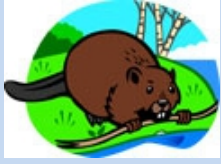


9/20/2013



Some Dam – Hydro News™ And Other Stuff



Quote of Note: *“The ultimate test of man’s conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard.” -- Gaylord Nelson.*

Some Dam - Hydro News → **Newsletter Archive for Back Issues and Search** <http://npdp.stanford.edu/>
Click on Link (Some Dam - Hydro News) Bottom Right - Under Perspectives

“Good wine is a necessity of life.” - -Thomas Jefferson
Ron’s wine pick of the week: 2010 Miro US Red Blend "Cuvee Sasha"
“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson



Dams:

(Wow, that's a scary headline! Don't usually use foreign articles but this is a typical problem we have in the U.S.)

Hampstead ponds 'need new dams or 1,400 could die'

Pippa Crerar, City Hall Editor, 11 September 2013, standard.co.uk

The lives of as many as 1,400 residents could be put at risk if new dams are not urgently built on Hampstead Heath ponds, it was claimed today. An official dam inspector, reporting to the Government, warned that work was needed to ensure that the dams did not break in major storms and cause serious flooding. Thousands of residents in Hampstead and Highgate downstream from the ponds could find their homes inundated. Those in basement or ground-floor flats would be at particular



risk from extreme flooding of the headwaters of the River Fleet. They could have as little as 40 minutes' notice of flooding to save their possessions or even their lives. The death toll could be much higher than 1,400, the study claimed, if flooding hit the transport network. The report said the City of London, which governs the heath, must move with "deliberate speed" to improve the flood protection barriers. The existing barriers, some of which are up to 300 years old and look entirely natural, are considered able to cope with regular rainfall but not extreme flooding. But a £15 million upgrade scheme has faced opposition from local heritage groups who fear the new dams would be a blight on the heath. A statement from the Heath and Hampstead Society said: "Disfigurement of the heath will not be tolerated, and we will do all in our power to prevent it." But Virginia Rounding of the City of London said: "The Panel Engineer who is legally responsible for establishing how safe the dams are is clear: we have to move with deliberate speed to improve the ponds' long-term safety — and the potential loss of even a small number of people's lives is a risk the City cannot take."

(A story about a dam failure and that shows why people try to prevent them. Interestingly it's near Estes Park, CO!)

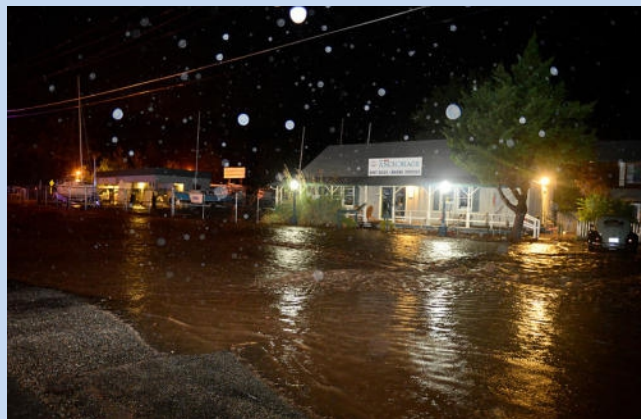
Roads into Lyons impassable; residents head to higher ground

Longmont Times-Call, 09/12/2013, timescall.com

Roads into and out of Lyons were blocked early Thursday after the St. Vrain River spilled over its banks and flooded roads in and around the town. Residents in low-lying areas were told to head to higher ground after word came shortly after 2 a.m. that a dam had failed near Pinewood Springs and that floodwaters were headed down the canyon toward Lyons. An evacuation center was set up at Lyons Community Church, and evacuees later were moved to Lyons Elementary School. The American Red Cross estimates that 200 residents have taken shelter at the school. "It is the most unbelievable thing I've ever seen," said Sally Van Meter, who lives on a hill just outside downtown Lyons. About 10 neighbors had sought higher ground in her home Thursday morning. Van Meter called 911 because neighbors said they heard someone calling for help. But homes she can see from her deck are completely surrounded by water and inaccessible except by boat, she said. Most of the town is submerged, including the Planet Bluegrass music festival ranch northwest of downtown, she said, adding that the St. Vrain River breached its north bank by 50 yards or more. "Everyone's pretty much under four feet of water," Van Meter said. Boulder County Sheriff Joe Pelle said that Lyons was completely isolated by water. Brian Eyster, who lives on the south side of Lyons near Bohn Park, said his own home is safe, but the river is not too far away.



"It's crazy watching the river. The river is a few hundred feet wide now," he said. "There are Dumpsters coming down the river." As of 2 a.m., the St. Vrain River already had breached its banks, and by 2:30 a.m., emergency sirens were sounding. The St. Vrain Valley School District announced about 3 a.m. that the elementary school and Lyons Middle/Senior High School will be closed on Thursday. Around 3:15 a.m., Boulder County Sheriff's deputies closed Colo. Highway 66 at 53rd Street, after water



from the St. Vrain River began spilling over the highway near its intersection with U.S. Highway 36, just east of town. Highway 36 also was closed between Lyons and Estes Park. Times-Call photographer Greg Lindstrom, who was at the intersection of Highways 36 and 66 at the time, said he could hear debris striking the bridge over the St. Vrain just south of the intersection.

(More on the dam failures in Colorado. A rash of small dam failures.)

Colorado flood: Dams break in Larimer and Adams counties; overflowing in Boulder

By David Olinger and Bruce Finley, *The Denver Post*, 09/12/2013, denverpost.com

Record-shattering rainstorms across Colorado's Front Range led to flooding that blew out at least six dams Thursday, stranding a Larimer County family on the second floor of their home and breaching a federal stormwater holding pond northeast of Denver. The floods also overflowed a dozen dams in Boulder County, but no structural failures had been reported Thursday evening, according to Boulder city spokeswoman Sarah Huntley. Water flows in Boulder Creek reached 4,500 cubic feet per second, more than twice the previous peak flow in 26 years of measurement, according to the U.S. Geological Survey Colorado Water Science Center. Normal flow is 100 to 300



A dam breach at Rocky Mountain Arsenal National Wildlife Refuge on Thursday, Sept. 12, 2013 in Commerce City. (Bruce Finley, The Denver Post)

cfs. Bill McCormick, who heads the state Division of Water Resources' dam-safety branch, said late Thursday that Colorado's highest-hazard dams, whose failures would probably drown people, performed well. "(But) we have a few weak spots we're tracking," he said. Among them is Baseline Reservoir, a high-hazard dam in Boulder County. He expressed confidence that the dam will survive record-setting days of rain.

Many less-hazardous dams were designed to withstand a 100-year rainfall, however, "And the rainfall we've had is exceeding the design of those dams," McCormick said. He urged people to be alert for damage to the hundreds, possibly thousands, of small earthen dams dotting the Colorado landscape, many of them too small to qualify for state safety inspections. In Larimer County, five small dams in the Big Elk Meadows area failed, trapping a family up a washed-out county road, said John Schulz, a spokesman for the Larimer County Sheriff's Office. When a county emergency services worker hiked in to check on the family Thursday, he saw a wall of water smash through the home's front door and flood the first floor. The family of three and their dog huddled on the second floor and waited to be rescued. The worker left a communications radio with the family to maintain contact. As of Thursday afternoon, efforts to rescue the family had stalled. County Road 47, off the highway between Lyons and Estes Park, is washed out, preventing vehicles from reaching them. Surging stormwaters channeling out of northeast Denver neighborhoods caused the rupture of the Havana Ponds dam inside Rocky Mountain Arsenal National Wildlife Refuge, located just northeast of Denver. The dam broke around 10 a.m. as overflowing water ripped out several concrete slabs. The currents carved an 8-foot-deep gully through the refuge and washed across roadways. Refuge managers raced to a series of other stormwater holding ponds and opened valves to relieve pressure. By evening, the Irondale neighborhood at the northwest edge of the refuge was evacuated because the massive amounts of water retained on the refuge could no longer be contained by an earthen embankment distant from the Havana Ponds. "The system is well-designed. It's just that this particular event is more than anything it's designed for," refuge manager Dave Lucas said at the scene. State dam-safety inspectors fanned out Thursday to check conditions on larger dams where failures could be deadly. Dam-safety engineer Ryan Schoolmeesters worked his way north from Denver, checking dams along Boulder Creek, Clear Creek and Bear Creek. So far, "the dams seem to be in good condition," he said in Arvada. "A few of the spillways have activated, which is what they're designed for." As a result, "residents could see some high spillway flow" downstream,

he said, causing "road flooding, water in yards." In Colorado, which has dammed nearly all of its rivers, hundreds of dams have become structurally deficient and in need of repairs. According to a Division of Water Resources report for the year ending in October 2010, 359 dams are classified as high-hazard, meaning that their failure would probably kill people.

The state has dealt with deficiencies in these and other dams by limiting the amount of water they're permitted to hold. "There are a total of 176 dams restricted from full storage," the state report read, "due to inadequate spillways and various structural deficiencies such as significant leakage, cracking and sliding of embankments." The state has made some progress since. As of October, 157 dams "remained on the dam-safety restricted-storage list," the division's latest report says. Those are just the larger dams. Earthen dams less than 10 feet high or capable of holding less than 100 acre-feet of water are classified as nonjurisdictional and not inspected, Schoolmeesters said. Four of the five Big Elk Meadows dams were classed as too small to inspect. All five failed.

(Anyone Want to buy a dam?)

Setting Pole Dam will go up for sale

September 13, 2013, By Shaun Kittle - Staff Writer, adirondackdailyenterprise.com, Adirondack Daily Enterprise

Tupper Lake, NY - The town board here is preparing to seek bidders to buy Setting Pole Dam on the Raquette River. Town Supervisor Roger Amell explained Thursday that the decision came after Dennis Ryan, vice president of ECOsponsible Inc., proposed a plan during Monday's meeting to replace the existing structure with a new hydroelectric dam. The Buffalo-based company has several other dams in operation in Western New York. The minimum bid for the 7-acre parcel will be \$400,000. The parcel, which was assessed at \$436,000 last year, is currently tax-exempt. The request for bids could be issued as early as Monday.



The Setting Pole Dam is seen during the height of spring flooding on May 1, 2011. "There's really no benefit to us keeping it," Amell said. "I'd rather we get on the tax rolls, create a few more jobs out of it and get some green power out of it." At the meeting, Ryan told the board he thinks the dam could draw one megawatt of power, enough to supply 300 homes. Amell said there are other benefits to the project, including up-to-date technology and the removal of the town's liability for the structure. If ECOsponsible builds the dam, it would be controlled electronically and have a system to monitor the water level. "It's going to have a barometer on it, so if a big storm is coming it'll send an alert down to the master-panel box, and the person down there can open the dam before the storm happens using a computer," Amell said. "If an emergency happens, we can react much faster." Amell also said the Setting Pole Dam has stress cracks along its surface, which might indicate a bigger problem. By replacing the dam, the town would be absolved of any associated liability. "The problem is, until you have an engineer core-drill it, you don't know how deep those cracks go," Amell said. "It could cost \$25,000 just to get an engineer in there to tell you what needs to be done on it." Amell added that repairing the current dam could easily cost up to \$1 million.

Four Raleigh lake dams to be replaced next year

September 14, 2013, By Colin Campbell — newsobserver.com

Raleigh, NC — Four aging dams that hold back neighborhood lakes are slated for replacement next year as Raleigh repairs the crumbling pieces of infrastructure.

Representatives of the city's stormwater utilities department met last week with residents of the Laurel Hills neighborhood off Edwards Mill Road to unveil plans for a new dam at Laurel Hills Lake. The project, set to begin next spring, will cost up to \$2 million and take a year to 18 months. "That's a high hazard dam," stormwater utility manager Danny Bowden said. "The system conveying the water from the lake downstream is way undersized. There's a safety risk there in the event that the dam was to blow out." The new dam will handle a larger amount of water, reducing the potential for flooding and erosion downstream during heavy storms. Bowden said the lake has been occasionally overtopping Laurel Hills Road atop the dam, including an incident during Hurricane Fran. The road will be closed for the majority of construction with a detour in place. Laurel Hills is one of several neighborhoods that will see dam construction starting next spring. Northshore Lake, near Capital Boulevard and New Hope Church Road, is set for a \$3 million fix. Construction companies will begin bidding on the work next month. Northshore has also been at the top of the city's priority list, Bowden said. "New Hope Church Road is directly below that, so there is direct damage to New Hope Church Road," he said. A few blocks west of Northshore, Brockton Drive Lake is also due for a new \$3.4 million dam starting next summer. "There is some structure flooding to some of the condominium units adjacent to that lake," Bowden said. "That's the key reason we're doing that, along with erosion."

Lake restoration and dam work is already underway at Upper Longview Lake off New Bern Avenue, and work on its neighbor, Lower Longview Lake, is scheduled for next year. It's a lot of work for the stormwater utility department, which has amassed funding from fees implemented in 2003. The average homeowner's fee is about \$81 annually. "These for some reason have happened to the design stage at the same time," Bowden said. "It was not intentional. They're important enough that we need to get them complete as quickly as possible." But one lake likely won't see any improvements. Brentwood Today Lake, also off New Hope Church Road, doesn't have a dam that impacts city streets. Its dam burst in 2012, draining the lake, but property owners haven't come together to fund the needed repairs – and city leaders don't want to pay for it alone.

Colorado dams survive record rainfall, but engineers to reinspect them

By David Olinger, The Denver Post, denverpost.com

Colorado's most dangerous dams all withstood a record rainfall test. That's the good news from a week of flood deaths, washed-out highways and evacuation orders that chased thousands of people from their homes. But in the slower-moving world of reservoir storage, the time of trouble may not be over. Safety engineers have been unable to reach many of the dams above closed roads, relying instead on phone calls with dam owners on-site. Statewide, 167 dams have water-storage restrictions because of structural deficiencies, and some probably exceeded their permitted storage levels during the flooding.



Others could have been damaged when floodwaters poured down their emergency spillways. The deficient dams have been restricted to reduced or no water storage for various reasons: no or inadequate spillways, excessive seepage, continual deterioration, general neglect, partial or complete breaches. When the clouds clear, "that's when we're really going to kick into action," said Bill McCormick, who heads the dam safety branch at the state Division of Water Resources. "We're going to be sitting with a bunch of full reservoirs," he said. "Fifty to 100 of those, we'll have to inspect as quickly as possible."

Engineering consultants in the Denver area have offered free help with the inspection job, which McCormick plans to accept. "Where we have to," he said, "we're going to release water again." The dam safety program classifies Colorado dams into three groups. Failures of high-hazard dams are likely to drown people. Significant-hazard dam failures may cause extensive property damage, and low-hazard dams are not a big threat to people or property. Fears about one high-hazard dam eased Friday, but homeowners below should expect to see water pouring down its spillway. The Baseline Reservoir, which serves as the city of Lafayette's water supply, had a damaged inlet, water standing on the dam crest and signs of erosion on the embankment. Repair materials were brought in and tarps laid across the crest, and the dam is under round-the-clock surveillance. But while the dam held, "its spillway is going to activate," McCormick said, and people below may see unprecedented water flows. So far, a handful of low-hazard dams have failed, along with dozens of other very small dams that the state does not inspect. Those include fishing ponds, stock ponds and aesthetic ponds. "Generally, these structures don't hold significant volumes of water but will cause localized flooding," said Todd Hartman, a spokesman for the state Department of Natural Resources. "People living near these structures need to be vigilant."



Hydro:

(80 feet is like building a new dam at this site. Things have a cost and in spite of what you've heard, money does not grow on trees.)

Electric rate hike will help pay for Blue Lake dam

By Ed Ronco, KCAW, September 11, 2013, kcaw.org

The Sitka, Alaska Assembly took the first step toward raising electric rates last night. Sitka plans a 10 percent across-the-board increase. The goal is to help pay for big projects, especially the expansion of the Blue Lake dam. Only one member of the public, John Stein, testified on the rates last night. "I use electricity. The city seems to think the people who use electricity should pay for it," he said. "And I agree. I support the rate increase and I support the Blue Lake project. Thank you for doing it." Even so, others in the community have raised concerns about the increased cost of electricity. Utility Director Chris Brewton says he's well aware that increasing the rates must be tempered with keeping power affordable. "I don't want to sound really hokey here, but I tell our folks in our department: We don't serve account numbers in this town, we serve friends, families and neighbors. We all know who we are. So our objective is to keep our costs as low as possible," he said.

A concrete pump truck pours footings for new Blue Lake powerhouse. The rig can place 500 cu.yards a day. (Blue Lake Expansion Project photo)



The rate hike comes as Sitka prepares to borrow nearly \$30 million from the Alaska Municipal Bond Bank to help pay for the Blue Lake dam. But the ordinance passed last night actually lists a higher amount. Interim Municipal Administrator Jay Sweeney says the city's consultant did that, to keep options open in case money does not come from the state legislature this year. "So he's written it for \$50 million to cover all contingencies," Sweeney said. "Our planning is roughly \$28 million this time, and we only have an approval at \$44.5 million for the bond bank in total. That means if the city needs more money, it will have to go back to the bond bank — which loans large sums of money to Alaska cities and towns. It would take a vote of the bank's board of directors to

send more money to Sitka. The Blue Lake hydro project is the largest public works undertaking in city history. Crews are raising the height of the dam more than 80 feet. Doing so will mean Blue Lake can generate more electricity for Sitka. It's estimated to cost a total of about \$140 million. Raising electric rates is part of an agreement which requires a certain amount of money to be coming into the city in order for the bonds to be granted.

(Another hydro sale! Mmmm! A real mystery! Why are they selling their hydro plants?)

Eagle Creek Renewable acquires ten hydroelectric plants from Algonquin Power

12 September 2013, hydro.energy-business-review.com

Eagle Creek Renewable Energy has acquired a portfolio of ten hydroelectric power generation facilities totaling 29MW capacity in the Northeast from Algonquin Power. The facilities, which together produce about 100 million kWh of renewable energy annually, will be integrated with Eagle Creek's existing hydroelectric power plants in New York, under the management team comprised of Eagle Creek employees and former Algonquin employees. Eagle Creek's total number of operating hydro plants has now reached to 40, spanning seven states with a total renewable capacity of 90MW and annual generation of 310GWh. Besides, the company is also developing three new projects totaling 4MW capacity that will add 16GWh to the annual generation portfolio. Eagle Creek CEO Bud Cherry said that the company has completed a strategic acquisition of projects from Algonquin Power and the transaction strengthens its position in the Northeast hydropower market. "Eagle Creek's growth began with our first purchase of hydro facilities in 2010, and we look forward to continuing our expansion into the future," added Cherry.

Celebrate the new Snoqualmie Falls at upcoming party, this Saturday

Sep 12, 2013, valleyrecord.com



A community celebration and grand-reopening of the re-developed Snoqualmie Falls Hydroelectric Project and Park is 10 a.m. to 3 p.m. Saturday, Sept. 14, at the Falls Park, 6501 Railroad Avenue S.E., Snoqualmie. Come celebrate more than a century of Snoqualmie Falls' rich cultural history and PSE's continual commitment to renewable energy generation.

Planned are tours of the Historical Train Depot and Carpenter Shop, including new interpretive and educational exhibits and extensive park and trail enhancements. There will be food vendors, educational booths and kids' crafts, plus giveaways and prizes, including a chance to win an overnight stay at Salish Lodge & Spa and get an exclusive tour of the hydroelectric project and park.

(Press Release)

Hydropower Generation Opportunities Increasing at Bureau of Reclamation Facilities

PRWEB.COM Newswire, Washington (PRWEB) September 13, 2013, digitaljournal.com

Hydropower generation capacity has increased at Bureau of Reclamation facilities in the West with the addition of Lease of Power Privilege development by non-federal partners, development of new technologies, and improved efficiencies at existing Reclamation powerplants. Through LOPP, more than 111,200 megawatt-hours of hydropower may be generated annually, enough electricity for more than 9,858 households. Seven projects are currently operating under a LOPP with six additional projects currently in development. These projects have an installed capacity of more than 55,000 kW. LOPP can take place when Reclamation leases its right to develop hydropower at its facilities to non-federal developers. Reclamation finalized the LOPP process requirements in September 2012. These requirements provide clear guidance and timelines, assign roles and responsibilities, set a standard methodology and identify potential charges for developers.

“Using existing dams and conduits for new hydropower generation provides a new source of reliable and sustainable energy in the west that minimally impacts other natural resources,” said Reclamation Senior Advisor for Power Kerry McCalman. “New generation technologies may open up more areas for hydropower generation that non-federal developers can use for the generation of green, renewable hydropower for their projects and communities.” Reclamation is testing the deployment of hydrokinetic generators in canals and recently completed testing a 25 kW hydrokinetic generator designed by BAE Systems in the Roza Canal near Yakima, Wash., through a facility use agreement with Instream Energy Systems. A hydrokinetic generator generates power where water is moving in a river or canal. Planning for the next phase of the study is underway. In this phase, multiple hydrokinetic units will be deployed through the canal. Generation efficiency is improving at Reclamation hydropower facilities through uprating generator capacity, replacing turbines and optimizing how the power is dispatched. A generator uprate increases the generating capacity and involves an electrical and mechanical review of the capability and limits of all the power equipment. Through uprating, Reclamation has gained 2,894 MW of additional capacity from our existing powerplants. For example, Reclamation completed two uprates at Flatiron powerplant (units 1 and 2) near Loveland, Colo., in 2010 and 2012, yielding four MW of additional capacity. Replacing turbines results in an improvement of overall unit efficiency. New turbine runner designs are more efficient than previous designs which results in an increase of power generation with the same volume of water or the same level of power generation with a reduced volume of water. Since 2009, Reclamation has replaced 20 turbines with an average increase in efficiency of approximately 3-percent. This equates to about 200 million kWh of annual generation or enough energy for more than 17,700 households. There are four turbine replacement projects scheduled through 2017.

Reclamation is also implementing a generation optimization system at its power facilities. A computer-based optimization system allows Reclamation powerplants to operate more efficiently, maximizing generation per acre foot of water. The system has been installed at Black Canyon Control Center in Idaho. It will provide dispatch recommendations for Black Canyon, Palisades, Minidoka and Anderson Ranch powerplants. The system is expected to provide an additional 10-30 million kWh of annual generation at the facilities operated out of the Black Canyon Control Center. Installations at other facilities are scheduled through 2016. If these systems were installed at all Reclamation powerplants, 400 million to 1,200 million kWh of additional annual generation could be achieved. “Reclamation will continue to work with our customers to take advantage of these opportunities when it shows economic value,” added McCalman. In 2011 and 2012, Reclamation identified a potential for 1.565 million MWh of additional electricity that could be generated annually at existing Reclamation dams and conduits. Annually, Reclamation powerplants generate more than 40 billion kWh of electricity, enough to serve

approximately 3.5 million homes. To learn more about Reclamation facilities, please visit <http://www.usbr.gov/power>.

(More hydro. What's good for hydro is good for the Country! And, the name of the City is appropriate! Let's hope they can pay the bill.)

Potsdam's new hydropower station almost ready for testing, then to generate electricity

September 13, 2013 - By Craig Freilich, northcountrynow.com

Potsdam, NY – The village's second hydro plant officially proposed in 2007 is finally about to produce power for the village with the surplus to be sold. Commissioning, or final testing, is now slated to begin Sept. 25, when a specialist in computer controls begins testing and calibration. If that goes according to plan, the two turbines and generators in the plant could be producing power for sale within days. While the village is still looking for a long-term contract for a fixed rate with a private buyer, a contract with National Grid is being prepared based on the floating "next-day" rate from the New York Independent System Operator, the state's electricity broker. That contract will have a clause allowing Potsdam to cancel it if another buyer is found. The cost of the project has risen from the original \$3.5 million to close to \$4.7 million, according to village administrator David Fenton, largely because Canadian Turbines, an Ontario-based equipment manufacturer, failed to deliver parts it said it would. The village had to finally purchase the parts elsewhere. Other extra costs were incurred when work on the plant, next to the western Raquette River Bridge at Maple Street, was stopped and started repeatedly waiting for parts. The village has a judgment of nearly \$7 million against the Canadian firm in state court, and work is being done to see what can be done through Canadian courts, but chances of recovering that from Canadian Turbines and owner Richard Kuiper are seen as slim, Fenton says. The village took out a \$3.5 million 20-year loan for the project, which is being repaid at about \$250,000 a year. To make up the shortfall, the village expects to use money from a reserve fund from revenues from the first hydro plant east of the new one, and a capital fund, "money we could have spent elsewhere," Fenton said.

Another disappointment is the rates being paid for electricity, now as little as half of the five to six cents per kilowatt hour expected when the project began. Fenton says the recession reduced demand for electricity and lower rates for natural gas have made cheaper power available.

(Good title!)

Hydro-powerful

Floating power generators proposed at locks on Mohawk River

September 15, 2013, By Jason Subik, The Leader Herald, leaderherald.com

A Capital Region engineering firm wants to use the Erie Canal locks along the Mohawk River as sites for generating hydroelectric power - a project that reflects renewed interest in hydropower nationwide. James Besha, the president of Albany Engineering Corp., said he believes his company can generate millions of dollars worth of electricity annually, enough to power tens of thousands of homes, by constructing floating hydroelectric power generators at Erie Canal Locks 8 through 15, which run from Glenville to Fort Plain. "Those



are the locks that have dams and those sites have never had hydroelectric generation on them, primarily because the dams are taken up during the winter time and there's no power that can be

generated," Besha said. "We came up with the concept to allow the dams to operate just as they do now, allowing them to come down during the winter, but we would only generate power during the summer when the dams are up. To do this we won't have fixed generators in, place; we'll use portable, mobile power generators that would float."

Albany Engineering Corp. operates and maintains other conventional hydroelectric plants in other parts of the state, including the Watervliet Hydroelectric Plant and plants in Mechanicville and Green Island. The firm has applied to the Federal Energy Regulatory Commission for approval of a \$58 million project to build and install the mobile power generators along the Mohawk River, a project Besha said he believes is unprecedented. "I don't think anything like this has ever been done in the United States, it may have been done in other parts of the world but not here," he said.

Hydropower uptick

The Mohawk River proposal comes at a time when the federal government is encouraging more hydroelectric power generation. Albany Engineering's FERC application is only one of the more than 60,000 megawatts worth of preliminary permits and projects awaiting final approval from FERC. Federal Energy Regulatory Commission, which oversees hydroelectric projects in the U.S., issued 125 preliminary hydropower permits last year, up from 95 in 2011. Preliminary permits allow a company to explore a project for up to three years. The agency issued 25 licenses for hydropower projects last year, the most since 2005. "We're seeing a significant change in attitude," said Linda Church Ciocci, executive director of the National Hydropower Association, a trade group. Hydroelectric development stagnated in the 1980s and 1990s as environmental groups lobbied against it and a long regulatory process required years of environmental study. But now power companies are proposing new projects to take advantage of government financial incentives, policies that promote renewable energy over fossil fuels and efforts to streamline the permit process. Hydroelectricity got a boost in 2005, when Congress approved a tax credit for hydropower that was already in place for other sources of renewable energy, including wind and solar. President Barack Obama signed two bills last month designed to spark more interest in hydropower. One directs the FERC to consider adopting a two-year licensing process at existing non-powered dams. The second authorizes quicker action on proposals for small hydro projects at dams owned by the U.S. Bureau of Reclamation. The Department of Energy concluded last year that the U.S. could boost its hydropower capability by 15 percent by fitting nearly 600 existing dams with generators. Hydroelectricity provides about 7 percent of the nation's power using about 2,500 dams. But those dams are just a fraction of the 80,000 in the United States. Most were built for flood control, or like the Erie Canal were built for river navigation. Besha said he believes his company's concept will provide the first financially viable model for tapping a system of smaller dams like the Erie Canal.

Tax implications

Albany Engineering's proposed project won't generate many, if any, local jobs, Besha said it should generate an enormous amount of property tax revenue. He said each of the floating power plants would be assessed as if they were stationary power plants, buildings valued at upwards of \$1 million each. He said he doesn't know yet if the power generators would pay taxes within the municipalities they generate electricity or wherever they are stored on Jan. 1 of each year. Fort Plain Mayor Guy Barton said the power generators could be a windfall for his flood-ravaged community. "If they are taxed in our village, I'm all for it, but if they are only taxed in one municipality, wherever they store them, and it isn't Fort Plain, I think the communities along the river should look for ways to share the revenue," he said. Besha said he expects FERC to rule on his permit application sometime in 2014. *The Associated Press contributed to this article.*



Water:

(The photos say it all. When it rains, it sometime pours! Oh well, I thought I bought a house out of the flood plain. This isn't funny, it's disastrous! Maybe one large dam could have prevented this.)

Evergreen: Downtown streets flooded

By Karen Groves, The Denver Post, 09/13/2013, denverpost.com

Evergreen, CO — **Downtown streets were barricaded and most businesses closed Friday afternoon after floodwaters shut down roads and created dangerous conditions here.**

After 2 p.m. on Friday the voice greeting for the Baskin Robbins business on Colorado 74 in Evergreen announced: "Today is really Friday the 13th. We are closed due to unsafe conditions in downtown Evergreen." Jefferson County Sheriff's Office personnel seemed omnipresent, but there were also a few people meandering on side streets. Crews from Xcel Energy have braced an electric pole that was in danger of falling due to the raging Bear Creek near the Evergreen National Bank drive-through facility. Mark Techmeyer, Jefferson County Sheriff's Office public information officer, said only a mild evacuation notice has been sent to residents along Upper Bear Creek Road which hugs the golf course and the lake before it ends at Colorado 74.

He said the notice is a Level 1 or the equivalent of saying: **"You might want to be prepared."**

He did not anticipate roads in the downtown area will reopen today. "It has taken out part of a



parking lot where the Evergreen National Bank drive-through is," Techmeyer said. He said the Sheriff's concerns are about the weather, because predictions are that it will rain as much as 3 more inches this weekend. "If it turns nasty, it will be a real kick in the stomach," he said. The swollen river was surging through Cactus Jack's Saloon on County Road 73 and overflowing off the decks as Bear Creek bursts toward Kittredge and Morrison beyond.

The neighborhood bar just below Evergreen Lake Dam has a deck that extends over the creek.

The Meyers Gulch Bridge downriver in Kittredge has been washed out. Golden Gate Canyon is closed as county crews evaluate whether blasting is required to prevent rock and dirt slides.

Denver Mountain Parks has closed its properties in Evergreen, Idledale and Kittredge. Bear Creek flood stage was at 9 feet and the creek Friday morning is running at 8.8 feet, according to the sheriff's office. Residents along Bear Creek, from Evergreen to Morrison, were "encouraged" to leave their homes if possible. Sheriff's deputies and Morrison police officers went door-to-door advising residents of the "increasing potential for flooding."



(Note: Photos on page 12)

Flood rescues continue as Colorado braces for more rain

Sep 14, 2013, reuters.com, By Keith Coffman

- * At least four people killed, 172 unaccounted for
- * Governor declared disaster emergency in 14 counties
- * Flooding triggered by unusually heavy late-summer storms

Denver, Sept 14 (Reuters) - More heavy rain is expected on Saturday in Colorado where rescue workers are battling to reach residents cut off by the worst floods in decades, which have killed at least four people and left 172 still unaccounted for. Search and rescue teams have used boats and helicopters to pull stranded residents to safety in areas where flash floods toppled buildings, washed out roads and inundated farmland. The flooding began overnight Wednesday. It was triggered by unusually heavy late-summer storms that soaked Colorado's biggest urban centers, from Fort Collins near the Wyoming border south through Boulder, Denver and Colorado Springs. Boulder and a string of other towns along the Front Range of the Rockies north of Denver were



especially hard hit as water poured down rain-soaked mountains and spilled through canyons that funneled the runoff into populated areas.

Overnight, rescue workers took advantage of a break in the weather to reach residents still stranded in their homes by rampaging floodwaters that turned creeks into raging torrents that burst their banks. "Quite a bit of the water has receded in the city ... and rescue crews will work throughout the night," Ashlee Herring, a spokeswoman for the Boulder Office of Emergency Management said of the recovery effort. The National Weather Service in Boulder warned of scattered showers and thunderstorms later on Saturday and into Sunday that could trigger further flash flooding in the already drenched area.

Disaster

Lyons, a town north of Boulder, was virtually cut off when floodwaters washed out U.S. Route 36, stranding residents without water and power for 48 hours. At least four people were killed, including a couple swept away in floodwaters after stopping their car northwest of Boulder. The man's body was recovered on Thursday and the woman had been missing and feared dead before her body was found on Friday. Also killed were a person whose body was found in a collapsed building near Jamestown, an evacuated enclave north of Boulder, and a man in Colorado Springs, about 100 miles (160 km) to the south, officials said. On Friday, Governor John Hickenlooper declared a disaster emergency for 14 counties, reaching from the Wyoming border south to Colorado Springs. The declaration authorizes \$6 million in funds to pay for flood response and recovery. In neighboring New Mexico, where floods forced the evacuation of hundreds of people in Eddy, Sierra and San Miguel counties, Governor Susana Martinez declared a state of disaster on Friday making funding available to state emergency officials for recovery efforts. The Boulder Office of Emergency Management listed 172 people as unaccounted for following the floods, stressing that while they were not yet considered missing or in danger, relatives and authorities had not been able to contact them. In rural Weld County, where the South Platte River has overflowed its banks and virtually cut the county in half, aerial TV footage

showed large stretches of land covered in brown water on Friday. Many homes and farms were largely half-submerged. Weld County sheriff's spokesman Steve Reams said nearly every road in and around a cluster of towns that includes Greeley, Evans and Milliken had been closed by flooding, including bridges that were washed out. **The flooding was the worst in the state since nearly 150 people were killed in Larimer County** in 1976 by a flash flood along the Big Thompson Canyon. The size and scope of property losses remain unquantified, with county assessment teams unlikely to begin preliminary evaluations of the damage at least until early next week, once water has receded, said Micki Frost, spokeswoman for the Colorado Office of Emergency Management.

(More flooding. I guess global warming caused it! Or, does this happen anyway every so often? Please don't think I take this lightly, this is disastrous to say the least!)

New Mexico flooding tops dams, kills 1

Man's body found in car near roadway

Associated Press, [September 15, 2013](#) in [Nation/World](#), spokesman.com

Albuquerque, N.M. – **New Mexico residents began cleaning up and assessing the damage on Saturday after harsh flooding ruptured dams and claimed the life of at least one person.** State Police Sgt. Emmanuel Gutierrez said the body of a man was found Saturday in his partially submerged vehicle next to State Road 51 in Ash Canyon, about 150 miles from Albuquerque. Investigators believe the man died after his vehicle washed into a ravine covered in mud near the Elephant Butte dam and was washed nearly a mile off the roadway, probably Friday during the flooding, Gutierrez said. The man's name was not released. The death is the first related to massive flooding in New Mexico this week from record heavy rains and overflowing rivers. **Officials said heavy rain on Friday caused the Rio Grande and nearby creeks to overflow in Sierra County – where the man was found – and forced an unknown number of residents to evacuate. The flooding also ruptured an earthen canal in Las Vegas and an aging earthen dam in southern New Mexico.**

In response, Gov. Susana Martinez issued a state of emergency to open up recovery funding. The governor was scheduled to tour affected areas Saturday. The ruptures came after parts of New Mexico saw record rainfall through the week and rivers began to overflow, causing millions of dollars in damage and small evacuations. **The canal east of Bradner Dam near the village of Los Vigiles gave in late Thursday or early Friday, which caused flooding in the city of Las Vegas and wreaked havoc throughout San Miguel County, officials said.** Las Vegas Mayor Alfonso Ortiz said repairs could take days, if not longer. In addition, three of the four major bridges in Las Vegas – Bridge Street Bridge, Independence Street Bridge and the Mills Avenue Bridge – were closed at some point Friday. All but Bridge Street later reopened. "It is widespread and throughout the county," Leger said of the flooding. "We're telling people to stay away from water courses. If you're safe where you're at, stay there. If you're home, and you're safe, stay there." **More than two dozen homes on the Santa Clara Pueblo were ordered to evacuate. The area had been hit hard due to the Las Conchas fire in 2011, which created a burn scar and made the canyon especially vulnerable to a flood.**



Other Stuff:

(Here's some food for thought!)

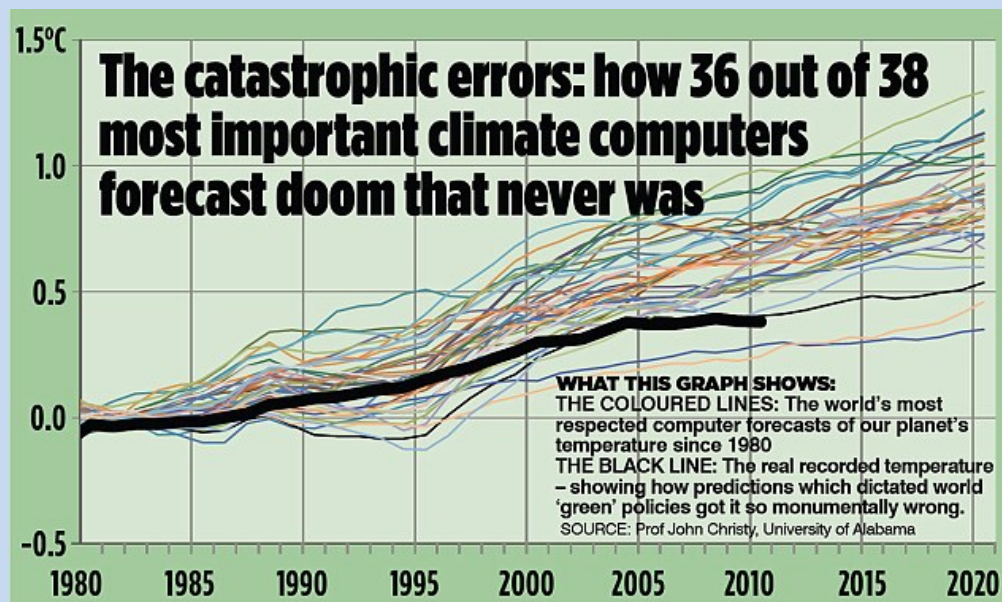
Global warming is just HALF what we said: World's top climate scientists admit computers got the effects of greenhouse gases wrong

- **Leaked report reveals the world is warming at half the rate claimed by IPCC in 2007**
- **Scientists accept their computers 'may have exaggerated'**

By David Rose, 15 September 2013, dailymail.co.uk

A leaked copy of the world's most authoritative climate study reveals scientific forecasts of imminent doom were drastically wrong. The Mail on Sunday has obtained the final draft of a report to be published later this month by the UN Intergovernmental Panel on Climate Change (IPCC), the ultimate watchdog whose massive, six-yearly 'assessments' are accepted by environmentalists, politicians and experts as the gospel of climate science. They are cited worldwide to justify swingeing fossil fuel taxes and subsidies for 'renewable' energy. Yet the leaked report makes the extraordinary concession that the world has been warming at only just over half the rate claimed by the IPCC in its last assessment, published in 2007. Back then, it said that the planet was warming at a rate of 0.2C every decade – a figure it claimed was in line with the forecasts made by computer climate models. But the new report says the true figure since 1951 has been only 0.12C per decade – a rate far below even the lowest computer prediction. The 31-page 'summary for policymakers' is based on a more technical 2,000-page analysis which will be issued at the same time. It also surprisingly reveals: IPCC scientists accept their forecast computers may have exaggerated the effect of increased carbon emissions on world temperatures – and not taken enough notice of natural variability.

They recognise the global warming 'pause' first reported by The Mail on Sunday last year is real – and concede that their computer models did not predict it. But they cannot explain why world average temperatures have not shown any statistically significant increase since 1997. They admit large parts of the world were as warm as they are now for decades at a time between 950 and 1250 AD – centuries before the Industrial Revolution, and when the population and CO2 levels were both much lower. The IPCC admits that while computer models forecast a decline in Antarctic sea ice, it has actually grown to a new record high. Again, the IPCC cannot say why. A forecast in the 2007 report that hurricanes would become more intense has simply been dropped, without mention. This year has been one of the quietest hurricane seasons in history and the US is currently enjoying its longest-ever period – almost eight years – without a single hurricane of Category 3 or above making landfall.



One of the report's own authors, Professor Myles Allen, the director of Oxford University's Climate Research Network, last night said this should be the last IPCC assessment – accusing its cumbersome production process of 'misrepresenting how science works'. Despite the many scientific uncertainties disclosed by the leaked report, it nonetheless draws familiar, apocalyptic conclusions – insisting that the IPCC is more confident than ever that global warming is mainly humans' fault. It says the world will continue to warm catastrophically unless there is drastic action to curb greenhouse gases – with big rises in sea level, floods, droughts and the disappearance of the Arctic icecap.

Last night Professor Judith Curry, head of climate science at Georgia Institute of Technology in Atlanta, said the leaked summary showed that 'the science is clearly not settled, and is in a state of flux'.

More...

- Taxpayer pays for £100,000 showers for sweaty ministers and staff to freshen up after cycling to work at the Department of Energy and Climate Change
- Britain's great climate change divide: Winters in the North are becoming warmer - while in the South it's summers that are getting hotter
- Did climate change drive the woolly mammoth to extinction? Genetic tests reveal species declined as weather warmed

She said it therefore made no sense that the IPCC was claiming that its confidence in its forecasts and conclusions has increased. For example, in the new report, the IPCC says it is 'extremely likely' – 95 per cent certain – that human influence caused more than half the temperature rises from 1951 to 2010, up from 'very confident' – 90 per cent certain – in 2007. Prof Curry said: 'This is incomprehensible to me' – adding that the IPCC projections are 'overconfident', especially given the report's admitted areas of doubt.

Head of climate science at Georgia Institute of Technology in Atlanta, said the leaked summary showed that 'the science is clearly not settled, and is in a state of flux' Starting a week tomorrow, about 40 of the 250 authors who contributed to the report – and supposedly produced a definitive scientific consensus – will hold a four-day meeting in Stockholm, together with representatives of most of the 195 governments that fund the IPCC, established in 1998 by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP). The governments have tabled 1,800 questions and are demanding major revisions, starting with the failure to account for the pause. Prof Curry said she hoped that the 'inconsistencies will be pointed out' at the meeting, adding: 'The consensus-seeking process used by the IPCC creates and amplifies biases in the science. It should be abandoned in favour of a more traditional review that presents arguments for and against – which would better support scientific progress, and be more useful for policy makers.' Others agree that the unwieldy and expensive IPCC assessment process has now run its course. Prof Allen said: 'The idea of producing a document of near-biblical infallibility is a misrepresentation of how science works, and we need to look very carefully about what the IPCC does in future.' Climate change sceptics are more outspoken. Dr Benny Peiser, of the Global Warming Policy Foundation, described the leaked report as a 'staggering concoction of confusion, speculation and sheer ignorance'. As for the pause, he said 'it would appear that the IPCC is running out of answers . . . to explain why there is a widening gap between predictions and reality'. The Mail on Sunday has also seen an earlier draft of the report, dated October last year. There are many striking differences between it and the current, 'final' version. The 2012 draft makes no mention of the pause and, far from admitting that the Middle Ages were unusually warm, it states that today's temperatures are the highest for at least 1,300 years, as it did in 2007. Prof Allen said the change 'reflects greater uncertainty about what was happening around the last millennium but one'. A further change in the new version is the first-ever scaling down of a crucial yardstick, the 'equilibrium climate sensitivity' – the extent to which the world is meant to warm each time CO2 levels double. As things stand, the atmosphere is expected to have twice as much CO2 as in pre-industrial times by about 2050. In 2007, the IPCC said the 'likeliest' figure was 3C, with up to 4.5C still 'likely'. Now it does not give a 'likeliest' value and admits it is 'likely' it may be as little as 1.5C – so giving the world many more decades to work out how to reduce carbon emissions before temperatures rise to dangerous levels. As a result of the warming pause, several recent peer-reviewed scientific studies have suggested that the true figure for the sensitivity is much lower than anyone – the IPCC included – previously thought: probably less than 2C. Last night IPCC communications chief Jonathan Lynn refused to comment, saying the leaked report was 'still a work in progress'.

MET OFFICE'S COMPUTER 'FUNDAMENTALLY FLAWED' SAYS NEW ANALYSIS

The British Met Office has issued 'erroneous statements and misrepresentations' about the pause in global warming – and its climate computer model is fundamentally flawed, says a new analysis by a leading independent researcher. Nic Lewis, a climate scientist and accredited 'expert reviewer' for the IPCC, also points out that Met Office's flagship climate model suggests the world will warm by twice as much in response to CO₂ as some other leading institutes, such as Nasa's climate centre in America. The Met Office model's current value for the 'equilibrium climate sensitivity' (ECS) – how much hotter the world will get each time CO₂ doubles – is 4.6C. This is above the IPCC's own 'likely' range and the 95 per cent certainty' level established by recent peer-reviewed research. Lewis's paper is scathing about the 'future warming' document issued by the Met Office in July, which purported to explain why the current 16-year global warming 'pause' is unimportant, and does not mean the ECS is lower than previously thought. Lewis says the document made misleading claims about other scientists' work – for example, misrepresenting important details of a study by a team that included Lewis and 14 other IPCC experts. The team's paper, published in the prestigious journal Nature Geoscience in May, said the best estimate of the ECS was 2C or less – well under half the Met Office estimate. He also gives evidence that another key Met Office model is inherently skewed. The result is that it will always produce high values for CO₂-induced warming, no matter how its control knobs are tweaked, because its computation of the cooling effect of smoke and dust pollution – what scientists call 'aerosol forcing' – is simply incompatible with the real world. This has serious implications, because the Met Office's HadCM3 model is used to determine the Government's climate projections, which influence policy. Mr Lewis concludes that the Met Office modelling is 'fundamentally unsatisfactory, because it effectively rules out from the start the possibility that both aerosol forcing and climate sensitivity are modest'. Yet this, he writes, 'is the combination that recent observations support'. The Met Office said it would examine the paper and respond in due course. 'Children of MoS reporter should murder him': vile abuse on Guardian site

The Mail on Sunday's report last week that Arctic ice has had a massive rebound this year from its 2012 record low was followed up around the world – and recorded 174,200 Facebook 'shares', by some distance a record for an article on the MailOnline website. But the article and its author also became the object of extraordinarily vitriolic attacks from climate commentators who refuse to accept any evidence that may unsettle their view of the science. A Guardian website article claimed our report was 'delusional' because it ignored what it called an 'Arctic death spiral' caused by global warming. Beneath this, some readers who made comments had their posts removed by the site moderator, because they 'didn't abide by our community standards'. But among those that still remain on the site is one which likens the work of David Rose – who is Jewish – to Adolf Hitler's anti-Semitic rant Mein Kampf. Another suggests it would be reasonable if he were to be murdered by his own children. A comment under the name DavidFTA read: 'In a few years, self-defence is going to be made a valid defence for parricide [killing one's own father], so Rose's children will have this article to present in their defence at the trial.' Critics of the article entirely ignored its equally accurate statement that there is mounting evidence the Arctic sea ice retreat has in the past been cyclical: there were huge melts in the 1920s, followed by later advances. David Rose's article in the Mail on Sunday last week attracted world wide interest. Some scientists believe that this may happen again, and may already be under way – delaying the date when the ice cap might vanish by decades or even centuries. Another assault was mounted by Bob Ward, spokesman for the Grantham Institute for Climate Change at the London School of Economics. Mr Ward tweeted that the article was 'error-strewn'. The eminent US expert Professor Judith Curry, who unlike Mr Ward is a climate scientist with a long list of peer-reviewed publications to her name, disagreed. On her blog Climate Etc she defended The Mail on Sunday, saying the article contained 'good material', and issued a tweet which challenged Mr Ward to say what these 'errors' were. He has yet to reply.

'A REFLECTION OF EVIDENCE FROM NEW STUDIES'... THE IPCC CHANGES ITS STORY
Power house: The IPCC'S Headquarters in Geneva, Switzerland What they say: 'The rate of warming since 1951 [has been] 0.12C per decade.' What this means: In their last hugely influential report in 2007, the IPCC claimed the world was warming at 0.2C per decade. Here they

admit there has been a massive cut in the speed of global warming – although it's buried in a section on the recent warming 'pause'. The true figure, it now turns out, is not only just over half what they thought – it's below their lowest previous estimate. What they say: 'Surface temperature reconstructions show multi-decadal intervals during the Medieval Climate Anomaly (950-1250) that were in some regions as warm as in the late 20th Century.' What this means: As recently as October 2012, in an earlier draft of this report, the IPCC was adamant that the world is warmer than at any time for at least 1,300 years. Their new inclusion of the 'Medieval Warm Period' – long before the Industrial Revolution and its associated fossil fuel burning – is a concession that its earlier statement is highly questionable. What they say: 'Models do not generally reproduce the observed reduction in surface warming trend over the last 10 – 15 years.'

What this means: The 'models' are computer forecasts, which the IPCC admits failed to 'see... a reduction in the warming trend'. In fact, there has been no statistically significant warming at all for almost 17 years – as first reported by this newspaper last October, when the Met Office tried to deny this 'pause' existed. In its 2012 draft, the IPCC didn't mention it either. Now it not only accepts it is real, it admits that its climate models totally failed to predict it.

What they say: 'There is medium confidence that this difference between models and observations is to a substantial degree caused by unpredictable climate variability, with possible contributions from inadequacies in the solar, volcanic, and aerosol forcings used by the models and, in some models, from too strong a response to increasing greenhouse-gas forcing.'

What this means: The IPCC knows the pause is real, but has no idea what is causing it. It could be natural climate variability, the sun, volcanoes – and crucially, that the computers have been allowed to give too much weight to the effect carbon dioxide emissions (greenhouse gases) have on temperature change. What they say: 'Climate models now include more cloud and aerosol processes, but there remains low confidence in the representation and quantification of these processes in models.'

What this means: Its models don't accurately forecast the impact of fundamental aspects of the atmosphere – clouds, smoke and dust. What they say: 'Most models simulate a small decreasing trend in Antarctic sea ice extent, in contrast to the small increasing trend in observations... There is low confidence in the scientific understanding of the small observed increase in Antarctic sea ice extent.'

What this means: The models said Antarctic ice would decrease. It's actually increased, and the IPCC doesn't know why. What they say: 'ECS is likely in the range 1.5C to 4.5C... The lower limit of the assessed likely range is thus less than the 2C in the [2007 report], reflecting the evidence from new studies.'

What this means: ECS – 'equilibrium climate sensitivity' – is an estimate of how much the world will warm every time carbon dioxide levels double. A high value means we're heading for disaster. Many recent studies say that previous IPCC claims, derived from the computer models, have been way too high. It looks as if they're starting to take notice, and so are scaling down their estimate for the first time.



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