Minister for the Environment and the Great Barrier Reef
Minister for Science and Youth Affairs

Our Ref: CTS 15539/22
Your Ref: A942428

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30 September 2022

Mr Neil Laurie
The Clerk of the Parliament
Parliament House
George Street
BRISBANE QLD 4000

Dear Mr Laurie

Thank you for your letter of 8 September 2022 enclosing a copy of Parliamentary Petition No. 3775-22 concerning a cloud seeding research program in south east Queensland.

In July 2007, the Queensland Government commenced research to test the viability of cloud seeding as a strategy to increase gains in water storages focusing on south east Queensland.

The research was conducted by the University Corporation for Atmospheric Research at Boulder Colorado, United States of America, under the guidance of a Scientific Advisory Group. The Group was chaired by Professor Roger Stone with scientific experts from the Commonwealth Scientific and Industrial Research Organisation, the Bureau of Meteorology, Monash University, University of Southern Queensland and officers from the Queensland Climate Change Centre of Excellence, within the then Department of Natural Resources and Water.

The aims of the project were to:

- establish the amenability of south east Queensland clouds to cloud seeding;
- assess the potential for cloud seeding on a catchment scale in south east Queensland; and
- investigate the meteorology and climatology of south east Queensland, including the level of pollutants and aerosols in the atmosphere and the likely impact on rainfall.

The research sampled a number of storms over two summer rainfall periods. Season 1 activities ran from December 2007 through to March 2008, while Season 2 ran from September 2008 until February 2009. Following Season 2 in 2009, no further cloud seeding operations were undertaken.

The statistical results from the project indicated that seeded clouds tend to produce more rain than unseeded clouds due to longer lifetimes and rain production. Furthermore, the statistical analysis indicated that the seeded clouds tend to live longer than the unseeded clouds after seeding, indicating a potential enhancement in storm duration from hygroscopic seeding.

These results were similar to those of South African and Mexican experiments; however, were not statistically significant at the 95 per cent level due to the small sample size, and therefore must be viewed with caution. Importantly, applications of cloud seeding elsewhere in the world cannot be automatically translated to Queensland because of differences in regional climatic, cloud characteristics and topographic features, and the complexities of cloud seeding.

The final technical report was submitted by the University Corporation for Atmospheric Research to the Queensland Government in November 2009, following a review by the Scientific Advisory Group and Queensland Climate Change Centre of Excellence staff.

Commissioning this internationally recognised research initiative also resulted in the accelerated development of a sophisticated radar facility, known as the CP2 research radar, at Redbank Plains, with the Bureau of Meteorology investing $8 million in this facility. The ongoing operation of the radar has been used to improve operational rainfall estimates and forecasts throughout south east Queensland.

The south east Queensland cloud seeding research project was formally completed with the provision of the final report to the Queensland Government in November 2009 and available on the Queensland Government's Long Paddock website at https://www.longpaddock.qld.gov.au/about/publications/?highlight=1&range=5. Technical results were also published in the Bulletin of the American Meteorological Society in 2012 which is available at https://journals.ametsoc.org/view/journals/bams/93/1/bams-d-11-00060_1.xml.

In relation to the specific matters raised in the Petition:

1. since the second season of cloud seeding in February 2009, the Queensland Government has not undertaken any further research or operational activities on cloud seeding, in south east Queensland or elsewhere within the State;
2. the Queensland Government is not aware of any other cloud seeding and/or weather manipulation projects or research conducted since 2012; and
3. the Queensland Government is not aware of any cloud seeding or any other weather manipulation activity being conducted by any agency in Queensland; however, this should be confirmed with Commonwealth Government organisations.

I trust that this information has been of assistance to the petitioners.

Yours sincerely

Meaghan Scanlon MP
Minister for the Environment and the Great Barrier Reef
Minister for Science and Youth Affairs