NASA
Office of Safety and Mission Assurance

Terry Wilcutt, Chief

May 14, 2018
OSMA Overview

• **Mission:** “The Office of Safety and Mission Assurance (OSMA) provides policy direction, functional oversight, and assessment for all Agency safety, reliability, maintainability, and quality engineering and assurance activities and serves as a principal advisory resource for the Administrator and other senior officials on matters pertaining to safety and mission success” [NPD 1000.3]

• The Office of Safety and Mission Assurance represents one of three Technical Authority areas: Engineering, SMA, Health and Medical
# Divisions and Functions

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Place within the NASA Organization

National Aeronautics and Space Administration

Administrator
Deputy Administrator
Associate Administrator

Chief of Staff
Deputy Associate Administrator
Associate Deputy Administrator
Associate Administrator for Strategy and Plans

Chief Engineer
Chief Scientist
Chief Technologist
Chief Health and Medical Officer
Chief, Safety and Mission Assurance

Office of Strategy and Policy
Office of Agency Council Staff

Chief Information Officer*
Chief Financial Officer*

Legislative and Intergovernmental Affairs*
Communications*
Small Business Programs

Diversity and Equal Opportunity
Education
International and Interagency Relations

General Counsel

Mission Support Directorate
Human Capital Management
Strategic Infrastructure
Headquarters Operations
NASA Shared Services Center
Procurement
Protective Services

Aeronautics Research Mission Directorate
Science Mission Directorate
Human Exploration and Operations Mission Directorate

Ames Research Center
Armstrong Flight Research Center
Glenn Research Center
Langley Research Center
Goddard Space Flight Center
Marshall Space Flight Center
Jet Propulsion Laboratory
NASA Management Office**
Stennis Space Center

Reporting Structure
Advisor
Associate Administrator

Note: Administrator may delegate direct reports to Deputy Administrator at his/her discretion.
* Center functional office directors report to Agency functional AA or Chief. Deputy and below report to Center leadership.
** NMO oversees the Jet Propulsion Laboratory and other Federally Funded Research and Development Center work.

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SMA Discipline/Program Area Breakdown

- Quality Engineering
- Reliability and Maintainability
- System Safety
- Risk Management
- Software Assurance
- Human Rating
- Payload Safety
- Range Safety
- Orbital Debris Mitigation
- Meteoroid Environments
- Nuclear Flight Safety
- Planetary Protection *
- Non-Destructive Evaluation
- EEE Parts Assurance
- Workmanship
- Metrology and Calibration

- Institutional Safety
- Pressure Systems
- Lifting Devices and Equipment
- Explosives Safety
- Safety Culture
- Human Factors
- Mishap Investigation
- Safety Reporting System
- Advisories and Alerts
- Audits and Assessments
- Technical Excellence
- Knowledge Management
Latest News
What's Happening in the SMA Community?

Learn More: Planetary Protection Policies and Practices Course
MAY 24, 2018 // PLANETARY PROTECTION

NASA's Planetary Protection program offers the course "Planetary Protection: Policies and Practices" one to two times a year, with the next offering being Oct. 30-Nov.1, 2018 at Kennedy Space Center. This course, which has been active for more than 15 years, covers what the requirements are for Planetary Protection for robotic missions, how to meet those requirements and lessons learned from past missions.

Update to NASA Explosives
**Recent launches:**
- Joint Polar Satellite System (JPSS)
- Transiting Exoplanet Survey Satellite (TESS)
- Geostationary Operational Environmental Satellite (GOES-S)
- InSight
- Gravity Recovery and Climate Experiment Follow-On (GRACE-FO)

**This year:**
- Ionospheric Connection Explorer (ICON)
- Ice, Cloud and land Elevation Satellite (ICESat-2)
- Parker Solar Probe
- Commercial Crew Program test flights

**Future key missions:**
- James Webb Space Telescope (Spring 2020)
- Orion and Space Launch System (Summer 2020)
- Mars 2020 (Summer 2020)
2017-2018 OSMA Highlights
Commercial Space

• National Space Council focus on commercial space industry
  – Transform launch and re-entry licensing regime
  – Consolidate space commerce responsibilities (except launch/reentry)
  – Ensure protection and stewardship of radio frequency spectrum
  – Review export licensing regulations
  – Ensure a stable and orderly space environment (Space Traffic Management)

• Congress also debating space commerce
  – House Resolution 2809, American Space Commerce Free Enterprise Act

• OSMA affected and/or involved in various ways
  – E.g., range safety, orbital debris mitigation, planetary protection
Transfer of Planetary Protection Office

• **Planetary Protection authority moved to OSMA**
  • Previously within Science Mission Directorate
  • Now aligned with Technical Authority (independent checks and balances) function
  • Preparation for planetary protection oversight for human spaceflight

• **New Planetary Protection Officer (Dr. Lisa Pratt) appointed**
  • Focused on mission oversight, research opportunities, authority transition.

• **Updates to policy and procedural directives underway**
Notable Directive and Standard Updates

- **EEE Parts Management and Control Requirements for Space Flight Hardware & Critical Ground Support Equipment (8739.10)**
  - New standard covering the selection, acquisition, traceability, testing, handling, packaging, storage and application of EEE parts

- **Reliability and Maintainability (R&M) Standard for Spaceflight and Support Systems (8729.1A)**
  - Updated standard covering R&M objectives and strategies for spaceflight system development

- **Human Rating Requirements for Space Systems (8705.2C)**
  - Updated directive to clarify existing requirements for NASA-owned HSF programs

- **Agency Risk Management Requirements (8000.4C)**
  - Updated directive to clarify the agency’s expectations for formal and transparent risk acceptance processes

more information at sma.nasa.gov
Training and Development

• **Initiated Technical Excellence Cohort Program**
  – Initiated to accelerate SMA professional development
  – One year program to complete the Level Two STEP Program
  – Class size about 30 SMA members from across the Agency
    • Nominated by SMA Directors
    • Participate in 3 Face to Face meetings, monthly course work and lectures
  – Receives great reviews from participants and home centers

• **Conducted Executive Safety Leadership Program events**
  – Two day learning events for Agency executives (about 100 per event)
  – Covers federal safety and health program requirements, processes, stories and culture
  – Culminates with crafting of personal statement by attendees for sharing with team members
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