



1/2/2015



Some Dam – Hydro News™ And Other Stuff



Quote of Note: *“Never mistake motion for action.” -- Ernest Hemingway*

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“Good wine is a necessity of life.” - -Thomas Jefferson
Ron’s wine pick of the week: 2012 Charles Smith Cabernet Sauvignon "Chateau Smith"
“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson



Dams:
(Someone sent this to me, so I pass it along to you.)



(This won't stop the opponents!)

Manager says increasingly expensive Susitna dam could help salmon

By Alex DeMarban, December 18, 2014, adn.com

The project manager for a proposed dam that would rise 735 feet in the Alaska wilderness said it could improve salmon-spawning habitat on the Susitna River, a statement that drew sharp criticism from opponents.

Wayne Dyok and other officials with the project set 87 river miles north of Talkeetna also said this week that the cost estimate for the Susitna-Watana

Hydroelectric Project has risen to \$5.7 billion, a \$500 million increase from the last estimate and one that comes at a time when the governor is considering

cutting such mega-projects. State's angry letter defends Susitna dam salmon science. Seeking to reduce an estimated \$3.5 billion deficit caused by plunging oil prices, Gov. Bill Walker recently removed \$20 million in capital funding for the project that had been proposed by his predecessor. The state Legislature could seek to add that and other stricken mega-projects back in, but such efforts will face the "utmost scrutiny," Walker's budget director has said. Legislators will likely discuss details of the hydroelectric project after they convene next month to consider whether it should receive funding to move forward, leaders said on Wednesday. "We'll look to see if it can continue to move forward or if we put it on hold a couple of years how that will affect the project," said Rep. Mark Neuman, R-Susitna Valley and incoming co-chair of the House Finance Committee. "Do we waste money and walk away from it, or should we put our shoulder to the stone and push forward because we know in the long term this is the answer for sustainable, lower-cost energy?" asked Sen. Anna MacKinnon, R-Eagle River and incoming co-chair of the Senate Finance Committee. MacKinnon said she does not currently have a position on the project's future but said it's important to remember it could have important long-term value that includes providing power after the state's natural gas supplies are exhausted.

Meanwhile, she said, the plunge in oil prices is a recent phenomenon and one the state will survive as it has done before. So far, the state has spent about \$180 million on environmental studies for the project during this latest effort. The hydroelectric project was also pursued in the 1980s, then shelved during that decade's oil price collapse. Alaska Energy Authority still has about \$10 million in funds for the project that have been not allocated, officials said. That is not enough money to support a full field season of work, said Emily Ford, the project's public outreach liaison. Getting the project to the phase during which it would file a license application with the Federal Energy Regulatory Commission will require another \$100 million, said Sarah Fisher-Goad, executive director of the energy authority, during an update on the dam on Tuesday. Fisher-Goad said the authority is looking at how to advance the licensing effort with less money. Dyok said the energy authority and project officials closed the public meeting and met in executive session on Tuesday to discuss strategies on pursuing licensing assuming the state won't provide the full \$100 million.

Getting a FERC license to build is important because it's a valuable asset that will be there when the state is ready to move to construction, Dyok said. Another \$230 million is needed for detailed engineering and geotechnical work to take the state to the point of construction in 2018. Michael



Lamb, chief financial officer for Alaska Energy Authority, said he believes the state should pay for the upfront costs. Lamb presented financing proposals showing that after the initial costs are covered, the state could fund the remaining \$5 billion by issuing revenue bonds and taking out a low-interest loan from the federal government's Rural Utility Service program. The dam would be operational in 2027, with customers paying back all project costs over decades. Lamb used a typical mortgage on a house to illustrate how debt would be paid back. "It'd be great if the first generation paid for the house and (future generations) got to live it in for the utility costs," he said. "We're trying to build a house and essentially have two and a half generations from the end of construction pay for that house." Economist Gregg Erickson recently released a report for the Alaska chapter of Trout Unlimited, a dam opponent, that said the project costs were underestimated. He said after the meeting that the estimated project cost has risen by \$1.2 billion since January 2012. If costs continue to rise as they have, the cost of the dam would exceed \$10 billion if completed in 2029, he said. "Alaska Energy Authority and its predecessor, Alaska Power Authority, have never had a large hydro project come in under budget," Erickson said. Dyok pegged the ultimate cost at more than \$7 billion, when interest payments are included. He said he would love to sit down with Erickson and walk through his "little analysis" with him. "We see some things quite a bit differently," he said. In the presentation, Dyok also said the project could potentially improve salmon spawning habitat. That's in part because the dam could reduce sediment downstream, leading to water that is clearer and more productive for feeding because sunlight can penetrate the water and stimulate food supplies, he said after the meeting.

Water levels, water flow and temperatures can also be carefully maintained to protect spawning and rearing salmon, he said. There's still more to learn about how to do that and best protect salmon in the river, but it's possible, he said. "We can develop the project in harmony with the environment," he said. Sarah O'Neal, a fisheries ecologist working with Trout Unlimited and another dam opponent, Susitna River Coalition, said the dam would be the second tallest in the U.S. and threaten habitat by sharply altering environmental conditions in the river. Sharply fluctuating water levels and flow could leave young salmon cut off from rearing areas or leave spawning grounds dry. As the dam seeks to increase power output or lower it, depending on the time of day, it would also affect sediment delivery. And the dam will also drastically change water temperatures, including for dozens of river miles downstream that would no longer freeze in winter. "The water temperature regime will change drastically, and that is something that is very important to fish," she said.

(This would save a lot of lives.)

It's time to fix the 'drowning machines'

By G. David Hurd, December 20, 2014, desmoinesregister.com

Des Moines has a world-class asset in the Principal Riverwalk along the historic Des Moines River. With riverside trails, a beautiful pedestrian bridge, renovated Botanical Gardens and a new fishing-themed children's park, the river beckons like never before. Yet, a terrifying danger lurks: the recirculating currents called "drowning machines" that form below the city's three low-head dams — at Center Street, Scott Street and Fleur Drive. The most deadly dam in Iowa, the Center Street Dam, is in the very heart of the Riverwalk. It has claimed 15 lives. When water flows over a low-head dam (riverwide dams less than 30 feet high), it creates a powerful recirculating current below the dam. Anything trapped in that current is immediately pushed down to the bottom, then back up, back down, and round and round. This deadly current can hold an object (or a person) indefinitely.



Fortunately, we now have ways to make our rivers safer, and it is high time we take action.

Among our choices is removing the dams and restoring our rivers to their historic channels. This has been done elsewhere in Iowa and the U.S. In this scenario, people could boat safely, children could wade and fish and other aquatic life could move freely. Or, we could modify the dams to remove the recirculating currents. This might mean lowering the top of the dam a few inches or feet and placing a series of large boulders below the dam so deadly currents could not form. Safe passage areas would be included. If a boat or person were washed over the boulders, it would be a bumpy, even risky, ride, but not certain death. It's time to move forward with a vision for our rivers. I would like to see widespread community conversations with many interests represented: anglers, power boaters, paddlers and rowers, community leaders, economic development interests, and those who have lost loved ones in dam tragedies. It would include those who love the Principal Riverwalk, Simon Estes Amphitheater, Robert D. Ray Asian Gardens and all our other riverside treasures. What do we want our downtown rivers and riverfront to look like? What is our vision for 5, 10, 25, and 50 years from now? How can we honor the lives lost in dam accidents, the fascinating role our rivers play in Des Moines' history, the importance of healthy water and habitat, and the investments made in our riverfront? Could our rivers again become our most treasured assets? Assets that draw people not only to the riverbank for fishing, picnicking, strolling, biking and community events, but also into the water for regattas up and down the river, sport fishing, paddle-boarding from a downtown dock, and a riverboat with fine dining in the center of it all.

Whatever the glories of our vision, we know there will be challenges and considerable cost. Yet, I am convinced the benefits will far surpass any cost — and there is no cost so great as the loss of human life. Among our challenges is assuring sufficient water levels to protect intake pipes that draw water for treatment by the Des Moines Water Works for our drinking water. The Center Street Dam, for example, keeps water in the Des Moines River at the height of the dam for several miles upstream. This “pool” assures that water intake pipes near Prospect Park can deliver river water to the Water Works. The pool also assures enough water for boating. Where the Des Moines and Raccoon Rivers meet, the Scott Street Dam can look harmless. Instead, it is deadly; three people have died there. This dam contains both a storm sewer and a sanitary sewer. The Fleur Drive Dam on the Raccoon River near Gray's Lake also creates a pool to protect Water Works intake pipes. Luckily, no one has died there. Along both the Des Moines and Raccoon Rivers, we also have some unique constraints such as the concrete river walls and ornamental railings known as balustrades. These are an integral part of the city's historic district designation. Iowa's Department of Natural Resources has helped low-head dam owners identify local goals and modify eight dams for safety, reconnected habitat, and improved fishing and recreation. Others are in the works and the Legislature has assisted with funding. Iowa Rivers Revival has also taken a lead in river restoration, advocated for strong state programs and provided training for communities and technical experts. In an exciting development, the DNR is talking with Des Moines Metropolitan Planning Organization about engaging our entire community to create a 21st-century vision for both rivers in our city, including the dams. Going forward will be challenging. It will take all our voices, it will take steadfast, inclusive leadership, and it will take a significant financial investment in our future. I have come to love rivers. Yet, even as a seasoned rower and paddler, low-head dams give me great pause. Sadly, I know many people who won't go near a river with a low-head dam, won't boat, won't swim, won't fish, won't take their children near the water — and I don't blame them. But we can do better. I believe the city and its citizens are up to this challenge and the transformative power that a healthy, safe river can provide. We can make our rivers safer for people, re-connect them so fish and other aquatic life can move freely, and create a world-class community with two beautiful historic rivers in our midst. We can become a community that celebrates our connection to the natural world and the pure joy our rivers can bring. *THE AUTHOR: G. DAVID HURD is former CEO and chairman emeritus of the Principal Financial Group and a member of Iowa Rivers Revival. Contact: [gdavidhurd@netins.net](mailto:g davidhurd@netins.net)*

Work underway at Lock and Dam 13

By Amy Kent Herald Staff Writer, December 19, 2014, clintonherald.com

FULTON, Ill. — Construction on Lock and Dam 13 in Fulton is well underway, and U.S. Army Corps of Engineers officials say things are moving along as expected. As of Monday, river traffic access through Lock and Dam 13 had been completely shut down by the Corps of Engineers as general contractor JF Brennan moved in to begin the first phase of a nearly four-month long, district-wide project. That project includes the installation of several bulkhead gates to securely drain the lock chambers for maintenance and repairs that are required on a regular basis. According to Lock and Dam 13 Assistant Lockmaster Jim Mears, construction is expected to take about eight weeks to complete, with the remaining month set aside for the maintenance and cleaning required for the lock and chamber.



“They’re working on putting the bulkhead slots in right now,” Mears said. “They’ve got to put coffer dams in first to get down below to work, drilling holes and getting ready to cut the slots, so that should take a few days to get done. Once they get that done they’re hoping to start cutting yet this year.” The cutting Mears referred to is to create grooves along the lock chamber wall that will fasten the bulkheads securely to the river floor. Once they are in place, engineers will drain the chamber to begin work on clearing debris from the chamber and other minor maintenance repairs that are needed. Dennis Shannon, Lock and Dam chief at Pleasant Valley, said the current phase of the project includes building shelters for the crews that will be responsible for cutting the slots in the concrete for the fastening of gates. “What I know is they’ve got a crew there working now and they will start building shelters for everything,” Shannon said. “When the shelters are all built then the saw-cutting crew will be working. If everything goes right, (saw cutting) will start the day after Christmas.” Shannon added that at this point the construction is on schedule and so far everything has gone as planned.

(Here’s a twist. Someone wants to save a dam!)

Group to file petitions to save Ballville Dam

Foes of removal seek referendum

BY VANESSA McCRAY, BLADE STAFF WRITER, 12/19/2014 - toledoblade.com

FREMONT, Ohio — A group opposed to removing the Sandusky River’s Ballville Dam plans to file petitions today seeking a public vote on Fremont City Council’s decision to tear down the century-old structure. After council voted 4-3 on Nov. 20 to proceed with removal, opponents circulated petitions to put the issue on the Nov. 3, 2015, ballot. Randy Rohm, spokesman for a committee trying to save the dam, said 317 signatures are needed and estimated nearly 500 people signed their names. He plans to submit them today to city Auditor Paul Grahl. But Mr. Grahl, backed by Mayor Jim Ellis, plans to reject the petition on the grounds that the ordinance is not subject to a referendum. They contend the Ohio Revised Code limits the ability to call for a referendum on a public improvement to only the first ordinance or measure required for it to be passed.



Mr. Ellis said that first step took place in April, when council approved a project contract with construction company MWH Constructors Inc. Since that measure was declared an emergency it went into immediate effect. He expects referendum supporters to challenge the auditor's decision, possibly taking the issue to court. Mr. Rohm knows that the mayor is opposed but said allowing a public vote on the controversial decision is the democratic thing to do. "...[N]ow everybody is going to have an opportunity to weigh in, so we will find out just what exactly the people think," he said. Those who don't want the dam removed have expressed numerous concerns, including the environmental impact of releasing sediment trapped behind it. **Removal and construction of an ice-control structure is estimated to cost \$10.5 million; while repairing the dam would cost nearly \$27 million.** Mayor Ellis said a referendum would delay the removal process, jeopardizing \$2 million in U.S. Fish and Wildlife Service funds for the project. He also contends opponents are more concerned about protecting property values of land located near the dam than about the democratic process. **"We've made a decision. This has been talked about and debated more than any other issue in the history of Fremont,"** he said.

(Hope they pay their way.)

Visitors still welcome at Wilson

Once closed, locks at dam remain popular attraction

By Russ Corey Staff Writer, December 21, 2014, tmesdaily.com

It's not uncommon to approach Wilson Dam and see a sign informing drivers the dam is closed. Officials with the Tennessee Valley Authority said they have closed the dam several times this year for maintenance projects. "The majority of closures were for maintenance and improvement projects that required a complete closure for the safety of motorists and repair crews," TVA spokeswoman Christine Shattuck-Cooper said. "We also closed it for races when the course included running over Wilson Dam." The closure does not impact drivers as much as it would have before the completion of the Singing River Bridge, which provided another crossing point over the Tennessee River. Once the new bridge was completed, there was speculation TVA could close the dam to vehicle traffic, but so far, that has not occurred. "TVA has no plan to close the road over Wilson Dam," Shattuck-Cooper said. "We continually assess all of our facilities, including dams, power plants and bridges, to ensure they operate safely, effectively and efficiently and provide the best service for our customers." While TVA owns the dam, the locks at the Florence side of the dam are operated by the U.S. Corps of Engineers. In May, the Corps announced it would once again allow visitors to tour the locks at Wilson Dam. Public access to the locks was prohibited after the Sept. 11, 2001, terrorist attacks.



About 3,700 vessels pass through the locks at Wilson Dam each year. Visitors are able to tour the locks from 7 a.m. to 7 p.m. each Friday through Sunday and on federal holidays.

Visitors can tour the locks Friday-Sunday from 7 a.m. to 7 p.m. and on federal holidays. The locks were a popular tourist destination for both local residents and visitors from out of town. Florence-Lauderdale Tourism Director Debbie Wilson said it was not unusual for visitors to ask about access to the locks at Wilson Dam. The interest still is high more than six months after the locks were reopened. "I had a phone call this week asking if you could tour the dam," said Susie Shoemaker, of the Florence tourism office. "People are very interested in that." The new tourism offices in Florence's McFarland Park features a display dedicated to the dam. The TimesDaily contacted the U.S. Corps of Engineers and requested information about the number of visitors, but those requests went unanswered. It's also unknown if the Corps plans to reopen the locks at Wheeler and Pickwick dams to visitors. According to the Corps' website, the locks at Wilson Dam

are considered "high lift" locks because they raise vessels over 55 feet from the river below the lock to the lake above them. Wilson Lock is the highest single lift lock east of the Rocky Mountains. A vessel locking through Wilson Lock is lifted 94 feet from the river below to the lake above the dam. The single chamber main lock measures 110 feet wide and 600 feet long. The dam has been a National Historic Landmark since 1956. The Corps also resumed public access to the lock at Old Hickory Dam in Hendersonville, Tennessee.

(As soon tomorrow doesn't seem likely! Money! How much is a life worth?)

MISSOULIAN EDITORIAL: Let's get diversion dam fixed ASAP

missoulain.com, 12/22/14

It has taken far too long already for a dangerous diversion dam on the Bitterroot River to be made safe. At this pace, the 4 1/2-mile stretch of river located between the Woodside and Tucker fishing access sites north of Corvallis will have to be closed again this summer - and perhaps the summer after that as well. Montana must commit the necessary resources to fix the Supply Ditch Diversion Dam as soon as possible. Fortunately, three Montana lawmakers from Ravalli County and other county officials visited the site last week, providing hope that the problem is receiving much-needed attention and stands a chance of being resolved in the near future.

The hold-up, of course, is money. The estimated cost of improving the low-head dam in a way that would make it safe for boaters approaches half a million dollars. Various potential sources of funding are being considered, and that's fine. However, this fix cannot be allowed to drag on while money is scraped together. The Montana Legislature ought to make sure that the necessary funding is available. The Supply Ditch Diversion Dam, located between the Woodside and Tucker fishing access sites north of Corvallis, has provided irrigation water to thousands of acres for decades. It only became a serious problem about six years ago, when the western channel of the river dried up and became impassable. Since then, dozens of boaters have been unable to avoid the dam - despite the presence of upriver signs warning them of the hazard. Ravalli County Search and Rescue has spent too many nice summer days pulling capsized boaters from the water. In one case, a father was trapped in the backwater for nearly an hour with his two sons before they were rescued. One memorable eight-day stretch had the Corvallis Fire Department conducting three separate river rescues at the site. Tragically, one of those incidents resulted in the drowning death of a 6-year-old girl.

Last week, state and county leaders stood near the dam and heard the girl's father retell the story of how his daughter, Joslyn, drowned in June 2013. Wade Farrell is an experienced rafter who is familiar with the river. As he floated the river with family members, he saw the sign indicating danger ahead, but there simply wasn't enough time to pull the drift boat from the fast-moving water before it hit the low-head dam and was sucked under. The boat was then propelled downstream, throwing its occupants overboard. Joselyn, wearing a life jacket, was caught in the backwater. This year, more signs were put up further upriver in the hope of providing more advance warning of the danger. Additionally, the stretch of river that includes the dam was closed entirely from April through the beginning of July. The signs are certainly helpful, and the river closure undoubtedly prevented further loss of life. But the dam itself needs to be dealt with. Last week, Leslie Nyce of the Montana Fish, Wildlife and Parks described the design of the Supply Ditch Diversion Dam as common in the eastern United States, where such dams are known as "drowning machines." The good news is that Montana has very few dams of this design. Further, the Montana Department of Natural Resources and Conservation has determined the dangerous dam in Ravalli County its No. 1 priority status for renewable resource grants. The Bitterroot Conservation District has already put in a request for \$125,000 to help cover project costs, but even under best-case scenario, a lot of planning and design work has to be completed before actual construction can begin. That's why state and county leaders ought to work together make sure the necessary funding is in place as soon as possible.

(What repair work doesn't look obvious!)

Dam needs more funding

Communities asked for more support

Dec 23, 2014, wmtw.com

GARDINER, Maine —The New Mills Dam Committee is meeting with officials from Gardiner, Richmond and Litchfield to seek funding for the Cobbosseecontee Stream dam following costly repairs. Repairs to the dam this fall cost more than \$70,000, depleting the dam fund shared between the three municipalities. The communities contributed \$100,000 to the fund over 10 years, but more is needed to replenish the fund and maintain the dam in the future.



(Guess we need more dams)

Will it happen again? Absolutely, experts say

12/25/14, registerguard.com

Even if the same conditions — almost 21 inches of rain in a single month on the heels of a deep freeze followed by quickly warming temperatures — presented themselves, we'll never see another flood like the 1964 Christmas Flood, will we. Modern-day dams and high-tech weather forecasting would save us, right? "Obviously, the 1964 flood was pretty exceptional, but we will have another flood like this again," said Scott Clemans, a spokesman for the Portland district of the U.S. Army Corps of Engineers. "It's not a question of if but when." That's why, 50 years later, the National Weather Service in Portland has things such as this on its website: #FloodReady and #64Flood. Click on those hashtags on social media sites such as Facebook and find everything you need to know about the 1964 Christmas Flood and what to do to prepare for the next one of such magnitude. The Corps and the National Weather Service are part of a state and federal interagency team called Silver Jackets, which includes the state Office of Emergency Management, the state Water Resources Department, the U.S. Geological Survey and others working to reduce the risk of flooding and other natural disasters. "Basically, we're trying to capitalize on it as an education and awareness campaign," weather service spokesman Andy Bryant said of the 50th anniversary of the '64 flood. "Oregon's population has grown significantly since 1964. A lot of people have never been through something like this, although many better remember the flood of February 1996 that besieged the Willamette Valley and, like the '64 flood, was a multi-state disaster that affected Washington, California and Idaho," he said. "Is there still a risk?" Bryant said. "Yes, we have flood control reservoirs. Yes, we have better weather forecasting. Yes, we have better river gauges. But that doesn't mean that the flood risk has ended. People need to be aware. What is their action plan if something were to happen?" The Corps' Portland district website has links on what to do before, during and after a major flood. There are explanations of flood warnings and watches; tips for reducing flood risks; the benefits of having flood insurance versus disaster assistance; family emergency plans and checklists; evacuation guides; and tips for driving in flood conditions as well as how to re-enter your home after it's been damaged in a flood. Nine of the 13 dams in the Corps' Willamette River basin project were in place in December 1964. And recent projections show that later dams, such as Fall Creek (1966) on the Willamette River and Blue River (1969) on the McKenzie River, would have kept river levels lower in '64, but not much. As part of its 50th anniversary project, the Corps has projected what the '64 flood would have been like with no dams and with today's current dam structure in place, and compared those scenarios to what actually happened.

For example, the Willamette River in Eugene crested at 24.2 feet (more than a half-foot above flood level) on Dec. 26, 1964. And with the current dam structure? It still would have hit 24 feet, according to a hydrograph provided by Clemans. If no dams had been in place 50 years ago, the projections show the Willamette cresting at 39 feet, similar to what happened during the greatest flood in Oregon in recorded history, in the winter of 1861-62. The "key message" is this, Clemans said in an email: "We can reduce damage from flood events, but we can't prevent them. Individuals and communities need to be prepared for another one, especially since vast areas of agricultural and natural wetlands in historical floodplains around Oregon have been developed for residential use since 1964." — Mark Baker

(When stuff happens! Hurry up!)

Leaburg Dam trouble: 'We're down to one gate that can regulate the flow through the river'

By Vanessa Paz and News Staff, Dec 25, 2014, kmtr.com

Another of the three gates has been out of service and under repair since 2012. "We're down to one gate that can regulate the flow through the river, which does increase urgency of getting repairs to the original gate broken," Lance Robertson with Eugene Water and Electric Board said. The middle gate that experienced a motor failure 3 years ago was set to be fixed by mid to late January.

Now crews have to figure out what's wrong with the right gate. "It just closed, slammed shut basically," Robertson said. Meanwhile EWEB crews are preparing for the possibility that the 3rd and only working gate could malfunction by having pumps at nearby hatcheries to maintain water levels. A crane might come in handy, too. "We're working on a contingency plan to use a crane to pull one of the gates up if we have to," Robertson said. The three 16-foot-tall by 100-foot-wide gates regulate the volume of water spilled from the 73-year-old hydroelectric facility on the McKenzie River east of Eugene. The gates have a unique system or opening and closing. They are cylindrical steel that "roll" or rotate, up and down, to regulate the flow of the river. Water also is diverted at Leaburg Dam into a power canal that is used to generate electricity at a powerhouse four miles downstream. Shutdown of the right-bank roll gate poses no immediate threat to the public, EWEB said.



Hydro:

(This guy is dreaming if he thinks they'll use common sense!)

Relicense the Conowingo hydroelectric plant

stardem.com, December 19, 2014

Relicense the Conowingo hydroelectric plant

The debate over relicensing Exelon to operate the Conowingo hydroelectric generating plant due to the sediment and nutrients washing down the Susquehanna River seems misplaced. One would get the impression that running the electric turbines somehow creates silt and phosphorus

rather than electricity. The sediment and nutrients come from runoff in central Pennsylvania and New York State. Some seem to think that the dam created the accumulated silt and nutrients in the lake behind the dam, but those too came from upstream, and if there had been no dam to block them, they would have been washing into the Chesapeake for the past 85 years.

Conowingo generates about 550 megawatts of power, similar to a full sized coal generating station, but cheaply and with no air or water pollution, so we should promptly authorize its use and keep it running. Yes, preventing more pollution of the Bay from the Susquehanna must be addressed. However, not using the existing electric turbines will have no effect on the accumulated silt or new materials washing down the Susquehanna into the Bay, but will increase electric costs and greenhouse gas emissions. It is a perfect lose-lose-lose decision.

GEORGE HAMILTON,, St. Michaels, MD

(Low-cost hydro does wonders for business.)

New hydropower allocation will spur \$130 million in capital investments in Western New York, create 101 jobs

by jmaloni, Dec 18th 2014, wnypapers.com

NYPA trustees approve \$6 million award for next 43North competition The New York Power Authority board of trustees approved an allocation of low-cost hydropower Tuesday to attract a new manufacturer to Western New York. WhiteRock Pigments is planning capital investments of \$130 million for its construction of a facility in Tonawanda, which will lead to the creation of 101 permanent jobs. The allotment of 2-1/2 megawatts from the Niagara Power Project to WhiteRock Pigments will support the company's construction of a pigment-production plant at a 50-acre brownfield site. (One MW is enough electricity to meet the needs of 800 to 1,000 typical homes.). In a separate action, the trustees approved \$6 million in funding for a planned business competition next year by 43North under the "Buffalo Billion" initiative, a comprehensive package of incentives spearheaded by Gov. Andrew Cuomo for growing businesses and jobs in Buffalo and Western New York. The funding approved by the NYPA board is made possible by the Western New York Power Proceeds Act, signed into law in 2012 by the governor for applying net earnings from the market sale of unutilized hydropower from the Niagara plant in support of the expansion of businesses in the Buffalo-Niagara region. "There is no greater evidence of the tremendous strides that we're making to boost the Buffalo-Niagara region economy than the 43North business plan competition," said John R. Koelmel, NYPA chairman and a resident of Erie County. "This year's \$5 million in awards to 11 highly innovative startup businesses underscored the efforts under Gov. Cuomo for growing and diversifying the area economy and establishing the right conditions for big ideas to take off. Now we're adding a new round of Power Authority funding for a second 43North contest to catalyze the growth of other businesses, just as we continue to do with our hydropower allocations." "Our collaboration with the private sector to spur job creation in Western New York is the centerpiece of the latest measures by the Power Authority trustees," said Gil C. Quiniones, NYPA president and CEO. "These actions provide another example of the state's multifaceted effort to turn around Western New York's economy and prepare it for the challenges of this new era." The hydropower allocation to WhiteRock Pigments is drawn from a block of power known as "replacement power," one of two large amounts of Niagara power reserved for businesses in the Buffalo-Niagara region. WhiteRock Pigments' new manufacturing facility will produce titanium dioxide pigment. This is a product that provides whiteness and opacity for products such as paints, plastics, paper, food, medicine and toothpaste. In addition to the allotment of low-cost hydropower, Empire State Development has approved \$2 million in Excelsior Tax Credits for WhiteRock's construction of the pigment plant in Tonawanda. "WhiteRock Pigments' new plant will be a major boon to the Tonawanda area, with a fresh infusion of new jobs and capital," said ESD President, CEO and Commissioner Kenneth Adams. "We're happy to be partnering with the Power Authority to welcome this new manufacturing facility in Western New York." "We are grateful for the support extended to us by New York state to bring about the construction of our new manufacturing facility in Tonawanda," said Robert L. Meyer, CEO, WhiteRock Pigments. "Gov. Cuomo's administration recognizes the narrow competitive cost margins that businesses must consider in making their strategic decisions, and this is reflected by the low-cost hydropower allotment and other assistance (New York) is providing." "This

reinvestment of clean power and power proceeds right here in Western New York supports local jobs and helps to move the region from old and industrial, through the reuse of brownfields, to new and innovative, with the advancement of the next breakthrough business," Congressman Brian Higgins said. Beyond the latest power allotment, Western New York also will benefit from the NYPA trustees' approval of the \$6 million in additional proceeds funding for 43 North. The action by the trustees followed a Dec. 3 recommendation by the Western New York Power Proceeds Allocation board. Just over a month after 43North's successful business competition, additional funding was approved for a second contest by 43North, which is named for Buffalo's latitude. As with this year's competition, next year's winning businesses will be offered incubator space and support services for at least a year. Including the latest awards, 28 enterprises have received power proceeds funding for a total of more than \$21 million since the initial round in 2013. Through the end of November, NYPA has made deposits of more than \$38 million into the Western New York Economic Development Fund, established following the proceeds legislation.

(More is better!)

Hydroelectric Pumped Storage Projects Increase in North America

industrialinfo.com

SUGAR LAND--December 22, 2014--Researched by Industrial Info Resources (Sugar Land, Texas)--Permitting applications for hydroelectric pumped storage projects have increased in recent years, according to the Federal Energy Regulatory Commission (FERC) (Washington, D.C.), as a result of the agency's recent approval of a pilot project to test a two-year licensing process. The Hydropower Regulatory Efficiency Act of 2013 directed the federal agency to investigate the feasibility of a two-year licensing process in order to streamline the permitting process. Within this article: Hydroelectric pumped project applications in the U.S.

(What else could it be?)

Our Voice: Even Boeing says hydropower is renewable energy

bellinghamherald.com, December 26, 2014

The language in a flawed energy initiative approved by voters in 2006 needs tweaking, but so far attempts to make the law more reasonable have been unsuccessful. It's worth noting, then, that a recent development might help make the case to state officials that hydropower should be considered a renewable resource. Boeing, the state's manufacturing giant, recently announced its plans to use all renewable energy sources at its factory where it assembles 737 commercial airplanes. Boeing officials say they will no longer use energy generated from coal or fossil fuels, and will instead buy more wind power credits and continue to use hydropower. So, the aerospace giant that state government officials bend over backward to accommodate, publicly accepts hydropower as a renewable energy source. Wouldn't it be great if the rest of the state followed suit? Tri-City legislators have been trying to convince their colleagues of this for some time, but without much luck. Perhaps this next legislative session they could use Boeing's example to help move along another attempt to change the law. Problems arose when voters passed Initiative 937, which created the Energy Independence Act. It requires utility companies with at least 25,000 customers to purchase at least 3 percent of their power from eligible renewable resources. That percentage increased to 9 percent in 2016 and 15 percent in 2020. The trouble is, the initiative focused on wind and solar energy sources, but failed to recognize hydropower as a renewable energy source.

As long as the Columbia River keeps flowing, hydropower should be considered renewable. The irony is that other states with similar renewable energy requirements end up buying their hydropower from Washington state, while our own utility companies must buy more costly power elsewhere. This hurts all Washington ratepayers, but especially the poor and those on fixed incomes. Opponents say that without a mandate to find sources other than hydropower, our state will never diminish its reliance on fossil fuels and the dams on our rivers. They believe if utilities can count hydropower as a renewable resource, then they won't go out of their way to find other alternatives like wind and solar energy. There needs to be more flexibility on this issue. Just

because Washington utilities were using a renewable energy source all along does not mean they are being lax if they continue to use it. Last year State Sen. Sharon Brown and Rep. Larry Haler gave a great effort to fix this flawed legislation and we would encourage them to try again. It can't hurt that Boeing, the top manufacturer in the state, also counts hydropower as clean and renewable. Perhaps using Boeing as an example will make a difference.



Water:

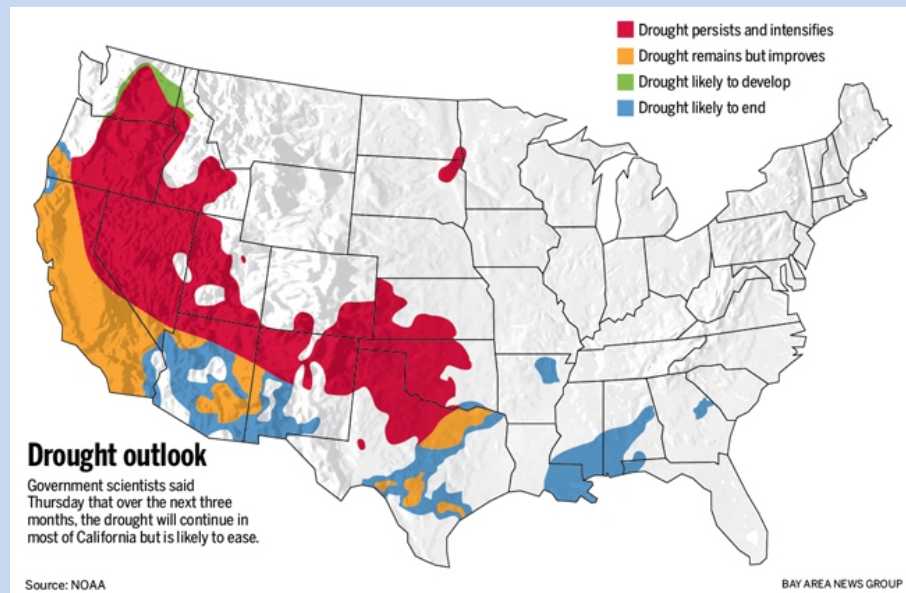
(This sums it up!)

California drought: Feds forecast good chance of wet conditions for next three months

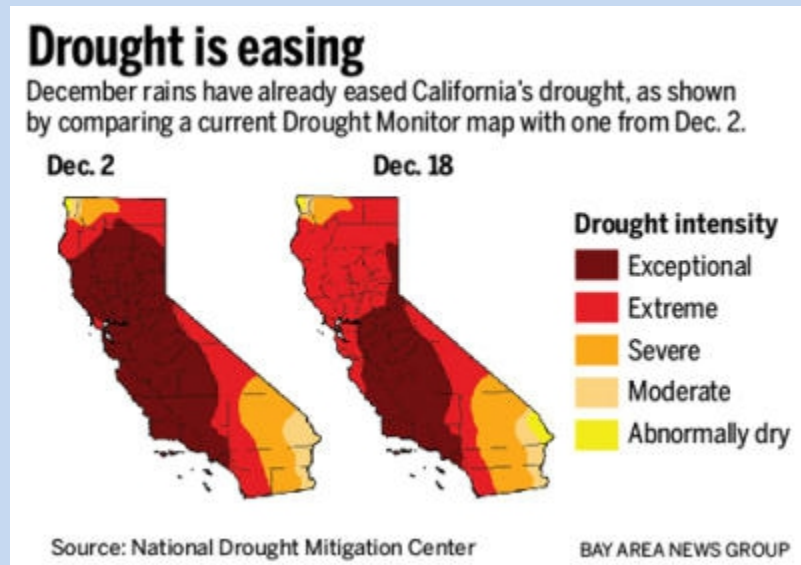
By Paul Rogers, mercurynews.com, 12/18/2014

There is a 75 percent probability of average or above-average precipitation between January and the end of March for California, according to a new report by federal scientists -- the first time in five years such a wet outlook has been predicted in the state during the first three months of a year. "This is good news," said Steve Baxter, a

seasonal forecaster with the National Oceanic and Atmospheric Administration, which issued the report on Thursday predicting that the harsh reality of California's historic drought may finally be giving way to wetter days ahead. "There are not indications of a monster wet season," he said. "It's unlikely that the drought will be broken this year, but it's likely that it will be improved." Pacific Ocean temperatures, which are warmer than normal, along with satellite imagery and computer models, are showing a greater likelihood of low-pressure systems, which can draw storms to California, Baxter said. There still is also a 65 percent chance of mild El Niño conditions developing this winter, which could further increase chances. Meanwhile, reservoirs continued to slowly rise across Northern California after three weeks of drenching rains. And another report out Thursday also offered an additional glimmer of hope. The U.S. Drought Monitor, a weekly map issued by the U.S. Department of Agriculture and other agencies, showed that 32 percent of California is in "exceptional drought," notably down from 55 percent last week, due to the recent rains.



The area showing improvement includes the Bay Area and communities from Monterey County to Humboldt County. Still, the Central Valley and the Los Angeles Basin, which have not received as much rain, remain in "exceptional drought." And 98 percent of California is still in "severe drought," the third most serious of five classifications. But the update, which is based on soil moisture levels and other factors, was the first time in more than two years with such a large section of the state showing an improving trend. "We've gone from real bad to just bad," said Bob Benjamin, a forecaster with the National Weather Service in Monterey. "If we would have had any more rainfall in the last few weeks, we would have had some major flooding. The trend is moving in the right direction. We're where we want to be. We need to keep it up into April."



WEEKEND FORECAST

Looking ahead to the weekend, more rain is forecast for Friday, with half an inch or so in most Bay Area cities and one inch or more in the mountains. After that, Northern California can put away its umbrellas for about a week. "We can expect dry conditions at least through Christmas Day," said Benjamin. "People will be able to enjoy some sun." California is mired in one of its worst droughts in history and has been since 2011, with many parts of the state receiving only about half the rainfall as the historic average. As a result, when the winter rainy season began, reservoirs were at dangerously low levels, streams were dry and groundwater tables had fallen precipitously. Farmers and water planners were worrying of severe cutbacks and rationing if the state moved into a fourth year of below-normal rain in 2015. That dire scenario still could play out if the wet weather stops. But this winter season, so far, has begun with a deluge. As of Wednesday night, San Jose's rainfall total since July 1 was 10 inches -- 253 percent of the historic average for this time of year. Similarly, San Francisco was at 193 percent, Oakland at 191 percent.

With the ground finally saturated, much of the rain is pouring into reservoirs. The state's largest, Shasta Lake near Redding, has risen by 35 feet since Thanksgiving, adding 448,000 acre feet of water -- enough to supply every home and business in the city of Los Angeles for 10 months. But in a clear illustration of how far California has to go to end the drought, all of that water only increased Shasta Lake from being 23 percent full three weeks ago to 33 percent full now. "There have been some healthy rises, but it still has a long, long way to go to recover back to levels that we saw three years ago," said Kevin Werner, NOAA's western regional climate services director in Seattle. Similarly, in the Bay Area, the 10 reservoirs operated by the Santa Clara Valley Water District, which serves 1.8 million people in and around San Jose, were 28 percent full weeks ago. After the storms, they are at 38 percent. And the East Bay Municipal Utility District, which provides water to 1.4 million people in Alameda and Contra Costa counties, has seen its seven reservoirs increase from 52 percent full to 54 percent over the same time. The small increase is due to the fact that the district's largest, Pardee Reservoir, is in the Central Sierra Nevada, which has not had as much rain and snow as the Northern Sierra. "Of course the recent storms are helping, but after two very dry years, nearly half of our reservoir space is

empty," said Abby Figueroa, a spokeswoman for EBMUD. "We'd love it if Mother Nature would keep pouring it on."

SUSPENDED FINES

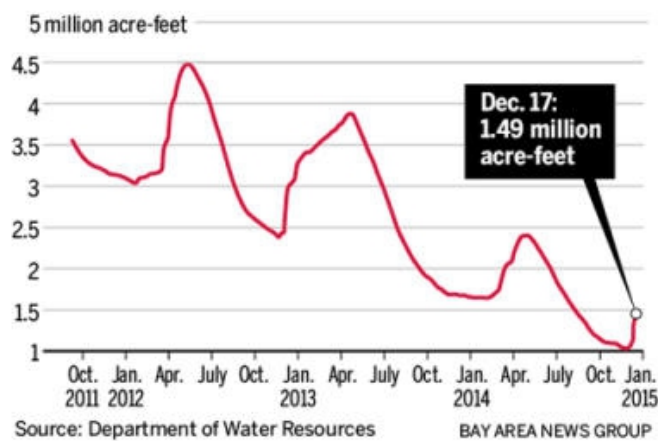
Overall, the Sierra Nevada snowpack on Thursday was at 50 percent of the historic average for this date, up from 24 percent three weeks ago -- climbing, but still half of where it should be.

In Santa Cruz, which has had some of the strictest water rationing rules in the state, city officials suspended the tough restrictions and fines earlier this month, asking instead for voluntary conservation. The city's only large reservoir, Loch Lomond, near Ben Lomond, has risen 6 feet -- from 58 percent full to 67 percent full -- in the past three weeks, as the watershed around it has received 24 inches of rain so far, compared with 2 inches this time last year. The recent rains, combined with Thursday's federal reports, offered Californians

hope for more soaking storms. Water experts remembered 2012, however, when a wet November and December gave way to a bone-dry spring, and 2013 became the driest year in state history back to 1850. Baxter, of NOAA's Climate Prediction Center, in College Park, Maryland, said that chances of a similarly dry recurrence are not high. But because of the state's huge rainfall deficits, he added, California will need every inch of rain it can get in the coming months. "The rains that have occurred over the last month are good," he said, "but they are not enough."

Reservoirs have a long way to go

A look at the water stored in Lake Shasta, the state's largest reservoir, over the past three years shows that despite recent rains it has a long way to go to fill back up.



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