

# Homestead National Monument of America Greening Charrette October 19-21, 2004 Beatrice, Nebraska Executive Summary

The Homestead National Monument of America was established in 1936 to commemorate the Homestead Act and the lives of the Homesteaders who came to Nebraska and other Homestead states. It is located on one of the first documented homesteads, which belonged to Daniel Freeman. The site includes prairie, woodland, and historic Osage Orange hedgerow, as well as a cabin and school building. There is an existing Visitor Center slated to be changed to an education center and a new visitor center/museum, called the Heritage Center, planned.



Homestead currently uses motion sensor flush valves and faucets, a photovoltaic system to provide parking lot lighting, and solar power to operate systems for a new storm shelter. Green procurement initiatives include bio-diesel, gasohol, or ethanol for all vehicles; other bio-based products for degreasers and cleaners; recycled plastic lumber for boardwalks; energy efficient doors and windows; compact fluorescent lighting; and other products. A Green Committee was formed in 2002.



This charrette was the seventh in a series co-sponsored by the National Park Service and the U.S. Environmental Protection Agency. The objective of the charrette was to develop a plan for further greening of Homestead in high priority areas such as its Environmental Management System (EMS), landscaping, potential use of wind power, new Heritage Center, and interpretation and education.

The event began with a half-day tour of the site, designed to introduce speakers and other outside participants to issues at Homestead that might be addressed during the charrette. The tour began at the existing Visitor Center and then proceeded around the site on the Upland Prairie Loop Trail. This took the group to the site of the proposed Heritage Center. The tour also included maintenance facilities, the new storm shelter, and the historic Freeman School.



The first full day of the charrette began with a welcome from Mark Engler, Superintendent at Homestead. The first session was a presentation of issues at Homestead and goals for the charrette by Mark Engler, Laura Stresemann, and Amy Garrett. Next, Gail Lindsey introduced the sustainability topics that are the focus of this charrette series: environmental leadership and planning, transportation, facilities, operations and maintenance, concessions, interpretation and education, and procurement.



To conclude the morning, two guest speakers, Ted Hillmer (Superintendent at Wilson's Creek National Battlefield) and Chris Case (Facility Manager at Pictured Rocks National Lakeshore), discussed ideas that could be incorporated into Homestead's planning for the future. After lunch, Kristine Johnson, Supervisory Forester at Great Smoky Mountains National Park, discussed concepts and resources for sustainable landscape design using native plants. Dan McGuire of the American Corn Growers Foundation discussed factors to be considered in evaluating wind power systems. Then Gail Lindsey gave an overview of the U.S. Green Building Council's LEED Rating System for buildings. Finally, Dena Saslaw, Gateway National Recreation Area, discussed ideas for interpreting sustainability and educating visitors and staff.



Participants then broke into three work groups to discuss ideas for (1) planning and EMS, (2) facilities and landscaping, and (3) interpretation and education. For the remainder of the day, the groups discussed a vision for their topic and the current status at Homestead to create a baseline. The work groups returned the final day to establish short-term, mid-term, and long-term goals and actions; the groups also identified champions and partners for high-priority actions as well as

barriers and opportunities and approximate level of cost. At the conclusion of the charrette, the groups presented their results and Superintendent Mark Engler reacted to the groups' priorities.

**SUMMARY of Short-Term Goals/Actions and Responsible Champions:**

<b>Priority Short-Term Goals/Actions</b>	<b>Champions</b>
<b><i>Planning</i></b>	
Apply proposed evaluation process to ideas developed during charrette	Mark Engler, EMS team
<b><i>Facilities and Landscape</i></b>	
Select sewage treatment system for Heritage Center	Mark Engler
Review Heritage Center design for fire suppression, energy efficiency, LEED credits proposed, energy targets	Mark Engler, Laura Stresemann
Develop cultural resource management plan with IPM	Gary Armstrong, Laura Stresemann, Jesse Bolli, and Michael Stansberry
Develop energy and water use baseline	Laura Stresemann, Gary Armstrong
<b><i>Interpretation/ Education</i></b>	
Install signs describing energy and water saving measures	Amy Garrett
Work with YCC/schools to provide credit for summer work (longer term goal)	Amy Garrett
Use Environmental Expo to expand partnerships/ outreach and for messages on reducing dependence on foreign oil	Susan Cook
Include messages in Prairie Appreciation event on landscape and native plants	Jesse Bolli

# Homestead National Monument of America Greening Charrette October 19-21, 2004 Beatrice, Nebraska Final Report

## Background

The Homestead National Monument of America was established in 1936 to commemorate the Homestead Act of 1862 and the lives of the Homesteaders who came to Nebraska and other Homestead states. It is located on one of the first documented homestead, which belonged to Daniel Freeman. The site includes tall grass prairie, woodland, and historic Osage Orange hedgerow, as well as a cabin and school building. There is an existing visitor center slated to be changed to an education center and a new visitor center planned.



Homestead is one of 20 NPS Centers for Environmental Innovation; it began implementing innovative technology in the 1980s with water source heat pumps. Since then, motion sensor flush valves and faucets, a photovoltaic system for parking lot lighting, and solar power for a new storm shelter have been installed. Green procurement initiatives have included bio-diesel, gasohol, or ethanol for all vehicles; other bio-based products for degreasers and cleaners; recycled plastic lumber for boardwalks; energy efficient doors and windows; compact fluorescent lighting; and other products. A Green Committee was formed in 2002.



This charrette was the seventh in a series co-sponsored by the National Park Service and the U.S. Environmental Protection Agency. The objective of the charrette was to develop a plan for further greening of Homestead in high priority areas such as its Environmental Management System, landscaping, potential use of wind power, new Heritage Center, and interpretation and education.

## Charrette Overview

The event began with a half-day tour of the site, designed to introduce speakers and other outside participants to issues at Homestead that might be addressed during the charrette. The tour began at the existing Visitor Center and then proceeded around the site on the



Upland Prairie Loop Trail. This took the group to the site of the proposed Heritage Center. The tour also included maintenance facilities, the new storm shelter, and the historic Freeman School.

The first full day of the charrette began with a welcome from Mark Engler, Superintendent at Homestead. The first session was a presentation of issues at Homestead and goals for the charrette. Mark said that the goal is simple – “to be the best that we can be” – but that getting there is more complicated. He acknowledged successes and outlined questions for the charrette to address. These include how to make the existing Visitor Center greener as it is transformed into an Education Center; how to make sure the new Heritage Center is as green

as possible; how to design a sustainable landscape for the new and existing Centers; whether wind power could be feasible, particularly since wind was used by homesteaders as an energy source and fits well with the park’s story; and whether purchasing and recycling could be improved. Laura Stresemann provided an overview of green strategies that have already been implemented, such as recycled materials, water saving fixtures that have saved 15,000 gallons of water even with increased visitation, bio-based maintenance and cleaning products, solar powered lighting, recycling, and education/ interpretation. She also highlighted a few areas needing attention such as landscaping and native plant displays. Amy Garrett discussed some of the park’s interpretation and education efforts, including the importance to homesteaders of “reducing, reusing, and recycling.”



Finally, the park established the following specific goals for the charrette: set goals to improve on what is already underway, identify realistic ideas and plans for future development at the Heritage Center; discuss plans for retrofitting the existing Visitor Center museum space; and identify potential outreach opportunities to the community and visitors.

Next, Gail Lindsey introduced the sustainability topics that are the focus of this charrette series: environmental leadership and planning, transportation, facilities, operations and maintenance, concessions, interpretation and education, and procurement.

To conclude the morning, two guest speakers discussed ideas that could be incorporated into Homestead’s planning for the future. Ted Hillmer, Superintendent at Wilson’s Creek

National Battlefield, provided examples of “free” resources and very low cost strategies, such as signs above waterless urinals stating how much water is saved per year. Chris Case, Facility Manager at Pictured Rocks National Lakeshore, also provided specific examples of strategies that work, including photovoltaics, waste reduction and recycling, product standardization, procurement, reduced toxins, and the bio-based fluids substitution program.

After lunch, Kristine Johnson, Supervisory Forester at Great Smoky Mountains National Park, discussed concepts and resources for sustainable landscape design using native plants. Dan McGuire of the American Corn Growers Foundation discussed factors to be considered in evaluating wind power systems. Then Gail Lindsey gave an overview of the U.S. Green Building Council’s LEED Rating System for buildings. Finally, Dena Saslaw, Gateway National Recreation Area, discussed ideas for interpreting sustainability and educating visitors and staff.



Participants then broke into three work groups to discuss ideas for (1) planning and EMS, (2) facilities and landscaping, and (3) interpretation and education. For the remainder of the day, the groups discussed a vision for their topic and the current status at Homestead to create a baseline. The work groups returned the final day to establish short-term, mid-term, and long-term goals and actions; the groups also identified champions and partners for high-priority actions as well as barriers and opportunities and approximate level of cost.



At the conclusion of the charrette, the groups presented their results and Superintendent Mark Engler reacted to the groups’ priorities. He said that he had heard lots of good ideas that should be followed up. The highest priorities, from his perspective, were the sewage and fire suppression systems for the Heritage Center; getting a baseline on energy use and asking the architects to do energy projections for the new facility; landscaping for the Heritage Center with native plants; landscaping for the Education Center with native plants; interpretive signs and incorporation of sustainability messages in new Education Center exhibits; and figuring out what needs to be done now to enable the park to install wind power in the future. He thanked the group for their work and dedication of time to the charrette.



## Highlights of Discussion

### Planning and Environmental Leadership

Team: Cecil Steward, John Seger, Charlie Whitehead, Ted Hillmer, Chris Case, Bob Hancock, Dick Fisher, Daris Honemann, Ruth Heikkinen, Dugan Smith, David Ha, Laura Stresemann, Mark Engler, Joel Ann Todd



#### Vision:

The group envisioned a process for stimulating and evaluating new ideas for further greening of the park and tested it on several ideas.

#### Current Status/ Baseline Conditions

- EMS Commitment Statement written and process is moving forward
- GMP (1999) includes sustainability
- Are discussing standardization and coordination of procurement

#### Short-Term Goals and Actions

1. Refine and apply process suggested by group to identify and evaluate proposed actions. The matrix below illustrates the process and factors to be considered in planning; the group did not suggest that the matrix should actually be filled in but that it should guide thinking. For each proposed idea:



- a. Assign to appropriate category – planning, transportation, facilities, O & M, interpretation, or procurement.
- b. Assess benefits, barriers and drawbacks, and feasibility (including needs) in each of the five domains – environment,

economics, social aspects, technologies, and policies.

	Environment	Economics	Social	Technologies	Policies
Planning					
Transportation					
Facilities					
O & M					
Interpretation					
Procurement					

2. Consider the following ideas (the group began applying this process to test the feasibility and usefulness of the process and to provide examples for the park; the group was not able to evaluate these ideas fully and further work by the park will be needed to complete the analysis):

- a. Make walking the preferable mode of transportation for visitors within the site (include interpretation for trails through audiotape, waysides, interactive kiosks, brochures; loan pedometers to visitors)



*Environmental Considerations*

Benefits – reduce air pollution, reduce fossil fuel use

Drawbacks/barriers – need to harden paths, more people in the resource (carrying capacity), and possible increase in fire danger

Feasibility –

*Economic Considerations*

Benefits – decrease wear and tear on roads, low cost to implement

Drawbacks/barriers – increase maintenance of trails, might need more parking if visitors leave cars in parking lot longer

Feasibility – could identify partners to handle overflow parking

*Social/ Cultural Considerations*

Benefits – health through exercise, enhance visitor experience of park, increase learning opportunities, increase interaction with other visitors

Drawbacks/barriers – accessibility, more time required for visit, safety of those walking (particularly in inclement weather) e.g., tripping, heat issues, drinking water

Feasibility – will depend on accessibility

*Technological Considerations*

Look for hardening material for trails that gives “appropriate” appearance

Use solar power for kiosks

*Policy Considerations*

None identified



- b. Use renewable energy sources in new building and provide interpretation (examples include building-integrated photovoltaic roof system, wind generator, solar hot water; demonstrations include small pump running water powered by small PV cell – visitors can block sun and pump stops)

*Environmental Considerations*

Benefits – reduce fossil fuel use, reduce pollution from energy production



Drawbacks/barriers – space for array, questions regarding bird strikes with wind generator

Feasibility –

*Economic Considerations*

Benefits – reduce ongoing energy costs  
(check payback)

Drawbacks/barriers – initial cost, space required for battery bank in building, training for staff in maintenance

Feasibility – identify funding

*Social/cultural Considerations*

Benefits – demonstrate technology to visitors and perhaps encourage their own use of renewables, demonstrate links to historic homesteading story

Drawbacks/barriers – view shed impacts of wind generator

Feasibility

*Technological Considerations*

Check on availability of sun and wind in specific locations

Select appropriate size and capacity

Check appropriateness and feasibility of roof systems in existing building design

*Policy Considerations*

Wind generator triggers codes/ permits regarding height, proximity to airport



- c. Conduct charrette processes: one charrette process to program and redesign spaces in existing Visitor Center – bring in students and faculty from nearby colleges and universities and second charrette on uses of Education Center with community, teachers, museum, Friends group, senior rangers, others; partner with Joslyn Castle Institute for Sustainable Communities and University of Nebraska

*Environmental Considerations*

Benefits – new ideas for environmental benefits, intense focus on sustainability, relating environmental issues to local needs, culture, products

Drawbacks/barriers – timing of decisions and academic schedule

Feasibility – participants offered to participate

*Economic Considerations*

Benefits – low cost



Drawbacks/barriers – would require staff time and some outside assistance to design the charrette and assignment

Feasibility – must very clearly define assignment and parameters/constraints

*Social/cultural Considerations*

Benefits- excellent learning experience, community buy-in, reflecting and meeting local needs

Drawbacks/barriers – Feasibility

*Technological Considerations*

None identified

*Policy Considerations*

Check with academic policies and requirements



d. Right-size the fleet – number of vehicles, size of vehicles, alternative fuels

*Environmental Considerations*

Benefits – reduce fossil fuel use, reduce air pollutants

Drawbacks/barriers –

Feasibility –

*Economic Considerations*

Benefits – fuel savings

Drawbacks/barriers – availability within the GSA fleet

Feasibility – depends on GSA

*Social/cultural Considerations*

Benefits – demonstrate new technologies (e.g., alternative fuels, smaller vehicles), demonstrates park commitment (signs on vehicles indicate benefit)

Drawbacks/barriers – staff preferences for larger vehicles, time required to walk, bicycle, drive “golf cart”

Feasibility – organize work to require only as much travel between buildings as is needed to get work done and maintain communication

*Technological Considerations*

Check into alternative fuels, alternative vehicles – requirements, availability of fueling stations, other feasibility issues

*Policy Considerations*

e. Compare homesteaders and present day lifestyles in terms of environmental impact (e.g., environmental footprint)



### *Environmental Considerations*

Benefits – visitors recognize their own environmental footprint and try to change some behavior to reduce it, see things differently (e.g., organic farming, parkway and travel)

Drawbacks/barriers –

Feasibility –

### *Economic Considerations*

Benefits – see self-sufficiency vs. dependence on outside forces, family farms vs. agribusiness,

Drawbacks/barriers –

Feasibility –

### *Social/cultural Considerations*

Benefits – understand changes in communities, urban interface, migrant farmers

Drawbacks/barriers –

Feasibility –

### *Technological Considerations*

Demonstrate evolution of technologies and what this has meant (include safety and health issues)

### *Policy Considerations*

How have policies influenced evolution – farm bills, subsidies, imports and exports?



3. Consider the following ideas which the group did not assess using the process:
  - a. Minimize purchased energy
    - i. Heritage Center – first reduce energy requirements and then consider roof integrated PV, wind, geothermal, capture waste heat for water heating, solar tube/day lighting, solar hot water, fuel cell; interpret steps taken
    - ii. Education Center – first reduce energy requirements (plug loads, envelope, etc.) and then day lighting, solar tube; interpret steps taken
  - b. Reduce water use – in human systems, mechanical systems, landscaping
  - c. Look for additional opportunities to green procurement – buy local products from locally extracted materials if possible

### **Facilities and Landscape**

Team: Steve Cinnamon, Glen Brinkman, Todd Hydo, Larry Kuhl, Dan McGuire, Mark Willoughby, Joyce Coppinger, Sharon Kuska, Kristine Johnson, Laura Stresemann, Mark Engler, Gail Lindsey



## ***Landscape***

### Vision:

Landscape for Homestead (existing and new) will be designed, constructed, and maintained in a long-term sustainable manner to preserve and interpret cultural landscape and reduce maintenance (mowing, water use, fuel consumption, soil compaction, pollutants and toxins, disturbance producing exotic plants, and reduce herbicide use)

Majority of native plants shall be in developed areas; some are not native but are cultural resources and require special placement (e.g., Osage Orange hedgerow)

### Current Status/ Baseline Conditions

- Current landscape is high maintenance – non-native plants and turf grass which is maintained for aesthetics and mowed as needed, (leaf blowers are also currently being used) Mowings are required to maintain professional appearance and provide for safety. A leaf blower is used to maintain safe and clear walking surfaces and control leaves.



### Short-Term Goals and Actions

1. Analyze options and select sewage treatment system for Heritage Center (septic field or lagoon are two initial options to review)
  - a. Obtain information from GWWO architects (Mark)
  - b. Hold a brainstorming meeting in November (Laura, Larry, Mark, Dick, DEQ)
  - c. Check on an existing Site analysis – soil boring information, water usage (to size system), “rest area”, environmental assessment (Region or Denver), and establish solid baseline information on the above
2. Create a Cultural Resource Management Plan with Integrated Pest Management components and benchmarks (Gary, Laura, Jesse, Michael)
  - a. Benchmarks (October, November) – water, maintenance, chemicals



- b. Plant list (include residence quarters) – Southeast Community College
- c. Maintenance – mowing/ wooded areas, Heritage Center, prairie, etc.
- d. Funding – cost share (PMIS 2005 Servicewide call), seed

stock (local suppliers), Friends group fundraisers, grants (Nebraska Arboretum), volunteer labor from colleges, Arbor Day Foundation

3. Once the park has established highly sustainable landscaping, the park will reduce mowing and other grounds duties.
4. Partner with Southeast Community College/University of Nebraska horticulture departments for design of native plant landscape at existing facility and Heritage Center

#### Long-Term Goals and Actions

1. Remove existing non-native ornamentals (Bugle pine, lilacs.) – must go through compliance since it is a designed landscape; donate or sell plants removed through Friends
2. Replace ornamentals with native plants
3. Set up a demonstration garden plot to be maintained by local college horticulture department, volunteers, heirloom plant groups, Southeast Community College
4. Consider options for existing Visitor Center tree – remove concrete tree well, replace with water-permeable surface
5. Develop native plant landscaping list or brochure for eastern Nebraska in partnership with NRCS, Southeast Community College, University



#### ***Facilities Energy and Water***

##### Vision:

Facilities for Homestead will be designed, constructed, renovated, operated and maintained to meet high energy efficiency standards so that: (1) LEED criteria are met (benchmarks included), (2) existing facility energy use is reduced, and (3) new construction minimizes energy consumption.

##### Current Status/ Baseline Conditions

- All facilities use electric closed loop geothermal and air to air heat pumps
- Wood stove in Visitor Center has demonstrated reduced electric bills and provides interpretive opportunities.
- No current wind use; partnerships have begun with Nebraska Power for future wind use.
- Park reduces energy use through compact fluorescents, motion sensor lights, heat pumps, and a wood stove
- Facilities currently use city water for drinking water
- Old wells are used for watering plants and lawn, fire suppression, and cleaning – (water from the wells are high in nitrates)



### Short-Term Goals and Actions

1. Review Heritage Center design for fire suppression (curatorial issues, water needs) and septic, energy efficiency (lighting, envelope R value, glazing, HVAC system and zones) and all specific LEED credits to be achieved
  - a. Meeting of Mark Engler, Ron Shields, GWWO architects plus consultants (be specific about energy targets for annual consumption)
  - b. Meeting on heating, cooling, fire suppression with experts and officials – Laura, Todd, Regional Office engineers
2. Establish baseline energy and water use – Laura, Gary
3. Learn about LEED Rating System and evaluate use for Heritage Center and other new construction (The Heritage Center (shell) design was evaluated against LEED ratings in the spring of 2004 during the value analysis phase of the project))
4. Incorporate energy awareness into education programs



### Mid-Term Goals and Actions

1. Evaluate generation of power by solar (especially roof tiles as collectors), wind, collection of water – partners include Federal Energy Management Program, Department of Energy, National Renewable Energy Laboratory, Nebraska Power, etc.
2. Design Heritage Center with capability to tie into wind as a future option  
The wind goal would be to size the wind generator to meet demand, tie it into the grid and only pay monthly minimum; this power source must be consistent for computers. Other concerns and issues with wind:
  - The local power company needs an explanation and to have its concerns addressed, in regards to what power source will be implemented, how it will feed back into the grid, and what the effect of the system will be on site usage and feed back of energy. (Kent Bullard at Channel Islands is a good resource).
  - NEPA would require public involvement.
  - Maintenance is low but staff must be trained, on the components of wind generators and solar feedback into the grid.
  - Historic wind mills were manufactured locally, there is no substation required – 1 or 2 turbines run directly into the line that already runs by the park
  - Surge protectors are required.
  - Partners: the Nebraska Power Review Board and FERC who would need agreement for purchase



- of surplus (Green Power or Green Tag programs), National Renewable Energy Laboratory (Jim Green or Larry Flowers)
  - Next steps: create an expert analysis of cost considerations as well as requirements and benefits (perhaps by NREL), obtain a new Nebraska wind map, and decide exact locations of wind turbine(s)
3. Evaluate low-level lighting options for parking lots as well as needs by season, placement, controls

### **Interpretation and Education**

Team: Amy Garrett, Phyllis Howard, Dena Saslaw

#### Vision:

Interpret and educate Homestead greening efforts to visitors in a wide-variety of ways focused primarily on the following: (1) Building reuse (tradition/cultural, science/natural), (2) Transportation (pull out on Route 4 – fence, life, vegetation), (3) Jr. Ranger Programs/YCC crew (school partners with the park to provide credit for YCC summer crew, youth scouts, kids at risk), (4) Modern “Bees”, (5) Energy and water, (6) Acreage depiction (spatial concepts, compare/contrast farming practices, walk around building-signs-ethnic), (7) Age related jobs, (8) Clothing (materials, reuse), and (9) social activities



#### Current Status/ Baseline Conditions

- Park holds an Environmental Expo during Earth Day Week
- Park makes in-house signs with educational messages (Alumi-jet)
- Park has recycling messages and programs
- Partnerships
  - Keep Beatrice Beautiful
  - High School students, Middle School students – water quality
  - Soy based products
  - Senior rangers
  - FFA/ FBLA
  - Scouts
- Park has a Prairie restoration program – gathering seeds, State Historical Society



#### Future Partnerships

- City – trail, NPPD-energy, schools
- Extension Service
- Farm coops
- Other Federal partners (Federal Energy Management Program)
- Microsoft
- University of Nebraska Lincoln

- Toyota
- SHPO
- PBS/NPR
- SCEP

### Challenges

- “We have deep pockets”
- “We are the Feds”
- “We don’t need help”
- Budget realities
- Staffing issues
- Resistance to change
- Social challenges – visitors, students
- Safety
- Freeman School



### Opportunities

- Better ability to tell our story
- Better ability to transfer knowledge
- More interactivities
- Potential to change perceptions listed above
- Reduce consumption of foreign oil

### Short-Term Goals and Actions

1. Place signs in bathrooms and other locations where energy efficiency and water conservation are working – (use sensors for hand washing, recycled content towels, etc.)

Champion – Amy

Timing – 6 months

Support – very low cost since the park has an Alumi-Jet sign material and will print from a computer.

Support – no additional cost, only staff time needed



2. Work with local schools to provide credit for YCC crew members for summer work (i.e. document learning while crew is working to remove invasive plants, farming history, potential harmful waste removal); encourage student to keep journals and write articles for local newspapers. Use the Environmental Expo to expand

partnerships and outreach as well as share messages on reducing dependence on foreign oil (practices and products)

Champion – Susan Cook



- Timing – 6 months  
Support -- partnership
3. Include messages in Prairie Appreciation event explaining landscape and native plant restoration in order to educate visitors and others regarding park actions, as well as, reach people who have not visited park  
Champion – Jesse  
Timing 1 year  
Support -- Partnership
  4. Develop visitor Internet count as visitation  
Champion – WASO/ Susan Cook  
Timing – 6 months  
Support –
  5. Develop GPS partnership with Garmin to map invasive species and demonstrate current technology with a “game” approach – (i.e. search for things in the prairie, answer questions about the ones they find, and map placement of signs)  
Champion – Jesse  
Timing – 6 months – 1 year  
Support – partners
  6. Initiate follow-up email for groups 6 months after they visit, especially for school groups  
Champion – Amy  
Timing – 6 months – 1 year  
Support –
  7. Promote state insect – “Protecting and enhancing the environment will protect and enhance the bees”  
Champion – Jesse  
Timing – 6 months – 1 year  
Support – PMIS, PACR?



### Mid-Term Goals and Actions

1. Develop linkage with Statue of Liberty and Galveston to tell immigrant story  
Champion – Todd  
Timing – 3-5 years  
Support – Statue/Ellis and park partners
2. Install educational signage on trail  
Champion – Interpretation  
Timing – 3-5 years  
Support – partners (adopt a sign with Reebok, Nike, Rockport, Trek)





3. Expand use of distance learning  
 Champion – Interpretation/Education  
 Timing – 3-5 years  
 Support –
4. Tell Homestead story with the use of outdoor space and art – what aspects of story need to be told outdoors  
 Champion – Superintendent, Interpretation  
 Timing – 3-5 years  
 Support –

### Long-Term Goals and Actions

1. Develop international links to tell story of homesteaders roots  
 Champion – Superintendent/ Historian  
 Timing – 5-10 years  
 Support –
2. Identify and engage Volunteers to become Homestead detectives to do research  
 Champion – RVUA/Historian  
 Timing – 5-10 years  
 Support – partners
3. Develop database – Homestead USA – to provide electronic access to resources  
 Champion – Historian  
 Timing – 5 years  
 Support – PMIS, partnership
4. Work with YCC/schools to provide credit for summer work (i.e. when students help with invasive plant removal); encourage students to keep journals and write articles for local newspapers  
 Champion – Amy  
 Timing –

### **Closing**

At the conclusion of the charrette, Mark Engler thanked the group for their time and hard work. He also said that he had heard a lot of good ideas including (1) questioning GWWO about sewage treatment, fire suppression, and environmental controls for the Heritage Center; (2) developing a native landscape plan for the Heritage Center and new landscaping for the existing Visitor Center; (3) gathering baseline data on energy use and asking GWWO do energy



projections for the Heritage Center; (4)

installing interpretive signs and working with YCC/schools on credit for student work;(5) incorporating sustainability messages in new Education Center; and (6) planning for wind power – what should be done now to enable future hook up. Gail Lindsey and Joel Todd, the consultants to NPS on this greening effort, ended the charrette with thanks to all and a reminder that the National Park Service will be contacting the park in six months to check on progress.