Capitol Reef National Park

Orchard Replanting Project (Guy Smith and Cook Orchards)

Public comments response

The following document summarizes 30 comment letters received from members of the public during the project comment period. They are organized into two sections: 1) a summary of responses to general questions posed during the comment period and at public meetings, and 2) park responses to common concerns or questions posed in these comment letters.

Summary of public responses to project questions

What do people value or find important about the Fruita orchards?

People providing comments generally stated that the Fruita Orchards are part of a rich cultural heritage of the park and local communities. Many commenters mentioned the important social aspect of fruit harvest in Fruita over many generations of families throughout the state as well as tourists. Most people felt that the maintenance of heirloom varieties is essential and that the orchards should continue to be a place where people may learn about historical and modern agricultural practices. Finally, some people felt that the orchards should serve as place for education around regional food security and environmentally sustainable practices.

What are concerns about the proposed replanting strategy?

While many respondents were fully supportive of the project as originally written, there were several comments regarding the scale, sustainability, and scope of the project. Several people felt that the approach is too aggressive, potentially sacrificing the very nature of the historical orchards by removing continuity with earlier trees and orchards. They suggested that the park consider ways to work in small plots in order to preserve older trees and preserve the look and feel of the orchards in general. Others felt that the park should move more aggressively by tackling other orchards at the same time as the Cook and Guy Smith. Most respondents again stated their preference for heirloom fruit varieties rather than modern commercial varieties, referencing the turn to national fruit market preferences in the 1950's. Others, however, suggested that there could be room for modern varietals to add variety, extend the fruit harvest season, and to serve as examples for educational purposes.

Specific technical concerns ranged from assessing the overall capacity of the park to properly maintain new plantings, to consulting the appropriate subject matter experts and protecting the area from invasive species. With respect to the capacity of the park to maintain new orchards, there were concerns regarding adequate and consistent irrigation, as well as proper fertilization and pruning. There was a concern about chemical additives and residual antibiotics in the cured manure to be used as fertilizer. Finally, one commenter wanted to make sure that the park consulted with a wide variety of experts in its National Historic Preservation Act Section 106 process. They suggested

the U.S. Department of Agriculture, disease and soil specialists, the Jesus Christ Church of Latter Day Saints, and scientists specializing in the preservation of agricultural species.

What other strategies could the NPS consider in maintaining the historic integrity of the orchards?

The primary comment received for this question was for the park to consider reworking and planting in sections rather than regrading entire orchards.

How important is the investment in traditional planting patterns and selection of fruit types?

Most respondents emphasized the need to maintain traditional planting patterns and to use full sized root stocks. Some commenters felt that regrading the orchards was inconsistent with historical methods and potentially could disrupt the quality of the soil. They suggested that this action would completely change the overall appearance and historical nature of the orchards and that the historical character should be preserved to the extent possible.

Most respondents clearly preferred preserving historic or heritage fruit varieties in the Fruita orchards. Many people mentioned the urgent need to graft scions from Fruita's oldest trees before they are gone. Some commenters suggested that the park reach out to local communities for scion cuttings from resilient fruit varieties in the area so that Fruita could serve as repository for other rare varieties. One commenter recommended that the park consult with the Navajo and Hopi Nations on potential use of their particularly drought tolerant fruit tree varieties as a potential hedge against climate change. One commenter mentioned that the park should consider reviving a seed orchard on Pleasant Creek, also as a form of insurance to preserve heritage fruit tree varieties.

What actions could the NPS take to improve or facilitate traditional use of the orchards?

Response to this question generally centered on educational opportunities. Many respondents suggested that the park sponsor events during fruit harvest to encourage local residents to gather and offer activities around traditional dress and fruit preparation, traditional and modern orchard practices, and the history and legacy of each orchard. Others felt that celebrating local and heritage food is particularly important right now and that the local area and the Fruita orchards offer a special locale for activities highlighting this aspect of agriculture.

<u>Responses to frequently asked questions:</u>

Why is the park taking this action?

Capitol Reef National Park is undertaking this pilot orchard replanting project in order to sustain healthy productive orchards in the Fruita Rural Historic District. Progressive loss of nearly 1,000 fruit trees over the past decade due to age and disease coupled with minimal replanting success only increases the

urgency to replant using a more comprehensive and systematic approach. Retaining approximately 40 acres of viable orchards intermixed with about 25 acres of fields and pasture is essential to maintaining the historic character of Fruita as outlined in the 1997 Cultural Landscape Report. The park is committed to sustaining a fruit harvest that serves the enjoyment and education of park visitors as well as traditions of local communities.

This action is a pilot project to replant the Cook and Guy Smith orchards, an area of 4.6 acres or 12% of the existing orchard areas in Fruita. Past replanting efforts have met with minimal success due to a variety of factors including, poor soil fertility, inadequate irrigation, diseased grafts, and a lack of crop rotation. This project attempts to remedy most of these by 1) limited field leveling that retains top soil at the surface to improve irrigation efficiency, 2) tilling in cured manure and feather meal to enhance soil fertility and reduce compaction, 3) planting saplings in large shallow holes with sufficient organic fertilizer, and 4) use of historically appropriate nursery trees grafted to full-sized root stock that is adapted to arid alkaline soils. Trees will be planted in annual blocks of 100-300 trees in order to sustainably care for young trees and change tactics as needed to increase viability.

The intent of the project is to improve replanting success. The park may adjust techniques in future plantings based on the success of this project and continued feedback from stakeholders.

Will the park take into consideration the historic nature of these orchards when replanting?

Yes. Capitol Reef National Park is committed to following guidance laid out in the 1997 Cultural Landscape Report for the area, the park General Management Plan, Susan Dolan's "Fruitful Legacy", and through consultation with the Utah State Historic Preservation Office, affiliated Native American Tribes, and local parties who have self-identified as having a unique cultural or economic connection to park orchards. This guidance specifies a preference for historic fruit varieties and replacement in-kind using the same planting patterns when feasible. Moreover, the park will continue to document historic trees and their condition, replanting efforts, and preservation of original tree germplasm in accordance with National Park Service Cultural Resource Management policy.

Will tribal voices be included in the planning process?

Capitol Reef National Park is actively consulting with tribes as a part of the National Historic Preservation Act Section 106 process.

Why does the park intend to grade entire orchards? This seems to be a significant impact to the historic character of the area and a loss of continuity with the past.

The proposed action affects 12% of the park orchards. 88% of the Fruita Orchards will remain unaffected by the proposed action so there will remain a substantial connection to the past. The two orchards selected for this pilot project have both exhibited substantial losses since 2012 and only a few widely spaced trees remain. The Cook Orchard contained 204 trees in 2012 and 55 in 2020, a 73% decline. Of the remaining 55, 38 trees that are widely spaced in the center of the orchard will be removed, while 17

apricots along the southwest edge will be retained. The Guy Smith Orchard contained 217 trees in 2012 and 15 in 2020, a 93% decline. All 15 of the remaining widely spaced trees will be removed.

Tree removal is very carefully considered because we do want to preserve old and unique trees where possible. This is especially important while the park works to graft scions from these trees in order to preserve that tree's exact genetics in young trees. In the case of the trees to be removed in the Cook and Guy Smith orchards, there are no unique varieties and most are rated in poor to fair condition. Given the rate of decline in these orchards, very few trees will remain in the coming few years.

Finally, considerations of project cost and efficiency, while secondary to preserving the historic character of the Fruita Orchards, must be taken into account when individual orchards reach the state of the Cook and Guy Smith Orchards. Limited staff and funding are available to rehabilitate orchards and preparing an entire orchard field at one time rather than in piecemeal fashion is a tremendous cost and resource savings. These savings are then invested in properly raising young trees that will keep the Fruita Orchards productive.

How does the park intend to protect the look and feel of historic Fruita?

The park intends to maintain the historic mix of approximately 40 acres of orchards and 25 acres of open fields and pastures. The amount of orchard space being replanted in this project and future replanting projects will encompass less than 20% of park orchards at any one time. The Guy Smith Orchard will be replanted with several peach varieties, helping to restore this much valued crop that is rapidly disappearing from the Fruita Orchards. Orchards planted entirely to full size peach trees reflect the historic character of Fruita in the 1930's and 1940's when the orchards were involved in commercial peach production. The Cook Orchard will be replanted as a mixed crop orchard reflecting many of the historical planting patterns evident in Fruita. This mixed planting style is consistent with orchards managed by individual families in Fruita during the late 1800's and early 1900's. In this way, the new orchard trees will help to restore and maintain the historic look and feel of Fruita.

Trees will be planted on historically accurate spacings which reflect horticultural standards of the time. As trees mature they will be pruned to have low-headed trunks, and either open bowl or modified leader forms. Period accurate pruning styles paired with historic spacing and irrigation systems will help to protect the historic look and feel of Fruita.

What orchard varieties will the park plant?

For the current project, the park intends to plant heirloom cultivars that are exactly the same as or very similar to what was here historically. These include J.H. Hale, Elberta, and Red Haven peaches in the Guy Smith Orchard. Other peach varieties that may have existed in Fruita to be added to the Guy Smith Orchard depending on availability are Early Red Haven, Crawford, Baby Crawford, and Rosa. The mixed variety Cook Orchard will be planted with the above listed peaches as well as sweet cherries (Utah Giant, Bing, Royal Anne, Lambert, and Van), sour cherries (Montmorency), apples (Red Astrachan, Rhode Island Greening, Winter Permain (Winter Pearmain), Ben Davis, Capitol Reef Red, 20 Ounce Cooking, Gibson Golden, Grimes Golden, Rubinette, and Yellow Transparent), pears (Bartlett, Winter Bartlett, and

Flemish Beauty), Plums (Duarte, Potawatomi, Stanley, Yellow Egg, and Santa Rosa), and apricots (Moorpark (Moorpack), Chinese Sweet Pit, and Blenheim).

In future projects, the park may consider other historic species including grapes, tree nuts, elderberry, mulberry and gooseberry. Depending on future stakeholder input, there could be consideration of historic varieties found locally, statewide or nationally, non-historic varieties that are desirable and better adapted to warmer climate conditions, and modern dwarfing varieties for educational purposes.

Will the park consider adding fruit varieties to extend the length and consistency of the fruit season?

Based on stakeholder input, the park will incorporate some varieties to fill gaps in the current fruit harvest season. This includes the early Red Haven, Crawford, Early Crawford peaches and Chinese Sweet Pit apricots among many others currently under consideration. The park is also seeking to increase the varieties of fruit available to add resilience to the fruit crop. This is exemplified in the addition of peach varieties for the Guy Smith Orchard and the additional cherry, plum, apple, and apricot varieties planned for the Cook Orchard. Future projects would continue and expand this effort to possibly include elderberry, gooseberry, and tree nut varieties.

How does the park intend to improve soil fertility?

Due to a lack of sufficient locally available cured manure, the park will incorporate approximately 1 inch of manure into the initial field preparation to be followed by additions of cow manure, and feather and bone meal to be mixed with excavated soil as each tree is planted.

Related to fertilization, the park will also be planting trees on rootstocks well adapted to the soil, irrigation and climatic conditions found within the Fruita orchards. Careful rootstock selection will help newly planted trees thrive in the nutrient depleted soils found in Fruita.

What sustainable agricultural methods does the park intent to use to maintain orchards?

As in the past, the park intends to continue the use of largely organic methods. Fertilization will be via additions of manure, natural slow release fertilizers, and occasional inorganic fertilizers as needed. Cover crops will be native grass species adapted to local conditions. Pest management will be conducted following Integrated Pest Management principles using organic or non-invasive methods as much as possible. These methods may include fences to exclude deer, insect mating disrupters, cover crop management, pesticide and herbicide sprays, and reflective materials to deter birds.

Would the park consider alternatives to solely using flood irrigation?

The park recognizes that there are many means of improving orchard irrigation beyond the traditional furrow flood irrigation. Given that the Cook and Guy Smith Orchards will require comparatively less grading than other orchards, the park intends to continue using exclusively furrow flood irrigation in these orchards, unless it becomes apparent that the young trees are not receiving sufficient and

consistent water. Other irrigation methods may then be considered. The park will continue to investigate alternate irrigation methods for future projects that are consistent with preservation of the area's historic character.

How should the park proceed with future replanting efforts?

Stakeholders provided many suggestions for replanting objectives. The park is able to accommodate some objectives such as expanding the fruit harvest season while continuing to focus on heritage varieties. The park has begun the process of grafting its historic cultivars so that they can later be planted back in Fruita. As the park develops an updated orchard management plan, additional factors will need to be considered such as annual replanting rates necessary to sustain orchard tree numbers, consideration of varietal water needs and drought tolerance, incorporation of local varieties not necessarily found in Fruita, planting modern varieties for educational purposes, and further balancing traditional and modern agricultural practices as needed to sustain healthy orchards.

How will the park insure the sustainability of the orchards over time?

Agriculture is a labor-intensive endeavor and many stakeholders suggested that the park carefully consider available labor and labor-saving techniques into the planning process. The park has prioritized and secured sustainable funding for an orchard manager, a horticulturist, and seasonal staff. Other staff may work in the orchards as well including the park gardener. The park has also secured several sources of sustainable youth corps funding to support interns and youth crews. Funding will always be a challenge and the park is committed to using fee revenue and working with the Capitol Reef Natural History Association to make sure basic needs are met. Technological improvements going forward could include improved mowers and tillers with kick-out features, work platforms and electric pruners for more efficient pruning, and irrigation system adjustments.

Will the park consider harvesting and selling fruit?

The current project is focused on replanting orchards and cannot address this larger question. This could be a topic for future orchard planning. In the past, park personnel have harvested small cherry harvests so that more people would be able to enjoy them. This is labor intensive and only possible for very small harvests. If there is stakeholder interest, the park would consider a partner that could harvest and sell fresh or preserved fruit.

What other orchards are being considered for replanting?

At present, the Mott and Carrell Orchards are also being considered for replanting in the near future. As further replanting efforts are considered and an Orchard Management Plan is written, all orchards will be considered for replanting. Planning out-year planting will require orchard size, current makeup, crop rotation, orchard to field ratio, visitor access, soil conditions, and fencing needs to be considered and

balanced, among other factors. Once determinations are made for future planting efforts the public will be notified, however this is currently outside the scope of this pilot project.

Will the park consider grazing of orchards by domestic animals?

This is out of the scope for the present project. While the park may consider this in future actions, available information suggests that this would be very labor intensive to insure that fruit trees are not damaged.

Will the park consider managing deer, turkeys, and beaver?

This is out of the scope for the present project.

What will the park do to enhance interpretation of park orchards?

While this question is generally out of the scope of the current project, there were many helpful suggestions submitted that may be considered in future orchard or Fruita area projects. These included making orchards a center-piece interpretation topic including special walks and a possible blossom festival as well as increasing the number of trails throughout the orchards. There were a number of comments regarding salvaging unharvested fruit to sell to visitors at the park or in Torrey, providing food for local food drives, or establishing local partners to harvest and preserve fruit. The park looks forward to continuing this conversation as it continues to rejuvenate park orchards.