The Shelterbelt Project in Nebraska

By Gary L. Hergenrader
Nebraska State Forester (Emeritus)

Gary served as the Nebraska State Forester from 1981 until his retirement in 2005. From 1981 until mid-1997 he was also Head, Department of Forestry, Fisheries, and Wildlife (FFW) at the University of Nebraska when FFW and the Nebraska Forest Service were part of the same administrative unit.

The 1930s were a time of dust and human despair in the Great Plains of America. The region was in the grips of a prolonged, severe drought. Inadequate rainfall devastated crops and lack of vegetative cover exposed the bare soil to incessant wind. Clouds of dust, thousands of feet high (black blizzards), darkened the sky and often obscured the sun. The nation was experiencing a crippling economic depression that affected the Plains states as well. Jobs were few and far between and money was hard to come by. The human misery produced by the twin onslaughts of drought and depression was profound. Often referred to as the “Dirty Thirties,” the “dust bowl days”, and “The Great Depression”, the decade was an extremely challenging time for this nation.

In the fall of 1932, then presidential-candidate Franklin D. Roosevelt, on a campaign tour through the Great Plains, saw up close the rampant wind erosion and profound human suffering being endured by the people living there. He conceived the idea of planting windbreaks in a 100-mile-wide band stretching from Canada to Texas. His purposes were twofold: create barriers to the wind to reduce wind erosion; and put people to work doing the meaningful job of planting trees. Thus Roosevelt’s Shelterbelt Project, as it was initially called, had both an environmental and social purpose.

On July 11, 1934, President Roosevelt, by Executive Order, created the Shelterbelt Project and ten days later the grand scheme was made public. The project was not formally authorized by Congress until the Norris-Doxey Act was passed in 1937. The name was also changed then to the Prairie States Forestry Project (PSFP). The Project had both supporters and detractors in the scientific community, the Congress, and the public. Many felt trees would not survive in the harsh climate of the Plains while others thought the Project was only a way to provide a handout for distressed Plains residents. However,
Board of Directors Summer Meeting

By Gray Reynolds, President

The annual two-day summer Board meeting was July 30 and 31 at the Hilton Garden Inn in Missoula. My objectives for the meeting were: 1) Focus on tasks to start building construction on July 1, 2009; 2) Review of past accomplishments; 3) Agree on priorities for the upcoming year; 4) Build commitment, enthusiasm and urgency; and 5) Understand museum site and project complexities.

The Board elected Jim LaBau of Anchorage, AK to the Board. Jim is a retired Forest Service research scientist. Jim attended the meeting and participated in all of the discussions. Welcome Jim.

Other Board members attending were: Steve Anderson, Dick Bacon, John Drake, Beryl Johnston, Pat Lynch, Max Peterson, Gray Reynolds, Dave Scott, Dave Stack, and Jane Westenberger. Others in attendance were John Sandor, Ed Nesselroad, Region 1 Liaison; Larry Gadt, Campaign Coordinator; and Randee Hearst, recording secretary.

Architect Stan Zimet, OZ Architects, discussed the museum building design philosophy and artistic vision. The Forest Service architectural design guide was the starting point to fit the building with the landforms and setting. An energy efficient building featuring building materials developed by the Forest Products Laboratory is the goal. The Design and Development phase is complete. We have 55 pages of drawings detailing the architectural, structural, mechanical, and electrical design. A materials list was developed. The estimated cost is $3.3 million for the building. The cost includes all contractor profit and construction contingency funds.

The Missoula Support Committee – Dick Bacon, Gary Brown, John Drake, Beryl Johnston, and Bo Nielsen and Dave Stack — met with OZ Architects and consultants on an almost weekly basis since September 2007. Design details were discussed and decisions were made by the Committee or referred to the Board. Minutes were prepared and sent to attendees.

The Board’s goal is to raise a minimum of $2.8 million by March 1, 2009 and to start building construction on July 1, 2009. With these funds we will be able to complete the building exterior. Additional funds will be required to finish the interior and build the exhibits. The Board believes starting construction will add momentum to the project and will assist in raising the remaining funds.

The Board traveled to the museum site. Dave Stack discussed the floodplain project. Missoula County requires a long-term drainage solution for Butler Creek before construction of the museum building. Dave anticipates an easy resolution by routing floodwaters into the historic channel blocked by highway construction or agricultural practices years ago. He is working closely with the Forest Service to work thru the problem. Members looked at the dry streambed and the floodplain area.

The Board walked through the “building”. Construction laths outlined the exterior walls of the building. Members could physically feel the size of the lobby, temporary exhibit area and the main exhibit hall.

A barbecue was held for the Board members, spouses and invited guests. John Drake was the chief organizer ably assisted by Randee Hearst. The setting for the barbecue was in the Museum of Mountain Flying hangar at the Missoula airport. The tables were located beside the DC-3 aircraft used in 1949 by the smokejumpers on the Mann Gulch fire. Mayor Jon Engen, Tom Tidwell, Regional Forester, Chuck Myers, Associate Deputy Chief, Rick Brazell, acting Deputy Regional Forester and Bill Possiel, National Forest Foundation were among the invited guests. A special thanks to Cris Jensen, Missoula Airport Director, for financially supporting the barbecue.
Roosevelt’s project was not an off-the-cuff, harebrained idea. Prior to the Project’s announcement, he had directed the U. S. Forest Service to examine the feasibility of planting trees in the Great Plains and have them survive. The Forest Service had done considerable research on the issue in the early 1900s and knew that trees could survive. In fact, the first nursery in the country, Bessey Nursery, was established as part of the Dismal River Forest Reserve at Halsey, Nebraska in 1902 to help support those early research efforts. The Bessey Nursery remains an active Forest Service nursery today.

The U. S. Forest Service was assigned the task of organizing the Project and carrying it out in the field. It was a huge task that could not have been completed without the cooperation of landowners, land-grant universities, state forestry agencies, the Cooperative Extension Service, county agents, the Works Progress Administration (W.P.A.) and others. But, the Forest Service was primarily responsible for accomplishing the objectives of the Project. Former Forest Service Chief John McGuire said, in 1976, “Planting tree shelterbelts in the Great Plains during the 1930s was indeed one of the first large-scale efforts to improve our environment, and the Forest Service was there to do the job.”

The first shelterbelt tree in Nebraska was planted in Red Willow County, near McCook, on April 4, 1935. In that first year of the Project, 21 miles of windbreaks on 47 farms were planted (Figure 1). The next year 150 miles were planted; 339 miles in 1937; 1,006 miles in 1938; and 1,009 miles in 1939, the most active planting year. Over the life of the project, from 1935-42, over 4,000 miles of windbreaks, totaling 51,621 acres, were planted on 6,994 farms in Nebraska and used 45,416,610 trees and shrubs. For the entire Prairie States Forestry Project over its 8 year life, 217,378,352 trees totaling 18,599 miles of windbreaks on 238,212 acres were planted on 30,223 farms in six states. Over 500 more miles of windbreaks were planted in Nebraska than any other state in the Project.

In 1954, Ralph Read, a Forest Service researcher stationed in Lincoln, Nebraska, did an evaluation to determine if the windbreak plantings had become effective wind barriers. He determined that 42% of the windbreaks were “excellent or good” barriers, 31% were “fair”, 19% were “poor” and 8% had been destroyed. At the time of Read’s evaluation, the windbreaks were between 12 and 19 years old. Several factors reduced the rating of many windbreaks including damage by livestock, lack of cultivation, damage by insects and disease, poor soils, etc. Today, the oldest windbreaks planted under the PSFP would be over 70 years old. Many of the trees are beyond their expected lifespan under the conditions in which they are living.

Steve Rasmussen, Northeast District Forester for the Nebraska Forest Service and in whose District many of the windbreaks were planted, believes most of the PSFP plantings are gone. They have been bulldozed out because the plantings have died, are falling apart for a variety of reasons, or the landowner wanted the land for other uses, usually crop production. A major factor for the removal of the large old windbreaks has been changing farming practices that use center pivot irrigation and large farm equipment. Center pivots move in circles which are often incompatible with windbreaks that are planted in straight lines.

Figure 2 shows one of the first PSFP windbreaks planted in April, 1935 near Orchard in Northeast Nebraska. From a distance the windbreak appears to be in reasonably good condition. Figure 3, on page 4, however, shows the interior of the windbreak. This condition is typical of those PSFP belts that are still around. Despite being broken down, they still provide effective wind barriers. Dennis Adams, Rural Forestry Program Leader for the Nebraska Forest Service, has suggested these old belts be managed like forests instead of windbreaks. Most are over 100 feet wide, a strip wide enough to respond to common forest management practices.

See SHELTERBELT, page 4
Cultivation and weed control would not be necessary and gaps in the rows would not need to be filled in. Consequently, management costs would be much less and the strips would still be effective wind barriers as well as providing wood products, wildlife habitat, esthetic values and other benefits.

The prospect of $7.00 per bushel corn is providing an almost irresistible incentive for removing existing windbreaks and the pace of removal is accelerating. Adams believes more field windbreaks are currently being removed than are being planted. Based on statistics provided by Adams and by Constance Miller, state forester for the Natural Resources Conservation Service (NRCS), more than an estimated 3,800 windbreaks have been designed and planned by the two agencies from 2004-07. This includes both renovated and new plantings in all classes of windbreaks—living barns for livestock, farmstead windbreaks, windbreaks protecting homes, and field windbreaks. The vast majority has been field windbreaks. Recent data on windbreak removals are not available, but bulldozed piles of trees throughout the rural countryside are a grim reminder of what is going on.

Furthermore, little incentive exists today to plant field windbreaks. Until recently, Federal Farm Bill cost-share programs like the Agricultural Conservation Program (ACP), Conservation Reserve Program (CRP), Stewardship Incentives Program (SIP), Forest Land Enhancement Program (FLEP), and Environmental Quality Incentives Program (EQIP) provided cost-share to landowners wanting to plant windbreaks. Today, the only federal cost-share program of any significance for planting windbreaks is EQIP and windbreak planting/renovation must compete with other conservation practices that usually have higher priority in the EQIP application ranking system. Several local Natural Resources Districts provide cost-share for removal of old trees and the planting of new windbreaks. Statistics are not readily at hand to illustrate the numbers being planted as a result of these practices but they are believed to be small.

Despite the proven benefits windbreaks provide: soil erosion protection, enhanced crop yields, wood products, wildlife habitat, and others, it does not seem likely that windbreak planting will increase in the foreseeable future, given the current high prices for corn, wheat, and soybeans and the expected continued high demand for them for food, renewable energy, and other uses. There may be a glimmer of hope, however, for those who believe trees are an important component of agricultural production systems and in the sustainability of those systems, a view held by the U.S.D.A. Forest Service/Natural Resources Conservation Service National Agroforestry Center in Lincoln, Nebraska. As this nation begins to develop mechanisms to address global climate change, trees, and their ability to absorb and store large quantities of carbon dioxide, may again move to the fore. Tree planters everywhere certainly hope so.

Author’s footnote: Over the years several accounts have been written about various aspects of the Prairie States Forestry Project. The most comprehensive is that of Droze (1977), Trees, Prairies, and People, A History of Tree Planting in the Plains States. Orth (2007), The Shelterbelt Project: Cooperative Conservation in 1930s America, who wrote about the collaborative nature of the project, particularly as it related to landowners and the federal government. Egan’s (2005), The Worst Hard Time, describes the human misery and suffering endured by people living in the Plains states during the dust bowl days. I have freely used material from these...
History is Important for Forest Service Employees Too

By Dale Bosworth

Dale retired in 2007 after 41 years of service. He was the 15th Chief of the Forest Service from 2001 to 2007.

I have often wondered why young people in the Forest Service do not seem to be as interested in our history as more “seasoned” folks. When I talk to a 25 year old about Forest Service history, I generally get polite attention, but soon the eyes glaze over. It’s like talking to a teenager about retirement benefits. Now when I talk about retirement benefits, or our history for that matter, with a 50 plus year old, then I have a genuine conversation on my hands. That’s to be expected, and I really wasn’t much different when I was young.

I think I believed that I had my whole career ahead of me, and I was more fascinated with the future than the past. I can remember hearing from old timers about the heroics of the past, while at the same time they insulted the present, and even tried to discourage me about the future. If I am honest, at that point in my career, I would not have been a supporter of a National Museum of Forest Service History.

We need young people to be interested in our history. The fact of the matter is that it will be nearly impossible to raise the funds we need to bring the Museum to life if we don’t have a large membership, engaged, active and supporting our efforts. It is especially tough when current Forest Service employees don’t take an interest. We have fewer than 100 current employee members of the National Museum of Forest Service History. A hundred employees out of more than 30,000 is not a strong representation. We could think that there must be something wrong with those folks who haven’t chosen to get involved. I think instead, we should take a hard look at ourselves. Is it that we put down the efforts of the folks currently working in the Forest Service? Do we criticize their efforts when we should try to understand and support what they are trying to accomplish instead?

Never before was the importance of our history as apparent to me as during the Forest Service Centennial. There was much celebration, but the real value came from people talking about the future, with a clear understanding of the past to help guide them. This happened all over the country at regional forums and at the Centennial Congress in Washington, DC. The public engaged, in a very meaningful way, with current and former employees about the future of the Forest Service and of natural resource conservation.

I have talked about it many times, this idea of change. Yes, old timers have a lot to contribute. But so do the young, and the creative, and the new, and those who are in charge now that we are gone. Maybe we need to help them with our wisdom and encouragement, like others helped us. Maybe then we’ll get the support for the Museum that will make it another in a long line of Forest Service successes.

If our history is important to our future, and I truly believe it is, then a museum interpreting our history is priceless. We old timers must behave in a way that entices young people to care about our history. We do that best by supporting them.

Does History Matter?

Amnesia is as detrimental to society as to an individual. The historian Daniel Boorstin put it very well: “Trying to plan for the future without a sense of the past is like trying to plant cut flowers.” (Parade, June 22, 2008)

Forest Service Reunion September 2009, Missoula, MT
Plan Now to Attend

Planning for the September 7-11, 2009 Forest Service Reunion in Missoula is well underway reports Reunion Chairman Beryl Johnston. The co-sponsors are: the National Museum of Forest Service History, the Northern Rocky Mountain Retiree Association and the National Smokejumpers Association.

The Reunion Committee is meeting regularly. The host location and main facilities, the Hilton Garden Inn in Missoula are reserved. The committee is organizing volunteers, committees and sub-committees. The reunion format will include general sessions, banquets, topic meetings, displays, and entertainment.

The focus will be the various attractions in and around the area of Missoula. If construction has started on the museum, tours to the site will be possible. We have invited Chief Gail Kimbell to schedule a national Leadership Team meeting in conjunction with the reunion. The committee is working to select a featured speaker. Our architect will give a presentation on the design of the Museum building.

Shuttle bus transportation is planned to and from other hotels to the Reunion headquarters hotel.
**Timber Post Update**

In the May 2008 Newsletter, plans were announced to obtain 24 posts for the Museum lobby. Posts will come from National Forests, Experimental Forests, State Forests and Tree Farms where State and Private grants have been provided by the Forest Service. The geographically diverse species will tell the story how forests supported the development of America. Visitors will read the plaque on each post and a companion brochure.

Fourteen posts have been committed to date. A northern red oak and black walnut (from a wind thrown tree) will be coming from the Fernow Experimental Forest (see photo at left). The first post arriving in Missoula was a western larch provided by the Payette National Forest in Idaho.

**Cupola Design**

This cross section drawing on the left shows the design of the cupola. Theater visitors will see into the open cupola. The view will provide a sense of spaciousness. The cupola will be darkened as the orientation video begins.

Cupola framing will replicate old style construction used in early lookouts. The rafters will have square edges and be cut to the full dimension.

The drawing shows the basement level and main level. Building height from the main level to the top of the cupola is 50 feet.

**Home Front: United of Divided**

**A new DVD for Sale**

A DVD film produced by Montana P.B.S. about World War II Civilian Public Service (CPS) smokejumpers can be ordered from: Montana P.B.S., MSU Bozeman, PO Box 173340, Bozeman, MT 59717. Telephone 866-832-0829. Cost of DVD is $19.95 plus $5 shipping.
Annual Meeting Notice

The annual NMFSH membership meeting will be held in conjunction with the Society of American Foresters’ annual convention in Reno, NV, November 5, 2008. Dave Stack will update members on current accomplishments and plans for the construction of the museum building.

All members in the area and members attending the SAF convention are urged to attend.

Date: November 5, 2008
Time: 2:00 pm – 4:00 pm
Place: Grand Sierra Hotel, Reno, NV
Crystal 2 Room

Volunteers Needed for Museum Booth at Reno Meeting

Volunteers are need to staff the joint Museum and National Association of Forest Service Retirees booth at the national Society of American Foresters convention, Grand Sierra Hotel, Reno, NV.

The booth will open at 5:30 pm on November 5 and closes at 4 pm on November 7.

One Exhibitors’ Pass is available to a volunteer who will take an active role in staffing the booth. The pass will provide access to the General Assembly sessions.

To volunteer, contact Dave Stack 406-541-6374 or email nationalforest@montana.com.

Radios to Repository Volunteer Needed

Dave Scott delivered a pick-up load of old Forest Service radios and communication equipment from Region 6 to the NMFSH Repository in Missoula. The radios date from the early 1940s.

A person knowledgeable in communication equipment is needed to work with the Museum curator to catalog the artifacts. Work will probably beginning in this fall or winter. Advice could be provided via email.

To volunteer, contact Beth Humble 406-541-6374 or email nationalforest@montana.com.

Western Heritage Catalog

The summer 2008 Western Heritage catalog, U.S. Forest Service edition urges readers to become members of the National Museum of Forest Service History (NMFSH).

A color drawing of the NMFSH museum exterior is printed in the catalog with explanations of NMFSH goals and plans.

The catalog includes an order form with a pre-printed line for museum membership. The museum board has approved a special $20 introductory annual dues rate for the catalog readers.

To get a free copy of the catalog telephone 800-303-5703 or email ranger@westernheritage.com. Or view the Western heritage on-line catalog at www.usfsstore.com.

We owe a big vote of thanks to Mike and Pat Lynch, publishers of the catalog, for their support of the NMFSH. Their catalog contains interesting Western heritage items, many related to the history of the Forest Service.

For Sale: Museum Books and Posters

Visit the Museum Webpage to view books and posters and print order form.

www.nmfs-history.net
Welcome New Members
05/03/2008 to 08/08/2008

- Russell & Darcie Bacon
- Annette M. Bodine
- Stanley Dempsey Sr.
- Brian Ferguson
- James L. Haglemeier
- Macario Herrera
- James C. Lancaster
- Donald W. Murphy
- Dan Pence
- Loren N. Ross
- Lyle F. Smith, Jr.
- Philip Tuma
- George R. Wilson
- Frank W. Winer

Newsletters via Email
Members may now receive their newsletters electronically. Just email nationalforest@montana.com and ask to receive your newsletter via email. This is a cost savings to the museum. Remember — please notify the Museum when your email address changes.

Unrestricted Donations
05/03/2008 to 08/08/2008

- Barb Beck
- Dorothy C. Hofferber
- Harold Porter
- John Case
- Terry Hoffman
- Delmar L. Radtke
- Joseph Church
- Marcia Hogan
- Chris Risbrudt
- Wendell M. Doty
- Enid Howell
- Ronald F. Seibold
- Sam Halverson
- Robert Lease
- Alan Taylor
- Robert Heeren
- Glenn Mueller
- Archer W. Wirth
- Jeanne Higgins
- Paula Nelson
- Robert Youngs

Capital Campaign Donations
05/03/2008 to 08/08/2008

- Harry & Myrna Camp
- Douglas Leisz
- Kenton Clark
- Delmar L. Radtke
- Donna M. Hanson
- William M. Palmer
- Mike Kerrick
- Donald W. Peterson
- James W. Landcaster
- Robwen Inc., John Grindley

In-Kind Donations
05/03/2008 to 08/08/2008

- Dale R. Petersen, Beartooth Highway Exhibit
- Terry Forest, DJ&A Engineers
- Wade Diehl, Cost Management Engineers

Forest Service History Memorials

In Honor of
- Gray F. Reynolds
- John Sandor

Memorials for
- Robert “Bob” Asher
- Malchus Baker
- William G. Edwards
- W. Joseph Kidd
- E. Rex Naanes
- Scollay C. Parker
- Andrew R. Schmidt

Groups / Organizations
- Aloha Lumber Company

Memorial Donations From:
- Barbara Asher
- Rita J. Glazebrook
- Marguerite E. Naanes
- John Sandor
- Dave Stack

See the Museum web site www.nmfs-history.net for nomination forms and instructions.

Missing Members
We need help to track Museum members who have moved and did not leave forwarding addresses. Their last known addresses are listed below for the missing members. Please contact us if you have additional information.

- Dan Cramsey, 209 Flagstone Dr, Burleson, TX 76028
- Dick Flannely, 3539 N Nottingham St, Arlington, VA 22207
Donor Name(s): __________________________ Address ______________________________

City: __________________ State: ____ Zip: _______ Daytime Ph.: ______________

☐ I / We enclose a gift of   $______
☐ I / We pledge a total gift of   $______

☐ Pledge Payment Schedule:

1) Date ___________ $ _________ 3) Date ____________ $ _________
2) Date ___________ $ _________ 4) Date ___________ $ _________

Please pay pledges by December 31, 2009

Gifts and pledges may be paid by cash/check or by gifting securities (stocks and bonds). For securities, please call the Museum Office (406 541-6374) or write the Museum Office for transfer instructions. In accordance with IRS regulations, your gift is fully tax-deductible.

All persons donating will be recognized in a commemorative booklet available at the Museum. Donors giving $1,000 or more will be recognized in the Museum lobby on the Wall of Honor.

Capital Campaign
Thermometer
$10 Million Goal

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members &amp; Friends</td>
<td>$371,511</td>
</tr>
<tr>
<td>Pledge Balance</td>
<td>72,620</td>
</tr>
<tr>
<td>Organizations</td>
<td>110,500</td>
</tr>
<tr>
<td>Foundations</td>
<td>20,000</td>
</tr>
<tr>
<td>Government</td>
<td>525,000</td>
</tr>
<tr>
<td>In-Kind Gifts</td>
<td>27,602</td>
</tr>
<tr>
<td>Endowments</td>
<td>32,189</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,159,422</td>
</tr>
</tbody>
</table>

Capital Campaign
Gifts
As of 07/31/2008
Note: Your mailing label shows the date your membership expires. Please mail dues payment, 1 month prior to the date listed above. This space is blank on complementary issues of the newsletter. Please renew EXPIRED memberships as soon as possible to continue support of the Museum program.

Membership Application
Fill out, detach, and mail to: National Museum of Forest Service History, P.O. Box 2772
Missoula, MT 59806-2772

Mr. __ Ms. __ Dr. __ Name:______________________________ Address______________________________________________________________

City/State/Zip: ___________________________________________________ Daytime Ph.: __________________

E-mail:________________________ □ New □ Renewal □ GIFT

Membership Categories Annual Dues

<table>
<thead>
<tr>
<th>Category</th>
<th>Dues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>$30 or more</td>
</tr>
<tr>
<td>Family</td>
<td>$55 or more</td>
</tr>
<tr>
<td>Student</td>
<td>$15 or more</td>
</tr>
<tr>
<td>Contributing</td>
<td>$150 or more</td>
</tr>
<tr>
<td>Sustaining Organization</td>
<td>$300 or more</td>
</tr>
<tr>
<td>Sustaining Life</td>
<td>$100 or more</td>
</tr>
<tr>
<td>Life</td>
<td>$1000 or more</td>
</tr>
</tbody>
</table>

7,600 POUNDS OF PLUM TREE SEED
at Fremont Seed Warehouse, Fremont, NE.

1936 Forest Service Photograph
Donald W. Nelson Collection 2004.75.616

See “The Shelterbelt Project in Nebraska,” page 1.