Watermaster Well Database
System Improvements - WWDIM
Business Requirements Specification
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## Document Revision History

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  • Adding ‘Unknown’ status in section 5.1.1
  • Moving item ‘Groundwater Level Monitoring Data Report’ to section 5.1.7 from 5.1.8
  • Corrected numbering on document | Kalani Tennakoon |

## Reviewers

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<td>09/21/2010</td>
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## Document Approvals

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1 Introduction

1.1 Purpose
The purpose of this document is to capture the business requirements of enhancements to MPWMD Water Master Database System.

1.2 Scope
Scope of this document is to specify the business requirements related to the enhancements to MPWMD Water Master Database System. The target audience would be all the stakeholders of the project.

1.3 Definitions, Acronyms and Abbreviations

1.3.1 Definitions
N/A

1.3.2 Acronyms and Abbreviations

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<td>MPWMD</td>
<td>Monterey Peninsula Water Management District</td>
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1.4 References and Supporting Documentations

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2 Project Summary

2.1 Project Objectives

Enhance the existing MPWMD Water Master Database System in terms of the identified areas of improvement.

2.2 Project Scope and Boundary

Project covers requirement analysis, design, development and testing required in-order to incorporate identified areas of improvement.

2.3 Assumptions

N/A

2.4 Constraints and Dependencies

WWDIM project will be implemented on top of the existing code base of the MPWMD Water Master Database System (Seaside Basin Watermaster Database).
3 Business Scenario

3.1 Current Business Context
The existing WWDIM system is mainly associated with “Well” production capturing and reporting for seaside basin area. System was initially built by RBF consulting. Later Zone24x7 incorporated new changes to the user access permissions and web application default page.

3.2 Current Business Problems
Some reports do not exactly cater in format and content with the requirements of staff. These were identified by MPWMD and are being catered in this project. Also some of the data input screens were lacking the functionality of being able to input certain fields.

3.3 Business Risks
N/A

3.4 Business Rules

3.4.1 User access level protection
The enhancements should adhere to the currently existing behaviour of exposing functionality according to user access levels. Currently the system is defined with user accessing levels as 1, 2, 3 and 4 where level 4 is granted with highest privileges of accessing the system.
4 Current System

4.1 Overview
The system mainly contains the following functionalities;
- Web application to list and view/edit “Well” related information, with action to add new “Wells” to the system.
- Reports for administration purposes.

4.2 Current System Architecture
The current system is a .NET based web application and SQL server reporting is used for Reporting functionality. The backend database is in SQL 2005 Server Express Edition.

4.3 Current System Limitations and Issues
The current system lacks some of the reporting facilities required during board meetings and data analysis. These are identified in 4.4.7 and 4.4.8 sections of this document.
5 Business Requirements

5.1 Business Functional Requirements

5.1.1 Ability to list Wells by Well status
System should have the ability to view the Well List screen filtered by the “well status” (Active/Inactive/Destroyed/Unknown). This would require the ability to specify the “well status” in Well Details screen.

Note: User access level 1 – 4 for specifying the “well status” in Well Details screen

5.1.2 Ability to choose the Well List view
System should allow to customize the whether the following columns are viewable or not in the Well List screen.

- Company Name, Common Name, Address, City, State, Zip, Contact Person, Telephone, Email, Owner Type, Assessor’s Parcel Number, Subarea, Northing, Easting, Reference Point Elevation, Well Casing Diameter, Total Depth of Completed Well, Date Well Completed, DWR Well Completion Report No. (Construction), Date Well Destroyed, DWR Well Completion Report No. (Destruction), Geologic Unit, Meter Unit.

Note: User access level 3 and 4

5.1.3 Production Screen format improvement
The Production screen should be modified accordingly to match the monthly production reporting template that Producers use currently to report their “Well” production.

Note: User access level 3 and 4

5.1.4 Ability to enter additional water quality related data
Following two data entries need to be added through the Water Quality screen.

- Bicarbonate
- Carbonate

5.1.5 Ability to enter the common name for company name
The Contacts screen needs the ability to view, edit, add a “Common Name” for the Company Name. This needs to be placed after “Company Name” column.
For example, in the database there is a Company called “King Venture”, but the Common Name for this Company is “Calabrese”. The modification will allow cross-referencing of Company Name with Common Name.

**Note:** User Access level 3 and 4

### 5.1.6 Map Functionality
Display all the “Well” locations on the map of the Basin on loading and ability to click on a specific “Well” on the map, and have data about that “Well” appear in a pop-up box on the map.

### 5.1.7 Enhancements to existing Reports
- Detailed Production Report – Addressing issues on:
  - In the production report currently generated, the “Report Date” (to be changed to “Report Month”), “Begin Date”, and “End Date” columns do not show accurately with respect to the information entered at the data entry screen. Discussing this issue scenario with an example can be found at Section 7 of this document.
  - Currently the report cannot identify the “Well” information for the records displayed.
- Groundwater Level Monitoring Data Report - enhancements to existing “Depth” report.
- Reports need to be added with “Well Master ID” and “Well Name” columns where relevant.

### 5.1.8 New Reports
- Compliance Report
- Summary Production Report
- Contacts Report

### 5.2 Client specific requirements

### 5.2.1 Performance Requirements
The current performance of the system will be maintained throughout the new enhancements as well.
5.2.2 Security Requirements
   Different level of employees will be granted different level of
   accessibilities, by following the role based permissions in the current
   system through user levels.

5.2.3 Usability Requirements
   The enhanced features will be consistent with current usability related
   features.

5.2.4 Capacity and Volume Requirements
   N/A

5.2.5 Technology Requirements
   • Windows 2003 server with IIS service and .NET framework 2.0
   • SQL 2005 Server Express Edition

5.2.6 Other Requirements
   N/A

5.3 External System Requirements

5.3.1 ESRI Maps
   The “Well” locations will be marked using ESRI services.

5.4 Future Proofing Requirements
   N/A
6 Support and Maintenance Requirements

6.1 Archiving and Backup Requirements
N/A

6.2 User Training Requirements
Training to the new enhancements will be delivered through System Demos as necessary.
7 Appendices

Issue scenario of the Detailed Production Report related to section 4.4.7.

Production data entry screen for York School well, Well ID No. 212 is shown below.

Detailed Production Report for Water Year 2008; currently generated related to above data is shown below.
As displayed the dates does not show accurately (the colored boxes around data depicts the same). This should be corrected for the dates to be accurate.

The corrected report should be as follows.

<table>
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<tr>
<th>Report Date</th>
<th>Begin Date</th>
<th>Begin Reading</th>
<th>End Date</th>
<th>End Reading</th>
<th>Total</th>
<th>Units</th>
<th>Total Acre-Feet</th>
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