

Minority Staff Report
Committee on Energy and Commerce
U.S. House of Representatives

July 2013

Climate Disconnect

**An Analysis of Record High Temperatures
by Congressional District**

Prepared for Rep. Henry A. Waxman

I. Executive Summary

The nation's premier scientific organizations have agreed that climate change is occurring, that it is caused by human activity, and that it poses significant threats to the nation's health and welfare. One of the impacts of climate change is warmer temperatures, such as those experienced in the United States in 2012. According to the National Oceanic and Atmospheric Administration (NOAA), the contiguous United States had its warmest year on record last year. Nationwide, the United States recorded over 30,000 record high temperatures in 2012.

This report compares the climate change voting records of members of Congress in the 112th Congress with the temperatures experienced in 2012 in the districts they currently represent. It finds a widespread "climate disconnect" in the voting records of the Republican members representing the districts most affected by the soaring temperatures in 2012.

There were 53 climate-related votes on the House floor last Congress, 41 of which were roll-call votes. The Republican members representing the districts most affected by the high temperatures cast anti-climate votes 96% of the time. They voted to overturn EPA's scientific findings that climate change endangers human health and welfare; to block EPA from regulating carbon pollution from power plants, oil refineries, and vehicles; to prevent the United States from participating in international climate negotiations; and even to cut funding for basic climate science.

No similar "climate disconnect" was found in the voting records of House Democrats. The Democratic members representing the districts most affected by high temperatures voted 86% of the time to uphold Administration authority to address climate change or to otherwise act to address climate change.

The report finds:

- The ten returning Republican members representing the congressional districts that experienced the greatest number of record-setting daily high temperatures across all weather stations voted for the anti-climate position 97% of the time.
- The ten returning Republican members representing the congressional districts with the individual weather stations with the greatest number of daily record high temperatures voted for the anti-climate position 98% of the time.
- The ten returning Republican members representing the congressional districts with the highest ratios of record high to record low temperatures voted for the anti-climate position 92% of the time.
- The ten returning Republican members representing the congressional districts with temperatures that exceeded long-term averages by the greatest amount voted for the anti-climate position 99% of the time.

An interactive map is available at democrats.energycommerce.house.gov that provides (1) information on temperatures in every congressional district in the country and (2) the climate voting record of the member representing the district.

II. Introduction

The dangers of climate change in the United States have become apparent in recent years. In 2011, drought plagued the southern United States, causing over \$10 billion of damage, Hurricane Irene devastated the Eastern United States with intense winds and record flooding, and wildfires destroyed thousands of homes and millions of acres of forest. In 2012, record heat waves caused dozens of deaths, Superstorm Sandy caused massive flooding and \$50 billion of damage, and severe drought affected more than 65% of the country, nearly shutting the Mississippi River to barge traffic.

At the same time that the impacts of climate change were growing in the United States, the U.S. House of Representatives voted 53 times last Congress to block action to mitigate or adapt to the threat. These votes are documented in an online database and report prepared by the minority staff of the Energy and Commerce Committee.¹

The House voted to overturn the scientific findings of the Environmental Protection Agency (EPA) that climate change endangers human health and welfare.² The House voted to block EPA from regulating carbon pollution from large stationary sources such as power plants and oil refineries.³ The House even voted to block EPA from working with the Department of Transportation and the automobile industry to develop harmonized greenhouse gas and fuel economy standards for vehicles.⁴

When debating efforts in the United States to reduce carbon pollution, House Republicans consistently voted against unilateral U.S. action, but when given the opportunity to support a global response, House Republicans also voted against action. The House voted to block funding for the State Department's Special Envoy for Climate Change, who represents the United States in international climate negotiations.⁵ The

¹ House Committee on Energy and Commerce, *The Anti-Environment Record of the 112th House of Representatives* (Nov. 14, 2012) (online at democrats.energycommerce.house.gov/index.php?q=legislative-database-anti-environment&legislation=All&topic=All&statute=All&agency=All).

² U.S. House of Representatives, Roll Call Vote on Passage of H.R. 910 (Apr. 7, 2011) (Roll Call No. 249).

³ U.S. House of Representatives, Roll Call Vote on Passage of H.R. 1 (Feb. 19, 2011) (Roll Call No. 147); Section 1746, H.R. 1, the Full-Year Continuing Appropriations Act of 2011.

⁴ U.S. House of Representatives, Roll Call Vote on Passage of H.R. 910 (Apr. 7, 2011) (Roll Call No. 249).

⁵ U.S. House of Representatives, Roll Call Vote on Agreeing to H.Amdt.89, Scalise Amendment No. 204 to H.R. 1 (Feb. 17, 2011) (Roll Call No. 87).

House also voted to eliminate U.S. funding for the Intergovernmental Panel on Climate Change (IPCC), which is the international body created “to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.”⁶

In other votes, the House cut funding for climate science and adaptation efforts. In February 2011, House Republicans passed an appropriations bill for FY2011 that cut funding to study climate change by more than \$100 million.⁷ The House also eliminated funding for EPA’s Greenhouse Gas Reporting Program, which requires the largest sources of carbon pollution to disclose their annual emissions.⁸ The House even voted to prevent federal agencies from spending money to prepare for the effects of climate change, voting to prohibit the Department of Homeland Security from using any funds to participate in the Climate Change Adaptation Task Force, which is charged with improving the federal response to climate disasters, and to block the Department of Agriculture from implementing its climate change adaptation program.⁹

At the request of Rep. Henry A. Waxman, this report is an effort to compare the impacts of climate change in members’ districts with members’ voting records. It finds a widespread disconnect between soaring temperatures in Republican districts, as measured by the 2012 temperature record, and the voting records of Republican members. The Republican members of the U.S. House of Representatives who represent the districts most affected by rising temperatures in 2012 consistently voted against measures to address the growing threat of climate change.

III. Data Sources

A. Temperature Records

The 2012 daily temperature records used in this report come from National Climatic Data Center (NCDC) data on the number of record high and record low daily temperatures for approximately 4,000 individual stations nationwide, including ties with

⁶ U.S. House of Representatives, Roll Call Vote on Agreeing to H.Amdt.154, Luetkemeyer Amendment No. 149 to H.R. 1 (Feb. 19, 2011) (Roll Call No. 132); Intergovernmental Panel on Climate Change, “Organization” (online at www.ipcc.ch/organization/organization.shtml) (accessed May 19, 2013).

⁷ U.S. House of Representatives, Roll Call Vote on Passage of H.R. 1 (Feb. 19, 2011) (Roll Call No. 147); House Committee on Appropriations, Summary: Fiscal Year 2011 Continuing Resolution (Feb. 11, 2011).

⁸ U.S. House of Representatives, Roll Call Vote on Agreeing to H.Amdt.47, Pompeo Amendment No. 84 to H.R. 1 (Feb. 16, 2011) (Roll Call No. 64).

⁹ U.S. House of Representatives, Roll Call Vote on Agreeing to H.Amdt.378, Carter Amendment No. 1 to H.R. 2017 (June 2, 2011) (Roll Call No. 392).

previous record temperatures.¹⁰ Stations were included in this analysis if they had at least a 30-year collection record from the same location for the daily record temperature data. The 1950-2012 annual average daily temperature data are from the U.S. Historical Climatology Network (USHCN), which is managed at NCDC.¹¹ Data for the entire 1950-2012 time period is available for 1,218 stations in 285 congressional districts. The identity of the congressional district in which each weather station is located was provided by the Congressional Research Service (CRS) based upon 113th Congress district boundaries.

Some caution must be used in assessing the 2012 record daily temperature data. The data from 2012 has not yet undergone the complete NOAA quality assessment process and remains subject to change. In addition, there remains significant variation in day-to-day and year-to-year temperatures. Thus, a temperature record for a given day may represent only a snapshot of conditions on any given day; similarly, the temperature data for 2012 represent only a slice-of-time assessment of conditions.

B. Voting Records

The voting records used in this report come from a database of anti-environment votes maintained by the minority staff of the House Committee on Energy and Commerce. The full database is available online [here](#).

As documented in the database, the House voted 53 times in the 112th Congress to block action to address climate change. Of these 53 votes, 41 were roll-call votes and are analyzed in this report.

IV. Results

A. Voting Records of Members Representing Districts with the Most Record High Temperatures

Nationwide, there were 32,925 record high temperatures set in 2012. Over 86% of congressional districts – 378 of 435 – had at least one record high temperature. Nine congressional districts had more than 500 record high temperatures, 43 congressional districts had over 200 record high temperatures, and 90 congressional districts had more than 100 record high temperatures.

¹⁰ The dataset compares temperatures set on a particular day (e.g., the temperature for July 14, 2012, was compared against temperatures recorded on July 14 for the previous years in the long-term record for the station).

¹¹ The methods used to quality control and bias-correct the USHCN data are peer-reviewed and are described in Menne, M.J., C.N. Williams, and R.S. Vose, 2009: The United States Historical Climatology Network Monthly Temperature Data - Version 2. *Bulletin of the American Meteorological Society*, 90, 993-1107. CRS calculated the average of the annual average temperatures for all stations in each congressional district.

The greatest number of record-setting daily high temperatures in 2012 were experienced by the following ten congressional districts: Nebraska 3rd, South Dakota At-Large, Wyoming At-Large, Kansas 1st, Missouri 6th, Iowa 4th, Colorado 3rd, Texas 13th, Texas 19th, and Arkansas 1st.¹² Table 1 lists these ten congressional districts, the member that represents them, and the voting records of these members.

All ten of these districts are represented by a Republican member of Congress. These ten members voted for the anti-climate position 97% of the time in the 112th Congress. Two of the Republican members representing these districts, Reps. Sam Graves (MO-6) and Steve King (IA-4) voted the anti-climate position 100% of the time.

Table 1: Congressional Districts Ranked by the Most Record High Temperatures Across All Weather Stations		
Congressional District, Member (Republicans in 113th Congress)	Number of Record High Temps (2012)	Percentage of Anti-Climate Votes Cast in 112th Congress
Nebraska 3 rd – Rep. Adrian Smith (R)	994	98%
South Dakota AL – Rep. Kristi Noem (R)	910	98%
Wyoming AL – Rep. Cynthia Lummis (R)	802	93%
Kansas 1 st – Rep. Tim Huelskamp (R)	673	95%
Missouri 6 th – Rep. Sam Graves (R)	615	100%
Iowa 4 th – Rep. Steve King (R)	611	100%
Colorado 3 rd – Rep. Scott Tipton (R)	608	95%
Texas 13 th – Rep. Mac Thornberry (R)	594	98%
Texas 19 th – Rep. Randy Neugebauer (R)	467	98%
Arkansas 1 st – Rep. Rick Crawford (R)	443	98%

The ten Democratic-represented congressional districts with the highest number of record temperatures were Iowa’s 1st and 2nd, Minnesota’s 7th, New Mexico’s 3rd, Wisconsin’s 3rd, Minnesota’s 1st, West Virginia’s 3rd, Maine’s 2nd, Mississippi’s 2nd, and Colorado’s 2nd. The Democratic members representing the districts with the most record high temperatures voted 79% of the time to uphold Administration authority to address climate change or to otherwise act to address climate change. Only two of the Democratic members representing these districts – Reps. Collin Peterson (MN-7) and Nick Rahall (WV-3) – voted for the anti-climate position more than half the time.

B. Voting Records of Members Representing Districts with Weather Stations with the Most Record High Temperatures

Another approach to analyzing the data identifies the districts with the individual weather stations with the greatest number of record high temperatures in 2012.

¹² For the purposes of this and all rankings in this report, congressional districts represented by a member who did not serve in the 112th Congress are excluded.

Nationwide, 135 weather stations recorded more than 20 record highs, and 43 weather stations recorded more than 30 record highs.

The Republican-represented congressional districts with the individual weather stations with the greatest number of record high temperatures in 2012 were: Nebraska’s 3rd, Missouri’s 6th, Kansas’ 2nd, Missouri’s 3rd, South Dakota AL, Tennessee’s 6th, Utah’s 3rd, Missouri’s 4th, Illinois’ 18th, Texas’ 11th, and Texas’ 19th. Table 2 lists these congressional districts, the member that represents them, and the voting records of these members.

The Republican members of Congress representing these districts voted for the anti-climate position 98% of the time in the 112th Congress. Six of the Republican members representing these districts, Reps. Sam Graves (MO-6), Blaine Luetkemeyer (MO-3), Diane Black (TN-6), Vicky Hartzler (MO-4), Aaron Schock (IL-18), and Mike Conaway (TX-11) voted the anti-climate position 100% of the time.

Table 2: Congressional Districts Ranked by the Most Record High Temperatures Recorded by an Individual Weather Station		
Congressional District, Member (Republicans in 113th Congress)	Number of Record High Temps at an Individual Station (2012)	Percentage of Anti-Climate Votes Cast in 112th Congress
Nebraska 3 rd – Rep. Adrian Smith (R)	57	98%
Missouri 6 th – Rep. Sam Graves (R)	53	100%
Kansas 2 nd – Rep. Lynn Jenkins (R)	46	88%
Missouri 3 rd – Rep. Blaine Luetkemeyer (R)	46	100%
South Dakota AL – Rep. Kristi Noem (R)	44	98%
Tennessee 6 th – Rep. Diane Black (R)	44	100%
Utah 3 rd – Rep. Jason Chaffetz (R)	43	93%
Missouri 4 th – Rep. Vicky Hartzler (R)	42	100%
Illinois 18 th – Rep. Aaron Schock (R)	41	100%
Texas 11 th – Rep. Mike Conaway (R)	41	100%
Texas 19 th – Rep. Randy Neugebauer (R)	41	98%

The Democratic-represented congressional districts with the highest average number of record temperatures per recording station were Iowa’s 1st, Iowa’s 2nd, Mississippi’s 2nd, Missouri’s 1st, Indiana’s 1st, Minnesota’s 1st, Texas’ 28th, Massachusetts’ 9th, Wisconsin’s 3rd, Colorado’s 2nd, and Indiana’s 7th. Democratic members representing these districts voted 88% of the time to uphold Administration authority to address climate change or to otherwise act to address climate change. No Democratic member voted for the anti-climate position more than half the time.

C. Voting Records of Members Representing Districts with the Highest Ratio of Record High to Record Low Temperatures

Climate scientists predict that as global warming becomes more severe, the ratio of record high temperatures to record low temperatures observed at a given location will become higher over time.¹³ Nationwide, in 2012, the ratio of record highs to record lows was 5:1. But in many districts this ratio was even higher. Four congressional districts had more than 50 record highs for each record low; eight had more than 40 record highs for each record low.

The Republican-represented congressional districts with the highest ratio of record high to record low temperatures in 2012 were Ohio’s 4th, West Virginia’s 1st, Michigan’s 3rd, New York’s 19th, Ohio’s 5th, Tennessee’s 2nd, Alabama’s 4th, Virginia’s 4th, Virginia’s 10th, and Georgia’s 3rd. Table 3 lists these ten congressional districts, the member that represents them, and the voting records of these members.

The Republican members of Congress representing these districts voted for the anti-climate position 92% of the time in the 112th Congress. Three of the Republican members representing these districts, Reps. Bob Latta (OH-5), Randy Forbes (VA-4), and Lynn Westmoreland (GA-3) voted the anti-climate position 100% of the time.

Congressional District, Member (Republicans in 113th Congress)	Ratio of Record High to Record Low Temps (2012)	Percentage of Anti-Climate Votes Cast in 112th Congress
Ohio 4 th – Rep. Jim Jordan (R)	59:1	98%
West Virginia 1 st – Rep. David McKinley (R)	53:1	90%
Michigan 3 rd – Rep. Justin Amash (R)	51:1	76%
New York 19 th – Rep. Chris Gibson (R)	46:1	78%
Ohio 5 th – Rep. Bob Latta (R)	44:1	100%
Tennessee 2 nd – Rep. John Duncan (R)	40:1	90%
Alabama 4 th – Rep. Robert Aderholt (R)	36:1	95%
Virginia 4 th – Rep. Randy Forbes (R)	35:1	100%
Virginia 10 th – Rep. Frank Wolf (R)	35:1	93%
Georgia 3 rd – Rep. Lynn Westmoreland (R)	29:1	100%

The ten Democratic-represented congressional districts with the highest ratio of record high to record low temperatures were Wisconsin’s 3rd, Maryland’s 5th, Maine’s 1st, New York’s 20th, Louisiana’s 2nd, Kentucky’s 3rd, Missouri’s 5th, Wisconsin’s 4th, Connecticut’s 2nd, and Massachusetts’ 2nd. Democratic members representing these

¹³ Environmental Protection Agency, *Climate Change in the United States, 2012* (available online at www.epa.gov/climatechange/pdfs/climateindicators-full-2012.pdf).

districts voted 96% of the time to uphold Administration authority to address climate change or to otherwise act to address climate change. No Democratic member voted for the anti-climate position more than half the time.

D. Voting Records of Members Representing Districts with the Greatest Difference Between Average Daily Temperatures in 2012 and Long-Term Annual Average Temperatures

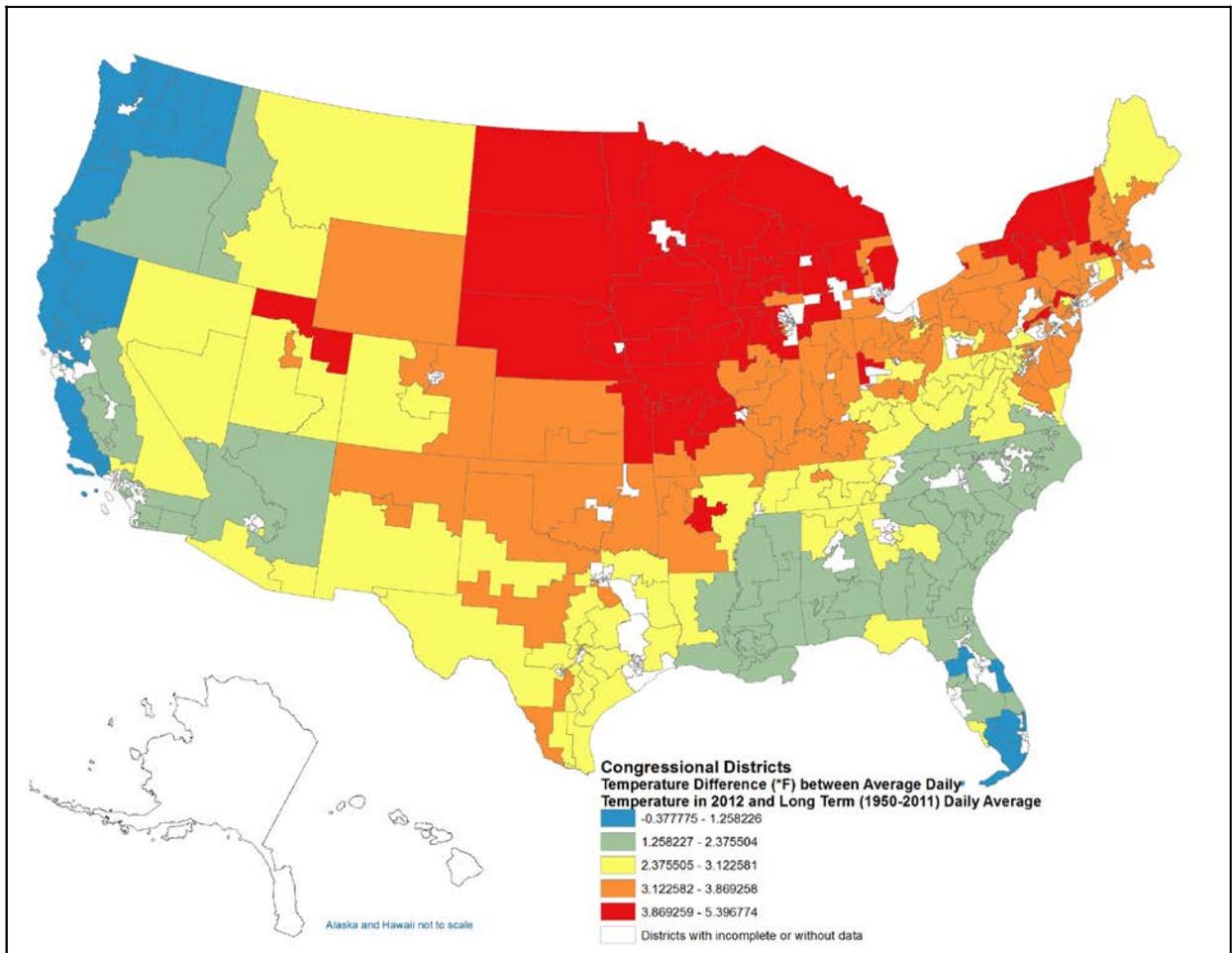
Nationwide, the average temperature in the United States in 2012 was 55.3°F. This 2012 average was 2.9°F hotter than the long-term average United States temperature. Overall, 280 of the 285 congressional districts with complete data were hotter in 2012 than their long-term average. There were two congressional districts that were at least five degrees hotter in 2012 than their long-term average, and 38 districts that were at least four degrees hotter than their 1950-2011 average.

Figure 1 shows a map representing the temperature difference for all congressional districts.

The Republican-represented congressional districts with the greatest difference between the average daily temperature in 2012 and the long-term annual average daily temperature from 1950 through 2011 were Wisconsin's 6th, Minnesota's 3rd, Wisconsin's 8th, Iowa's 4th, Wisconsin's 7th, Michigan's 2nd, Missouri's 3rd, Michigan's 1st, Missouri's 6th, and South Dakota's At-Large district. Table 4 lists these ten congressional districts, the member that represents them, and the voting records of these members.

The Republican members of Congress representing these districts voted for the anti-climate position 99% of the time in the 112th Congress. Six of the Republican members of Congress representing these districts, Reps. Erik Paulsen (MN-3), Steve King (IA-4), Sean Duffy (WI-7), Blaine Luetkemeyer (MO-3), Dan Benishek (MI-1), and Sam Graves (MO-6) voted the anti-climate position 100% of the time.

Figure 1: Difference between the 2012 Average Daily Temperature and Long-Term Annual Average Daily Temperature, by Congressional District¹⁴



¹⁴ This map was produced using 2012 daily temperature records from the National Climatic Data Center.

Table 4: Congressional Districts Ranked by the Difference Between the 2012 Average Daily Temperature and Long-Term Annual Average Daily Temperature

Congressional District, Member (Republicans in 113 th Congress)	Temperature Difference (°F) between Average Daily Temperature in 2012 and Long- Term Average	Percentage of Anti-Climate Votes Cast in 112 th Congress
Wisconsin 6 th – Rep. Tom Petri (R)	5.10	98%
Minnesota 3 rd – Rep. Erik Paulsen (R)	4.87	100%
Wisconsin 8 th – Rep. Reid Ribble (R)	4.75	95%
Iowa 4 th – Rep. Steve King (R)	4.66	100%
Wisconsin 7 th – Rep. Sean Duffy (R)	4.55	100%
Michigan 2 nd – Rep. Bill Huizenga (R)	4.51	98%
Missouri 3 rd – Rep. Blaine Luetkemeyer (R)	4.49	100%
Michigan 1 st – Rep. Dan Benishek (R)	4.49	100%
Missouri 6 th – Rep. Sam Graves (R)	4.39	100%
South Dakota AL – Rep. Kristi Noem (R)	4.38	98%

The ten Democratic-represented congressional districts with the greatest difference between the average daily temperature in 2012 and the long-term annual average daily temperature from 1950 through 2011 were Minnesota’s 5th, Minnesota’s 1st, Wisconsin’s 3rd, Iowa’s 1st, Wisconsin’s 4th, Minnesota’s 7th, Michigan’s 12th, Missouri’s 5th, New York’s 26th, and New York’s 25th. Democratic members representing these districts voted 88% of the time to uphold Administration authority to address climate change or to otherwise act to address climate change. Only one of the Democratic members representing these districts – Rep. Collin Peterson (MN-7) – voted for the anti-climate position more than half the time.

V. Conclusion

Weather stations across the United States recorded over 30,000 record high temperatures in 2012, and 2012 average temperatures were above the long-term average in over 95% of all congressional districts. Democratic members representing the districts most affected by these soaring temperatures voted consistently to uphold the authority of the Administration to address the risk of climate change. On the Republican side, however, a notable “climate disconnect” was apparent. The Republican members representing the districts most affected by the soaring temperatures voted over 95% of the time against policies that would allow the Administration to reduce the risk of climate change.