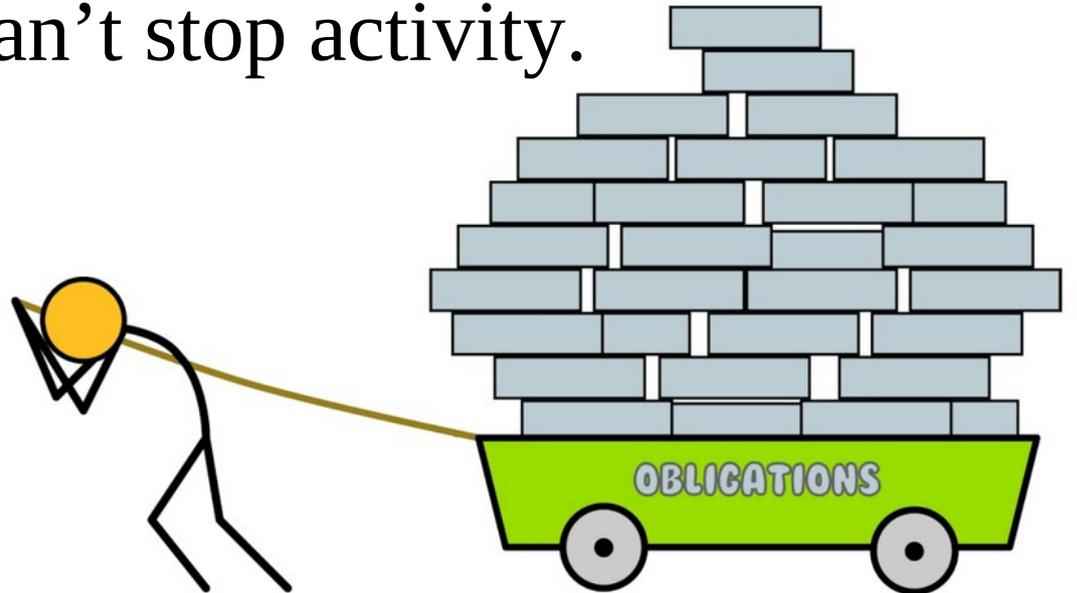


Legal Aspects of Weather Modification Application to Programs



International Obligations

- Notice given about seeding.
- Countries consult.
- Affected neighboring country.
- Decides what to do, but can't stop activity.
- Can take legal action.
- Has to prove liability.



Common Way to Regulate

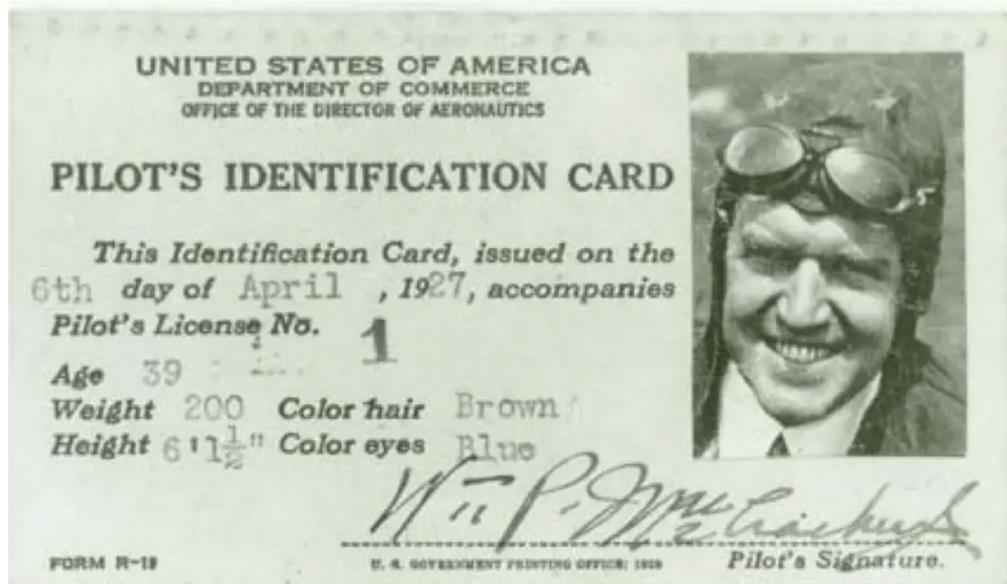
- Licensing and Permitting
 - What are some example of licenses and permits?
- Need both to conduct seeding in some states.
- License – Authority to practice profession.
- Permit – Authority to operate a given project.



Seeding Flares on Aircraft Wing

License Criteria

- Professional Qualification
 - Training/Education
 - Or Experience
- Good Character



Licensing Procedures

- Grant/denial
 - Application
 - Determination
- Renewal/Non-renewal
 - Application
 - Determination
- Suspension – Temporary
 - Revocation - Permanent

Image showing of Pilot's License No 1.

Permit Procedures

- Grant/denial
- Application
 - Notices hearings determination
 - Grant as requested
 - Grant as altered
 - Denied
- Provisional/renewal/non-renewal
- Modification/Suspension/Revocation



Permit Considerations

- Experience of Project Personnel
- Seeding Agents, Modes and Rates.
- Equipment Used
- Access and Easements
- Suspension Criteria
- Projected Environmental Impact
- Liability Insurance



Federal Reports

- Authority
 - The only Federal law is Reporting
- Timing
- Contents
 - Days
 - Purposes
 - Hours
 - Seeding Agents
- Uses
 - Annual Report
 - WMO Register

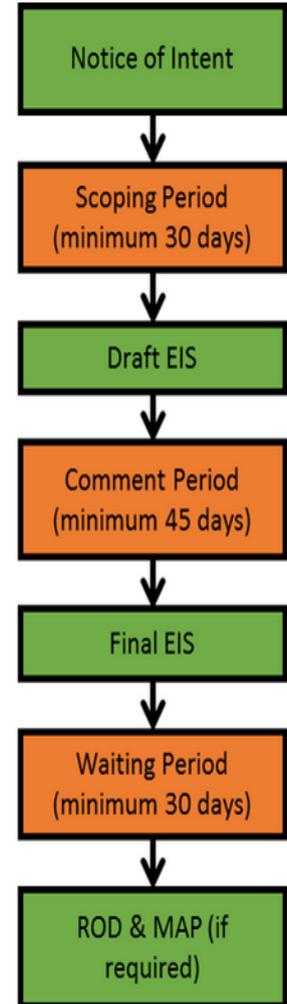
State Reports

- Forms
- Data



Environmental Impact Statements (EIS)

- Federal requirement under certain conditions.
- EIS are also required by some states.
- Federal EIS required when:
 - Federal dollars are involved.
 - Seeding actually done.
 - Possible significant impact on the environment.
- Process takes years, may kill project.



Wilderness Act

- Legislation – Areas “untrammelled by the hand of man”
- Impact on Weather Modification
 - Seeding Areas
 - Data Collection



President Lyndon B. Johnson signed the Wilderness Act on September 3, 1964.

Liability – Should this Concern You?

- Three things have to be proved to win:
 - Conduct (defendant)
 - Impact (plaintiff)
 - Causation



Types of Liability

- Trespass (intrude on property)
- Negligence (careless)
- Nuisance (harm outweighs benefit)
- Abnormally dangerous activity



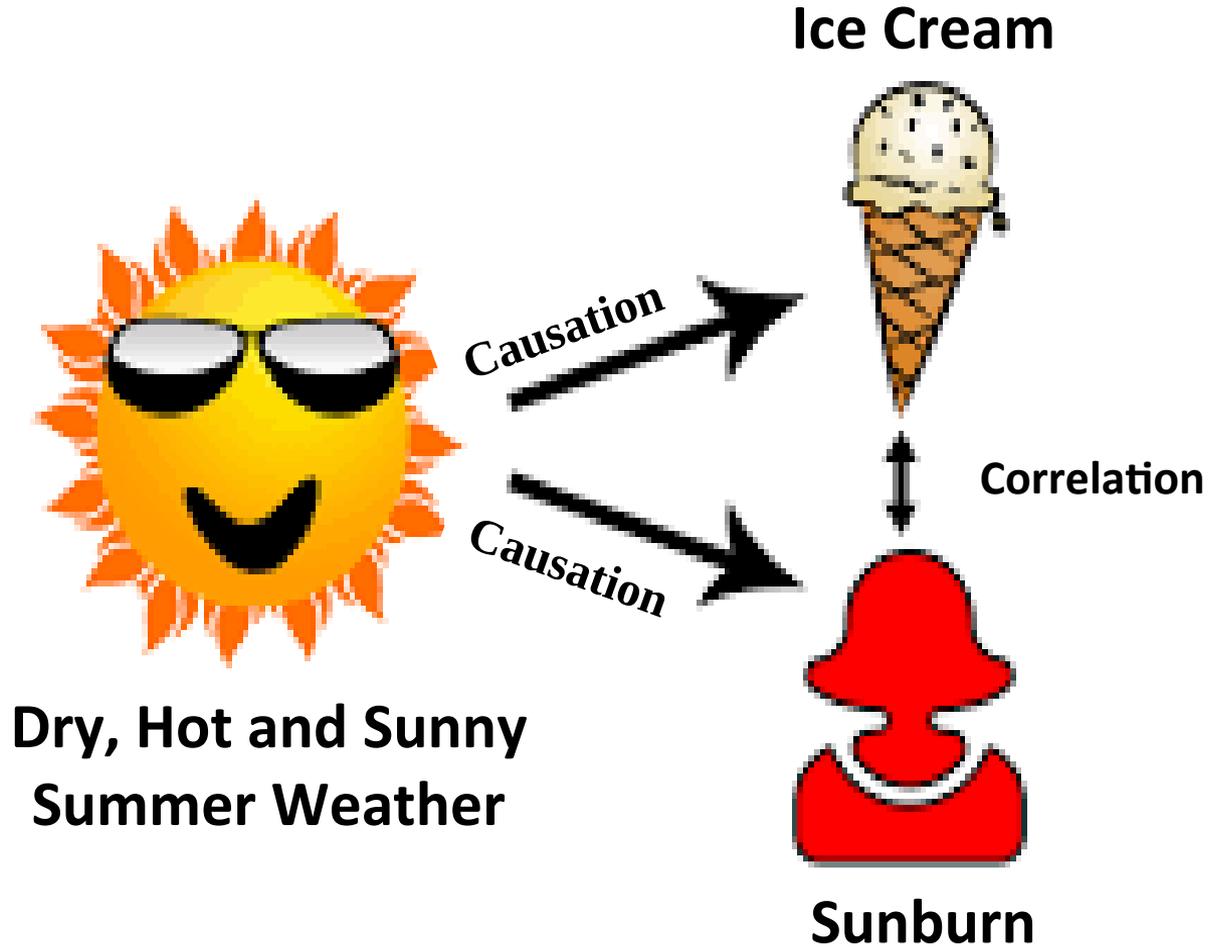
Image showing the 1997 Flood in Grand Forks, North Dakota.

Harm (Impact)

- Economic
 - Expenses Incurred
 - Income lost
- Non-economic
 - Nominal
 - Intangibles

Causation

- Hardest to Prove
- No Cases Won



Defenses

- Immunity (government)
- Privilege (public necessity)
- Shifting cost
 - Indemnification (contract)
 - Insurance
 - Most states' statutes require weather modification operators to secure basic liability and professional liability insurance coverage.



Litigation

- The city of Boise, Idaho, was sued in the early 1990s because of a car accident in the vicinity of the local airport following an airborne fog dispersal seeding event.
- As a result of this lawsuit, such operations are now performed via a mobile ground dry-ice delivery system in association with public advertisements.



Litigation Concern Regulations

- The regulatory entity in the State of North Dakota prohibits the seeding of tornadic storms.
- If a tornado develops, treatment is to cease immediately and not resume until at least 30 minutes have elapsed after the dissipation of the tornado or funnel.
- This regulation decision is important since tornadic storms are usually among the most severe and often produce significant damaging hail.

Water Rights: Who Gets Extra Precipitation

Theories

- Riparian
 - Owners of land by water have equal right to use the water.
- Appropriation
 - First come, first served

Treatment of Additional Water

- Seeder
- Landowner
 - Can appropriate
 - Prior Appropriation
 - As Natural Precipitation (ND)



Image showing rain shaft.