



Prepared for:

Environment Agency for England and Wales

National Groundwater Modelling System

Release Documentation

NGMS Version 0.9 (2007/01)

July, 2007

CLIENT:	Environment Agency, UK						
TITLE:	National Groundwater Modelling System Release Document NGMS v2007/01						
REFERENCES:	EA Contract Reference Number 11915 EA Purchase Order Number not received yet						
VER.	ORIGINATOR	DATE	REMARKS	REVIEW	APPROVED BY		
	Ververs & Gijsbers						
PROJECT IDENTIFICATION:		Q4415					
KEYWORDS:		Delft FEWS, National Groundwater Modelling System, NGMS					
NUMBER OF PAGES		13					
STATUS:		<input type="checkbox"/> PRELIMINARY		<input type="checkbox"/> DRAFT		<input checked="" type="checkbox"/> FINAL	

Preface

The document describes NGMS release 0.9, based on DelftFEWS release2007/01.

The release documentation includes the following information:

- a description of the changes in the system functionality
- configuration issues

Contents

1	Introduction	1—1
2	New in this Software Release.....	2—1
2.1	Operator Client	2—1
2.2	FEWS Modules.....	2—2
2.3	Config Manager	2—3
2.4	Admin Interface & Master Controller	2—3
2.5	Various.....	2—4
3	Configuration issues	3—1
3.1	Location issues.....	3—1
3.2	Module adapter issues	3—1
3.3	Scenario editing issues	3—1
3.4	Synchronization issues	3—1

I Introduction

This document provides information regarding the NGMS release 0.9, based on DelftFEWS release 2007/01. This version will be available to the EA on 9 July 2007.

This document describes:

- changes that were made in comparison to the previous release of the software
- outstanding configuration issues

2 New in this Software Release

In the next sections the new features in this released are described. Most features are not used in NGMS.

2.1 Operator Client

The following bug fixes and new features have been implemented:

Component	Action
Time Series Display	Resolution of exception in preconfigured displays
	Quality labels
	Display of ensemble including statistical distribution
Spatial Display	Automatic refresh when new data comes in
	Contour plots
	Folder structure
	Navigation buttons
What-if Scenario Display	Improvement to deletion of what-if scenarios
	IDs less sensitive to user entries
Scenario editor	beta-release (not 100% bugfree)
Explorer	Navigation buttons
Correlation Displays	Cross hairs always visible in scatter graph, also when cursor is not moving.
Skill Scores Display	Resolution of bugs in computation of Contingency Table parameters
Help	Update to Help content

2.2 FEWS Modules

The following bug fixes and new features have been implemented:

Component	Action
Core	Data format change longitudinal profiles
Import	Import of data in GRIB format
	Addition of elements for rotated long-lat & polar stereographic co-ordinate systems
Validation	Improvement to avoid erroneous data slipping through checks
	Correction to same readings check when data is arriving one at the time
Interpolation	Added direct interpolation from grid to longitudinal profile
Transformation	Persistence feature has been improved
	Dealing with 'gaps' between user defined segments of rating curve automatically
	Computation of maximum surge in moving windows of configurable length
	Allow non-equidistant data in typical profile
Threshold Event Crossing	Improvement of performance with large number of threshold events in system
Error Correction	Allow configuration of analysis window independent of relative view period
	Allow for using user defined parameters
Reports	No export to file system ('old webserver'). 'Reports' item removed from Tools Menu.
	Allow for thresholds not being available for all locations when configuring reports
	Display colours of thresholds
	Avoid 'End of Zlib' error in report export
	Export of reports to PDF
Synchronisation	Synch levels to configuration files
	Session handling and reconnection mechanisms have been made more robust (see also Master Controller)
	Automatic refresh following configuration update
	Correction to queuing of synch tasks in Custom Profile
	Allow synchronisation of large files
	Allow synchronisation of astronomical data between servers of duty-standby system

Component	Action
Local Datastore	Synchronisation without errors to Local Datastores that have not been used for some time (with lots of expired data)
	Reading ‘maps’ from the datastore. Distribution of maps via synchronisation and file system
	Reading ‘icons’ and ‘images’ from the datastore
	Introduction of Firebird as Local datastore on the forecasting shell servers

2.3 Config Manager

The following enhancements and bug fixes have been implemented...

Component	Action
Upload/download	Correction of download of ModuleConfigFile Report_Export_ZIPFile.xml
	Resolution to occasional null pointer exception when validating configurations
	Avoid ‘hanging’ of Config Manager following upload
	Allow entry of user description when uploading files
	Allow for setting all files active in single import
	Setting a synch level
Version Management	Addition of version number for config as a whole
	Introduction of roll-back functionality

2.4 Admin Interface & Master Controller

The following enhancements and bug fixes have been implemented...

Component	Action
Admin Interfaces	Resolution of exception when scheduling workflows
	Retrieve password from password repository
	Extension of options to filters logs
Master Controller	Improvement to failover behaviour of tasks running on a duty-standby system
	Reconnection mechanism has been made more robust (see also Modules)
	Development of schema for MC configuration

Component	Action
	Email functionality from MC for sending status information
	Allow scheduling of task to all available FSSs in one go
	Rerun of tasks that have failed on FSS
Synchronisation	Allow synchronisation of large files

2.5 Various

The following enhancements and bug fixes have been implemented...

Component	Action
Hardware component references	Hardware components are referred to by means of DNS names in stead of IP addresses
Patching	Allow patching - and roll-back of patching – for OC and FSS via synchronisation
	Make patching mechanism more robust
Linux	FEWS OC and FSS are now Linux compatible

3 Configuration issues

3.1 Location issues

This release has been developed from scratch using the data templates and configuration tools. All location related information (locationIds, branches, polygons, grids and location sets, IdMappings) have been upgraded.

Due to the late start of the work, no severe testing could be undertaken to ensure that all data mappings are correct. Hence, some locations may indicate missing data due to configuration errors.

3.2 Module adapter issues

- All surface water output of the WestMidlands Worfe model, including the data in the non-active layer, is converted to NGMS. As a result, the Penkrige gauging station does get its flows. Outstanding is an analysis to check the outcome of the model. Some minor deviations have been detected during quick checks.
- What-if scenarios of the YNN model fail due to a stack overflow of the Module Adapter while preparing the new WEL-file. This issue has been reported to the Module Adapter developer, but is not yet resolved in this release.

3.3 Scenario editing issues

The toolbar provides access to the old scenario editor.

The new scenario editor has been included as a beta-release product. However, due to a software build incompatibility, it can NOT be utilized via menu 'Tools→Scenario editor (New)'.

3.4 Synchronization issues

With respect to synchronization, the following issues are relevant:

- software bugs have been fixed (see previous chapter)
- The time series type has changed from 'external' to simulated. Approved runs will be distributed automatically to all clients, based on their log-on /synchronization profile. Non approved runs will have to be downloaded manually.
- Synchronization profiles have changed

Minimal profile includes

- point locations
 - Observation boreholes
 - Gauging stations
 - Abstraction wells
 - SW laterals
- GW units

Custom profile includes

- minimum profile
- optional: Grids Merged
 - surface water grids
 - upper groundwater table
 - recharge
 - total cell flows
 - longitudinal profiles
- optional: Grids Head details
 - heads for all individual layers
- optional: Grids cell flow details
 - cell flows for all individual layers

Full profile includes

- minimum profile
- Grids Merged (see custom)
- Grids Head details (see custom)
- Grids cell flow details (see custom)