

When he leaves office in January, President Obama will have compiled a remarkable record of environmental achievements. The record spans everything from climate change to endangered species and ocean protection. We can only hope that next Tuesday's election doesn't undo many of these gains.

Here is a list, in no particular order, of twenty of Obama's notable achievements:

1. **Jumpstarting the green economy.** The [stimulus](#) provided \$90 billion dollars for a bevy of green initiatives, including \$29 billion for improving energy efficiency, \$21 billion for renewable energy generation, \$10 billion for the grid, \$18 billion for rail, and several smaller initiatives.
2. **EPA Endangerment Finding.** For the first time, EPA made an official finding that greenhouse gases (GHGs) endanger human health and welfare. This finding was upheld by the D.C. Circuit Court of Appeals; the Supreme Court declined review.
3. **GHG Standards for New Vehicles.** EPA issued the "tailpipe" rule, cutting CO<sub>2</sub> emissions from new cars by almost a billion tons. This was also upheld by the courts.
4. **GHG Standards for Power Plants and Factories.** At the same time as the "tailpipe" rule, EPA issued a rule requiring GHG cuts for major new facilities; most of that rule was upheld by the Supreme Court. More importantly, EPA issued the Clean Power Plan, addressing emissions from existing power plants. The legality of that rule is now before the D.C. Circuit.
5. **Mercury Controls for Power Plants.** Using its authority to regulate toxic chemicals, EPA established a rule cutting mercury emissions, which will save thousands of lives, primarily by cutting dangerous particulates. The rule is now in front of the D.C. Circuit on remand from the Supreme Court, but most of the industry has already complied.
6. **Social Cost of Carbon.** For the first time, the government tried to measure the harm that CO<sub>2</sub> causes, for purposes of future cost-benefit analyses. The current figure is around \$35 per ton.
7. **National monuments.** Obama has established more national monuments than any other president in history. They also cover more acreage than any previous president's.
8. **Oceans.** Obama designated some 580,000 square miles off Hawaii as a national monument. He also cleaned up the mess from the BP Deepwater Horizon Oil Spill, twisting BP's arm into setting up a compensation fund for victims, and then ultimately obtaining billions of dollars in criminal and civil penalties. He also reformed regulation of deepwater drilling after the disaster, with no help from Congress.
9. **New environmental legislation.** Obama signed the Frank R. Lautenberg Chemical Safety for the 21st Century Act, which finally fixed the nearly moribund Toxic

Substance Control Act. He also signed the Food Modernization and Safety Act in 2011, which substantially strengthened the FDA's power to safeguard the food supply. Given the near-total gridlock of today's Congress, obtaining any new legislation is something of a minor miracle.

10. **Interstate air pollution.** EPA established its first major rule addressing interstate transport of particulates and ozone, something that had been attempted unsuccessfully by the Bush Administration. The major features of the rule have been upheld by the Supreme Court; some lesser matters are still before the D.C. Circuit.
11. **Keystone XL Pipeline.** Obama blocked construction of this pipeline to take Canadian tar sands oil to market. The pipeline had come to symbolize the profligate use of fossil fuels.
12. **Mountaintop mining.** In decisions in 2013 and 2016, the D.C. Circuit upheld the Obama EPA's effort to curb mountain top mining, an extremely destructive variant on strip mining, even when that means withdrawing or modifying an existing permit.
13. **Endangered species.** As of April 2015 (the [latest figures](#) I could find), the Obama Administration had listed 299 species, bringing them under the protection of the Endangered Species Act. It had also delisted 12, and had 35 listings in progress.
14. **Fracking.** In 2015, the Administration issued new rules regulating fracking on public lands, designed to protect against groundwater pollution. This year, EPA followed up with rules to restrict methane emissions from natural gas operations.
15. **Energy efficiency.** In December 2015, the Department of Energy issued a standard governing commercial air conditioners and furnaces, which covers heating and cooling for about half of the country's commercial space. The new rule is estimated to save a total of \$167 billions in energy costs and reduce carbon emissions by 885 megatons.
16. **International mercury agreement.** The Obama Administration entered into the Minamata Convention on Mercury, which bans mercury mining and regulates mercury products, processes, and pollution.
17. **Coal ash.** EPA issued the first-ever regulation of coal-ash impoundments, imposing new requirements for structural integrity and for groundwater protection.
18. **Stricter air quality standards.** After dodging the issue in the run-up to the 2012 election, the Administration finally issued a new air quality standard for ozone, cutting the allowable level from 75 to 70 ppb. In 2013, EPA had also issued a new standard for particulates, cutting the permissible level of PM<sub>2.5</sub> from 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to 12  $\mu\text{g}/\text{m}^3$ .
19. **Protecting wetlands.** The Administration issued the Water of the United States (WOTUS) rule, which clarified the reach of federal jurisdiction over wetlands. The rule is now mired in litigation.
20. **International climate negotiations.** Last but far from least: President Obama

succeeded in obtaining the 2009 Copenhagen Accord and more recently the 2015 Paris Agreement, the first international agreement including developing nation commitments to address emissions. Even more recently, the Administration was successful in negotiations to curb super-strong greenhouse gases using the Montreal Protocol and in negotiations for emissions limitations on commercial aviation.

Environmentalists can point to ways in which these initiatives might have been stronger. Still, it's an amazing record, and Obama will go down in history especially for his fight against climate change.

**Addendum:** Here are a couple of additional items suggested by a reader: Settlement of Deepwater Horizon oil spill for the largest natural resources settlement in history; requiring VW to buy back or fix all of the sedans they had improperly equipped with defeat devices