

## **Public Scoping Meetings:**

Environmental Impact Statement for the Potential National Science Foundation (NSF) Investment in an Extremely Large Telescope (ELT) Located in the Northern Hemisphere

> Maunakea, Hawaiʻi Island, Hawaii August 2022

National Science Foundation



## Introductions



#### • NSF:

- Caroline Blanco
- Dave Boboltz
- Kristen Hamilton
- Karen Pearce
- Elizabeth Pentecost

## • Jacobs Engineering:

- Michelle Rau
- Madeline Almodovar
- Christina McDonough
- Lori Price
- Richard Manz

# Jacobs

## Purpose of These Public Scoping Meetings

- The scoping process is conducted as the first step in NSF's formal environmental review process to solicit public comments and identify issues that will be analyzed in an Environmental Impact Statement (EIS).
- NSF welcomes public comments on potential alternatives, information, and analyses relevant to the environmental review.
- The comments received during these meetings will play a key role in
  - (1) determining the list of alternatives to ultimately be evaluated in the Draft Environmental Impact Statement (DEIS);
  - (2) informing the scope of the analysis, including any necessary studies and significant issues to be evaluated in the DEIS; and
  - (3) determining appropriate ways to engage the community in a meaningful and effective manner during NSF's environmental review.

## NSF Astronomy

- NSF funds the vast majority of all nonmedical science in the United States
  - National scientific research facilities including ground-based telescopes
  - Research grants that allow individuals and groups to conduct specific science investigations
- The National Science Foundation (NSF) is the federal steward for ground-based astronomy



## Why Would NSF Consider Investing in This Telescope?



- ELTs have capabilities beyond those of spacebased telescopes — will usher in a new era of astronomy
- ELTs will explore:
  - Fundamental physics and cosmology
  - The early universe and galaxy formation
  - Supermassive blackholes
  - The formation of stars and exoplanets in our galaxy
- In addition, these telescopes will, for the first time, search for the signatures of life on other worlds, answering fundamental questions about humans' place in the universe:
  - Is there other life out in the vast expanse of space?
  - Are there other worlds with life within reach of future generations?

## The Thirty Meter Telescope Project **under review by NSF** as proposed by the TMT International Observatory

- TMT Observatory (enclosure, support building, and parking area)
- Access road and utilities to support the facility
- Lay down staging area during construction
- NSF could determine that educational and other benefits could come with funding TMT
- NSF was not involved in 2019 controversy over TMT (it is not our project, then or now)
- NSF is looking for ways to do things differently



## **Preliminary Proposed Alternatives**



Action Alternative 1 Investment in the construction and operation of TMT (as the ELT in the Northern Hemisphere) located on Maunakea, Hawai'i Island, Hawaii

#### Action Alternative 2

Investment in the construction and operation of TMT (as the ELT in the Northern Hemisphere) located on Maunakea, Hawai'i Island, Hawaii, with an NSF-facilitated plan to define and practice responsible astronomy in Hawaii in partnership with the Mauna Kea Stewardship and Oversight Authority, the Maunakea Observatories, and the affected Hawaiian community

Action Alternative 3

Investment in the construction and operation of TMT (as the ELT in the Northern Hemisphere) located on the Roque de los Muchachos, La Palma, Canary Islands

\*These preliminary proposed alternatives will be refined through public input

#### NSF's Environmental Review Process: NEPA and NHPA

- National Environmental Policy Act (NEPA), and
- National Historic Preservation Act (NHPA)



## Preliminary Resource Areas Considered for Analysis

- Cultural resources
- Visual Resources
- Socioeconomics
- Land use
- Human Health and Safety
- Biological Resources
- Geological Resources
- Water Resources
- Hazardous Materials and Waste
- Traffic and Transportation
- Public Services and Utilities
- Noise
- Air Quality and Climate Change



\*These preliminary proposed resource areas will be refined through public input

## Informal Outreach Effort

- NSF initiated an informal outreach effort to gain an understanding from those who have a connection with Maunakea
- The outreach effort focused on the proposed TMT investment and the future of astronomy on Maunakea
- NSF conducted sessions with more than 150 individuals and received approximately 140 written comments during the 16-month outreach effort
- Feedback received during the informal outreach effort informed the development of the Draft CEP and will inform the Environmental Impact Statement (EIS)



## Additional Engagement Steps

- Draft Community Engagement Plan is now available for public review through September 17
- Draft Study Plans will be available for a 30-day public review
- A workshop will be held on defining and practicing responsible astronomy in Hawaii



It became clear to NSF during its Informal Outreach Effort that any environmental review process related to TMT and Maunakea must provide additional, meaningful, and easily accessible opportunities for the widely varying viewpoints on this proposed project to be heard.

Available online at <u>https://beta.nsf.gov/tmt</u> and in several libraries

## NHPA Section 106 Consulting Parties

- The goal of the NHPA Section 106 process is to accommodate historic preservation in federal undertakings
- Consulting parties should be prepared to:
  - Actively participate for the entire Section 106 process,
  - Be flexible and seek creative solutions,
  - Recognize project needs while being considerate of historic properties, and
  - Be respectful and engage in productive dialogue.

#### Consulting parties may include:

- State Historic Preservation Officers
- Advisory Council on Historic Preservation
- Native Hawaiian organizations
- Representatives from local governments
- Applicants for federal assistance, permits, licenses, and other approvals
- Other individuals and organizations with a demonstrated interest in the undertaking or the affected historic properties

(36 CFR 800.2)

## How to Provide Comments



Complete a paper comment form during this meeting



Provide your comments verbally during this meeting



Submit online through the website <u>https://beta.nsf.gov/tmt</u>



Mail your comments to Ms. Elizabeth Pentecost, RE: ELT National Science Foundation Room W9152 2415 Eisenhower Avenue Alexandria, VA 22314

Comments can be submitted to NSF from July 19, 2022, through September 17, 2022

## **Scoping Meetings**





# Thank you for your participation!

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