

# Environmental Concerns of Weather Modification



Group picture for the POLCAST field project conducted in North Dakota to test effectiveness of hygroscopic flares.

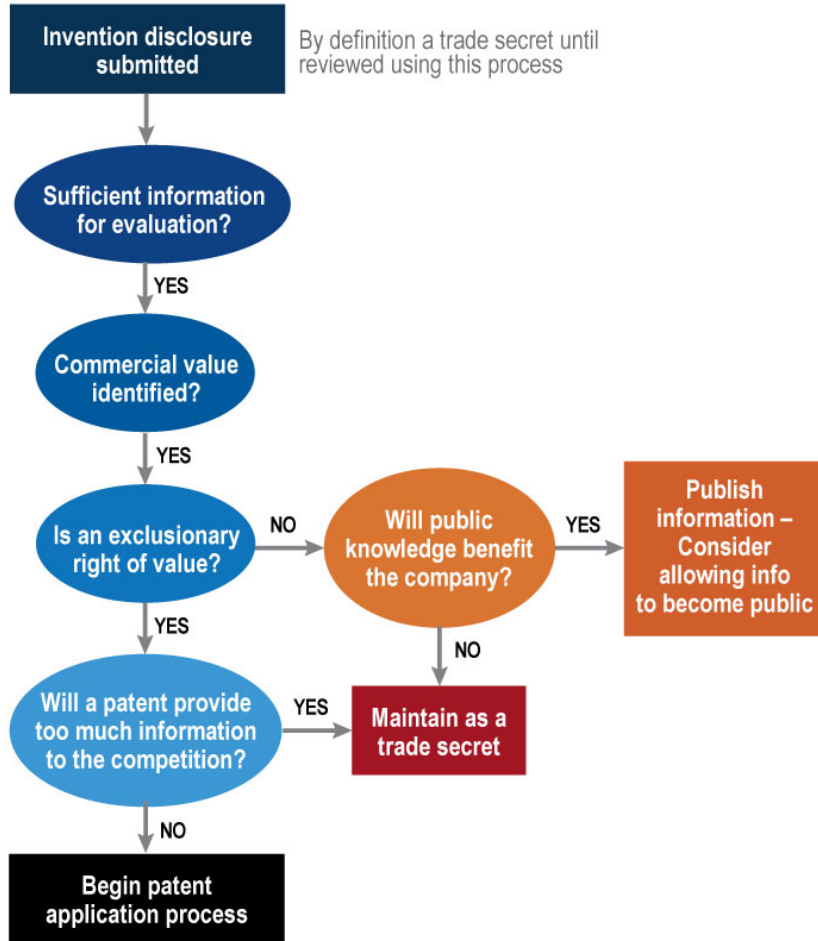
# Environmental Impacts

- Many States require an environmental impact statement for any large activity that may change the environment.
- Project Skywater Environmental Impact Statement (EIS)
  - The Bureau of Reclamation completed work in 1977, which is one of the most complete EIS for a weather modification project.
  - The study examined a number of possible effects and a draft of the document was circulated to a number of organizations for additional comments.

# Environmental Impacts

- Many States require an environmental impact statement for any large activity that may change the environment.
- To accurately assess an environment impact, there is a need to know the exact chemical components of seeding material released.
- Cloud seeding market is relative small; hence, companies don't patent but keep as trade secret.

# Trade Secret Versus Patent: Decision Tree



- Patent like would provide information for others to copy the product?
- The benefit of public release.
- Environmental Impacts Assessment

# Effects of Silver Iodide (AgI)

- Silver iodide, like most silver compounds, is insoluble in water.
- Therefore, it is difficult to get silver iodide into the food chain or to get it absorbed into any living organism.
- The quantity of Silver Iodide released is also quite small relative to the project area; hence, the effects on the environment are small.

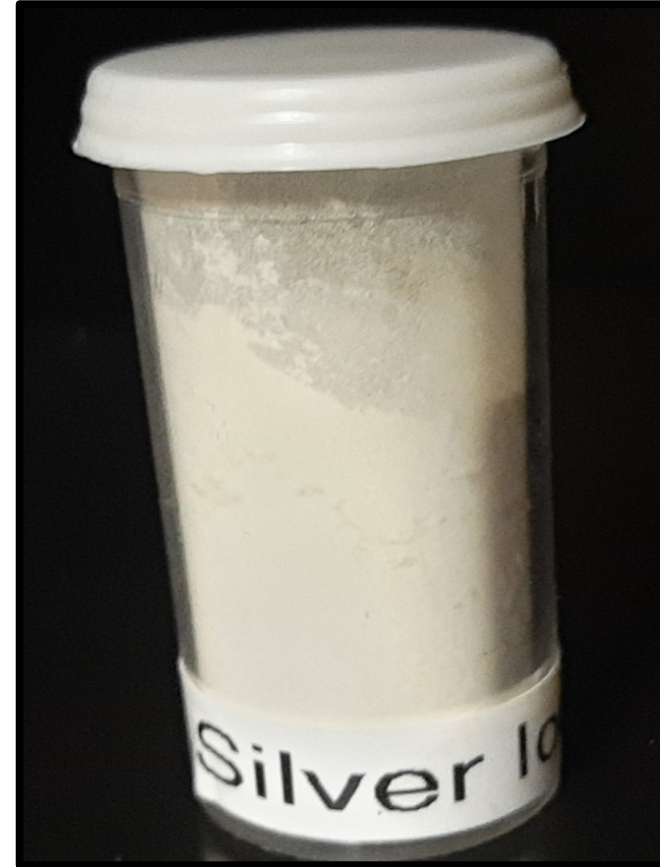


Image Credit:  
David Delene - 2023/01/24

# Effects on Vegetation and Animals

- Project Skywater looked at the additional moisture on the natural vegetation.
- Different areas were affected differently, but the effects on the short term were small.
- The effects on animal life were less pronounced, but there would be changes possible, largely as a result of the vegetation changes.
- Effects tend to be a long term effect and not noticeable on the short term.

# **Erosion and Adverse Effects**

- Additional precipitation would result in additional runoff, especially in the case of winter programs.
- The additional runoff would cause more erosion, especially in mountainous terrain.
- Result in enhancement of an ongoing process.
- Some people will benefit more than others and some may find weather modification undesirable.
- Some examples are snow removal, loggers, and recreational industries.