

NOAA/NESDIS's Plans to Address Year 2000 Compliance

Summary and Purpose of this document:

Significant progress has been made by NOAA/NESDIS over the past two years to prepare for the century date change and millennium leap year. NOAA/NESDIS has completed all the major phases of its preparations for the Year 2000 for all mission critical and non-mission critical systems as of March 31, 1999. We recognize the importance of our products to our customers' business processes and have taken all the necessary steps to assure the continuity and serviceability of our products beyond January 2000.

Action Proposed:
None

NESDIS's Year 2000 activities followed the standard phased approach utilized by virtually the entire information technology industry (i.e. assessment, renovation/replacement, testing, and implementation). The NESDIS Year 2000 failure is low because our systems use year data infrequently, and we exercised stringent configuration management control over system renovations, and conducted thorough end-to-end tests. During the assessment phase we created a database of all the components that make up each mission critical and non-mission critical system. We then checked each component to find Year 2000 date-related problems. All date-related problems that were found were either fixed or the component was replaced. During the Validation Phase a series of test plans for each system were developed. Each system was tested according to test plans using configuration management to ensure ongoing compliance and an audit of change history. In addition, NESDIS is a member of the Special Action Group (SAG) for Year 2000 Testing. Other representatives are the Naval Oceanographic (NAVOCEANO), the Naval Ice Center (NAVICE), the National Weather Service (NWS), the Air Force Weather Agency (AFWA), the Federal Aviation Agency (FAA), and Fleet Numerical Meteorology Oceanography Center (FNMOC). The SAG began meeting in July 1998, to identify all data exchanges between members and develop test plans for several end to end tests. These SAG tests were conducted from July 1998 until July 1999 and a test report was developed to document all tests. The Implementation Phase included the development of a Business Continuity and Contingency Plan (BCCP) for all mission critical systems. The BCCP documents contingencies to ensure continued readiness to manage any problem arising from Year 2000 issues. Several test scenarios have been developed and executed so that staff can deal with Year 2000 triggered events. In addition, NESDIS has developed a Day One Plan to cover activities for mission critical systems, telecommunications, and facilities as the century roll over occurs.

The following is a synopsis of Year 2000 Phases and completion dates.

Accomplishment/Phase	Completion Date
Assessment of Mission Critical and Non-Mission Critical Systems	June 30, 1997
Renovation/Replacement	September 30, 1998
Validation	January 31, 1999
Implementation	March 31, 1999

Satellite Clocks

- Polar orbiting Operational Environmental Satellite (POES) spacecraft – No year clock onboard
Julian day and day in milliseconds
Reset to 1 on January 1st
- Geostationary Operational Environmental Satellite (GOES) spacecraft
No day/year clock onboard
24 hour clock reset to zero every 24 hours
- GOES Data Collection System (DCS) – No date/time information added

GOES and POES Year Fields

- POES

A four digit year field is applied on the ground during processing from raw to level 1b

- GOES

A four digit year field is applied on the ground via the SPS

Product Year Fields

- POES

NOAA-15 Level 1b has a four digit field

Products range from no year field to 2 digits to 2 digits for year and 2 digits for century to 4 digits

- GOES

Products range from no year field to 2 digits to 2 digits for year and 2 digits for century to 4 digits

GOES Validation/Testing

- GOES-10 Year 2000 test was conducted on May 28/29, 1998
- GOES-7 Year 2000 tests were conducted on January 22-28, 1999, and March 22-26, 1999

Testing criteria December 31, 1999 (day 365) and January 1, 2000
 December 31, 2000 (day 366) and January 1, 2001
 February 28 to February 29, 2000
 February 29 to March 1, 2000

Polar Products Validation/Testing

- Conducted unit and string testing of modules from April 1998 to April 1999
- Testing criteria

December 31, 1999 (day 365) and January 1, 2000
 December 31, 2000 (day 366) and January 1, 2001 (selected modules)
 February 28 to February 29, 2000
 February 29 to March 1, 2000 selected modules

End to End Testing

- GOES and POES participated in the Year 2000 Special Action Group meetings held July 1998 – May 1999

Focused on testing and interfaces/exchanges
 Tests were conducted in January 1999 & March 1999

- Global Telecommunications System (GTS) – not changing
- Binary Universal Form for data Representation (BUFR) – already handles
- Level 1b – 4 digit year field
- Shared Processing Program (SPP) uses existing formats

Embedded Chips (Platforms)

- Product Processors

All verified Year 2000 compliant or replaced

- PC/Workstations
All verified Year 2000 compliant or replaced

- Satellites

No Embedded Chips using year field

Telecommunications Status

- Phone systems

Verified Year 2000 compliant or upgraded

- Line services

Verified Year 2000 compliant from providers

- Routers, switches, hubs

Verified Year 2000 compliant or have been replaced