Finding of No Significant Impact

For the

Department of Commerce Boulder Laboratories

Campus Master Plan

Agency: Department of Commerce (DoC)

Action: Finding of No Significant Impact (FONSI)

Introduction

The DoC has developed a 20-year Master Plan for the DoC Boulder Laboratories campus located in Boulder, Colorado. Three DoC bureaus operate at the Boulder Laboratories campus; the National Oceanic and Atmospheric Administration (NOAA), the National Institute of Standards and Technology (NIST), and the National Telecommunications and Information Administration (NTIA). The need for the Master Plan, and the campus improvements described therein, is driven by both institutional policy and the inability of existing facilities and infrastructure to support current and projected mission requirements for the three bureaus. An Environmental Assessment (EA) has been conducted to evaluate environmental impacts arising from execution of the DoC Boulder Laboratories Campus Master Plan. NIST, with participation from NOAA and NTIA, served as the lead bureau in the development of the Master Plan and EA.

Scope

The EA was completed in accordance with the National Environmental Policy Act (NEPA) of 1969 (Public Law [P.L.] 90-190, 42 U.S. Code [U.S.C.] 4321 et seq.), as amended in 1975 by P.L. 94-83 and the regulations established by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500-1508). DoC determined that an EA was the appropriate level of NEPA review for the DoC Boulder Laboratories Campus Master Plan.

Alternatives Considered: This EA considered two alternatives: The Proposed Action and the No-Action Alternative.

Proposed Action: The Proposed Action is a Master Plan to guide the physical development of the campus to advance the agency's mission-related goals over the next 20 years. The Master Plan emphasizes quality and collaborative research in addition to sustainable and efficient operations. The Master Plan addresses current campus needs and delineates future development through phasing packages. Full execution of the Master Plan will increase the employee population by approximately 12% from its current population of 1,761 to 1,973 by 2036 and will result in a net increase in facility space by approximately 13%.

The physical development envisioned in the Master Plan will include new construction, additions, renovation, demolition, landscape improvements, utility improvements, and circulation improvements. The Master Plan will focus on a core center of the campus and associated green space used to connect existing, renovated, and new laboratories. The Master Plan also involves the consolidation of administrative buildings and support facilities at the western end of the proposed

campus green. Aging, deteriorating, and some temporary buildings will be phased out and replaced by updated facilities.

No-Action Alternative: The No-Action Alternative would not implement the Master Plan and would maintain the present course of action at the campus by continuing ongoing research, management, and maintenance activities. The No-Action Alternative would ultimately result in a site that would no longer support the advanced research requirements of DoC and would render much of the campus obsolete. The No-Action Alternative would not meet the purpose and need criteria for the campus.

Consultations

A public scoping meeting was held at the Boulder Public Library on January 12, 2016 to solicit public input on alternative concepts for the Master Plan and issues to be considered in the EA. The public scoping meeting was followed by a 31-day period during which written comments were accepted on the proposed Master Plan alternatives and issues for the EA. DoC also conducted outreach to staff at the DoC Boulder Laboratories Campus to encourage their feedback on the proposed Master Plan alternatives and issues to be considered in the EA. This outreach consisted of giving a presentation during an all-hands meeting, publishing notices on DoC and NIST internal websites, and directly emailing NOAA staff.

A biological consultation letter was sent out to the U.S. Fish and Wildlife Service (USFWS) for the review of potential impacts to threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, as a result of this project. Correspondence confirmed a total of 11 threatened or endangered species that could be impacted by actions on or around the DoC Boulder Laboratories Campus. These species and associated critical habitats were considered in the EA effects analysis.

During the development of the Master Plan, DoC consulted with the Office of Archaeology and Historic Preservation (OAHP) and reached an agreement that Building 1 is eligible for listing in the National Register. In accordance with Section 106 of the National Historic Preservation Act, DoC will continue to consult with OAHP to determine if renovations to Building 1 under the Master Plan will cause adverse effects and to seek ways to minimize or avoid such adverse effects.

DoC initiated a public comment period on the Draft Master Plan and Draft EA on October 19, 2016 and accepted comments through December 5, 2016. The Draft Master Plan and Draft EA were made available for review by federal, state, and local agencies as well as the interested public. In response, the following federal, state, and local agencies submitted comment letters to DoC:

- The USFWS Colorado Field Office provided a response of "no comment" on the Draft Master Plan and Draft EA.
- The U.S. Department of Agriculture Natural Resources Conservation Service Colorado State Office provided comments regarding farmland protection and erosion control.
- The Colorado Department of Public Health and Environment provided comments regarding protection of air quality.
- The City of Boulder provided comments on a variety of topics affecting both the Draft Master Plan and Draft EA.

All comments received, including those from the general public and from staff at the DoC Boulder Laboratories Campus, were taken into consideration during development of the Final Master Plan and Final EA.

Findings and Conclusions

Based on the analysis of baseline conditions and the anticipated impacts of the Proposed Action described in the EA, DoC has determined that no significant impacts to the environmental conditions of the DoC Boulder Laboratories Campus and/or the surrounding community will result from implementation of the Proposed Action. Table 1 attached summarizes the anticipated impacts and mitigation measures for the Proposed Action. Accordingly, this Finding of No Significant Impact statement is issued regarding DoC's intent to complete the Proposed Action. Further NEPA analysis may be required as new projects are identified and incorporated into the Master Plan, or if significant changes are made to the projects currently included in the Master Plan. As the proposed projects described in the EA enter the preliminary design stage, each will be reviewed individually to determine whether further NEPA analysis is warranted.

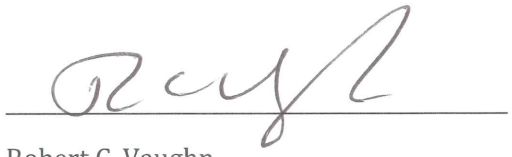
Determination

In view of the analysis contained in the EA prepared for the DoC Boulder Laboratories Campus Master Plan, and proposed mitigation measures summarized in Table 1, it is hereby determined that the projects included within the Master Plan will not significantly impact the quality of the human environment. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.

7/19/17

James Michael Blackmon
NEPA Coordinator
National Institute of Standards and Technology

Date



7/24/17

Robert C. Vaughn
Chief Facilities Management Officer
National Institute of Standards and Technology

Date

Attachment: Table 1. Summary of Environmental Effects and Mitigation Measures.

Table 1. Summary of Environmental Effects and Mitigation Measures

Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Land Use and Socioeconomics	
Land Use and Regional Planning	Effects: • Improved connectivity, stronger campus identity, and encouraged collaboration amongst employees. • No impact on land use designations on the campus. Continued preservation of open space and natural features. • No impact on zoning or regional planning outside the campus. Mitigation: • No mitigation necessary.
Social and Economic Resources	Effects: • Minimal long-term impact on population, housing, and education trends due to the projected increase of approximately 200 staff over the course of 20 years. • Minor long-term economic benefits associated with improved productivity and available resources as well as a marginal improvement to employment levels associated with increased staff on the campus. Staff increases would likely benefit the local economy and job market. • Temporary minor impact on the population and availability of housing during construction (due to potential influx of construction workers). • Temporary economic benefits to the local community during construction activities (e.g., meals and incidentals for construction workers). • No disproportionate impact on children, minorities, or low income populations. Mitigation: • No mitigation necessary.
Open Space	Effects: • No long-term or temporary impact on open space, protected areas, or recreational areas. Mitigation: • No mitigation necessary.
Trails	Effects: • No impact on public trails located within the Protected Area on campus. • Potential improvement to trails leading to off-campus recreation areas, multi-use trails, and the designated bicycle route areas. • Improvement to circulation and safety on campus for pedestrians and bicyclists. • Potential temporary trail closure or detour during construction activities. Mitigation: • No mitigation necessary.
Biological Resources	
Vegetation	Effects: • Removal of vegetation due to construction in previously undeveloped areas. • No impact on rare, threatened, or endangered plant species or to vegetation in stream buffers or wetlands. • Improvement to urban landscape due to replacement of water-intensive, non-native plants with drought-resistant, native species (requiring less irrigation). • Improvement to urban landscape due to planting additional trees for cover and shade and additional native vegetation in association with the pedestrian promenade and vegetated arroyo. • Improvement to urban landscape due to removal and replacement of ash trees, which provide emerald ash borer habitat. Mitigation: • Reseeding native grasses and vegetative species in disturbed areas following completion of construction activities to the extent feasible. • Replacement of trees removed. • Management of ponderosa pine stands to prevent infestation by bark beetles. • Management of hardwood trees to prevent the spread of the emerald ash borer. • Consolidation of facilities in previously developed areas.

Table 1. Summary of Environmental Effects and Mitigation Measures

Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Wildlife	Effects: • Temporary minor reduction in potential wildlife, migratory bird, and pollinator habitat during construction activities. • Temporary potential impact on wildlife due to noise during construction. Negligible long-term noise impacts. • No disturbance within the boundaries of the existing prairie dog colony located in the protected area. • Unlikely impact on rare, threatened, and endangered species since there are no critical habitats within the project areas. • Potential minor impact on aquatic life due to runoff of sediment or other contaminants. • Minor improvement to wildlife and pollinator habitat due to replacement of non-native plants with native vegetation and planting additional trees. Mitigation: • Consolidation of facilities within previously developed areas. • Avoidance of tree clearing until it is verified that no migratory bird eggs and/or young are present. • Consultation with the U.S. Fish and Wildlife Service and implementation of appropriate mitigation measures if threatened or endangered species are discovered on the campus during the course of planning or execution of the Master Plan. • Reassessment of the prairie dog colony boundaries prior to project implementation to determine whether a potential conflict exists. Non-lethal, non-removal methods would be implemented for resolving any conflicts. • Implementation of stormwater management and pollution prevention measures to reduce impact on aquatic life. • Management of ponderosa pine stands to prevent infestation by bark beetles. • Management of ash trees to prevent the spread of the emerald ash borer.
Topography, Geology, and Soils	
Topography	Effects: • Minor impact on topography due to construction activities, which would require grading in previously disturbed areas. • Potential for minor changes to existing drainage patterns in the immediate vicinity of new facilities. • No impact on topography of Kohler Mesa. Mitigation: • No mitigation necessary.
Geology and Soils	Effects: • Moderate disturbance due to construction, demolition, and renovation projects that would impact previously disturbed soils. Potential for surface and subsurface compaction and soil relocation during construction and demolition activities. • Minimal potential for extensive soil erosion. Mitigation: • Implementation of erosion and sediment control (ESC) measures during earth disturbance. • Installation of post-construction best management practices (BMPs) for projects that disturb 1 acre or greater of land.

Table 1. Summary of Environmental Effects and Mitigation Measures

Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Water Resources	
Surface Water	Effects: • Potential impact on surface waters due to runoff from construction activities and changes in the quality and quantity of post-construction stormwater runoff. • Potential improvement to surface water quality at the campus associated with design and implementation of post-construction BMPs and improved stormwater management techniques such as Low Impact Development (LID) features. • Potential increase in wastewater discharge to the City of Boulder sanitary sewer system due to increased campus population. No change in wastewater quality. • Potential increase in wastewater discharge to the campus stormwater system due to increased cooling loads. Mitigation: • Implementation of ESC measures during all construction activities to prevent sediment transport to Skunk Creek and Anderson Ditch.
Groundwater	Effects: • No impact on groundwater consumption. • Potential impact on groundwater quality during construction and demolition activities. • Potential for enhanced groundwater recharge during storm events due to installation of BMPs and implementation of advanced stormwater management techniques. Mitigation: • Implementation of appropriate pollution prevention and ESC measures during construction and demolition activities to avoid spills and exposure of groundwater to contamination.
Wetlands	Effects: • No construction, demolition, or renovation within wetlands or wetland buffers. • Potential for long-term changes in the quality and quantity of stormwater runoff discharged to the wetland surrounding Skunk Creek following construction of the new Childcare Center and parking garage. Mitigation: • Installation of stormwater management BMPs to reduce potential for sediment and contaminant transport.
Floodplains	Effects: • Reconfiguration of Curie Circle within the current 100-year floodplain. No construction, demolition, or renovation within the city's proposed 100-year floodplain. • Renovation of portions of Building 1 within the city's proposed 500-year floodplain. • No construction, demolition, or renovation within the current or proposed conveyance zone or high hazard zone. Mitigation: • Permitting or consultation with Boulder Planning and Development Services Center. • Proper siting and design of new facilities to avoid impacts to floodplains and ensure consistency with federal regulations and EOs. • Minimization of stormwater runoff from new development to Skunk Creek and Anderson Ditch.
Utilities and Infrastructure	
Potable Water Supply	Effects: • Minor increase or potential decrease in potable water demand. • Potential for improvement to water efficiency via improved availability of chilled water, installation of efficient water fixtures, and addressing water leaks. • New potable water line installation. Mitigation: • Implementation of water conservation practices.

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Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Wastewater	Effects: • Increase in wastewater generation from increased population and increased cooling loads. • New sanitary sewer line installation. Mitigation: • Installation of water-efficient fixtures in new and renovated buildings.
Stormwater Management	Effects: • Temporary impact on stormwater from sediment associated with renovation, demolition, and construction activities. • Potential long-term improvement to stormwater quality and reduction in stormwater quantity via removal of impervious surfaces and installation of post-construction BMPs, control measures, and LID technologies. Reduction in impervious areas within the campus by 4.8% with full implementation of the Master Plan. Mitigation: • Implementation of approved ESC and stormwater management plans during construction activities.
Energy Systems - Electricity	Effects: • Expected 1-2% increase in electrical demand due to operation of lighting systems, laboratory equipment, and HVAC systems associated with new buildings. • Removal of inefficient small and temporary buildings. • Improved energy efficiency for new and renovated buildings. • Potential for reduced consumption of electricity from the grid with installation of photovoltaic energy systems and a solar panel field. • Potential for new buildings to achieve net-zero energy consumption. • No extensive modifications to the existing electrical distribution network. Mitigation: • No mitigation necessary.
Energy Systems - Heating and Cooling	Effects: • Expected 1-2% increase in electrical (including cooling demand) and 1-3% increase in heating demand. • Removal of inefficient and under-insulated small and temporary buildings. • Improvement to insulation and efficiency of heating and cooling for new facilities. Mitigation: • No mitigation necessary.
Sustainable Development	
--	Effects: • Moderate overall improvement to campus sustainability through replacement of inefficient facilities and upgrading outdated equipment. • Improvement of energy efficiency; stormwater management; and transportation efficiency. • Short-term and continuing generation of waste and commitment of resources (e.g., raw construction materials, fossil fuels) to support facility construction and operation. • Achievement of LEED Silver certification (or better) for each new or renovated building. • Adaptive reuse of an outdated laboratory building to become the Campus Center. Mitigation: • Recycling of construction and demolition debris to the extent practicable.

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Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Solid and Hazardous Waste	
--	Effects: • Temporary generation of construction and demolition waste, potentially including materials containing polychlorinated biphenyls, lead, or asbestos. • Minor long-term increase in operational waste due to increase in staff and operational space. Mitigation: • Recycling of construction and demolition debris to the extent practicable. • Handling and disposal of wastes in accordance with Colorado Department of Public Health and Environment regulations.
Transportation	
Vehicle Circulation and Parking	Effects: • Reduced vehicle congestion and queuing at the campus entrance and Security Center. • Improved vehicle circulation and maneuvering. • Slight increase in vehicles entering and exiting the campus due to personnel increase. • Minor reduction in vehicle use within the campus due to improved pedestrian access to and between buildings. • Improved parking configuration. • Temporary increase in traffic and decrease in parking availability during construction and demolition activities. Mitigation: • Coordinate construction activities and create temporary parking and staging areas to avoid parking overflow during construction and demolition activities.
Public and Alternative Transportation	Effects: • Slight increase in public transit ridership due to increase in employees. • Improved access to the campus from bus stops due to improved pedestrian walkways. • Improved safety and accessibility for bicycle commuters. Mitigation: • No mitigation necessary.
Air Quality	
--	Effects: • Minor long-term increase in air emissions from onsite boilers and emergency generators and new or relocated laboratory activities. • Minor long-term increase in local air emissions from mobile sources associated with 12% increase in employee population and associated increase in vehicle use. • Temporary increase in air emissions due to demolition, construction, and renovation activities. • Air emissions would be below the *de minimis* thresholds each calendar year for nonattainment criteria pollutants and their precursors. Mitigation: • Continued use of low-NOx burners in new boilers. • Implementation of BMPs during demolition, construction, and renovation activities to reduce criteria pollutant and fugitive dust emissions. • Removal and disposal of lead-containing materials, asbestos-containing materials, and ozone-depleting substances in accordance with applicable regulations.

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Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Climate Change	
--	Effects: • Minor long-term increase in direct and indirect greenhouse gas (GHG) emissions from boilers, emergency generators, and operation of new facilities (including purchasing of electricity). • Temporary increase in GHG emissions due to demolition, construction, and renovation activities. • Potential contribution to effects of climate change through potential minor increase in potable water demand. Mitigation: • Implementation of BMPs during demolition, construction, and renovation activities to reduce GHG emissions. • Installation of solar energy systems to further offset GHG emissions from the campus.
Cultural and Historic Resources	
Architectural Resources	Effects: • Potential adverse effect associated with renovation of historic Building 1. • No impact on Anderson Ditch or historic properties outside the campus. Mitigation: • Continued consultation with the Colorado Office of Archaeology and Historic Preservation to identify appropriate mitigation measures to reduce or avoid adverse effects to Building 1.
Archeological Resources	Effects: • No adverse effects on tribal protected areas, archeologically sensitive areas, or previously identified archeological sites. Mitigation: • No mitigation necessary.
Visual Impacts	
Viewscapes	Effects: • Minimal impact on the viewscape from surrounding areas due to new construction, which would not obstruct visibility of Kohler Mesa when viewed from Broadway and 27th Street. • Temporary impact on the viewscape from surrounding areas due to construction activities. • Improvement of viewscape on the campus by replacing dated buildings with new buildings. Mitigation: • No mitigation necessary.
Light Pollution	Effects: • Negligible change in light trespass outside the campus boundary. • Potential minor temporary light trespass from supplemental lighting during construction activities. • Potential increase in glare in the vicinity of the campus due to sunlight reflected from solar panels. • Potential increase in light trespass on the campus from interior lighting due to skylights and windows in proposed facilities. Mitigation: • Conducting construction work during daylight hours. • Ensuring that all new exterior lighting systems would be directed and sized appropriately; designed in accordance with current guidance and the Boulder County Outdoor Lighting Ordinance; and would generate light with a color temperature that is appropriate for reducing nighttime light pollution. • Screening with tree plantings on the campus to intercept light trespass outside the campus boundary. • Ensuring that solar panel designs incorporate glare reduction measures and that the panels are sited in a manner to avoid creating excessive glare. • Continued use of automatic lighting controls. • Continued evaluation of whether additional design and landscaping measures would be necessary to mitigate light trespass outside the campus boundary.

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Resource	Proposed Action (DoC Boulder Laboratories Campus Master Plan)
Noise Levels	
--	Effects: • Negligible impact on overall operational noise levels. • Temporary increase in noise during construction activities. Mitigation: • Limitation of construction activities to normal daytime working hours. • Use of hearing protection by operational and construction workers as needed. • Continued evaluation of whether additional design and landscaping measures would be necessary to mitigate noise trespass into adjacent residential properties.