

Wisconsin DNR Water App

Team Two

02-07-17

Overview

- Users and Environment
- Cognitive Walkthrough
 - Nominal Use Scenario (Donna)
 - Error Handling Scenario (Lenny)
- Usability Goals
- Usability Concerns

Users and Environment

- Contracted county staff:
 - Will be minimally trained
 - Will be the only people interacting with App
 - Fills out online form and print a copy
- Environment:
 - App will be used across urban and rural areas
 - User will drive out to one of many Water Systems

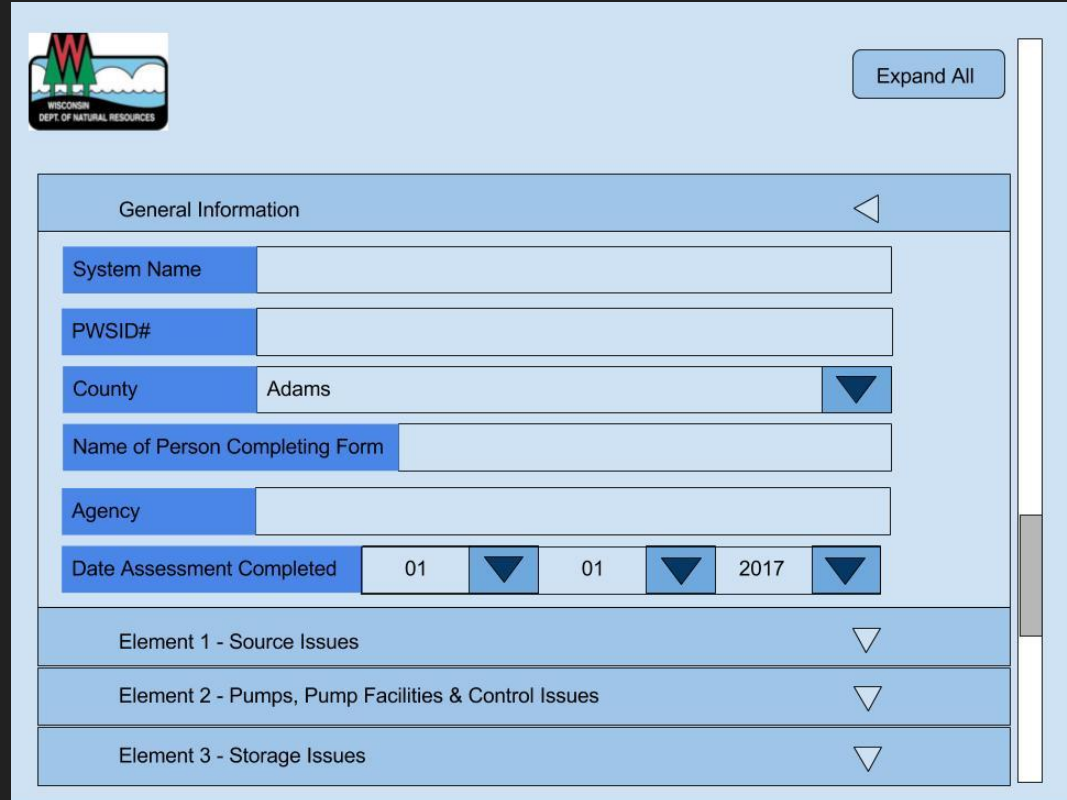
Cognitive Walkthrough

Nominal Use Scenario

- Donna Johnson
 - 52 years old
 - Has been working with the Wisconsin DNR for past 10 years
 - Has a smartphone, but has trouble operating it
 - usually her sons set things up for her
 - can perform simple tasks on her phone, but cannot troubleshoot issues
 - Before working at the DNR Donna worked at a financial firm, and also a law firm
 - used a computer for word processing and scheduling
 - familiar with Microsoft Office

Nominal Use Scenario

- Donna drives out to a site to perform a water site inspection
- Within cell service so can connect phone's browser to Well Inspection form
- Enters the System name, PWSID, and County
- Allows access to the rest of the form



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Expand All

General Information

System Name

PWSID#

County Adams

Name of Person Completing Form

Agency

Date Assessment Completed 01 01 2017

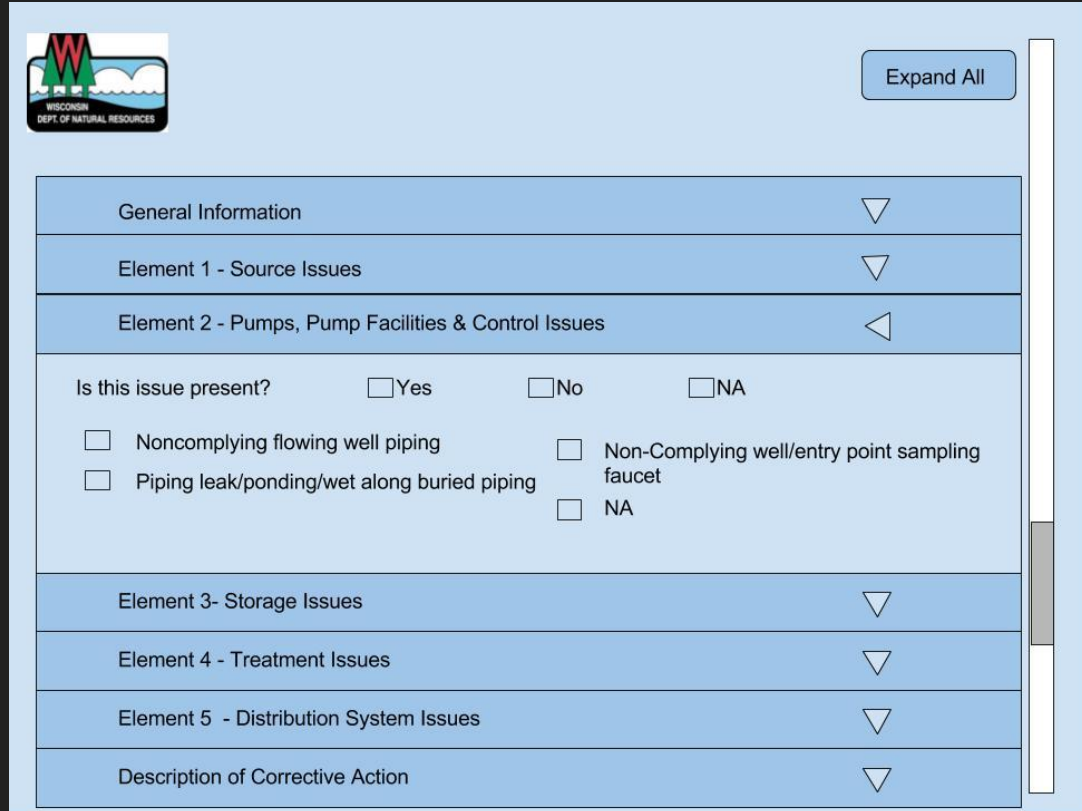
Element 1 - Source Issues

Element 2 - Pumps, Pump Facilities & Control Issues

Element 3 - Storage Issues

Nominal Use Scenario

- Continues with the inspection



The screenshot shows a web-based inspection form interface. At the top left is the Wisconsin Department of Natural Resources logo. At the top right is an "Expand All" button. The main content area is a vertical list of expandable sections, each with a downward-pointing triangle icon:

- General Information
- Element 1 - Source Issues
- Element 2 - Pumps, Pump Facilities & Control Issues
- Element 3- Storage Issues
- Element 4 - Treatment Issues
- Element 5 - Distribution System Issues
- Description of Corrective Action

Below the "Element 2" section, there is a form for reporting issues. It starts with the question "Is this issue present?" followed by three radio button options: "Yes", "No", and "NA". Below this are five checkboxes for specific issues:

- Noncomplying flowing well piping
- Piping leak/ponding/wet along buried piping
- Non-Complying well/entry point sampling faucet
- NA

Nominal Use Scenario

- Sees something wrong with the way the water is being stored
- Expands Description of Corrective Action
- Fills out the appropriate info

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Expand All

General Information	▼
Element 1 - Source Issues	▼
Element 2 - Pumps, Pump Facilities & Control Issues	▼
Element 3- Storage Issues	▼
Element 4 - Treatment Issues	▼
Element 5 - Distribution System Issues	▼
Description of Corrective Action (If Required)	◀

Corrective Action Due Date

Review and Print

Nominal Use Scenario

- Donna clicks the review and print button to review info that was entered
- Brought to a page that shows her what is being printed out on paper



SECTION A - RECENT CHANGES	
Have any of the following occurred in the last year? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<input type="checkbox"/> Changes in nearby land use activity/potential new contamination sources (blasting, fire suppression, land spreading, septic issues)	<input type="checkbox"/> Visible indicators of unsanitary conditions (vermin, animal waste, chemicals)
<input type="checkbox"/> Other _____	
SECTION B - SURVEY OF WATER SYSTEM ELEMENTS (Potential Sanitary Defects)	
Element 1 – Source Issues? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<input type="checkbox"/> Conduit damaged/missing	<input type="checkbox"/> Well casing damaged/corroded
<input type="checkbox"/> Floodwater/runoff ponding/topped well	<input type="checkbox"/> Well cap/well seal damaged
<input type="checkbox"/> Grout or seal around well damaged	<input type="checkbox"/> Openings through well cap not watertight (bolts/wires/lines)
<input type="checkbox"/> Vent damaged/unscreened	<input type="checkbox"/> Other _____
Element 2 – Pumps, Pump Facilities & Control Issues? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<input type="checkbox"/> Noncomplying flowing well piping	<input type="checkbox"/> Non-complying well/entry point sampling faucet
<input type="checkbox"/> Piping leak/ponding/wet along buried piping	<input type="checkbox"/> Other _____
Element 3 – Storage Issues? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<input type="checkbox"/> Pressure not holding	<input type="checkbox"/> Other _____
<input type="checkbox"/> Tank deterioration, rust, holes	
Element 4 – Treatment Issues? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	
<input type="checkbox"/> Broken part(s) system malfunction	<input type="checkbox"/> Other _____
<input type="checkbox"/> Filter(s) or brine tank not cleaned/ maintained	
Element 5 – Distribution System Issues /Cross Connections? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	

Back

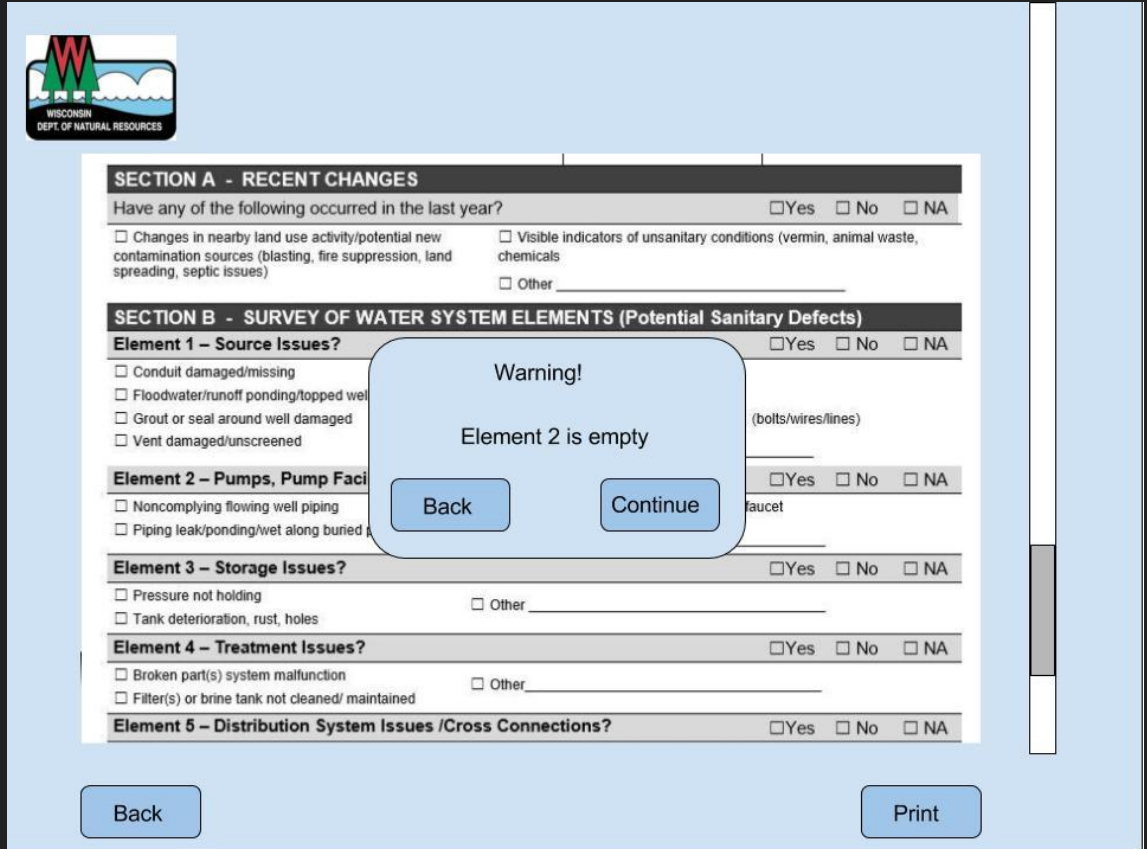
Print

Error Handling Scenario

- Lenny Smith
 - Goes to school at University of Michigan
 - Wanted to be home for the summer
 - Working a temporary position at the Wisconsin DNR
 - Can pick up on computer skills quickly
 - Owns own smartphone
 - Doesn't read instructions before prior to attempting the system

Error Handling Scenario

- Lenny quickly performs water site inspection
- Gets to screen 4 and clicks the print button
- Warning message pops up



The screenshot shows a web-based inspection form for the Wisconsin Department of Natural Resources. The form is titled "SECTION A - RECENT CHANGES" and "SECTION B - SURVEY OF WATER SYSTEM ELEMENTS (Potential Sanitary Defects)". It contains several sections with checkboxes for various issues. A warning message box is overlaid on the form, stating "Warning! Element 2 is empty" and has "Back" and "Continue" buttons. The form also has "Back" and "Print" buttons at the bottom.

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SECTION A - RECENT CHANGES

Have any of the following occurred in the last year? Yes No NA

Changes in nearby land use activity/potential new contamination sources (blasting, fire suppression, land spreading, septic issues) Visible indicators of unsanitary conditions (vermin, animal waste, chemicals) Other _____

SECTION B - SURVEY OF WATER SYSTEM ELEMENTS (Potential Sanitary Defects)

Element 1 – Source Issues? Yes No NA

Conduit damaged/missing Floodwater/runoff ponding/topped well Grout or seal around well damaged Vent damaged/unscreened

Element 2 – Pumps, Pump Facilities? Yes No NA

Noncomplying flowing well piping Piping leak/ponding/wet along buried piping

Element 3 – Storage Issues? Yes No NA

Pressure not holding Tank deterioration, rust, holes Other _____

Element 4 – Treatment Issues? Yes No NA

Broken part(s) system malfunction Filter(s) or brine tank not cleaned/ maintained Other _____

Element 5 – Distribution System Issues /Cross Connections? Yes No NA

Warning!

Element 2 is empty

Back Continue

Back Print

Usability Goals

- Efficient
 - Entering lots of information
- Utility
 - Everything the user needs is there
- Learnable
 - Range of expertises using the app

Usability Concerns

- Entering incorrect data type
- Leaving part of the form blank
 - Pop up warning message
 - Can continue or go back and fill in the blank

Questions?