Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **11** **DECISION**

TOPIC **Contract – Dan Corbin, Inc. – Iowa Orthophoto Quality Assessment**

Recommendation:
The Department requests Commission approval of a contract in the amount of $126,900 in 2009 and not to exceed $130,000 in 2010 with Dan Corbin, Inc. (DCI)

This request would allow Dan Corbin, Inc., a licensed surveyor and photogrammetrist to collect highly accurate, photo identifiable ground survey points and perform subsequent quality assurance testing for the aerial photography collected as part of the Iowa LiDAR Project. It is our intention to issue a one-year contract in April 2009 to cover approximately ½ of the state with the possibility of extending it another year (if funding allows) for the second ½.

Funding Source:
This project will be funded through Pooled Technology dollars. The Department received a grant from the Pooled Technology fund for the work in 2009. Dollars for 2010 have been requested from the same fund and the request has been scored in the top three. If the legislature decides not to fund the Pooled Technology program in 2010, the contract will NOT be extended to cover that effort.

Purpose:
The purpose of this contract is to ensure data being collected for the Iowa LiDAR Project (both LiDAR and aerial photography) are meeting the accuracies stated by those vendors. Furthermore, this contract will quantify any errors so the Department can effectively evaluate the utility of the data for such uses as floodplain mapping, levee assessment, sediment basin design, *etc*.

Consulting Firm Selection Process:
This contractor was chosen for several reasons. First, Dan Corbin, Inc. is an Iowa firm. They have a long and proven history of completing successful projects of this nature locally. Lastly, they offered the Department the most affordable rates of all bidders.

Scope of Work:
Executive Summary for NSSDA Horizontal Accuracy Testing
DCI will use the National Standard for Spatial Data Accuracy (NSSDA) to measure and report the horizontal positional accuracy of the final digital orthorectified photography. The NSSDA provides a step-by-step approach and sound statistical methods for measuring and reporting the positional accuracy of digital spatial data.
Briefly, the steps in applying the NSSDA are:
1. Select a set of test points from the data set being evaluated.

2. Select an independent data set of higher accuracy that corresponds to the data set being tested.
3. Collect measurements from identical points from each of those two sources.
4. Calculate a positional accuracy statistic using the NSSDA horizontal accuracy statistic worksheet.
5. Prepare an accuracy statement in a standardized report form. A data set's accuracy is tested by comparing the coordinates of points within the data set (digital orthos) to the coordinates of the same points from an independent data set of greater accuracy. Points used for this comparison must be well-defined. Twenty or more test points are required to conduct a statistically significant accuracy evaluation of an area. An area of a minimum of one county in size of digital orthos will be tested as a whole to meet the specified horizontal accuracy at 95% confidence level. An accuracy statement will be prepared for the final digital orthos for each area tested.

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