**Requirements for**

**Recall Information Sharing System**



Texas Feed and Fertilizer Office of the

Control Service Texas State Chemist

**Office of the Texas State Chemist**

**Texas A&M AgriLife Research**

# Revision History

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| --- | --- | --- | --- |
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# 1. Introduction

According to the Food and Agriculture Organization of the United Nations (FA) and the World Health Organization (WHO), a recall is “The action to remove food from the market at any stage of the food chain, including that possessed by consumers.” In the context of risk analysis, a food or feed recall is one the most important tools in a food safety control authority’s risk management options. In essence, a recall is also the recognition that a failure has occurred somewhere in the food safety assurance system, and a last resort to remedy such failure and protect human or animal health.

A major difficulty when performing recalls is sharing the information between different organizations in different countries which may have been affected. An internationally available recall information sharing system would allow easier coordination between these organizations. This document will define the requirements for such a system.

# 2. General Description

This system will be built based on suggestions from volunteers from Caribbean and Latin American countries. This system will be designed to share information between those countries as well as the state of Texas. The project requirements below are only for software and protype testing, there has been no consideration for long-term hosting of the site, as this will involve coordination with member organizations, which would push the project past the available timeline.

2.1 Perspective

This will be a stand-alone web based system. Integration with Infosan is not within the scope of this initial project, but may be included later. This project will follow the example of systems like RASFF, but will focus more on communication and less on historical trends.

## 2.2 User Interfaces

­­­­­­There will be a public display interface through the web, which will show recent recalls of high enough priority. The system will have a log-in screen and an interface to allow verified users to add new recalls to the system.

## 2.3 Hardware Interfaces

Long-term hardware is unknown. Hosting for development will be performed on Office of the Texas State Chemist servers, but the final hosting service is not determined. There is significant risk in not having final destination assigned, but we will try to mitigate this risk with open source mysql database. The development will be performed on Microsoft servers, and will use the OTSC license. Once the final hardware and hosting decisions are made, this section will be updated.

## 2.4 Software Interfaces

1) MySQL database will be used for back end storage. No license required.

2) VB.net and aspx will be used for client and server side code. No license required.

3) Microsoft Visual Studio will be used for development and deployment. Already have development license, will not need license after deployment.

4) Microsoft Windows 2012 Server with built-in IIS web server will be used for development. This will utilize the already existing OTSC license. Long-term hosting is not covered in the cost or timeline of this project.

5) Microsoft Exchange 2013 E-mail Server will be used for development. This will utilize the already existing OTSC license. Long-term email is not covered in the cost or timeline of this project.

6) SSL certificate will be required for the authenticated user URL. A license for this will need to be purchased as part of this project.

7) PHPMyAdmin will be used to manage the creation of the database through development. This does not require a license.

8) This project includes no backup system. This is a significant risk if this project moves beyond a prototype. Long-term hosting and maintenance is not covered in the cost or timeline of this project.

## 2.5 Communication Interfaces

The system will be available in both Spanish and English. All input from users must be in all languages it will need to be read in, translation of user input is far beyond the scope of this project. Users of the system will accept translation responsibilities for recall information.

We will utilize email communication to appropriate contacts using this system. This will be initially developed utilizing Office of the Texas State Chemist email addresses, but this may need to change to a more generic email address if this is deployed beyond Texas A&M. This presents only a small risk as email is a fairly standardized system.

## 2.6 Assumptions and Dependencies

1) This project must remain small enough to be completed within the time allotted by the grant, any changes or addition requirements beyond what is stated in this document will not be included.

2) The current hardware allotted for the development of this project will not support full international use of this system. If this system is deployed and used international, there will be additional time and money needed to integrate the system with capable hardware.

# 3. Specific Requirements

## 3.1 External Interfaces

*3.1.1 External Input*

1) There will be a single screen for input of new recall. Users will be required to input product and tracking information, as well as countries affected. For each data point with limited options, such as country of origin, there will be one input field. For each field that allows free text entry, there will be one box for the Spanish version of the text and one for English. The system will store both with the Recall record.

2) The system will include a page to edit or delete recall information, available only to the user who entered the information. The edit page will look similarly to the input form for ease of use.

3) There will be a separate administrative screen that will allow the addition of new users to the system, and the reset of current user passwords. This screen will also allow the selection of when emails should be sent to each user.

*3.1.2 External Output*

1) There will be a public screen on the website which will include a table with recent recalls which have been marked “available to public”. The user will be able to filter by country of origin, affected country, business and product category.

2) Once an authorized user has logged in, there will be a table with all recent recalls. The user will be able to filter by country of origin, affected country, business and product category and action taken.

3) There will be an information panel, which will include all available information related to a specific recall, available from output 2.

4) Once an authorized user has logged in, there will be a second screen with all of the recalls that user has entered. This table will connect with input 2.

5) For administrative users, there will be a screen listing all active users’ information. This screen will allow administrators to access input 3.

## 3.2 Functional Requirements

*3.2.1 Store Alert Data*

The system will store the following recall data. Any verified user will be able to add a recall, and edit or delete a recall if they originally added that recall.

1) Product Name - free text, store English and Spanish separately  
2) Product Category - options stored in database  
3) Product Information - free text, store English and Spanish separately  
4) Origin Country - options stored in database  
5) Affected Countries - multiple selections, options stored in database  
6) Company Information - free text, store English and Spanish separately  
7) Tracking Information - free text, store English and Spanish separately  
8) Severity - options stored in database  
9) Hazard Information - free text, store English and Spanish separately  
10) Action Taken - free text, store English and Spanish separately  
11) Status of Recall - options stored in database  
12) Share with Public - yes or no check box  
13) Other Notes - free text

The system will also store user information along with the entry, to determine who can edit the record, as well as added and last update timestamps for display and logging.

*3.2.2 Store User Data*

The system will maintain a list of users and roles within the system. The admin users will be able to add and edit user information and reset passwords. The stored data will be.

1) Email Address  
2) Hashed password  
3) Password seed  
4) Name  
5) Organization Name  
6) Country  
7) Email options  
 a) Severity 1: (Don’t email, Only my country, All)  
 b) Severity 2: (Don’t email, Only my country, All)  
 c) Severity 3: (Don’t email, Only my country, All)  
8) Admin – yes or no

*3.2.3 Display Data*

The system will display data in based on the external output requirements in section 3.2.1

*3.2.4 Email Users*

The system will email any user who has been set up to receive emails based on country and severity of recall. When a recall is created the system will save the data, and send an alert email with the system generated recall number, product name and category. This email will be sent based on the severity, affected countries and originating country to each user whose email preferences match those criteria. Whenever the recall is updated, another email will be sent out based on the same criteria. If the update to the recall changes the affected countries or the severity, the email list will be reset based on the new and information.

## 3.3 Performance Requirements

There are no performance requirements, as there is no set hardware for this project. Performance will tested to ensure usability on development servers, but no specific guidelines can be defined.

## 3.4 Reliability

The reliability requirements cannot be set without long-term hosting, backup, and disaster recovery provisions. The reliability requirements for development and prototyping are that a mock recall can be run through the system and resulting data is displayed correctly.

## 3.5 Security

Recall information will be publically available. Recall information will only be editable by defined users of the system. User information will only be able to be viewed and edited by administrative users. Password information will be hashed and seeded, and will not be accessible to anyone.

# 4. Change Management Process

There will be no official change management process for this project. Any change requests will be shared and discussed by email, and any change to these requirements would need approval from the Director of the Office of the Texas State Chemist and the IT team.