Welcome

NASA's Public Meeting

Draft Environmental Impact Statement (EIS)

for cleanup and demolition activities at

Santa Susana Field Laboratory (SSFL)

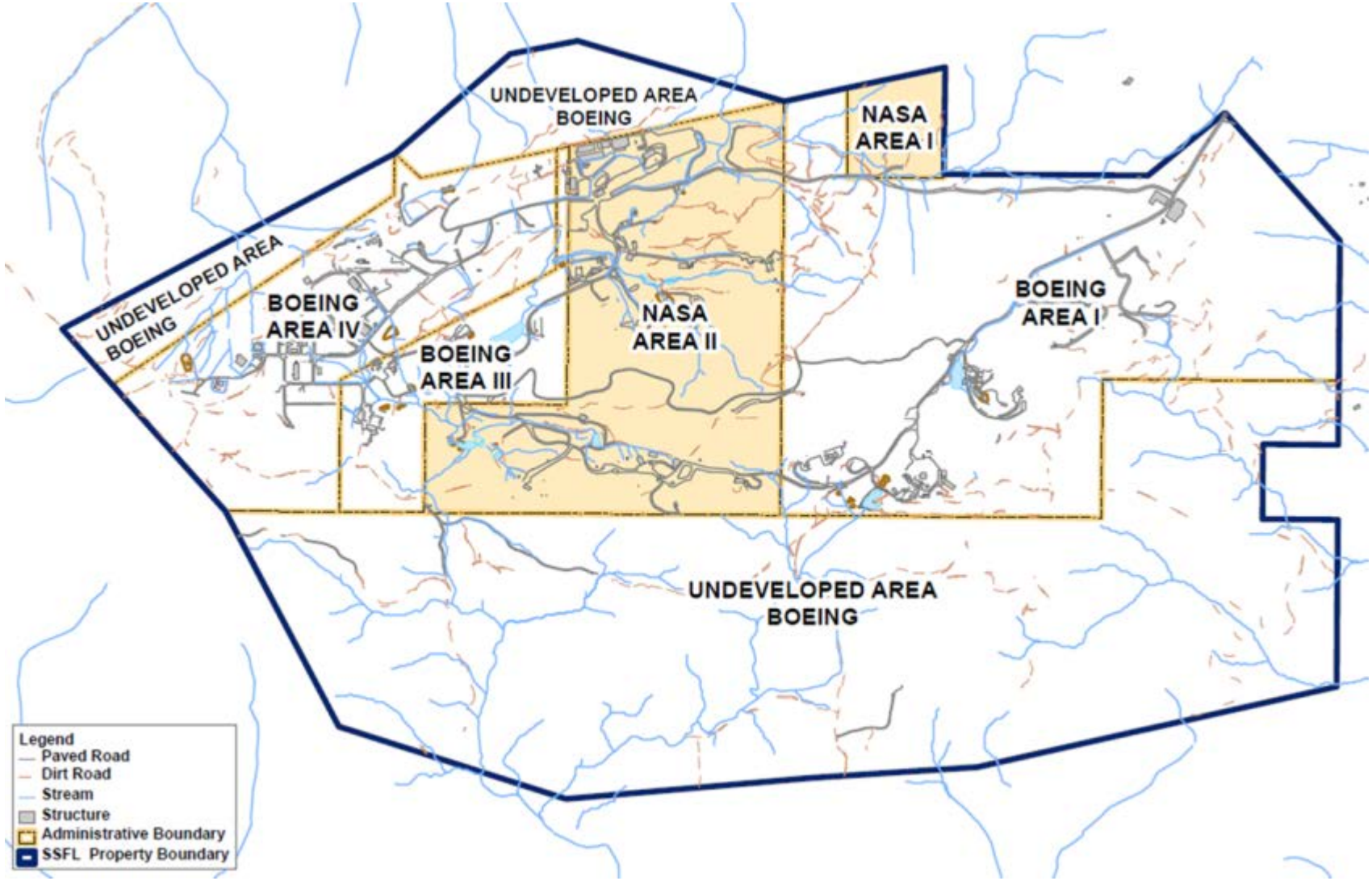
Photos of engine test facilities

Draft EIS Meeting Agenda

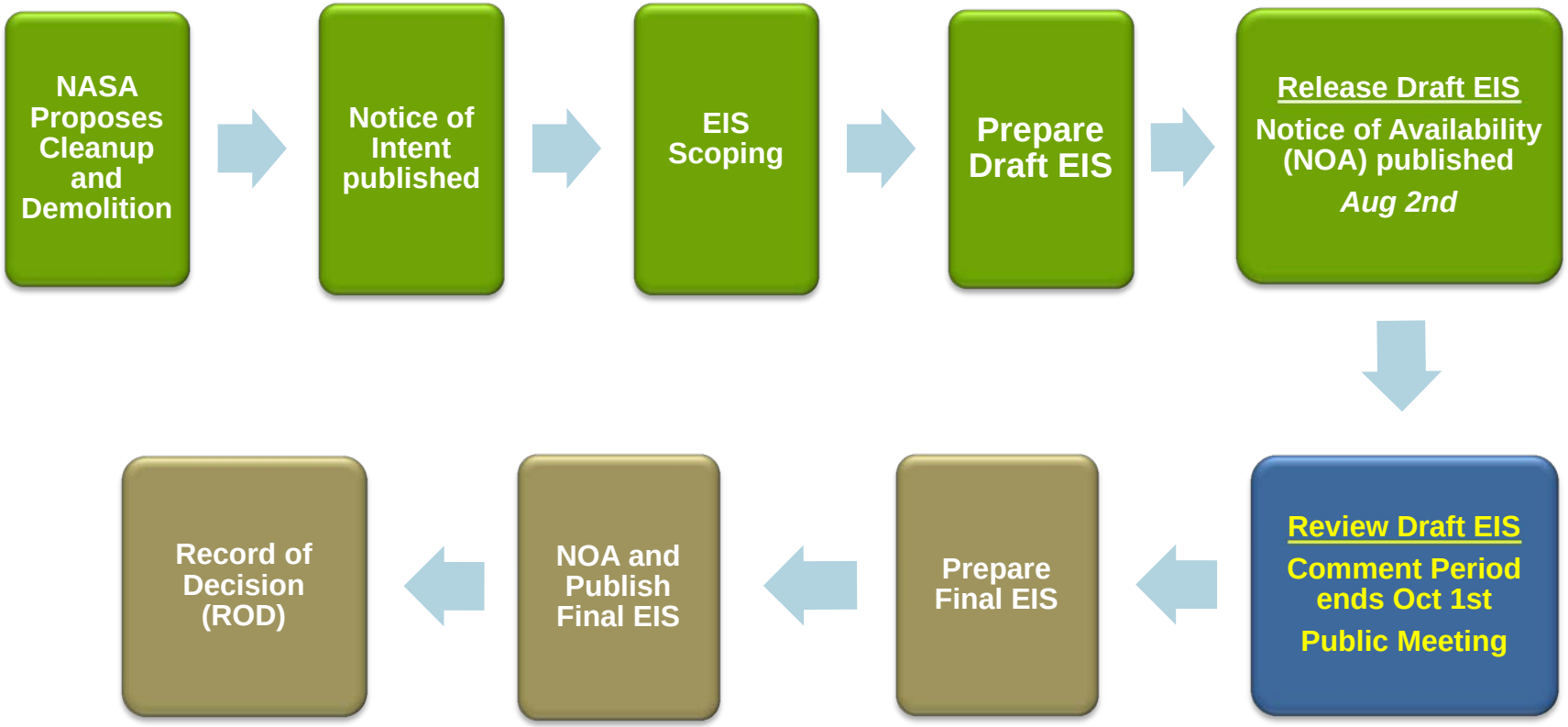
- Welcome – Susan Santos
- Introduction – Allen Elliott
- Overview of NASA's Draft EIS – Jason Glasgow
- Cultural Resources – Jennifer Groman
- Q&A on DEIS
- Public Comments on the Record

Photos of flora and fauna at SSFL

Santa Susana Field Laboratory (SSFL) Draft EIS Introduction



NASA's EIS Process



Schedule

- Draft EIS Public Comment Period (Aug 2 – Oct 1)
- Review comments (Oct 2013)
- Publish Final EIS (Nov 2013)
- Publish Record of Decision (Dec 2013)
- Schedule Drivers
  a. AOC requires NASA complete cleanup by 2017
  b. Demolition needs to be completed prior to cleanup starting

Photos of cultural resources

Scope of the Draft EIS

The purpose of the Proposed Action is to:

- **Clean up the environment in accordance with 2007 Consent Order and 2010 AOC**
- **Perform demolition of test stands and other structures necessary to support remediation and property disposition**

Photos of soil Sampling, groundwater treatment, drilling, soil cleanup and transport

Santa Susana Field Laboratory (SSFL)
Overview of Draft EIS

Summary of Draft EIS (DEIS)

- DEIS evaluates only two alternatives
  - Cleanup to Background (AOC)
  - No Action alternative (NEPA)
- Evaluates impacts from demolition (up to 100%)
- Evaluates different technologies/methodologies for achieving soil and groundwater cleanup
- AOC requires soil cleanup to “Background” or “Look-Up Table values”
  - A “foot-print” of 105 acres out of 225 acres of soil
  - Equates to 500,000 yd^3
  - Requires over 26,000 truckloads for soil removal and almost 9,000 truckloads for backfill + demolition (approximately 80,000 total trucks up and down)

Technical Cleanup Options Evaluated

Soil

- Soil vapor extraction (SVE)
- Ex situ treatment using land farming
- Ex situ treatment using thermal desorption
- Ex situ and in situ chemical oxidation
- In situ anaerobic or aerobic biological treatment

Groundwater

- Pump and treat
- Vacuum extraction
- Heat-driven extraction
- In situ chemical oxidation
- In situ enhanced bioremediation
- Monitored natural attenuation
- Institutional controls

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Draft EIS Key Points

- **320,000 yd^3 of soil must be excavated and disposed offsite to meet the AOC**
- **180,000 yd^3 may be able to be treated on site (study to determine is underway)**
- **Significant impacts are due to scale of the cleanup footprints across the site (approx. ½ of NASA's soil area)**
- **Significant impacts are due to soil removal which requires destruction of vegetation and digging into archeological sites**
- **Significant impacts are due to the amount of trucks and traffic associated with the cleanup**

Summary of Impacts for the Proposed Demolition and Environmental Cleanup at NASA's Santa Susana Field Laboratory

Significant	Moderate	Minor or Negligible	Beneficial
- Soils - Cultural Resources - Biological Resources - Traffic and Transportation	- Water Resources - Air Quality - Environmental Justice - Safety	- Site Infrastructure and Utilities - Noise - Hazardous and Nonhazardous Materials and Waste	- Biological Resources - Hazardous Waste - Water Resources - Health






Significant Impacts

- **Soil: erosion**
- **Cultural Resources: archeological site; historic districts; Indian Sacred Site**
- **Biological Resources: sensitive habitats; native vegetation communities; soil profiles; invasive species**
- **Traffic and Transportation: damage to roads**

Photos of cultural resources

Moderate Impacts

- **Water Resources: hydrology; surface water quality**
- **Air Quality and Greenhouse Gasses: fugitive dust from the site; emissions from trucks**
- **Environmental Justice: increased truck traffic (child safety)**
- **Safety: onsite risks for injury**

Photos of cultural resources

Minor and Beneficial Impacts

- **Minor Impacts**
  - Site Infrastructure and Utilities: loss of service; temporary expansion for cleanup
  - Noise: onsite equipment; truck hauling
  - Hazardous and Nonhazardous Materials and Waste: generation, management and disposal of hazardous materials
- **Beneficial Impacts**
  - Removal of chemicals (Biological Resources; Hazardous Wastes; Health)
  - Increased natural areas from demolition (Biological Resources)
  - Reduced impervious surfaces (Water Resources)

Photos of flora and fauna at SSFL

Potential Mitigations

- What are Best Management Practices and Mitigation Measures?
- DEIS contains possible mitigation opportunities
  - Summarized in Section 6
  - Examples include dust and erosion controls, hand digging around large oaks, weed management, reseeding native plants, and preserving a test stand
- Mitigations cannot eliminate all impacts from Proposed Action
- Cumulative Impacts were assessed

Photos of soil Sampling, groundwater treatment, drilling, soil cleanup and transport

Section 106 and Cultural Resources

- **Adverse Effects**
  - **Historic Districts – demolition**
  - **Archeological sites – soil removal**
  - **Indian Sacred Site (places of traditional religious and cultural importance) – soil and plant removal**
- **Resolution of Adverse effects**
  - **DEIS proposes mitigation to resolve adverse effects**
  - **Ongoing Section 106 consultation should result in final mitigation**
  - **NASA must seek ways to avoid adversely affecting the physical integrity of the Indian Sacred Site**

Comment Period (Aug 2 – Oct 1)

- Provide comments through public meetings (orally or by comment card), written submission or website email
  - msfc-ssfl-eis@mail.nasa.gov
- This is THE opportunity to provide comments to NASA on Draft EIS for comments to be reflected in the Final EIS
  - Analysis of Impacts
  - Alternatives
  - Mitigations
  - Comments will be considered in the development of the Final EIS

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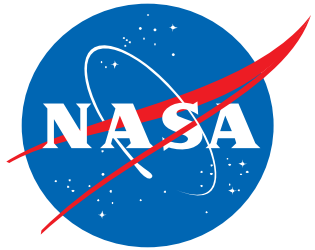
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