



**National Park Service
U.S. Department of the Interior**

**Death Valley National Park
Regions 8, 9, 10 and 12**

**FINDING OF NO SIGNIFICANT IMPACT
STOVEPIPE WELLS DEVELOPED AREA IMPROVEMENTS**

Recommended:

Mike Reynolds
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Date

Approved:

Frank Lands
Regional Director, Interior Regions 8, 9, 10 and 12, National Park Service

Date

1. Introduction

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an environmental assessment (EA) to evaluate the impacts of improving the Stovepipe Wells Developed Area in Death Valley National Park (park), Inyo County, California. The Stovepipe Wells Developed Area includes Stovepipe Wells Village, Emigrant Junction, Mesquite Flat Sand Dunes trailhead, Mosaic Canyon Road and trailhead, and Devils Cornfield parking pullout (figure 1). These improvements are needed to address critical infrastructure issues, visitor safety concerns, and conditions that adversely impact visitor experience, cultural and natural resources, and park operations. The statements and conclusion reached in this Finding of No Significant Impact (FONSI) are based on the documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below. Except where noted, references can be found in the EA.

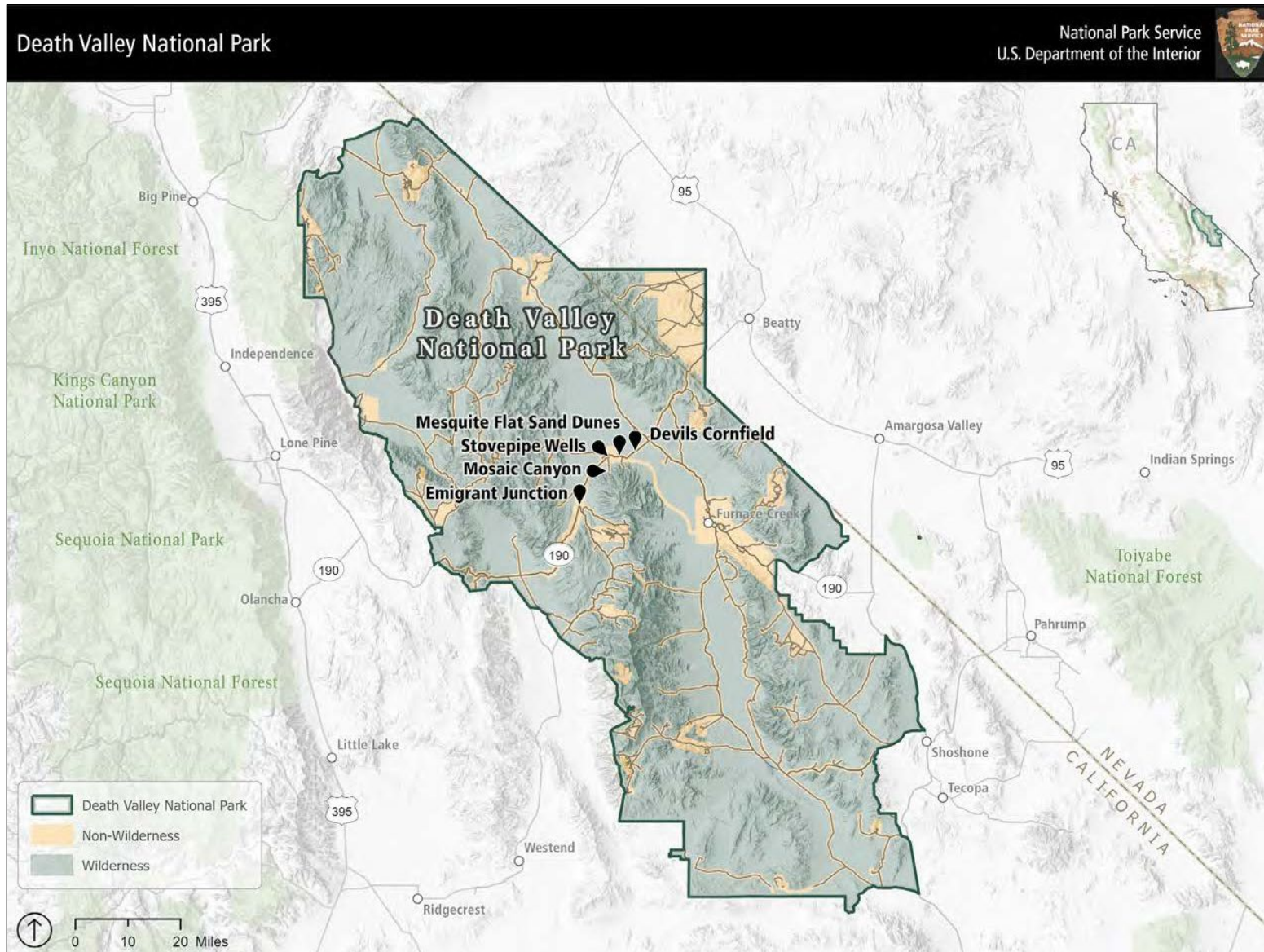
2. Selected Alternative and Rationale for the Decision

Two alternatives were analyzed in the EA: 1) The no-action alternative, which will result in no changes in how the Stovepipe Wells Developed Area is currently managed, and 2) the proposed action/preferred alternative, which has modifications to the Stovepipe Wells Developed Area to address failing infrastructure and improve park operations in this area of the park. These actions will enhance the overall visitor experience and protect natural and cultural resources. Detailed description of the actions for each area are described in chapter 2 of the EA.

After careful analysis of resource impacts, consultation with agencies, and review of stakeholder and public comments, the NPS preferred alternative was selected, as described on pages 19 through 31 of the EA, with one exception – the Stovepipe Wells airstrip. The National Park Service has decided to modify the preferred alternative with regard to the Stovepipe Wells airstrip. The National Park Service will convert the Stovepipe Wells airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park's General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative.

In the harsh desert environment, reliable infrastructure is important to the health and safety of both visitors and staff. It is inefficient to spend park funds and staff time on emergency repairs and piecemeal replacements of outdated and failing infrastructure, such as potable water and wastewater systems, and unplanned outages compromise the visitor experience. The National Park Service will implement the selected action (NPS modified preferred alternative) to address the most important issues related to visitor experience, natural and cultural resource protection, and park operations.

Figure 1. Location of Stovepipe Wells Developed Area Improvements in Death Valley National Park



Rationale

The National Park Service modified the preferred alternative, which is now the selected alternative, because it responds to public comments regarding the airstrip, best meets the project purpose to address critical infrastructure issues, visitor safety concerns, and conditions that adversely impact visitor experience, cultural and natural resources, and park operations.

Although the National Park Service selected the preferred alternative, the park has decided not to proceed with the proposal to remove the Stovepipe Wells airstrip, as described in the preferred alternative. Federal funds for transportation projects are awarded/distributed by use and population density. Low volume of aviation for the two airstrips plus recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip make the Stovepipe Wells airstrip a more compelling proposal. With the addition of new information gained through this Stovepipe Wells Developed Area planning effort and Tribal concerns expressed from the Timbisha Shoshone Tribe, the park has concluded that further study, planning, and outreach are necessary to determine if one or both airstrips should be closed. Therefore, the no-action alternative, as described for the Stovepipe Wells airstrip only and analyzed in the park's General Management Plan, will be carried forward. No other elements under the no-action alternative are included in the selected alternative.

3. Mitigation Measures and Best Management Practices

The selected alternative incorporates by reference mitigation measures, the best management practices and the regulatory requirements for the Stovepipe Wells Developed Area Improvements Floodplain Statement of Findings, the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, *Secretary of the Interior's Standards for the Treatment of Historic Properties*, and NPS *Management Policies 2006* for building in floodplains located in chapter 2 of the EA, pages 33 through 35.

4. Other Alternatives Considered

A no-action alternative was also analyzed in the EA. The no-action alternative would have resulted in no changes in how the Stovepipe Wells Developed Area is currently managed, except for the Stovepipe Wells airstrip, which would have been converted from an asphalt surface to gravel. This action was included in the park's 2002 General Management Plan but has not yet been implemented. No other alternatives, except the preferred alternative, which is now the selected alternative, were analyzed in the EA.

5. Public Involvement/Agency Consultation

The specific actions in the comprehensive development plan will require additional regulatory compliance once the design phases are complete. Additional consultation with the California State Historic Preservation Office (SHPO) and the Timbisha Shoshone Tribe will also be necessary at that time.

6. Finding of No Significant Impact

The selected alternative has the potential for minor adverse impacts on floodplains, archeological sites, historic districts, ethnographic resources, and visitor experience; however, no potential for significant adverse impacts was identified.

Mosaic Canyon, Stovepipe Wells Village, and Emigrant Junction are located in active alluvial fan areas that are subject to flooding. The selected action will increase the amount of fill, disturbance, and impervious surface within the floodplain of the Stovepipe Wells Developed Area. These modifications will affect a small portion of the large watershed areas within Stovepipe Wells and Emigrant Junction and will not result in long-term negative net impacts to floodplain function. Restoring the grade of Mosaic Canyon Road to accommodate natural flow patterns will have a beneficial impact on floodplain values, and converting the asphalt airstrip to gravel will restore a large area of permeable surface within the floodplain. Although the flood control features will alter natural flow patterns in the floodplains, they will divert flow from less than 2% of the entire floodplains area. Overall, the natural functions of the floodplain within the project area will not be adversely affected. Developed areas could continue to be at risk of flood damage, and visitors and park staff will continue to be at risk from flash flooding, although the developed areas of Stovepipe Wells, Mosaic Canyon Road and trailhead, and Emigrant Junction will be substantially safer with the dike improvements.

The selected action will result in no adverse effects to archeological resources at Stovepipe Wells campground, Emigrant Junction Ranger Station and Comfort Station, Mesquite Flat Sand Dunes, and Devils Cornfield Parking Area. The selected action may alter some of the characteristics of the Emigrant Junction Historic District or historic structures; however, using the guidelines set forth by the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, the alterations would not diminish the integrity of the district and therefore, not result in an adverse impact to the historic district or historic structures at Emigrant Junction.

The revised preferred alternative, now the selected alternative, as described above in section 2, will convert Stovepipe Wells airstrip from a paved to gravel surface. Some pilots might choose to land at Furnace Creek airstrip instead, potentially increasing air traffic in the Tumpisa Traditional Cultural Property and near the Timbisha Village where some members of the Timbisha Shoshone Tribe live and work. If air traffic does increase slightly, this may have a negligible and temporary effect on the integrity of feeling and association within known ethnographic resources. These impacts would be brief and transient in nature and would not reduce the National Register qualifying characteristics of the Traditional Cultural Property to an adverse level.

The selected alternative will make improvements that will enhance existing opportunities (e.g., improvements to the Stovepipe Wells campground and Mosaic Canyon Road) and create new recreational opportunities (e.g., increases availability of interpretive opportunities). Some pilots may not be interested or able to land at Stovepipe Wells airstrip once it is converted to gravel while others prefer a more primitive surface. Overall, the selected alternative will be beneficial to visitor use and experience and would allow continued recreational use of the Stovepipe Wells Developed Area.

There will be no significant impacts on public health, public safety, or unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative

effects, or elements of precedence were identified. Implementation of the NPS selected alternative will not violate any federal, state, or local environmental protection laws.

7. Conclusion

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an environmental impact statement (EIS). The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA. Based on the foregoing, it has been determined that an EIS is not required for this project and, thus, will not be prepared.

Appendix A: Errata Indicating Text Changes to the EA

Errata

Stovepipe Wells Developed Area Improvement Project Environmental Assessment Death Valley National Park June 2022

The following errata, together with the response to substantive public comment (appendix B), the FONSI and the EA, describe the final decision of the National Park Service for improving the Stovepipe Wells Developed Area at Death Valley National Park.

Errata

Corrections or revision to an EA are generally in response to comments received during the public comment period, which was conducted from January 28 through February 28, 2022. The *National Park Service NEPA Handbook* defines substantive comments as those that: 1) question, with reasonable basis, the accuracy of the information in the NEPA document; 2) question, with reasonable basis, the adequacy of the environmental analysis; 3) present reasonable alternatives other than those presented in the NEPA document; or 4) cause changes or revisions in the proposal.

The National Park Service received 343 pieces of correspondence during public and agency review of the EA. Appendix B contains the substantive comments, summarized into concern statements, and NPS responses. Based on public comment and consideration of these comments, the National Park Service changed one of the components of the preferred alternative, as described below.

These errata are to be attached to the *Stovepipe Wells Developed Area Improvement Project Environmental Assessment* dated January 2022 and are intended to correct or clarify statements in the EA other than typographical and minor editorial errors. EA text to be deleted is shown as ~~strikeout text~~ and revised or new text is shown as ***bold italicized*** text. These modifications did not change the assessment of impacts in the EA.

Chapter 1: Purpose and Need

Introduction, page 1

The proposed project would include the following actions:

- Improve visitor safety along California Highway 190 (CA-190)
- Improve or replace potable water, wastewater, and septic system components throughout the project area
- Demolish and replace the Stovepipe Wells emergency services building (fire and ambulance station)
- Redesign Stovepipe Wells campground
- Demolish and replace Stovepipe Wells visitor contact station

- Improve parking areas throughout the Stovepipe Wells Developed Area
- Improve interpretive facilities, including signs, throughout the area
- Create a trail connecting Stovepipe Wells Village to Mesquite Flat Sand Dunes trailhead
- Improve the gas station by adding diesel fuel
- Improve and increase concession employee housing
- Improve the emergency services helipad and ~~remove the Stovepipe Wells airstrip~~ ***a future analysis will be conducted on whether to convert the surface of the Stovepipe Wells airstrip from asphalt to gravel or remove it entirely***
- Rehabilitate Emigrant Junction Ranger Station, Comfort Station, and campground
- Construct recreational vehicle (RV) pads for staff at Emigrant Junction
- Improve Mosaic Canyon Road and trailhead
- Install an off-road driving barrier along CA-190 at Devils Cornfield

Issues and Resource Topics Retained for Detailed Analysis

Human Health and Safety, page 8

In the harsh desert environment, reliable critical infrastructure is important to the health and safety of both visitors and staff. Death Valley National Park has issues with utility failures due to the environment and the age of the infrastructure. Similarly, the facilities at the Stovepipe Wells Developed Area are outdated and in need of upgrades. The actions proposed under the preferred alternative would replace outdated and failing infrastructure, such as potable water and wastewater systems, which would reduce the number of unplanned outages and provide visitors and park staff with safe, consistent, and reliable access to water, as well as restroom and housing facilities.

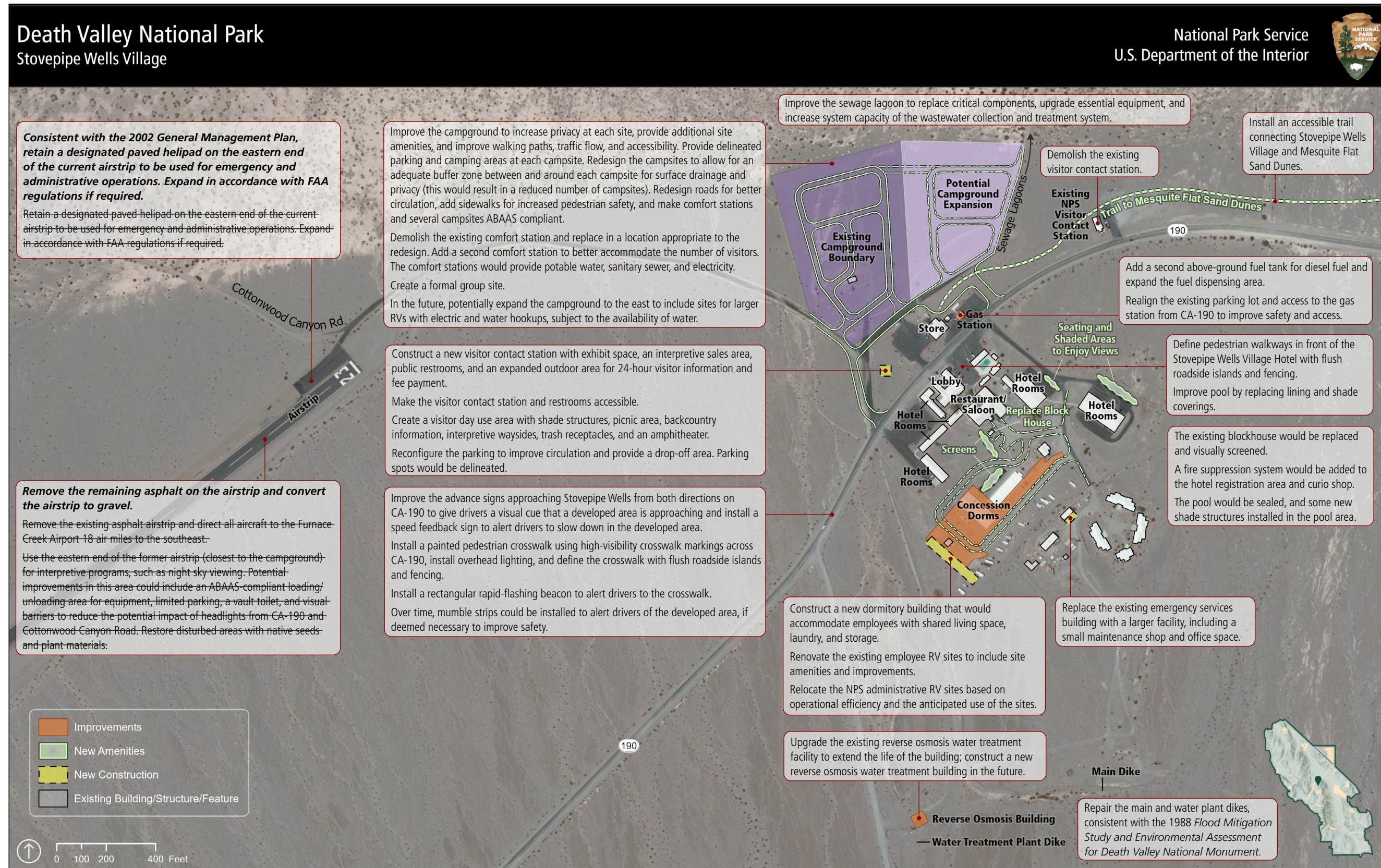
Crossing CA-190 at Stovepipe Wells and Emigrant Junction is potentially dangerous to visitors due to speed and traffic on the highway. Under the proposed action, warning systems to alert drivers and slow speeds would be installed. During construction activities, mitigation measures to protect visitors would be implemented, such as restricting visitors from active construction areas to ensure their safety, as well as safely storing any hazardous materials required for construction.

Once construction is complete, impacts on human health and safety ***from the infrastructure, facility, and road design improvements*** would be beneficial, as conditions would be improved after the implementation of the proposed action. ***Commenters have noted the benefit of having multiple airstrips available for recreational pilots in the event that there is a weather event or mechanical issue. Pilots are advised to know the weather at their destination and along their flight plan. The closing of the Stovepipe Wells airstrip would not eliminate the availability of alternate airstrips or airports available to pilots if the weather is not suitable for landing at Furnace Creek. There are additional airstrips within 100 nautical miles of Furnace Creek that offer similar runway alignments to Stovepipe Wells in the event the weather at Furnace Creek is not suitable for landing.*** For these reasons, human health and safety has been dismissed from detailed analysis.

Chapter 2: Alternatives

Alternative B – Proposed Action (NPS Preferred Alternative)

Figure 7. Stovepipe Wells Village under Alternative B, page 20



Chapter 2: Alternatives

Alternative B – Proposed Action (NPS Preferred Alternative) Stovepipe Wells Village Area Projects, pages 23 – 24

Airstrip. Under alternative B, the park would amend the 2002 GMP related to the management of the Stovepipe Wells airstrip. The airstrip would be removed, and all aircraft would be directed to the landing strip at the Furnace Creek airstrip, which is 18 air miles to the southeast. The Furnace Creek airstrip is a more appropriate facility for both small and larger aircraft because it is located near the largest developed area in the park and is a more appropriate location for this use. The park has had a difficult time securing funding to repair the airstrips at Furnace Creek and Stovepipe Wells because the level of use at both airstrips is low. By concentrating the use into a single airstrip, funding for repair, while not assured, may be more likely. A separate rulemaking process would be required to formally close the Stovepipe Wells airstrip, and this process would include an opportunity for public comment.

A portion of the eastern end of the airstrip (closest to the campground) could be repurposed for interpretive programs, which could include night sky viewing. The location of the programming area would be designated based on the appropriate distance from the helicopter landing area and proximity to the campground and hotel and to take advantage of a previously developed area, thus limiting new disturbance. The park is considering improvements to this area, which could include an ABAAS-compliant loading/unloading area for equipment, parking, and a vault toilet. In addition, to reduce the potential impact of headlights from CA-190, Cottonwood Canyon Road, and the developed area on nighttime programming, the park would consider installing visual barriers within the footprint of the existing disturbed area to the extent possible. Outside of the helicopter landing area and an area designated for interpretive programming, the remaining disturbed area would be restored with native seeds and plant materials. Upon completion of the design phase, additional regulatory compliance would be completed as necessary.

Airstrip. In the 2002 GMP, the park decided that the airstrip would be converted from a paved asphalt surface to a gravel surface. The size and foundation of the gravel airstrip would be based on an engineering analysis. No additional amenities would be provided. As stated in alternative A, a state permit compliance inspection conducted by the California Department of Transportation (Caltrans) Division of Aeronautics on behalf of the FAA identified two deficiencies requiring correction—the runway hold-line is too close to the runway centerline and there is brush in the runway safety area (Caltrans 2018). Addressing the deficiencies would require expanding the development footprint of the current airstrip by an estimated 723,100 square feet, which would not include the expansion of the airplane parking ramp. The selected alternative does not address these issues. Solutions will be evaluated in a later planning effort. A preliminary cost estimate to remove and dispose of the asphalt airstrip and install the gravel runway is between \$1.5 and \$3 million. This does not include the cost of removing the vegetation from the runway safety area. To date, the park has been unable to secure funding to address the deficiencies or to complete actions from the 2002 GMP. No modifications or repairs would be made to the Stovepipe Wells airstrip without a source of funding.

Actions Considered but Dismissed from Detailed Analysis

Second paragraph, page 32

The National Park Service received comments suggesting the park consider multiple uses at the airstrip, maintaining the current use of the airstrip and also using the area for programming, such as night sky viewing programs. As noted in the description of alternative A, maintaining the use of the airstrip would require addressing deficiencies outlined in an assessment of the airstrip conducted by the Caltrans Division of Aeronautics on behalf of the FAA. Addressing the deficiencies would require expanding the development footprint of the current airstrip by an estimated 723,000 square feet. ~~This level of disturbance is not justified given the current low use of the airstrip and the environmental impacts in a national park. In addition, as noted in the description of alternative B, trying to maintain two airstrips in such close proximity to each other makes securing the funds necessary to address the identified deficiencies and complete any repairs less likely.~~ Based on this analysis, the National Park Service has concluded that maintaining the use of the Stovepipe Wells airstrip would cause too great an environmental impact that cannot be justified given the low level of use. *The National Park Service will conduct further planning and outreach to address whether to close the Stovepipe Wells and/or Furnace Creek airstrip in the future, as maintaining two airstrips in such close proximity to each other makes securing the funds necessary to address the identified deficiencies and complete any repairs less likely.*

Chapter 3: Affected Environment and Environmental Consequences

Ethnographic Resources Impacts Assessment

Impacts of Alternative B: Preferred Alternative, pages 43 – 44

Airstrip. Under alternative B, the Stovepipe Wells airstrip would be closed, and the area would be used for interpretive programming that could include night sky viewing. This would permanently displace recreational aviation at Stovepipe Wells and result in increased use of the airstrip at Furnace Creek, which is located near the Timbisha Village. The types of impacts would be the same as alternative A with an increase in noise and concerns for safety and accidents. Alternative B would result in a larger number of aircraft landing at and taking off from the Furnace Creek airstrip, resulting in an adverse impact on known ethnographic resources.

The impacts to ethnographic resources, would be the same as described under alternative A and would result in a negligible adverse impact on known ethnographic resources.

Ethnographic Resources Impacts Assessment Conclusion for Ethnographic Resources, page 44

Both alternatives have the potential to increase aircraft traffic at the Furnace Creek airstrip, which is located within the proposed Tumpisa Traditional Cultural Property and near the Timbisha Village where some members of the Timbisha Shoshone Tribe live and work. The use of Stovepipe Wells airstrip is currently low. Converting the airstrip to gravel under alternative A *and B* may divert some pilots to the paved Furnace Creek airstrip ~~but removing the Stovepipe Wells airstrip completely under alternative B would noticeably increase the number of aircraft landing and taking off.~~ Both alternatives would have negligible adverse effects on known ethnographic resources, ~~but alternative B would have a greater impact.~~

Visitor Use and Experience Impacts Assessment

Impacts of Alternative B: Preferred Alternative, page 52

~~Airstrip. Under alternative B, the airstrip would be closed and the asphalt removed, except for the paved helicopter landing pad. Given its proximity to the developed area, interpretive programs, such as night sky programs, could be provided in this location. This would permanently displace recreational aviation at Stovepipe Wells and result in adverse impacts to some members of this user group who prefer the experience at Stovepipe Wells. Pilots and passengers would still be able to visit the park and surrounding area by using the airstrip at Furnace Creek, approximately 18 air miles away. Some pilots may not want to use the Furnace Creek airstrip or the Chicken Strip airstrip in Saline Valley, and these pilots would be permanently displaced from landing in the park, which would adversely affect their visitor experience. A larger number of visitors staying overnight at Stovepipe Wells accommodations would benefit from converting the area to a night sky viewing area. For visitors whose experience of the park is adversely impacted by airplanes landing at Stovepipe Wells, the long-term impact on their experience would be beneficial once the use of the airstrip stops.~~

For the airstrip, the impacts would be the same as described under alternative A. Some pilots may be impacted by changing the asphalt runway to gravel, while some visitors may still be beneficially affected by reduced airstrip use.

Visitor Use and Experience Impacts Assessment

Conclusion for Visitor Use and Experience, page 53

Converting the airstrip to gravel under alternatives A *and* B may displace some additional pilots *more* from landing in Stovepipe Wells if they do not prefer gravel or their aircraft is not equipped to do so. This would result in adverse impacts on a small number of visitors. ~~Removal of the airstrip under alternative B would eliminate the opportunity for pilots to land at Stovepipe Wells, one of the three airstrips in the park, affecting a larger but still small number of park visitors (refer to table 1 and 3 for park visitation and visitation to the Stovepipe Wells airstrip and the Furnace Creek airstrip).~~ Reducing or eliminating aircraft landing and taking off from Stovepipe Wells would be a benefit to some visitors that do not appreciate the sight or sounds of the aircraft. Under both alternatives, a paved helicopter landing pad would be retained to allow for administrative and emergency services.

Overall, alternative B would be beneficial to visitor use and experience and would allow continued recreational use of the Stovepipe Wells Developed Area. ~~However, recreational aviation would be permanently displaced resulting in adverse impacts to some members of this user group.~~

Floodplains Impacts Assessment

Impacts of Alternative A: No-Action Alternative, page 55

Under alternative A, the current operations and maintenance activities would continue in the Stovepipe Wells Developed Area. The deficiencies of the main dike and the water plant dike would be restored consistent with the 1988 *Flood Mitigation Study and Environmental Assessment for Death Valley National Monument* (NPS 1988). Although these improvements may result in additional fill in the floodplain, they are located in a previously disturbed area of the floodplain and would prevent up to 100-year flood flows from entering the developed area. Future flood flows in the Stovepipe Wells alluvial fan

would continue to cause erosion and safety issues along Mosaic Canyon Road, as use and grading of the road have altered the way flood flows travel through the alluvial fan. However, risks to the development and visitors and park staff at the Stovepipe Wells Developed Area would be reduced, as the repaired dikes would provide structural protection from most floodwaters. ***The conversion of the asphalt airstrip to gravel would restore a large area of permeable surface within the floodplain.*** Existing facilities within Emigrant Junction would continue to be at risk of flood damage, and the safety of visitors and park staff at these locations would continue to be at risk from flash flooding.

Conclusion for Floodplains, page 57

Both alternatives would improve the main dike and the water plant dike. The developed areas of Stovepipe Wells, Mosaic Canyon Road and trailhead, and Emigrant Junction would continue to be at risk of flood damage, and visitors and park staff would continue to be at risk from flash flooding; however, Stovepipe Wells Village would be substantially safer with the dike improvements. There would be no other floodplain impacts under alternative A, but Emigrant Junction would continue to be at risk of flood damage and the safety of visitors and park staff at these locations would continue to be at risk from flash flooding. Alternative B would increase the amount of fill, disturbance, and impervious surface within the floodplain of the Stovepipe Wells Developed Area. These modifications would affect a small portion of the large watershed areas within Stovepipe Wells and Emigrant Junction and should result in no long-term negative net impact to floodplain function compared to alternative A. New facilities would largely occur within previously disturbed areas, and the introduction of impervious surfaces would be minimized. Restoring the grade of Mosaic Canyon Road to accommodate natural flow patterns would have a beneficial impact on floodplain values. ***Under both alternatives, ~~and~~ the removal of the asphalt airstrip and converting the surface to gravel*** would restore a large area of naturally permeable surface within the floodplain. Alternative B would install protection structures at Emigrant Junction, providing flood protection for the developed features, visitors, and park staff. The rehabilitation of flood control features under both alternatives and the addition of new flood control alternatives under alternative B would enhance human safety and protect capital investment. Although these flood control features would alter natural flow patterns in the floodplains, they would divert flow from less than 2% of the entire floodplains area. The Stovepipe Wells and Emigrant Wash alluvial fans would continue to reduce the energy of the runoff, allowing it to dissipate through overland flow, and improved or new flood protection structures would divert flood waters from the developed areas of Stovepipe Wells Village and Emigrant Junction. Developed areas could continue to be at risk of flood damage, and visitors and park staff would continue to be at risk from flash flooding, although the developed areas of Stovepipe Wells, Mosaic Canyon Road and trailhead, and Emigrant Junction would be substantially safer. The impacts of alternative B on floodplains are discussed further in the floodplains statement of findings in appendix B.

Appendix A: Potential Effects to Resources from the Preferred Alternative

Stovepipe Wells Airstrip, page 68

Location/ Category	Proposed Action/NPS Preferred Alternative	Cultural Resources (Archeological Resources, Historic Districts/Structures)	Ethnographic Resources	Visitor Use and Experience	Floodplains
Stovepipe Wells Airstrip	<ul style="list-style-type: none"> ▪ The 2002 GMP would be amended, and the existing asphalt airstrip would be closed and removed. All aircraft would be directed to the Furnace Creek Airport, 18 air miles to the southeast. ▪ An area for interpretive programming, including night sky viewing, could be established on the eastern end of the airstrip. The location would be designated based on the appropriate distance from the helicopter landing area, the proximity to the Stovepipe Wells campground and hotel, and the ability to provide ABAAS-compliant access and improvements, including parking and a vault toilet. ▪ If necessary, the park may consider installing visual barriers within the previously disturbed area to shield it from headlights along CA 190, Cottonwood Canyon Road, and the development at Stovepipe Wells Village. ▪ The disturbed area no longer in use as an airstrip would be restored, including revegetation with native seeds and plant materials. ▪ <i>The airstrip would be converted from a paved asphalt surface to a gravel surface, as decided in the 2002 GMP. The size and foundation of the gravel airstrip would be based on an engineering analysis. No additional amenities would be provided.</i> 	<ul style="list-style-type: none"> ▪ Surveys have not identified any NRHP-eligible archeological sites or historic properties in the vicinity of the airstrip. ▪ Therefore, there will be No Effect on historic properties under these proposed actions. They are dismissed from detailed analysis. 	<ul style="list-style-type: none"> ▪ Removal of <i>Changing</i> the Stovepipe Wells airstrip would <i>to gravel</i> may increase the use of the airstrip at Furnace Creek near the Timbisha Village, resulting in noise from planes and safety and crash concerns. This action will be analyzed in detail. 	<ul style="list-style-type: none"> ▪ The closure of the airstrip to gravel would result in an adverse effect on a user group. ▪ These actions will be analyzed in detail. 	<ul style="list-style-type: none"> ▪ <i>Converting</i> the removal of the asphalt <i>asphalt to gravel</i> would result in beneficial impacts on the floodplain, as a majority of the asphalt would be removed, <i>by</i> reducing the amount of impervious surface from the floodplain and restoring floodplain function in this area. These actions will be analyzed in detail.

Appendix B: Floodplains Statement of Findings

Preferred Alternative First Paragraph, page 76

~~Preferred~~ *Selected* Alternative

The ~~preferred~~ *selected* alternative is alternative B in the environmental assessment *with the exception of the Stovepipe Wells airstrip. The National Park Service has decided to take the no-action alternative for the Stovepipe Wells airstrip and convert the existing asphalt airstrip surface to gravel.* ~~and~~ Under ~~this~~ *the selected* alternative, the following actions would be implemented to provide protection for visitors and staff, improve visitor experience, protect natural and cultural resources, protect and repair critical and failing infrastructure, restore some floodplain function, and improve park operations.

Stovepipe Wells Village, page 76

The deficiencies of the primary flood dikes (Main dike and the Water Plant dike in figure 2) would be restored consistent with the 1988 Flood Mitigation Study. Deficiencies of existing infrastructure would be addressed by the rehabilitation or replacement of facilities in approximately the same location within the existing footprint of the Stovepipe Wells Village. The existing concession employee dormitory, emergency services building, and reverse osmosis water treatment plant would be replaced with structures designed to address operational issues and make park and concession management more efficient and effective. The campground would be redesigned to provide more distance between campsites and would include the addition of amenities, such as shade structures and fires rings. Roadways within the campground would be better defined and walking paths would be developed. The existing comfort station would be replaced, and an additional comfort station would be constructed. The existing visitor contact station would be replaced with a new building constructed closer to the general store. A new trail would be constructed to link the Stovepipe Wells Campground with the Mesquite Flat Sand Dunes. The helicopter landing pad would be retained and could be expanded consistent with Federal Aviation Administration requirements. The asphalt airstrip would be ~~removed, and the disturbed area would be revegetated~~ *converted to gravel.*

Summary, page 81

Through the FSOF process, the National Park Service has determined that there are no practicable, non-floodplain locations for the proposed action. The terrain and topography preclude any alternate locations for the Mosaic Canyon facilities, and the functionality of Stovepipe Wells and Emigrant Junction are dependent on their proximity to CA-190, which is surrounded by floodplain. Potential impacts to human life and health would be mitigated through the posting of NWS flood advisories and the installation of signage with evacuation information. Potential impacts to capital investment would be mitigated through a combination of implementing design standards consistent with the National Flood Insurance Program's Floodplain Management Criteria for Flood-Prone Areas (44 CFR section 60.3) and in accordance with county or state requirements for flood-prone areas. The replacement and rehabilitation of facilities should result in no long-term negative net impact to floodplain function compared to the no-action alternative. New facilities would largely occur within previously disturbed areas, and the introduction of impervious surfaces will be minimized. Restoring the grade of Mosaic Canyon Road to

accommodate natural flow patterns would have a beneficial impact on floodplain values, and the ~~removal~~ **conversion** of the asphalt airstrip **to gravel** would restore a large area of ~~naturally~~ permeable surface within the floodplain. The project includes the addition and rehabilitation of flood control features, which would enhance human safety and protect capital investment. While these flood control features would alter natural flow patterns in the floodplains, it will divert flow from less than 2% of the entire floodplains area. Therefore, the National Park Service finds that the proposed action would not have any material additional adverse impacts on floodplains and their associated values.

Appendix B: Response to Substantive Public Comments

**National Park Service
US Department of the Interior**



**Death Valley National Park
California, Nevada**

Stovepipe Wells Developed Area Improvements Environmental Assessment

Public Comment Summary Report

June 2022

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Acronyms and Abbreviations

CA-190	California Highway 190
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FONSI	Finding of No Significant Impact
NEPA	National Environmental Policy Act
NPS	National Park Service
park	Death Valley National Park
PEPC	Planning, Environment and Public Comment
RV	Recreation Vehicle
SHPO	State Historic Preservation Officer

Introduction

Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations (40 *Code of Federal Regulations* [CFR] 1500–1508) and National Park Service (NPS) Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*, and accompanying NPS NEPA Handbook, the National Park Service prepared an environmental assessment (EA) for improvements to the Stovepipe Wells Developed Area in Death Valley National Park (park) to address critical infrastructure issues, visitor safety concerns, and conditions that adversely impact visitor experience, cultural and natural resources, and park operations. The project area includes Stovepipe Wells Village, Emigrant Junction, the Mesquite Flat Sand Dunes trailhead, Mosaic Canyon Road and trailhead, and the Devils Cornfield pullout. In this comment analysis report, the National Park Service summarizes the substantive comments on the EA and responds to concerns raised in these comments.

This comment analysis report provides a summary of the public comments received during the public review of the EA and includes NPS responses to substantive comments. On January 28, 2022, the National Park Service released the EA for public review and comment. The National Park Service notified the public of these proposed modifications to the Stovepipe Wells Developed Area through a press release that was distributed electronically. The press release was posted on the park’s website, and the park also posted a link to the NPS Planning, Environment and Public Comment (PEPC) site on social media. The EA presented two alternatives for managing the Stovepipe Wells Developed Area, describes the environment that would be impacted by the alternatives, and analyzes the environmental consequences of implementing the alternatives. The EA was available for public review until February 28, 2022. During the comment period, the National Park Service held one virtual public meeting on February 9, 2022. The public was encouraged to submit their comments on the EA electronically through the NPS PEPC website. Public comments were also accepted in writing by hard copy mailing and emailing comments to the park. All hard copy and emailed comments received were transcribed into the PEPC system for analysis.

Definition of Terms

Primary terms used in this document are defined below.

Correspondence: A correspondence is the entire document received from a commenter. It can be in the form of a letter, email, written comment form, note card, or petition. Each piece of correspondence is assigned a unique identification number in the PEPC system.

Comment: A comment is a portion of the text within a correspondence that addresses a single subject. It could include information such as an expression of support or opposition to the use of a potential management tool, additional data regarding an existing condition, or suggestions for additional considerations in the impact analysis. Comments were determined to be substantive or non-substantive using Section 4.6, *Circulating Environmental Assessments and Environmental Impact Statements, Soliciting Public Comments, and Responding to Comments*, of the NPS NEPA Handbook as guidance.

Substantive comment: Section 4.6 of the NPS NEPA Handbook defines a substantive comment as a comment that does one or more of the following:

- Question, with reasonable basis, the accuracy of information in the NEPA document
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the NEPA document
- Cause changes or revisions in the proposal

In other words, substantive comments raise, debate, or question a point of fact or analysis.

Public Comment Analysis

The NPS PEPC database was used to manage the comments. The database stores the full text of all correspondence and allows each comment to be coded by topic. The database produces tallies of the total number of correspondences and comments received, can sort and report comments by a particular topic, and provides demographic information on the source of each correspondence. During the public comment period for this EA, the National Park Service received 343 pieces of correspondence from 26 states, the District of Columbia, and Canada.

Comment analysis is a process used to compile and combine similar public comments into a format that can be used by decision-makers and the project team. Comment analysis helps the project team in organizing, clarifying, and addressing technical information pursuant to NEPA regulations. It also aids in identifying the topics and issues to be evaluated and considered throughout the planning process.

A coding structure was developed to capture the content of all the comments received and to help sort comments into logical groups by topic and issue. The coding structure was derived from an analysis of the range of topics from comments received from members of the public. Analysis of the public comments involved assigning codes to comments made in the letters, emails, and PEPC comment entries. All comments were read and analyzed in the process of preparing the decision document, the finding of no significant impact (FONSI). All substantive comments were summarized by developing concern statements. Concern statements represent a summary of the substantive issues received from the public that require a response. A response was prepared for each concern statement. If changes to the EA were warranted to address a concern, this was done via the errata in the FONSI. For changes made through the errata, the response provides a brief summary of how the edits were addressed for that concern. If the information requested or suggested was already included in the EA, the response guides readers to the appropriate location(s) within the document. These concerns and corresponding responses are listed in the following section.

Public Comment Summary

Suggest a Change to the Preferred Alternative

Concern Statement: Commenters provided a range of suggestions to modify the preferred alternative.

- The following general suggestions were made:
 - New and upgraded infrastructure and facilities should be as efficient as possible to reduce the stress on resources, such as energy and water. Use alternate energy sources (e.g., solar, wind) to the extent possible. Commenters provided examples, such as providing a solar-

- paneled roof on the proposed dormitory for concession staff and solar arrays on the comfort stations to provide electricity and hot water.
- Use recycled materials to the extent possible to reduce the need for lumber. The posts for hanging lanterns at the Stovepipe Wells campground, as well as picnic tables and fencing, could be made from recycled materials.
 - Provide shade structures for picnic tables and protect trees when improvements to the Stovepipe Wells Developed Area are designed and constructed.
 - Provide lids to all trash receptacles to prevent wildlife from becoming food conditioned.
 - Signs and speed limits along California Highway 190 (CA-190) should be appropriate to alert drivers that they are approaching visitor areas. Rumble or mumble strips should be installed.
 - Additional interpretive materials should be installed and could include information on the original Stovepipe pump, the wagon roads from Skidoo to Rhyolite, and the history of Stovepipe Wells Village in movies.
- The following suggestions were made for Stovepipe Wells Campground and Recreation Vehicle (RV) Park:
 - The campground should be designed for low-cost maintenance.
 - Implement a reservation system for the Stovepipe Wells campground.
 - One commenter suggested that the National Park Service provide more RV hook-up sites at the Stovepipe Wells campground, which would reduce generator use, and put limits on the times that generators can be used. Conversely, another commenter requested that the number of hook-ups not be increased but that generator hours be reduced and enforced.
 - Eliminate campfire rings from the plans for the Stovepipe Wells campground, as fires can degrade the experience for other campers and are an unnecessary form of pollution.
 - Do not include showers at the new comfort stations or sidewalks at the Stovepipe Wells campground.
 - The following suggestions were made for Stovepipe Wells Village:
 - Include electric vehicle charging stations at the Stovepipe Wells gas station instead of or in addition to the diesel pump, especially given the recent order in California that will ban the sale of gas car sales by 2035. The electric charging stations could be powered primarily with solar power and battery storage.
 - Add focal points for night photography (props to include in the photos) at the Stovepipe Wells night sky viewing area.
 - Do not include the trail from Stovepipe Wells Village to Mesquite Flat sand dunes. The trail does not seem necessary and would be difficult to maintain due to blowing sand. One commenter suggested the use of movable wood planks as the trail’s surface to avoid issues with sand covering the trail.
 - Delineate the parking areas at the Stovepipe Wells Village Motel to separate parking on the south side of CA-190 or day-use visitors and overnight users.
 - The following suggestions were made for Emigrant Junction:
 - Develop an indoor interpretation area that describes the significance of Emigrant Junction, install benches on the porch of the Ranger Station, add shade structures in the picnic areas, prohibit campfires and keep lighting to a minimum to allow for continued night sky

viewing, and better restrict RVs and generators from the rustic campground at Emigrant Junction.

- Install additional restroom stalls at the Comfort Station to accommodate larger groups that stop there, a double vault toilet at the northern end of the parking lot, and a vault toilet at the Emigrant Junction campground.
- Improve the Emigrant Junction parking lot with better signs indicating entry and exit directions and remove the lines for parking, allowing visitors to park more efficiently.
- The following suggestions were made for Mesquite Flat Sand Dune Trailhead:
 - Install a tall pole with a flag to mark the location of the Mesquite Flat Sand Dunes parking lot for visitors that get disoriented and improve signs to warn visitors about taking enough water.
 - Replace the single-stall vault toilet at Mesquite Flat Sand Dunes with two double-stall toilets because of the high visitation to this area.
 - Eliminate parking on the paved entrance to the parking area but allow off-pavement parking along the north side of CA-190 at Mesquite Flat Sand Dunes to accommodate dune photography.
- The following suggestions were made for Mosaic Canyon Road and Trailhead:
 - One commenter suggested that the National Park Service use packed gravel to resurface Mosaic Canyon Road, stating that paving the road and parking lot would increase visitation beyond capacity. One commenter suggested oiling the road or paving it, as gravel is hard to maintain.
 - Improve the signs at Mosaic Canyon Road to warn visitors of the potential for flash floods and make them aware of the rules of the area to help avoid conflicts, such as dogs on the trail.
- The following suggestions were made for Devils Cornfield Parking Pullout:
 - Do not install fencing to deter off-road driving at Devils Cornfield, instead place larger rocks at the edge of both the north and south pullouts.

Response: Commenters provided valuable suggestions for improvements throughout the Stovepipe Wells Developed Area. Some of these elements were considered, including but not limited to, providing shade structures, increasing the number of trash receptacles, providing more RV hook-up sites, installing informational and speed limit signs along CA-190, including an interpretation area at Emigrant Junction, and providing improved parking at Emigrant Junction. These elements are discussed in the description of alternative B, the proposed action/NPS preferred alternative, on pages 19 through 31 in chapter 2. The actions are not yet to this level of detailed design; however, as the park begins the design phases, these suggestions will be considered and incorporated as appropriate. As noted throughout the EA, the actions proposed in this comprehensive EA would require additional regulatory compliance with the opportunity for public involvement once the design phases are complete.

Airstrip

Concern Statement: Commenters stated that the EA does not present accurate conditions of the Stovepipe Wells airstrip and does not report accurate usage for the airstrip. Commenters noted that the Stovepipe Wells airstrip is in better condition than the Furnace Creek airstrip and can be safely used by all general aviation aircraft likely for many more years. The data collected from the pilot logbook (69

airplanes in 2020) may not be accurate, as it is not secure, and pilots have reported missing pages and other vandalism. These data conflict with those presented by AirNav — an average of 83 aircraft land at the Stovepipe Wells airstrip per month. These differences between the logbook and AirNav data indicate that the size of the user group, and thus the impacts from the alternatives, may have been underestimated in the EA. It was suggested that the National Park Service collect accurate user data for the airstrip before making a decision on the airstrip based on the rationale of low use.

Response: Logbooks at Stovepipe Wells and Furnace Creek recorded an average of 278 flights landed at both airstrips combined from 2015 through 2019. However, wind and vandalism mean that these records should be considered a minimum baseline. There could be missing records, or pilots that did not sign in. The National Park Service used the best information it had on hand when developing the alternatives for the EA, per 40 CFR 1502.23 and the NPS NEPA Handbook (2015).

The description of the conditions of the Stovepipe Well Airstrip is based on park personnel observations, including the park's engineer, and AirNav, which is a website that publishes aeronautical and airport information released by the FAA, including critical airport details for domestic US airports. Together, these are considered to offer the most accurate and up-to-date information on the conditions of the airstrip.

Concern Statement: The EA states that an assessment, conducted by the California Department of Transportation (Caltrans) Division of Aeronautics on behalf of the FAA, identified deficiencies. Commenters state that these deficiencies are improperly attributed to the Stovepipe Wells airport, which is small and rural. It was suggested that the National Park Service work with a specialist in airport design to determine if the specifications used by Caltrans are appropriate for the Stovepipe Wells airstrip, and if not, the extent of the work needed to bring the airstrip into compliance. It was noted that other public airports similar in size to Stovepipe Wells are able to safely operate without meeting requirements such as these and the Stovepipe Wells airstrip has been safely used since it was constructed. The National Park Service may also be able to obtain a waiver for the airstrip, which would allow the airstrip to continue to operate in its current state.

Response: The National Park Service has determined that the two minimally used paved airstrips — Furnace Creek and Stovepipe Wells — in Death Valley National Park are duplicative and receive minimal (or even negligible when compared with overall visitation) use. Continued funding concerns necessitate closing one or both airstrips. Due to recent electrical and water utility failures and continued safety issues at the Furnace Creek airstrip, and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, the National Park Service has concluded that further planning and outreach is necessary to address if one or both airstrips should be closed. The National Park Service has decided to modify the preferred action alternative with regard to the Stovepipe Wells airstrip. The National Park Service will convert the Stovepipe Wells airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park's General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative.

Caltrans Division of Aeronautics inspects airstrips on behalf of the FAA. Caltrans identified two deficiencies requiring correction that would necessitate expanding the development footprint of the current airstrip by an estimated 723,100 square feet, as noted on page 13 of the EA. During the analysis of

the two airstrips, the National Park Service will evaluate whether the airstrips are required to meet the safety standards identified by Caltrans. This evaluation will include any deficiencies identified for both the Stovepipe Wells and Furnace Creek airstrips.

Concern Statement: Commenters noted that the Stovepipe Wells airstrip and Furnace Creek airstrip are different in their alignments, and depending on the weather conditions (e.g., wind, temperature), one airstrip could be more dangerous for landing a small plane. It was asserted that retaining these two airstrips can also be used for pilots experiencing in-flight emergencies, mitigate risks as pilots develop their flight plan, and provide emergency services via airplane when a helicopter is not available or when roads are affected by flash floods. Retaining both the Stovepipe Wells and Furnace Creek airstrips is important for these reasons.

Response: Pilots are advised to know the weather at their destination and along their flight plan. The proposed closing of the Stovepipe Wells airstrip would not eliminate the availability of alternate airstrips or airports available to pilots if the weather is not suitable for landing at Furnace Creek. There are additional airstrips within 100 nautical miles of Furnace Creek that offer similar runway alignments to Stovepipe Wells in the event the weather at Furnace Creek is not suitable for landing. The National Park Service has decided to modify the preferred action alternative with regard to the Stovepipe Wells Airstrip. The National Park Service will convert the Stovepipe Wells Airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park's General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative. However, due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, and Tribal concerns expressed from the Timbisha Shoshone Tribe, the National Park Service has concluded that further planning and outreach will be necessary to address if one or both airstrips should be closed in the future.

Concern Statement: Furnace Creek and Stovepipe Wells provide different visitor experiences with Stovepipe Wells being more rustic. There is no reasonable transportation — either mass transportation or available rental vehicles — from Furnace Creek to Stovepipe Wells, basically eliminating Stovepipe Wells as an option for those that land at Furnace Creek. This would be an impact on a user group, as well as the park's revenue as a whole.

Response: Furnace Creek and Stovepipe Wells do provide different visitor experiences. There is no mass transportation to the park, or between locations in the park. The overwhelming majority of visitors arrive to Death Valley via automobiles or on bus tours. There is a Jeep rental business at Furnace Creek, which was part of the National Park Service's reason for prioritizing Furnace Creek airstrip over Stovepipe Wells.

The National Park Service does acknowledge that closing an airstrip would affect the aviation user group, as noted in the analysis of Visitor Use and Experience on pages 50 to 53 of the EA. This plan will stay with the no-action alternative for the Stovepipe Wells airstrip, which means converting it from paved asphalt to gravel. The park will conduct an analysis of Furnace Creek and Stovepipe Wells airstrips holistically to consider if one or both airstrips should be closed.

Concern Statement: The EA does not indicate whether funding has been secured for improvements to the Furnace Creek airstrip, which brings into question whether there is a long-term plan for retaining the

Furnace Creek airstrip. Since the future use of the Furnace Creek airstrip is not certain, it should not be identified as a feasible alternative to the Stovepipe Wells airstrip. The potential loss of the Furnace Creek airstrip, and therefore recreational aviation in the developed area of the park, should be included as a cumulative impact.

Response: Commenters are correct in that funding for improving the Furnace Creek airstrip has not been secured. The NPS has decided not to proceed with the proposed alternative of removing the Stovepipe Wells airstrip. Instead, NPS will conduct an analysis of Furnace Creek and Stovepipe Wells airstrips at the same time. The volume of aviation does not warrant maintaining both paved airstrips. Fund source managers have told the park that having two airstrips so close together makes it harder to get funding for either one, because having two airstrips in such close proximity is unnecessary, and therefore not a sound use of funds.

Concern Statement: Commenters stated that the National Park Service has not explored all available options to fund improvements and maintenance for the Stovepipe Wells airstrip to keep the airstrip open. These include but are not limited to the State of California Caltrans aviation trust fund, federal Airport Improvement Program, the US Navy, and US Marine Corps, or allow an aviation group, such as Recreational Aviation Foundation, to maintain the airstrip to reduce the costs. Additionally, the National Park Service could also explore the use of lower-cost materials (e.g., asphalt concrete grinding and liquid asphalt), which have been approved for use at other general aviation airstrips by Caltrans. Commenters noted that funding is not discussed for any other proposed changes in the environmental assessment.

Response: The National Park Service has explored many different options to partner with outside groups and agencies to facilitate the correction of the deficiencies listed by the Caltrans Division of Aeronautics on behalf of the FAA. However, due to the scale and scope of these deficiencies, a several million dollar investment would be necessary to bring the airstrip up to conditions that meet the appropriate regulations.

The park has a memorandum of agreement (MOU) with Recreation Aviation Foundation (RAF) to maintain airstrips. RAF has dragged the Chicken Strip, an unpaved airstrip in Saline Valley. They have painted border rocks and trimmed vegetation. However, they have not offered to assist with funding a repaving project. No other partner organization has offered that level of funding either.

Some commenters in 2020 suggested the park reach out to the Navy SeaBees. After receiving this helpful suggestion, the park did contact the SeaBees, and the SeaBees are enthusiastic about the Furnace Creek airstrip as a project. The SeaBees would fund the construction labor. However, the park would still need to fund the design and materials. While this would substantially reduce the project cost for the park, the park still needs to obtain millions in funding.

All of the National Park Service's inquiries into funding from outside agencies, such as the FAA or the state of California, have been fruitless to date. Those agencies have told the National Park Service to use its own funding. The National Park Service does not prioritize general aviation in its mission. The low level of use compared to the park's overall visitation, combined with the multi-million-dollar cost, mean that the road base replacement and repaving that Furnace Creek and Stovepipe Wells airstrips each need will be difficult to compete for within the National Park Service. NPS fund source managers have also told the park that having two airstrips so close together – which is perceived as unnecessary – makes funding repairs for either one more unlikely.

The NPS preferred alternative was to remove the Stovepipe Wells airstrip in order to focus funding efforts on the Furnace Creek airstrip. The National Park Service has decided to modify the preferred action alternative with regard to the Stovepipe Wells Airstrip. The National Park Service will convert the Stovepipe Wells Airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park's General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative. However, due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, and Tribal concerns expressed from the Timbisha Shoshone Tribe, the National Park Service has concluded that further planning and outreach will be necessary to address if one or both airstrips should be closed in the future.

Concern Statement: Some commenters do not see an issue with co-locating the Stovepipe Wells airstrip with a night sky viewing area while others stated that the night sky viewing area can be located in other areas of the park. If co-located, the airstrip would not interfere with night sky viewing, as it is closed to night operations and does not have any lighting. Commenters provided examples of other airstrips that are co-located with night sky viewing, including Havana, Illinois and the Blue Canyon-Nyack airport in Tahoe National Forest. Enhancing the existing airstrip, such as under-wing camping, picnic tables, and restroom facilities, would bring more pilots to the Stovepipe Wells area and increase use. These improvements at the airstrip would also make night sky viewing more appealing to visitors participating in that activity. However, a night sky viewing area could be set up in other previously disturbed areas of the Stovepipe Wells Village, including the location of the existing ranger station, Cottonwood Road, and the area near the water treatment ponds.

Response: The proposal to replace the airstrip with a dedicated visitor night sky viewing area was shared in the 2020 civic engagement newsletter for the Stovepipe Wells Developed Area Improvements project. Based on public comments expressing concern about replacing the airstrip, the National Park Service identified a potential hybrid approach that would reduce the length of the airstrip and implement a night sky viewing area in this modified area of the current airstrip. This approach could meet the interests of stakeholders in the aviation community by retaining a portion of the current airstrip, as well as offering visitors an opportunity to experience dark night skies, which is identified as a fundamental resource in the park's 2017 foundation document. Managers also considered installation of a berm to prevent aircraft from overshooting the runway and ending up on the closed end of the airstrip; however, this was dismissed because a berm would present a safety risk to pilots. Further, the state permit compliance inspection conducted by the Caltrans Division of Aeronautics on behalf of the FAA in 2018 identified two deficiencies requiring correction that would necessitate expanding the development footprint of the current airstrip by an estimated 723,100 square feet. As noted, a goal of this project is to not expand the development footprint, and expansion of the airstrip would not allow for shortening it for the hybrid approach. Ultimately it was decided that the hybrid approach would not be possible due to the potential risks of injury to pilots and visitors.

The park reviewed two airports that have been suggested as examples of how airstrips and night sky viewing can share the same location. Havana Regional Airport, in Illinois, hosts a variety of events that include stargazing with the University of Illinois Astronomy Club. Night sky activities appear to be on nearby grassy areas, rather than on the runway itself. Blue Canyon Nyack Airport in Emigrant Gap, California is closed to non-emergency air traffic during night sky events. There are three permanent astronomy telescope buildings on site and the tarmac (but not the runway itself) is available for night sky

related activities. However, in the case of Stovepipe Wells airstrip, the tarmac is not large enough to accommodate night sky viewing areas without expanding onto the runway or into surrounding undisturbed landscape.

Concern Statement: It was suggested that the National Park Service conduct a visitor use survey to see if visitors enjoy hearing and seeing aircraft land at the Stovepipe Wells airstrip and whether pilots prefer landing on asphalt or gravel. The survey can also help the park understand who would participate in night sky viewing at Stovepipe Wells. Commenters provided conflicting statements on aircraft noise, some saying that it affected their experience beyond the Stovepipe Wells Developed Area and others saying that the noise is similar to ground vehicles using CA-190. The EA does not include data from a sound inventory, thus the noise from aircraft at the park cannot be compared to FAA guidance for noise at airports. Commenters also stated that since the closure of the Stovepipe Wells airstrip would eliminate one user group (pilots) to provide an experience for another user group (stargazers), the National Park Service should provide a more substantial rationale for its decision.

Response: The park is currently developing an Air Tour Management Plan that would delineate acceptable levels of commercial air tours including, but not limited to, frequency, duration, altitude, and routes, consistent with the National Parks Air Tour Management Act of 2000. Congress developed this Act out of concern that noise from tour aircraft could harm national park resources and experiences for visitors. Public comments on the plan were accepted in July and August 2021. The comments received were largely against air tours over the park due to the noise and pollution generated by the aircraft.

Death Valley National Park visitors come to the park to enjoy a variety of recreational activities and those activities, or the impacts of those activities may conflict. Visitors that come to the park for a wilderness experience — solitude, natural, and quiet — may be adversely affected by the sights and sounds of recreational aircraft, while aviation enthusiasts likely enjoy these aspects of recreating in the Stovepipe Wells Developed Area. Commenters are correct that modeling of the noise of the aircraft has not been conducted and compared to FAA regulations; however, it is reasonable to assume that noise does not need to be quantified to be identified as an impact on visitors attempting to enjoy the quiet and solitude of the park wilderness.

The park has received conflicting opinions from pilots whether a gravel airstrip would be an acceptable alternative to a paved airstrip.

The National Park Service has decided to modify the preferred action alternative with regard to the Stovepipe Wells Airstrip. The National Park Service will convert the Stovepipe Wells Airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park's General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative. However, due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, and Tribal concerns expressed from the Timbisha Shoshone Tribe, the National Park Service has concluded that further planning and outreach will be necessary to address if one or both airstrips should be closed in the future.

At such time, the National Park Service will do a more thorough evaluation of Furnace Creek and Stovepipe Wells airstrips — including requesting pilot opinions on whether gravel is acceptable — to decide if one or both of the airstrips should be closed.

Concern Statement: Commenters suggested that the Stovepipe Wells airstrip be revegetated under the no-action alternative instead of using gravel. The signs at the airstrip should be improved to make it clear to pilots that they must pay an entrance fee and direct them to the pay station.

Response: As stated in chapter 2 of the EA, the no-action alternative would convert the asphalt airstrip to gravel, as directed by the park's 2002 General Management Plan. Restoring the airstrip to natural conditions using native species would not be conducive for continued use of the area as a safe runway and is therefore not feasible. Due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, and Tribal concerns expressed from the Timbisha Shoshone Tribe, the National Park Service has concluded that further planning and outreach is necessary to address if one or both airstrips should be closed. With regard to the Stovepipe Wells airstrip, the National Park Service has decided to take the no-action alternative for the Stovepipe Wells Developed Area Plan and convert the asphalt surface to gravel as directed in the park's 2002 General Management Plan (see page 13 of the EA).

Improving the signs at the airstrip informing pilots of the entrance fee and the location of the pay station is a valuable suggestion; as the park begins the design phase for the airstrip, this suggestion will be considered and incorporated as appropriate.

Coordination and Consultation

Concern Statement: Commenters noted that the EA was prepared without input from an aviation expert or in consultation with an aviation-related government agency, which is cited as a short-coming. The EA should be revised after review by a professional engineer with credentials in airport design or an environmental planner with experience in airport design. One commenter suggested that the National Park Service develop a board to discuss the issues with the airstrip and determine how best to manage it; this board should include at least one aviation expert.

Response: Prior to the decision to close the Stovepipe Wells airstrip, the National Park Service worked with the California Division of Aeronautics, which has the delegated authority from the FAA to perform airstrip inspections. The Caltrans Division of Aeronautics, in 2018, identified two deficiencies requiring correction that would necessitate expanding the development footprint of the current airstrip by an estimated 723,100 square feet. The National Park Service acknowledges this evaluation could be more thorough and plans to compare the value of Furnace Creek and Stovepipe Wells airstrips, usage at each location, and long-term operation and maintenance costs.

NEPA Process

Concern Statement: Commenters stated the National Park Service did not consider the comments that were submitted during the civic engagement period, specifically in regard to the Stovepipe Wells airstrip. Additionally, commenters that provided input during civic engagement were not directly made aware of the National Park Service's intent to develop an EA and were not directly notified when the EA was available for review. One commenter suggested that the National Park Service release to the public the comments received during the civic engagement comment period pertaining to the airstrip.

Response: Public civic engagement comments were reviewed and analyzed consistent with NPS and Council on Environmental Quality NEPA guidance and the NPS NEPA Handbook (2015). Commenting

is not a form of “voting” but rather a way for the public to provide substantive feedback on the critical issues, environmental analysis, reasonable alternatives, and accuracy of information the National Park Service has presented. Substantive comments raise, debate, or question a point of fact or analysis. Comments that support or oppose a proposal or agree or disagree with NPS policy are not considered substantive without supporting documentation. A summary of the comments received during civic engagement was provided as appendix C of the EA. Due to protection of private information, the National Park Service does not release the full comments or any identifying information provided by the public when submitting comments. The *NPS NEPA Handbook* (2015) encourages parks to notify the public of the availability of NEPA document through the Federal Register, direct or electronic mailings, press releases, website updates, newsletters, and on PEPC. The park notified the public of these availability of the Stovepipe Wells Developed Area Improvements EA through a press release that was distributed electronically. The press release was posted on the park’s website, and the park also posted a link to the NPS PEPC site on social media.

Concern Statement: Commenters stated that the management of the airstrip should be evaluated separately from the rest of the actions for improving the Stovepipe Wells Developed Area. The other actions in the preferred alternative would benefit visitors to the park but the removal of the airstrip would have a negative effect on those who access the park by flying.

Response: The purpose of the project is, not only to implement actions that will address conditions that adversely impact visitor experience, but also to implement actions that will address critical infrastructure issues, visitor safety concerns, and adverse impacts to cultural and natural resources, and park operations.

The Stovepipe Wells Developed Area Improvements EA was developed as a comprehensive plan to analyze proposed changes to Stovepipe Wells Village, Emigrant Junction, the Mesquite Flat Sand Dunes trailhead, Mosaic Canyon Road and trailhead, and the Devils Cornfield pullout. These changes to the Stovepipe Wells Developed Area were analyzed collectively to maximize the use of limited tax-payer funds to complete the compliance and potentially implement proposed project elements most efficiently. In this manner, some elements, such as those improving utility infrastructure, could be implemented as soon as funding is available. This would improve the overall visitor experience at the park at the soonest possible time. As noted in chapter 2 of the EA, other actions will require additional compliance, including the changes to the airstrip. Due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, and Tribal concerns expressed from the Timbisha Shoshone Tribe, the National Park Service has concluded that further planning and outreach is necessary to address if one or both of the airstrips should be closed. For this planning effort, the National Park Service has decided to implement the no-action alternative for the Stovepipe Wells airstrip and convert the asphalt surface to gravel as directed in the park’s 2002 General Management Plan (see page 13 of the EA).

Concern Statement: The removal of the Stovepipe Wells airstrip could require that the NEPA pathway be elevated to an environmental impact statement (EIS), as removal would be highly controversial, could constitute an irreversible and irretrievable commitment of resources, and could be a violation of the National Historic Preservation Act. Revising the preferred alternative to include conversion from asphalt to gravel would eliminate the need for an EIS. Further, the preferred alternative does not meet the project’s purpose and need, which is to improve existing infrastructure. Removal of an existing facility for the creation of a new one does not fulfill the stated goals. However, retaining the airstrip or converting it to gravel and collocating a night sky viewing area at the airstrip would meet the purpose and need.

Response: According to the *NPS NEPA Handbook* (2015), an EIS is appropriate for projects “that could result in significant adverse environmental impacts.” Additionally, an EIS is considered the appropriate NEPA pathway if the proposal is designated by the National Park Service as an action normally requiring preparation of an EIS; there is incomplete or unavailable information to the extent that a Finding of No Significant Impact cannot be supported; there is a high degree of controversy over the environmental impacts of a proposed action; or an EIS is legislatively or judicially mandated. Although changes to the Stovepipe Wells airstrip would have an important impact to one user group, overall, the improvements outlined for the preferred alternative do not have highly controversial impacts.

The purpose of this project, as stated on page 1 of the EA, is to address critical infrastructure issues, visitor safety concerns, and conditions that adversely impact visitor experience, cultural and natural resources, and park operations. The actions of the preferred alternative would provide reliable critical infrastructure to the Stovepipe Wells Developed Area, which would allow and improve continued visitor use in this area of the park, while minimizing impacts on the park’s resources. As noted previously, further regulatory compliance would be undertaken as appropriate as portions of this project complete the design phase. The National Park Service has decided to modify the preferred action alternative with regard to the Stovepipe Wells Airstrip. The National Park Service will convert the Stovepipe Wells Airstrip asphalt surface to gravel (the no-action alternative). This action is included in the park’s General Management Plan and Environmental Impact Analysis and was approved in a Record of Decision in 2002. This revision to the preferred alternative does not change the impacts analysis, as this project is analyzed under the no-action alternative. However, due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, the National Park Service has concluded that further planning and outreach will be necessary to address if one or both airstrips should be closed in the future.

Suggested Revisions to the Environmental Assessment

Historic Resources

Concern Statement: The Stovepipe Wells airstrip should be evaluated as a historic structure. Commenters noted that the Stovepipe Wells airstrip was established in the 1940s and included in the enabling legislation for both Death Valley National Monument and Death Valley National Park. A Section 106 review should be undertaken for the airstrip. The airstrip has further historic value, as it is part of the aviation history of the California desert and Death Valley National Park, and it was previously owned by George Putnam, Amelia Earhart’s widower.

Response: The Stovepipe Wells Airstrip was originally built where the Stovepipe Wells Campground is currently located. Sometime in the early to mid-1970s the NPS moved the Airstrip from its original location to its present location. It was during that time that the Airstrip was first paved. At this time, the Stovepipe Wells airstrip has not been evaluated for historical significance. The National Park Service has decided to follow the no-action alternative for the Stovepipe Wells airstrip, meaning that the park would still plan to convert Stovepipe Wells Airstrip from a paved asphalt surface to gravel, as directed in the park’s 2002 General Management Plan. Retaining the two paved airstrips in the park is duplicative due to minimal (or even negligible when compared with overall visitation) use and continued funding concerns necessitate the need to close one airstrip. The National Park Service will conduct further planning and outreach to address if one or both airstrips should be closed. If deemed necessary, the National Park Service would evaluate the historic significance of the Stovepipe Wells airstrip prior to removing the

asphalt. As stated on pages 23 and 24 of the EA, a separate rulemaking process would be required to formally close either airstrip, and additional regulatory compliance, which would include an opportunity for public comment, would be required following the design phase for the changes to the airstrip area. Additional surveys may be needed at the time of detailed design and implementation. Consultation with SHPO is ongoing for this project; SHPO would be consulted in any historic designations made for the Stovepipe Wells Developed Area and decisions made during the design phases for the individual actions.

Ethnographic Resources

Concern Statement: The EA states that some pilots currently using the Stovepipe Wells airstrip would use the Furnace Creek airstrip once the preferred alternative is implemented. However, commenters stated that the Furnace Creek airstrip would probably only receive more use if that airstrip were improved. As such, statements in the EA regarding the impacts on the aviation user group may be underestimated and impacts on ethnographic resources may be overestimated. The EA does not contain any modeling analysis or data on noise or safety impacts from operating the airstrips in the park. Without supporting data, these issues should not be considered as impacts on ethnographic resources.

Response: Specific consultation with the Timbisha Shoshone Tribe for the Stovepipe Wells Developed Area Improvements plan is pending, as stated on page 43 of the EA; however, the Tribe has expressed concern about safety and quality of life concerns with the Furnace Creek airstrip. Use of the Furnace Creek airstrip could increase if the Stovepipe Wells airstrip is converted to gravel or removed under alternatives A and B, respectively. The potential increase in frequency of use at the Furnace Creek airstrip and the potential for safety issues would have an effect on the Timbisha Shoshone Tribe. These impacts are acknowledged in the EA and do not need to be quantified to be justifiable.

Water Resources

Concern Statement: Commenters noted that the EA lacks details on how much water is currently being used, how much is expected to be used during construction, and how much is expected to be used in the long term. This information is needed to determine if the reverse osmosis plant would provide enough potable water for visitors and staff. The EA also lacks an analysis of the effects of the proposed changes on groundwater recharge and whether the proposed action would impact the springs at Salt Creek and the and the rare, endemic Salt Creek pupfish.

Response: Water resources was dismissed from full analysis, but the text on pages 5 and 6 of the EA state that although the consumptive use of water in Stovepipe Wells Village would increase, the increase would not be substantial because the proposed action would also incorporate measures that would help to offset increases in water use.

The base flow of Salt Creek is sourced primarily by regional groundwater flow from the eastern side of Death Valley; however, flood hydrographs indicate that Salt Creek is influenced by infiltrated storm flow (shallow groundwater) from the entire Death Valley wash and Towne Pass watersheds. The Mosaic Canyon watershed is a very small part of this contributing area, and therefore limited groundwater pumping from the Mosaic Canyon alluvial fan would not have an appreciable impact on Salt Creek discharge.

As noted in chapter 2 of the EA, additional regulatory compliance would be required as the design phases for actions of the preferred alternative are complete. Further analysis of the water resources, including water availability and groundwater discharge, would be conducted at that time, if necessary.

Human Health and Safety

Concern Statement: Given the stated issues with infrastructure and facilities and the potential for safety issues related to the airstrips, the EA should evaluate human health and safety.

Response: According to the *NPS NEPA Handbook (2015)*, issues that should be retained for consideration and discussed in detail if the environmental impacts associated with the issue are central to the proposal or of critical importance; a detailed analysis of environmental impacts related to the issue is necessary to make a reasoned choice between alternatives; the environmental impacts associated with the issue are a big point of contention among the public or other agencies; or there are potentially significant impacts to resources associated with the issue. Detailed analysis should be reserved for significant issues that will play a key role in making a decision.

The infrastructure and facility upgrades proposed under the preferred alternative would result in beneficial effects on visitors and park staff. Similarly, the preferred alternative would install warning systems to alert drivers and slow speeds, increasing the safety for all pedestrians at the Stovepipe Wells Developed Area.

Pilots are advised to know the weather at their destination and along their flight plan. The proposed closing of the Stovepipe Wells airstrip would not eliminate the availability of alternate airstrips or airports available to pilots if the weather is not suitable for landing at Furnace Creek. There are additional airstrips within 100 nautical miles of Furnace Creek that offer similar runway alignments to Stovepipe Wells in the event the weather at Furnace Creek is not suitable for landing. However, due to recent water and electrical utility failures and continued safety issues at the Furnace Creek airstrip and with the addition of new information gained through the Stovepipe Wells Developed Area planning effort, the National Park Service has concluded that further planning and outreach is necessary to address if one or both airstrips should be closed. With regard to the Stovepipe Wells Airstrip, the National Park Service has decided to take the no-action alternative for the Stovepipe Wells Developed Area Plan and convert the asphalt surface to gravel as directed in the park's 2002 General Management Plan (see page 13 of the EA).

Human health and safety as a resource topic was considered but dismissed for full analysis because it did not rise to the level required by the guidelines outlined in the *NPS NEPA Handbook (2015)*; however, the dismissal of Human Health and Safety as a resource topic was expanded to include the information above. Please see the updated text in Appendix A: Errata Indicating Text Changes to the EA of the *Stovepipe Wells Developed Area Improvements Finding of No Significant Impact*.

Actions Considered but Dismissed

Concern Statement: The EA discusses the potential for opening additional airstrips in the park in the “Actions Considered but Dismissed from Detailed Analysis” but dismisses this action because “operating a motor vehicle except on park roads, in parking areas and on routes and areas designated for off-road motor vehicle use” is considered illegal. One commenter suggested that the rationale for dismissing this action should be changed to state that it is out of scope.

Response: The potential for opening additional airstrips in the park is presented on page 33 of the EA. Comments received during civic engagement suggested that the park develop airstrips in locations such as Racetrack Playa, Lost Lake, Owl Lake, and Hidden Valley. As noted in the EA, all of these areas are in designated Wilderness, and landing an airplane in one of these areas or other locations in designated Wilderness is expressly prohibited in Section 4(c) of the Wilderness Act. For this reason, creating new airstrips in these areas cannot be considered.

Concern Statement: The discussion of removing the Stovepipe Wells airstrip in the “Actions Considered but Dismissed from Detailed Analysis” section of the EA contains circular language, stating that the condition of the airstrip deters pilots from using the airstrip, but the low use of the airstrip is used as rationale for not spending the money to fix the airstrip. This should be revised. Similar rationale is used under the analysis of the alternatives in the “Visitor Use and Experience” section of chapter 3 and should also be revised.

Response: It is possible that more pilots would use Stovepipe Wells airstrip if it were in better condition. However, the low level of use of Stovepipe Wells airstrip will continue to be an obstacle to prioritizing spending NPS funds on major maintenance work on either Furnace Creek or Stovepipe Wells airstrips. Ultimately, the cost of maintaining two airstrips that receive low use in close proximity to each other is a heavy cost burden on the park. The National Park Service will conduct further planning and outreach to address whether to close the Stovepipe Wells and/or Furnace Creek airstrip in the future, as maintaining two airstrips in such close proximity to each other makes securing the funds necessary to address the identified deficiencies and complete any repairs less likely.

Attachment A: Public Comment Content Summary Tables

The following tables are produced from PEPC and provide information on the numbers and types of comments received, as well as demographic information.

Table 1: Correspondence Count by Correspondence Type

Type of Correspondence	Number of Correspondences	Percentage
Web Form (PEPC)	330	96.2
Email	11	3.2
Letter	2	0.6
Total	343	100

Table 2: Geographic Distribution of Public Comments by State

State	Number of Correspondences	Percentage
California	262	76.4
Nevada	16	4.7
Washington	7	2.0
Texas	3	0.9
Arizona	5	1.5
Colorado	5	1.5
Oregon	3	0.9
Idaho	2	0.6
Florida	4	1.2
Utah	5	1.5
Unknown	5	1.5
Montana	5	1.5
Wisconsin	1	0.3
Minnesota	2	0.6
Michigan	2	0.6
North Carolina	3	0.9
New York	2	0.6
Ohio	1	0.3
Pennsylvania	1	0.3
Wyoming	1	0.3
New Jersey	1	0.3
Oklahoma	1	0.3
Iowa	1	0.3
South Dakota	1	0.3
New Hampshire	1	0.3
South Carolina	1	0.3
Vermont	1	0.3
District of Columbia	1	0.3
Total	343	100

Table 3: Geographic Distribution of Public Comments by Country

Country	Number of Correspondences	Percentage
United States	342	99.7
Canada	1	0.3
Total	343	100

Attachment B: Agencies and Organizations Represented in Public Comments

Commenters have an opportunity to list an agency or organization when entering their information and commenting in PEPC. The agencies and organizations in the following list were provided by commenters.

- Acacia RE
- Aircraft Owners and Pilots Association
- Aris Leasing
- Big Bear Pilots Association
- birdandhike.com
- California Pilots Association
- CalPilots
- Cessna-Pilots Society
- Chris Torres Farming
- Congress of the United States
- Deal Flyers
- Del Amo Flyers
- Delta Dental
- Desert At Large Airport Commissioner for San Bernardino County
- Eagles
- Flower Mound Women's Care
- Flying Journalism
- Flying Tails
- Hills-Valley Enterprises, LLC
- Hoffman and Pomerantz, LLP
- Jake's Air Repair
- JNL Corp
- KSNA Airport Support
- Mountain Valley Airport
- Orange County Pilots
- Pacific Coast Flyers
- Range of Light Group - Sierra Club
- Recreational Aviation Foundation
- Redlands Airport Association
- San Carlos Airport Association
- Scott Valley Airport Pilots Association
- SKO Fly Aerial
- The Second Derivative
- Tracy Airport Association
- TransOceanic Aircraft Ferry
- University of Scranton
- Watsonville Pilot's Association

Appendix C: Non-Impairment Determination

Non-Impairment Determination

Stovepipe Wells Developed Area Improvement Project

Environmental Assessment

Death Valley National Park

Prohibition on Impairment of Park Resources and Values

National Park Service (NPS) *Management Policies 2006* (section 1.4) require analysis of potential effects to determine whether or not proposed actions will impair a national park's resources and values. NPS decision makers must always seek ways to avoid or to minimize, to the greatest degree practicable, adverse impacts on park resources and values. NPS has the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park, although that discretion is limited by the statutory requirement that NPS must leave resources and values unimpaired unless a particular law directly and specifically prescribes otherwise.

NPS *Management Policies 2006*, Section 1.4.4, explains the prohibition on impairment of park resources and values:

While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

What is Impairment?

NPS *Management Policies 2006*, Section 1.4.5, What Constitutes Impairment of Park Resources and Values, and Section 1.4.6, What Constitutes Park Resources and Values, provide an explanation of impairment.

Impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 of NPS *Management Policies 2006* states:

An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park, or

- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified as a goal in the park’s general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per Section 1.4.6 of *NPS Management Policies 2006*, park resources and values that may be impaired include:

- the park’s scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system;
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the National Park Service was in some way responsible for the action.

How is an Impairment Determination Made?

Section 1.4.7 of *NPS Management Policies 2006* states, “[i]n making a determination of whether there would be an impairment, an NPS decision-maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.”

NPS Management Policies 2006 further defines “professional judgment” as “a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account

the decision-maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relating to the decision.”

Impairment Determination

The National Park Service has determined that Stovepipe Wells Developed Area Improvements will not result in impairment of park resources and values. An impairment determination is made for all resource impact topics analyzed for the selected alternative. The impairment determination does not include discussion of impacts to topics such as visitor experience and public health and safety, as these topics do not constitute impacts to park resources and values subject to the no-impairment standard. This determination applies only to NPS lands and resources and has been rendered solely by NPS management.

Archeological Resources. The selected alternative would be designed to avoid eligible archeological resources. The proposed actions at the Stovepipe Wells campground, Emigrant Junction Ranger Station and Comfort Station, Mesquite Flat Sand Dunes, and Devils Cornfield Parking Area will not have adverse effect on archeological resources within or adjacent to these project areas. If, during design, it is determined that avoidance is not feasible, the National Park Service would work with the California SHPO and appropriate tribal offices to propose and implement appropriate mitigation for cultural resources as a part of the subsequent Section 106 consultation under the NHPA. With avoidance or mitigation measures, implementation of the selected alternative will not result in impairment of archeological resources.

Cultural Landscape/Historic District/Historic Structures. The Stovepipe Wells Village has been evaluated and was determined not eligible for the National Register. The Stovepipe Wells Airstrip has not been evaluated at this time. Only the historic district and historic structures at Emigrant Junction have the potential to be impacted by the selected alternative. The proposed actions, individually and collectively, may alter some of the characteristics of the Emigrant Junction Historic District or historic structures; however, using the guidelines set forth by the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, the alterations would not diminish the integrity of the district and disqualify the property for inclusion in the National Register of Historic Places (NRHP). Therefore, the actions are anticipated to result in no adverse impacts on the historic district and historic structures at Emigrant Junction. Concurrence from SHPO on the assessment of effect is pending. With avoidance and following the *Standards for the Treatment of Historic Properties*, implementation of the selected alternative will not result in impairment of historic district and historic structures.

Ethnographic Resources. The selected alternative has the potential to increase aircraft traffic at the Furnace Creek airstrip if pilots prefer not to land on the gravel surface at the Stovepipe Wells airstrip. The Furnace Creek airstrip is located within the proposed Tumpisa Traditional Cultural Property and near the Timbisha Village where some members of the Timbisha Shoshone Tribe live and work. The known ethnographic resources are already affected by current air traffic. National Park Service staff will continue to consult with the Tribe on this issue. Implementing the selected alternative will not result in impairment of ethnographic resources.

Floodplains. The selected alternative will increase the amount of fill, disturbance, and impervious surface within the floodplain of the Stovepipe Wells Developed Area. These modifications will affect a small portion of the large watershed areas within Stovepipe Wells and Emigrant Junction and should result in no long-term negative net impact to floodplain function. New facilities will largely occur within previously disturbed areas, and the introduction of impervious surfaces will be minimized. Restoring the grade of Mosaic Canyon Road to accommodate natural flow patterns would have a beneficial impact on floodplain values, and the removal of the asphalt airstrip would restore a large area of naturally permeable surface within the floodplain. The rehabilitation of flood control features and the addition of new flood control alternatives will enhance human safety and protect capital investment. Although these flood control features will alter natural flow patterns in the floodplains, they will divert flow from less than 2% of the entire floodplains area. The Stovepipe Wells and Emigrant Wash alluvial fans will continue to reduce the energy of the runoff, allowing it to dissipate through overland flow, and improved or new flood protection structures will divert flood waters from the developed areas of Stovepipe Wells Village and Emigrant Junction. Implementing the selected alternative will not result in impairment of ethnographic resources.

Conclusion

The National Park Service has determined that the improvements to Stovepipe Wells Developed Area will not constitute an impairment of the resources or values of Death Valley National Park. As described above, implementing the improvement projects is not anticipated to impair resources or values that are essential to the purposes identified in the enabling legislation of the park, key to the natural or cultural integrity of the park, or identified as significant in the park's relevant planning documents. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, the comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction of the NPS *Management Policies 2006*.

**Appendix D:
Signed Floodplains Statement of Findings**

**Statement of Findings for
NPS Director's Order 77-2, "Floodplain Management"**


**Stovepipe Wells Developed Area Improvement Plan
Environmental Assessment
Death Valley National Park**

Recommended: **MICHAEL REYNOLDS**  Digitally signed by MICHAEL REYNOLDS
Date: 2022.05.23 07:12:22 -07'00'

Superintendent
Death Valley National Park
National Park Service


Date

Certified for Technical Adequacy and Servicewide Consistency

FORREST HARVEY  Digitally signed by FORREST HARVEY
Date: 2022.05.23 11:19:29 -06'00'

Chief
National Park Service, Water Resources Division

Date

Concurred: **STACY WERTMAN**  Digitally signed by STACY WERTMAN
Date: 2022.05.23 13:06:35 -07'00'

Safety Officer
National Park Service, IR 8, 9, 10, 12

Date

Approved: _____

Regional Director
National Park Service, IR 8, 9, 10, 12

Date

FLOODPLAINS STATEMENT OF FINDINGS

This statement of findings has been prepared in accordance with Executive Order (EO) 11988, “Floodplain Management.” The objective of EO 11988 is to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. It has also been prepared in accordance with EO 13690, “Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” which establishes a Flood Risk Management Standard for federally funded projects to improve the nation’s resilience to floods and to ensure new federal infrastructure will last as long as intended. Finally, this statement was prepared in accordance with NPS Director’s Order (DO) #77-2, *Floodplain Management*, and Procedural Manual #77-2.

This floodplain statement of findings (FSOF) summarizes the proposed floodplain development associated with actions to improve flood resilience and visitor services at several locations within the park. The FSOF also describes the reasons why encroachment into the floodplain is required to implement the project, the site-specific flood risks involved, and the measures that would be taken to mitigate floodplain impacts.

PROJECT AREA

The National Park Service is preparing an environmental assessment to consider the environmental consequences related to improving the Stovepipe Wells Developed Area in Death Valley National Park (the park), Inyo County, California. The Stovepipe Wells Developed Area includes Stovepipe Wells Village, Emigrant Junction, Mesquite Flat Sand Dunes trailhead, Mosaic Canyon Road and trailhead, and Devils Cornfield parking pullout. Based on the flood hazards described in the 1988 *Death Valley Flood Mitigation Study and Environmental Assessment* and review of aerial photography, actions subject to DO #77-2 that could affect floodplain functions and/or increase risk to human health or capital investment would be limited to Stovepipe Wells Village, Mosaic Canyon Road and trailhead, and Emigrant Junction (figure 1).

Stovepipe Wells Village is the oldest visitor-serving area, as well as the first tourist destination in the park. Stovepipe Wells Village is located in the center of the park between the Panamint, Cottonwood, and Funeral mountain ranges, and positioned on an alluvial fan at the base of Tucki Mountain. The village is bisected by California Highway 190 (CA-190), and there are facilities on both sides of the highway which include a hotel, housing, administrative buildings, water and wastewater treatment facilities, campground, and a general store. There are four main flood control features protecting these facilities (figure 2).

Emigrant Junction is located just north of the intersection of Emigrant Canyon Road and CA-190, approximately 9 miles southwest of Stovepipe Wells Village. The site has a number of historic buildings including a stone ranger station on the east side of CA-190 and a stone comfort station on the west side. Additionally, there is a parking lot, a picnic area, and a 10-site tent-only campground on the west side of CA-190. A 5-mile pipeline transports water from Emigrant Spring to Emigrant Junction. The pipeline is buried and roughly follows Emigrant Canyon Road. The water line connects to the comfort station and campground at Emigrant Junction, and the campground has a spigot for campers. The site includes two septic systems, one on each side of CA-190, that serve the comfort station and the ranger station respectively. There is a flood control dike on the east side of the development (figure 3).

Mosaic Canyon Road is 0.2-mile west of Stovepipe Wells Village along CA-190. The 2.3-mile unpaved Mosaic Canyon Road terminates at a gravel parking lot and the Mosaic Canyon trailhead (figure 4). The trailhead leads into a rocky wash and narrow marbleized canyon. The canyon is popular for a 3.5-mile round-trip hike.

SELECTED ALTERNATIVE

The selected alternative is alternative B in the environmental assessment with the exception of the Stovepipe Wells airstrip. The National Park Service has decided to take the no-action alternative for the Stovepipe Wells airstrip and convert the existing asphalt airstrip surface to gravel. Under the selected alternative, the following actions would be implemented to provide protection for visitors and staff, improve visitor experience, protect natural and cultural resources, protect and repair critical and failing infrastructure, restore some floodplain function, and improve park operations.

Stovepipe Wells Village

The deficiencies of the primary flood dikes (Main dike and the Water Plant dike in figure 2) would be restored consistent with the 1988 *Flood Mitigation Study*. Deficiencies of existing infrastructure would be addressed by the rehabilitation or replacement of facilities in approximately the same location within the existing footprint of the Stovepipe Wells Village. The existing concession employee dormitory, emergency services building, and reverse osmosis water treatment plant would be replaced with structures designed to address operational issues and make park and concession management more efficient and effective. The campground would be redesigned to provide more distance between campsites and would include the addition of amenities, such as shade structures and fires rings. Roadways within the campground would be better defined and walking paths would be developed. The existing comfort station would be replaced, and an additional comfort station would be constructed. The existing visitor contact station would be replaced with a new building constructed closer to the general store. A new trail would be constructed to link the Stovepipe Wells Campground with the Mesquite Flat Sand Dunes. The helicopter landing pad would be retained and could be expanded consistent with Federal Aviation Administration requirements. The asphalt airstrip would be converted to gravel.

Mosaic Canyon Road and Parking Lot

The existing road has become channelized and bermed from decades of erosion and repeated grading, and the placement of fill and removal of the berms would bring the roadbed back to the natural grade. Mosaic Canyon Road and the parking lot at the trailhead would be improved through re-grading, the addition of fill, and the application of one of several potential surface treatments. A range of surfaces for the Mosaic Canyon Road to reduce dust and improve drainage would be considered based on a design process that would be completed in the future. Surface materials that would be considered could be either pervious (e.g., decomposed granite, porous paving products, gravel) or impervious (e.g., soil cement, chip seal over gravel, asphalt). The parking lot would be graded and resurfaced with the same surface treatment as the road. The parking lot is located adjacent to a wash at the mouth of Mosaic Canyon, and based on the results of a future design process, the bank may be stabilized using a range of options (e.g., riprap and/or gabion baskets) to prevent erosion of the parking lot. A vault toilet would be added in the parking area.

Emigrant Junction

Approximately 5 miles of the historic Emigrant Junction water system (2-inch diameter galvanized piping, which is deteriorated and corroded) would be replaced with buried pipeline. The existing comfort station leach field would be replaced, and a flood protection structure would be added to prevent scour during flood events. The new leach field and flood dike would be an engineered design that may require a hydrologic analysis, so the exact location and configuration cannot be identified at this time. Figure 3 shows a potential configuration of a flood dike that would provide protection of the campground, as well as the new leach field. The flood dike would likely be constructed of wire gabion baskets filled with cobble rock. The second leach field would be replaced as part of the rehabilitation of the ranger station. The ranger station may be used to enhance visitor services or provide living quarters for park staff. The second leach field would also require an engineered design that would include a flood protection

structure. Siting of this leach field would be determined at the time of the design, which would be based on a hydrologic analysis, but the leach field would likely be adjacent to CA-190 in a previously disturbed area. Flood control would most likely involve the rehabilitation of an existing dike (figure 3), which would provide protection for the new leach field, as well as the rest of the development on the east of CA-190. The proposed action also includes development of two recreational vehicles (RV) sites for personnel near the ranger station. Final designs would be determined during planning and consultation with the State Historic Preservation Officer.

SITE AND FLOOD HAZARD DESCRIPTION

Because of the nature of flooding on alluvial fans and desert washes, precise floodplain boundaries are difficult to establish, and site-specific depths and velocities of design floods cannot be accurately predicted. However, overall flood hazard can be assessed and evaluated and effective mitigative measures may be prescribed. Following DO #77-2, the proposed improvements are Class I Actions, and the corresponding Regulatory Flood is the one-percent annual exceedance probability (1% AEP) flood, commonly referred to as the 100-year flood. Furthermore, following EO 13690, capital investment by the National Park Service requires consideration of an additional Federal Flood Risk Management Standard (FFRMS) to provide additional flood resiliency to expensive infrastructure. Lastly, human occupation in a presumed flash flood area is a Class III Action as per DO #77-2. While the proposed project does not specifically add new risks to human life, elements of the project do support continued human occupation, and measures to mitigate this risk are also a part of the proposed project. Every road and most developed areas in the park are subject to flash flood hazard (NPS 1988). Currently there is no Federal Emergency Management Agency floodplain mapping available for the park, and a formal floodplain delineation has not been performed in the areas of the proposed action. However, the drainage patterns at Mosaic Canyon, Stovepipe Wells Village, and Emigrant Junction indicate that they are located in active alluvial fan areas that are subject to flooding. Runoff in alluvial fans can be unpredictable, quickly changing channels, braiding into numerous smaller channels, eroding new channels, and/or abandoning channels that become choked with sediment.

Stovepipe Wells Village is built upon an alluvial fan produced by outwash from Mosaic Canyon in Tucki Mountain (NPS 1988). Flash floods can concentrate in Mosaic Canyon from a several-square-mile watershed. The majority of runoff from Mosaic Canyon generally flows in a dominant channel on the east side of the alluvial fan, but there is another significant channel to the northwest of the fan. If the floodwaters overwhelm a critical section at the mouth of Mosaic Canyon, the dominant washes may not be able to contain the runoff, and the high energy of the runoff can scour new channels. The degree of hazard from floodwater concentration in Mosaic Canyon onto the alluvial fan is unpredictable. Runoff may or may not concentrate and flow down the fan towards developed areas. Smaller floods that develop on the Stovepipe Wells alluvial fan can be a problem, but the greatest hazard to human safety and development is from floods emanating from Mosaic Canyon and flowing down the fan. Runoff from Mosaic Canyon is estimated to be 220 cubic feet per second (cfs) for the 1% AEP flood and 1,460 cfs for the probable maximum flood (NPS 1988). To protect the development at Stovepipe Wells Village, two primary dikes have been constructed, including the main L-shaped dike (Main dike) south of the Stovepipe Wells Village Hotel and the dike above the water plant (Water Plant dike) (figure 2). According to the 1988 analysis, the Main dike should be capable of containing the 1% AEP flood flow, but not capable of containing the probable maximum flow. Because its upper wall is constructed perpendicular to the slope, the dike tends to stop flow rather than diverting it from the developed area. This has caused sedimentation above the upper wall, so the effectiveness of this feature has been substantially reduced from its condition in 1988 (Friese, pers comm 2021). Further, the dike is permeable, so saturation of the dike could lead to breaching (NPS 1988). However, the secondary Housing and Hotel dikes downslope that should protect the developed areas from a 1% AEP if the main dike is breached (figure 2). The Water Plant dike is also an earthen dike that is somewhat permeable, but this feature is

oriented such that it diverts runoff away from the water plant, and therefore it is less prone to saturation and has not been subject to the upslope sedimentation. However, the uppermost part of the dike has been breached, and it is allowing some runoff to approach the water plant and has resulted in some incipient erosion of the Main dike (Friese, pers comm 2021). Fortunately, Stovepipe Wells Village sits at the toe of the alluvial fan, which is less prone to dangerous flooding because this area has a gentler slope and more diffuse runoff patterns than upslope areas.

Emigrant Junction is on the Towne Pass alluvial fan adjacent to the Emigrant Wash. The flood areas are more predictable at Emigrant Junction because the water flows through more defined channels. However, the focus of flow energy within these defined channels increases the potential for hazardous conditions at Emigrant Junction compared to Stovepipe Wells Village—where the energy of the flow is dissipated across multiple distributary channels of the alluvial fan toe. The Emigrant Wash conveys floodwaters from portions of the Towne Pass drainage basin, Emigrant Canyon, and Harrisburg Flats. Emigrant Wash passes approximately 700 to 1,000 feet west of the Emigrant Junction Ranger Station. This wash would contain the 100-year and probable maximum flood (NPS 1988), but facilities and visitors in the Emigrant Junction area may still be susceptible to risks from floods as channels can change quickly during a major flood event due to sedimentation and erosion and potential failure of flood control features. There is a 640-foot dike between the development and the flood channel, and a cross section in the 1988 flood report indicates that the dike is approximately 6 feet high on the side of the main channel. This dike is composed of permeable materials and therefore is susceptible to failure (NPS 1988), but aerial imagery back to 1985 indicates that the flood waters of the main channel have not approached the dike. Furthermore, the aerial imagery indicates that the main channel has been degrading, thereby increasing the effective height of the dike and decreasing the likelihood that flow in the main channel would reach the dike.

JUSTIFICATION FOR THE USE OF THE FLOODPLAIN

Stovepipe Wells Village is the oldest visitor-serving area and the first tourist destination in the park. Stovepipe Wells Village continues to be a popular destination with a peak monthly overnight visitation of 7,700 and an average of 950 vehicles per day traveling through the Village. The proposed actions are in direct support and protection of existing and well-established park infrastructure and visitor services and are therefore tied to the current locations. CA-190 is surrounded by floodplain in this area, and the only way that the facilities could be relocated is to move them far from CA-190. Since the facilities are dependent on CA-190, there is no practicable alternative to locating these proposed actions in the area. Moreover, if the facilities were moved it would put them in conflict with many other resources, and/or result in them being located on an unstable building formation, such as sand.

Emigrant Junction is one of the main entrance points for visitors in the park, and the effectiveness and utility of the Emigrant Junction facilities is dependent on their proximity to CA-190. CA-190 is surrounded by floodplain in this area, and the only way that the facilities could be relocated is to move them far from CA-190. The Ranger Station, Comfort Station, generator buildings, and other features were constructed by the Civilian Conservation Corps in the 1930s, and the Emigrant Junction Historic District has been determined to be eligible for the National Register of Historic Places. The historical significance of these structures is tied to their location.

FLOODPLAIN IMPACTS

Natural Floodplain Values

The floodplains in the Stovepipe Wells Village and Emigrant junction areas serve to dissipate the energy of runoff, encourage infiltration, support native vegetation, transport sediment and nutrients to downslope areas, and support the geomorphic processes and landscape dynamics that Death Valley is known for. These floodplain values could be diminished by the introduction of fill, impervious surfaces, or features

that disrupt natural runoff. Overall, alternative B would increase the amount of fill, disturbance, and impervious surface within the floodplains in the project area. However, these modifications would affect only a small portion of these large floodplains, and the natural functions of the floodplains would remain largely intact.

The floodplain values in the project areas have been altered by human activities, and the actions under alternative B would contribute slightly to these impacts. During construction activities, the floodplain would be temporarily impacted by the disruption of runoff caused by the presence of staging areas, construction equipment, and materials in the floodplain. Although the area is naturally sparsely vegetated, there could be an increased erosion potential in disturbed areas before vegetation recovers. Best management practices would be implemented to minimize erosion and sedimentation during construction activities, and disturbed areas would be protected and allowed to revegetate following construction. Given the infrequency of flood events and the relatively short duration of the construction, it is doubtful that construction activities would result in any significant impacts on floodplain values. Furthermore, most large flood events occur in the summer when construction activity is unlikely due to the extreme temperatures.

Existing flood control dikes at Stovepipe Wells Village have protected approximately 76 acres from flooding since at least the early 1980s. The additional facilities proposed under alternative B at Stovepipe Wells are within this protected area, and they would result in only a small additional footprint of disturbance. Two existing flood dikes, which are needed for public safety and to protect facilities and infrastructure, would be rehabilitated. However, the flood dikes will continue to prevent natural floodplain processes across 76 acres of developed area, a very small portion of the 2,900-acre alluvial fan. Therefore, this should not have any appreciable impact on floodplain functions.

The rehabilitation of Mosaic Canyon Road is the component in the proposed action that presents the most potential for the introduction of fill. However, the purpose of the fill would be to restore the natural grade and runoff patterns, which would improve floodplain function. Leaving Mosaic Canyon Road a natural surface would allow for beneficial infiltration during runoff events, so this option may be preferable with regard to floodplain function. However, a natural surface may require more work to maintain the grade (also important to floodplain function) than a more resistant paved surface would. Adding impervious surfaces in a floodplain prevents infiltration, potentially increasing localized flooding. The rehabilitation of Mosaic Canyon road would also present the most potential for additional impervious surface if the decision is made to pave it, but paving may be a long-term benefit to the floodplain if it results in easier maintenance of the natural grade and prevents the re-channelization of the road. Impacts from the potential addition of an impervious surface would be somewhat offset by the removal of the impervious surface at the Stovepipe Wells airstrip.

The stabilization of the bank to prevent erosion of the Mosaic Canyon trailhead may require the introduction of fill in the form of riprap or cobble-filled gabion baskets. The armoring of up to 200 feet of the eastern bank of the main channel may interfere slightly with the natural widening or migration of the main channel. However, the main channel is currently on the eastern side of the fan, and it would likely take thousands of years for the channel to overcome the hydrographic apex and migrate to the west side of the fan.

Actions at Emigrant Junction under alternative B would have minor and localized impacts on floodplain function. Improvements such as replacing the Emigrant water line would result in only a small disturbance in the floodplain where it crosses Emigrant Wash. The replacement of leach fields and the installation or rehabilitation of flood dikes would result in new disturbance within the floodplain. However, it is expected that the diversion of runoff by the dikes would affect less than 6 acres of the 1,800-acre floodplain, and any diverted runoff will reenter natural channels immediately downslope from

the developed area. Installation of the RV pads and paving the entry road apron at Emigrant Junction would result in only a small increase in impervious surface at the site.

Capital Investment

The proposed capital improvements within floodplains are intended to enhance visitor experience, repair failing infrastructure, improve park operations, and restore floodplain function. The facilities that are proposed for possible replacement within a floodplain include a concession employee dormitory, an emergency services building, two comfort stations, a visitor contact station, a reverse osmosis water treatment plant, a water line, and two leach fields. Facilities proposed for potential rehabilitation within a floodplain include a helicopter pad, Mosaic Canyon road and trailhead, Stovepipe Wells campground, and two or three flood dikes. New facilities include one or two flood dikes at Emigrant Junction, a vault toilet at Mosaic Canyon trailhead, and two trails. The enhancement and addition of flood dikes would protect the rehabilitated, new, and existing NPS assets.

Human Health and Safety

Although the proposed actions do not directly impact health and life, elements do support continued human occupancy in a flash-flood prone area, and consequently, protection of human life is considered. The focus of human activity in the project area is Stovepipe Wells Village, which is at the toe of the alluvial fan where runoff energy will be most diffuse and therefore less dangerous. The flood control enhancements and additions would provide a degree of risk management and increase the safety factor for human occupancy within the flood zone. However, given the nature of flooding on alluvial fans, risk management up to a specific level such as the 1% AEP flood is problematic, and therefore additional measures will be taken. These measures would include flood warning and evacuation planning, as well as messaging to visitors and staff to identify flood hazard zones.

FLOOD MITIGATION MEASURES

Mitigation measures to protect natural floodplain values, capital investment, and human health and safety, are outlined below.

Natural Floodplain Values

- Best management practices would be used to minimize erosion and sedimentation during construction activities.
- Soil compaction in the floodplain would be minimized during construction, and the soil surface restored if needed after construction.
- Appropriate drainage would be considered in the design of all project components to prevent accelerated runoff within the project area.
- The improvements of Mosaic Canyon road would be designed to improve floodplain function by restoring the natural grade and runoff.

Capital Investment

- New and rehabilitated flood protection structures would divert flood waters from the developed areas of Stovepipe Wells Village and Emigrant Junction.
- The stabilization of the bank at the Mosaic Canyon parking lot would protect the trailhead and new vault toilet
- Building materials would be flood resistant and appropriate for the environment in the park.
- Building designs would be flood resilient.

- Building locations would be selected to minimize flood exposure, and the park could consider additional measures such as introducing fill to raise buildings above grade.
- All construction designs and materials would follow National Flood Insurance Program (NFIP) Guidelines as directed by EO 11988 and DO #77-2, National Flood 5 Insurance Program’s Floodplain Management Criteria for Flood-Prone Areas (44 CFR section 60.3), and in accordance with county or state requirements for flood-prone areas.

Human Health and Safety

- The National Weather Service (NWS) issues flash flood advisories, which allow for warnings and potential evacuation for protection of human life. NWS flash flood advisories would be posted on the outside of the comfort stations along with signage describing evacuation procedures in the event of a flood.

SUMMARY

Through the FSOF process, the National Park Service has determined that there are no practicable, non-floodplain locations for the proposed action. The terrain and topography preclude any alternate locations for the Mosaic Canyon facilities, and the functionality of Stovepipe Wells and Emigrant Junction are dependent on their proximity to CA-190, which is surrounded by floodplain. Potential impacts to human life and health would be mitigated through the posting of NWS flood advisories and the installation of signage with evacuation information. Potential impacts to capital investment would be mitigated through a combination of implementing design standards consistent with the National Flood 5 Insurance Program’s Floodplain Management Criteria for Flood-Prone Areas (44 CFR section 60.3) and in accordance with county or state requirements for flood-prone areas. The replacement and rehabilitation of facilities should result in no long-term negative net impact to floodplain function compared to the no-action alternative. New facilities would largely occur within previously disturbed areas, and the introduction of impervious surfaces will be minimized. Restoring the grade of Mosaic Canyon Road to accommodate natural flow patterns would have a beneficial impact on floodplain values, and the conversion of the asphalt airstrip to gravel would restore a large area of permeable surface within the floodplain. The project includes the addition and rehabilitation of flood control features, which would enhance human safety and protect capital investment. While these flood control features would alter natural flow patterns in the floodplains, it will divert flow from less than 2% of the entire floodplains area. Therefore, the National Park Service finds that the proposed action would not have any material additional adverse impacts on floodplains and their associated values.

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PaleoWest

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1980 Executive Order 11988, “Floodplain Management” (May 28, 1980). Executive Order of the President of the United States.

Floodplain Statement of Finding

Area Overview

Death Valley National Park
National Park Service
U.S. Department of the Interior

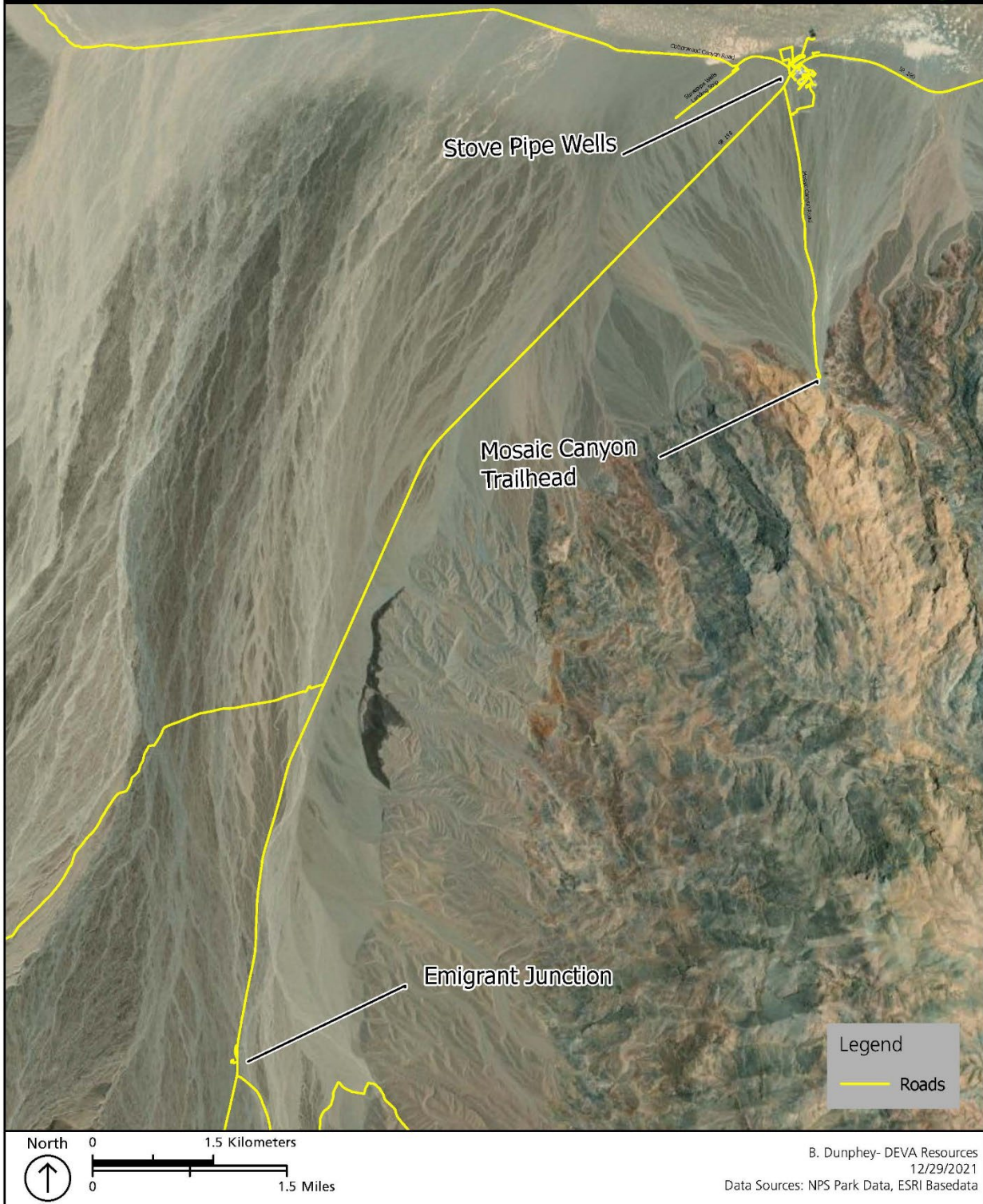


Figure 1. Project Area Overview

Flood Control Structures

Stove Pipe Wells

Death Valley National Park
National Park Service
U.S. Department of the Interior



Figure 2. Stovepipe Wells Village

Flood Control Measures
Emigrant Ranger Station

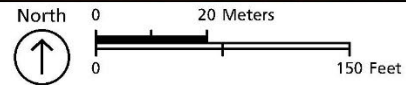
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Figure 3. Emigrant Junction

Mosaic Canyon Trailhead
Area Overview

Death Valley National Park
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B. Dunphey- DEVA Resources
12/29/2021
Data Sources: NPS Park Data, ESRI Basedata

Figure 4. Mosaic Canyon Trailhead and Parking Area