
# CONDUIT Update

Cooperative Opportunity for NCEP Data using IDD Technology

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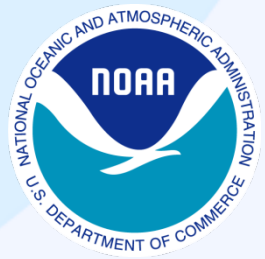
April 2, 2012

# Agenda

- Changes over the last 6 months
- Upcoming NCEP model changes
- CONDUIT content on NOAAPORT
- Additional Data/Survey Results
- Discussion

# Changes
## October 2011 – March 2012

- **NFCens** (11/1/11) – NCEP/FNMOC Combined Wave ensemble
  - Significant Wave Height output for members and combined ensemble
- **HIRESW** added to NOAAPORT (11/8/11)
- **WSA ENLIL** (12/13/11)
- **GEFS Upgrade** (02/14/12)
  - Resolution increase 0-192 hrs T190L28 --> T254L42, 192-364 hrs T190L28 --> T190L42
  - Change reflected in products sent to CONDUIT
- **2.5 km Gridded MOS** (02/28/12)
  - Slated for NOAAPORT
- **NGOFS** (04/03/12) -- Northern Gulf of Mexico Operational Forecast System

# Upcoming NCEP Model Changes May 2012

- **Rapid Refresh replaces RUC** – May 1, 2012
  - Includes new larger-domain 32 km grid
  - 80km, 40km native levels and all surface grids will be removed
- **Wave model physics upgrade** – May 8, 2012
- **HWRF/GFDL upgrades** – May 15, 2012
  - Includes new 0.03 degree output grid for HWRF
- **EKDMOS** – late May
  - Ensemble Kernel Density MOS
  - Probabilistic forecast guidance for temps
- **ESTOFS** -- late May
  - Extra-tropical storm surge and tide model for the Atlantic

# Upcoming NCEP Model Changes
## June and beyond

- **GFS upgrade** – June 2012
  - Hybrid EnKF - 3DVar GSI Data Assimilation, with 80 member T254L64 ensemble. Additional fields for Fire Weather & wind energy
  - Does not include addition of 0.25 degree grids
  - Parallel data available by mid-April
- **Short-Range Ensemble Forecast System (SREF) Upgrade** – after GFS
  - Change make-up of multi-model ensemble members, increase horizontal resolution
  - Possibility of new 16km output grids
- **RTMA** upgrade (currently not scheduled)
  - Based on the Rapid Refresh, expand CONUS grid, finer-scale grids for Alaska

# Upcoming Events

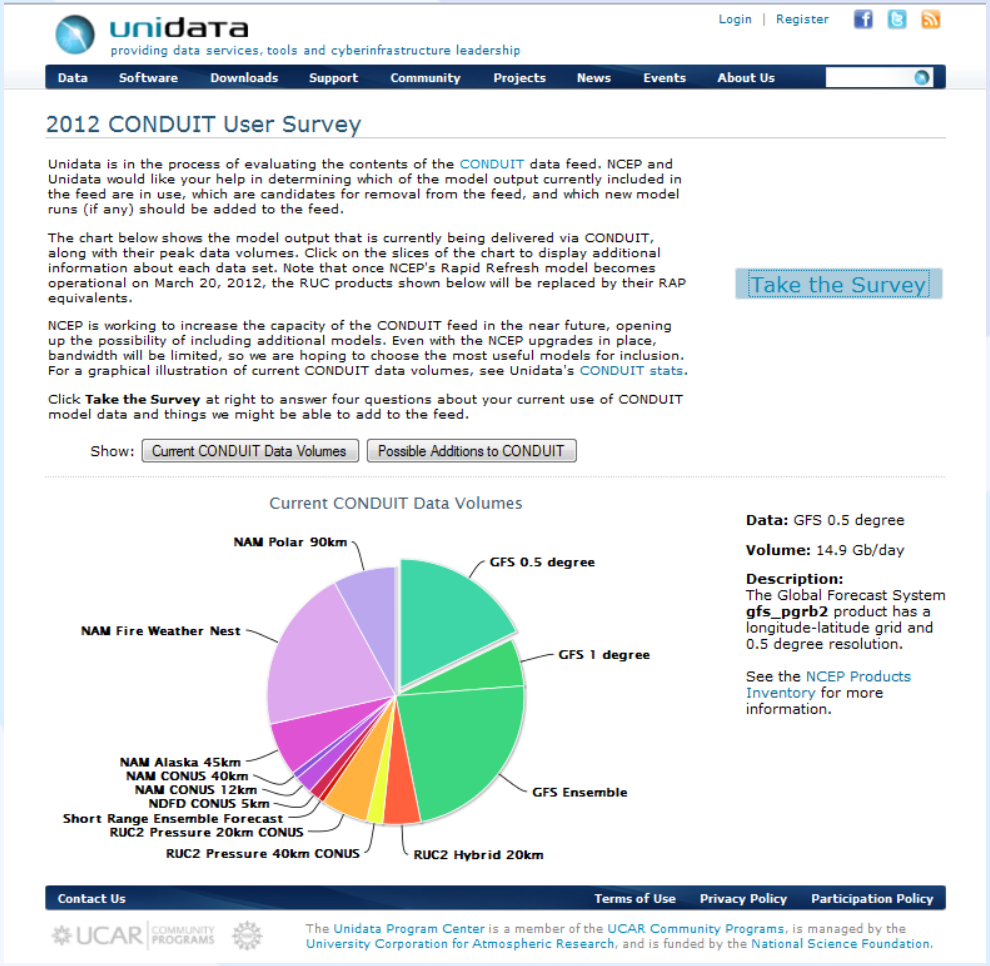
- **CONDUIT Technology refresh**
  - More memory for larger LDM queue and therefore more data!
  - On hold till we get dataflow IT set up in NCWCP
- **Begin new 10-year supercomputing contract**
  - Major implementations on hold while we transition to new computers summer-2012 to summer-2013
- **NCWCP – College Park, MD**
  - Move begins mid-July 2012
  - Dataflow team currently configuring our systems in the new building

# NOAAPORT vs. CONDUIT

- Additions to NOAAPORT have been severely limited last few years
- HIRESW and RTMA on NOAAPORT before added to CONDUIT
- Often have more variables in CONDUIT files than on NOAAPORT
- RUC 40km pressure grids
  - NOAAPORT is GRIB1 w/limited forecast hours
  - CONDUIT is GRIB2 hourly to 18hrs
- SREF ensemble products
  - Raw fields on NOAAPORT
  - Bias-corrected on CONDUIT
- No changes to be made right now

# User Survey

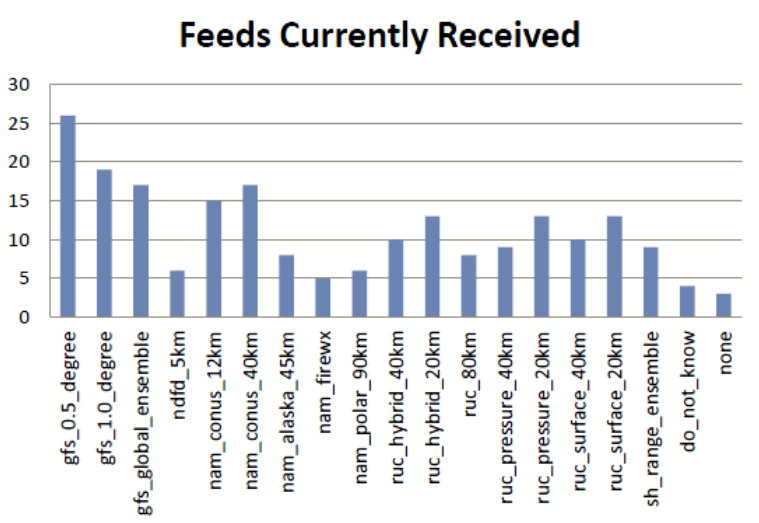
http://www.unidata.ucar.edu/community/surveys/conduit2012/2012survey_intro.html

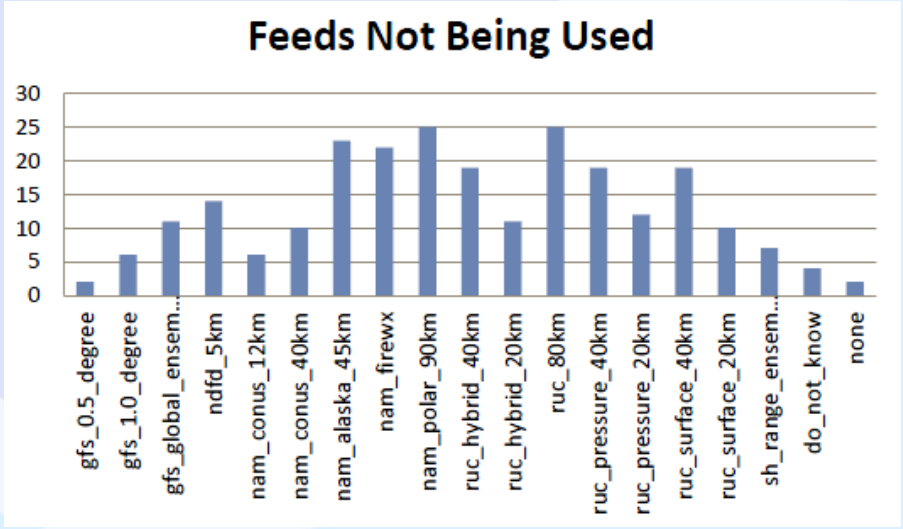


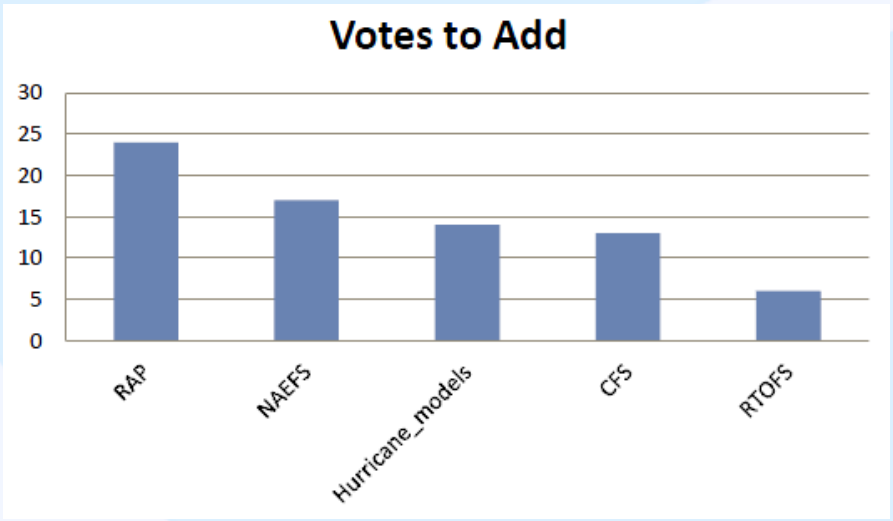

- What do you currently use?
- What do you not use?
- What should we add?

- Surveyed users March 14th – 30th, 2012

# Survey Results




44 responses as of 4/2

# Recommendations

- Remove all 40km RUC products
- Remove 45km NAM Alaska
- Remove 90km NAM Polar

- Add 32km RAP products when available
- Add bias-corrected NAEFS output (or raw?)
- Need more information from CFS and Global RTOFS requests due to large size of datasets

# Questions/Discussion