

year into the atmosphere, predictably that increases carbon concentration in our atmosphere. "Put more in and find more there" is not a complex scientific theory. It is not a difficult proposition. And 7 to 8 billion metric tons a year into the atmosphere is a very big thing in the historical sweep.

So we now measure carbon concentrations climbing in the Earth's atmosphere. Again, this is a measurement, not a theory. The present concentration exceeds 390 parts per million.

So 800,000 years and a bandwidth of 170 to 300 parts per million, and now we are over 390.

This increase has a trajectory. Plotting trajectories is nothing new either. It is something scientists, businesspeople, and our military service people do every day. The trajectory for our carbon pollution predicts that 688 parts per million will be in the atmosphere in the year 2095 and 1,097 parts per million in the year 2195. These are carbon concentrations not outside of the bounds of 800,000 years but outside of the bounds of millions of years. As Tyndall determined at the time of the Civil War, increasing carbon concentrations will absorb more of the Sun's heat and raise global temperatures.

Let me end by reviewing the scale of the peril that we are facing if we fail to act. Over the last 800,000 years, as I said, it has been 170 to 300 parts per million of carbon dioxide. Since the start of the industrial revolution, that concentration is now up to 390 parts per million. If we continue on the trajectory that we find ourselves, our grandchildren will see carbon concentrations in the atmosphere top 700 parts per million by the end of the century, twice the bandwidth top that we have lived in for 8,000 centuries.

To put that in perspective, mankind has engaged in agriculture for about 10,000 years. It is not clear we had yet mastered fire 800,000 years ago. The entire development of human civilization has taken place in that 800,000 years, and within that 170 to 300 parts per million bandwidth. If we go back, we are back into geologic time.

In April of this year, a group of scientific experts came together at the University of Oxford to discuss the current state of our oceans. The workshop report stated:

Human actions have resulted in warming and acidification of the oceans and are now causing increasing hypoxia.

Acidification is obvious—the ocean is becoming more acid; hypoxia means low oxygen levels.

Studies of the Earth's past indicate that these are the three symptoms . . . associated with each of the previous five mass extinctions on Earth.

We experienced two mass ocean extinctions 55 and 251 million years ago. The rates of carbon entering the atmosphere in the lead-up to these extinctions are estimated to have been 2.2 and 1 to 2 gigatons of carbon per

year respectively, over several thousand years. As the group of Oxford scientists noted:

Both these estimates are dwarfed in comparison to today's emissions.

As I said earlier, those are 7 to 8 gigatons per year. The workshop participants concluded with this quote:

Unless action is taken now, the consequences of our activities are at a high risk of causing, through the combined effects of climate change, overexploitation, pollution and habitat loss, the next globally significant extinction event in the ocean.

The laws of physics and the laws of chemistry and the laws of science these are laws of nature. These are laws of God's Earth. We can repeal some laws around here but we can't repeal those. Senators are used to our opinions mattering a lot around here, but these laws are not affected by our opinions. These laws do not care who peddles influence, how many lobbyists you have or how big your corporate bankroll is. Those considerations, so important in this town, do not matter at all to the laws of nature.

As regards these laws of nature, because we can neither repeal nor influence them, we bear a duty, a duty of stewardship to see and respond to the facts that are before our faces according to nature's laws. We bear a duty to shun the siren song of well-paying polluters. We bear a duty to make the right decisions for our children and grandchildren and for our God-given Earth.

Right now I must come before the Chamber and remind this body that we are failing in that duty. The men and women in this Chamber are indeed catastrophically failing in that duty. We are earning the scorn and condemnation of history—not this week, perhaps, and not next week. The spin doctors can see to that. But ultimately and assuredly, the harsh judgment that it is history's power to inflict on wrong will fall upon us. The Supreme Being who gave us this Earth and its abundance created a world not just of abundance but of consequence and that Supreme Being gave us reason to allow us to plan for and foresee the various consequences that those laws of nature impose.

It is magical thinking to imagine that somehow we will be spared the plain and foreseeable consequences of our failure of duty. There is no wizard's hat and wand with which to wish this away. These laws of nature are known; the Earth's message to us is clear; our failure is blameworthy; its consequences are profound; and the costs will be very high.

I thank the Senator from Arkansas for his indulgence for the extra time, and I yield the floor.

Mr. UDALL of New Mexico. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. BROWN of Ohio). The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. CARDIN. Mr. President, I ask unanimous consent the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

AMERICAN JOBS ACT

Mr. CARDIN. Mr. President, I take this time to comment on a vote that took place earlier this week that the people of this Nation are having a hard time understanding—why the Republicans are filibustering legislation that will allow us to consider job growth in America. It is a filibuster, and that happens so frequently in this body that it seems to be standard operating procedure for the Republicans. But in this case I think the American public realizes they have gone too far.

We have to create more jobs. We have to create more jobs so our economy can grow. There are millions of Americans who are seeking work and cannot find jobs and they need work in order to support their families. We need more jobs for our economy to grow.

We got into a debate in August about what we were going to do about raising the debt ceiling and we were all concerned about the deficits this country has. Yes, we are concerned that our current deficits are not sustainable, but we will not have a budget that is sustainable unless we have more jobs. You can look at all of the programs to reduce government spending or to try to bring in more revenues, but if we do not create more jobs we are not going to be able to get our budget into a semblance of order.

The reason for that is simple. The more people out of work, the more reliant they are on government services and the less taxes paid in to pay our bills. So for the sake of those who are seeking employment, for the sake of our economy, for the sake of our budget, we have to create more jobs.

We had a vote this week on moving forward on S. 1660, the President's jobs initiative. It was a motion to proceed. It was a motion to bring the bill to the floor so we could get into a debate about the best way to create jobs. Many of us thought we would have amendments that would enhance and improve the President's package. The President's package was a starting point for our debate. But the Republicans said no, we are going to filibuster even the opportunity for us to consider jobs legislation. They wouldn't even allow us to move forward.

We had a majority of the Senate. We had enough votes to pass it or at least proceed if it were a simple majority, which is what most democracies believe is the right standard. But, no, we had a filibuster that did not even allow us to consider the jobs bill on the floor of the Senate.

I find that most surprising. When you look at the President's proposal, the individual provisions have bipartisan support. This is not a Democratic proposal. Every one of the provisions that

the President included in his package had bipartisan support. The Congressional Budget Office said the President's proposal would actually reduce the deficit and would create jobs. It has been validated by the outside experts. Marc Zandi, the chief economist at Moody's—he was also, by the way, the economic adviser to Senator McCAIN during the 2008 Presidential campaign—said, talking about the President's plan, "The plan would add 2 percentage points to GDP growth next year, add 1.9 million jobs, and cut the unemployment rate by a full percentage point."

There are many others. Macroeconomic Advisers said that the President's package would:

Boost the level of GDP by 1.3 percent by the end of 2012, and by 0.2 percent by the end of 2013—

In other words, we are moving in the right way; and then went on to say:

Raise nonfarm establishment employment by 1.3 million by the end of 2012 and 0.8 million by the end of 2013. . . .

The Economic Policy Institute estimates that the President's job bill would create 2.6 million jobs over 2 years and protect an existing 1.6 million jobs.

Republicans say we cannot even talk about this on the floor, the majority shouldn't at least be able to bring forward this issue so we can have a full debate in the Senate.

The President's proposals included areas in which I think there is strong bipartisan support—to help small businesses. We all know small businesses are the growth engine of America. That is where jobs are created. That is where most innovation will take place. The proposal would help small businesses with new hires on their payroll and expensing of investments so they have an incentive to invest in job growth. That is what was in the President's proposal to help small businesses.

In the President's proposal was help for our veterans. We all talk about our warriors, our soldiers, out there every day protecting our values. They have represented America so brilliantly in international combat. Now they are coming home to America. They are coming home and they cannot find work, cannot find a job. The President is saying let's help them. We all talk about doing what we can to help our warriors. This bill did something tangible about it.

What did the Republicans do? They filibustered an opportunity to even talk about a bill that could help create more jobs.

The proposal also provides for infrastructure. Infrastructure is building. It is rebuilding America. Democrats and Republicans agree on that. We have to rebuild our bridges and our roads. The bridges are falling down. Roads are in desperate need of repair. Roads help provide economic growth for our country. It would help us rebuild America, create jobs through those who construct these new roads and bridges and

electric grids, et cetera, but then also make America more competitive.

It would help those who are unemployed in several ways. First, it would provide not just unemployment benefits, which are important because they help families keep their homes and keep their family together and help our economy because that money is spent, it also reforms the unemployment system, so we train those who are out of work for jobs that are available. In many cases, as the Presiding Officer from Ohio knows, those who have lost their jobs are going to have to find employment in a different area. Well, the unemployment system should be reformed so that they could be trained for those types of jobs. That was in the proposal the Republicans would not even allow us to bring up. They filibustered rather than allow the majority to bring forward a bill to help create jobs.

The bill was paid for. As I have indicated before, it didn't increase the deficit. The Congressional Budget Office said it would actually reduce the deficit.

I want to make the point I made earlier and underscore this: The motion to proceed was the starting point for the debate—the starting point. I had three amendments I wanted to bring forward—I am going to talk very briefly about those three amendments—that I think would have improved the President's bill.

One would allow the Small Business Administration surety bond program—this is a program that gives small construction companies the ability to move forward with construction work. It would increase the surety bond program from \$2 million to \$5 million. It was an amendment I offered to the American Recovery and Reinvestment Act. Let me tell you about the success of that program. As a result of increasing the surety bonds from \$2 million to \$5 million, we saw a jump of 36 percent in 1 year, 2010, in construction work for small businesses. That is quite a success story. Guess how much money that cost the taxpayers of this country in direct costs. Zero, no cost to the taxpayer. Well, my amendment would make that extension permanent. And it is bipartisan—Democrats and Republicans support it.

I have another amendment that would expand the infrastructure work to include water projects. Water projects are in desperate need. We have a huge need to deal with the way we treat wastewater and our safe drinking water. My amendment would add \$30 billion for infrastructure in our water projects. It would provide \$20 billion to the Clean Water State Revolving Fund and \$10 billion to the Safe Drinking Water Act.

I would like to talk about one more amendment, which is the cool roof bill I filed with Senator CRAPO which would change the depreciation schedule for those businesses that put on modern roofs that are energy efficient and would create 40,000 jobs and help our

energy policy. This is another amendment I cannot bring forward because the Republicans filibustered the motion to proceed, so we can't bring up the jobs bill.

Well, Americans want us to consider jobs legislation. I hope we find a way to do it. I can tell you that I am going to continue the fight to create more jobs for America because that is America's future. Our economy depends upon it, and we need to continue to focus on how we can create more jobs for the American economy.

I yield the floor.

The PRESIDING OFFICER. The Senator from Nebraska is recognized.

HONORING OUR ARMED FORCES

MASTER SERGEANT CHRISTIAN RIEGE

Mr. JOHANNES. Mr. President, I rise today to remember a fallen hero, U.S. Army National Guard Master Sergeant Christian Riege. He and two fellow officers were killed when a gunman opened fire at a Carson City International House of Pancakes on September 6, 2011. This was a tragic event. It ultimately took the lives of four people and left hollow hearts from Nevada to Nebraska, where his father and mother and several relatives live.

Master Sergeant Riege enlisted in the U.S. Navy in 1992. As a career non-commissioned officer, Chris spent much of his time in uniform training young soldiers. He entered the Nebraska National Guard after his service in the Navy. Like many National Guard NCOs, he held more than one military occupational specialty. With experience as an infantry soldier and knowledge of mechanics and supply logistics, Chris set the standard high for the soldiers he trained. He excelled in physical fitness, and he was a natural teacher. He served a 22-month deployment in Fort Irwin, California with the task of training units deploying for overseas contingency missions.

Chris most recently served with the 1st of the 221st Cavalry in Afghanistan, earning his combat spurs during this tour. The decorations and badges earned over his distinguished career include the Combat Action Badge, the Meritorious Unit Commendation with oak leaf cluster, the Legion of Merit, the Meritorious Service Medal with oak leaf cluster, the Army Commendation Medal, the Army Achievement Medal with four oak leaf clusters, the Armed Forces Expeditionary Medal, the Southwest Asia Service Medal, and the Afghanistan Campaign Medal with one campaign star.

Chris is remembered as a soft-spoken warrior with a love for fixing things.

A fellow soldier and friend, Master Sergeant Paul Kinsey, made reference to his demeanor:

You can't just label him with one word or one phrase. Still waters run deep.

The Riege family laid their soldier to rest in Page, Nebraska, on September 17, 2011. Today, I join the family and