AN ACT
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:

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

CHAPTER 95
THE GEOENGINEERING ACT

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

23-95-2. Legislative intent.
(a) To preserve the safe, peaceful uses of Rhode Island's atmosphere for people, the environment, and agriculture, by regulating geoengineering, weather modification and other large-scale activities and prohibiting activities that are harmful.

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

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

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

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

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

(c) All geoengineering activities require state licensing.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) Carbon capture or removal, which processes involve capturing what is considered
"waste" CO2 and depositing it at storage sites;

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

(4) Ocean fertilization (OF) by dumping iron filings, lime, and urea in order to sequester CO2, producing detrimental artificial algae blooms and reducing oxygen and needed nutrients; and

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

(f) Additional geoengineering activities requiring state licensing include, but are not limited to:

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

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

(3) Ground-based cloud-nucleating generators;

(4) Weather modification involving the release of sea salt, silver iodide, barium or other particulates to enhance precipitation (rain or snow) in one area, while reducing precipitation in other areas;

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

(6) Nitrogen removal and sequestration;

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

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

(9) Chaff releases, which involve the dispersal of bundles of millions of aluminum-coated silica or glass fibers, often in lengths of one and five-tenths centimeters (1.5cm), two and five-tenths centimeters (2.5cm), and five centimeters (5cm), which spread over hundreds of miles, remain in the air for up to a day, and then fall and break apart purposed to confuse foreign radars and satellite vision. Chaff causes power outages and interferes with air-traffic control, weather forecasting and long-term climate research;

(10) Deployment of radiofrequency/microwave (RF/MW) radiation, or low frequency electric or magnetic fields, other than for safety and aviation communications, by large infrastructures, individual and high-densification antennas at terrestrial surface and at higher altitudes from satellites, or by other means or at other altitudes; and

(11) Intense mechanical vibration or noise other than from an aircraft's propulsion or other physical agents, such as intentional changes to ambient temperature or barometric pressure, or excessive light at night, for any purpose, or inadvertently from other activities.

(g) Aircraft geoengineering activities include those carried out from any type of aerial vehicle, rocket, drone or balloon, which involve the release or deployment of any nuclear radiation; any biologic or trans-biologic agent; any chemical substance or mixture including any chemical
substances added to the aircraft's fuel emissions; cloud seeding; any electromagnetic radiation other
than radar or radio communications necessary for the aircraft's safety; or any other harmful physical
agent, shall be subject to regulation including the licensing process, pursuant to this chapter.

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

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

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

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

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

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

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

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

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

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

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

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

(12) Increased ultraviolet radiation (UV, including UVA, UVB, and UVC), at earth's
surface. UV is strongly absorbed by organic materials such as living tissues, with UVC's high
energy and small wavelength particularly capable of destroying DNA and reproduction;

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

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

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

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

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

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

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

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

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

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

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

(i) Response to federal actions. Shirking duties to protect national security, safety, health
and the environment, the federal government acted by various means to cause harm through
geoengineering, thereby establishing, through the Tenth Amendment of the United States
Constitution, the necessity, authority, and obligation of all the states to override destructive federal
acts and provisions, correct the federal government, cancel plans for geoengineering and high-
densification of antennas, and void current contracts presently in place.

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


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

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

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

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

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

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

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

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

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

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

(10) "Impact evaluation report" means the report developed and submitted to the department by an agency, office, department or program in this state that assesses specific, actual
and potential short-term and long-term effects upon human health and safety, aviation safety, agriculture, biodiversity, coastal conservation, endangered species, energy, environment, fish and wildlife, forestry, habitat, water resources, wildlife, river and ocean purity and the state's economy.

Short-term effects shall be effects observed within one year of the activity and long-term effects shall be effects observed within ten (10) years of the activity.

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

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

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

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

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

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

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

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

23-95-5. Geoengineering policy - Rules and regulations.

(a) Procedure. Due to the potential for significant harm, any contemplated geoengineering activity shall require the submission of a written license application to request a license to engage in a specific type of geoengineering activity on one or more specified dates during a period of time...
not to exceed five (5) days. The following shall apply:

1. Every submitted license application shall be made a public record within twenty-four (24) hours of submission;

2. A license shall not be used for any activity other than the activity specified in the license. The license shall constitute a contract between the department and the licensee;

3. The department shall review each application submitted under this chapter; and

4. The director shall have the power to:
   (i) Grant or deny a license;
   (ii) Modify the conditions of a license; or
   (iii) Revoke a license for cause;

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

(b) Evaluation.

1. A proposed geoengineering activity must first be evaluated by the department and every applicable agency, office, department and program in this state, including, but not limited to, an evaluation of the following factors:
   (i) Transboundary effects;
   (ii) Impacts of reduction of sunlight reaching earth's surface;
   (iii) The planned methods of release, dispersal, or other deployment of substances or physical agents into the environment including the atmosphere; and
   (iv) The potential and actual, direct and indirect effects upon humans and other living organisms, populations, ecosystems, agriculture, human structures, aviation and the state's economy.

2. To obtain a license under this chapter, an applicant must show proof of environmental health and safety and that the applied-for activity shall produce zero hazardous emissions.

3. Prior to granting or denying an application under this chapter, the department shall:
   (i) Solicit and obtain, within a reasonable amount of time as determined by the department, impact evaluation reports from the various agencies, offices, departments and programs in the state; and
   (ii) Hold at least four (4) public hearings and comment periods on the proposed activity, which shall be announced on the department's publicly accessible internet website.

(c) Regulatory oversight. The department shall promulgate rules and regulations for the implementation of this chapter, including, but not limited to, the following:

1. Granting or denying applications submitted under this chapter, which shall be decided
on a case-by-case basis; and

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

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

(1) Persons with disabilities;

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

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

23-95-6. License application.

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

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

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

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

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

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

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

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

(3) Proof of safety and environmental health during and following the activity, with substantiating scientific evidentiary documents from independent sources;
(4) The names, educational and professional backgrounds and qualifications of any individual person to be involved in the activity, along with any prior employment and business ownership of the person;

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

(6) An electronic copy of the application.

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

(1) The department of health;

(2) Disability Rights Rhode Island (DRRI);

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

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

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

(6) The water resources board;

(7) The coastal resources management council;

(8) University of Rhode Island coastal institute;

(9) The office of energy resources;

(10) The soil and conservation office;

(11) The state conservation committee;

(12) The state parks & recreation program;

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

(14) The Fisherman's' Alliance;

(15) Rhode Island Farm Bureau;

(16) Rhode Island Dairy Farms Cooperative;

(17) Rhode Island Beekeepers Association;

(18) Rhode Island Audubon Society;

(19) Rhode Island Wild Plant Society;

(20) Rhode Island airport corporation; and

(21) The Rhode Island emergency management agency.

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

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

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

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

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

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

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

(g) Impact evaluation report response.

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

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

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

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

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

(6) Following publication of the impact evaluation report under subsection (g)(5) of this section, the director shall allow online commentary to the impact evaluation report for a period of two (2) weeks prior to making a final decision on the application.
(h) New information. The director shall supplement the environmental and economic
impact by the department and correcting any misinformation in the impact evaluation report.

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

1. The department shall deny an application if any of the following is true:
   1. An applicable impact evaluation report recommends that the applied-for activity be
disallowed; or
   2. An applicant has not proven within seven (7) calendar days the validity of evidence
submitted under this chapter that the applied-for activity is harmful.

2. The director shall deny an application, or, if applicable, issue a cease-and-desist order
to halt a geoengineering activity where the activity has been approved by a municipality of the state
if the following is true:
   1. An agency, department office or program or member of the public produces evidence
to the department that the activity is harmful or involves a hazardous emission; and
   2. The applicant or person involved in the geoengineering activity has not disproven the
evidence within seven (7) calendar days.

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

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

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

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

1. A detailed report of the department's limitations and safeguards placed upon the
activity;

2. A detailed report to be submitted to the department by the licensee after completion of
the activity, along with the steps to be taken to track effects and assure prompt public disclosure of
any observations and objections; and
(3) Proof of bonding and insurance for the activity and indication of understanding of the potential for adverse consequences if the terms and conditions are violated or not fulfilled.

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

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

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

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

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

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

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


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

(b) Reporting.

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

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

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

(2) A public official who receives information under this subsection and has reason to
suspect violative activity based on evidence presented by an individual must, directly or through a
designee, report in writing within twenty four (24) hours all documentary and supportive evidence
to the department.

(c) Reports involving physical agents.

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

(2) Radiofrequency/microwave radiation measured at and near the reported location by any
state employee at peak in excess of ten (10) microwatts per meter squared (μW/m²), or an emission
from a wireless telecommunications facility (WTF) with and effective radiation power (ERP) in
excess of forty (40) milliwatts (mW), given the 1996 Telecommunications Acts' preemptions
clause, 47 U.S.C. § 332 (c)(7)(B)(iv), leaving operations of such facilities within the regulatory
authorities of state and local officials; or low-frequency AC electric fields in excess of 1 volt per
meter (V/m) or magnetic fields in excess of 1 milliGauss (mG); or added transients in the electrical
wiring, also called "dirty electricity," which must be filtered; or ionizing radiation in excess of 0.02
milliSievert per hour (mSv/h); or any vibration, noise or other physical agent exceeding official
limits, guidelines or standards, shall trigger:

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

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

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

(iv) The department's evaluation within twenty four (24) hours of the owner's performance
in causing the cessation of all operations except those activities exempted under subsection
(c)(2)(iii) of this section.


The director shall promulgate rules and regulations to implement the provisions of this chapter, including, but not limited to, rules and regulations governing the license application process for geoengineering activities and the contents of the application.

SECTION 2. This act shall take effect upon passage.

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LC005312
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EXPLANATION
BY THE LEGISLATIVE COUNCIL
OF
AN ACT
RELATING TO HEALTH AND SAFETY -- THE GEOENGINEERING ACT

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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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LC005312
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