

Natural Resources Conservation Service

# CONSERVATION footprints

*A quarterly publication by, for, and about NRCS-WA employees.*

## With conventional till you harvest a haboob

*By Jim Armstrong, Spokane County Conservation District*

Haboob: a funny word, but its meaning is far from laughable. Defined as a type of intense dust storm carried on an atmospheric gravity current, haboobs can have catastrophic effects to both land and life.

Dry August winds often stir up dust clouds in Central and Eastern Washington, but this year was exceptional. On August 12, 2014, an enormous haboob, reminiscent of those from the Dust Bowl era, descended on Eastern Washington. Two weeks later, another dust cloud caused a 50-car pile up in the Southern part of the state, sending multiple people to the hospital and shutting down Interstate 82. Why did this happen? Much like the dust storms in the 1930s – these events were



*A haboob blows over farmland in Eastern Washington.*

totally preventable.

The primary source of this dust is unprotected farm fields, either after harvest or lands that had been in summer fallow, meaning there were no plants covering the soil between cropping years. See for yourself: this fall when passing farmers using conventional tillage techniques are

working the ground, notice the dust being kicked up by tractors and drills tearing into the bare ground. Substitute 40 to 50 mph winds in place of the tractor and the soil erosion increases exponentially. Combine several hundred thousand acres and 50 mph winds at the same time and you have a haboob.

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## A Message from Roylene



It's hard to believe summer is over, and with that, the end of our fiscal year. And what a year it was! As an agency, we rolled out the new Farm Bill as soon as it passed..

Even with several new programs merging with former programs – NRCS staff plowed full steam ahead to get deadlines set, applications filled out, and contracts signed. I am so proud of all of you and what you have accomplished.

Something else that I am very proud of this year was the overwhelming response from our partners when we presented the new Regional Conservation Partnership Program. Washington State was second only to California in number of proposals submitted to national headquarters. Final proposals are due to NHQ October 2, 2014.

Unfortunately, summer in Washington State also meant wildfires. Field staff in the areas affected have spent a great amount of time helping determine after fire risks and providing assistance to those affected across the state. I am especially proud of our NRCS family members who suffered personal loss and yet continued to provide support to landowners during this crisis. Recently, we announced funding available to help landowners recover from the devastating fires. For more information and to view our new wildfire resources webpage, go here.

As this fiscal year comes to a close, take a step back and reflect on all you have accomplished. I am looking forward to what the future of the new Farm Bill holds – new programs, new opportunities, and best of all more acres of private land conserved!

Thank you,

## Haboob, continued

Conventional farming practices include using discs, plows, chisels, harrows, sprayers, fertilizers and drills, all being pulled around the same field, one at a time to accomplish one goal; to prepare the soil and plant a single crop. Four to eight passes, depending on the crop, are made over the same field to establish that crop. The end result of repetitive disturbance is topsoil that has been worked into a fine powder and is easily and rapidly lifted into the air with even the slightest of winds, creating soil erosion of the type Washington State experienced in August.

One of the techniques used in the drier areas west and south of Spokane, Wash. is called deep furrow planting, a method of placing the seed down where the moisture level is by the end of summer, in many cases six to eight inches below the surface. Much of this type of planting occurs on fields with a winter wheat/summer fallow rotation meaning one year growing wheat and the next lying fallow. The fallow fields are continually worked during the summer to prevent any type of vegetative growth, in theory to protect moisture from being removed. However, studies have clearly shown that bare soil will have temperatures 40 plus degrees higher than soil with vegetation or even stubble for shade. The resulting high soil temperatures and evaporation quickly dry the soil.

There is an alternative, one that's more profitable and sustainable. No-till farming is the practice of placing the seed and fertilizer of the next crop directly in the ground through the stubble or residue from the previous crop. This does a couple of very important things; first, it leaves the soil pretty much undisturbed as the



*Zero percent visibility and very hazardous driving conditions.*

drill moves through the soil. Second, no-till farming protects moisture in the ground, not leaving the soil exposed to open sunlight and evaporation. Research shows that for every tillage operation where the soil is disturbed, up to a half inch of moisture is lost. Add up the three or four tillage operations in a conventional system and the moisture loss is significant. With no-till farming, all of the moisture in the topsoil is retained and available for the plants.

Farmers often refer to a "million dollar rain" in the early summer. It is a million dollar rain only if it stays on the farm. If it runs off to the nearest stream, taking precious topsoil with it, everyone loses.

Change is coming to agriculture, slowly but surely. As more farmers make the switch and embrace the new technologies available to them, we will see fewer episodes of severe wind erosion and the resulting haboob. To feed future populations, we as consumers need to recognize the difference between crops produced in a conventional system and ones produced in a more sustainable no-till system. Hopefully, we will have that opportunity soon.

## Cover Crop Field Tour at the Pullman PMC

Submitted by Pamela Pavek, Conservation Agronomist



Field tour participants.

The Pullman Plant Materials Center hosted a Cover Crop Field Tour on August 8, 2014, to exhibit their cover crop studies and to provide an opportunity for staff to discuss cover crop options for the Inland Pacific Northwest. The event was attended by 20 NRCS employees, some from as far away as John Day, Oregon, and Davenport, Washington. Tour participants visited the National Soil Health Study, which is in its second year of implementation. In this study, three cover crop mixes and three seeding rates are being evaluated for their effect on soil health properties. The Pullman PMC is one of seven PMCs around the country implementing this study. So far, results show cover crop practices and species used in the eastern and midwestern states are not effective in our region. A summary of first-year results from the Soil Health Study can be accessed [here](#).

The second study the tour participants visited was the Cover Crop Biomass Study, in which 41 species, cultivars and mixes were compared for their adaptability to cover cropping windows in eastern Washington dryland rotations. Tour participants viewed the cover crops planted at two dates in the late



Cover crop biomass trial at Pullman PMC.

spring/early summer and learned to identify warm-season crops such as teff, millet, and safflower. The study also included two planting dates the previous fall. Results from this study and recommendations for ideal cover crops and planting dates for eastern Washington have been written up in Plant Materials Technical Note 25, which is currently being reviewed.

At the end of the tour, Diana Roberts, WSU Extension, briefly presented results from her cover crop studies in Spokane County and participants shared cover crop experiences of their growers. Events such as these, where everyone can learn from one another, are vital for advancing our knowledge and implementation of practices to improve soil health.

### Goodbye and Good Luck to the following employees:

**Melissa Topping**, Biological Science Aid in the Plant Material Center, resigned effective 8/1/14.

**Ardina Boll**, Biological Science Aid in the Plant Material Center, resigned effective 8/8/14.

**Mark Stannard**, Plant Material Center Manager at the Pullman Plant Material Center, retired effective 8/11/14.

**Joseph Randolph**, Cultural Resources Specialist in the Olympia Area Office, retired effective 8/22/14.

**Jonathan LeBlanc** transferring to the U.S. Forest Service in Bedford, Indiana effective 10/5/14.

### Welcome to the following new employees:

**Brad Jacobson**, Rangeland Management Specialist in the Davenport Field Office, effective 9/7/14

### Items of Interest:

Lorna Winona changed her name to **Lorna Bilodeau** effective 9/7/14. Congratulations on your recent marriage, Lorna!



Don Hanson, CRAC chair (left), and Peter Bautista, CRAC advisor (right) presented Jenifer Coleson with the Chief's Individual Award for civil rights at the last CRAC face-to-face meeting in August.

## Jenifer Coleson Receives Chief's National Civil Rights Individual Award

Submitted by Peter Bautista, Assistant State Conservationist for Operations

For the 2013 Chiefs Civil Rights Individual Award, our very own Jenifer Coleson, NRCS-WA CRAC chairperson was nominated by our CRAC committee and selected as the sole winner in the country for this prestigious award.

Congratulations Jenifer Coleson on this award as it is well deserved. Your commitment and leadership with the CRAC has definitely made a difference in our state with many developments under your leadership as 2013 CRAC Chair including; the Diversity Day and Diversity Discussion annual venues and the State Barrier and Parity Analysis references for the state outreach purposes.

Finally, I would like to share a quote from Chief Weller's Award letter to Jenifer, which nicely captures this awards significance, "Thank you for your interest and initiative in diversifying our workforce and customer base. It is an honor to have someone of your caliber as an employee of NRCS. Keep up the good work!"

## Multi-agency, Team Approach Taken for the Carlton Complex Fire

Submitted by Scott Bare, Soil Scientist



Part of the burned landscape resulting from the Carlton Complex fire.

The Carlton Fire Complex started on July 14, 2014 from four lightning caused fires - Stokes, Gold Hikes, French Creek and Cougar Flat - burning over 250,000 acres of forest, rangeland and associated riparian areas. Ownership is comprised of federal, state, county, tribal, and private lands in Okanogan, County Washington. Approximately 169,000 acres of non-federal lands were burned. Later in July, these fires combined into one larger fire which was exacerbated by hot and windy conditions, dry fuel and mountainous terrain, creating high intensity fire behavior. The fire threatened several towns, consumed approximately 300 homes and destroyed critical infrastructure. Following the fire, isolated and intense rain storm events contributed to flooding and debris flow that impacted homes, roads and many other critical values.

Immediately afterwards, the Okanogan Conservation District, in conjunction with NRCS and other federal partners, were in the field locating and recording damaged structures. The scope of this

initial assessment eventually broadened to include other resources and values. As a result, the Okanogan Conservation District organized and implemented a multi-agency approach using the proven USFS Burned Area Emergency Response (BAER) method. The BAER template was used to evaluate impacted values and resources on state, private and other non-federal lands. To my knowledge, this was the first time this process has been used on non-federal lands. Professionals from the northwest and as far away as Florida, representing conservation districts, state and federal agencies teamed up for this assignment. Teams were composed of hydrologists, engineers, soil scientists, fish biologists, geographic information specialists, cultural resource and range specialists, and conservationists.

Training and operations support was provided by USFS in conjunction with other federal agencies for the purposes of evaluating soil burn severity and fire burn intensity and conducting a rapid

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## A New Partnership

Submitted by Sherre Copeland, Partnership Liaison



Partnership Liaison Sherre Copeland in Washington, D.C. with Secretary Vilsack and the rest of the RCPP rating committee.

In the Summer 2014 edition of Footprints, Roylene reported on the information meetings and webinars that have been conducted here in Washington for the new Farm Bill Program called the Regional Conservation Partnership Program. She said, "we are anticipating a large number of proposals coming from Washington State." She anticipated right! Partner groups submitted pre-proposal applications for 24 different state, national, and critical conservation area projects. There were only a few other states in the nation that had more applications than Washington State. Nine partner groups from Washington were asked to prepare full proposals for the nationwide competition.

As Partnership Liaison in Washington, I am ecstatic to have the opportunity to work on a program with "Partnership" in the name. Not only have I worked with our traditional partners like the conservation districts, but I've met some new groups who have an interest in conservation but have never worked with NRCS before. For RCPP, my job here in Washington was to help partners understand the new program and to encourage them to work in their local communities to propose projects that meet our priorities and will help get more conservation on the ground. Also, I was honored to be chosen to go to

Washington, DC to help rate the pre-proposal applications and I will return in October to help with the final proposals.

The excitement and the pressure for success that the leadership of our Department has for this program is palpable. The rating group, which was made up of about 20 employees from across the nation, was visited by Washington (the other one) leaders and dignitaries throughout our stay who told us how much is riding on this program.

We were visited in the first week by Mark Rose, Director, Financial Assistance Programs; Dr. Wayne Honeycutt, Deputy Chief for Science and Technology; several of the Regional Conservationists; and Assistant Chief, Kirk Hanlin. Each feels the gravity of this being the first time in history where the conservation title (Title II – \$28 billion) of the Farm Bill has more funding than the commodity title (Title I - \$24 billion).

Chief Weller stopped by and said that this program puts local communities in the driver's seat by allowing them to design projects that identify their needs and the tools they need in their community to meet the broader benefits of natural resources conservation.

Ann Mills, Deputy Under Secretary for Natural Resources and Environment, came to thank and encourage us. Deputy Secretary Krysta Harden, who as former Chief Executive Officer of the National Association of Conservation District, has her heart closely aligned to conservation, was effusive in her support of this program, describing it as a new era for conservation.

One of the most touching visits was by Tina May, currently Ms. Harden's Chief of Staff, former aide to Senator Stabenow and who served as the senior staffer for the Senate Agriculture Committee during negotiations on the Farm Bill. When members of the rating committee were asked to talk about some of the projects that they were reviewing, Ms. May's eyes welled with tears and she became emotional about how proud she was to see this program come to fruition.

Ms. May's savvy on Capitol Hill, as well as her experience with USDA, could be a key reason why this part of the bill is both realistic and flexible.

Finally, Secretary Vilsack joined us to explain his "Venture Conservation" philosophy, calling the \$1.2 billion available for RCPP his venture capital fund. The Secretary wants to "buddy up" with companies, universities, non-profit organizations, local and tribal governments, agricultural organizations, sports (hunting and fishing) groups, and other conservation-minded groups who have proposed ways to improve soil health, water quality and water use efficiency, wildlife habitat, and other related natural resources on private lands.

All in all, RCPP is good for Washington (DC and State), great for NRCS, and awesome for conservation. I am very lucky to be one of the "partners" in the Regional Conservation Partnership Program.

## Employees Learn about Cultural Resources in Washington

Submitted by Jenifer Coleson, Environmental Specialist



Cultural resources class photo from the last day of training.

NRCS and partner employees met in Ephrata in September to explore the cultural resources in the Columbia Basin and learn about the laws and policies that protect them. This hands-on field training fulfills the NEDC sequence of training that begins with online Aglearn modules and is a mandatory training for staff with responsibility to consider cultural resources as part of the conservation planning process.

NRCS staff, Kellie Green, David Munsell and Jenifer Coleson, organized and delivered the training with help from a variety of guest speakers. Dr. Rob Whitlam, an Archaeologist with the Department of Archaeology and Historic Preservation, shared information, photos and stories about archaeology in Washington as well as explained federal and state laws that protect cultural resources. Tribal consultation and Traditional Cultural Places (TCPs) were discussed by Gideon Cauffman,

a Cultural Resources Specialist with the Jamestown S'Klallam Tribe. Washington State Parks Archeologist, Charles Luttrell, and Chris McCart, Dry Falls Interpretive Specialist, rounded out the teaching staff. The field portion of the training took the participants to a number of locations near Ephrata where a pictograph, house pits, rock cairns, and lithic scatter were found and discussed.

Class participants also practiced reading an archeological site form, visited a TCP, and identified and dated historic railway era sites.

One participant remarked that it was clear after taking this training that cultural resources is a component of the human part of SWAPA + HE and that we not only have a legal responsibility but a stewardship responsibility to protect these valuable resources.

## Wellness Committee: An Update

Submitted by Debbie Williams, Acquisitions Specialist

Hello to All! The plans for a Wellness Committee are still in progress, although I have not received many responses from folks interested in participating. I know this is a time of total chaos as far as workload though, so I'm hoping that I'll hear from more of you after the end of September. To that end, I came up with a quick (only 5 multiple choice questions) survey to get a sense of what you all are interested in having the Wellness Committee do for you. ALL responses are greatly appreciated, even if your intent is to express your dissent! Here is the link:

<https://www.surveymonkey.com/s/JZFDP8T>

I am planning a **teleconference on Wednesday, October 8th at 2 p.m.** for everyone who might be interested in helping out on the committee, would like to put in their two cents about what the committee should be doing, or just want to find out what's going on. This teleconference will not take more than an hour of your time. I will send a reminder out a few days before the teleconference. Meanwhile, I hope you are all hanging in there; your job is important, and what you do is much appreciated! Just don't forget to take care of yourself, too!





from left to right are : Melissa Gilman, Systems of Care Admin Assistant, Aleilah Lawson Tribal Wellness Coordinator, Ruth Charles Master Gardener and Sissi Bruch Elwha Senior Planner.

## Tunnel of Health

Submitted by Jim Poffel, Resource Conservationist

The Lower Elwha Klallam Tribes high tunnel is a hit. In April 2014, about 30 volunteers pitched in to control weeds, work the soil, and construct a 1,440 foot structure. As part of the Tribal Food Sovereignty Program, the tribe is growing crops such as eggplant, tomatoes, broccoli, cucumbers, red cabbage and herbs that include basil, chocolate mint, sage and rosemary to name a few. The incidence of diabetes and cancer is high among tribes and the project is being utilized to help promote a healthier lifestyle among the tribal members and spark interest in home organic vegetable gardening.

The Clallam County Master Gardeners were made aware of the high tunnel program through Clea Rome, Washington State University Extension Agent, and former NRCS employee at the Port Angeles Field Office. I met with Ruth Charles and Sheryl Charging Whirlwind, both lower Elwha Elders, and the application process was underway. Ruth and Sheryl were the first Native Americans in Clallam County to become Master Gardeners. Sissi Bruch Elwha, Senior Planner and Aleilah Lawson, Tribal Wellness Coordinator, were both instrumental in getting the project on the ground.

On June 26, 2014 the high tunnel received a tribal blessing and starts were planted. Within a month, broccoli, kale and zucchini were being harvested.

To paraphrase one of the workers that was working on a fence to keep out the deer and rabbits "After seeing this project when I go to the store it makes me shop differently and shop healthy."

## BAER, continued

rapid assessment – within 2 weeks  
- of critical resources and values on non-federal lands within the burn area. After receiving training, we were grouped into teams that went to the field and collected data and information in targeted areas and watersheds. The data was then analyzed and summarized into a team report. All team reports were incorporated into a final document that identified the critical values at risk, emergency measures/



Data collection.

treatments, their locations and associated costs. This document will be a valuable reference for land owners and managers as they begin their planning and restoration efforts.

My team, which consisted of three soil scientists and one range specialist, worked with other teams of engineers, hydrologists, archeologists, geographic information system specialists to draft a report that summarized fire and potential post-fire effects to soil resources, and included concerns relative to invasive plants and range lands. Specifically, our report addressed the following:

1. The effects of the fire on soil resources
2. Critical soil resource values at high risk of irreversible damage
3. Both emergency and long-term treatments that could rehabilitate or protect soil resources from irreversible damage

The BAER process used on the non-federal lands was valuable and demonstrated how a multi-agency approach can be a beneficial strategy for all stake holders and ultimately the public at large. It provided a positive environment for information and ideas exchange. Further refinement with future projects will only enhance the method and process. It was a great learning experience and I appreciated working with the other professionals in this collaborative endeavor.

### Have Your Own Conservation Success Story?

Our successes do not end when we implement a conservation plan. An important aspect of conservation success includes "showing-and-telling" the work we've accomplished. "Highlights in Conservation" is a quick submission process which will help facilitate capturing our accomplishments, like those above.

- View and download the [submission form](#).
- View past [Conservation Footprints publications](#).