

SUPPLEMENTAL PROPOSAL FOR NEW LANDFILLS: FACT SHEET

SUMMARY OF ACTION

- On August 14, 2015, the U.S. Environmental Protection Agency (EPA) issued a supplemental proposal to achieve additional reductions of methane-rich landfill gas from *new, modified and reconstructed* municipal solid waste (MSW) landfills. In a separate action, EPA also proposed guidelines for reducing emissions from *existing* landfills. Both actions are part of the President's Climate Action Plan – Strategy to Reduce Methane Emissions.
- MSW landfills receive non-hazardous wastes from homes, businesses and institutions. As the waste in a landfill decomposes, it breaks down to form landfill gas, which includes a number of air toxics, carbon dioxide and methane -- a potent greenhouse gas with a global warming potential more than 25 times that of carbon dioxide. MSW landfills are the third-largest source of human-related methane emissions in the U.S., accounting for 18 percent of methane emissions in 2013.
- Methane pollution contributes to long-lasting changes in the earth's climate, such as rising air and ocean temperatures, changes in precipitation patterns, melting and thawing of global glaciers and ice, increasingly severe weather events, and sea level rise, among other impacts.
- Climate change threatens America's health and welfare for current and future generations. Children, older adults, people with heart or lung disease and people living in poverty may be most at risk from [the health impacts of climate change](#).
- The New Source Performance Standards (NSPS) supplemental proposal would change the emissions threshold at which new, modified or reconstructed landfills would be required to begin capturing emissions of landfill gas. In 2014, EPA proposed to set that threshold at 40 metric tons (expressed in the proposal as megagrams) a year; the supplemental proposal would change that threshold to 34 metric tons a year. EPA is proposing this change in response to public comments and based on additional data and analysis that show that additional, cost-effective methane reductions are available, and that more landfill modifications are projected to occur than the agency estimated in 2014.
- The proposed changes would apply to landfills constructed, modified or reconstructed after July 17, 2014, the date an earlier proposal was published. Based on the information received during the public comment period on the 2014 proposal, EPA revised its estimates

of the number of landfills that would be subject to the NSPS. The agency now estimates that 140 landfills would be covered by the NSPS over time.

- Landfills are required to collect and control emissions when emissions of nonmethane organic compounds reach a threshold. Under the proposed 34 metric ton threshold, an estimated 127 new, modified or reconstructed landfills would have to begin controlling landfill gas emissions by 2025, based on their projected emissions; the remaining 13 would have to report their emissions.
- EPA is seeking comment on the proposed emissions threshold and on the new estimate of the number of landfills that would be covered by the proposed NSPS. The agency also is requesting comments and data that would help identify landfills that are expected to modify through 2018.
- Today's action would not change other aspects of the July 2014 proposal. Under the proposal, landfills would have 30 months after reaching the emissions threshold to install a gas collection and control system.

EMISSION REDUCTIONS, BENEFITS AND COSTS

- EPA estimates that the supplemental NSPS proposal would reduce annual methane emissions by 51,400 metric tons beginning in 2025, compared to current requirements – the equivalent of reducing 1.3 million metric tons of carbon dioxide emissions a year. Emissions of nonmethane organic compounds, which include a number of air toxics, would be reduced by 300 metric tons a year.
- Estimated climate benefits of the methane reductions from the supplemental proposal would outweigh costs. EPA estimates the value of the climate-related benefits in the supplemental proposal at \$78 million in 2025 – more than \$9 in benefits for every dollar spent to comply. The estimated climate benefits reflect a net reduction in climate change damages, which include human health impacts, property damages from flood risk, and the value of ecosystem services, among other effects.
- Reductions in other pollutants, including volatile organic compounds and air toxics, also are expected to yield benefits; however, EPA was not able to quantify those. Those benefits include reductions in health effects related to fine particle pollution, ozone and air toxics, along with improvements in visibility.
- EPA estimates the nationwide cost of complying with the supplemental proposal are \$8.5 million a year in 2025. This includes the cost of installing and operating a gas collection

control system and, at some landfills, the cost of an engine to convert the landfill gas into electricity. The costs also reflect the revenues landfills may make by selling electricity generated with landfill gas.

- EPA estimated the benefits and costs of the proposed emission guidelines for existing landfills separately. For more information, see <http://www.epa.gov/ttnatw01/landfill/landflpg.html>.
- EPA will take comment on the supplemental proposal for 60 days after publication in the *Federal Register*. The agency will hold a public hearing if one is requested within five days after the supplemental proposal is published. To request a hearing contact Aimee St. Clair at (919) 541-1063 or stclair.aimee@epa.gov.

REDUCING LANDFILL METHANE EMISSIONS

- In March 2014, as part of the President's Climate Action Plan, the Obama Administration issued the Strategy to Reduce Methane Emissions, which identified actions that will improve public health and safety while providing more energy and reducing greenhouse gas emissions.
- Landfills accounted for 18 percent of the human-related methane emissions in the U.S. in 2013 – the equivalent of approximately 100 million metric tons of carbon dioxide pollution. Nearly 1,000 MSW landfills in the U.S. currently are subject to either the 1996 emission guidelines for existing landfills or the 1996 NSPS for new landfills.
- The strategy called on EPA to propose updates to the NSPS for new and modified landfills and take public comment on whether to update standards for existing landfills, engaging industry and stakeholders on a range of approaches for cutting landfill gases currently being emitted by existing facilities.
- In addition, the strategy called on EPA to continue to work with municipalities and landfill owners to advance cost-effective landfill energy recovery projects through the agency's Landfill Methane Outreach Program (LMOP). Created in 1994, LMOP helps reduce methane emissions from landfills by encouraging the recovery and use of landfill gas as an energy resource.
- LMOP forms partnerships with landfill owners, utilities, power marketers, states, tribes and nonprofit organizations to provide technical assistance, share information on best practices, and provide tools and resources to market the benefits of projects to their communities. As of August 2015, LMOP had more than 1,100 partners.

BACKGROUND

- The Clean Air Act requires EPA to review New Source Performance Standards at least every eight years, and revise them as appropriate, for industrial categories that cause, or significantly contribute to, air pollution that may endanger public health or welfare.
- EPA issued the initial NSPS for MSW landfills in 1996. The agency proposed amendments to the NSPS in 2002 and 2006 to clarify issues that arose during implementation; however, those proposals were not finalized.
- In June 2014, EPA announced proposed updates to the NSPS. New landfills would be subject to the proposed rule if they have a design capacity of 2.5 million metric tons and 2.5 million cubic meters of waste. This is the same as the existing NSPS requirements. This requirement would not change in the supplemental proposal.
- Under the 2014 proposal, affected landfills would have to install and operate a gas collection and control system within 30 months after landfill gas emissions reach 40 metric tons of nonmethane organic compounds or more per year. The supplemental proposal would change that threshold to 34 metric tons. Under the existing NSPS, this threshold is 50 metric tons per year.
- Landfill owners/operators may control gas by combusting it in an enclosed combustion device (such as a boiler, engine, or turbine) for energy generation, or by using a treatment system that processes the collected gas for sale or beneficial use, or by flaring it.

HOW TO COMMENT

- EPA will accept comments on the supplemental proposal for 60 days after publication in the Federal Register.
- Please identify your comments with Docket ID No. EPA-HQ-OAR-2003-0215.
- Comments may be submitted by one of the following methods:
 - www.regulations.gov: Follow the online instructions for submitting comments.
 - Email: Send your comments via electronic mail to A-and-R-Docket@epa.gov, Attention Docket ID No. EPA-HQ-OAR-2003-0215.
 - Facsimile: Fax your comments to (202) 566-9744, Attention Docket ID No. EPA-HQ-OAR-2003-0215.
 - Mail: Send your comments to: Environmental Protection Agency, EPA Docket Center (EPA/DC), Mailcode 28221T, 1200 Pennsylvania Ave., NW, Washington, DC 20460, Attention Docket ID No. EPA-HQ-OAR-2003-0215. Please include a total of two copies.
 - Hand Delivery: Deliver your comments to: EPA Docket Center (EPA/DC), WJC West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC, 20004,

Attention Docket ID No. EPA-HQ-OAR-2003-0215. Such deliveries are accepted only during the normal hours of operation (8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays), and special arrangements should be made for deliveries of boxed information.

FOR MORE INFORMATION:

To read the supplemental proposal and for information on the proposed emission guidelines, visit: <http://www.epa.gov/ttn/atw/landfill/landflpg.html>.