

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
SCIENCE ADVISORY BOARD**

**FINAL REPORT**

**Peer Review of “Climate Change Impacts on Human Health & Communities”**

**Prepared for:**

Commissioner Shawn M. LaTourette

**Prepared by:**

Public Health Standing Committee

**Approved by:**

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**February 2022**

## **REPORT PREPARATION**

This report was prepared by the following members of the Public Health Standing Committee:

- Michael Gochfeld, M.D., Ph.D.
- Jerald A. Fagliano, M.P.H., Ph.D.
- Judith Klotz, Dr.P.H.
- Mark Maddaloni, Dr. P.H., DABT
- Benjamin Sallemi, Ph.D., CIH

**Science Advisory Board**  
**Summary of the Public Health Standing Committee's review of**  
**"Climate Change Impacts on Human Health & Communities"**  
**February 22, 2022**

In 2020, the Bureau of Climate Resilience Planning (BCRP) and the Division of Science and Research (DSR) released a [scientific report](#) on the current and anticipated environmental effects of climate change on New Jersey. Following the release of the scientific report, the DEP Commissioner requested that an addendum to the report be written to address how human health is impacted by climate change. The human health addendum was drafted and entitled "Climate Change Impacts on Human Health & Communities". This addendum includes sections on Extreme Weather, Diminished Air Quality, Changes in Infectious Disease Transmission Patterns, and Climate Change-driven Community Impacts (35 pages total).

DSR requested peer review of the human health addendum by the DEP's Science Advisory Board's Public Health Standing Committee. In particular, the standing committee was asked to address the following two charge questions during their review of the addendum:

1. Does the addendum include and adequately describe the primary anticipated human health impacts from climate change in New Jersey?
2. Are there any additional references, data, or information that should be included that would improve the document?

The standing committee (M. Gochfeld [Chair], J. Fagliano, J. Klotz, M. Maddaloni, and B. Sallemi) completed a timely and insightful review of the addendum. Overall, the reviewers concluded that the addendum is a high-quality, detailed document that will be a valuable addition to the existing report on climate change. Although the committee had a positive impression of the addendum, many thoughtful comments and suggestions were provided as some aspects could be improved. The following list provides an overview of the comments:

1. Some key terms were missing from the addendum, including Ecology, Environmental Justice, Climate Justice, and Social Conflict.
2. Combined sewer overflows are briefly mentioned in the addendum, but this should be highlighted as a NJ-specific issue because of the many cities with old infrastructure.
3. There was not enough attention given to sea-level rise. The consequences of population displacement and conflict from this should be more clearly discussed. Social conflicts resulting from sea-level rise and loss of resources need to be mentioned as long-term effects of climate change.
4. More attention should be given to Climate Justice in the summary.
5. Some inconsistency exists among sections in the degree to which NJ-specific concerns are discussed.
6. Some sections could be reorganized. For example, the Precipitation Anomalies section could be separated into two sections called Extreme Precipitation and Droughts, and/or the Weather-Related Natural Disasters section could be separated into immediate versus long-term impacts.

7. More information could be added regarding Hurricane Sandy. For instance, medical access was decreased following the storm because of downed trees and powerlines.
8. Is there value in Section 1.4, “Challenges to Studying Extreme Weather and Human Health Effects” and the following parallel sections in other parts of the report?
9. Ultraviolet radiation is not increased as a result of temperature rise.
10. Ecological benefits of the impacts of climate change need to be included (e.g., benefits of forest fires such as increased availability of sunlight). These were also largely omitted from the original report.
11. Section 2.1-1.2 “Particulate Matter Pollution” would benefit from a table that shows different particle sizes, names depths of penetration, and relative amounts generated by burning.
12. A short paragraph on levels of ozone should be added to Section 2.1-1.3 “Ozone Pollution”.
13. Several additional references were recommended.
14. Many editorial and grammatical suggestions were included.

For the complete review, please see the Word document with tracked changes which was also provided to the DEP (ClimateChange\_HumanHealthAddendum\_22Feb2022.docx).