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Nez Perce Soil & Water Conservation District
www.nezperceswcd.org

Forever Soil & Water

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Unless otherwise noted, all articles are written by Whitney Garrison, and all photos courtesy of Nez Perce Soil and Water Conservation District.



Cover photo courtesy Melissa Crouch

A Conversation with Retired Ranch Operator Art Heitstuman

Picture driving cattle-herding cows and sheep through town, up over hill-sides, down through ravines, in rain or snow without trucks or modern equipment to aid you. That is exactly what conservationist Art Heitstuman did in the 50s.

Heitstuman first learned the ropes of farming and ranching by helping his father on their family land. Then, in 1955, he operated his own land four miles down river from Chief Timothy Park on the Snake River in Clarkston, Wash. At that time, equipment farmers and ranchers find necessary today wasn't available. Heitstuman moved the cattle from Lewiston all the way through town toward his property in Clarkston.

"The cows began to know the route on their own after a while," he laughed.

Twelve years later, in 1967, Heitstuman bought acreage in Culdesac, Idaho, and became interested in soil conservation.

"At that time, I had about 4,800 acres of land. I ran cattle and had some farm ground, but most of it was pasture," he recalled.

Throughout his span working in ranching and farming, Heitstuman has applied various conservation practices.

"I put in 160 acres of grass on the steep grounds. I did a lot with soil practices, too," he said.

Heitstuman said one of his biggest land improvements he addressed was the decrease of soil erosion, though he also had his fair share of problems.

"Lapwai Creek ran right through my property," he said. "I think I saw about three floods over the years, and I was always trying to clean up the creek and stabilize the banks."

Heitstuman said if he were

"The more soil you can keep in the field the better. The soil is your livelihood."

to give farmers any advice, it would be concerning crops.

"The more soil you can keep in the field the better. The soil is your livelihood," he said.



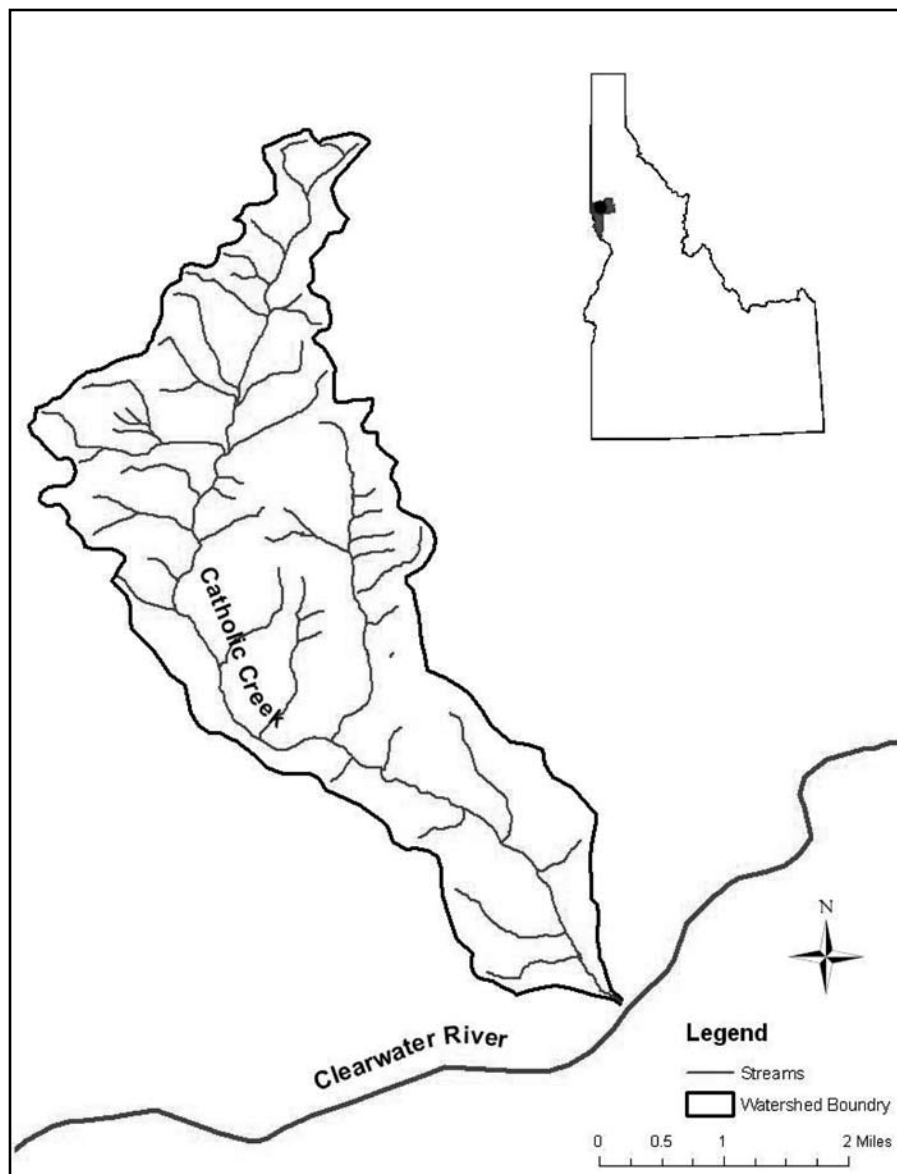
Art Heitstuman at his Winchester property

Winchester property-timber thinning progress



Heitstuman couldn't recall anything he didn't enjoy about his work in the past. He said he especially enjoyed the independence involved with owning and operating farm and pastureland. He said he

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Catholic Creek watershed map, Catholic Creek Conservation Needs Assessment

District Finishes Catholic Creek Conservation Needs Assessment

The District has completed a Conservation Needs Assessment for Catholic Creek. Catholic Creek joins the Clearwater River approximately two miles north of Peck, Idaho at river mile 35.3. The watershed encompasses 175,000 acres in Nez Perce and Latah counties.

As part of the assessment, a survey was distributed to watershed stakeholders in order to determine what issues and needs are most important to them. By providing us with this information, we are able to identify natural resource concerns as well as protect and properly manage Catholic Creek's natural resources in the future.

Over all, fish habitat was a main concern of stakeholders. The respondents suggested improving the fish habitat with practices such as: reducing agricultural chemicals in water, limiting livestock access to water, limiting all-terrain vehicle use, and working to improve the water quality.

Below is a list of Catholic Creek issues that survey respondents said are most important.

Top 10 Resource Issues

1. Weeds
2. Cropland erosion
3. Soil Erosion
4. Disease, weed, and insect management
5. Water quality
6. Soil quality/soil health
7. Loss of agricultural land
8. Agricultural sustainability
9. Agricultural productivity
10. Rural land development/urban sprawl AND landslides/soil mass movement

The District's Catholic Creek Conservation Needs Assessment can be found on our Web site: www.nezperceswcd.org. Click on the Publications link!

Rasmussen, Lynn. Catholic Creek Watershed Restoration and Protection Plan. Culdesac: 2009. Print.

Art Heitstuman, *continued from page 1*

liked the concept of learning by making his own mistakes.

Today, at 78 years old and retired, Heitstuman and his wife Shirley, live in Clarkston. They have been married for 55 years. The couple raised five children who all reside here in the northwest.

Heitstuman remains focused on conservation efforts. He took me to his land near Winchester that he is thinning timber on in order to seed. He said at one point, the trees were so thick that you couldn't see through them. Now, three years and 340 acres later, sunlight shines through gaps amid the tamaracks and pines. The vast amount

of trees filling the miles of rolling land proves what an accomplishment Heitstuman has achieved utilizing his experience, work ethic, and conservation efforts.

"I wouldn't trade it for any other occupation"

Heitstuman said he has enjoyed everything about his experience farming and ranching.

"I wouldn't trade it for any other occupation," he said.



Nez Perce Soil and Water Conservation District

District Board meetings held the third Thursday of each month

Forever Soil & Water

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Nez Perce County Floods

Information courtesy Nez Perce County

Flooding Event of 1996

Winter snowfall for Nez Perce County was normal through the middle of January, 1996, with most of the moisture concentrated at the higher elevations. The third week of January brought large amounts of snow to the lower elevations, along with cold temperatures. For the first weekend of February, the National Weather Service projected warming, and issued an alert for ice jam-induced flood potential during the week. Just after midnight on the morning of Wednesday, Feb. 6, 1996, rapid snowmelt resulted in small stream flooding throughout Nez Perce County. Big Canyon Creek, Cottonwood Creek, and Lapwai Creek were over their banks by daylight. State and County roads along these watersheds were being eroded. The warming trend continued, with increased flooding exacerbated by rain and warmer than normal evening temperatures. Flooding continued through

On Jan. 4, 1997, President Clinton declared a major disaster in the State of Idaho, including Nez Perce County due to severe winter storms, flooding, mud, and landslides.

Saturday, with an additional threat of potential dam failure at the Winchester Reservoir, which feeds Lapwai Creek. Affected municipalities were Peck (Big Canyon Creek) and Culdesac and Lapwai (Lapwai Creek). Of these, the residents along Big Canyon Creek suffered the heaviest damage, with five homes lost to floodwaters. The danger worsened by impassable roads and

sporadic communications. Despite major personal property damage throughout the County, no one was killed or injured because of the flood.

By the end of December 1996, winter snowfall for watersheds feeding Nez Perce County was one and a half times normal. Soil moisture was at maximum capacity. Beginning the day before Christmas and extending over the New Year's holiday, a sub-topical weather system dumped first additional snow, and then warm rain on the existing snowpack. This caused a combination of widespread landslides and limited flooding. Several roads were closed. The landslides and attendant erosion filled the small streams and rivers with thick silt and debris. The water intake and distribution system for the City of Peck was heavily damaged. In the



Lapwai Creek, circa April 1996

Lewiston Orchards, several septic systems required daily pumping, as a former underground stream reactivated. This was compounded by health and structural concerns with flooding basements. Nez Perce County and the City of Lewiston issued disaster declarations. Although there was major personal property damage, no one was killed or injured because of the flood and landslides. On Jan. 4, 1997, President Clinton declared a major disaster in the State of Idaho, including Nez Perce County due to severe winter storms, flooding, mud, and landslides.

Causes of Flooding in Nez Perce County

Flooding occurs when climate (or weather patterns), topography, geology, and hydrology combine to create conditions where river and stream waters flow outside of their usual course and “overspill” beyond their banks. Flooding is most common from late November/early December, and throughout the late winter and spring, when storms bring intense rainfall to the area. Frozen topsoil also contributes to the frequency of floods.

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Spaulding Bridge, circa 1996

Safe Disposal of Pesticides- Guide for Farmers

Information by the Environmental Protection Agency

- The best way to dispose of small amounts of excess pesticides is to use them- apply them - according to the directions on the label. If you cannot use them, ask your neighbors whether they have a similar pest control problem and can use them.

- If all the remaining pesticide cannot be properly used, check with your local solid waste management authority, environmental agency, or health department to find out whether your community has a household hazardous waste collection program or a similar program for getting rid of unwanted, left-over pesticides. These authorities can also inform you of any local requirements for pesticide waste disposal.

To identify your local solid waste agency, look in the government section of your phone book under categories such as *solid waste*, *public works*, or *garbage, trash*, or *refuse collection* or you can call 1-800-CLEANUP.

In the LC valley, contact:

Lewiston City Solid Waste

406 Burrell Ave.

Lewiston, Id 83501

208.746.3671

Lewiston Waste Management Inc.

208.746.8243

State and local laws regarding pesticide disposal may be stricter than the Federal requirements on the label. Be sure to check with your state or local agencies before disposing of your pesticide containers.

- If the container is partly filled, contact your local solid waste agency.

- If the container is empty, do not reuse it. Place it in the trash, unless the label specifies a different procedure.

- Do **not** pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain. Pesticides may interfere with the operation of wastewater treatment systems or pollute wa-



terways. Many municipal systems are not equipped to remove all pesticide residues. If pesticides reach waterways, they may harm fish, plants, and other living things.

Habitat Projects Wanted

Looking for landowners in the Big Canyon and Lapwai Creek drainages who are interested in fish and wildlife habitat improvements on or near streams, tributaries, waterways, etc.

Nez Perce Soil and Water Conservation District is now accepting applications for habitat improvement projects.

Please contact Tim Robinson at the Nez Perce Soil and Water Conservation District, 208.843.2931



Urban Conifers Get Buggy, Too!

This article is excerpted from "Pacific Northwest Trees", a publication of the Pacific Northwest Chapter of the International Society of Arboriculture. The full article was written by Karen Ripley, Forest Health Program Manager, Washington State DNR.

Huge sections of the forests in the Pacific Northwest continue to suffer from insect infestation by a variety of forest insects. These critters aren't just in rural forests. They follow the trees, moving into cities, parks and yards— wherever they can find a meal. In 2008, about 9.4 million acres of forest land across the United States had new mortality attributed to forest insects, with the most heavily affected areas being in the western US. Mountain pine beetle is overwhelmingly (66%) responsible for the most mortality.

The major forest pests always include bark beetles and native defoliators. These insects are all being found in our urban areas as well as the forests.

Bark Beetles

Although only about the size of a grain of rice, "bark beetles" are the 800-pound gorillas of forest pest management. As they search and communicate to locate and aggregate their attack on densely growing or weakened trees, bark beetles are usually the direct cause of tree death even when trees are stressed by other factors. When bark beetle populations are large, even otherwise healthy trees may be killed.

Most bark beetles can only successfully attack and breed in one species or genus of tree. They feed on fresh inner bark tissue (phloem) and cannot successfully feed on or breed in trees that have been dead for more than a few months.

Beetle outbreaks depend on a combination of weather and

stand conditions coming together: 1) host trees of suitable sizes, 2) forests of low vigor due to density or damage from storms, 3) sustained periods of drought or other weather extremes, 4) suitable species composition, and 5) a beetle population that produces more beetles than die while trying to infest the trees.

In an urban setting, avoiding tree injury and providing adequate water during dry months are the most important bark beetle prevention tactics.

Defoliators

The most important native conifer defoliators in the west are western spruce budworm and the Douglas-fir tussock moth. As summer caterpillars, these insects eat the foliage of Douglas-fir and grand fir which are major components of our native mixed-conifer forests.

Budworms primarily excavate new buds and consume the current year's foliage, which allows budworm outbreaks to persist in an area for many years, even decades,

as trees slowly decline and are unable to replace aging interior foliage with new needles. In contrast, the tussock moth caterpillars can eat all the foliage on a tree within one season. Tussock moth outbreaks occur and decline rapidly in a dramatic 3 to 4 year cycle.

When viewing defoliated trees, look closely at leaves and branches to identify the cause. Defoliation can be caused by drought, winter injury, pollution, foliage disease, root disease, or insects. Use forest entomology and pathology resources when investigating defoliators of conifers. In some cases, by the time urban trees are affected the situation is well developed in adjacent forest lands.



If you have questions about this Newsletter or the Community Forestry Assistance Program, please contact Tera King with Northwest Management, Inc. at 208-883-4488-ext. 133.



Understanding Your Stream

By Ken Clark, Water Quality Analyst- IASCD

A stream is a significant resource for those who are lucky enough to live near one. The stream may be used to water your crops or livestock. It may be a place your children can explore, swim and fish in. Becoming familiar with the current conditions of the stream, and the watershed it is found in, is a good way to keep it from becoming degraded. Some characteristics of a stream to look for are the shape, flow, vegetation and stability of the streambanks.

When discussing the shape of a stream, we are concerned with the depth, width, and meander lengths of the stream. When a stream channel becomes incised, which means that the channel is deeper and narrower than it should be, it can lose its connection to its floodplain. The erosion potential of an incised channel is greater than that of a natural channel, because the stream cannot disperse its flow energy onto the floodplain; instead it cuts deeper into its bank and streambed.

Flow can determine the type of habitat that will be available for wildlife, as well as determining the erosive force of the stream. The size and area of the water-

shed, shape of the channel, and the condition of the bed and bank material are all important factors influencing flow. Stream gradient also plays a key role in defining the characteristics of a stream. High gradient reaches of streams are straight and rocky, often with few deep pools. These streams have a tendency to cut into the bedrock and produce unstable channel conditions. Low gradient streams are characterized by meandering channels with an equal number of pools and riffles. Streams with low gradients also tend to have a greater diversity of wildlife.

Riparian vegetation along stream banks provides habitat and helps filter pollutants from runoff. Additionally, riparian vegetation keeps streams cooled for fish and other species, and stabilizes streambanks. The larger the vegetation the more stable the streambank (i.e. trees are better than grasses). The root system of the vegetation keeps the banks from eroding during high flows. Large woody debris from trees can slow the streams flow, thus reducing erosion downstream and increasing water storage. If the stream does not have established vegetation, the streambank is more susceptible to erosion.

Be aware of how your use affects the waters downstream as well. Good stewardship of the stream reach near you is important to both you and your neighbors downstream.

Determining the extent and condition of the watershed your stream sits in is important as well. Find out the condition and use of upstream property along the stream and see if you can relate those land uses to the condition of the stream through your property. Be aware of how your use affects the waters downstream as well. Good stewardship of the stream reach near you is important to both you and your neighbors downstream.

Other problems may not be apparent from visual assessment, such as contamination by fertilizers, manure or other chemicals. Chemical and biological assessments are used to determine the extent of these problems. Chemical tests can reveal the pH, dissolved oxygen, nitrogen and phosphorus levels of the stream, while the biological assessment can show the impact of these pollutants on the diversity and quantity of organisms living in the stream.

Once problems have been identified, collaborative efforts between local residents, landowners, governmental agencies, and of course your local Soil and Water Conservation District can be used to help rehabilitate this valuable resource.



Gerry Queener, gqueer@tds.net

Idaho Fish and Game presents Idaho Master Naturalist Program

The Idaho Master Naturalist Program aims to develop a corps of well-informed volunteers to actively work toward stewardship of Idaho's natural environment.

Who can become an Idaho Master Naturalist?

Idaho Master Naturalists can volunteer at nature centers, give programs to children, help biologists collect data, monitor wildlife, assist at parks and natural areas, or contribute to many other conservation efforts.

Anyone who enjoys and appreciates Idaho's outdoors can be an Idaho Master Naturalist; teachers, hunters, nature guides, farmers, retired professionals, and...you!

Through the Idaho Master Naturalist Program you will:

- Participate and guide conservation efforts
- Join a statewide network of dedicated, trained volunteers who work toward conservation
- Further your education and interest in nature
- Have an opportunity to give back to your community

Experience

- Learning new things
- Meeting new people
- Idaho's natural world



Connect

- With nature
- With your community
- With others who have similar interests
- With professionals

Contribute

- Help conserve Idaho's environment
- Collect scientific data
- Teach children

For more information, please contact Sara Focht, Idaho Fish and Game, at (208) 287-2750.



September Direct Seeding Demonstration

The Palouse Rock Lake Conservation District hosted a direct seeding presentation in St. John, Wash. on Sept. 15 to show crop producers how different types of drills used in seeding can work on various land types.

Staff members from the Nez Perce Soil and Water Conservation District (District) attended the event to learn more about seeding practices. The event, assisted by the Pacific Northwest Direct Seed Association (PNDSA), included a display of about a dozen drills owned by area producers. One at a time, drill owners started their tractors and seeded a small portion of field adjacent to U.S. Highway 23, allowing other producers and onlookers to see the drills in action and determine variances. Seven drills were demonstrated.

“We are here to spread the awareness of direct seeding,” said Russ Evans, an executive director for the PNDSA.

“First, the soil should be un-tilled...Secondly, leave as much residue from soil as possible. Next is seed depth control, fertilizer placement, and durability of the drill...”

Evans opened the event Tuesday morning. He introduced his seeding partnership organization and delivered a short message about its importance. His delivery was followed by Emily Davis of the National Resources Conservation Service (NRCS) who briefly provided a summary of NRCS’ role.

“I am happy to be here on behalf of the NRCS,” said Davis, “and we want you all to know that there are government funded organizations to help out with conservation practices such as direct seed.”

Producers discussed how their seeders worked, costs to own and operate, background, and positive and negative attributes. A Cross Slot drill representative and producer told observers what he thinks are the five main criteria for an opener.

“First, the soil should be un-tilled,” said Keith Saxton, a former agricultural engineer for the United States Department of Agriculture, speaking on behalf of Cross Slot. “Secondly, leave as much residue from soil as possible. Next is seed



top: Tractors and seeders displayed at St. John direct seeding event

above: R & R Farms producer from Endicott, Washington gives brief history and summary of his seeder

depth control, fertilizer placement, and durability of the drill,” he said.

Gavin Porter, a Cross Slot representative from the company’s manufacturing base in New Zealand, attended the event to speak about Cross Slot no-till systems and to display the newest version of Cross Slot’s drill. Porter told attendees that Cross Slot is a system designed to lower costs and improve yields.

“Although it may not be the cheapest option, it produces the best quality in the world,” said Porter. He explained how the drill worked, pointing out different aspects on the drill displayed in the bed of his truck. Porter highlighted the opener, the electronic monitor for conducting depth control, and he discussed the costs to run it. He said if you’re not sure about buying one, you can rent a machine for two years to see if you like it. If not, he said give six months notice and it can be picked up.

After the introductions and the Cross Slot presentation, producers began seeding part of the field. Landowners and producers rushed in to get a better look at the seed and fertilizer placement, deciding for themselves which machines they thought worked best.

Tammany, Lindsay, and Cow Creek WAG News

The Tammany, Lindsay, and Cow Creek Watershed Advisory Groups (WAGs) will hold meetings in the beginning of December. Agendas for WAG meetings will be sent out one week prior to meeting date.

Reminder

The last meeting held for each of these groups was in June. It was then decided among members of the Tammany and Lindsay WAGs that the two will combine in order to be more time efficient and proficient as one large group. For more information, contact Whitney Garrison, WAG Coordinator, at 208.843.2931 or whitneygarrison@co.nezperce.id.us.



Rows seeded as part of demonstration

The no-till and low-till trend in seeding has several benefits.

Tim Robinson, a project supervisor at the District, said this trend in seeding is good because it reduces erosion, improves soil quality, and increases organic matter.

Direct seeding benefits include the switch from conventional farming becoming more accessible and direct seed education is growing. The direct seed demonstration showed how the switch in farming practices can be achieved and applied. Nearly 100 people attended, and local producers especially, seemed energetic and eager to hear about the technology.

“It is great to see so many local growers interested and excited about no-till direct seeding,” said Robinson.

The PNDSA will host a Direct Seed Cropping Systems Conference Jan. 20-21, 2010 in Kennewick, Wash. Producers and companies interested in progressive farming are invited to attend.

For more information, contact Russ Evans of the Pacific Northwest Direct Seed Association at (208) 883-0190, or for information regarding Cross Slot technology visit www.crossslot.com.

Nez Perce County Floods *continued from page 3*



Garden Gulch Road damage, flood 2005

Riverine and urban flooding are the two types of flooding that primarily affect Nez Perce County. Riverine flooding is the overbank flooding of rivers and streams, the natural processes of which add sediment and nutrients to fertile floodplain areas. Urban flooding results from the conversion of land from fields or woodlands to parking areas and roads, through which the land loses its ability to absorb rainfall.

The following list of floodplains and waterways are likely flood hazard areas in Nez Perce County.

Waterways and Flood Hazard Areas

- | | |
|--|-------------------------------|
| Clearwater River | Little Canyon Creek |
| Snake River | Ten Mile Creek |
| Potlatch River | Sweetwater Creek |
| West Fork Sweetwater Creek | West Fork Sweetwater Creek |
| Lindsay Creek | Redbird Creek |
| Tributary to Lindsay Creek (Lapwai Road) | Madden Creek |
| Tammany Creek | Captain John Creek |
| Lapwai Creek | South Fork Captain John Creek |
| Mission Creek | Webb Creek |
| Rock Creek | West Fork Deer Creek |
| Hatwai Creek | Eagle Creek |
| Cottonwood Creek | Wapshilla Creek |
| Deer Creek | Bedrock Creek |
| Pine Creek | Little Potlatch Creek |
| Cow Creek | Union Flat Creek |
| North Fork Tom Beall Creek | Cedar Creek |
| South Fork Tom Beall Creek | Mann Lake |
| Tom Beall Creek | Waha Lake |
| Soldier Canyon Creek | Blue Lake |
| Jacks Creek | Mud Lake |
| Big Canyon Creek | Soldiers Meadow Reservoir |



Visit the District's Culdesac office: 27880 Chambers Road, Culdesac, Idaho 83524

And don't forget to check out our Web site! www.nezperceswcd.org



Nez Perce Soil and Water Conservation District

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Deadline for Forestry Project Applications

Landowners interested in receiving cost-share for conservation improvements on forested lands in the Big Canyon, Lapwai, Jacks, and Cottonwood Creek drainages need to submit their applications by December 7, 2009.

Priority projects include fencing, water developments, road erosion improvements, weed control, streambank protection, and tree planting.

Applications and additional information is available on the Nez Perce Soil and Water Conservation District's Web site at www.nezperceswcd.org or by contacting Whitney Garrison at the District office. Phone 208-843-2931, npswcd@co.nezperce.id.us.



*Happy Thanksgiving
from the
Nez Perce
Soil and Water
Conservation District*

