Dams:
(Gotta find if there are any problems before there are big problems.)

Dams need inspection under new state rules
By Macklin K. Reid, February 22, 2016 in Community, Lead News, theridgefieldpress.com

There are more than 70 dams in Ridgefield, most of them privately owned, and the state has tightened regulations that spell out dam owners’ responsibilities. The new rules are designed to “minimize the potential for dam failures and increase public safety,” according to Commissioner Robert Klee of the state Department of Energy and Environmental Protection (DEEP). Dams must be inspected regularly and, for dams that pose more serious threats, emergency plans are required. “Responsibility for meeting these obligations is also now clearly placed where it belongs: with the owners of dam structures,” Commissioner Klee said.
Major obligations under the new regulations, effective Feb. 3, include:

- Dam owners must have periodic inspections of their dams by a professional engineer, with the frequency of inspections based on the hazard class assigned to a dam — from every two years for “high hazard” dams to every 10 years for “low hazard” dams.
- Owners of dams categorized as high or significant hazard — because their failure poses a risk to downstream life or residential property — have to prepare an “emergency action plan,” including evacuation notice procedures, updated every two years and filed with state and local authorities.

It’s more than an exercise in bureaucracy. The environmental department says that as a result of rains in 1982, 17 dams around Connecticut failed and another 31 were damaged, with 11 flood-related deaths. In Ridgefield, a nor’easter in the spring of 2007 left a hole the size of a car in the dam at the pond by Stonehenge restaurant, emptying it. In 2004, maintenance problems with the dam led to a substantial draining of 43-acre Rainbow Lake. And the flood of 1955 wiped out much of Branchville and Georgetown, resulting in tremendous property damage and the loss of four lives after heavy rains from two hurricanes caused cascading dam failures and raging Norwalk River waters. Of the 73 dams listed in Ridgefield by the state, just six have a high enough hazard rating to require emergency action plans. One of these is owned by the town and another by the state, but four are private: Naraneka dam at Pierrepont Lake, Miller’s Pond dam in Branchville, John’s Pond dam off Branchville Road, and Robert’s Pond dam at Robert’s Pond off Saw Mill Hill Road. All are rated as Class B dams with “significant hazard potential.” The town-owned dam considered to have significant hazard potential — and requiring an emergency action plan — is Shadow Lake dam on Mallory Pond in Ridgebury. The state-owned Great Swamp flood control dam off Farmingville Road near the Fox Hill condominiums is the only dam on the list with a Class C, or “high hazard potential” rating, which also requires an emergency action plan. The regulations apply whether the dam owner is an individual property holder, a homeowners’ or lake association, or a public entity such as the town or state.

Rating system
The state’s rating system for dams establishes a “hazard level” based on the amount of water held back, what lies downstream in the area that would be flooded if the dam broke, and the threat posed by a dam break. There are five classes:

- Class AA is a “negligible hazard potential dam” which, if it failed, would result in “no measurable damage” to roadways, land, structures, and “negligible economic loss.”
- Class A is a “low hazard potential dam” where failure would result in damage to agricultural land and local roadways with “minimal economic loss.”
- Class BB is a “moderate hazard potential dam” where failure threatens “damage to normally unoccupied storage structures,” paved local roadways and “moderate economic loss.”
- Class B is "a significant hazard potential dam" which, if it failed, could result in "possible loss of life" as well as "minor damage to habitable structures," including residences, industrial or commercial buildings, hospitals, convalescent homes or schools; and damage to "local utility facilities," from water supply and sewage treatment plants to power plants, fuel storage facilities and cable or telephone infrastructure, causing localized interruption of these services; and damage to collector roadways and railroads; or “significant economic loss.”
- A Class C dam is "a high hazard potential dam" which, if it were to fail, would result in any of the following: "probable loss of life" or "major damage to habitable structures" such as those listed for Class B dams; "damage to major utility facilities," from water supply and sewer plants to electrical substation, "causing widespread interruption of these services"; damage to arterial roadways; or "great economic loss."

While only Class B and Class C dams are required to have emergency action plans, every class above AA is required to be inspected. The frequency of required inspections varies with the hazard level: Class A (low), inspected every 10 years; Class BB (moderate) every seven years, Class B (significant) every five years; Class C (high) every two years. Most of the 73 dams the

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
state lists in Ridgefield are classified as A or BB hazard class, although there are the five Class B (four private and one town-owned) and the state’s Class C dam. A few dams are listed without a hazard classification because the state hasn’t assigned one yet.

**Town dams**
The town-owned dams are Shadow Lake dam (Class B), Lake Windwing dam (Class BB), Kovac’s dam (Class BB), Great Pond dam (Class A), and Bennett’s Pond dam (Class A). Town Engineer Charles Fisher said there has been recent attention to the town-owned dams, and more is planned. "With the exception of Bennett’s Pond dam, all of the dams have been inspected in 2014 and 2015," Fischer said. "The results of the inspections prompted me to include in this year’s capital request money to complete the design of Shadow Lake dam and do minor repairs to Lake Windwing dam. Great Pond dam was repaired as a result of a tree obstructing the spillway several years back and Kovac’s Dam was repaired a few years before Great Pond dam, as required by DEEP.

"We did visually inspect dams from time to time but will comply with the new regulations regarding periodic inspections," Fisher said. "While I can do the inspections as an engineer, I feel it is wise to have someone from the outside give an objective inspection to the dams. The cost of the inspections in 2014 was $35,000. "Bennett’s Pond dam will be inspected this upcoming fiscal year with the passage of the appropriation at a cost of $3,600. Next fiscal year (2017-18) will also see a request for emergency action plans for several of the dams as required by DEEP. I do not have a cost for that yet." There are extensive requirements concerning the creation, filing and updating of an emergency action plan, or EAP, in the state regulations. According to the DEEP, “an EAP is intended to be a practical document that defines conditions which require a response, and provides clear direction for action in an emergency situation. An EAP provides the owner of a dam with a procedure to follow in making a determination when to alert local emergency response agencies that conditions are deteriorating at a dam and that an evacuation of the downstream area may be necessary. The local emergency management authority will have their own procedures in place to issue a warning or evacuation notice to downstream residents should that be necessary. "Dam owners are now required to submit an EAP to the Commissioner of DEEP, the chief executive official of a city or town, and the emergency management officer of any municipality potentially impacted by an emergency involving the owner’s dam. Dam owners must submit EAPs to the commissioner for approval for Class C dams (high hazard) no later than Feb. 3, 2017, and no later than Aug. 3, 2017 for Class B dams (significant Hazard)." The new regulations can be viewed in the state regulations section of the secretary of the state’s website. Those who own dams and have questions about the state regulations may contact Arthur Christian, supervisor of the dam safety program with the state Department of Energy and Environmental Protection, at art.christian@ct.gov.

(The countdown begins, You’ll be sooorrrry!)  
**Latest: Klamath dams to come down**
**A deal that would have supplied water to irrigators and tribes fell apart.**
Paige Blankenbuehler Feb. 22, 2016, hcn.org

**BACKSTORY**
A water war in the early 2000s in Oregon’s Klamath River Basin brought bitter feelings, fallowed fields and devastating fish die-offs. After decade-long negotiations, more than 40 stakeholders signed three agreements in 2010 that would have provided minimum flows for irrigators and wildlife refuges, assured tribal water rights — and removed four geriatric dams, restoring salmon runs and improving water quality. In late 2015, though, Congress let the agreements'
cornerstone expire, leaving the Klamath's future uncertain ("Hope fades for Klamath River accords," HCN, 2/2/16).

FOLLOWUP
On Feb. 2, the Interior Department announced that despite the congressional inaction that sank the Klamath Agreements, the four Lower Klamath River dams will be removed through the Federal Energy Regulatory Commission process, which found that the cost of retrofitting far exceeded decommissioning. The removal (set for 2021) will occur independently of the other deals, so stakeholders still have to figure out how to revive them.

(But, Congress is at it again.)

Congressman Offers Draft Bill to Resolve Issues in Klamath Basin
February 22, 2016, by Alyssa Carducc, news.heartland.org

U.S. Rep. Greg Walden (R-OR) released draft legislation on December 3 aimed at resolving a number of ongoing public land and water use conflicts in the Klamath Basin, which straddles the California-Oregon border. Walden's bill would transfer 200,000 acres of U.S. Forest Service (USFS) land to Klamath and Siskiyou Counties, split evenly. Supporters of the bill say the transfer would grow jobs in rural communities and improve forest health. The legislation would also grant American Indian tribes in the Klamath Basin economic development funds and 100,000 acres of USFS land for timber production, in exchange for waiving the tribes waving their senior water rights claims.

‘Big, Bold, Proposal’
Rep. Rob Bishop (R-UT), chairman of the House Natural Resources Committee, praised Walden's proposal. "Big, bold, and creative proposals are what’s needed to resolve these longstanding issues,” said Bishop in a statement. "That means looking differently at the issue than the provisions and agreements that have been pending for over seven years,” said Bishop. “If we’re tied to these precedents that have failed, then we will fail in the future. "The federal land transfer provisions included in Congressman Walden’s draft legislation are ideas I could strongly support in order to move forward," Bishop said. "While some immediately rejected any form of federal land transfer to empower local communities, I hope they will reconsider.”

Dam Controversy
The bill does not implement dam removal provisions related to the 2010 Klamath Hydroelectric Settlement Agreement, an agreement negotiated between Klamath tribes, irrigators, anglers, conservation groups, a number of counties, Oregon and California, various federal agencies, and PacifiCorp, which owns four dams on the Klamath river. Addressing this concern, Walden said, “By now it should be clear to all the parties involved there are not the votes in the U.S. Senate or the U.S. House to pass the Klamath Basin Settlement Agreement and related agreements as proposed.” Oregon state Sen. Doug Whitsett (R-Klamath Falls) says if the dams are removed, the region will lose hydropower generation. Whitsett also says the Federal Energy Regulatory Commission (FERC) should be allowed to perform the tasks it is charged with, including making decisions concerning whether to relicense all, some, or none of the Klamath Basin's hydroelectric dams.
Sen. Walden’s bill designates FERC as the agency charged with making any decisions about dam removal. “In my opinion, the Klamath Hydroelectric Settlement Agreement was a political attempt to remove that decision from FERC authority,” said Whitsett. “I believe the dams should be modernized and enhanced to produce more carbon-free generation and relicensed.”

Contrary to claims made by those pushing for the removal PacifiCorps’ dams, Whitsett says removing the dams will do little to improve the Klamath Basin’s environment. “Removal of the dams will serve little if any water quality or fish passage purpose, because the overriding cause of poor water quality originates in Upper Klamath Lake, has existed for millennia, and will continue to exist into the foreseeable future,” Whitsett said.

(Brazil: 7 Charged Over Dam Disaster)

By THE ASSOCIATED PRESS, February 23, 2016, nytimes.com

The president of the Samarco mining company and six other people have been charged with aggravated homicide over the deaths of at least 17 people after a dam burst in November, the Brazilian police said Tuesday. The police in the state of Minas Gerais said they had requested that Samarco’s president, Ricardo Vescovi, five other company executives and one contractor be held in preventive detention while awaiting trial. The men are charged with homicide, causing a flood and polluting drinking water. A wave of debris from an iron-ore mine broke through the Fundão dam on Nov. 5.

Work on gates will fix the leak on dam and allow spills

Laser show will have whitewater backdrop again

February 24, 2016 | LXXV No. 48 | grandcoulee.com

Those who were disappointed in the Laser Light Show last season because the Bureau of Reclamation couldn’t spill water as a backdrop for the lasers will be happy to hear that things will be fixed in time for the show this spring. The bureau has normally allowed a shallow spill across the face of the dam during the light show, adding a whitewater backdrop for the colored lasers. When a seal leak on one gate began leaking last year, it meant the lasers had only the dark concrete to dance on. Work to repair the seal on drum gate three, the villain last year, will begin March 14, and will be finished by May 14, said Lynne Brougher, public affairs officer for Grand Coulee Dam. In fact, work will be done on a number of drum gates during the two-month work schedule.

Currently, workers are affixing platforms at the base of the drum gates so they can get to work when the water level in Lake Roosevelt reaches 1255 feet above sea level, the maximum lake level to allow work on the gates that control the spills over the top of the dam. Brougher stated that, with current flood control data, experts are projecting the level of the lake to be at 1253 feet by the end of April. That all depends on weather that affects snow melt in the mountains, power demand and more. Work is scheduled to repair the leak on drum gate three; inspect and, if needed, repair corner seals on three gates; replace gate seals and bumper seals on three gates; and perform annual maintenance on all gates. Work scheduled also includes five-year maintenance on three gates; 11-year maintenance on two gates, ultrasonic hinge pin inspections on three gates, plus doing a number of maintenance items inside the dam, including replacing air filters, inspecting and repairing elbows and hoses on all gates. The 11 drum gates are each 135 feet long and 30 feet high. Ideally, Brougher stated, maintenance would be performed on the drum gates each year, but the lake level dictates when that can be done.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
$75 Million Repair Job To Dams Critical For Protecting Houston

Major repairs are now under-way to reduce the risk of failure of two dams on Houston's west side.

Dave Fehling, February 25, 2016, houstonpublicmedia.org

The two dams hold back the Addicks and Barker reservoirs that lie on opposite sides of the Katy Freeway at Highway 6. Right now, there's not much water in either reservoir. But during big storms and hurricanes, they hold millions of gallons that would be slowly released down Buffalo Bayou. But the gate structures that allow those controlled releases have a problem. "We have seepage that's occurring under the conduits themselves," says Richard Long, the on-site manager for the US Army Corps of Engineers. "It can get worse and worse and worse." It's no small matter. The Corp ranks these two dams among six in the nation that are considered "extremely high risk." Because if they ever failed during a big rain event, flooding downstream could do an estimated $60 billion dollars in damage to downtown Houston, to industries along the Houston Ship Channel, even to the Texas Medical Center. "All of it is an effort to prioritize funding and to address the most critical issues first. And this one being up there at the top, " says Bobby Van Cleave with the Corp’s Dam Safety division. The federal project to fix the Addicks and Barker dam gates is just getting started; it’ll cost $75 million dollars and is slated for completion by 2019. The US Army Corps of Engineers will hold a public meeting about the project March 9th from 6:30-8:30 p.m. at the Bear Creek Community Center.

Hydro:

(LETTING EVERYBODY KNOW ABOUT NEW HYDRO)

Public open house held about Black Canyon Dam

2/24/16, messenger-index.com

The U.S. Bureau of Reclamation will hold an open house to discuss the Black Canyon Diversion Dam project to construct a 12.5 megawatt hydroelectric generating unit at the dam with the public. The open house will take place from 6-8 p.m., Wednesday, March 9, at the Kenneth Carberry Elementary School, 1950 E. 12th St. Emmett. The proposal includes the following actions:

• Constructing a new power plant to house the unit.
• Placing a new penstock through the dam.
• Removing and replacing an existing administration building.
• Installing a new trash rake removal system.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
• Installing new trash rakes.
• Completing miscellaneous modifications to the existing power plant.
• Realigning transmission lines currently on Bureau of Reclamation property.

Send your written comments on the Draft Environmental Assessment to BOR Natural Resource Specialist Richard Jackson, Snake River Area Office, 230 Collins Rd., Boise, ID 83702 or via email to bedd-comments@usbor.gov. Comments must be received by Monday, March 14. Additional information on this project including the Draft Environmental Assessment can be found at tinyurl.com/zudcptn.

(Flood control – doing what dams do best.)

Mt. Morris dam holding up despite recent rain, melting
By Mark McLean, February 24th 2016, 13wham.com

Mt. Morris, N.Y. - The recent snow melt from last weekend and rainfall this week has elevated many local tributaries. The Mt. Morris Dam serves as Rochester's fortress of flood protection on the Genesee River. Dam manager Steven Winslow gave 13WHAM News a tour of the structure and encouraged others to tour the facility when it opens in April. Winslow said the dam has a very high capacity for water. "Our total capacity is over 302,000 acre feet or the equivalent of about 98 billion gallons of water," Winslow said. To put those water numbers in perspective, 302,000 acre feet of water is the approximate volume of 1.96 million Olympic swimming pools.

The size of the structure is hard to describe, but once inside we discovered that the dam had more steps inside than the Statue of Liberty. When asked if the recent rain and snow melt would cause any problems, Winslow called the rise "unusual", but didn't indicate it should cause alarm. "The water rise is unusual in the sense that the water level will be going up 40 feet in a day and a half on the upstream side of the dam, so that's a rapid rise," Winslow said. To measure the dam's performance, Winslow and his staff use Piezometers and advanced hydrographs. The Piezometers measure water pressure around the dam and can give the operators of the dam a sense of any waters moving around the outside of the structure. The hydrographs give the operators advanced notice of potential future water levels behind the dam due to rainfall or melting snow. Above all, Winslow wanted to reassure everyone in WNY that the dam is in great shape and ready for any future rain events. "The dam has been successfully preventing flood damage from occurring in downstream areas, including the city of Rochester for 64 years," Winslow said. "The data we're getting back keeps telling us that the dam is in really good shape."

(Hydropower simplified.)

Hydropower
By jpinkner, 2/19/2016, toryboardthat.com

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
(Never tire of Hoover Dam stories.)

**Hoover dam is American engineering at its best**

By Lesley Francis Columnist, February 19, 2016, bryancountynews.com
Last month, I was lucky enough to go out west with my husband, who had a business trip. I was able to work remotely on my trusty laptop by day, and see the sights of glitzy Las Vegas with him by night. However, the most striking part of the trip wasn’t in the gambling and nightlife capital of America, but instead our day trip to Lake Mead and the Hoover Dam. These took my breath away. The pioneering spirit and determination of Americans to overcome physical and geographic challenges has made the USA into the great nation it is today. In my opinion, the Hoover Dam is a stunning example of this American phenomenon. Before I visited this area, I was not aware that regular flooding by the unpredictable and dangerous Colorado River had caused misery for many years before the U.S. Bureau of Reclamation developed plans for this huge dam. The aim was to provide river control, as well as water and hydroelectric power for the developing the Southwest, but in order to achieve this, a truly magnificent feat of engineering for the early 20th century was needed.

I cannot completely communicate the immensity of this construction — I recommend that you visit it in person — but I can share some of the statistics:

- Situated on the Nevada-Arizona border, 30 miles southeast of Las Vegas, and stretching 1,244 feet across the Black Canyon, the Hoover Dam took five years to construct.

- A total of 4.3 million cubic yards of concrete was used to build the dam, its power plant and auxiliary features. That is enough concrete to pave a 16-foot-wide, 8-inch-thick road from San Francisco to New York City, according to the Bureau of Reclamation.

- When it was built, the Hoover Dam was the tallest dam in the world, rising 726 feet above the bedrock of the river and altering the geography of the whole region. Hoover Dam created Lake Mead, America’s largest reservoir, covering about 248 square miles. It is capable of holding some 9.4 trillion gallons of water. Lake Mead supplies water to Nevada, Arizona, California and New Mexico and, since 1964, has also been used for boating, fishing and swimming. Due to years of drought it is now at its lowest level ever.

- In the early 1930s, Boulder City, Nevada, was constructed to house 5,000 dam project workers. A total of 21,000 men worked on the dam; an average of 3,500 each day, with the daily figure peaking at more than 5,200 in June 1934.

- Hoover Dam’s power plant was the world’s largest hydroelectric station from 1939 to 1949. It has a capacity of 2,080 megawatts, and currently generates around 4 billion kilowatt-hours of hydroelectric power annually for homes and business in Nevada, Arizona and California.

The Hoover Dam was originally called the Boulder Dam, as it was going to be constructed at Boulder Canyon a few miles away. Even when it was moved to nearby Black Canyon, the original name stuck. In 1930, when construction began, it was announced that the dam would be named for President Herbert Hoover. However, he later became unpopular because many people blamed him for the Great Depression, so the name of Boulder Dam was used until 1947. Finally, President Harry Truman approved a congressional resolution that officially named the dam for 9

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
Hoover. I leave you with a quote from President Franklin D. Roosevelt’s speech at the dedication of the dam on Sept. 30, 1935, “This morning I came, I saw and I was conquered, as everyone would be who sees for the first time this great feat of mankind … This is an engineering victory of the first order — another great achievement of American resourcefulness, American skill and determination … well done.” I could not agree more. God bless America!

(After over a 100 years, they get a rest.)

NorthWestern replacing century-old turbines at Hauser Dam
2/20/16, helenair.com

Crews from NorthWestern Energy and Anaconda Foundry Fabrication Company on Thursday replace one of the six Hauser Dam turbine units planned for replacement during the next few years. The six units have been in service since 1911, when the dam was completed, said NorthWestern spokesman Butch Larcombe. The new turbines are being constructed in Anaconda and brought by truck to the dam. Replacing the turbine units one at a time avoids any significant loss of generation. Each turbine unit costs about $1 million to replace. Planning for the replacement was underway when NorthWestern took ownership of the former PPL Montana dams in November 2014. ‘We were well aware of this project at the time of the purchase and it will not have any impact on customer bills,’ Larcombe said.

(Relicensing, held up for hostage.)

Sims is just happy to paddle
By Sarah Sherman Sentinel Staff, February 20, 2016 8:00 am | sentinelsource.com

The kitchen window of Norman Sims’ 1837 farmhouse in Winchester looks down over a snowy hill to a small ice-covered pond. During the warmer months, he can put in his canoe at the unowned and unnamed pond and paddle through a backchannel to the Ashuelot River. The recreational opportunities provided by the natural areas of Winchester brought Sims north to settle here two years ago from Greenfield, Mass. “Winchester is a wonderful community because it has so much undeveloped land, wildlife and conserved property,” Sims said. “It’s a prime area for wildlife along Snow Brook to Pisgah Park and the Ashuelot River. It’s just a really nice place to live.” Now retired from 34 years as a professor of journalism and honors classes at the University of Massachusetts Amherst, Sims has been a member of the Appalachian Mountain Club since 1979, and has represented the club and paddlers in the Federal Energy Regulatory Committee’s relicensing of dams on the Deerfield, Androscoggin and Connecticut rivers. The Appalachian Mountain Club promotes the protection, enjoyment and understanding of the mountains, forests, waters and trails of the Northeast. It was formed in 1876 and now has more than 90,000 members, making it the largest conservation and recreation organization in New England. Sims also served on the club’s board of directors for 12 years and has participated on its conservation programs committee. In January, Sims was awarded the club’s Distinguished Service Award, a lifetime award and the highest honor bestowed upon its volunteers.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
He learned about whitewater boating from local club members and in 1988 became involved in the relicensing of dams on the Deerfield River, issued by the Federal Energy Regulatory Commission, responsible for governing the hydropower dams and electric transmission lines along the river.

Sims’ involvement in the relicensing process stemmed from an interest among himself and club members to paddle scheduled whitewater releases on the Deerfield River. Sims offered his services to the club as a representative at these relicensing conversations and has been sitting at the table ever since. "The dams are already in place and licensed," Sims explained. "When the license comes up for renewal, it’s a long process that includes a study phase. We’re trying to gain public benefits from the relicensing — fishing, which is managed by state agencies, recreation and filling the river with whitewater, like at Turners Falls (Mass.) and Bellows Falls. We want to improve the aesthetic flow and access.” With the club’s support, Sims and others interested parties reached a settlement agreement with New England Power Co. on the first major hydropower relicensing in the Northeast, negotiating 138 whitewater releases and 18,000 acres of land in a conservation easement, providing better access for recreation and a long-term enhancement fund. Sims views relicensing as an opportunity to produce real results that will last for 30 and 50 years. “Having worked with Norm from the nationally precedent-setting Deerfield River hydroelectric relicensing settlement agreement in the 1990s, to his role on AMC’s board of directors and conservation programs committee, to the ongoing relicensing of hydropower dams on the Connecticut River, Norm has contributed much more than just advice,” said Ken Kimball, director of research for the Appalachian Mountain Club, of Sims’ hundreds of hours of volunteer efforts. “... His receiving AMC’s Distinguished Service Award is well-earned and deserved.”

Sims says the combined result of relicensing over the past 28 years on six New England rivers has been that 642 whitewater releases are scheduled every year and more than 20,000 acres of land have been placed in conservation easements. The public benefits of these agreements are far-reaching.

“Science dissolves controversy,” Sims said. “Studies tell us the science of the rivers, but not what the dam owners should be doing. It’s about balancing the need for hydropower with recreation and conservation.” Kimball agreed about the need for balance and collaboration during the relicensing process. Sims “has participated in boating flow studies, attended countless licensing meetings and helped draft required filings — all with a collaborative and pragmatic perspective,” Kimball said. Generally, it’s always the same people at the table, Sims says. It’s an adversarial relationship across the table, but not usually arguing or antagonistic. Sims is currently working on the relicensing of five dams on the Connecticut River and two on the Deerfield River, including dams in Bellows Falls and Vernon, Vt., as well as Northfield Mountain and Turners Falls, Mass. “It’s the most important work I’ve done in my life — besides teaching students,” Sims said. “Many of my friends agree. We talk about it all the time. We’re proud of what we’ve achieved. ... It’s not about getting credit, It’s about getting things done.” Sims has also been working with Heather Clish of the club and Gus Ruth of the Winchester Conservation Committee on plans to blaze a hiking trail from the Connecticut River to Mount Monadnock, running through Pisgah State Park and Rhododendron State Park in Fitzwilliam. Clish has been instrumental in getting grant funds from the Society for the Protection of N.H. Forests for the conservation commission to complete the project.

“The key to protecting the landscape is to develop an audience for that landscape,” Sims said. “Rivers aren’t natural anymore, they are artificial. I’ve learned how the approval process works and I’ve met a lot of nice people in the power companies and the state agencies.” Growing up in the farm country of central Illinois, Sims was a member of the Boy Scouts and spent time outdoors, but says he hated paddling at the time. He didn’t really get into it until he took a class on canoeing in college. After graduating from the University of Illinois, he worked as a reporter at United Press International in Minnesota. He and his then-partner bought an aluminum canoe and took it camping up to Quetico Park in Ontario, Canada. “Having a canoe in Minnesota is like having a pickup truck in New Hampshire,” Sims said. “Everyone has one. It’s the state of 10,000 lakes, but really there are 100,000.” That was the beginning of a lifelong relationship with canoes.
Having previously co-authored “The Deerfield River Guidebook,” Sims is now writing a nonfiction book with co-author Mark Neuzil of Minnesota about the history of the North American canoe.

“Canoes: A Natural History in North America” will be published in the late fall by the University of Minnesota Press. “It’s a highly illustrated book that covers the history of canoes from dugout to birch bark to modern materials,” Sims said. “It talks about the relationship to the environmental movement of the ‘60s forward. There is also a chapter on literary works about canoes.” With a forward by John McPhee, the best-known writer about canoes of the past 40 to 50 years, and a cover image by Winslow Homer, Sims is eager to see the project come to fruition. He has pursued the idea since 1990 when he met with a friend’s grandfather, Jule Fox Marshall, who had worked with the American Canoe Association since the 1890s. Marshall’s grandchildren have since inherited his old canoes and the book contains photos of them, reproduced from glass plates of that era. The publisher has raised the first press run from the original 2,000 to 10,000 copies and Sims believes it is the best collection of historical images of canoes ever published.

“I become so attuned to nature that I lose track of space and time,” Sims said of his love of canoeing. “I can shed all sense of civilization.”

My Turn: Is Murkowski’s energy bill a monumental contribution?

By Kate Troll, FOR THE JUNEAU EMPIRE, February 21, 2016 - juneauempire.com

At the end of 2015, Sen. Lisa Murkowski moved the first major energy bill since 2007 out of committee and onto the Senate floor by a rare bipartisan margin of 18–4. The Energy Policy Modernization Act (EPMA) of 2015 was crafted and co-sponsored by Sen. Maria Cantwell, D-Wash., another display of the bipartisan spirit that is “missing in action” in today’s Congress. Given the deep divides and the profoundly dysfunctional nature of our Congress, Sen. Murkowski’s energy bill can be viewed as a monumental achievement. She used her chairmanship of the Senate Energy Committee in a refreshingly bipartisan manner. Sen. Murkowski also used her senior position to include some provisions that will specifically benefit Alaska. For example, the act requires the Secretary of Energy to makes a decision on any LNG export application within 45 days after completion of an environmental review. The act would also reauthorize federal research into geothermal energy. According to the Senator’s press announcement, this could benefit up to one-fourth of Alaska’s communities.

In order to get the EPMA onto the Senate floor, Murkowski and Cantwell looked for energy issues like climate change and offshore oil drilling revenues that would sidestep legislative land mines. The bill instead focused on modernizing power grids, increasing fossil fuel production, mining permits, energy efficiency and boosting infrastructure development for hydropower and microgrid technology. While some of these provisions are good, particularly the push on hydropower, what’s missing from this bill are provisions that would accelerate an overall rapid transition to clean, renewable energy.

There are no renewable energy and energy efficiency portfolio standards for utilities, no job training for the wind and solar workforce, and no provisions for promoting electric vehicle technology. Furthermore, the bill does not attempt to phase out fossil fuel subsidies for coal and some of the larger producers of oil and gas. Instead the bill includes more than half a billion dollars per year to build a coal project that bills itself as “clean.” According to the League of Conservation Voters, the bill also interferes with efforts to build and retrofit federal buildings to be fossil fuel free, like the Ted Stevens Marine Research Institute in Juneau. When one looks at what is missing from this bipartisan effort, Sen. Murkowski’s bill falls well short of monumental. Sen. Cantwell said this bill was “the first step in the long but important journey” to work on significant energy legislation. In other words, it’s an important step but it does not significantly move the needle away from fossil fuel dependence and toward a rapid transition to renewables. Instead the Energy Policy and Modernization Act of 2015 maintains a “business as usual” trajectory for the fossil fuel industry.

(Question to ponder: Should everything we do be based on climate change? Watch out for those 4 letter words or acronyms like ECPA, etc.)
To consider what a forward thinking energy policy would look like, all one need do is look to countries like Denmark and Germany. Denmark aims to be fossil fuel free by 2050. Without hurting the economy. According to the Worldwatch Institute, Germany intends to have at least 45 percent of their energy needs being met from renewable energy sources by 2030. In contrast, the U.S. is keeping fossil fuel subsidies in place and has numerous leaders in Congress who refuse to admit that climate change is a serious threat caused by human activity. Senator Bernie Sanders, a member of the Energy & Resources Committee, proposed the following amendment to EPMA: "It is the Sense of Congress that climate change is real, caused by human activity, there isn’t much time to reverse it, and the consequences of inaction are dire." The amendment failed, with all 12 Republicans in the majority voting "no." This of course includes Sen. Murkowski, who represents a state known to be on the frontline of climate change. I learned about Sen. Murkowski’s inability to admit to this fundamental understanding of climate change prior to reading her Jan. 14 column published in the New York Times, "Stop Wasting America’s Hydropower Potential."

Now knowing her position on not accepting the seriousness of climate change, I was most surprised to read her opening line where she plays the climate change card in appealing to President Obama to consider hydropower has a way to address “one of the biggest challenges facing our country”. Apparently, Sen. Murkowski’s belief in the seriousness of climate change is interchangeable to the fuel or energy source she chooses to promote. By the end of reading her op-ed, I strongly agreed with what she had to say about harnessing more of the potential of hydropower. We in Southeast Alaska are good example of harnessing hydropower with a minimal environmental footprint. She’s right when she talks about the values of coordinated environmental reviews and how that can expedite permitting. She’s right about upgrading and modernizing turbines at existing hydropower facilities. Then she writes, “With hydropower, Congress has given the president an opportunity to address climate change and ‘bridge the divide’ between parties. If he’s serious about expanding the use of clean, renewable energy, he should at last give hydropower the attention it deserves in his final year.” Again she’s right. But imagine how much more sincere her appeal would be if there was a climate change “Sense of Congress” to go along with it. As I learned after spending endless hours of playing 500 Rummy with my mother, “a card laid is a card played”. Kate Troll is a City and Borough of Juneau Assembly member. The views expressed are her own.

Water:
(CA water woes, everybody is against everything.)

Critics of California water-tunnel project claim it's gov't waste to save tiny smelt
By Hollie McKay, February 22, 2016, FoxNews.com

Even as it squeezes taxpayers to repair bridges and roads, cash-strapped California is planning a $15 billion water tunnel designed, at least in part, to save a tiny fish that may already be extinct. The “WaterFix” Twin Tunnels project, championed by Gov. Jerry Brown but opposed by environmental groups and taxpayers alike, would
bore 150 feet underground to the side of the Sacramento-San Joaquin Delta. The plan is to divert fresh water for thirsty farms and communities throughout the state without disturbing the habitat of protected species that live in the delta, including the finger-long delta smelt. "To a large extent, this seemingly innocuous little fish controls much of what we can or cannot do in the delta," said Robert Shibatani, managing partner and principal hydrologist at the California-based Shibatani Group International. The 3-inch fish have protected status under the federal Endangered Species Act and are considered by the U.S. Fish & Wildlife Service to be a crucial barometer for the continued health of the West Coast water lands. They once thrived in the delta, which is the hub of the state’s water supply and is fed by the Sierra Nevada snowmelt carried to the Pacific by the Sacramento River.

The plan, a variant of one Brown pushed when he was governor in the early 1980s, would siphon off water without disrupting the flow of the river or harming wildlife. Three intakes would be built on the east bank of the river in the northern part of the delta, each with screens to keep fish like the smelt from being sucked in. They would feed two 40-foot-wide tubes, some 150 feet underground, that would carry the diverted water 30 miles away to pumping plants that then would push it into the canals that crisscross hundreds of miles of San Joaquin Valley farmland and cities as far away as San Diego. Until now, the solution has been to largely let much-needed freshwater flow past parched farms and communities, emptying into the ocean. That strategy took a heavy toll on the state during the recent drought and often pitted environmentalists against farmers, communities and taxpayers. State officials believe the tunnel system is a fair -- if expensive -- solution.

“If we do nothing to modernize the water conveyance system in the delta, the trajectory of the past 40 years shows us that native fish populations will continue to decline,” Brown spokeswoman Nancy Vogel told FoxNews.com. “We would plunge deeper into the chronic trouble of the last three decades: more frequent water shortages, ever-lower populations of endangered species and, most likely, a return to expensive and unproductive litigation.” It may be too late for the smelt, which are on or near the brink of extinction, according to a survey conducted by state biologists last year. The study found only six of the smelt in delta waters, where prior surveys netted hundreds. University of California-Davis biologist Peter Moyle said a gradual drop in numbers was caused by upstream water diversion projects, but the four-year drought was the last straw. The probability of the delta smelt surviving in the next three years is relatively low. The chances of its bouncing back from where it is today seem very unlikely," Moyle, who has studied the fish for several decades, told National Geographic. “There are a lot of things going on simultaneously. Everything that stresses that poor fish is out there. The drought is the final straw.” Given the dire future of the fish, which is found in larger numbers in the San Francisco Bay, taxpayer and environmental groups are dubious of the expensive proposal. “Stop the Tunnels,”
Domestic Water Use in California (the darker blue means more water use)

Domestic water use is water used for indoor and outdoor household purposes which bills itself as a statewide coalition of businesses, consumers, environmentalists, fishermen, farmers, Native Americans and community-based organizations, charges the project will send water rates soaring while wasting much-needed infrastructure dollars. It is one of several groups that have formed to fight the project. Another is California Water Impact Network (C-WIN), which claims the science behind the plan is flawed because, no matter how it is measured, it pulls water out of the delta. “As such, it fails to achieve its purpose of conserving the delta ecosystem and recovering threatened and endangered species,” said C-WIN Director Tom Stokely. “The Water Tunnels will lead to the degradation of water for human use by millions in the region.” Even environmental groups, such as Restore the Delta, believe the plan will benefit agri-businesses and few others. "The people in Southern California will not receive additional water, yet they will end up carrying higher water rates and additional taxes," Restore the Delta Executive Director Barbara Barrigan-Parrilla said. And the online campaign “Delta Tunnels Action” contends that farmers will lose because the tunnels will leave them low-quality saltwater which will hurt their production as well as the inland environment. Finally, taxpayers are dubious the bill will stop at $15 billion. Carolee Krieger, executive director of C-WIN, called the tunnel project “ruinously expensive for no new water” and predicts the tab could reach $67 billion.

"The state is not telling the truth about the costs," she argued, noting that besides the taxpayer price tag the project also could destroy the critical West Coast ecosystem. "The farmers in the delta itself have some of the most senior water rights in the system. They will be gravely harmed as they will lose their water.” Critics say California already has the infrastructure and know-how in place to adequately hydrate the state without flushing more money down the drain, or into the ocean – but say policies that have been put in place in recent years to protect a handful of small Delta Smelt are driving the water crisis. The system is completely choked, said Johnny Amaral, spokesman for Westlands Water. "The overarching problem creating the water shortages are the layers and layers of laws like these and for the last few years it has been easy for the government to blame the drought. The tunnels are not an economically viable project and they would not be needed if we used common sense. The government has spent the last decade flushing water out with the intention of saving fish, but they are no better than they were.” There is no set deadline for when the project may be approved or tabled. The Water Board will start hearings on the state’s petition on April 7, and the hearings are expected to last several months. In addition, in coming months, the boards of directors for the public water agencies that are paying for the project must decide whether to continue to invest in the project, should it be permitted.

Meanwhile, proponents of the plan have offered up some additional benefits to consider, including that it would create more than 100,000 jobs while ensuring water delivery should an earthquake strike. "There are some that argue we can assure adequate water supplies in California by investing in conservation, recycling desalination, storm water capture, etc. instead of new intakes and tunnels," Vogel said. “We need all of that – as well as California WaterFix.”

Environment:
(Fish do what they do best.)

New hope, scrutiny for Carmel River in wake of dam removal, rerouted channel
By Jim Johnson, Monterey Herald, 02/20/16, 10:04 AM PST | montereyherald.com

Carmel Valley, CA >> An adult steelhead was spotted in the Carmel River earlier this month, migrating upstream past the point where two white stripes of concrete on steep canyon faces
mark the site of the old San Clemente Dam. Redds or nests that female steelhead build for their eggs have been seen above the dam removal and river reroute site, evidence the threatened species is moving upriver unimpeded for the first time in nearly a century. Water flowed freely through the Carmel River’s new route about midway up the 36-mile river during a visit to the site on Thursday. It rushed over a series of step pools and swirled into resting pools along a quarter-mile stretch of the river specifically designed to provide the best possible passageway for the fish to swim upstream and allow the river’s crucial downstream habitat to begin the recovery process. The river’s new banks are festooned with fledgling willow trees and other of the some 100,000 plantings at the site. Massive log barriers are set up to protect them from a huge rainstorm-driven rush of river water if the promise of El Niño weather conditions ever comes through. Piles of silt and gravel are strategically placed to slowly peel off and feed the sediment-starved downstream stretches.

Further upstream, though, the river’s other dam — the newer Los Padres Dam — remains as an obstacle to steelhead during their journey upriver, though fish passage improvement projects are aimed at easing the species migration both upstream and downstream.

Hopes are high for the previously at-risk river’s future and the species that rely on it for survival in the wake of last year’s major completion of the largest dam removal project in state history. The $83 million undertaking by a public-private partnership of dam owner California American Water, NOAA and the state Coastal Conservancy included both the removal of the 104-foot-high seismically unsafe dam built in 1921 and the rerouting of the river to avoid the mountain of sediment that had built up behind the dam. This year, the old Carmel River Dam built in the 1880s will also be removed and the Sleepy Hollow ford will be replaced with a bridge. Experts are already at work studying both the effect on the river of the San Clemente Dam removal and river reroute project, and the various options for the future of Los Padres Dam. Carmel River Watershed Conservancy executive director Lorin Letendre said he’s thrilled to see the river running unimpeded down the new route and the promise of a restored river for steelhead. Letendre’s organization was created in 1999, the same year the Carmel River was declared one of North America’s 10 most endangered rivers. It has been working with the Carmel River Steelhead Association and others on a variety of river habitat restoration efforts since, including creation of a watershed assessment and action plan. The watershed conservancy heads up the Carmel River Task Force, which includes more than two dozen nonprofit organizations and government agencies as members focused on the river work. “It’s just really fantastic to see the river flowing through the new channel, and I’m getting very excited that we’re going to get the kind of steelhead run we’ve been hoping for years now,” Letendre said.

How quickly and effectively the river will be restored from the project site and downstream is the focus of a series of studies led by a collaboration between NOAA’s National Marine Fisheries Service, the U.S. Geological Survey, the Monterey Peninsula Water Management District, and CSU Monterey Bay’s Division of Science and Environmental Policy.

The studies will range from habitat assessment and sediment management to evaluating steelhead populations and fish passage. They will include computer simulation modeling. They’re expected to continue for the foreseeable future, as long as funding is available. During Thursday’s visit to the project site, NOAA fisheries research ecologist David Boughton said the dam removal and river reroute project could serve as a precedent for some of the state’s other dams, 200 of which are one-third to one-half full of sediment. “To me, this is the future, and that’s why it’s important to see if it functions like it’s supposed to,” Boughton said, noting that past dam removals...
had been ecologically ineffective largely because of sediment buildup. "If we can (address sediment) we should have the fish come back." CSUMB professor Doug Smith called the project a "world-class example of stream construction" offering a "great research and educational opportunity."

As for the future of the project site, Letendre said the federal Bureau of Land Management, which will assume ownership of the surrounding property from Cal Am, has indicated it wants to transfer the land to the Monterey Peninsula Regional Parks District to allow the public access. He said there is also discussion about commemorating the project with a concrete sculpture near the site or at Garland Ranch Regional Park. Meanwhile, 6½ miles upstream, the newer Los Padres Dam is also filling up with sediment, though the earthen dam and concrete spillway built in the late 1940s is still capable of storing about 1,640 acre-feet of water, more than half its original capacity. The dam presents neither the seismic safety nor flooding-risk issues that the San Clemente Dam did, but does still present a barrier for migrating steelhead. That has prompted the current effort to consider its future. NOAA fisheries administrator Joyce Ambrosius said the agency asked Cal Am a few years ago to conduct a feasibility study aimed at determining the pros and cons of removing the dam given its impact on steelhead and river habitat. The key question, Ambrosius said, is whether the dam’s benefits including the ability to control the flow of water downstream during dry periods to help steelhead and habitat offsets the possibility of a free-flowing river if the dam is removed. Peninsula water management district engineer Larry Hampson said the dam also plays a key role in the area’s water supply, and is linked to about two-thirds of Cal Am’s authorized river water right. Its removal could have an impact on other river water rights holders he said. As a result, Hampson said the water management district mounted a successful bid to conduct the feasibility study instead of Cal Am, and the study is expected to be complete by 2018.

An earlier study of the dam conducted by The Shibatani Group and completed in 2014 recommended removing the dam in exchange for a smaller dam on a Carmel River tributary for water storage, but district officials don’t appear to be considering that option at this point. Meantime, Cal Am is nearly finished with a $5 million downstream fish passage project that includes a floating collector and pipeline to deliver steelhead from the reservoir to the river below the dam, avoiding a long slide down the concrete spillway and drop into the river. Cal Am has also proposed an upgrade to the existing upstream “trap and truck” fish ladder designed to more effectively move steelhead from below the spillway to the reservoir. Both projects are considered mitigation as part of Cal Am’s pending application to modify the state-ordered cutback in pumping from the river. With the San Clemente Dam relegated to history, and the future of Los Padres Dam uncertain, Letendre said he’s looking forward to the completion of the Monterey Peninsula Water Supply Project portfolio of water initiatives from the desalination plant to recycled water to aquifer storage and recovery designed to cut Cal Am’s river production by about two-thirds. “Then, hopefully, the river can flow year-round,” he said. "That would be incredible."

(Whether the dams get the blame or not, they are asked to fix it.)

Groups ask for emergency measures to protect salmon runs
George Plaven, East Oregonian, February 24, 2016, eastoregonian.com

On Feb. 9, groups sent a letter to Col. Jose Aguilar in Portland criticizing the Corps’ “inability to protect returning adult salmon from high water temperatures,” and said another major die-off could push Snake River sockeye to the brink of extinction.

Last year took a massive toll on sockeye salmon in the Columbia and Snake rivers, as high water temperatures killed hundreds of thousands of fish returning from the Pacific Ocean. Conservation groups are pointing the finger at federal dam operators, and have asked the U.S. Army Corps of Engineers to come up with emergency measures to avoid a repeat in 2016.
“If the Army Corps fails to adopt and implement emergency measures, it risks causing further massive fish kills, unauthorized take, failure of mandatory legal duties to protect endangered species and jeopardizing the continued existence of the Snake and Columbia rivers’ salmon and steelhead populations in 2016 and future years,” the letter states. Both Columbia Riverkeeper and Snake River Waterkeeper signed onto the letter, which does not propose any specific measures but points to several statistics underlining the urgency of the situation. They emphasized 96 percent of endangered Snake River sockeye died before ever making it to Lower Granite Dam in 2015.

The Clean Water Act requires temperatures in the Columbia River to stay at or below 68 degrees to protect native salmon and steelhead. Rock Peters, senior fisheries biologist for the Army Corps’ Northwest Division, said temperatures varied in 2015 but eclipsed 70 degrees in July. Oregon snowpack was the lowest on record for the 2015 water year, and early runoff exacerbated low flows throughout the Columbia Basin. By July, more than a quarter-million sockeye had died in the Columbia and Snake rivers — at least half the total run, according to reports. One biologist with the National Oceanic and Atmospheric Administration worried mortality could rise to 80 percent. Environmental groups say dams are the main culprit. Peters did not specifically address the letter sent to Col. Aguilar, but said the Corps is working with NOAA and the state of Idaho on a report detailing what exactly happened in 2015, and ways they can keep the rivers cooler moving forward.

The report will also address fish passage issues on the lower Snake and Columbia dams, Peters said. “We’re looking at various operations that could offset the (fish) ladder temperature differences,” he said. “Those discussions are going on.” Peters said that report will be presented to the Northwest Power and Conservation Council, possibly in April. The council is made up of representatives from Oregon, Washington, Idaho and Montana, and works to balance regional power needs with fish and wildlife. Possible emergency measures might include closing off surface collectors at the dams when water temperatures get too high. Surface collectors take in water near the surface to help with juvenile fish passage, but can introduce warmer water into the dams’ fish ladders that impede returning adults. Another idea, Peters said, is to start catching and trucking fish at the dams earlier in the year when conditions arise. But nothing has been set in stone. “I think we were all caught somewhat behind last year,” he said.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu