



PROPOSAL
FOR A FALL
SURVEILLANCE
OVERFLIGHT
OF THE
PELICAN RIVER
WATERSHED DISTRICT

A.W. RESEARCH LABORATORIES

- WATER ANALYSIS • LAKE ANALYSIS •
- ENVIRONMENTAL AERIAL PHOTOGRAPHY •

DATE: July 24, 1995

TO: Pelican River Watershed District
Richard Hecock
803 Roosevelt Avenue Suite 100
Detroit Lakes, MN 56502

SUBJECT: **PROPOSAL FOR A FALL SURVEILLANCE OVERFLIGHT OF
THE PELICAN RIVER WATERSHED DISTRICT**

FROM: Gordon Johnson
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INTRODUCTION

A.W. Research Laboratories conducted a surveillance overflight of the Pelican River Watershed on June 20, 1995 to detect and document possible illegal and/or environmentally damaging activities. The overflight was very successful in locating 75 possible illegal and/or environmentally damaging activities within the Pelican River watershed boundaries. We recommended that another surveillance overflight be conducted this fall during thin vegetative cover (leaf off) to locate any possible illegal and/or environmentally damaging activities that may have been hidden from view by the dense vegetative cover of the summer months. The following proposal defines the reasons why another overflight is necessary and as well as lists the effective uses of the imagery data.

PROPOSAL

AWRL proposes to conduct a fall (leaf off) surveillance overflight of the Pelican River Watershed to detect and quantify possible illegal and/or environmentally damaging activities along with permit violations in the specified area. Once detected, the targeted areas will be photographed using 35mm color slides, and hyper spectral video bands where applicable.

To get the most effective use out of AWRL's surveillance overflights they should be flown twice a year, once in the spring before leaf on or in the fall after leaf off and once during the summer months. One flight should be conducted when the ground under dense vegetation can be seen and the other during heavy resource use when the vegetation reflects nutrient or toxic effects. Another reason for two overflights is to document what has been done to rectify any or all of the illegal and/or environmentally damaging activities that were photographed during the first overflight, as well as locate new illegal and/or environmentally damaging activities.

The data collected on the overflight will be analyzed and documented on a slide by slide basis. Location for the detected areas will be referenced on 7.5 minute USGS quadrangle maps. Analysis and maps will be incorporated into a neatly bound report, which can be shared with the property owner resulting in an educational opportunity.

EFFECTIVE USES OF THE IMAGE DATA

1. Current documentation of illegal and/or environmentally damaging activities.
2. A rapid method of reviewing a particular site for permit compliance or non-compliance without actually going into the field.
3. An easily understood means of educating or showing individuals their effect upon the environment.
4. A historical data base that will allow the Pelican River Watershed District to review and compare past issued permits to aid in decisions pertaining to future permit issuance and how they may effect the environment.
5. A method of defining and prioritizing high nutrient point sources draining the various sub-watersheds entering the lakes and wetlands. This will enable the administrators and/or citizens monitoring the lakes and wetlands to prioritize their efforts in further investigation of the nutrient sources.
6. The dual surveillance overflight method can be used to document when new problems occurred by locating new problems that did not exist during the first overflight, what was done or was not done to rectify the problems, and how successful efforts were in rectifying the problems.
7. Aid local Planning and Zoning board in enforcing and issuing fines for illegal activities.

PERFORMANCE SPECIFICATIONS

The following conditions are to be met by A.W. Research Laboratories on acceptance of this bid:

1. All materials, supplies, labor, transportation, etc., will be provided by A.W. Research Laboratories.
2. The final report will contain the following:
 - a. A map showing the location of the detected possible illegal and/or environmentally damaging activities. The map will be made using 7.5 minute USGS quadrangles.
 - b. 35mm color slides of the detected possible illegal and/or environmentally damaging activities.
 1. Slides will be numerically correlated with a map for easy orientation.
 2. Slides will be mounted in clear plastic slide pages for storage.
 3. Video data will be provided on a standard VHS tape.
 - c. An analysis of the suspected activities and their significance.
3. Time table for the project:

The overflight will be conducted during the fall (leaf off) of 1995. The final report will be submitted within three weeks or less, after completion of the overflight.

The following conditions are to be met by the Pelican River Watershed District on acceptance of this bid:

1. All payments will be made in accordance with the terms provided in the financial section of this document.
2. Provide A.W. Research Laboratories with a copy of the ordinances that govern the township to be flown.

**SPECIFICATIONS FOR A FALL SURVEILLANCE OVERFLIGHT OF
THE PELICAN RIVER WATERSHED**

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Surveillance overflight of the Pelican River Watershed as outlined in the proposal dated July 24, 1995.

The total cost of the project as specified in this bid with one copy of the final report to be presented to the Pelican River Watershed District not to exceed \$1,500.00

Flight to be conducted during the fall (leaf off) of 1995.

Payment will be made upon submittal of final report.

SIGNATURE BELOW CONSTITUTES ACCEPTANCE OF ABOVE SPECIFICATIONS

RICHARD HECOCK (Pelican River Watershed District) DATE _____

A.W. RESEARCH LAB DATE _____

Please return to address listed on the title page of this proposal. The unit price and estimate charges in this proposal will be in effect through December 31, 1995. Beyond that time they will be subject to review and revision.

If additional A.W. Research Laboratories services would be required, such as further attendance at meetings, further research, data analysis, or field sampling they will be provided on a time and material basis confirmed through a written request for services.