on it, to understand that there are a lot of preconditions that have to be brought into play. Of course, you have to identify the components, and it appears that we have approximately 350 individual or independent construction projects—give or take.

So, the first thing to do, is to go through a process of evaluation, of identifying those, designing, getting some idea of how they fit into the system, and ultimately

what you'd be looking for is the longest-duration component, which sets the precedent for everything else: What would take the longest to build? In order to evaluate all that, you first would have to have a team of people. This little process map is just an example, to try to get some feel for it.

But the very first thing you would do, is assemble a management team. I would presume that to be primarily comprised of, or led by, the Army Corps of Engineers in the U.S. component, and then the Canadian Military Engineers would be certainly involved, because they're obviously a big part of that. As near as I can imagine, Canada will be, through some kind of treaty agreement, selling water into the U.S. and Mexico.

So then, we'd need to identify control systems. First you would try to develop a control base, where you would be working from kind of a central command area, so to speak. And then you'd identify your systems, so you'd be looking to your system providers, which would be primarily hardware, some software, that you would use.

Q: Companies that would be producing that, and providing it, you mean?

Voelz: Exactly. The management team, I would think—their first task would be to identify the systems that they'd be using. So you'd be interviewing systems providers; there are major system providers out there. I would probably look to NASA for input. Maybe the auto industry. You know, they have to assemble massive amounts of components, and they have a process called “just-in-time-inventory,” so things just show up, just in time, so you would have that.

I'm sure that the software and the hardware are available. We probably have to customize it and modify it. It'd be a massive system, and it would be collaborative, so that your players—your various suppliers and contractors, etc.—would have access to certain areas in the system, scheduling, planning, data inputs.

Q: So, you're talking about more of a living, virtual map of the time-scales, and all the different physical processes that are meeting at the points of construction of NAWAPA?

Voelz: Absolutely. It would be a very interactive, collaborative process. With the Critical Path process, if we're operating on a fast track—which we would be. I mean, I would advocate that we fast-track. Why wouldn't you? There's every good reason to do that.

Ultimately, you want to reach the goal as quickly as possible, and in the case of fast-track, it tends to employ more people, in a more concentrated timeframe.

So, of course, you'd have to have your finance and accounting systems and teams in place, and contract administration. I would probably tend to contract centrally, as opposed to letting major aspects of the project out to one big general contractor. I think we would tend to go more towards directly contracting with, probably, materials suppliers, transportation, that sort of thing, so that we would really be doing the primary administering of contracts from that central controlled location. And in fast-track, you really don't have the opportunity to do competitive bidding. That's one of the challenges that you have with fast-track, is that you need to identify competent players, and then you have to have a trust in them, and set up a mechanism for compensation. We usually would negotiate a cost-plus type scenario, so that there would be the cost of materials and labor, and they would get some kind of percentage, that we would identify as the reward, or profit.

Initial Phases of NAWAPA

Q: As the organizational phase is progressing, can the pre-construction phase also proceed? As you're starting to get this first general organizational phase, as you're describing it, going, are you already putting into motion elements of the pre-construction phase, which are going to take longer to start?

Voelz: Well, yes. The next thing you would do, is, of course, you have to have data, to feed into the engineers. This is kind of a perpetual process of identifying and designing activities. So, before we can get to a build point, we have to create all the conditions. So, the first thing I would do—I'm sure all the engineers would agree—is that you go out and gather data. So you send out a group that you identify as the data teams. You need physical data, physical input: So you have the geological data, you know geology includes topographical data; you have those teams that would be re-verifying topographical maps, and the hydrologists would be calculating all the necessary volumes, etc.

Survey teams would be essentially outlining the areas that would be identified for land acquisition. The good news is that that data collection process is far more sophisticated now, than it was, for example, when the TVA was in play.

Well, the geotech guys would go out and take physical samples: They'd be doing borings, drilling down to



U.S. Army Corps of Engineers/Ricky Garcia

The Army Corps of Engineers will play a leading management role. Before design and construction can begin, however, data teams will have to study the terrain. Here, Corps engineers in Michigan monitor a dredging project in St. Mary's River, near Detroit.

identify the structures, testing, that kind of stuff.

And then you'd have an environmental team. Certainly they would be collecting certain environmental data that would be physically relevant to the project, and certainly we'd want to make sure that we did a reasonable job of considering environmental impacts. You can make certain choices that would be more conducive to certain preservation considerations and that sort of thing. So you'd have an environmental team out there; you'd have to have that.

Q: All right. Then you get into the pre-construction phase?

Voelz: Well, once we have that data, then we can start sending that data out to the design teams, because pretty much everybody's work is predicated on this physical data. Especially the infrastructure, the hard structure guys, the structural design teams—dams, tunnels, aqueducts, canals—they can't even really start until they get the physical data. Same thing with all of these teams, the power generation teams, hydroelectric, nuclear; mechanical design teams, the pumping stations.

And you would start, immediately, all these tracks would be running concurrently: Material productions systems; you'd be looking to your cement producers, you'd need to ramp those up. Perhaps in certain cases, you would even go out and find new mines and set up

new plants to supply cement. Steel, of course—cement and steel are the two primary components, construction materials, of just about all of this stuff. Of course, you've got your technical systems. You have your mechanical systems, and machinery production, machine-tool sector, you'd be starting to gear that up, or identify those people.

Q: What areas of the United States would we go to for the machine production?

Voelz: Well, you'd go back to where that sector exists, back East, Midwest, Detroit, all of those areas where there are still viable factories, and people that know how to bring 'em back online.

Q: But they wouldn't be producing cars. They'd be producing this stuff.

Voelz: Sure, absolutely. If you look at the chart here, you could see you're going to need construction machinery. There's probably quite a surplus of construction machinery around the country that's idle right now. However, there will, I'm sure, be more specialized equipment required: transportation machines, maglev systems, maglev rail, the actual trains themselves. And even the conventional railways will need to be gearing up, and extending into areas that they're not currently involved in.

So, we're starting to identify groups of people—and that's critical to the process. You have to find these people to plug into this construction system, that are focused on the whole project. You'd want to get buy-in from everybody. I mean, you'd really want to have it be a national mission-type of culture. It's really going to be a kind of culture; you're going to be developing a whole culture that would be working towards this whole thing.

I tend to liken it to marshaling for war, if we adopt that kind of an attitude, and say, "Well! We must win this! We must win, we have to have water within ten years!" And as we work with this process, as we start to build the data, and these critical paths start to evolve—and of course, there's critical paths within critical paths; you just break out the cement plant, and say, "All right, what's that critical path? What does it take for you to get on-stream by Springtime?" I would suspect if we pulled the trigger, shortly, in the next month or two, you could ramp this up pretty quick. You could probably be in the ground, in certain locations, when Spring broke. Especially in the northern tiers, of course, you'd have to at least have reasonably good weather to initiate the project. Once you've got 'em under way, I suspect that you could carry on all year 'round. There are certain ways to accomplish that, even in the below-zero type climates.

Q: So, I imagine you could start mobilizing a certain volume of the pre-construction phase industries, even as you're in the control-system phase, and data phase, which of course, is crucial to get.

Voelz: You could start to identify the players. You know, it's kind of a synergistic process, there's a lot of feedback, there's a lot of perpetual calculation, and consideration, and strategizing, and identifying. You start to get the key components identified, the longest-duration cycles, and I suspect there would be a strategy for certain components to come online early; for example, you've got the waterways across Canada that are immediately adjacent to the collection system, that perhaps could come in—and we'd have to work with the engineers and see how you might bring 20% of it online. It would be a phasing process. You know, you'd really strategically analyze how you could bring it on-stream, click, click click, click, click. We'd be looking to see what we could bring onstream as quickly as possible.



Library of Congress

Assembly of a B-25 bomber in Inglewood, Calif., July 1942. With a spirit of national mobilization as in wartime, Voelz said, there is no reason that NAWAPA could not be completed in five to ten years.

Mobilizing as if for War

Q: Is it possible to get NAWAPA completed in five to ten years?

Voelz: Well, we fight wars in four or five years. World War II's duration was only about four years, five years. Look at how much was accomplished! Look at how many airplanes were built. When you marshal—if you could get the attitude of a national mission. And of course, you'd have to get the Canadians to adopt a similar viewpoint.

But I suspect that that's possible. This CPM method is what identifies that. You have to go through the analysis to determine that, especially with something that's an unknown. If you say, "Pick out one dam," and we have some kind of historical, empirical data, and you say, "Well, it took X years to build the Hoover Dam, and this is similar, so therefore, we could probably build that nowadays in less time than they did it then." And

the thing that really tends to hold you up, that delays things, is always this permitting process, and environmental considerations, that are extreme, just extreme impositions on the construction process. You have even inspecting processes, and all kinds of reporting processes—that you have to stop construction and wait, till somebody decides that it’s okay. You’d have to mitigate that, you know, or remediate that problem, in order to stay in a fast-track scenario.

Platforms for Further Work

Q: All these people we’ve been meeting, who have a special knowledge of dam construction, canal construction—they’ve all referred to the rigorous and extensive preparatory work you have to do, before you drill a tunnel, before you initiate the smallest amount of construction. Where is the site? Is the rock the right rock? What kind of rotor blade are you therefore going to use in this rock to build this tunnel? That’s the kind of things the data teams are going to figure out.

Voelz: Absolutely. It’s a strategic process, identifying all the physical conditions, and trying to avoid setbacks.

You can kind of think of this in terms of platforms: We have to build platforms. Even if you think about a typical construction project, you have what we call staging or scaffolding. You could consider the data team as a platform, or even the control base as a platform: We have to get up in a position that we can move to the next level, and that’s just kind of what’s happening here with this pre-construction phase. You’re starting to develop your platforms, that you can use to physically build the project.

And some of those are what we call soft, and some are hard. Some of the soft platforms would be the finance, accounting, communications, data control. And then the hard platforms, of course, are physical data-gathering, design. You have to design the dam before you can build the dam. In a conventional sense, typically, you would have the whole “damn design,”—so to speak—before you would submit it into the permitting process, and there would be all of this analysis that would go on.

But the good news is, that you’d want to forgo all that. We’d want to trust that our engineers are sharp



The base camp for an oil pipeline construction project across the Yukon River, at Five Mile, Alaska. For NAWAPA, the headquarters would be something like Mission Control for the NASA missions.

enough that we could start to build the dam—or at least when you identify the preconditions, the site, the geological structures, that we could initiate the foundation before we had the complete set of drawings. I’ve done that before, where basically, you have the designers and engineers, and designing goes on simultaneously with the building process. So, every week, they come out and deliver the next step. And it’s amazing! Yeah, if you had all the proper circumstances, you could certainly, I would think, go twice to three times as fast as you would, typically, in our current environment.

Q: Where should a base of operations for NAWAPA be located, and what would be its function?

Voelz: Idaho, which I think is where the Sawtooth Life System would be, would be a good central location for that. It would be some kind of a complex, a building, or a building complex. And you would be able to house your key people there. Nowadays, you can have remote components—you know, the financing component can be in San Francisco. But I suspect that we would like to have that—it can be argued—but we’d like to have that all onsite, as much as possible, in a central location, just for pure oversight. Just to have them there, I think, would be more appropriate.

Q: So, it would be something like Mission Control for the NASA missions?

Voelz: Absolutely. Very similar. You have the mission control room, or the area where you really did your perpetual strategic planning and monitoring. And of course, you might, at some point, have all of the projects up—some are nearing completion, some are initiating, but you might, at some time, have all of them up at one time. So, theoretically, if there were 350 different construction projects, you'd have 350 different construction managers and their support teams, and the liaison to each one of those projects, perhaps, in that complex, that would be monitoring there and doing their input to the whole. I guess we could call it holistic.

But it would be strategic, certainly, and it would be coming online in phases, I would think. Because I suspect that there's a way to utilize a certain amount of that water, and get it moving in a certain direction. What we kind of imagine is that we'd have to have the reservoirs all completely full, everything would have to be done, and we'd flip the switch, and the water starts flowing, and six months later, it hits Mexico! I don't think that's realistic. I think that we would start—and I think John Sparlin [U.S. Army Corps of Engineers (ret.)] spoke to this [see interview with LPAC-TV, <http://www.larouchepac.com/node/16663>], that it would be a phased process. And it would! But you would be shooting to hit that, you know, you would be just looking to click through that.

Q: That's how the Transcontinental Railroad was built. They were using the railroad as they built it.

Voelz: Absolutely.

Q: The railroad was delivering the supplies to the construction sites—the railway just built, was carrying the most recently needed supplies forward to the teams.

Voelz: Yes, there's a great book on that whole thing that Stephen Ambrose wrote, called *Nothing Like It in the World*, that describes that. Well, it makes perfect sense! Why, you built a railroad, why would you bring it in on a wagon train? Sure!

I mean, what we're talking about, is a complex, interrelated set of systems. And basically, obviously, we're building *the* platform for our new economic system. It's fascinating! I think it's just a fascinating thing.

So you'd have to have a sophisticated organizational

structure, and again, the sophisticated systems to manage that, and monitor that. So, it would be like building a Space Shuttle or something, I mean, you're shooting to launch in three years, and you forgot the certain component—it's just a small part, and it doesn't really take six months to build it, but somebody forgot to order it! Like, "We can't fire that nuclear plant up, until we get the motherboard," or something like that. So, you really have to make sure that all those things are being considered, and that's part of this analysis and identification process, and assigning responsibilities. So, it's an organizational structure. It's probably the most sophisticated one that will ever be created.

Q: When you're talking about fast-tracking this process, one of the major problems, in my mind, that would come up, is the huge amount of unskilled, untrained youth that we have around, that would be the ones that we're talking about employing, to do a lot of this labor. How do you see the concept of a Civilian Conservation Corps fitting into the development of the labor force necessary for NAWAPA? Or, what's the best way to get these youth trained up and on the job?

Voelz: Well, I think LaRouche's idea of a CCC program is the exact way to go about that. In your process, in your pre-construction phase, and even within the context of the pre-construction phase, if you look at the critical path, there's the land-acquisition process, access easements, and you have these teams out there; you have survey teams; you have various teams that are identifying roadways—there would be a lot of what's called OJT, which would be "on-the-job training"; and certainly you could set up, you see where I say "base camps" [Figure 1], you have to set the preconditions: You've got to be able to get to the site, you have to be able to have power, water; you have to be able to support your construction teams in there, especially in these really remote areas.

Certainly we'd set up a process, and you would continue to need more and more labor, more and more skilled labor, as you started to bring these construction projects online. So, you might have, also, offsite, a scenario to initiate bringing those people into a boot camp, similar to the military. The military does a great job of that. When people volunteer or sign up, you go to boot camp, and you basically get your physical training, you get all the education that you need, that sort of thing. As far as the technical training, though, that probably works best onsite. Take them out onsite.



USAF/Alan Boedeker

The military's "boot camp" way of training volunteers could be a good way of bringing unskilled young people into the NAWAPA process, Voelz said. Shown, basic training in the Air Force.

Q: How will other teams function, such as structural, power generation, or mechanical design teams?

Voelz: Again, in a fast-track scenario, we'd be looking to initiate construction as quickly as possible, so once they'd be able to identify their parameters to the point where they could initiate foundation designs, clearing limits—obviously, you'd start with clearing limits and site preparations. In certain of these cases, your site prep might be extensive. Really, with dams, you key into the geological structures. You have to clear areas, you have to move in equipment, you have to build cranes, and all kinds of machinery, and you probably have a lot of blasting and that kind of stuff.

And even before you've got to that point, you still have to have these structural design teams—and I think you could fast-track that just as well. Like what I called out [in Figure 1], as dams, tunnels, aqueducts, canals, waterways—they can fast-track that stuff. And I would want all of those things to be designed as quickly as possible. We might not get to building some of the downstream canals and waterways initially; maybe it wouldn't make sense to build some of that, you'd have to analyze it. There might be certain cases, where you would build something, and it would have to sit idle for a while; but it was beneficial to do that, just for the use of labor, having jobs—there might be some good strategic reasons to do that.

But, the power design teams: We need power. You can see how some of this is interrelated. So, if you go into a site, you have to set up electrical power, where you might not have any available electrical power. There are mobile, modular, nuclear-type systems that you might bring in temporarily, or there would be one in a string of several. Maybe you just needed one nuclear plant, to initiate construction. Ultimately, you're going to have the need for three times that much power to drive the pump station or whatever, but you could get one nuke in there, at least, in order to have power.

So, you need that design. You need to have the preconditions that you can physically initiate. There's other temporary power systems, you just have to strategically analyze—each case is going to be different. There might be similarities—we can group it up in dams, and tunnels, and say, "But each tunnel will be its own condition."

Q: What would be the purpose of the base camps?

Voelz: The base camps are the areas, more specifically in the remote-type areas, where the people live while they're building the project. And it could be temporary/permanent, and that would be where, if you had your city planners and designers working—I don't think I have a path for those guys in here!—ultimately, you would like to identify the location for a base camp in the same location where it could evolve and become a city, because you're going to expend a fair bit of effort to get the utilities in there, water systems, and sewer systems, and everything it takes to handle 3,000 people, or whatever it would take to build that particular project. In the Lower 48 [states], not so much; you might have adjacent towns where you'd be able to work from initially. But you would start to identify areas where you would do that. So you'd have some kind of a temporary housing program that could become permanent—there are ways to go about that.

Q: So you need a certain infrastructure, for the workers themselves.

Voelz: You need an infrastructure to build the infrastructure!

LaRouche's Plan To End the Depression And Create 3-4 Million New Jobs

NAWAPA

We are now on the edge of the post-Obama era, in which it becomes possible for mankind to orchestrate an upshift in Biospheric development, starting with the NAWAPA program to re-engineer the entire Northwest water system, from Alaska down to Mexico.

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Wall Street Is Dead! Please Don't Be Silly!
Renewed Warnings of Israeli Attack on Iran
LaRouche: Fire Obama, the Failed Personality, Now

Learn from NAWAPA:
Mind or Body?

LYNDON LAROUCHE— LEARN FROM NAWAPA: MIND OR BODY?

Man's power to exist lies not in the things which exist, but in the process through which things, and mortal human lives, come and go, in the domain of the immortality of each soul of a very special species, mankind. . . .

NAWAPA could not be killed, because it was the immortal feat on which man's future presently depends.

- **NAWAPA: "The Next Evolutionary Step for the Human Species,"** a Basement Team Roundtable, EIR, Aug. 27, 2010 (<http://tiny.cc/f14hd>).
- **"Learn from NAWAPA: Mind or Body?"** by Lyndon H. LaRouche, Jr., EIR, Aug. 20, 2010 (<http://tiny.cc/iovad>)
- **"NAWAPA, from the Standpoint of Biospheric Development,"** by Sky Shields et al., EIR, Aug. 13, 2010 (<http://tiny.cc/ai2gm>)



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