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| State of Alaska<br>Department of Environmental Conservation<br><br> <b>Policy and Procedure</b><br><br><b>Procedure</b> |   | POLICY AND<br>PROCEDURE   | PAGE<br><br><b>1 of 2</b> |
|  |   | EFFECTIVE DATE<br><br><b>May 1, 2024</b>  |                           |
| SUBJECT<br><br><b>Temporal Requirements for Modeling Data Set Utilization</b>  |   | SUPERCEDES<br><br><b>N/A</b>  |                           |
| SECTION<br><br><b>Air Quality Division</b>   | CHAPTER<br><br><b>Permit Processing</b> | APPROVED BY<br><br><b>Jason Olds, Director</b> |                           |

## PURPOSE

Establish Division policy on the requirement to use pollutant-specific and meteorological monitoring data sets within a reasonable 10-year recency for use in permit applications and other modeling demonstrations.

## BACKGROUND

The Department has observed dynamic changes to meteorological data sets over recent years. Changing daily temperatures, wind patterns and rainfall or snowfall have all experienced seasonal variations and changing normal ranges. Considering this, the concern arises that use of data from too far in the past, albeit what was once “approved”, no longer comports with actual daily conditions that could reasonably be extended past a decade given changing climatic conditions being observed. The Department has reviewed the use of pollutant-specific and meteorological data sets used in recent permit applications and has noted that many data sets being utilized as representative pre-date some of the more severe changes in Alaska geographic regions. ADECs concern is that data being used may no longer be truly representative.

To correct this, the Department is establishing a policy that data sets used to support modeling analysis for permit applications be no more than 10-years old, except for case-by-case situations. This policy will be used from the policy issuance date in all subsequent modeling submissions. A case-by-case determination to use data sets outside of this temporal restriction may be provided for unusual circumstances.

### Changing climatic conditions

Since 1925 (the beginning of reliable records), temperatures in Alaska have increased by about 3°F, compared to about 1.8°F since 1900 for the contiguous United States.<sup>1</sup> Accelerated warming has occurred since mid-2013: 2016 and 2019 were the second warmest and warmest years on record, respectively, at the time of this policy drafting.<sup>2</sup>

## **POLICY**

### **Determining Temporal Representativeness of Modeling input Data Files:**

The Department believes that based on the changing conditions, most pre-existing or pre-processed data sets older than a decade may no longer truly be representative within guidance [Arctic Report Card 2023<sup>1</sup>, Alaska and a Changing Climate<sup>2</sup> and Fifth National Climate Assessment 2023, Alaska Chapter<sup>3</sup>] The Department will review all submissions with the expectation that, absent a case-by-case finding or determination made during pre-application consultation, that submissions used to support application submission be within this temporal restriction.

## **IMPLEMENTATION RESPONSIBILITY**

Air Permits (APP) and Air Monitoring and Quality Assurance (AMQA) Program Managers.

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<sup>3</sup> [Arctic Report Card 2023 \(U.S. National Park Service\) \(nps.gov\)](https://www.nps.gov/learn/education/2023-report-card)

<sup>4</sup> [Alaska and a Changing Climate | USDA Climate Hubs](https://www.usda.gov/land-stewardship/land-use-planning/land-use-planning-reports)

<sup>5</sup> [Alaska \(globalchange.gov\)](https://www.alaska.gov/globalchange)