XEFS Ensemble Product Generator - EPG

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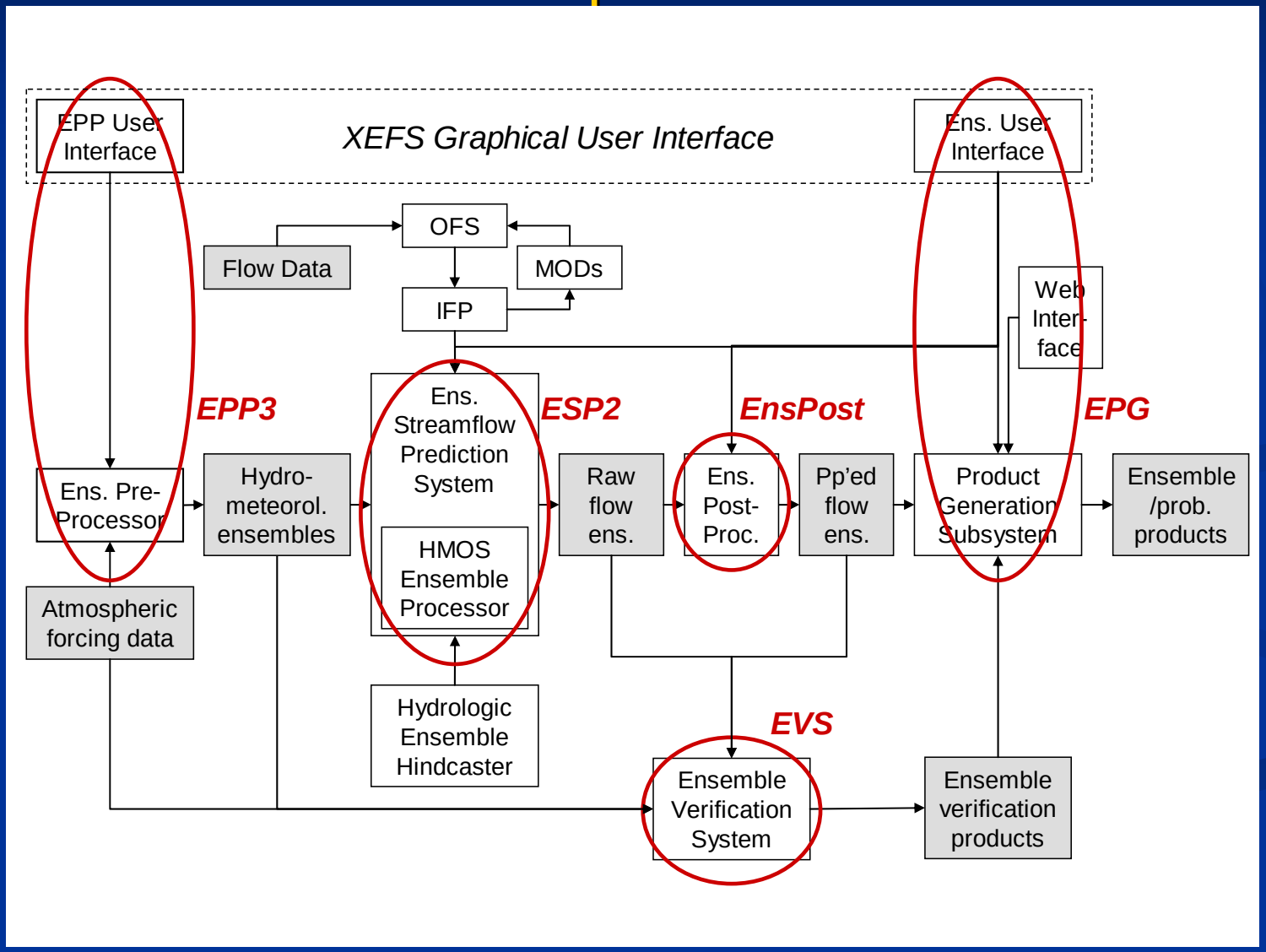
XEFS
Components



Product Builder

- Series of queries that help user (external users and forecasters) interactively select the location, duration, period, parameter, and risk aversion
- Various display modes provide several ways to look at the information
- Options limited to those that have an acceptable level of skill and/or make sense
  - selections outside of this (quality-controlled) range could use simple climatologic analysis with user notification of such
- This is a base requirement of extreme importance
  - Web service may have to be adjusted to support this

XEFS
Products and Services

Reliable and skillful ENSEMBLES (streamflow and forcings) and associated meta data for 1 hour to 2 years

Archive of hindcasts, forecasts, simulations, observations, and meta data

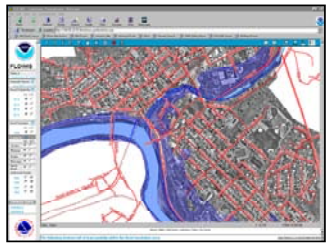
Verification information in user friendly form

Specific data, forecasts, ensembles, and analysis for use in *value added* processes (e.g. flood inundation mapping)

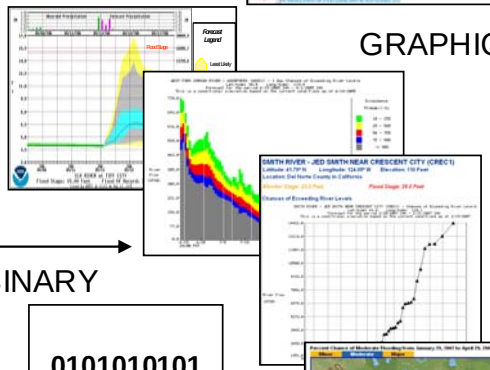
User selectable attributes:
period
duration
time aggregation
probability levels
thresholds
probability type
analogs based on meta data

User selectable context
mean, median, max, min
analogs based on meta data
specific years
specific forecast w/outcome

Instructional (annotated examples)



GRAPHICS



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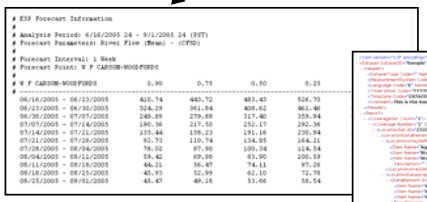
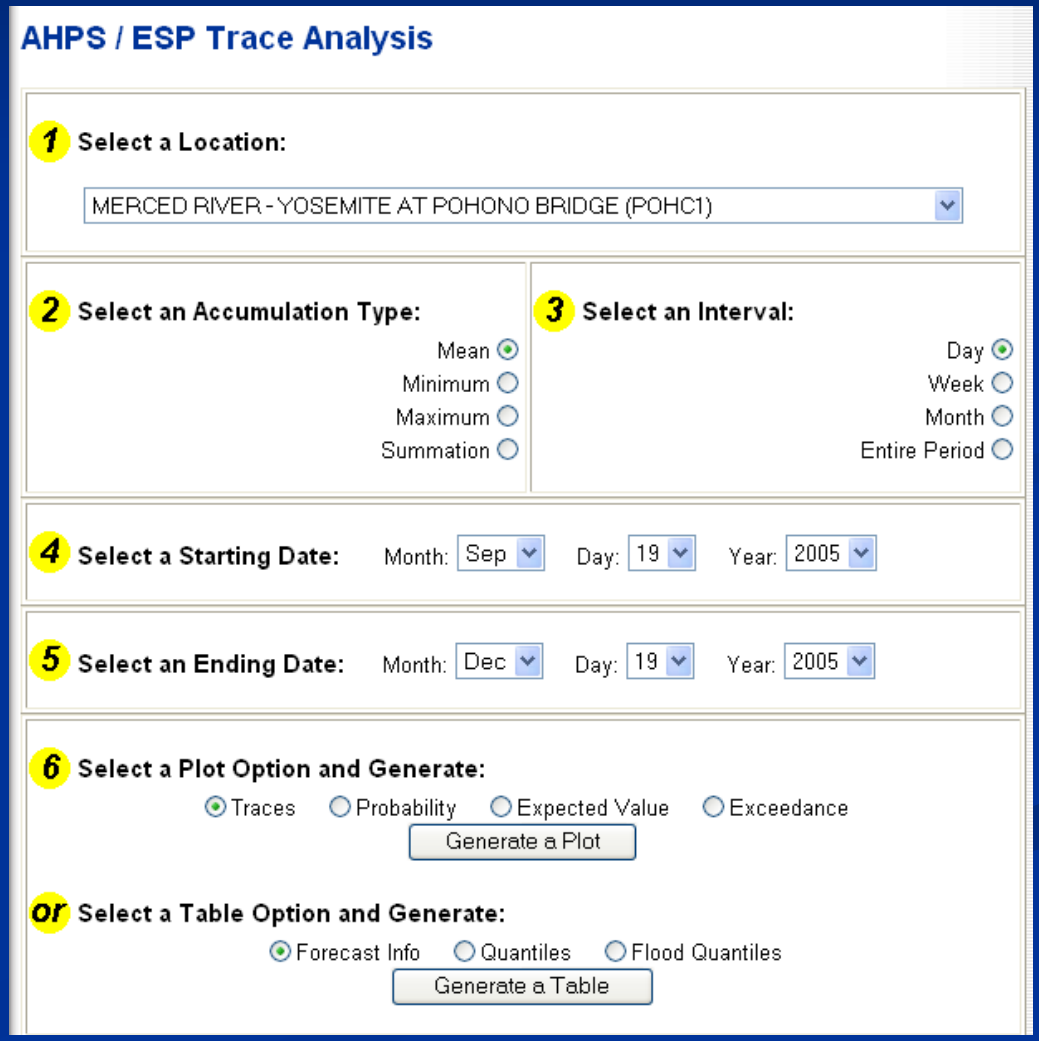


XML

CNRFC Web-Based
Ensemble Guidance

- "Create Your Own"
- Ensembles run nightly
- Interpretive tools
- Assumes knowledgeable user

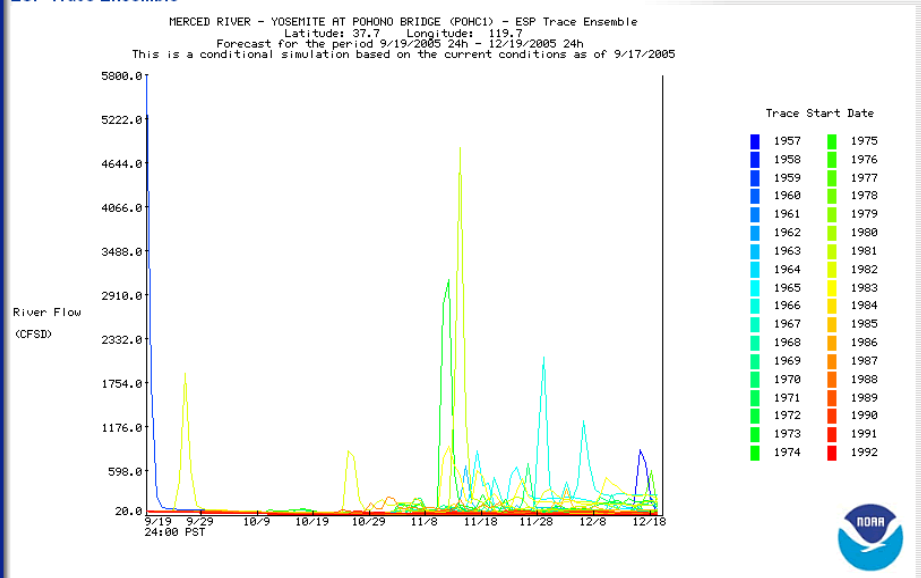


Post-processing
Ensemble Guidance

MERCED RIVER - YOSEMITE AT POHONO BRIDGE (POHC1)
Latitude: 37.72° N Longitude: 119.67° W Elevation: 3862 Feet
Location: Mariposa County in California

Monitor Stage: N/A *Flood Stage: 10.0 Feet*

ESP Trace Ensemble



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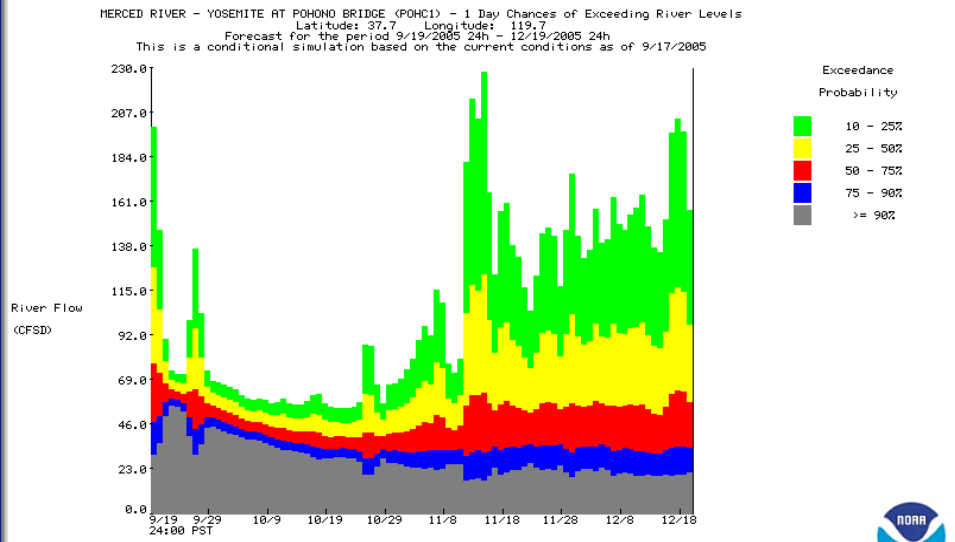
1 Day Chances of Exceeding River Levels



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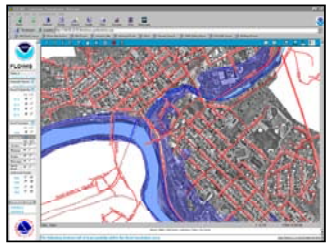

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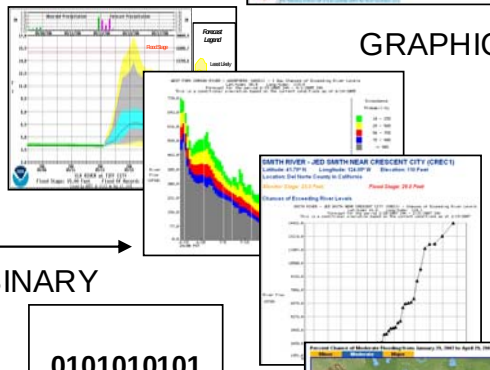

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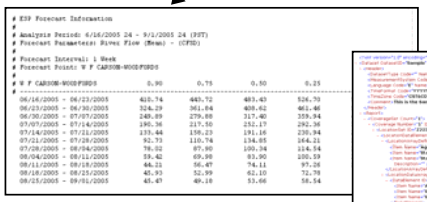

XML

Design Process

- Begin with what we have/know
  - ESPADP
  - Ensemble Verification System (EVS)
  - Hydrologic Ensemble Hindcaster (HEH)
  - Aptima Report
  - OCWWS Requirements
- Prototype new system centered on data from FEWS, EVS, and Archivedb

Thank You