Attachment A

Project: Barker Dam Parking Lot Expansion Project

PEPC #: 97997

Project Location: 34.024953, -116.141988; San Bernardino County

Administrative Record Location: JTNP HQ Planning Office, Twentynine Palms, CA

Background:

During peak season Joshua Tree National Park (JTNP) can have over 4,000 vehicles entering the park per day vying for less than 800 parking spots. The formal parking spots in use today at JTNP were developed in the 1990s and are undersized for the number of vehicles entering the park during peak season. Recent management guidance documents (Foundation Document Jan. 2015) recommend the Park expand parking to address the aging and inadequate infrastructure and to reduce resource conflicts.

Visitors in their vehicles are vying for limited parking spaces, and when parking lots are filled, the parking spills over into off-road parking areas where there is little or no shoulder to accommodate parking. Vehicles parking off-road or on inadequate shoulders cause an ever-expanding disturbance footprint on adjacent native desert habitat. And from these off-road parking spots, pedestrian travel from their vehicles to formalized hiking destinations cause social trailing into the fragile desert ecosystem and/or unsafe walking along busy roadways. In addition, park operations staff are routinely dispatched to these high congested parking areas to manage the gridlock and maintain safe conditions and emergency access. Park staff can get diverted for hours a day, taking away from their ability to perform other job functions.

Purpose and Need:

The purpose of the project is to provide additional parking at Barker Dam to better meet parking demand at this popular visitor destination area.

Due to limited parking, additional parking is necessary because the parking lot fills quickly on high visitation days and visitors park off the road shoulder and cause damage to fragile desert soils.

Description of Action (Project Description):

Expanding the Barker Dam Parking Lot involves converting the two undeveloped disturbed islands in the interior of the circular parking lots into parking spaces. The total areas of the islands is approximately 11,000 square feet. The project would be phased, with the first phase converting the islands into a dirt surface by saw cutting and removing the curb line, clearing vegetation and organic material, and then capping the area with 3” of road base. As funding becomes available, the parking area would receive additional base preparation, and would be eventually be paved with asphalt. Grading of the site would be done to ensure proper stormwater run-off to avoid standing water and erosion in the parking lot. When completed, an additional 40 parking spaces would be available.

Vegetation clearing would require the relocation of 13 Joshua trees to an area adjacent to the parking area. The protection of affected Joshua trees (*Yucca brevifolia*) is an important component of this project. Joshua trees recently (9/22/20) received candidate status under the California Endangered Species Act. Under the federal Endangered Species Act, they do not have special status, but for JTNP, their survival and conservation are paramount to the park's mission. Relocation of the Joshua trees will require pre-project preparation of watering the Joshua trees to ensure they are not drought - stressed, and post-planting care and maintenance consisting of supplemental watering to increase their survival.

Figure 1. Existing Condition

Figure 2. West Island (3,186 sq ft)

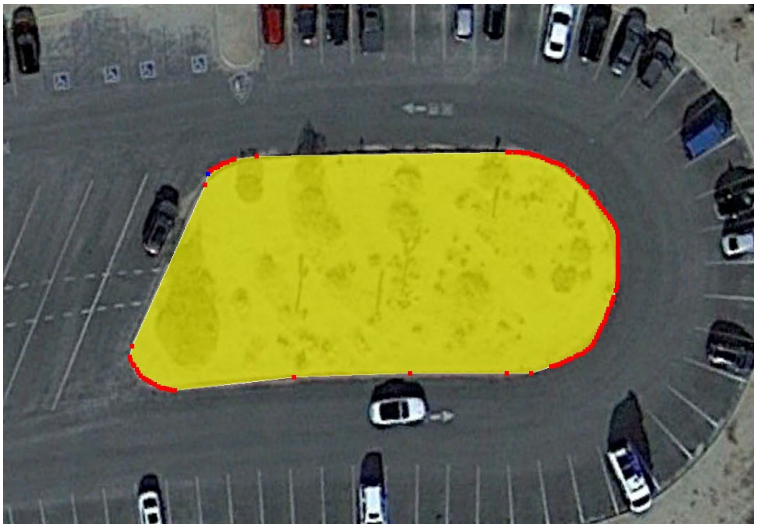

Figure 3. East Island (7,627 sq ft)

Initial phases of construction would be done by NPS staff and would likely use the following equipment: large tree spade; small Bobcat tree spade; (1) Case 521 Loader; (1) John Deere 210 Skip Loader; (1) Cat double steel wheel roller; (1) John Deere 770GP Grader; (1) International Dump Truck; (1) Mack Dump Truck; (1) F750 Water Truck; and (1) Concrete Saw. Paving the parking lot would be done by a paving contractor and their equipment would likely consist of a small paving machine, double steel wheel roller, and a loader. Construction of the

Figure 4. Rendering of Completed Parking Lot

project would be completed in phases as funding becomes available. The project could take as long as 2-3 years to be fully developed into a paved parking area.

Impact Assessment

Existing Conditions

As shown in Figure 1, the current parking lot contains 58 spaces total, including 4 accessible spaces. The interior of the parking lot has two undeveloped islands, the west island which is 3,186 sq ft and an east island that is 7,627 sq ft (see Figures 2 and 3). The vegetation on the islands contains a total of 12 Joshua trees of varying sizes (see Attachment C), and other vegetation such as Creosote bush. Because there is no walking path between the furthest parking areas and the trailhead, the interior islands are often used as a shortcut by visitors. As a result, the area receives frequent trampling by visitors which keeps the soils in a disturbed state.

Direct and Indirect Effects - Environmental Impact Screening Form (ESF)

See mitigations on Page 1 for measures to minimize adverse impacts.

Resource	Potential for Impact	Potential Issues & Impacts
Air Air Quality *GHG Emissions and Fugitive Dust*	Potential	Issue: The proposed project is located within the Mojave Desert Air Quality Management District (MDAQMD). The project area is located in a non-attainment area, exceeding federal and state air quality standards for: • Ozone 8-Hr (1997 Standard) • Ozone 8-Hr (2008 Standard) • Ozone 8-hr (2015 Standard) • PM 10 (1987 Standard) Equipment used to construct parking lot will emit GHG emissions. These emissions from construction would be insignificantly greater than normal emissions emitted in the air district from normal park operations. Impact: Emissions from this activity will fall below de minimus levels defined in General Conformity Rule and would not trigger Mojave Desert Air Quality District Rule 403 Fugitive Dust Control. See mitigation to minimize fugitive dust.
Biological Nonnative or Exotic Species *Native Plants*	Potential	Issue: Soil disturbance associated with transplanting salvaged Joshua Trees to new locations could lead to an increased abundance of non-native invasive species. Construction equipment could introduce invasive plants to the local area. Impact: Invasion by or increased density of invasive alien annual grasses due to soil disturbance and vehicle introduction. See mitigation.
Biological Species of Special Concern or Their Habitat *Desert Tortoise*	Potential	Issue: Desert tortoise are known to inhabit areas within and next to the project area Impact: Individual tortoise may be crushed and killed from project activities. See mitigation.
Biological Species of Special	Potential	Issue: The western Joshua tree is a sensitive species, a candidate species for listing as threatened under California State law, and integral to the

Concern or Their Habitat *Joshua trees*		park's significance. Vegetation surveys were conducted to assess the number and size classes of Joshua trees. Survivability would likely be poor without pre and post relocation actions. Survivorship of the plants would be greater with mitigation measures than without; however, exact survivability is not known; and it is also unknown how much of beneficial affect the supplemental watering would have on survivability. Impact: Relocating the plants could result in mortality of up to 12 Joshua trees as a worst-case scenario. With mitigation (pre and post supplemental watering), JTNP's goal is to have 100% survivability; however, some mortality is still expected. Monitoring will be done to track survivability of relocated trees. See mitigation.
Biological Vegetation *Vegetation*	Potential	Issue: Impact to vegetation in project area. Impact: Other vegetation in the project area islands would be permanently removed, species of note includes Joshua trees, Creosote bush and annual grasses. Creating additional parking would reduce the amount of off-shoulder parking that is occurring, lessening the amount of soil and vegetation disturbance in these areas.
Biological Wildlife and/or Wildlife Habitat including terrestrial and aquatic species	None	
Cultural Archeological Resources *Southern Wonderland of Rocks archeological district*	Potential	Issue: Ground disturbance has the potential to disrupt unidentified, intact subsurface artifacts. Impact: Disruption of context and loss of integrity. Cultural materials are irreplaceable, and if their contextual information is damaged or lost, the loss is permanent and irreversible.
Cultural Cultural Landscapes	None	
Cultural Ethnographic Resources	None	
Cultural Museum Collections	None	
Cultural Prehistoric/historic structures	None	
Geological Geologic Features	None	
Geological Geologic Processes	None	
Lightscapes Lightscapes	None	

Other Human Health and Safety *Park Staff Safety*		Issue: Additional parking would reduce the amount of time park staff need to actively manage parking at this parking lot during peak visitation periods. Impact: Reducing the amount of time park staff is exposed to outdoor elements, vehicle traffic and exhaust would be beneficial to park staff safety.
Socioeconomic Land Use	None	
Socioeconomic Socioeconomic	None	
Soundscapes Soundscapes *Vehicle Noise*	Potential	Issue: Cars idling or circling the parking lot looking for a parking spot. Impact: Additional parking may have some beneficial effect on the soundscape from reducing the number of cars that would normally be continuously circling the parking lot looking for available parking.
Viewsheds Impacts to open space and views	None	
Viewsheds Viewsheds	None	
Visitor Use and Experience Recreation Resources *Visitor Access*	Potential	Issue: Increase in vehicle parking spaces. Impact: The project would increase the number of vehicle parking spaces. More visitor parking would benefit visitor access by providing additional parking near the Barker Dam trailhead, the destination for most of the visitors that go to this parking lot.
Visitor Use and Experience Visitor Use and Experience *Visitor Experience*		Issue: Adverse visitor experience due to lack of parking. Impact: Increase vehicle parking would have some beneficial effects to visitor experience as they would not have to circle around waiting for parking as frequently, or park on road shoulders away from the trailhead giving them more time to experience the park outside of their vehicle.
Water Floodplains *Floodplain*	None	Impact: Project is not in a floodplain.
Water Water Quality or Quantity *Stormwater*	Potential	Issue: The project is being phased and with each phase the new parking lot will become progressively more impervious causing additional quantities of concentrated stormwater to be produced. Impact: In its final phase the parking lot will be become impervious pavement. Stormwater will flow where there is least resistance and may pool if not properly drained. The eventual paving of the parking lot would create an impervious surface and concentrated stormwater may cause standing water if not directed. See mitigation.
Water Water Quality or	Potential	Issue: Pre and post watering is necessary to increase the survivability of Joshua trees being relocated from the project area. Water would need

Quantity *Water Usage*		to be hauled from Twentynine Palms. The exact amount of water to be used is not known because it is hard to predict the amount of natural rainwater that will be available to the relocated Joshua trees. Impact: Utilizing JTNP existing equipment and water from the municipal water supply, water would be hauled from Twentynine Palms JTNP HQ to the project site pre-project, and supplemental watering shall occur once every two weeks in the month following transplanting and once a month thereafter for a period of one year. Frequency of supplemental watering may be adjusted based on monitoring of salvaged trees. Frequency and quantity of supplemental water may be adjusted based on precipitation events if these events result in moist soil at a depth of 8 inches. The portable 250-gallon water tank would be filled close to capacity before leaving JTNP HQ and would likely be emptied each trip. See mitigation.
Wilderness Wilderness	None	Impact: Project is not in wilderness.

Cumulative Effects

Cumulative effects are impacts on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The park has not identified other present and reasonably foreseeable actions that would cumulatively add direct and indirect effects on the resources affected by this parking lot expansion. Speculatively, actions that could affect the same resources as the Barker Dam parking expansion could include similar parking lot expansion projects within the park, however, at this time there are no such projects that have been funded or have existing decisions for implementation. This project would not on its own cause an increase in visitation into the park.

Public Comment

Public Comment on this proposal was initiated on August 18, 2021 for a 30-day and public review and comment period. Notification of the start of public scoping was done by: news release; park planning newsletter sent to approximately 861 people; social media (tweet was sent with links to newsletter and Public PEPC comment site); and posted on JTNP website https://www.nps.gov/jotr/getinvolved/planning-news-stay-informed-newsletters.htm.

JTNP received comments from 22 individuals in response to our public comment outreach. A summary of the comments JTNP received is as follows:

Substantive vs Non-Substantive Comments

Substantive comments are those that:

- question, with reasonable basis, the accuracy of the information;
- question, with reasonable basis, the adequacy of the information;
- present reasonable alternatives other than those presented; or
- cause changes or revisions in the proposal.

Comments that merely support or oppose this proposal were considered non-substantive comments but have been noted by park management as providing a general sense of how the public is perceiving the project. Most of the commenters noted support for the project, taking the stance that additional parking

is needed at this popular location. Those opposed believed that the project would do little to address the issue of overcrowding and visitation at JTNP.

Substantive Public Comment Summary

A summary of the scoping comments and response to comments is summarized below.

Carrying Capacity / Limiting JTNP Visitation.

Approximately 6 commenters felt that the park should not be taking a piecemeal approach to addressing visitation overcrowding and felt expanding one parking lot does not deal with the overall issue of too many vehicles in the park overwhelming parking capacity. These same commenters offered ways JTNP should deal with overcrowding visitation issues, including limit visitation into the park; implement a shuttle system similar to Yosemite or Zion NP; and ban cars in favor of a shuttle system.

> *Response*: Many parks are conducting carrying capacity studies to inform actions that deal with increasing visitation and visitor experience from increased visitation. JTNP has been conducting various studies to understand visitation and information garnered from these studies will inform park actions that address congestion and visitor satisfaction in the future. Various management planning documents (JTNP Foundation Document, 2015) have recommended the park address its aging infrastructure to meet current visitation. JTNP current infrastructure was built when there were 2 million fewer park visitors. Consistent with NPS management policies, the park has no intention of trying to build parking infrastructure to meet peak demand but will continue to look for opportunities to upgrade infrastructure where it can be done in a sensible way that would resolve issues and provide for a better visitor experience. The suggestions to implement a shuttle, limit visitation, or ban cars is outside the scope of this project.

Survivability of Joshua trees and Monitoring

Seven commenters wanted more information on the specific part of the proposal that concerns the relocation of the Joshua trees that would be affected by the construction of the parking lot. Specifically, commenters had the following concerns and questions: how well will the plants survive their relocation; is the area where plants are to be relocated the best place given trampling concerns; what will their water needs be pre- and post-relocation; a suggestion to mitigate to replant at a 2:1 ratio for each affected Joshua tree; and monitoring.

> *Response*: JTNP is committed to relocating the Joshua trees using methods that give the plants the best chance of survival. The impact, including survivability to Joshua trees, and mitigations to increase survivability is addressed in the Impact Assessment section above (See ESF).
>
> Monitoring will be done to track survivability; however, the park will not implement compensation for Joshua trees that are affected or do not survive.

Design Consideration / Stormwater and Loss of Pervious Surface

Four commenters suggested the park should consider making changes to the proposed design or scope of work. Commenters suggested the design of the parking area should incorporate: Bike parking; add an additional restroom; include bioswales due to loss of pervious surfacing; and leaving some of the Joshua trees in place and design the parking around the Joshua tree plants.

Response: These suggestions for additional design changes were taken under advisement.

- Bike Rack. The park will consider adding a bike rack, but not a separate parking area as part of the area proposed for expanded parking. The consideration of a bike rack and its location would be done as a separate project unrelated to this proposal.
- Additional Restroom. JTNP's visitor satisfaction surveys or JTNP staff have not identified a need for additional restroom facilities at the Barker Dam parking lot. Currently there is a double vault toilet located there and it seems to meet the current demand.
- Because of the distribution of the plants, leaving Joshua trees in place would significantly reduce the number of parking spaces the park would be able to provide. Given the location of the trees, it may not be possible to efficiently install the parking area while leaving some in place. During construction if it is possible to reach parking design capacity and retain some Joshua trees the park will do so.
- The park will incorporate stormwater drainage to address increase in impervious surfacing. During construction design, the park will consider incorporation of a pervious bio-swale between the two parking isles or elsewhere and implement if the park is comfortable that it would not flood the parking lot after storm events.

Direct, Indirect, and Cumulative Impacts

One commenter wanted the JTNP to disclose what measure the park would use to reduce air quality impacts; whether the park would require construction vehicles be washed before and after to control invasive weeds; whether botanical surveys were done for at least two years; What measures would be done to control dust; if water is being used; what is the source of water; what are the air quality impacts of transporting water; if wells are going to be used, and if so what the source of the water; and whether the park assessed the projects on Valley Fever. The same commenter expressed concern that the park address cumulative impacts on potential for the proposed project to increase visitors inside and outside the park, including public lands not managed by the NPS.

Response:

- Air quality was assessed in the Impact Assessment above (see ESF). Mitigations have been added to minimize fugitive dust.
- Mitigation has been incorporated to ensure equipment brought to the site be weed-free.
- Botanical surveys were performed as part of the Joshua tree inventory. See Attachment C.
- Watering is assessed in Impact Assessment above (See ESF Water Usage).
- The park did not assess whether the fungus *Coccidioides* that causes Valley Fever is prevalent in the project area. The park is unaware of this being a public health issue within the park.
- Cumulative effects were assessed in the Impact Assessment above (see Cumulative Effects section). Since the park does not believe the project on its own would cause an increase in visitation, it would be inappropriate to consider it as part of a cumulative impact on increasing visitation.

Project Description

One commenter wanted to know what construction equipment would be used to construct the project.

Response: The project description has been updated to include the type of equipment that would likely be used for the construction of the expanded parking lot.

Decision/Implementation Process

A draft proposal for the Barker Dam Expanded Parking Lot was released to the public for a 30-day public review and comment period on August 18, 2021 for a 30-day public review and comment.

Following the 30-day public review and comment period, the NPS reviewed and analyzed the comments received. With consideration of the public's feedback, this document represents the final implementation decision made by the discretionary authority of the Superintendent.

JTNP expects to begin implementing this project in the Winter of 2021-22. The project will be done as described herein and will incorporate the mitigation measures outlined on the Superintendent's CE approval (see Superintendent CE Approval).