USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

1. **Title:** Workshop on Best Management Practices for Airport De-icing Stormwater (Information dissemination/technology transfer project)

2. **Focus Categories:** NPP, WW, TRT

3. **Keywords:** stormwater, nonpoint source pollution, de-icing fluids

4. **Duration:** One year

5. **Federal Funds Requested:** $26,430

6. **Non-Federal (matching) funds pledged:** $55,560

7. **Principal Investigator:**

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8. **Congressional District:** First, Massachusetts

9. **Statement of critical regional water problem:**

With the advent of new regulations concerning aircraft de-icing and management of spent aircraft de-icing fluids, many airports now face the challenge of maintaining public safety along with environmental protection. Each year large quantities of propylene glycol, ethylene glycol, and diethylene glycol are used to de-ice aircraft. In addition, urea, which readily breaks down in the environment to ammonia, is in widespread use as a runway deicer. All of these compounds exert large oxygen demands when introduced into natural waterways. In addition, there are toxicity concerns with certain glycols. As a result, the collection and treatment of these wastes is now being mandated by regulatory agencies for protection of both human health and the environment. While numerous alternatives have been proposed for de-icing wastewater management, at the present time there is no firm consensus on the best means of managing this significant problem. This is an information dissemination proposal to request funding to develop a manual and hold a workshop for best management practices for airport de-icing stormwater.

10. **Statement of results or benefits:**

The project manual and workshop resulting from this study should be useful to regulators, airport operators, and environmental engineers, scientists and managers concerned with de-icing fluids management. The management of de-icing wastes is a significant problem at airport facilities, and better solutions need to be developed. The manual and workshop will allow users to be more familiar with management options.