

GREAT PLAINS

Homestead Cleans Up Following Tornado

On the night of May 8, a tornado ripped through 10 acres (4 ha) of Homestead National Monument of America, Nebraska, damaging park and neighboring homes, and scattering an estimated 114 tons of wind blown debris over 30 acres (12 ha) of park tallgrass prairie. No deaths or serious injuries resulted from the storm, but the high winds damaged trees, fences, signs, and homes in and adjacent to the park sending fiberglass insulation, wire, plywood, structural beams, drywall, asphalt shingles, and personal items across park lands. In some areas, the debris was 5-10 pieces thick per square foot.

The Homestead tallgrass prairie is a restored cultural landscape that interprets the scene as it appeared prior to the homestead movement of the 1860s. Established in 1939, the 100 acre (41 ha) prairie is the oldest such restoration in the national park system. The debris posed a safety threat to visitors and impaired the prairie itself as the spring growing season began. Immediately, park staff needed to determine the best method of clearing the debris.

At the time, the prairie grasses were 2-3 feet high and the debris was either hard to see or tangled in the grass and emerging forbs. The park posted a message on the NPS cc:Mail Natural Resource Bulletin Board in an attempt to solicit suggestions and accounts of experience dealing with similar circumstances. Among the 25 replies, a few recommended prescribed fire as a remedy; oth-

ers suggested raking or just leaving the debris; several suggested using volunteer labor.

Though the park identified few hazardous materials, burning was not the preferred alternative due to the proximity of private homes, the presence of asphalt and fiberglass, and the possible encouragement of exotics resulting from burning late in the spring. Raking was impossible due to the terrain, debris materials, and type of vegetation. Using heavy trucks was also impractical due to the long-term damage they would cause from soil compaction. Leaving the debris was not an option and after considering all suggestions, the park decided that hand labor was the only alternative that would allow staff to collect the maximum debris with minimal impact.

After surveying the affected area, employees estimated that about 2,000 hours of labor would be needed to conduct the cleanup. At the time, monument staff consisted of eight permanent employees with no funds for seasonals. Considering the nature of the debris and its effect upon the rapidly growing prairie plant life meant that clean up needed to commence without delay. Continuing rainstorms matted debris into the vegetation as staff began the massive pickup, and they immediately realized they needed considerable outside help.

Using local and regional media, the park proclaimed June to be "Homestead Cleanup Month." Volunteers responded almost immediately. Civic organizations, other agencies, families, and individuals generously donated their time to work under the supervision of park staff

and do whatever was needed to clear the debris. To maintain park operations, the park limited the volunteer cleanup effort to 4 days a week. All volunteers received a park orientation and safety flyer when they arrived and a certificate of appreciation for their service. The presence of dangerous materials (nails,



glass, etc.) led the staff to restrict participation to volunteers of 16 years of age or older. Furthermore, they checked all volunteers for gloves and boots and made sure that those using chain saws wore approved NPS personal protection equipment. Despite the obvious safety hazards, no injuries were reported.

By late June, the cleanup was complete, although the park will wait until autumn to clear some of the larger trees in heavily wooded areas. During the 7-week effort, park staff dedicated 662 hours to the cleanup. An additional 112 hours were contributed by NPS personnel from the Midwest Archaeological Center in Lin-

coln and Great Lakes and Great Plains SSO personnel from Omaha. A total of 27 AmeriCorps volunteers contributed 211 hours and 100 community volunteers donated 461 hours of work. The Nebraska Job Service supplied five employees who had been displaced from their jobs when a local store was destroyed by the same storm that hit the park. Hired for 3 weeks using emergency funds remaining from

1993 floods, these workers contributed 500 hours of labor. In all, 160 people contributed 1,953 hours to the effort.

The need for immediate response to clear the debris prevented the park from taking advantage of some potential learning opportunities. The park had no staff or technical ability to map the debris pattern. They also have no ability to measure microscopic soil effects before or since the storm. Effects such as the impact to the microclimate caused by the destroyed trees may be measurable from Long-term Ecological Monitoring Program data; Homestead is a prototype park in the Prairie Parks Cluster for this program.

As the urban-wildland interface continues to expand, this type of incident can be expected to occur more often. Homestead will continue to assess its response plans for handling future natural disasters. Nevertheless, this was a situation when technology provided no ready solution to a messy and unpredictable resource problem. Cooperation, community partnerships, and hard work contributed to our achievements in confronting this situation.

