



United States Department of the Interior

NATIONAL PARK SERVICE  
Saguaro National Park  
3693 South Old Spanish Trail  
Tucson AZ 85730



IN REPLY  
REFER TO:  
A5623

March 16, 2012

To: Regional Director and Deputy Regional Director, Intermountain Region

From: Superintendent, Saguaro National Park

Subject: Analysis of Potential Impacts & Effects of Implementing the Director's Policy of Recycling and Reducing Disposable Plastic Bottles, Saguaro National Park

Per the Director's recent policy designed to recycle and reduce disposable plastic bottles in national parks (memo dated January 3, 2012), Saguaro National Park (SAGU) has completed an analysis of the potential impacts of banning their sale in the park.

SAGU does not have a concessions operation within the park, nor does the cooperating association (Western National Parks Association, WNPA) sell ready-to-consume food or drink. However, The Friends of Saguaro National Park (FOSNP) currently has an informal agreement with the Pepsi Corporation to operate vending machines that dispense bottled water, Gatorade, and canned soda. There are a total of four vending machines, two each directly outside of the park's two Visitor Centers (Tucson Mountain District and Rincon Mountain District). These machines net about \$10,000 total in sales annually, with FOSNP retaining about 40% (\$4,000) in commission, and the remainder going to Pepsi.

Both districts of Saguaro are adjacent to the city of Tucson, and within easy driving distance of urban amenities, including convenience stores, grocery stores and restaurants. Nevertheless, the vending machines have been in place for several years and are popular particularly during Tucson's warmer months. Dehydration is a significant safety issue for visitors, especially in the summer. Thus, the park appointed an interdisciplinary committee represented by all divisions to conduct the analysis and determine whether to discontinue the sale of bottled/canned beverages in the park. Based on the evaluation, the park's final decision is to remove the four vending machines in the park, two from each visitor center. Below is the completed analysis.

### *1. Amount of waste eliminated and pros/cons to overall park operations*

Saguaro National Park could eliminate up to 40% of what is currently recycled; about 15% of the park's total waste stream. In fiscal year 2011, disposable plastic bottles accounted for about 22% of the park's recyclables, and aluminum cans about 17%.

#### Pros

- Results in less plastic and aluminum garbage, which is good for the park and overall environment
- Decreases litter in the park
- Supports NPS "Green Parks Plan" and "Healthy Parks Healthy People" Strategies
- Provides a model/education opportunity for green practices and sustainability
- Improves visitor safety by reducing/eliminating bees and wasps that congregate near garbage cans due to the sweet, sticky soda cans
- Increases revenue for Western National Parks Association (WNPA) by promoting and increasing sales of reusable water bottles in both park visitor centers.

#### Cons

- Results in loss of revenue for Friends of Saguaro National Park (FOSNP)
  - Mitigation: FOSNP points out that this loss, about \$4K, is really to the park. Saguaro deems this an acceptable trade-off.
- Does not provide portable water for visitors who arrive after hours and don't already have their own water bottles.
  - Mitigation: WNPA may look into providing vending machines that sell/dispense their water bottles. Visitor education about water availability will be increased to provide as much pre-visit information as possible.
- Dehydrated people coming to the VC for water/electrolytes won't be able to buy Gatorade.
  - Mitigation: These visitors can get assistance, water and/or electrolytes from rangers as is procedure now. WNPA may sell powdered Gatorade in packages.

### *2. Infrastructure costs and funding sources for filling stations*

Saguaro purchased five water bottle filling stations for our 2011 Bioblitz, and has installed three at the eastside visitor center, two at the westside VC. The park also has three water fountains. No additional funds are needed.



**A newly installed water bottle filler at the Tucson Mountain District's Red Hills Visitor Center. Visitors were using the device before the installation crew had left the site!**

*3. Contractual implications on concessioners*

N/A. The four existing vending machines (two at each Visitor Center) are operated through FOSNP. There is no written contract between FOSNP and Pepsi who own the vending machines; nor is there a Commercial Use Authorization in place.

*4. Operational costs of filling stations, including utilities and public health testing*

Maintenance staff already conduct weekly water testing. This will not change/increase due to the water filling stations.

*5. Cost and availability of reusable containers*

WNPA currently sells two reusable water bottles – an inexpensive (\$2.95) bottle, which fits in bicycle water bottle cages, and a larger (32 oz.) nalgene bottle for \$12.95. (The cost of a bottle of water from the park's vending machines is \$1.25). At the park's request, WNPA has recently added an attractive new hard plastic reusable bottle with the park's logo, that will sell for \$2.99. All of these items are BPA free.

All variations and themes of water/drink holders are available within five miles of either district, throughout the community of Tucson.

*6. Effect on concessioner and cooperating association sales revenue*

WNPA should benefit from this action through increased sales of reusable water bottles. WNPA will monitor these sales on a quarterly basis to quantify the increase in sales.

*7. Availability of water within concession food service operations*

N/A. The park has no concession food services in either district.

*8. Visitor education in the park and online so visitors may come prepared with their own water bottles*

The park is advertising both the removal of vending machines and the installation of water filling stations through a media campaign including a press release to print, television and radio outlets; highly visible signage near the new bottle filling stations; a 60 day spot under “emergency message” on our website; and a long term quicklink from the front page to a new webpage with targeted messaging about why we made the change and where to find reusable water bottles. In addition, the Saguaro Sentinel park newspaper has updated information about water availability and updates to park maps indicating where the new water filling stations are located.

*9. Results of consultation with the NPS Public Health Office*

The park consulted LCDR Adam Kramer, USPHS, Regional Public Health Consultant, NPS Public Health Program, IMR. Adam asked that the park consider the potential increase in the probability of a park visitor going hiking without sufficient water. He also acknowledged that the park has reusable water bottles available for purchase, and that there are other nearby opportunities for individuals to purchase drinks or reusable containers.

*10. A sign plan so that visitors can easily find filling stations*

Water filling stations will be highly visible, well signed in conspicuous/strategic locations around the bottle fillers in all public locations. The signs will be modeled after those in use at GRCA and ZION, and will not only direct people to the water fillers, but will provide educational information on the NPS’s efforts to reduce waste and promulgate sustainable practices. They will cost ~\$1,000 and will be funded from the park’s donation account. Temporary signs will be in place before the vending machines are removed in March, 2012. Pending evaluation of signage, permanent fabrication and installation will occur Summer 2012.

*11. Safety considerations for visitors who may not carry enough water or who resort to drinking from surface water sources*

Due to the dry and hot weather conditions at Saguaro, the park already makes a concerted effort to provide information and educate visitors about the dangers of hiking in the desert unprepared, particularly without sufficient water. Information and recommendations for planning a visit or hiking in Saguaro National Park (on website, in park newspaper, during programs, on signage at trailheads, etc.) all reiterate the importance of bringing plenty of water. Furthermore, rangers are available to assist those who suffer ill effects from inadequate hydration, or drinking from unpotable/natural water sources.

*12. A system for annual evaluation of the program, including public response, visitor satisfaction, buying behavior, public safety and plastic collection rates.*

The park will collect, summarize and report the following information annually:

- Visitor comments (Branch Chief of Interpretation)
- Incidents in park due to lack of water (Chief Ranger)
- Water management/quality reports (Facility Manager)
- Recycled waste collection rates/volume (Facility Manager)
- Water bottle sales (WNPA to Superintendent)

The park shall continue submission of environmental data and waste stream reports, incident statistics, and WNPA summary reports.

*13. Results of consultations with concessioners and cooperating associations*

The park superintendent has spoken on several occasions to FOSNP, who operate and benefit financially from the vending machine sales, and who will lose money from this action. The Board understands the rationale for eliminating waste and removing the vending machines, and they support the decision. The Superintendent also spoke with WNPA, who will benefit financially from this action through increased reusable water bottle sales. WNPA supports the proposal and has already ordered an additional, affordable reusable water bottle for sale. Furthermore, WNPA will consider other actions (i.e., water bottle vending machines, selling powdered Gatorade packages) to mitigate the negative impacts identified in this analysis.

*14. Timeline of phase in period*

- December 14, 2011 Park received Director's memo.
- January 6, 2012 Teleconference between IMR DRD Laura Joss, WASO Commercial Services Contract Mgt Branch Chief Kurt Rausch, and SAGU Supt Darla Sidles re: clarification of new NPS policy in absence of CUA.
- January 11, 2012 Superintendent Darla Sidles contacted the Executive Directors of FOSNP and WNPA regarding the potential impacts to the park and each organization if vending machines sales were

- eliminated.

  - February 6, 2012 Interdisciplinary team representing all park divisions meet to discuss the new policy and identify the information needed to assess impacts of eliminating vending machines selling water, Gatorade and soda in the park.
  - February 7-22, 2012 ID Team and park staff collected data.
  - February 23, 2012 ID Team reconvened to analyze the data, and assess the impacts, effects and potential mitigations. Team made decision to eliminate vending machines. Superintendent relayed this decision to FOSNP and IMR.
  - Feb 23-Mar 16, 2012 Park develops public information, signs, and online resources to educate the public about the change.
  - February 24, 2012 FOSNP contacted Pepsi and requested they remove machines by March 23.
  - March 2, 2012 All water filling stations operational.
  - March 16, 2012 Final meeting of ID Team. Temporary signs in place at water filling stations.
  - March 23, 2012 Vending machines removed.
  - March 26, 2012 Press Release issued.
  - Summer 2012 Permanent signing in place at water filling stations.