

**NOAA PLANNED USE OF THE METEOROLOGICAL SATELLITE  
ALLOCATION AT 7750-7850 MHz**

**Summary and Purpose of Document**

This document indicates the planned use by NOAA of the 7750-7850 MHz meteorological satellite allocation on the National Polar-orbiting Operational Environmental Satellite System (NPOESS).

Action Proposed: None

## **SUMMARY**

In response to Action 27.09, NOAA examined the planned use of the 7750-7850 MHz band allocated to meteorological satellites. The Integrated Program Office (IPO) in NOAA has oversight for developing the National Polar-orbiting Operational Environmental Satellite System (NPOESS). In order to accommodate the many required environmental data records, several sensors on the spacecraft will acquire data amounting to significant numbers. Transmission of these data at rates in excess of 50 Mbps exceeds the available polar-orbiting meteorological satellite spectrum at L band (1698-1710 MHz). Fortunately, the International Telecommunication Union, at its World Radiocommunication Conference in 1997 allocated the 7750-7850 MHz band for non-geostationary meteorological satellite use in the space-to-Earth direction. This 100 MHz allocation accommodates the transmission of such high data rates envisioned for NPOESS.

Known as High Rate Data (HRD), this NPOESS data stream is planned for transmission on a frequency near 7825 MHz, requiring a bandwidth close to 40 MHz. This plan is tentative, but is likely near that which will be accepted when design of the NPOESS system is completed. Since transmission of this data is expected in direct broadcast mode, similar to the current High Rate Picture Transmissions sent from NOAA-15, close coordination with EUMETSAT and other meteorological satellite operators planning to use the X-band downlink will be required. In particular, reception at Svalbard, Norway of both the METOP Global Data Set and NPOESS HRD transmissions will require discussions between the two meteorological satellite operators to avoid possible interference due to co-visibility. However, it is believed that most, if not all, of such co-visibility at Svalbard can be avoided by properly timing the launch of NPOESS spacecraft.