

# Project Title

## Project Background

### Client background

The Alberta Government in the 1980-1990's encountered a nascent and growing interest in ecological conservation. Two-thirds of Alberta is Crown or public land. Large national and provincial parks astride undesignated land that is open to resource extraction. In between these two extremes are 248 smaller Protected-Areas.

Ranging from a fraction of an acre to many thousands of acres, these Protected-Areas provide local recreation, natural capacity, and stepping stones for floral and fauna to move from one area to another.

Concurrent with this, the Stewards of Alberta's Protected Areas Society (SAPAA) was established. An independent organization, it represented the interests of the Stewards. Fast forward to 2018 and a seismic shift in the non-profit landscape occurred.

**OHS.** Alberta's Occupational Health and Safety (OHS) legislation was amended to include volunteers as unpaid workers. Suddenly the government, and select organizations, were faced with the prospect of having to develop an OHS compliant volunteer safety program.

### Project details

SAPAA is at a watershed moment in its existence. The original focus on a government run program has ceased to exist. Interest among its members to report on the protected areas remains high. As well, it is believed there is strong interest across Albertans to be 'Citizen Stewards' and 'Citizen Scientists' as the protected areas come under increasing pressure from population growth, abuse, and global demand for resources.

For SAPAA to be successful, it requires a robust underpinning of technology and information management. That underpinning starts with **Site Inspection Form v2024-Winter and the University of Alberta course CMPUT 401.**

**Does the project involve the development of a new system? Or is it about changing (or migrating) an existing software system? Or is it about an extension to a system under development? Is there code to be reused? Is there data to be ingested into the system?**

SAPAA wants CMPUT 401 to focus on improving a web based Site Inspection form. What will be delivered is a 'working proof of concept' v2024-Winter. This tool will be fully functional and may or may not be deployed based on its state of readiness. Nevertheless, the tool will be shown to peer organizations and potential funders to help these stakeholders better understand what SAPAA 2.0 looks like and whether they wish to support (and fund) the technology to underpin 'Citizen-Stewards' and the 2030 vision. Before jumping ahead to 2030, some practicalities for 2024.

**Who will be the users?**

For the first few years, the users will likely be 60+ in age. What are the GUI considerations for this demographic including near-sightedness, ease of use, degraded hand to eye coordination?

**What is the computer-usage experience of the envisioned users?**

Most of the existing users own and use smart phones (Android and iPhones). They are not sophisticated users and require an intuitive and simple GUI.

**Is it an open-source project? If yes, which license is preferable?**

The resulting tool may be an application, a web form, or another method of delivery. If it is an application, it can be developed open source; given the plethora of possible licensing considerations, a recommendation from the CMPUT 401 project team is appreciated.

## Project Sponsor and Stakeholders

**Please name the person(s) from your organization involved in the project and their roles.**

**Who will sign off?**

The SAPAA executive sponsor for the project is Frank Potter; his peer in this respect is Mark Polak who is acting as the Account Manager.

**Who will be available to meet with the students? We anticipate that at least four meetings will occur between the development and client teams.**

Day to day activities is managed by the respective Project Managers, Frank and a student to be named. Below this level, the parallels between the structures split.

## Key Functional Requirements of the System

Provide a list of at most ten functions the system should have. Consider organizing these functions according to the types of users who will exercise them.

Req. #	Type	Name	Requirement description
R02	0.Business	Real Time Report	Tool supports gathering, editing and submitting a site inspection report in the field. Media files can be transmitted along with the report.
R06	0.Business	Tech Know	Resulting product can be configured but must not require technical interventions as this skill does not exist in SAPAA.
R08	0.Business	Tech-Data	Data will be saved to a Google Sheet on a pre-existing Gmail account.
R10	fe.Ease	Responsive Design	Tool will respond to consuming device and render correctly.
R12	fe.Ease	TX Handle	A single site inspection submission represents one volunteer's visit to one site on one day
R14	fe.Ease	USE-Efficiency	A trained volunteer can complete the radio buttons and drop downs in <90 seconds.
R16	fe.Ease	USE-Intuit	A typical volunteer can be trained to use the tool and complete their first report in < 2 hours.
R18	fs.Safety	Toolbox	Before starting a site visit, app will run through a 'tool box safety' check with the volunteer.

# Technical Requirements

## What programming language and/or development tools must be used?

In designing and planning for v2024-Winter, the project team must work within the following constraints:

1. SAPAA uses the 'starter' plan from wordpress.com . This plan supports embedded iframes. Based on the support level purchased, SAPAA cannot implement plugins and has limited technical access.
2. The data storage method will be a free Google Drive and associated tools such as a Google Sheet. Free data repositories that can seamlessly integrate with wordpress.com and Google Drive will be considered.
3. There is no technical knowledge to maintain or develop beyond user accessible tools described above.
4. The resulting tool may be an application, a web form, or another method of delivery. If it is an application, it can be developed open source; given the plethora of possible licensing considerations, a recommendation from the CMPUT 401 project team is appreciated.

## What type of operating systems does it need to run on?

This is an early design consideration for the project team. Likely the resulting application will be operating system agnostic.

## Is the system web-enabled (i.e., all interactions will be through a web browser)?

Yes

## Will your organization be providing the development platform?

Yes

## Will your organization be providing the deployment platform?

Yes

## Quality Requirements

List the three most important [quality requirements](#) (i.e., user-response time, throughput, usability, security, privacy, extendibility) for the envisioned system.

Req. #	Type	Name	Requirement description
R14	fe.Ease	USE-Efficiency	A trained volunteer can complete the radio buttons and drop downs in <90 seconds.
R16	fe.Ease	USE-Intuit	A typical volunteer can be trained to use the tool and complete their first report in < 2 hours.
R44	fe.Ease	USE-Reading Glasses	UI can be read by someone requiring a < 2X reading glasses.
R68	fe.Ease	USE-Efficiency	Spell and grammar check is available in text fields.