

McCormack's Pipe Dream

A 'Necessity is the Mother of Invention' Tale

by Bill Lee - A Most Unlikely (and Minor) Participant

The Pacific Northwest Unprecedented Drought Scare of 1977

In January of 1977, the US Bureau of Reclamation announced that the amount of snowfall in the Pacific Northwest anticipated in the winter of 1976/1977 was expected to be extremely light...a historic low in volume. Unfortunately, the dams in that region, built primarily to control flooding would greatly inhibit the flow of what little water was predicted to be available after the spring thaw of 1977.

Consequently, this government agency informed the public that water allocations to irrigation districts throughout the Yakima Valley would have to be limited to just six percent of normal. That had never happened before. Panic quickly ensued.

Local farmers quickly pointed out that they could not grow any crops with such a miniscule amount of water being made available. Located in the arid south-center of Washington State and highlighted in red on the right, the Yakima Valley is called the Fruit Bowl of the Nation.



Water pumped from the Yakima River is the life blood of that region. Economists pointed out that the loss of an entire season of apples, cherries, pears and grapes, plus a wide variety of vegetables and field crops would have a huge, adverse impact on the availability and cost of such products, nationwide.

Even worse, fruit trees would die, requiring years to replace them at enormous expense. In addition, the burgeoning wine industry in that region would also be wiped out if the grape vines withered and died due to a lack of water.

Despondent farmers sought ways to mitigate this predicted agricultural disaster. Ironically, just a few miles away there was enough water in the Columbia River basin that could greatly help. But elevational differences and those pesky dams made access to that potential source of water seemingly impossible to tap.

Desperate Men do Desperate Deeds

Some farmers in the Yakima Valley committed to drilling deep wells, seeking ground water. The water table there was roughly a thousand feet down, requiring extremely expensive drilling and the purchase of high pressure pumps to bring any ground water found to the parched surface.

Others leased land not being farmed that had water allocations, hoping they could grow enough crops to survive the drought period. Wheat and barley were substituted for higher water-use crops such as sugar beets and potatoes.

Faced with the possibility of financial ruin, farmers and many others in the Yakima Valley begged their local, state and national representatives to do something...anything...to help them.

State and federal agencies promised to put into place plans for granting low interest loans to Yakima Valley distressed land owners to help defray these kinds of abnormal costs. But ever repaying such loans seemed extremely doubtful.

Then, their local congressman got involved. **Mike McCormack** [right], was a 56 year-old chemist by profession who had worked for twenty years at the Department of Energy's nuclear energy facility in neighboring Hanford, Washington. That experience was followed by several years of being involved in politics at the local and state levels. In 1970, McCormack became the area's representative in Congress.



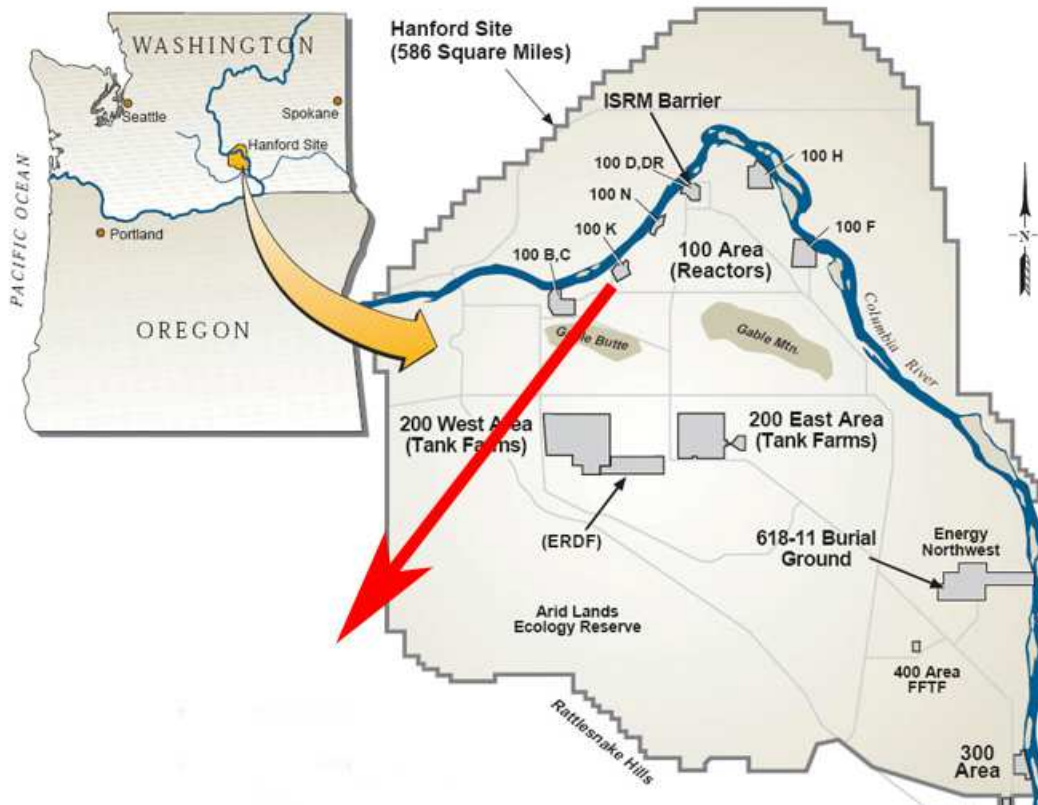
An Audacious Plan

His intimate knowledge of the government's Hanford Reservation facilities, plus his desire to help avert economic disaster for a large number of his constituents resulted in the preliminary development of an extremely bold plan. McCormack thought it technically feasible to utilize existing high pressure, large volume pumps that were idle at Hanford to move water from the Columbia River basin, over a range of hills and into the Yakima Valley via temporary piping.

The multiple pumps he had in mind were located at a pair of plutonium production reactors on the banks of the Columbia River in an area dubbed 100 K by DOE. Constructed in the mid-1950s as part of the Cold War defense effort, the reactors had been shut down in 1970. But in 1977 those facilities were being maintained in standby condition by DOE in case they might ever be needed again.

The pumps had been used to force large quantities of river water through the reactors to keep them cool during operation. Located well upstream of the reactors' cores, the pumps themselves were not radiologically contaminated.

Disconnecting the pumps from the reactors' cooling systems and utilizing them to supply the desperately needed water was the easy part. But building a temporary pipeline...as the crow flies, as indicated by the red arrow on the following map...in time to 'save' the Yakima Valley seemed impossible to those with whom McCormack shared his 'pipe dream'.



The pipeline would have to run southwest for about 15 miles and rise about 1,500 feet to move water up and over an elevated ridge called Rattlesnake Hills before cascading down into the Yakima Valley irrigation system. In addition, traditional studies, environmental impact statements and a multitude of permits normally required would have to be waived, and emergency funding found.

Tenneco to the Rescue

That was the situation when I happened, quite coincidentally, to stumble into McCormack's local area office in early February. My only reason for being there was to make a courtesy call, in parallel with seeking nuclear design and/or construction work with the government at Hanford on behalf of Newport News Industrial (NNI), a subsidiary of Newport News Shipbuilding (NNS).

Extolling...some might say exaggerating...NNI's capabilities, I included mention of our Tenneco ownership and their vast capabilities. McCormack's office manager noted an awareness of Tenneco's impressive building of pipelines during World War II, and wondered if they might be interested in the congressman's 'little project'. I probably said "maybe"...and that was all it took.

McCormack was flying from Washington, DC that very day to present his scheme to the Yakima Valley Growers' Association. I hitched a ride with the congressman's office manager to Yakima, met briefly with McCormack when he arrived, and promised to inquire about any possible Tenneco interest.

Never trust a politician. At the meeting, McCormack shocked me by saying that Tenneco was interested in helping! With considerable trepidation, I returned to Newport News and reported what had transpired. I may have omitted mention of the premature announcement of any Tenneco interest by McCormack...



I was pleasantly surprised, and more than a little relieved when the presidents of NNI and NNS thought Tenneco might, indeed, be interested. Anyway, a call was made to Joe Parrish [left], president of Tenneco's gas and oil pipeline operation. I provided a verbal synopsis of the preceding information. He was interested...very interested. Joe, as I quickly became comfortable calling him, asked if I could meet with him and others in Houston the next day, The NNI and NNS presidents said that I could...and I did.

The next day, Joe and two of his pipeline designers listened intently to all the details I could provide. They told me they had done some preliminary checking, confirming that a huge surplus of piping, pumps and other gear provided for the 800 mile-long, Trans-Alaska Pipeline was in Seattle Washington. Fortunately, it was available, since the Alaska pipeline was nearing completion in early 1977.

Their interest, as Joe explained, was to participate in one last 'no holds barred' pipeline project. Projects like the Alaska pipeline had required years of study and hundreds of permits. If McCormack could sweep all that away, they were 'in'!

Within a couple of hours, the two Tenneco pipeline people and I were on our way to Washington State to develop a working plan. Before leaving, I called McCormack's local office, asking that news of our forthcoming activity be passed on to him...and to get DOE access permission to the site for us.

The Impossible Takes a Little Time

It probably is necessary at this juncture to point out that the DOE officials at Hanford were fully supportive of the congressman's scheme. They just didn't think it was possible. Nevertheless, they were not going to turn down our request, since we only wanted to inspect undeveloped land. Besides their neighbors were in the middle of a full stage economic panic.

The three of us spent the next day in the field. We were escorted to the reactor facilities to look at the pumps and to make some sketches...no photos!...of what would be necessary to temporarily modify the pumps' discharge piping to connect to four, 48 inch diameter pipes and run those lines in parallel off the DOE site.

The congressman's office manager had thoughtfully arranged for a four wheel drive vehicle and a local driver to take us up Rattlesnake Hills. We followed a rough road that ran parallel to a high tension electric line.

Roughly half-way up the hillside, and near an elevation that represented the maximum height the Hanford pumps' discharge could push water, we found a perfect spot to put booster pumps and an electrical substation supplied by the high tension line. We could hardly believe our luck!

This photograph, taken that day from near the top of the hill, looks down at that perfect 'flat spot'. The Hanford facilities are in the background, with the Columbia River further away and barely visible.



The two fellas with me showed great interest in the loose, gravel-like consistency of the land. They asked our driver if the conditions observed were typical of the area.

When I asked why that was important, they informed me that to avoid the expense and time to build piping supports, they felt that they could dig trenches roughly two feet deep and half-bury the piping for support. Ingenious, I thought! Up to that point, I had envisioned something like the elaborate system used in Alaska; see image on the right.



But our project did not require piping insulation, heating of the medium being transported, or consideration of disturbing the tundra that bedeviled the designers and builders of the Alaska pipeline.

In an amazingly short period of time, working in a hotel room, the two talented guys from Tenneco created a piping layout and associated details sufficient to determine the rough cost and time required to build McCormack's pipe dream. All of this information was supplied to the congressman's local representative.

Congressional Calamity

A few days later, back in Newport News and trying to work while nursing a bad cold, I got a telephone call. It was from McCormack's office manager.

I was informed that McCormack had arranged for an unprecedented hearing in just a couple of days before two powerful US Senate committees to receive testimony in support of his audacious plan. They were the Senate Committee for Energy and Natural Resources and the all-important Appropriations Committee.

Senator Henry Jackson of Washington State was chairman of the first committee named above, and Senator Warren Magnuson was a member of the second committee. Both of them represented Washington State and naturally were greatly interested in minimizing the predicted impact of a drought.

McCormack wanted very much for someone from Tenneco to make a fact-finding report before those two groups, before he requested emergency funding and a blanket waiver of all permits and competitive bid requirements normally associated with a pipeline.

Back I went into consultation with the presidents of NNI and NNS, followed by a call to Joe Parrish. He readily agreed to testify, but asked that I fly to Houston to help prepare a presentation. The next forty-eight hours were a whirlwind of activity and travel. I'd have enjoyed it a lot more if I had not been sick.

At the appointed time and place...this imposing hearing room or one like it...Joe Parrish, his two staff members and I were invited to sit in front of the combined committees alongside Mike McCormack. He introduced us, and then Joe Parrish presented a slide show that we had completed late the night before.



There was no doubt to anyone in the room that he knew what he was talking about. He handled all questions easily, making it clear that a 15 mile pipeline of the nature proposed could be constructed by Tenneco in mere days...at cost plus a one dollar fee. There was no doubt that if given the go-ahead, his group could get the job done in time to provide water to Yakima Valley.

Then...the other shoe dropped. Senator Jackson thanked Joe profusely and marveled at Tenneco's abilities and kind offer. Then he ruefully admitted that the US Government simply could not move fast enough to get the funding, waivers, etc. necessary. McCormack's posture clearly showed he knew that was coming. Politics! It was all for show! I was crushed. Joe Parrish calmly took it all in stride.

Later that day, Joe and his team returned to Houston; I to Newport News to report the surprising and disappointing results of our quest.

To me, it seemed like I had been a naive supporter of a modern day Don Quixote, futilely tilting a windmill called 'government'. I just didn't know if I was Sancho...or the donkey.



A Semi-happy Ending

About a month later, another call came my way from McCormack's office manager. 'Now what?' I negatively thought.

The message was totally unexpected. After we left Washington, DC, considerable pressure had been put on the Bureau of Reclamation by the Washington State congressional delegation to do 'something' to deliver more water to the Yakima Valley. The 'something' they did was to re-examine their figures.

Lo and behold, they discovered some calculation 'conservatism'. Bureaucrats!

Then, as they were adjusting their predictions slightly upwards, Mother Nature had relented. The Pacific Northwest began to experience an abnormally high amount of spring rain, which eventually made up for a large portion of the shortfall in snow accumulation during the winter of 1976/1977.

By spring planting time, the farmers in Yakima Valley received seventy percent of their normal water allocation. That came too late for many who had stripped their trees of fruit in hopes of saving their trees, as well as others who had left their fields fallow.

Several farmers who had spent large amounts of money to sink deep wells tried to sue the federal government. They didn't get very far. Surprised?