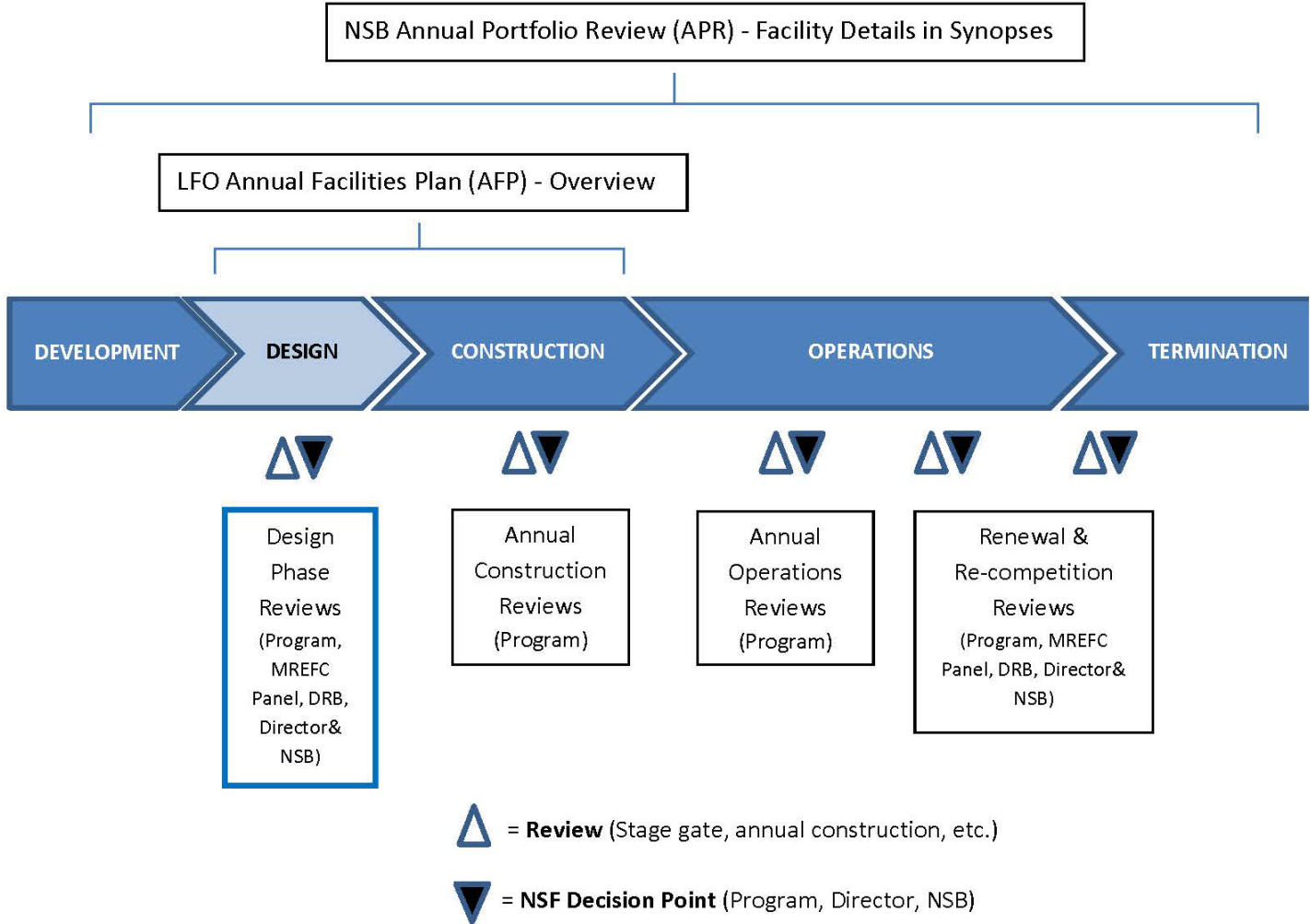


# Annual Facilities Plan ~ 2015

Matthew J. Hawkins  
Acting Head, Large Facilities Office  
February 3, 2015

# Annual Facilities Plan ~ 2015

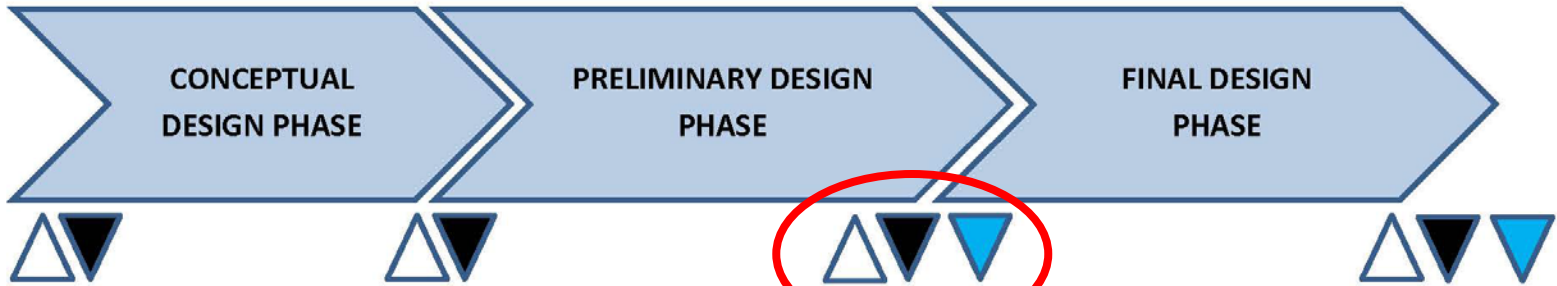
## Project Stages and MREFC Process



# Annual Facilities Plan ~ 2015

## Project Stages and MREFC Process

### DESIGN STAGE



#### Conceptual Design Review (CDR):

- ▲ - MREFC Panel Review
- ▼ - Director's approval for advancement to Preliminary Design Phase

#### Preliminary Design Review (PDR):

- ▲ - MREFC Panel & Director's Review Board (DRB) Reviews
- ▼ - Director's approval for advancement to Final Design Phase
- ▼ - **Board approval for inclusion in future MREFC Budget Request (CPP/any meeting prior to August)**

**Project Definition Established**  
(Cost, Scope, Schedule, Plans, Risks & Contingency)

#### Final Design Review (FDR):

- ▲ - MREFC Panel & DRB Reviews
- ▼ - Director's approval for advancement to Construction Stage
- ▼ - **Board approval for the Director to obligate construction funds**

# Annual Facilities Plan ~ 2015

## Projects in the Design Stage

### Regional Class Research Vessel (RCRV)

- Preliminary Design Phase
- PDR Complete (August 2014)
- NSF Cost Analysis Underway
- Decadal Survey of Ocean Sciences (DSOS) inputs considered
- NSB Action Item – **May 2015**



### Antarctic Infrastructure Modernization for Science (AIMS)

- Conceptual Design Phase
- Refining Project Scope and Schedule
- Parametric Cost Estimates
- CDR (March 31 – April 2, 2015)
- NSB Oral Info Item – **August 2015**

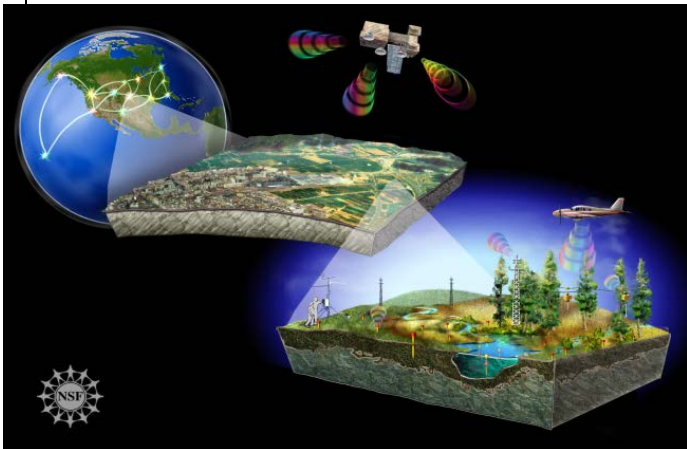


# Annual Facilities Plan ~ 2015

## Projects in the Construction Stage

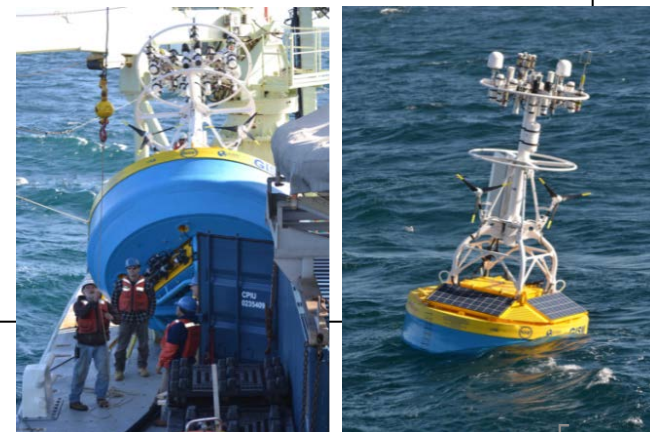
### National Environmental Observatory Network (NEON)

- 50% Complete
- Transition to operations at some sites
- Schedule and budget re-planning complete (August 2014 Review)
- Behind Schedule/Within Budget
- Construction End: **October 2017 (Revised)**



### Ocean Observatory Initiative (OOI)

- 90% Complete
- Behind Schedule/Within Budget
- Transitioning to Operations
- Most major assets deployed (Southern Ocean pending)
- Cyber-Infrastructure and Science User Interface under final development
- Construction End: **July 2015**



# Annual Facilities Plan ~ 2015

## Projects in the Construction Stage

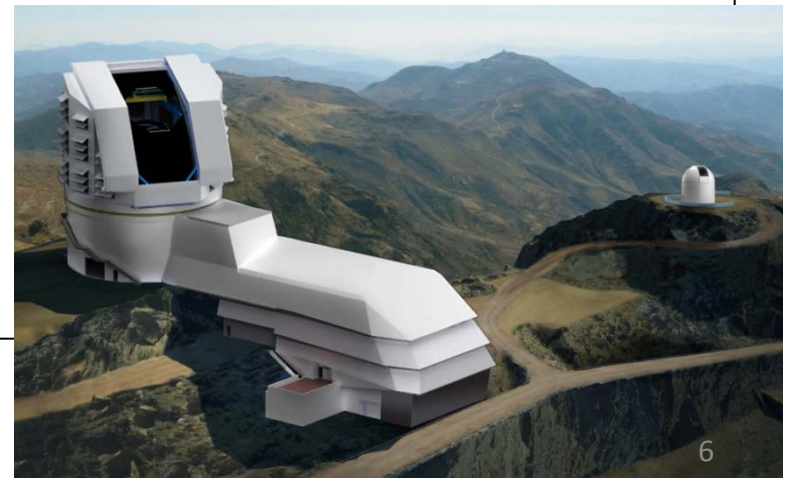
### Daniel K. Inouye Solar Telescope (DKIST)

- 50% complete
- Legal challenges being adequately managed
- Behind Schedule/Within Budget
- Weather Risks; No significant technical risks
- Construction End: **August 2019** (Ops start)



### Large Synoptic Survey Telescope (LSST)

- Construction Start – **August 2014**
- Final Contingency Budget being re-evaluated (Project, Program & LFO)
- Final award at or below **\$473M** Board approved TPC.
- Contingency confidence level TBD.



# Annual Facilities Plan ~ 2015

## Projects in the Construction Stage

### Alaska Region Research Vessel (ARRV; R/V *Sikuliaq*)

- 95% Complete
- First funded science cruises (Dec 2014)
- On Schedule/Within Budget
- Construction End: **September 2015**
- No Cost Extension (NCE) under consideration (Final trials and shipyard warranty period)



### Advanced Laser Interferometer Gravitational-wave Observatory (AdvLIGO)

- 95% Complete
- On Schedule/Within Budget
- Construction End: **September 2017**
- NCE approved to allow for most advanced computing and data storage

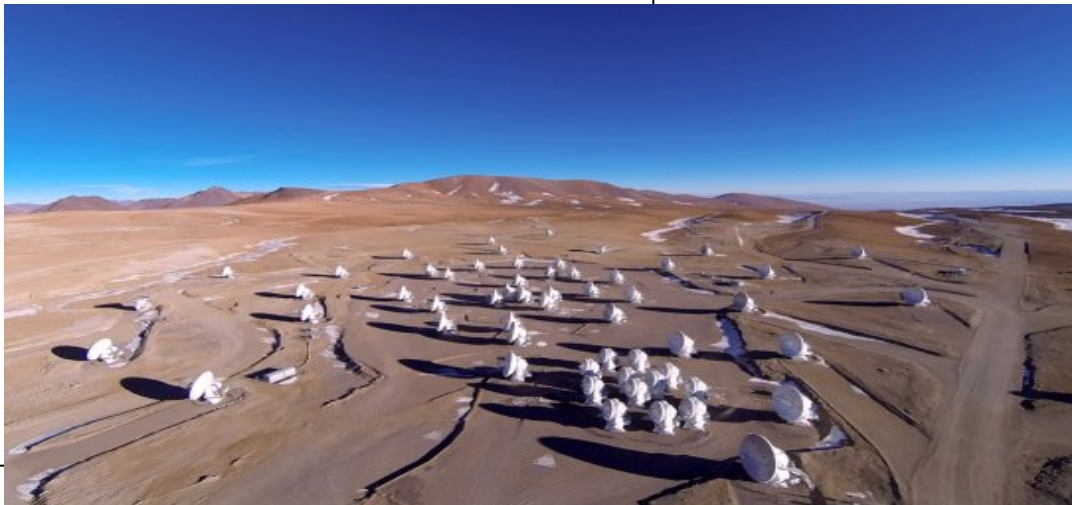


# Annual Facilities Plan ~ 2015

## Projects in the Construction Stage

### Atacama Large Millimeter Array (ALMA)

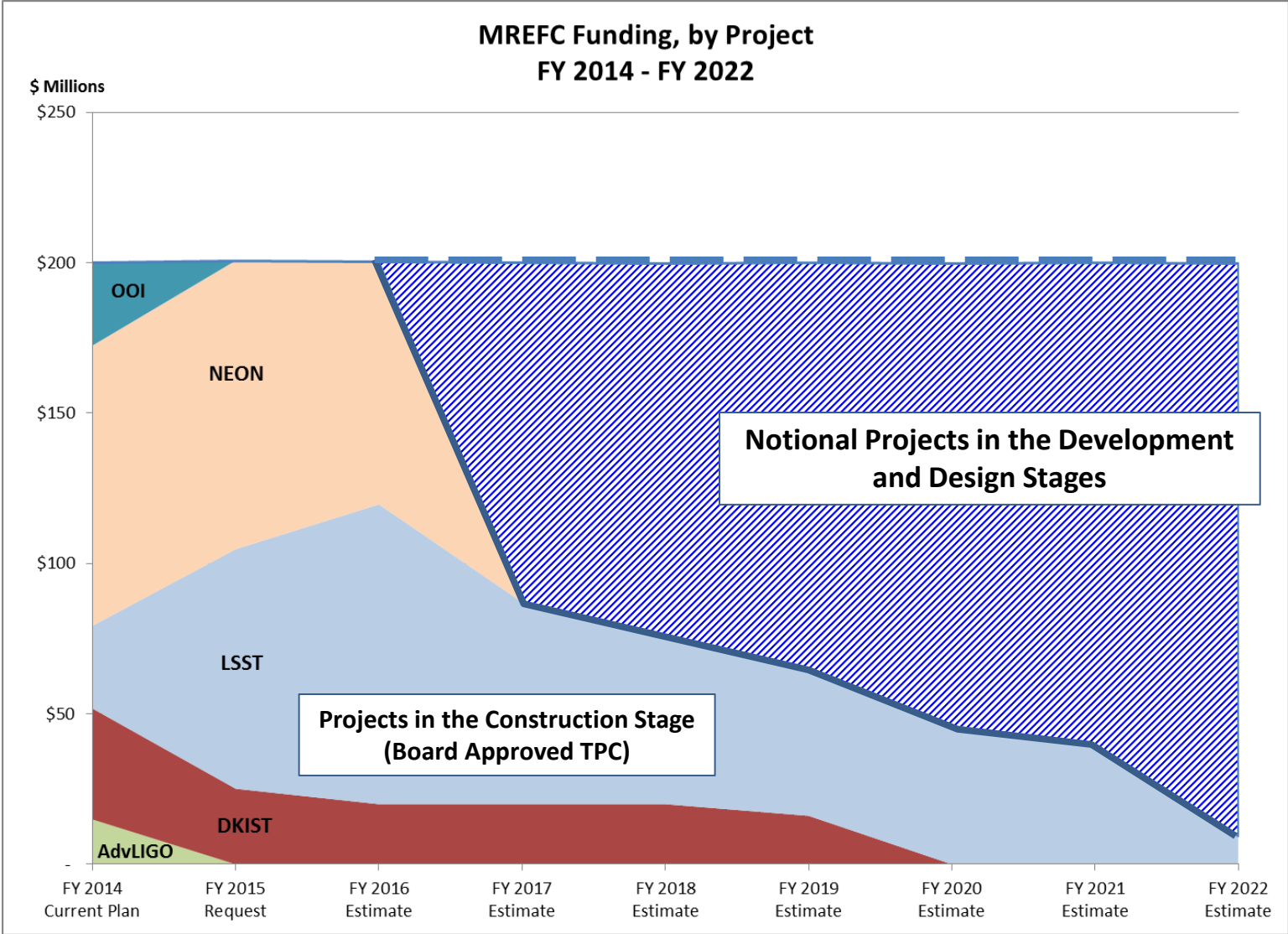
- 99% Complete
- Final Project close-out underway with retirement of remaining risks (minor)
- Construction End: **March 31, 2015**





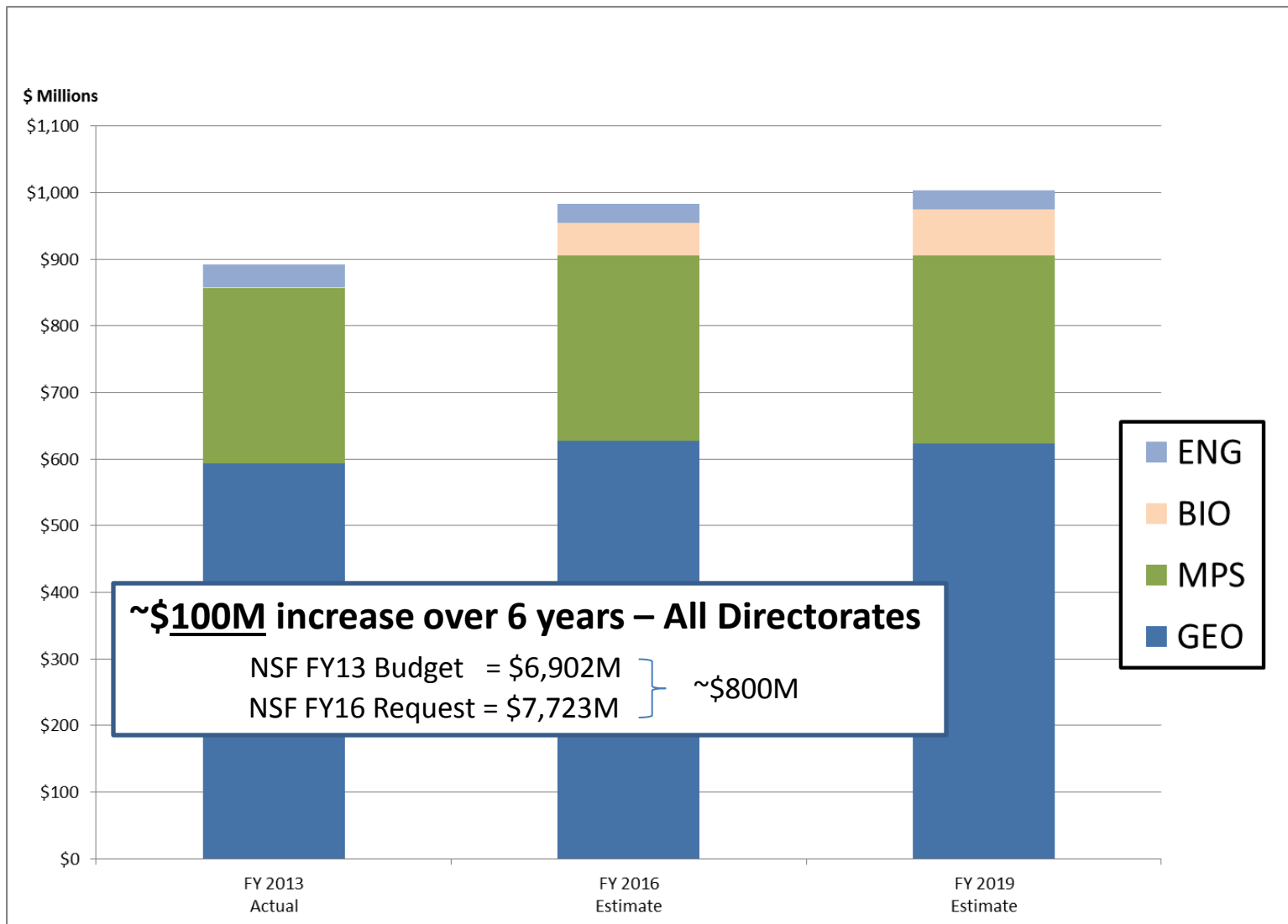
# Annual Facilities Plan ~ 2015

## MREFC Budget Profile



# Annual Facilities Plan ~ 2015

## Projected Operational Cost Profile



# Annual Facilities Plan ~ 2015

## Renewals & Re-Competitions

**Arecibo:** Analysis of divestment alternatives complete in FY15

**Network for Earthquake Engineering Simulation (NEES):** Solicitation in August 2014, proposals due in December 2014, potential award in FY15

**National Optical Astronomy Observatory (NOAO):** Solicitation for management and operations in July 2013. [Action Item to NSB in May 2015 for October 2015 award.](#)

**Geodetic (& Seismological) Facilities for the Advancement of Geosciences and Earthscope (GAGE & SAGE):** FY15 Workshop for solicitation supporting 2018 start.

**IceCube:** Re-competition solicitation for operations and maintenance in FY15; new award in FY16

**AdvLIGO:** Laboratory management re-competition in FY18

**Academic Fleet:** R/V *Point Sur* retired in 2014; R/V *Sikuliaq* on 5-year review and 10-year re-compete (2024) in Cooperative Agreement.

# Annual Facilities Plan ~ 2015

## Other Topics

### LFO Activities

- **Large Facilities Manual (LFM):**
  - Public Comment Period Complete – January 6<sup>th</sup>
  - Contingency Policy & Risk Management
  - Cost Analysis
  - Improved internal NSF Coordination of oversight & assurance via new Integrated Project Teams (IPT) – Actions and Accountability
  - **Finalized NLT April 2015** – Including revised Management Fee Policy
- **Next Steps – February 2015 (Large Facilities Working Group):**
  - Large Facilities Lexicon Standardized
  - Roles & Responsibilities Clarified (NSF-wide)

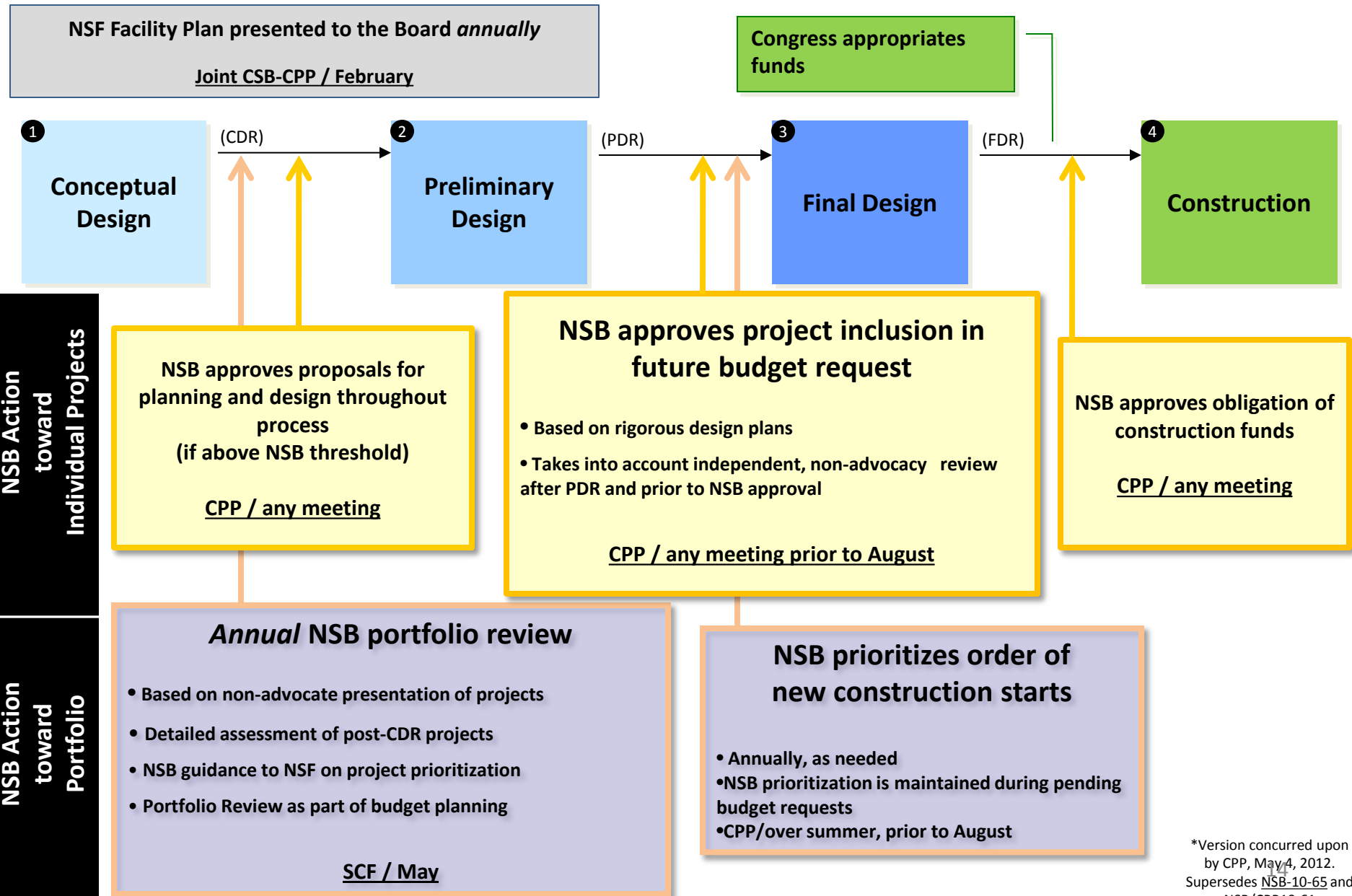
1. Ensure a Foundation-wide risk management approach
2. Provide additional rigor to technical, cost, schedule, and management reviews.
3. Improve transparency, communication, and clarity on process and expectations.
4. Increase capacity for efficient and effective project planning.



# Annual Facilities Plan ~ 2015

## Back-Ups

# National Science Board MREFC Process\*



\*Version concurred upon by CPP, May 4, 2012. Supersedes NSB-10-65 and NSB/CPP10-61