



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

January 29, 2019

Mr. Andrew R. Wheeler  
Acting Administrator  
U.S. Environmental Protection Agency  
Air and Radiation Docket  
1200 Pennsylvania Ave, N.W.  
Washington, DC 20460

Ms. Heidi King  
Deputy Administrator  
National Highway Traffic Safety Administration  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
Washington, DC 20590

Attn: Docket Nos. EPA-HQ-OAR-2018-0283; NHTSA-2018-0067

RE: Supplemental Comments on the Proposed Rulemaking: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. 83 Fed. Reg. 42986 (August 24, 2018)

Dear Acting Administrator Wheeler and Deputy Administrator King:

The Pennsylvania Department of Environmental Protection (DEP) submits the following supplemental comments<sup>1</sup> in response to the notice of proposed rulemaking entitled *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* published jointly by the U.S. Environmental Protection Agency (EPA) and National Highway Safety Administration (NHTSA) (hereinafter the agencies) in the *Federal Register* on August 24, 2018 (83 Fed. Reg. 42986) (Proposed Rule).

DEP's supplemental comments, as detailed below, focus on the analysis and findings of the U.S. Global Change Research Program (USGCRP) contained in the Fourth National Climate Assessment<sup>2</sup> (NCA4 or Assessment) released by the Trump Administration on November 23, 2018; a confident, scientific assessment of the national and regional impacts of natural and human-induced climate change.

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<sup>1</sup> On October 26, 2018, DEP submitted comments through the federal eRulemaking portal to EPA Docket No. EPA-HQ-OAR-2018-0283, available at <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2018-0283>, and to NHTSA Docket No. NHTSA-2018-0067, available at: <https://www.regulations.gov/document?D=NHTSA-2018-0067-11956>.

<sup>2</sup> USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA. doi: 10.7930/NCA4.2018, available at: <https://nca2018.globalchange.gov/>.

Secretary

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Representing the work of over 300 government and non-government experts, led by experts within EPA, the U.S. Department of Transportation and eleven other federal agencies,<sup>3</sup> the findings of the Assessment give further support to DEP's previous comments on the Proposed Rule regarding the agencies' failure to evaluate and fully consider the direct and indirect effects of not finalizing the augural carbon dioxide (CO<sub>2</sub>) standards for passenger cars and light-duty trucks; and the agencies' intention to (1) freeze corporate average fuel economy (CAFE) standards for model year (MY) 2021-2026 vehicles at MY 2020 levels; (2) revoke California's waiver issued under Section 209 of the Clean Air Act (CAA); and (3) reinterpret Section 177 of the CAA to block Pennsylvania and other states from adopting California's vehicle emissions program. The Proposed Rule fails to adequately consider the collective interests of states and local governments in preventing and mitigating the impacts of climate change on their citizens, economies, valued natural resources, and environment (in other words, the interest of Pennsylvania and other states in establishing mitigation and adaptation strategies to prevent and minimize the impacts of climate change).

DEP asserts that the agencies should concur that the NCA4, including its findings on climate change harms and the need for extensive mitigation measures, is of central relevance to the reasonableness, and therefore the lawfulness, of the agencies' proposed approach in the Proposed Rule of freezing greenhouse gas (GHG) emission standards, rolling back CAFE standards, revoking California's waiver, and reinterpreting Section 177 of the CAA to block states from recognizing the pollution reduction benefits of adopting California's regulatory program. The agencies should include the Assessment in the dockets for the Proposed Rule. See Section 307(d)(4)(B)(i) of the CAA (42 U.S.C. § 7607(d)(4)(B)(i)). Additionally, the Assessment's findings are of central relevance and should be evaluated and considered as part of NHTSA's environmental review of the Proposed Rule under the National Environmental Policy Act (NEPA).

In addition to the comments in this letter, DEP incorporates by reference the supplemental comment letter submitted jointly by the Attorneys General of California, New York, Pennsylvania, and numerous other states, as well as several local government attorneys on December 21, 2018 to the EPA and NHTSA dockets for the Proposed Rule, namely Docket Nos. EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067. DEP echoes the renewed requests of the state and local government commenters to immediately withdraw the Proposed Rule weakening highway vehicle standards or, at a minimum, reopen the comment period to allow for public input on and adequate consideration of the findings in NCA4 and their bearing on the Proposed Rule.

#### **Detailed Supplemental Comments on Climate Change Impacts in Pennsylvania**

In DEP's October 26, 2018 comments, DEP asserted that the agencies' Proposed Rule fails to adequately account for the future impacts of the increased GHG emissions that the Proposed Rule would allow, including GHG emission increases throughout the life of post MY 2026 vehicles. In part, DEP stated:

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<sup>3</sup> The other 11 federal agencies are the U.S. Departments of Agriculture, Commerce, Defense, Energy, Health & Human Services, Interior, and State, as well as the U.S. Agency for International Development, NASA, the National Science Foundation, and the Smithsonian Institution.

*DEP believes that the Proposed Rule does not fully consider the potential effects of global climate change resulting from these forgone reductions or the interests of states in preventing or mitigating the impacts of climate change on their citizens and environment. In Pennsylvania alone, the impacts of climate change range from more frequent and severe inland waterway flooding from increased storm intensity, increased landslides and sedimentation runoff resulting in water pollution and infrastructure damage, an increase in the number of days with dangerously high temperatures, increased energy consumption, disruption of commerce, and an increase in the number of invasive species. For example, Pennsylvania experienced severe flooding from extreme weather events throughout the Ohio and Susquehanna River Basins in 2018. The volume of extreme weather events and other effects of climate change will drastically increase mitigation and recovery costs to the Commonwealth, including its counties and municipalities, as well as to businesses and homeowners. The Proposed Rule fails to consider the costs of these impacts on state, county, and municipal governments and the harm to human health and welfare and the environment.*

In furtherance of these comments, the DEP cited a May 2017 study released by the Trump Administration entitled, “Ohio River Basin Pilot Study - Formulating Climate Change Mitigation/Adaptation Strategies through Regional Collaboration with the ORB Alliance.”<sup>4</sup> The study, located on EPA’s website, included the U.S. Army Corps of Engineers, EPA, other federal agencies, and representatives of states and local governments (ORB Alliance) and assessed the forecasted impacts of climate change in the Ohio River Basin.<sup>5</sup> The ORB study indicates that climate change will negatively affect numerous areas within the basin such as water quantity and quality, natural resources, flood control, transportation and energy infrastructure, aquatic ecosystems, agriculture and commerce. The ORB study is replete with examples as to how federal, state and local governments, as well as businesses and homeowners stand to experience increased costs, environmental degradation and other challenges due to climate change. Therefore, it is reasonable for the agencies to conduct a holistic assessment of costs and impacts associated with the effects of climate change, including those identified in the ORB study, as part of the Proposed Rule.

Notably, the ORB study references the important role that state and local governments in the Ohio River Basin, which includes Pennsylvania, have in reducing CO<sub>2</sub> emissions through mitigation:

*Basin transportation modes include highways, railways, airports, waterways, and pipelines. The majority of these modes (except pipelines) use fossil fuels as their primary energy source and emissions from these modes contribute to the total basin’s output. These modes are the lifeblood network of the region’s economy; therefore, sustaining their future capabilities while reducing their emissions supports the Alliance vision for the basin. Mitigation measures for transportation modes include efforts by basin states, counties, and municipal jurisdictions and their agencies to conserve the use of electricity*

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<sup>4</sup> USEPA, Science Inventory, “Ohio River Basin- Formulating Climate Change Mitigation/ Adaptation Strategies Through Regional Collaboration with the ORB Alliance”, available at: [https://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?Lab=NRMRL&dirEntryId=339719](https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NRMRL&dirEntryId=339719).

<sup>5</sup> The Ohio River Basin includes all or parts of Pennsylvania, New York, Maryland, West Virginia, Ohio, Indiana, Illinois, Missouri, Kentucky, Tennessee, Mississippi, Alabama, Georgia, North Carolina and Virginia.

*and expand municipal and rural transit opportunities, thus reducing reliance on private vehicles for work and school-related trips. Some basin transit services and municipal service vehicles have changed to electric, propane, or natural gas fuels. All these local actions reduce CO<sub>2</sub> emissions.<sup>6</sup>*

The ORB study cites the 2014 Third National Climate Assessment for North America,<sup>7</sup> which notes as part of the definition of *mitigation*, “the threat of irreversible impacts makes the timing of mitigation efforts particularly critical.”<sup>8</sup> Pennsylvania has taken steps to develop and implement mitigation and adaptation strategies to address the impacts of climate change. For example, DEP recently released the draft 2018 Pennsylvania Climate Action Plan.<sup>9</sup> DEP’s sister agency the Department of Conservation and Natural Resources, has developed and begun to implement a Climate Change Adaptation and Mitigation Plan to protect Pennsylvania’s forests and other natural resources from the effects of climate change.<sup>10</sup> Additionally, Pennsylvania Governor Tom Wolf signed Executive Order 2019-01 on January 8, 2019 which set a goal to achieve a 26 percent reduction of net GHG emissions statewide by 2025 from 2005 levels, and an 80 percent reduction of net GHG emissions by 2050 from 2005 levels and directed executive branch agencies to reduce their overall energy consumption, including from vehicle fleet operations.<sup>11</sup> Finally, Pennsylvania has joined other mid-Atlantic and northeast states in the Transportation and Climate Initiative to collaborate on reducing GHG emissions from the transportation sector.<sup>12</sup>

Subsequent to DEP’s original comments on the Proposed Rule, the USGCRP released NCA4 in accordance with the Global Change Research Act of 1990.<sup>13</sup> This quadrennial report to Congress and the President “1) integrates, evaluates, and interprets the findings of the Program...; 2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, infrastructure, human health and welfare, human social systems, and biological diversity; and 3) analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.”<sup>14</sup> This scientific assessment further supports DEP’s comments regarding the interests of Section

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<sup>6</sup> ORB study, at 80. See also, USEPA, Office of Transportation and Air Quality, Fast Facts: U.S. Transportation Sector Greenhouse Gas Emissions 1990-2016, EPA-420-F-18-013, July 2018, available at: <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions> (demonstrating that transportation is the largest emitting sector of GHG emissions in the United States and that light duty vehicles account for over 60% of GHG emissions in the transportation sector).

<sup>7</sup> Melillo, J. M., T. Richmond, and G. W. Yohe (eds.). 2014. Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program.

<sup>8</sup> See ORB study, at 79.

<sup>9</sup> ICF, Pennsylvania Climate Action Plan (DRAFT), Nov. 20, 2018, <https://www.dep.pa.gov/Business/Energy/OfficeofPollutionPrevention/climatechange/PublishingImages/Pages/CCA/C/2018%20PA%20CAP%20Draft%20112018.pdf>.

<sup>10</sup> Dep’t of Conservation and Natural Resources, Climate Change Adaptation and Mitigation Plan, June 2018, available at: <https://www.dcnr.pa.gov/Conservation/ClimateChange/Pages/default.aspx>. See also, <https://www.dep.pa.gov/Business/Energy/OfficeofPollutionPrevention/climatechange/Pages/CCAC.aspx>.

<sup>11</sup> See, <https://www.governor.pa.gov/executive-order-2019-01-commonwealth-leadership-in-addressing-climate-change-and-promoting-energy-conservation-and-sustainable-governance/>.

<sup>12</sup> See, <https://www.transportationandclimate.org/>.

<sup>13</sup> Global Change Research Act of 1990. Pub. L. No. 101-606, 104 Stat 3096–3104, November 16, 1990. <https://www.gpo.gov/fdsys/pkg/STATUTE-104/pdf/STATUTE-104-Pg3096.pdf>.

<sup>14</sup> NCA4, at 1.

177 states pertaining to the regional and state level effects of GHG emissions and climate change. While providing national scale discussion of the effects of climate change on fifteen critical areas of natural and human systems (including air quality), NCA4 further analyzes the effects of climate change in specific regions of the United States. Specifically, it highlights potential direct and indirect effects of projected climate change scenarios that demonstrate, even with optimistic GHG reduction assumptions, that Pennsylvania and the other Northeastern states will be significantly impacted from many of the projected effects of climate change.

The effects projected by the Assessment are in stark contrast to the dubious conclusion reached by the agencies that their Proposed Rule, forgoing GHG reductions from a significant source of those emissions, will lead to “minimal” increases in global temperature.<sup>15</sup> Notably, however, the Assessment points specifically to highway vehicles as an example of a GHG source reduction strategy that would contribute to the lessening of the magnitude of climate change.<sup>16</sup> Neither the Proposed Rule nor the NEPA environmental review addresses how the collective scientific opinion of over 300 government and non-government experts differs decidedly from the agencies’ unsupported assertions.

The Assessment shows that Pennsylvania has already experienced, and will experience increased, climate change related impacts.

The Assessment predicts that even under a scenario assuming significantly greater emission reductions, even for current and near-term emissions, than previous low-end scenarios used by earlier Intergovernmental Panel on Climate Change (IPCC) analyses, Pennsylvania could expect to see a number of climate related impacts. The key messages of the Assessment and the climate summaries<sup>17</sup> for Pennsylvania that informed the Assessment include:

1. An already observed increase of Pennsylvania’s mean annual temperatures of 2°F over the last century with a projected increase of two to six additional degrees by 2100. When projecting a scenario that assumes little reduction in GHG emissions, the projected increase in mean annual temperature in Pennsylvania rises anywhere from 6 to 15 additional degrees. Combined with high humidity, these temperature increases can lead to significant increases in heat-related casualties in Pennsylvania urban areas like Philadelphia and Pittsburgh.
2. Pennsylvania has already experienced an increase in heavy precipitation events. These include an increase in intensity of storm events, including tornados and tropical cyclones. These increases result in not only additional human casualties but significant associated social and economic costs. Overall precipitation and the frequency and intensity of precipitation events are expected to increase significantly by the year 2100.

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<sup>15</sup> The agencies claim in the Proposed Rule that the preferred alternative of the Proposed Rule “would result in a 3/1,000ths of a degree Celsius increase in global average temperatures by 2100, relative to the standards finalized in 2012. On a net CO<sub>2</sub> basis, the results are similarly minimal.” 83 Fed. Reg. 42996, August 24, 2018.

<sup>16</sup> NCA4, at 1493.

<sup>17</sup> Frankson, R., K. Kunkel, S. Champion, B. Stewart, A.T. DeGaetano, and W. Sweet, 2017: Pennsylvania State Climate Summary. NOAA Technical Report NESDIS 149-PA, 4 pp., available at: <https://statesummaries.ncics.org/pa>.

3. With an already realized increase in global mean sea level of 8 inches since 1880, the Assessment projects that the Philadelphia area will feel the effects of sea level rise on the order of an additional one to four feet by 2100. With this rise, the projected annual number of tidal floods in Philadelphia will increase from the current annual average of around 10 days per year in the last decade to over 300 per year. The high emissions scenario projects that tidal flooding in Philadelphia by 2100 could occur nearly every day of the year.

These impacts could alter the many fundamental assumptions about climate that are intrinsic to Pennsylvania's infrastructure, governments, and businesses and the stewardship of its natural resources and environment. For example, bridges are designed for certain flooding return intervals, energy systems are designed for certain temperature ranges, farmers plant crops suited to historical climate conditions, and communities are planned around historical floodplains. If not properly accounted for, changes in climate could result in more frequent road washouts, higher likelihood of power outages, shifts in economic activity, and other impacts. It is estimated that events such as these have cost governments, citizens, and businesses in the United States more than \$1.1 trillion in the last 30 years.<sup>18</sup>

Climate change can also affect vital determinants of health such as clean air, safe drinking water, sufficient food as well as secure shelter. This can include impacts from increased extreme weather events such as heat, droughts, and floods, wildfire, decreased air quality, and illnesses transmitted by food, water, and disease carriers such as mosquitoes. The World Health Organization expects climate change to cause around 250,000 additional deaths globally per year between 2030 and 2050, with additional direct damage costs to health to be estimated around \$2-4 billion per year by 2030.<sup>19</sup> GHG emissions must be reduced very quickly if these impacts are to be avoided.

As mentioned above, Pennsylvania recently drafted its own assessment, entitled the 2018 Pennsylvania Climate Action Plan,<sup>20</sup> to evaluate the climate impacts and mitigation efforts in the state. The draft plan estimates that if governments fail to take further action to combat climate change, GHG emissions will remain nearly even with 2005 levels by 2050. This finding emphasizes the need for more ambitious and swift climate action from all stakeholders, including government leadership, businesses, and citizens.

The Assessment shows that the effects of current and projected climate change on the entire Northeastern United States will be significant.

In addition to the key messages from the overall climate report and Pennsylvania climate summaries, the Assessment includes chapters on the projected impacts of climate change on different regions of the United States, including the Northeast. Chapter 18 provides a regional

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<sup>18</sup> USGCRP, 2017, "Highlights of the U.S. Global Change Research Program Climate Science Special Report". [https://science2017.globalchange.gov/downloads/CSSR\\_Executive\\_Summary.pdf](https://science2017.globalchange.gov/downloads/CSSR_Executive_Summary.pdf).

<sup>19</sup> World Health Organization, Climate Change and Health, Feb. 1, 2018, <https://www.who.int/en/news-room/factsheets/detail/climate-change-and-health>.

<sup>20</sup> See footnote 9, above.

examination using both state-specific and regional aggregated data, on the regional effects of current and projected future climate change.<sup>21</sup>

The Assessment in Chapter 18 makes clear that both rural and urban communities in the Northeast, have distinct vulnerabilities, impacts and adaptation responses to climate change.<sup>22</sup> In rural areas, for example, the Assessment notes that the outdoor recreation industry contributes nearly \$150 billion in consumer spending to the Northeast economy and supports more than one million jobs across the region. Additionally, the Assessment indicates that agriculture, fishing, forestry, and related industries together generate over \$100 billion in economic activity annually, supporting more than half a million jobs. Climate change threatens these vital economic driving industries in rural communities in Pennsylvania and the rest of the Northeast.

The Assessment indicates that projected increases in coastal flooding, heavy precipitation, runoff and extreme heat would have negative impacts on urban centers. It indicates that residents in urban areas face multiple climate hazards, including temperature extremes, episodes of poor air quality, recurrent waterfront and coastal flooding, and intense precipitation events that can lead to increased flooding of urban streams. According to the Assessment, urban areas are at risk for large numbers of evacuated and displaced populations and damaged infrastructure due to both extreme precipitation events and recurrent flooding. Therefore, the Proposed Rule should take into consideration the effects of climate change on both rural and urban communities.

Additionally, significant effects of climate change on neighboring states will have additional impacts on Pennsylvania due, in part, to historically intertwined economies in the Northeast. These effects were not adequately considered by the agencies in their analysis for the Proposed Rule.

#### Climate change will negatively impact air quality in Pennsylvania.

As shown by the Assessment, climate change will further exacerbate air quality problems. Chapter 13 of the NCA4 assesses the effects of climate change on air quality. According to the Assessment, “climate change will also influence future levels of ozone in the United States by altering weather conditions and impacting emissions from human and natural sources. The prevailing evidence strongly suggests that climate change alone introduces a climate penalty (an increase in air pollution resulting from climate change) for ozone over most of the United States from warmer temperatures and increases in natural emissions. This climate penalty will partially counteract the continued reductions in emissions of ozone precursors from human activities.”<sup>23</sup>

Photochemical modeling of ground level ozone effects for the future climate scenarios modeled for the Assessment<sup>24</sup> indicates that Pennsylvania could experience projected climate change

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<sup>21</sup> Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 669–742. doi: 10.7930/NCA4. 2018. Ch. 18.

<sup>22</sup> NCA4, ch. 18.

<sup>23</sup> NCA4, ch. 13.

<sup>24</sup> USEPA, 2017: Multi-model Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment. EPA 430-R-17-001. U.S. Environmental Protection Agency (EPA), Washington, DC, 271 pp., available at: [https://cfpub.epa.gov/si/si\\_public\\_record\\_Report.cfm?Lab=OAP&dirEntryId=335095](https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OAP&dirEntryId=335095).

induced increases in the maximum daily summer 8-hour ozone concentrations<sup>25</sup> from 1 part per billion (ppb) to 4 ppb statewide in 2050 and 2090 lower impact scenarios. The higher impact scenario showed additional increases from 3 ppb to over 5 ppb in urbanized parts of western and northwestern Pennsylvania by 2090. Given that these projected increases already account for measures taken, and yet to be implemented, under the CAA, it is clear that mechanisms of climate change will influence, and potentially interfere with, Pennsylvania's ability to maintain existing and achieve future CAA ozone ambient standards.

Climate change will negatively affect water quality and quantity in Pennsylvania.

Changes in climate and hydrology have direct and cascading effects on water quality.<sup>26</sup> The Assessment indicates, among other things, that increases in high flow events can increase the delivery of sediment, nutrients, and microbial pathogens to streams, lakes, and estuaries. Additionally, decreases in low flow volume (such as in the summer) and during periods of drought can impact aquatic life through exposure to higher water temperatures and reduced dissolved oxygen. The Assessment cautions that the risk of harmful algae blooms could increase due to an expanded seasonal window of warm water temperatures and the potential for episodic increases in nutrient loading. For example, the Assessment notes that the Chesapeake Bay watershed, which includes the Susquehanna River, is "experiencing stronger and more frequent storms, and an increase in heavy precipitation events".<sup>27</sup> Increased pollution from extreme precipitation events associated with climate change impedes Pennsylvania's ability to improve local water quality in the Susquehanna River Basin and elsewhere.

Climate change will disrupt critical infrastructure in Pennsylvania.

The Assessment in Chapter 3 indicates that extreme precipitation events are projected to increase in a warming climate and may lead to more severe flooding and a greater risk of infrastructure failure in some regions. The Assessment notes that much of the critical water infrastructure across the nation is aging and, in some cases, deteriorating or nearing the end of its design life, presenting an increased risk of failure. Estimated reconstruction and maintenance costs aggregated across dams, levees, aqueducts, sewers and water and wastewater treatment systems total in the trillions of dollars.<sup>28</sup>

The Assessment indicates that much of the infrastructure in the Northeast, including drainage and sewer systems, flood and storm protection assets, transportation systems and power supply, is nearing the end of its planned life expectancy.<sup>29</sup> For example, the Assessment indicates that bridges in Pennsylvania are expected to be more prone to damage during extreme weather events, because Pennsylvania leads the nation in structurally deficient bridges. The Assessment points out that water treatment and wastewater systems in Pennsylvania are notably aging, requiring an estimated \$28 billion in new investment over the next 20 years for repairs and to meet increasing demands. The Assessment concludes that current water-related infrastructure in

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<sup>25</sup> Compared to known 8-hour average ozone concentrations from 1995 to 2005.

<sup>26</sup> NCA4, ch. 3.

<sup>27</sup> NCA4, ch.18, Box 18.6.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*, ch. 18.



the Northeast is not designed for wider variability associated with future climate conditions and would require significant new investments in infrastructure.

Timing of GHG emission reductions is critical.

Finally, the Assessment emphasizes that the timing of GHG emission reductions is critical. In response to the question, "Is timing important for climate mitigation?" the Assessment answers:

*Yes. The choices made today largely determine what impacts may occur in the future... The sooner greenhouse gas emissions are reduced, the easier it may be to limit the long-term costs and damages due to climate change. Waiting to begin reducing emissions is likely to increase the damages from climate-related extreme events (such as heat waves, droughts, wildfires, flash floods, and stronger storm surges due to higher sea levels and more powerful hurricanes).<sup>30</sup>*

Accordingly, state and local governments have significant interests in protecting their citizens, economies, natural resources and the environment from the impacts of climate change through implementing mitigation and adaptation strategies. The Proposed Rule, if finalized, would undermine the interests and efforts of state and local governments to avoid and minimize the effects of climate change.

**Summary and Conclusion**

The NCA4, and its supporting documentation, are further evidence of the impacts of climate change on current and future Pennsylvanians. The Assessment reaffirms DEP's assertion that the agencies failed to analyze and consider the deleterious effects of climate change when considering the Proposed Rule.

Given the findings of the Assessment regarding realized and projected effects of climate change on states and regions of the United States, and the existence of clear scientific evidence that the nation and states cannot afford to forego cost effective, technologically feasible emission reduction strategies for significant sources of GHGs, DEP reiterates its request that the agencies withdraw the Proposed Rule, or at a minimum, provide a comment period of sufficient duration for all stakeholders to analyze and comment on the Proposed Rule as a *de novo* rulemaking.

Thank you for your additional consideration in this matter.

Sincerely,



Patrick McDonnell  
Secretary

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<sup>30</sup> NCA4, at 1488.