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STATE OF RHODE ISLAND

IN GENERAL ASSEMBLY

JANUARY SESSION, A.D. 2020

A N A C T

RELATING TO HEALTH AND SAFETY -- THE GEOENGINEERING ACT

Introduced By: Representatives Bennett, Price, Edwards, Quattrocchi, and Lyle

Date Introduced: June 18, 2020

Referred To: House Environment and Natural Resources

It is enacted by the General Assembly as follows:

1 SECTION 1. Title 23 of the General Laws entitled "HEALTH AND SAFETY" is hereby
2 amended by adding thereto the following chapter:

3 CHAPTER 95

4 THE GEOENGINEERING ACT

5 **23-95-1. Short title.**

6 This chapter shall be known and may be cited as "The Geoengineering Act."

7 **23-95-2. Legislative intent.**

8 (a) To preserve the safe, peaceful uses of Rhode Island's atmosphere for people, the
9 environment, and agriculture, by regulating geoengineering, weather modification and other large-
10 scale activities and prohibiting activities that are harmful.

11 (b) "Geoengineering" is defined as the intentional manipulation of the environment,
12 involving nuclear, biological, chemical, electromagnetic and other physical-agent activities that
13 effect changes to the earth's atmosphere or surface.

14 (c) The general assembly finds that geoengineering encompasses many technologies and
15 methods involving hazardous activities that can harm human health and safety, the environment,
16 agriculture, aviation, and the economy of the state of Rhode Island.

17 (d) It is, therefore, the intention of the general assembly to regulate all geoengineering
18 activities as further set forth by the terms and provisions of this chapter.

19 **23-95-3. Findings of fact.**

1 (a) Background. Earthly life, or "Bios", is a system that can be impaired and broken by
2 perturbations such as human activities that are xenobiotic, (i.e., foreign to life). The extant damage
3 from pollutants and other harmful human activities is incalculable, and the state of earth's biotic
4 system is widely reported as catastrophic and in urgent need of protective action.

5 (b) Scope of geoengineering. Inclusive of solar radiation management (SRM), carbon
6 dioxide removal (CDR), and other technologies, geoengineering activities are diverse, varying
7 greatly in their characteristics and consequences. Geoengineering, defined to include anthropogenic
8 atmospheric activities generally, may involve ground-based, under-water, or atmosphere-based
9 activities, including, without limitation, cloud-seeding and other means of deployment of hazards
10 by aircraft, rockets, unmanned aerial vehicles (UAVs) and drones, large balloons, wireless
11 infrastructures, ships or submarines.

12 (c) All geoengineering activities require state licensing.

13 (d) SRM activities include, but are not limited to, Stratospheric Aerosol Injection (SAI)
14 such as:

15 (1) Solar shields or atmospheric sunscreens: Reflective materials are injected into the
16 stratosphere with the intention of increasing albedo. These include, but are not limited to, sulfur
17 dioxide (SO₂), sulfuric acid (H₂SO₄), and aluminum oxide (Al₂O₃).

18 (i) Per the journal Geophysical Research Letters, SO₂ injected into the atmosphere slowly
19 converts to H₂SO₄ and produces the adverse effects of ozone layer reduction and radiative heating
20 of the lower stratosphere through reflection and absorption of terrestrial heat. The Federal Clean
21 Air Act is focused on reducing SO₂ and H₂SO₄, the primary components of acid rain. Per the
22 Federal Environmental Protection Agency (EPA), SO₂ penetrates deeply into sensitive parts of the
23 lungs and is harmful to the environment.

24 (ii) Per the National Institutes of Health (NIH), Al₂O₃ causes respiratory tract, eye, and
25 skin irritation as well as organ damage and bone abnormalities, particularly with repeated or
26 prolonged exposure; and it may be neurotoxic if absorbed into the brain. Section 313 of the Federal
27 Emergency Planning and Community Right-to-Know Act (EPCRA) requires anyone
28 manufacturing, processing, or using Al₂O₃ to report this activity to the Environmental Protection
29 Agency (EPA). Any aircraft containing a hazardous substance is considered by Section 103 of the
30 Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
31 and by Section 304 of EPCRA as a "facility" required to report any such release into the
32 environment. Whether users deploying substances at stratospheric altitudes do presently comply is
33 unlikely. Following stratospheric release, sulfuric and aluminum oxide particulates fall into the
34 troposphere, blocking sunlight from reaching earth's surface, after which they rain down as acidic

1 pollution, harming terrestrial and aquatic life. Acidic precipitation further mobilizes aluminum
2 from both natural sources and the direct anthropogenic releases in SAI and industrial processes.
3 Specifically, environmental acidification mobilizes aluminum from land into aquatic environments.
4 Acid rain dissolves and washes away the nutrients and minerals in the soil which help plants to
5 grow, reduces photosynthesis by removing the waxy cover on leaves, and ultimately kills the
6 aquatic life upon which human life depends.

7 (2) Carbon black or black carbon releases: Deliberate, atmospheric releases of soot are used
8 to produce artificial weather events, increasing albedo and reflecting sunlight;

9 (3) Rocket emissions: These include, but are not limited to, black carbon and alumina
10 particles in addition to water vapor, a "greenhouse gas", blocking sunlight and reflecting terrestrial
11 heat;

12 (4) Cloud brightening: Sodium chloride (NaCl) or sea salt, seawater, nitric acid (HNO₃),
13 or other materials injected into clouds make the clouds more reflective, after which the salt and
14 other materials rain out over land areas and freshwater supplies;

15 (5) Salt flare rockets: Fired into clouds, these rockets trigger rain downpours containing
16 salt, which contaminates freshwater supplies, desiccates surfaces, and makes the atmosphere more
17 conductive;

18 (6) Cloud-seeding releases of silver iodide (AgI) or solid dry ice, or both, which is carbon
19 dioxide (CO₂), the latter increasing levels intended to be decreased;

20 (7) Cloud cover production: Aerial releases of water vapor, a "greenhouse gas", result in
21 manmade cloud cover, trapping terrestrial heat;

22 (8) Reflective space mesh mirrors: Wire-mesh mirrors, deployed in space, reduce the
23 amount of direct sunlight reaching earth's surface over small or large areas, depending on their size;

24 (9) Space sunshades or sunshields: Huge, parasol-like devices reduce the amount of direct
25 sunlight reaching earth's surface;

26 (10) Planetary sunshades: These largest of SRM operations use particulates to cover, over
27 time, the whole earth, stripping the ozone layer by as much as seventy-six percent (76%) and
28 reducing the amount of direct sunlight reaching earth's surface;

29 (11) Artificial ionosphere: A sustained, high-density plasma cloud is produced in earth's
30 upper atmosphere; and

31 (12) Large helium balloons which release atmospheric contaminants such as SO₂.

32 (e) CDR, involving the sequestration, capture, or removal of carbon dioxide consisting of:

33 (1) Land-based and ocean-based carbon sequestration, also called CO₂ geo-sequestration;

34 (2) Carbon capture or removal, which processes involve capturing what is considered

1 "waste" CO2 and depositing it at storage sites:

2 (3) Biochar, requiring burning huge amounts of biomass such as trees, crops, and solid

3 waste;

4 (4) Ocean fertilization (OF) by dumping iron filings, lime, and urea in order to sequester

5 CO2, producing detrimental artificial algae blooms and reducing oxygen and needed nutrients; and

6 (5) Genetically modified CO2-eating, plastic trees.

7 (f) Additional geoengineering activities requiring state licensing include, but are not

8 limited to:

9 (1) Ocean-cooling pipes, which, per recent reports, would exacerbate oceanic warming;

10 (2) Re-icing or cooling the arctic and other areas through artificial means;

11 (3) Ground-based cloud-nucleating generators;

12 (4) Weather modification involving the release of sea salt, silver iodide, barium or other

13 particulates to enhance precipitation (rain or snow) in one area, while reducing precipitation in

14 other areas;

15 (5) Glacier-reflecting blanket deployment, with vast polar areas to be covered with soot;

16 (6) Nitrogen removal and sequestration;

17 (7) Evaporation alteration, by spreading of various kinds of film upon large bodies of water;

18 (8) Water vapor generation using nuclear fission or fusion, contaminating water sources;

19 (9) Chaff releases, which involve the dispersal of bundles of millions of aluminum-coated

20 silica or glass fibers, often in lengths of one and five-tenths centimeters (1.5cm), two and five-

21 tenths centimeters (2.5cm), and five centimeters (5cm), which spread over hundreds of miles,

22 remain in the air for up to a day, and then fall and break apart purposed to confuse foreign radars

23 and satellite vision. Chaff causes power outages and interferes with air-traffic control, weather

24 forecasting and long-term climate research;

25 (10) Deployment of radiofrequency/microwave (RF/MW) radiation, or low frequency

26 electric or magnetic fields, other than for safety and aviation communications, by large

27 infrastructures, individual and high-densification antennas at terrestrial surface and at higher

28 altitudes from satellites, or by other means or at other altitudes; and

29 (11) Intense mechanical vibration or noise other than from an aircraft's propulsion or other

30 physical agents, such as intentional changes to ambient temperature or barometric pressure, or

31 excessive light at night, for any purpose, or inadvertently from other activities.

32 (g) Aircraft geoengineering activities include those carried out from any type of aerial

33 vehicle, rocket, drone or balloon, which involve the release or deployment of any nuclear radiation;

34 any biologic or trans-biologic agent; any chemical substance or mixture including any chemical

1 substances added to the aircraft's fuel emissions; cloud seeding; any electromagnetic radiation other
2 than radar or radio communications necessary for the aircraft's safety; or any other harmful physical
3 agent, shall be subject to regulation including the licensing process, pursuant to this chapter.

4 (h) Consequences. Documented problems arising from geoengineering activities include,
5 but are not limited to:

6 (1) Contamination of air, water, and soil, as particulates fall to earth's surface, and other
7 contamination, including by vapors and physical agents, at or below ground or sea level;

8 (2) Degradation of human, animal, and plant health and productivity, when people and
9 other living organisms are exposed to geoengineering particulates, vapors, and other contaminants,
10 often in violation of the National Environmental Protection Act of 1970 (NEPA);

11 (3) The acceleration of biodiversity and species losses, especially the loss of endangered
12 and threatened species as identified under the Federal Endangered Species Act of 1973 (ESA), each
13 of which species has intrinsic as well as human-resource value, and each of which cannot bear, per
14 ESA, further habitat modification or degradation;

15 (4) Extreme weather, with unprecedented temperatures, fires, wind speeds, precipitation,
16 electrical storms, hurricanes and tornados, resulting in large-scale loss of life, structures and
17 infrastructures; and severe reduction in state, regional, and global food production;

18 (5) Changes in micro-climates, local weather, and large-scale climates within short time
19 periods, with increased and cascading climate effects and political ramifications;

20 (6) Global dimming, which decreases vitamin D (calciferol) in humans and animals,
21 causing malabsorption of calcium, magnesium and phosphate; and which reduces photosynthesis,
22 with losses in agriculture and productivity;

23 (7) Less direct sunlight reaching earth's surface, with fewer winter freezes and higher
24 humidity, resulting in increased molds, mildews, fungi, and other pathogens and pests that develop
25 from such conditions;

26 (8) Increases in acid rain loads from the airborne injection or releases of sulfur and
27 aluminum oxide, with human, animal, plant, and water-resource degradation;

28 (9) Changes in distribution patterns and chemical contents of rainfall, resulting in floods,
29 droughts, and the potential for international political conflicts therefrom;

30 (10) Algal blooms, with adverse impacts upon human health, aquatic systems, and
31 economies;

32 (11) The near impossibility of restoring de-valued natural resources, with the undermining
33 of state-funded conservation programs;

34 (12) Increased ultraviolet radiation (UV, including UVA, UVB, and UVC), at earth's

1 surface. UV is strongly absorbed by organic materials such as living tissues, with UVC's high
2 energy and small wavelength particularly capable of destroying DNA and reproduction;

3 (13) Increased combustibility of earth's terrestrial surfaces, by means of fallen particulates
4 with increased incidence of fires;

5 (14) Significant increases in ambient mechanical vibration and noise pollution, leading to,
6 including, but not limited to, increased incidence of nervous system and cardiac irregularities;

7 (15) Increased metals content in surface-dwelling and aquatic organisms, producing
8 increased bodily electrical conductivity, with more susceptibilities and damages therefrom;

9 (16) Extreme harm to vulnerable human subpopulations and to the more vulnerable
10 species;

11 (17) Significant changes to earth's atmosphere's electric, magnetic, and electromagnetic
12 properties through the induction of high-intensity RF/MW radiation, resulting in extreme and less
13 predictable weather, the desiccation of terrestrial animals and plants, and the reduction of those
14 animal and insect populations dependent for navigation upon electromagnetism;

15 (18) Visibility impairment and clutter, reducing aviation safety and accelerating the
16 incidence of collision with "space-junk" or "space-debris" particulate matter and balloons;

17 (19) The delay by decades of the ozone layer's potential recovery;

18 (20) The financial burden that airborne, reflective, metallic particulates such as chaff must
19 be repeatedly replenished by aircraft release, since their atmospheric time is limited;

20 (21) Further financial burden, since, per the Pacific Northwest National Laboratory, the
21 amount of injected material is much less effective in polluted clouds, requiring the injection of
22 increased amounts of material for cloud-brightening;

23 (22) Economic losses to various sectors of society and to the state itself, resulting from,
24 including, but not limited to, human health damages, with increased and earlier health care needs,
25 and heightened suffering for those injured or sensitized by prior hazardous exposures, contaminated
26 soils and water supplies, loss of pollinators such as bees and birds, lower crop yields, dead and
27 dying forests, loss of habitats, decline of fisheries, rising pollution cleanup costs, and less solar
28 power production from lack of sunlight reaching earth's surface; and

29 (23) The potential and ease for enemies, foreign and domestic, to cause harm intentionally.

30 (i) Response to federal actions. Shirking duties to protect national security, safety, health
31 and the environment, the federal government acted by various means to cause harm through
32 geoengineering, thereby establishing, through the Tenth Amendment of the United States
33 Constitution, the necessity, authority, and obligation of all the states to override destructive federal
34 acts and provisions, correct the federal government, cancel plans for geoengineering and high-

1 densification of antennas, and void current contracts presently in place.

2 (j) In view of these facts, the general assembly declares that geoengineering activities must
3 be strictly regulated by the state through a licensing process, within which an environmental and
4 economic impact report (EEIR) from the department of environmental management (DEM), and
5 preliminary, detailed impact reports (IRs) from the state agencies, state offices, departments, and
6 programs included in § 23-95-6, as well as information gathered in public hearings, must guide
7 decision making, pursuant to this chapter.

8 **23-95-4. Definitions.**

9 As used in this chapter, the following words and phrases shall have the following meanings:

10 (1) "Albedo" means the fraction of incident radiation, such as light and heat, reflected by a
11 natural cloud or by materials injected into the atmosphere.

12 (2) "Application" means a submitted, written request by any person seeking to implement,
13 conduct or engage in any form of geoengineering.

14 (3) "Area" means a portion within the confines of the state and its territorial waters,
15 including the atmosphere above it.

16 (4) "Atmospheric contaminant" means any type of aerosol, chaff, biologic or trans-biologic
17 agent, genetically modified agent, metal, radioactive material, vapor, particulate down to or less
18 than one nanometer in diameter, and any air pollutant regulated by the state, including, but not
19 limited to, those deemed "unnecessary" pursuant to the general laws, xenobiotic (foreign-to-life)
20 electromagnetic radiation and fields, mechanical vibration and other physical agents, or any
21 combination of these contaminants.

22 (5) "Chaff" means aluminum-coated hair-like silica glass fibers typically dispersed in
23 bundles containing five (5) million to one hundred (100) million inhalable fibers, which fall to the
24 ground in about one day.

25 (6) "Conditions" means any limitations and safeguards to be placed on an applied-for
26 geoengineering activity that is licensed by the director of the department of environmental
27 management.

28 (7) "Department or DEM" means the state department of environmental management.

29 (8) "Director" means the director of the state department of environmental management.

30 (9) "Geoengineering" means the intentional manipulation of the environment, involving
31 nuclear, biological, transbiological, chemical, electromagnetic or other physical-agent activities
32 that effect changes to earth's atmosphere or surface.

33 (10) "Impact evaluation report" means the report developed and submitted to the
34 department by an agency, office, department or program in this state that assesses specific, actual

1 and potential short-term and long-term effects upon human health and safety, aviation safety,
2 agriculture, biodiversity, coastal conservation, endangered species, energy, environment, fish and
3 wildlife, forestry, habitat, water resources, wildlife, river and ocean purity and the state's economy.
4 Short-term effects shall be effects observed within one year of the activity and long-term effects
5 shall be effects observed within ten (10) years of the activity.

6 (11) "License" means a license issued by the director pursuant to this chapter to engage
7 in geoen지니어ing or any weather modification activities.

8 (12) "Person" means any individual, trust, firm, joint stock company, corporation,
9 including a quasi-governmental corporation, partnership, association, syndicate, municipality,
10 municipal or state agency, department program, fire district, club, nonprofit agency, commission,
11 university or college, armed services, department or agency of the state or federal government,
12 international governances or instrumentality thereof, including foreign, domestic and mercenary
13 armed services, or region within the United States

14 (13) "Physical agent" means an agent other than a substance, including, but not limited to,
15 radiofrequency/microwave and other electromagnetic radiation and fields, barometric pressure,
16 temperature, mechanical vibration and sound.

17 (14) "Post-activity report" means the report submitted by the licensee to the director
18 following a licensed geoen지니어ing activity.

19 (15) "Release" means any activity that results in the issuance of contaminants such as the
20 emitting, discharging or injecting of one or more nuclear, biological, trans-biological, chemical, or
21 physical agents into the ambient atmosphere, either once, intermittently, or continuously.

22 (16) "Stratosphere" means the region of the upper atmosphere extending upward from the
23 edge of the troposphere to about thirty (30) miles or fifty kilometers (50 km) above the earth.

24 (17) "Troposphere" means the region of the lowest layer of the atmosphere, six (6) miles
25 or ten kilometers (10 km) high in some areas and as much as twelve (12) miles or twenty kilometers
26 (20 km) high in others, within which there is a steady drop in temperature with increasing altitude
27 and within which nearly all cloud formations occur and weather conditions manifest.

28 (18) "Weather modification and control" means changing or controlling, or attempting to
29 change or control, by artificial methods, the natural development of any or all atmospheric cloud
30 forms and precipitation forms which occur in the troposphere.

31 **23-95-5. Geoen지니어ing policy - Rules and regulations.**

32 (a) Procedure. Due to the potential for significant harm, any contemplated geoen지니어ing
33 activity shall require the submission of a written license application to request a license to engage
34 in a specific type of geoen지니어ing activity on one or more specified dates during a period of time

1 not to exceed five (5) days. The following shall apply:

2 (1) Every submitted license application shall be made a public record within twenty-four

3 (24) hours of submission;

4 (2) A license shall not be used for any activity other than the activity specified in the

5 license. The license shall constitute a contract between the department and the licensee;

6 (3) The department shall review each application submitted under this chapter; and

7 (4) The director shall have the power to:

8 (i) Grant or deny a license;

9 (ii) Modify the conditions of a license; or

10 (iii) Revoke a license for cause;

11 (5) A licensee must file a post-activity report, including the hour and minute of each aspect

12 of the activity.

13 (b) Evaluation.

14 (1) A proposed geoengineering activity must first be evaluated by the department and every

15 applicable agency, office, department and program in this state, including, but not limited to, an

16 evaluation of the following factors:

17 (i) Transboundary effects;

18 (ii) Impacts of reduction of sunlight reaching earth's surface;

19 (iii) The planned methods of release, dispersal, or other deployment of substances or

20 physical agents into the environment including the atmosphere; and

21 (iv) The potential and actual, direct and indirect effects upon humans and other living

22 organisms, populations, ecosystems, agriculture, human structures, aviation and the state's

23 economy.

24 (2) To obtain a license under this chapter, an applicant must show proof of environmental

25 health and safety and that the applied-for activity shall produce zero hazardous emissions.

26 (3) Prior to granting or denying an application under this chapter, the department shall:

27 (i) Solicit and obtain, within a reasonable amount of time as determined by the department,

28 impact evaluation reports from the various agencies, offices, departments and programs in the state;

29 and

30 (ii) Hold at least four (4) public hearings and comment periods on the proposed activity,

31 which shall be announced on the department's publicly accessible internet website.

32 (c) Regulatory oversight. The department shall promulgate rules and regulations for the

33 implementation of this chapter, including, but not limited to, the following:

34 (1) Granting or denying applications submitted under this chapter, which shall be decided

1 on a case-by-case basis; and

2 (2) Soliciting and obtaining impact evaluation reports, holding hearings and providing a
3 commenting period as required under subsection (b)(3) of this section.

4 (d) Public comment. The department shall seek public comment for any proposed activity
5 for which an applicant has submitted an application under this chapter, which shall include, but not
6 be limited to, comments of the following communities:

7 (1) Persons with disabilities;

8 (2) Medical, health-care and public health science professionals; and

9 (3) Environmental science, agricultural, astronomy, coastal, conservation, ecology, fishing,
10 forestry, meteorology and oceanographic professionals.

11 **23-95-6. License application.**

12 (a) Process. The department shall promulgate a written application to conduct
13 geoengineering activities in Rhode Island. A person seeking to implement, conduct or engage in
14 any form of geoengineering within or above any area of the state shall submit to the director the
15 written application for a license.

16 (b) Application. The application promulgated under subsection (a) of this section shall
17 require the following information as well as other information as required by the director:

18 (1) A detailed description of the contemplated activity, including the purposes, scope,
19 methods, materials, physical agents and timing of the activity;

20 (2) The following information, which shall be included in the materials and physical agents
21 requirement under subsection (b)(i) of this section:

22 (i) Sources, sizes, amounts and concentrations of all materials and the precise chemical
23 formulas of any substance or mixture to be used in the activity;

24 (ii) The resulting product during and following deployment of a substance or mixture listed
25 under subsection (b)(2)(i) of this section;

26 (iii) The biological or transbiological materials used in the activity, along with any potential
27 interactions of the materials and physical agents during and following deployment of the materials
28 during the activity; and

29 (iv) The wavelengths, modulation characteristics and rates, intensities and concentrations,
30 directionalities, reflection and duration specifications of any type of electromagnetism or other
31 physical agent to be deployed or potentially emitted, intentionally or inadvertently, during the
32 activity;

33 (3) Proof of safety and environmental health during and following the activity, with
34 substantiating scientific evidentiary documents from independent sources;

1 (4) The names, educational and professional backgrounds and qualifications of any
2 individual person to be involved in the activity, along with any prior employment and business
3 ownership of the person;

4 (5) The name and number of any aircraft or other vehicle that may be used for the activity;
5 and

6 (6) An electronic copy of the application.

7 (c) Distribution of application. The department shall distribute a copy of each application
8 to the following:

9 (1) The department of health;

10 (2) Disability Rights Rhode Island (DRRI);

11 (3) Division of agriculture within the department of environmental management;

12 (4) Office of air resources within the department of environmental management;

13 (5) Office of water resources within the department of environmental management;

14 (6) The water resources board;

15 (7) The coastal resources management council;

16 (8) University of Rhode Island coastal institute;

17 (9) The office of energy resources;

18 (10) The soil and conservation office;

19 (11) The state conservation committee;

20 (12) The state parks & recreation program;

21 (13) The division of fish and wildlife outdoor education;

22 (14) The Fisherman's' Alliance;

23 (15) Rhode Island Farm Bureau;

24 (16) Rhode Island Dairy Farms Cooperative;

25 (17) Rhode Island Beekeepers Association;

26 (18) Rhode Island Audubon Society;

27 (19) Rhode Island Wild Plant Society;

28 (20) Rhode Island airport corporation; and

29 (21) The Rhode Island emergency management agency.

30 (d) Fee. The application process requires that a one thousand dollar (\$1,000) fee be paid
31 into a public trust which shall be set up for the purpose of this chapter.

32 (e) Background check. The department shall require a criminal background check from
33 each participant in a potential geoengineering activity.

34 (f) Impact evaluation report.

1 (1) An agency, office, department or program that receives a copy of an application from
2 the department shall acknowledge receipt of the application to the director within one day of
3 receiving the application.

4 (2) Within two (2) weeks, or other period as determined by the director, the agency, office,
5 department or program shall publish on the agency's, office's, department's or program's publicly
6 accessible internet website an impact evaluation report citing all actual and potential impacts of the
7 proposed activity, both short-term and long-term impacts as respectively defined within one year
8 and within ten (10) years.

9 (3) Each impact evaluation report shall include a recommendation to allow, disallow, or to
10 allow in a qualified way the proposed activity.

11 (4) The director shall publish each impact evaluation report receipt received by the
12 department on the department's publicly accessible internet website.

13 (5) The director shall set, and publish on the department's public accessible internet
14 website, dates and times for public hearings on any and all health, environmental, agricultural and
15 economic impacts.

16 (g) Impact evaluation report response.

17 (1) The department shall prepare an impact evaluation report evaluating the environmental
18 health and economic impacts of a proposed geoengineering activity.

19 (2) In preparing the impact evaluation report under subsection (g) (1) of this section, the
20 department shall consider all actual and potential public health and safety, environmental,
21 agricultural and aviation safety consequences and economic impacts within one-year and ten-year
22 (10) periods, which consequences and impacts may result from the proposed activity.

23 (3) The department shall weight bodily security and health more heavily than economic
24 interest.

25 (4) The department shall include in the impact evaluation report, prepared under this
26 section, the factual and legal information presented at any pertinent hearings held by the
27 department, including, but not limited to, the Ninth Amendment of the Constitution of the United
28 States protection of individual rights to privacy and freedom from assault in one's home and on
29 one's body.

30 (5) The impact evaluation report prepared under this section shall be published on the
31 department's publicly accessible internet website.

32 (6) Following publication of the impact evaluation report under subsection (g)(5) of this
33 section, the director shall allow online commentary to the impact evaluation report for a period of
34 two (2) weeks prior to making a final decision on the application.

1 (h) New information. The director shall supplement the environmental and economic
2 impact by the department and correcting any misinformation in the impact evaluation report.

3 (i) Decision. The director shall render a decision to grant or deny a license after producing
4 the department impact evaluation report response and the following shall apply:

5 (1) The department shall deny an application if any of the following is true:

6 (i) An applicable impact evaluation report recommends that the applied-for activity be
7 disallowed; or

8 (ii) An applicant has not proven within seven (7) calendar days the validity of evidence
9 submitted under this chapter that the applied-for activity is harmful.

10 (2) The director shall deny an application, or, if applicable, issue a cease-and-desist order
11 to halt a geoengineering activity where the activity has been approved by a municipality of the state
12 if the following is true:

13 (i) An agency, department office or program or member of the public produces evidence
14 to the department that the activity is harmful or involves a hazardous emission; and

15 (ii) The applicant or person involved in the geoengineering activity has not disproven the
16 evidence within seven (7) calendar days.

17 (3) The cease-and-desist order shall have the authority of a court order and any violation
18 shall be punished pursuant to law.

19 (j) Federally approved programs. Where a geoengineering activity or public process for a
20 geoengineering activity that the department has deemed hazardous has been approved, explicitly
21 or implicitly, by the federal government, the department shall issue a notice to the appropriate
22 federal authority that the hazardous activity cannot lawfully be carried out within or over the state
23 of Rhode Island, pursuant to the Tenth Amendment to the Constitution of the United States.

24 (k) International programs. An international body that funds or engages in a geoengineering
25 activity deemed to be hazardous by the department shall be prohibited in perpetuity from both
26 engaging in and applying to engage in geoengineering activities in or above the state of Rhode
27 Island.

28 (l) Agreement. Upon granting a license under this chapter, the director shall provide the
29 applicant an agreement potentially to be executed, which shall require the following:

30 (1) A detailed report of the department's limitations and safeguards placed upon the
31 activity;

32 (2) A detailed report to be submitted to the department by the licensee after completion of
33 the activity, along with the steps to be taken to track effects and assure prompt public disclosure of
34 any observations and objections; and

1 (3) Proof of bonding and insurance for the activity and indication of understanding of the
2 potential for adverse consequences if the terms and conditions are violated or not fulfilled.

3 (m) Execution of the agreement. The director shall execute the agreement and issue the
4 license to the applicant if the director finds the applicant's bonding and insurance and other required
5 information to be accurate and comprehensive.

6 (n) Timing of geoengineering activity. Upon receipt of the license, the licensee shall inform
7 the department of precisely when the atmospheric activity shall begin, which must be no earlier
8 than fourteen (14) calendar days from the issuance of the license.

9 (o) Appeal. A person aggrieved by a decision of the director may, within ten (10) calendar
10 days, appeal a decision pursuant to chapter 35 of title 42.

11 **23-95-7. Penalties for violations.**

12 An unlicensed person who engages in a geoengineering activity which requires a license
13 under this chapter or who fails to comply with the decision of the director, or any person who uses
14 an unmarked or unidentified aircraft or other vehicle to carry out a geoengineering activity:

15 (1) Shall be guilty of a felony and shall pay a fine of not less than five hundred thousand
16 dollars (\$500,000) or be imprisoned for not less than two (2) years, or both;

17 (2) Shall be guilty of a separate offense for each day during which violative activity has
18 been conducted, repeated or continued; and

19 (3) Shall be deemed in violation, and subject to the penalties of chapter 23 of this title.

20 **23-95-8. Enforcement.**

21 (a) Public announcement. The department shall post advertisements in newspapers of
22 general circulation and on the department's public accessible internet website to encourage the
23 public to monitor, measure, document and report present, potential and past incidents that may
24 constitute geoengineering activity.

25 (b) Reporting.

26 (1) An individual who presents evidence of geoengineering activity shall email or
27 otherwise provide in written form to the department of environmental management or the state
28 police, the following:

29 (i) Evidentiary photographs, with each separately titled as an electronic or hard-copy
30 document, with the respective location from which, and, if the content is from other than a
31 measuring device, the direction in which the photo was taken, with its time and date; and

32 (ii) Collected samples with photographs, lab tests, microscopy, spectrometry, and other
33 forms of evidence shall similarly be submitted in writing to the department or state police.

34 (2) A public official who receives information under this subsection and has reason to

1 suspect violative activity based on evidence presented by an individual must, directly or through a
2 designee, report in writing within twenty four (24) hours all documentary and supportive evidence
3 to the department.

4 (c) Reports involving physical agents.

5 (1) A report to the department of excessive electromagnetic radiation or fields in any part
6 of the spectrum, including light and ionizing radiation, or of intense mechanical vibration, noise or
7 other physical agent, with evidence, including possible photographs or audio recordings, and
8 measurements of the physical agent, shall trigger within two (2) hours a state agency's emergency
9 measurements of peaks with the appropriate, calibrated meter or other forensic device both at and
10 near the reported location.

11 (2) Radiofrequency/microwave radiation measured at and near the reported location by any
12 state employee at peak in excess of ten (10) microwatts per meter squared ($\mu\text{W}/\text{m}^2$), or an emission
13 from a wireless telecommunications facility (WTF) with an effective radiation power (ERP) in
14 excess of forty (40) milliwatts (mW), given the 1996 Telecommunications Acts' preemptions
15 clause, 47 U.S.C. § 332 (c)(7)(B)(iv), leaving operations of such facilities within the regulatory
16 authorities of state and local officials; or low-frequency AC electric fields in excess of 1 volt per
17 meter (V/m) or magnetic fields in excess of 1 milliGauss (mG); or added transients in the electrical
18 wiring, also called "dirty electricity," which must be filtered; or ionizing radiation in excess of 0.02
19 milliSievert per hour (mSv/h); or any vibration, noise or other physical agent exceeding official
20 limits, guidelines or standards, shall trigger:

21 (i) The department's immediate communication of the requirement of the owner of each
22 tower, antenna, other wireless telecommunications facility, other facility deploying energy-
23 demanding emissions, or other source of emissions at or near the reported location, to produce
24 records of all data collection on the extant operators at one or more sites near where xenobiotic
25 electromagnetism and fields, mechanical vibration, or other physical agents are or have been
26 detected.

27 (ii) The department's immediate communication of the requirement of the owner and/or
28 operator of the facility, utility or other service at or near the reported location to provide within one
29 business day all data collection records up to that date and time of electrical usage at or near the
30 reported location.

31 (iii) The department's order to cease operations of all antennas on the measured structure
32 other than those needed for police, fire, emergency services and aviation safety; and

33 (iv) The department's evaluation within twenty four (24) hours of the owner's performance
34 in causing the cessation of all operations except those activities exempted under subsection

1 [\(c\)\(2\)\(iii\) of this section.](#)

2 **23-95-9. Rules and regulations.**

3 [The director shall promulgate rules and regulations to implement the provisions of this](#)
4 [chapter, including, but not limited to, rules and regulations governing the license application](#)
5 [process for geoengineering activities and the contents of the application.](#)

6 SECTION 2. This act shall take effect upon passage.

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LC005312
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EXPLANATION
BY THE LEGISLATIVE COUNCIL
OF

A N A C T
RELATING TO HEALTH AND SAFETY -- THE GEOENGINEERING ACT

1 This act would establish a procedure and process to prohibit the intentional manipulation
2 of the environment by means that are known as "Geoengineering" and would require that a person
3 seeking to engage in a geoengineering activity must meet health, safety, and environmental
4 requirements in order to procure a license from the director of the department of environmental
5 management (DEM) for any such activity.

6 This act would take effect upon passage.

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