

CHPS

Chris Dietz

CHPS Project Leader, OHD HL HSEB

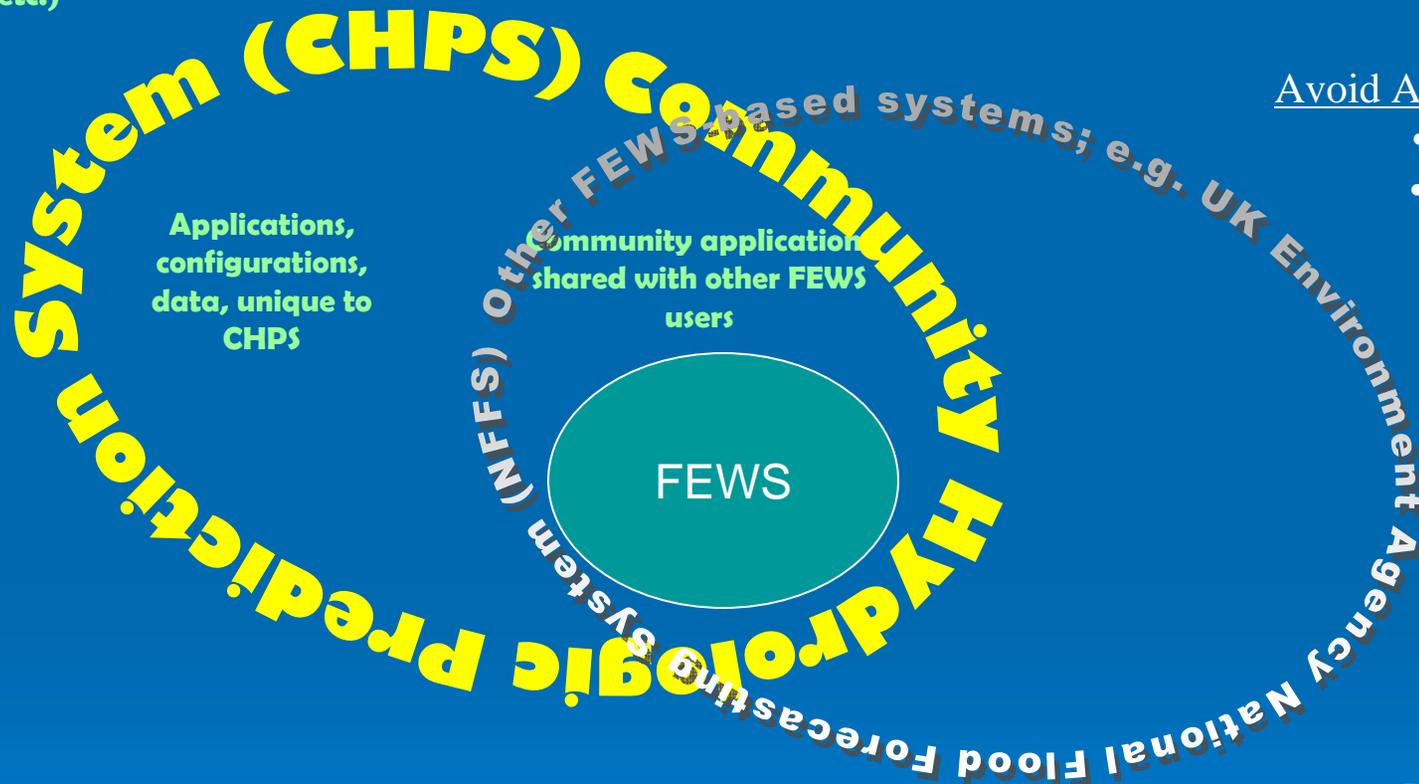
RFC DOH Workshop

Silver Spring, MD

July 15, 2008

Terminology

FEWS features have potential application to the entire FEWS user community (generic time-series storage, displays, workflows, etc.)



Preferred Usage

- “FEWS for CHPS”
- “CHPS and FEWS”
- “CHPS or FEWS”

Avoid Ambiguous Usage

- “CHPS/FEWS”
- “CHPS-FEWS”

FEWS is a suite of configurable modules which can store, manipulate, and display time series data using your own and community applications.

CHPS is a uniquely configured realization of FEWS, using RFC-specific data and applications.

General Approach

- CAT RFCs bear the brunt of the pain for all!
 - CAT RFCs go through migration one year ahead of other RFCs to work out wrinkles
 - CAT RFCs act as mentors for other RFCs during the main CHPS migration

Implementation Strategy

➤ Clear planning and execution

- Gap analysis for essential operations
 - Use of existing calibrated parameter sets is essential
- Preprocessing and post-processing utilities
- AWIPS II integration
- Staff training
- Technical support
- RFC contributions (individual, groups, regions)
- Many others...

Implementation Strategy (cont'd)

➤ Port models that require calibration

- BASEFLOW, SARROUTE, CONS_USE, LAG/K, LAY-COEF, TATUM,
- TIDEREV, MUSKROUT, RES-J, RSNWELEV, SNOW-17, CHANLOSS,
- STAGE-Q, SSARRESV, STAGEREV, UNIT-HG, RES-SNGL, SAC-SMA

➤ Create adapters for several new models (e.g. HEC-RAS)

➤ Rely on existing FEWS data and display utilities with identified enhancements

- CLEAR-TS, CHANGE-T, ADD/SUB, SET-TS, MULT/DIV, NOMSNG, MERG-TS,
- MEAN-Q, WEIGHT-TS, LOOKUP3, LOOKUP, DELTA-TS, ADJUST-Q,
- ADJUST-H, ADJUST-T, PLOT-TS, PLOT-TUL

Implementation Strategy (cont'd)

- Provide for forecaster run-time modifications
 - IGNORETS, FMAP, SSARREG, MFC, RRICNG, SWITCHTS, TSCHNG,
 - CHGBLEND, WECHNG, RAINSNOW, RRIMULT, WEADD, TSADD, SACCO,
 - AESCHNG, ROMULT, SETMSNG, UADJ, ROCHNG, UHGCHNG, SETQMEAN,
 - UHGDATE, QCSHIFT, QPSHIFT, HECRAS

- Provide for existing level of ensemble operations, products, and services
 - Port ESP, ESPADP, ENS_PRE, ENS_POST, to use FEWS architecture and data resources
 - Leverage FEWS existing ensemble capabilities
 - Future: XEFS

Implementation Strategy (cont'd)

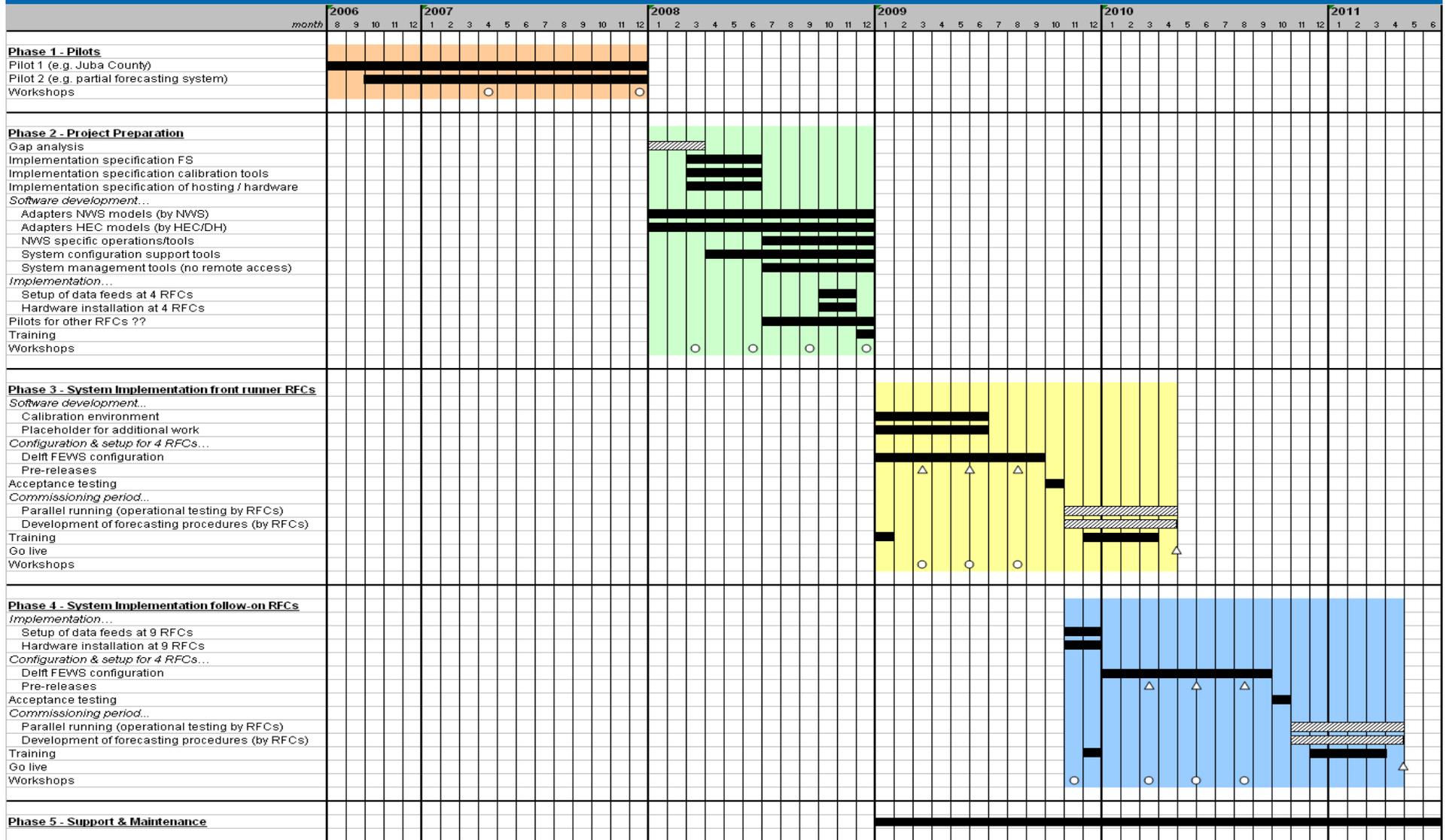
➤ Two tiers of deployment

- CAT RFCs (AB, CN, NE, NW)
 - Initial hardware delivery in October 2008
 - Initial migration software and training in January 2009
 - Operational hardware delivery summer 2009
 - Parallel operations by October 2009
- Remaining 9 RFCs
 - Initial hardware delivery in October 2009
 - Migration/Systems training – Fall 2009
 - Migration begins January 2010
 - Parallel operations by October 2010

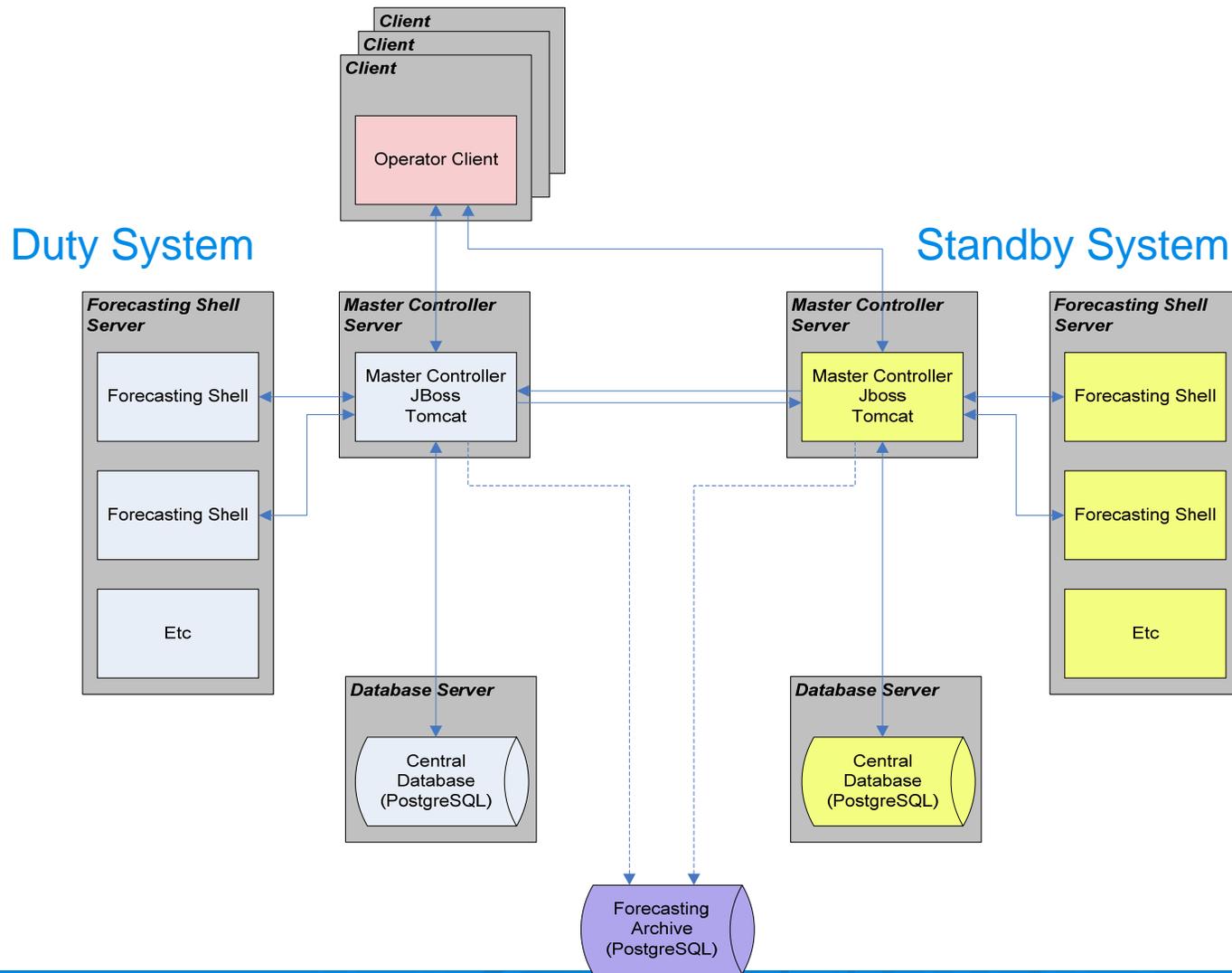
➤ RFCs not required to drop NWSRFS until “fully ready”

07-15-2008

Project Timeline



FEWS Hardware Infrastructure



Current Status

- Gap analysis
- Define Baseline Operational Capability (BOC)
- OHD models
- FEWS enhancements
 - MODs
- Migration tools
- Hardware (CAT sites)
- AWIPS II integration
- HEC-RAS

Next....

- Hardware for non-CAT RFCs
- Calibration
- Verification
- XEFS
- Local applications
- Distributed Modeling

Science Questions

- What to do about MAPE?
- Parallel Operations:
 - Comparison of forcing data
 - Comparison of forecasts

Useful Resources

- Deltares wiki page for NWS FEWS users:
 - https://public.deltares.nl/login.action?os_destination=%2Fdisplay%2FFEWSUSA
 - Userid nws; Password nws123

(Or go to <https://public.deltares.nl/>, click on “Log In”, enter userid and password, then select DELFT-FEWS USA. This takes you to the same NWS FEWS area.)

(For wiki help, visit <http://www.atlassian.com/software/confluence/>)

- rfc.chps@noaa.gov – Harold and Chris will answer your questions

DOH To Do List

- Share your CHPS knowledge with others in your office
- Submit ideas for analyzing local applications; then volunteer to participate
- Send list of MODs in operational use at your RFCs to Randy Rieman
- Respond to Harold's email "OFS IFP functionality & CHPS/FEWS - Action: July 11"
- Ask questions about CHPS or FEWS - rfc.chps@noaa.gov.
- Go to wiki page (slide 12) and learn

Questions?