

CR ENVIRONMENTAL, INC.

**GEOPHYSICAL AND HYDROGRAPHIC SURVEY
UNCERTAINTIES AND LIMITATIONS**

1. Acoustic methods of remote sensing in aquatic environments are influenced by the chemical and physical characteristics of the waterbody and underlying sediment. Water column characteristics which introduce uncertainty include: biological interference (e.g. fish or debris in mid-water column); conductivity/salinity and temperature as they affect sound velocity; and weather and other surface conditions as they effect navigation. Sediment and bottom characteristics which introduce uncertainty include supersaturated flocculent sediments; sediments which contain entrained natural gases (e.g., sulfides, methane) which limit sonar penetration; steep slopes which may limit sonar bottom penetration due to increased angle of incidence or scattering; and rooted vegetation. CR Environmental, Inc. (CR) has made all technically feasible attempts to minimize the above uncertainties as described in the report.
2. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of services or the time and budgetary constraints imposed by the Client.
3. The conclusions and recommendations contained in this report are based in part upon the data obtained using acoustic remote sensing observations obtained along survey transects spaced approximately 10 to 50 feet apart. Information presented in this report between the survey transects (i.e., depth contours) is based on mathematical interpolation, and thus may not be suitable for navigation.

CR Environmental, Inc. respectfully reserves the right to amend this report should new information become available.