CHAPTER 2
INTRODUCTION

PROJECT BACKGROUND

The Lake County Public Works Department (LCPWD) owns and operates a water system in the Village of Vernon Hills that serves approximately 6,500 customers with an average day water demand of approximately 2.1 million gallons. Lake County purchases water for the Vernon Hills distribution system from the Central Lake County Joint Action Water Agency (CLCJAWA), an intergovernmental cooperative formed by the communities it serves. The water is pumped from Lake Michigan and treated by CLCJAWA at the Paul M. Neal Water Treatment Facility in Lake Bluff. The Vernon Hills water system includes 90 miles of water main, four ground storage reservoirs, and two elevated towers holding 3.8 million gallons of water.

The purpose of this study is to evaluate the electrical systems and Supervisory Control and Data Acquisition (SCADA) systems at seven remote water facilities and the SCADA System Center at the Vernon Hills NCT Water Reclamation Facility (WRF), as shown in Figures 2-1 and 2-2. Numerous electrical system upgrades are needed to improve old and obsolete equipment and allow the water system to function properly. They will also alleviate the current concerns of failure due to obsolete parts that can no longer be purchased.

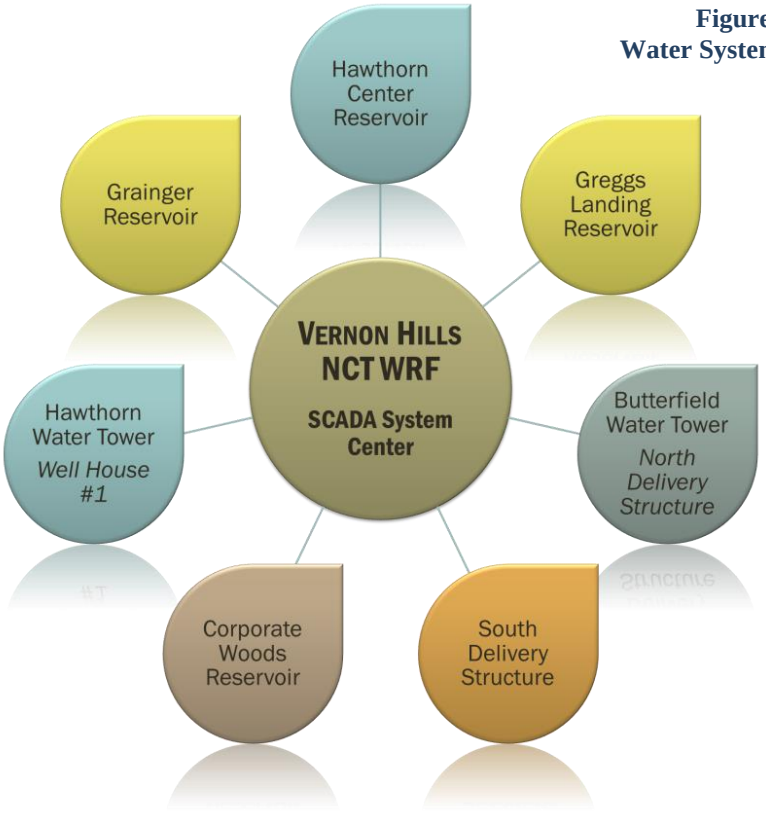

Figure 2-1
Water System Facilities