



United States Department of Interior

NATIONAL PARK SERVICE

Petrified Forest National Park

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Petrified Forest, Arizona 86028




A7217

Memorandum

August 27, 2012

To: Director, Intermountain Region

From: Superintendent, Petrified Forest National Park 

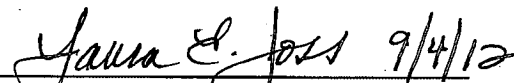
Subject: Request for Approval to Eliminate the Sale of Water in Disposable Plastic Bottles

Petrified Forest National Park proposes to eliminate the sale of single-use water bottles, experiment with the sale of water in cans and gallon jugs instead, and create water bottle filling stations at each of the three main points of visitor contact in the park. Attached is the required analysis of the situation. We seek your concurrence with the proposal.

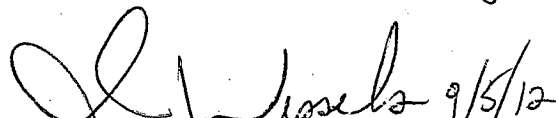
Thank you

Attachment

Recommend Concurrence:


Laura E Joss, Deputy Regional Director

Concur:


John Wessels, Regional Director

Petrified Forest National Park

Analysis of potential impacts/effects of plastic bottle replacement program – substituting water in aluminum cans and gallon jugs for single-use plastic bottles

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

In calendar year 2010, Xanterra sold approximately 9000 single use bottles of water. It is unclear what percentage of these made their way to the park's waste stream but approximately 30% of the park's recycling volume that year was single use plastic bottles. Eliminating the sale of single use water bottles will not reduce the recycle volume to nothing because visitors and residents will bring them from elsewhere but it will eliminate an estimated 9000 bottles per year from the at-large waste stream.

Pros:

- Decreases in plastics going into circulation, whether to be recycled or land-filled, or into the environment another way.
- Decreases in monetary costs to any visitor who would have purchased more than one bottle of water within the park; and if our education efforts are successful, visitors may save additional money as they continue to refill their reusable bottles after they leave the park.
- Savings of resources used and Green House Gases (GHCs) released during the transportation of waste and recyclables and during the recycling process.
- Decreases in litter associated with disposable bottles.
- Reduces risk of plastic bottle ingestion. Birds, rodents, and larger mammals are known to be attracted to plastic bottles. Thinking there is food/water inside, animals chew and inadvertently swallow plastic pieces. It is well documented that ingested plastic can become lodged in throats and choked on and/or accumulates and creates blockages in digestive tracks.
- Diminishes release of toxic chemicals such as bisphenol A (BPA). Toxins leached from plastics are known to have negative effects on wildlife.

Cons:

- Bottled water is a high profit margin item for the park concessioners and partners. If reusable bottle sales (lower profit margin) do not make up for this, concessioners and partners could incur some financial loss. (See #6 for additional analysis).
- Some people perceive a risk to visitors of dehydration as visitors have become accustomed to relying on single use water bottles for hydration.

2. Infrastructure Costs and funding source(s) for filling stations

Petrified Forest National Park already has water fountains in public places at all three primary visitor contact areas. The cost to convert these to water bottle filling stations (gooseneck spouts and signing) is miniscule and will be absorbed in base operating funds.

3. Contractual implications on concessioners, including considerations of new leaseholder surrender interest or possessory interest

Xanterra is the long-time concessioner at Petrified Forest and is on the 17th one-year extension of their expired contract. The proposed adjustment here is the substitution of 12 ounce aluminum water cans and 1 gallon water jugs for single use water bottles in their two stores. No financial interest is involved.

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

The three water fountains to be used as water bottle filling stations already exist – no new operating costs are anticipated.

5. Cost and availability of BPA-free reusable containers:

Xanterra sells 5 different types of BPA-free water bottles from \$6.99 to \$11.95. The Petrified Forest Museum Association sells one aluminum water bottle, with several different designs, for \$19.95.

6. Effect on concessioner and cooperating association sales revenue

Based on a voluntary trial run, Xanterra projects a loss in water sales of approximately 60% when cans and gallon jugs of water are sold in place of single-use water bottles. Sales of reusable water bottles may increase but are not expected to make a significant contribution to offsetting the loss. As a percentage of General Merchandise sales (grocery and film, primarily), the drop in water sales is expected to be approximately 7%. As a percentage of total retail sales, it is approximately 0.6%.

The cooperating association does not sell water but has recently begun selling aluminum water bottles.

7. Availability of water within concessioner food service operations

The restaurant at Petrified Forest includes water as a beverage option. New signing has identified the beverage dispenser as a place to fill water bottles.

8. Visitor Education in the park and on line so that visitors may come prepared with their own water bottles

Within the park, information about the filling stations and reusable water bottle promotion will be available in the park newspaper and on all filling stations. The primary site at the Painted Desert Visitor Center (located before visitors enter the park) will have an exhibit explaining the program at the water fountain. A site bulletin will be completed on the water filling stations and will be made available on-line and throughout the park. The NPS and concessioner staff within the park have been provided with information about the program and encouraged to share this information with park visitors. In addition, the park will add information to the website about the filling stations and the reusable water bottle program. This info would be updated to reflect that water in individual disposable containers is no longer sold within the park; and a link to the filling station/ ban page would be featured on the park's home page to ensure easy access to information about the change.

9. Results of consultation with NPS Public Health Office

The park has incorporated numerous consultation meetings with the NPS Public Health Office. The Public Health Office reviewed the design of the water filling stations, commented on placement of the stations to meet public needs and all aspects were found to be satisfactory. The NPS Public Health Office is fully supportive of this ban, as any concerns about public safety have been addressed.

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

Filling stations are at all three visitor contact locations in the park, including the trailhead to the Painted Desert Wilderness. Each is in a prominent location and will be well marked.

11. Safety considerations for visitors who may resort to not carrying enough water or drinking from surface water sources with potential exposure to disease

There is virtually no surface water at Petrified Forest most of the year and, in part because of the lack of water, very little long-distance hiking or backpacking. The park's safety messages always include admonitions to carry sufficient water and snacks – future messages will include water availability.

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

On an annual basis the park would monitor and collect the following data:

- Visitor satisfaction/public response by using the visitor comment forms – log in complaints/compliments (Public Response and Visitor Satisfaction).
- Visitor and Resource Protection staff will track incidents/contacts related to water availability and dehydration (Public Safety).
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- We will track sales with Xanterra (Buying Behavior).
- Interpretation will track sales with PFMA (Buying Behavior).
- Administration will track collection rates with input from our contracted carrier (Collection Rates).

A position in the park will be designated as the “project manager” to collect all of the data and evaluate the data on an annual basis.

13. Results of consultation with concessioners and cooperating associations

Consultation with the concessioner and the cooperating association began informally in 2011. These discussions included the development of alternative products that are both sustainable and affordable (various price points) in order to allow the organizations an opportunity to recoup revenue currently associated with bottled water sales. The concessioner is supportive of the aims of the bottle replacement program and suggested aluminum cans and gallon jugs as alternatives, which the park has approved.

14. Timeline of phase in period

Xanterra has experimented with the aluminum cans and gallon jugs during the 2012 summer season. The water bottle sign is poised for installation in the fall of 2012 and alterations to existing water fountains will be ready for the summer of 2013.