



SR 530 Mudslide Recovery

FIRST YEAR REPORT APRIL 2015

Executive Summary

On Saturday, March 22, 2014, a mudslide took the lives of 43 people four miles east of Oso, Washington, creating a slide zone that affected communities along State Route (SR) 530 from Darrington to Arlington. Carrying a wall of mud and debris across the North Fork of the Stillaguamish River, the slide destroyed 49 homes and structures. The mudslide initially blocked the river, causing further damage to homes along the river and cutting off transportation and communication to the communities served by SR 530. These small towns were immediately isolated by the mudslide, but people quickly organized themselves to assist first responders and begin the arduous process of recovery. Washington State University (WSU) President Elson Floyd immediately committed University resources to assist in the recovery, asking WSU Extension to be on point for the institution. This report summarizes what has been accomplished to date.

Background

The President's Commitments to Slide Zone Recovery and Development

As the state's land-grant university, WSU has a mission to assist the people and communities of the state of Washington. In line with this mission, President Floyd has committed WSU to work with local leaders to not only restore the area to the way it was before the mudslide, but to also help area communities tap into all available resources to generate a thriving economy. President Floyd honored this commitment by guaranteeing tuition waivers for area students for the 2015–2016 academic year and creating the WSU SR 530 Mudslide Recovery Team ("the team"). President Floyd charged this interdisciplinary team with coordinating relevant expertise and resources from across WSU to foster recovery, self-reliance, resilience, and renewal. The team, in partnership with local affected communities, has worked to cultivate community and economic development, emergency management services, youth and family wellbeing, and communications in the area.

One Year Later

One year later, the communities in the slide zone along SR 530 are showing new energy, thanks to the extensive recovery and relief efforts driven by the work of community leaders, local citizens, WSU, and the team. From an initial 135 tuition waivers offered, 109 area college students have taken advantage of this opportunity, studying to become the next generation of problem solvers.

The team's involvement has also had positive, measurable, and lasting effects on the communities affected by the mudslide. Community leaders in the slide zone are more familiar with each other's efforts and have a common understanding of current priorities, while groups have unified their efforts under common goals.

Initial reports indicate that tourism has increased beyond post-disaster expectations, and communities are exploring sustainable ways to economically benefit from local natural resources. Citizens and elected officials are also increasingly aware of the resources and expertise available through WSU, creating a mutually



President Elson S. Floyd views the SR 530 mudslide with Snohomish County Sheriff's Deputy Andy Kahler. Photo by Sylvia Kantor/WSU.

beneficial relationship that will support and inspire more stable and sustainable communities.

The Team

In April 2014, as emergency response efforts turned toward long-term recovery strategies, WSU formed the interdisciplinary SR 530 Mudslide Recovery Team. The team is co-housed under WSU Snohomish County Extension and the WSU Division of Governmental Studies and Services (DGSS) and co-led by Curt Moulton and Mike Gaffney. Team members hail from multiple WSU Extension units including Community and Economic Development, Youth and Families, and Agriculture and Natural Resources; as well as the WSU Energy Office; WSU North Puget Sound; and Communications in the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS). Members have diverse experience and backgrounds and include student interns; administrators; researchers; and specialists in community and economic development, youth development, communication, technology, agriculture, emergency management, broadband technologies, and natural resources. The team has collaborated with elected leaders from affected communities as well as local citizens, tribal officials, and representatives from area nonprofits and state and federal agencies.

President Floyd charged the team with securing relevant expertise and resources from across WSU and making them available to local governments and residents to aid in rebuilding lives and guide them toward self-reliance, resilience, and sustainable economic futures. This outreach was unique in its depth and the diversity of team membership, who worked collaboratively to positively impact community and economic development, emergency management, youth and family wellbeing, and communications. Significant team accomplishments are described in more detail below.

Program Areas

Community and Economic Development

To restore balance and facilitate economic development projects that build sustainable resources, the team worked with local businesses, community organizations, government agencies, and elected officials to create a strategic economic redevelopment plan and secure multi-agency funding, including a \$150,000 federal grant from the Economic Development Administration. The WSU Community and Economic Development Program (EDP) is now in place, employing a full-time coordinator in Darrington.

This foundation was built through the team's work in facilitating meetings with community leaders to set priorities and jointly move economic



Arlington Mayor Barbara Tolbert speaks at a community luncheon in Darrington. Photo by Sylvia Kantor/WSU.

development projects forward, fostering teamwork and collaboration with WSU. President Floyd also made a personal commitment to the recovery efforts, and attended several local events, including a local community meeting hosted by local elected officials and Sauk-Suiattle tribal leaders, where he heard reports from WSU student interns who were actively engaged in recovery efforts. Residents participated in team-supported community gatherings, leadership opportunities, and other efforts aimed at improving the quality of life and health in the area through Whole Community Discussions. Feedback from participants guided team outreach and continue to influence future programming efforts and approaches.

A key strategy to increase tourism taps into the area's natural beauty and potential as a recreation destination through creating public information programs such as "Destination Darrington," and expanding local festivals, establishing a new snow park, and paving the Mountain Loop Highway to increase access to the area. WSU 2014 summer student interns were actively engaged in these efforts, which is further detailed in the Youth Development section, below. The team also facilitated a partnership with the U.S. Forest Service to establish stewardship projects and explore a multi-organization collaborative to increase timber sales from the local Forest Service district.

As recovery efforts move into the second year, the WSU North Puget Sound and WSU Extension, with strong connections to businesses and economic development organizations, are now invited members of the Stillaguamish Valley Economic Redevelopment Advisory Council and leadership committee. Community leaders in the former slide zone are increasingly familiar with each other's efforts and have a common understanding of current priorities, groups have unified their efforts under common goals, and community members are accessing WSU resources that they had not used before.

Youth Development

WSU Student Internship Program

Shortly after the mudslide, the team rapidly created and implemented a WSU student internship program that employed 12 WSU students in local agencies in Arlington, Darrington, and Pullman for the summer of 2014. The majority of the interns hailed from the impacted area and were recipients of the tuition waiver for the 2015–2016 academic year. Funding for the intern positions was provided by CAHNRS, the Edward R. Murrow College of Communications, Arts and Sciences, Architecture and Engineering, Education, and WSU North Puget Sound in Everett.

Through their work, the interns gained in-depth knowledge of the impact of the disaster and what it takes to assist communities with longer term recovery efforts. Several students reported that the experience changed or helped to focus their career direction. Students also learned about the role the state's land-grant university serves in the community. The students presented the results of their internships experience directly to the communities and President Floyd, and the CAHNRS communication intern produced two short videos documenting the summer program.

Sponsoring agencies reported that the students made significant and immediate contributions to



WSU student interns view damage from the mudslide. Photo by Sylvia Kantor/WSU.



WSU student interns with Darrington Mayor Dan Rankin. Photo by WSU Media Services.

the needs of the communities where they worked. This encompassed website development and other communications needs, youth programming, video production for the City of Arlington, water source inventory for Snohomish County, and event planning and tourism programming in Darrington and Arlington. Projects with longer term impacts included analysis for park development and paving the unpaved section of the Mountain Loop Highway to promote tourism. Additional information about this work is available at <http://mudsliderecovery.wsu.edu/>.

The team also worked to engage the student body on the WSU campus. In partnership with ASWSU, the team—via the organizational efforts of two student interns—solicited donations and organized fundraisers, raising more than \$15,000 to support SR530 recovery efforts. The interns also engaged the WSU community, particularly drawing on the volunteer ethos of the WSU Greek system, and organized two student service weekends (one in Darrington and a second in Arlington) which, together, brought more than 60 WSU students from Pullman to the area to help with projects and learn about building resilient communities.

K–12 Programs

To minimize post-slide disruptions for families, the team implemented a 4-H summer program in 2014 for K–8 students through locally secured funding. The program's curriculum included robotics, nutrition, and natural resource programming. Funding from local workforce and human services sources supported a Summer Forestry Institute (SFI) program, providing natural resource education, job experience, and stipends for 10 high school youth. Another "Learn and Earn" program, co-sponsored with North Counties' Family Services, employed an additional eight high school students focused on teamwork and workforce skills training in an effort to improve absentee rates and tardiness. The team worked with community members to form a natural resources STEM program, facilitate integration with Darrington Middle School,

and provide teacher curriculum training. They also provided assistance to the communities of Arlington and the Sauk-Suiattle Tribe on developing a natural resources STEM program focused on natural resource studies and careers, which is supported by multiple agencies, groups, and businesses. In the fall of 2014, all Darrington School District teachers received training on teaching traumatized children and continued to receive monthly follow-up sessions from the WSU Area Health Education Center.

Results showed that 42 elementary and middle school youth participated in summer robotics, nutrition, and natural resource education activities, improving their life skills in teamwork and healthy lifestyle choices. Ten high school youth in the SFI demonstrated an increase in natural resources job knowledge, and mastery of tree measuring tools and water quality testing equipment. Eighteen youth also gained teamwork and workforce skills through Challenge education, and boasted no absences or tardiness during program participation. One SFI participant enrolled at WSU in 2014 and another will enroll in 2015. One hundred youth have been enrolled in the STEM program and five middle school teachers received Project Learning Tree and 4-H curricula training needed to implement a STEM program in natural resources. All 29 Darrington School District teachers improved their skills in working with traumatized youth, benefiting all of the district's 417 students.

Technical Assistance

The team provided technical assistance to affected communities on topics ranging from emergency management issues, broadband services, online education, and renewable energy opportunities. In addition to the significant technical assistance, this outreach is exemplary in that it marks the first time current community leaders have tapped WSU technical assistance resources and student interns, creating the foundation for a mutually beneficial relationship for the years to come.

Working with the Ruckelshaus Center, members of the team helped facilitate the Governor's Joint SR 530 Landslide Commission, which was tasked with examining issues related to disaster response and providing recommendations to elected officials for improving responses to future community disasters. The final Joint SR 530 Landslide Commission report drew a consensus solution on every issue addressed by the Commission, and can be accessed at <http://www.governor.wa.gov/issues/reform/landslide>.

The City of Arlington used examples of effective public policies provided by WSU to develop new draft ordinances to streamline its response to future natural disasters. For the first time, the Sauk-Suiattle Tribe participated in a broadband conference for Washington tribes as a result of a personal invitation from a member of the team. WSU was publicly praised

by the Governor and the Snohomish County Executive for facilitating the Commission's final report. The Darrington senior and middle school building complex was selected to participate in the Wood Pellet Heat in Schools pilot program conducted by the WSU Energy Program. This renewable energy pellet heating demonstration project is expected to result in reduced energy costs for the building.

Research and Recognition

The team facilitated research employing Ripple Effects Mapping to collect data from WSU student interns who participated in the summer program. This data will be used to improve future program outcomes and will be disseminated in professional journal articles. The WSU Energy Office's economic analysis of the wood pellet fuel industry in the state of Washington has identified both production and fuel use opportunities for the town of Darrington. Team members have presented a poster on recovery efforts at the Extension Disaster Education Network (EDEN) conference and will present at NACDEP, in addition to producing a winter newsletter article. Team leaders were invited presenters to the CAHNRS National Board of Advisors. One student intern's video was recognized with a 2015 Society of Professional Journalists Region 10 Mark of Excellence Award. The team will receive the National Team Award from the National Association of Community Development Extension Professionals at the annual conference in May 2015.



WSU student intern Tesia Lingenfelter explains results of a ripple effects mapping exercise. Photo by Sylvia Kantor/WSU.

WSU's contributions to the mudslide recovery efforts were noted in nearly 20 news stories over five months. Elected officials, including the Arlington and Darrington mayors, Snohomish County Executive, city and county council members, state legislators, and federal delegation staff, praised WSU and President Floyd for the active role that WSU has taken in the recovery effort. The mayors of Arlington and Darrington visited the WSU Pullman campus to express

their gratitude to WSU. Further information about the team, including video and news output, can be found at <http://mudsliderecovery.wsu.edu/>.

Fund Allocations and Commitments

Funding of the WSU response to the SR 530 mudslide has been accomplished through use of existing staff (largely from WSU Extension); special internal allocations by the WSU Foundation and the Colleges; federal, state, and local grants and donations; and campus fundraising efforts. Additionally, a mudslide area coalition has brought in economic development planning money for the local Economic Alliance and municipalities.

To date, the team has helped secure over \$312,000 in grants and donations for recovery efforts from: the WSU Foundation (\$100,000); CAHNRS (\$50,000) and other WSU colleges (\$20,000); Snohomish County (\$20,000); the U.S. Forest Service (\$7,000); local charities (\$26,000); Workforce Snohomish (\$10,000); a Smith-Lever grant (\$64,172); and an on-campus fundraising banquet (\$15,000). In addition, the local coalition brought in \$150,000 from the federal Economic Development Administration for economic development planning.

Future Plans

The WSU SR 530 Mudslide Recovery Team continues its work into the second year of President Floyd's commitment to the slide zone. Projects, programs, and priorities are clearer now, after the first year of work.

The youth development programming will become more comprehensive and coordinated with its focus

on trauma recovery and STEM education. Community and economic development programming will focus on forest products, recreational tourism, and transportation development. The team plans to deepen its relationship with the Sauk-Suiattle Tribe, with collaboration on emergency management and First Responder Network Authority (FirstNet) communication planning. WSU student engagement will continue with student interns focused specifically in the project areas.

For 2015, the team has secured funding for several of the programs created in 2014, including 4-H summer programming, the WSU summer internship program, the Learn and Earn program, and the Summer Forestry Institute. A plan has been developed to establish a nonprofit organization for expanding STEM natural resource programming in Darrington.

Secured and pending funding is in the pipeline. The National Red Cross will be engaged as a contributing partner in the team's childhood trauma work. For economic development programming, USDA, Economic Development Administration, and America's Best Communities programs are expected to provide funding. FirstNet emergency management communications funding for WSU's work with tribal communities is contracted from the Washington OneNet project managed by the Washington State Office of Chief Information Officer. President Floyd's next visit to the area will focus on the Sauk-Suiattle Tribe.

Journal article manuscripts about WSU's recovery efforts are in development for submission to Extension and Human Development professional journals.

WSU Team Members

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2014 Interns

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Carson Davis, Voiland College of Engineering and Architecture

Katherine Fee, College of Agricultural, Human, and Natural Resource Sciences, and CAS

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