between Cabin Spring (near campsite #1) and the Grotto is closed. This includes Zion's popular Angels Landing Trail. There is no estimate for when the trail will be reopened. Visitors are encouraged to use Observation Point Trail or Hidden Canyon Trail as alternatives. The West Rim campsites are open and accessible from Lava Point.

Emerald Pools Area Trails -

Much of the Emerald Pools Trail complex is also closed due to major damage. Just past the alcove at the end of Lower Emerald Pools Trail, a 20 foot by 10-foot boulder that was supporting part of the trail fell, leaving a deep void in the trail. Two large retaining walls also failed. On the Kayenta Trail, numerous large boulders completely crushed approximately 50 feet of trail. The Kayenta Trail, Upper Emerald Pools Trail and a small section of Lower Emerald Pools Trail will remain closed until repairs can be made. There is no estimate for when the repairs will be complete. The Lower Emerald Pools waterfall is still visible from the Lower Emerald Pools Trail, but visitors can no longer walk behind it. Watchman Trail, Weeping Rock, and Riverside Walk are suggested alternatives.

The damage after the floods – locals look at their properties in Richfield (Fox 13, Salt Lake City, UT)

Erin Cox, July 16, 2018

RICHFIELD, Utah - Locals in Richfield are recovering after devastating flash floods over the weekend.

"I was running around trying to stop the water from coming down, but after a while, there's not much you can do," recalled Kirk Harris, who lost more than 200 acres of his sod farm in just 4 hours.

Harris said that kind of loss will likely cost him more than a million dollars.

Pointing out pipelines and water channels ruined because of the flood's flow, Harris said it may take until 2020 to get his sod business back on track.

After working with 30 percent less water this year, Harris said they scrimped and saved to make it through, and now, they still don't have enough to replant.

"We'll probably have to shut down for a year," Harris said.

But he's not the only one hurting. Harris said he helped other neighbors minimize the damage to their homes and land.

Surveying his property, Harris also pointed out the damage done to a gravel pit company down the road from him.

The pit was entirely filled up with water, and a bulldozer sat right in the middle, barely peaking up above the water.

"It's going to take a while to get it all cleaned up," Harris said.

Harris said he's working with Sevier County on a few projects to help minimize flood damage in the future.

Sevier County Commissioner Tooter Ogden said he's been working on getting funding for research projects on the water tables so they can know how to better handle floods in the future.

"Now, we're trying to make it," Ogden said. "Identify these areas; hopefully we can get the funding to help with trying to put in some detention dams.

WYOMING

Wyoming Wildfire Danger Slightly Lower Than Typical (Casper Star-Tribune, Casper, WY)

Shane Sanderson, July 16, 2018

CASPER, Wyo. (AP) — The Badger Creek Fire has burned for more than a month along the Colorado border, consuming more than 32 square miles (82 square kilometers) in the process. Six hours north, the Terek Fire, more than twice the size of its southern counterpart, has burned for more than a week.

The fires, which were almost completely contained Friday, will likely not be the last to ignite in Wyoming this summer.

This summer shouldn't bring with it an inferno, however. Authorities are predicting a relatively mild fire season in a state historically prone to bouts of burning wildland throughout the summer months. Those forecasts come with a significant disclaimer, however.

"As always, it all depends on our short-term weather," said Wyoming State Forester Bill Crapser.

The National Weather Service does not predict an unusually dry summer, according to drought outlook maps provided by the agency. Current conditions indicate nearly all of the state should remain untouched by drought through September, the maps show.

However, short-lived events, the agency warns, can impact the predictive power of the mapping.

And it is short-lived events — like an exceptionally hot and dry week — that can lead to rapid wildfire spread, Crapser told the Casper Star-Tribune.

The Badger Creek Fire, first began in early June, grew with the help of a week like that. On June 1, low temperatures meant low fire danger in the area. Just more than a week later, after fuel

sources had been dried out by a heat wave, the fire ignited and spread rapidly. The fire's spread resembled that of an early-August burn, Crapser said.

The Terek Fire, burning near Worland, spread after a wind ribbon pushed lightning-caused fires across cheat grass, Crapser said. The invasive species, once dry, "will burn like gasoline," Crapser said.

Although Wyoming had a wet spring, Crapser said, it won't necessarily limit fire risk. The heavy rainfall promoted plant growth. When those plants dry out, they serve as additional fuel for wildfires.

A heavy rain won't rehydrate dried plants, Natrona County Emergency Manager John Harlin said. Once a plant has dried out, it will remain dead — and prime material to feed wildfires, he said.

"Even a torrential rainstorm won't change ... overall fuel levels too much," he said.

For the month of July, the danger is "below normal" in northern Wyoming, according to maps provided by the National Interagency Fire Center. Through October, the entire state's wildfire potential is rated as "normal."

Update: Park Firefighters Located, Suppressing Beaver Creek Fire (Jackson Hole News & Guide, Jackson Hole, WY)

Frederica Kowley, July 16, 2018

Monday afternoon at about 1:30 p.m., Grand Teton National Park firefighters located and started suppressing the small fire that started smoking Sunday evening west of the Beaver Creek area.

Officials received a smoke report at approximately 5:15 p.m. Sunday, July 15 from a park employee. An engine and firefighters on foot were dispatched to the scene at that time, said Denise Germann, the public information officer for Grand Teton National Park.

Park officials believe the cause of the fire was a lightning holdover from last week's storm, she said. Heavy rain showers following the storm prevented firefighters from locating the fire until it began smoking yesterday.

The fire is approximately one-tenth of an acre in area, Germann said.

It's important to completely put out campfires so they are cold to the touch and immediately call 911 or the interagency fire dispatch if park visitors see smoke, she said.

"It's a good reminder for everybody as we get into the middle of July and vegetation starts drying out," Germann said.

Jack Corcoran

Program Support Specialist – External Affairs FEMA Region VIII 303.235.4944 (desk) 202.320.2378 (cell)

john.corcoran@fema.dhs.gov

Sender:	Greff, Stacie
Recipient:	"Americanos, Christopher "
Sent Date:	2018/07/31 16:35:29
Delivered Date:	2018/07/31 16:35:00

From:	Greff, Stacie
To:	"Dick, Jennifer "
Subject:	Info: Cheyenne River Sioux Tribe chairman to pipeline builder: 'We will be waiting'
Date:	2018/07/17 14:06:30
Priority:	Normal
Туре:	Note

From: Greff, Stacie

Sent: Tuesday, July 17, 2018 9:01 AM

To: Depalo, Lee <lee.depalo@fema.dhs.gov>; Dragani, Nancy <nancy.dragani@fema.dhs.gov>

Cc: Floyd, Megan < Megan. Floyd@fema.dhs.gov>

Subject: Info: Cheyenne River Sioux Tribe chairman to pipeline builder: 'We will be waiting'

Lee – Relates back to the letters you shared over the weekend, and why Cheyenne River Sioux is exploring a PDA and possible direct request versus going through the state.

From: Corcoran, John

Sent: Tuesday, July 17, 2018 8:44 AM

To: R8 External Affairs < R8PublicAffairs@fema.dhs.gov>

Subject: RE: Region VIII news clips July 17, 2018

Additional story of interest:

Cheyenne River Sioux Tribe chairman to pipeline builder: 'We will be waiting' (Rapid City Journal, Rapid City, SD)

Christopher Vondracek, July 17, 2018

On July 11, TransCanada sent a letter to the chairman of Cheyenne River Sioux Tribe about upcoming construction for the Keystone XL Pipeline.

A day later, Harold Frazier responded with four words: "We will be waiting."

In November, TransCanada received approval from a board in Omaha to begin the final buildout phase of its XL pipeline project, which will carry crude oil in a 36-inch pipe from the Alberta Tar Sands to a refinery in Illinois.

The 1,000-plus mile line will cross treaty land ceded to the Cheyenne River Sioux Tribe in the 1851 Treaty of Fort Laramie. Tribal spokesman Remi Bald Eagle said the pipe will also cross the

Cheyenne River closely upstream from the reservation and the nature of riparian lands means "so the pipeline will ultimately be on the reservation at some point."

Under federal law, consultation must take place. However, consultation can be fulfilled by TransCanada merely communicating to the tribes its intentions.

The July 11 letter from Nadine Busmann, senior manager of Indigenous Relations, Keystone XL, with TransCanada was "an opportunity to provide you with a further update." The letter stated TransCanada would move materials and "prepare construction-related sites in Montana and South Dakota" beginning in July. Activities could include truck and trailer traffic and new equipment to "staging areas and pipe yards."

The letter also acknowledges the "distinct relationship to the land" held by tribal nations and "the concern" tribes may have with construction of the pipeline. Busmann says TransCanada remains committed to dialogue and open to "discuss potential opportunities for participation in the project."

On TransCanada's website, the Keystone XL Pipeline is described as a "safe, reliable and environmentally responsible way to deliver crude oil to markets in the U.S."

In 2016, protest initiated by the Standing Rock Sioux Tribe culminated in thousands trekking to the Cannonball River in North Dakota to protest the Dakota Access Pipeline. That pipeline received expedited review under President Donald Trump and began pumping oil in May 2017.

Following the protest on Standing Rock, the South Dakota legislature passed Senate Bill 176, which allows the governor the authority to establish "public safety zones" of 20 people or fewer.

Thanks, Jack

Jack Corcoran

Program Support Specialist – External Affairs FEMA Region VIII 303.235.4944 (desk) 202.320.2378 (cell) john.corcoran@fema.dhs.gov

From: Corcoran, John Sent: Tuesday, July 17, 2018 8:41 AM To: R8 ALL PFTs-CORES <R8ALLPFTs-CORES@fema.dhs.gov>; R8 All Hands <R8AllHands@fema.dhs.gov> Cc: (b)(6) @mail.mil; (b)(6) @nd.gov; @state.co.us; (b)(6) (b)(6)@state.sd.us;(b)(6) @state.sd.us(b)(6) @utah.gov; (b)(6) @wyo.gov; (b)(6)@usace.army.mil; (b)(6 @fema.dhs.gov>; @hhs.gov; (b)(6) @hhs.gov; (b)(6) @sba.gov; (b)(6) @sba.gov; Nelson, Jason < Jason. Nelson 2@fema.dhs.gov>;(b)(6) @fs.fed.us; Alexander, Daniel

<pre><daniel.alexander@fema.dhs.gov>; (b)(6)</daniel.alexander@fema.dhs.gov></pre>	@atf.gov; (b)(6)	@aveshka.com; 0	Carlson-Sherbo,
Diana < Diana. Carlson-Sherbo@fema.dhs.gov>;	(b)(6)	ogilvy.com; (b)(6)	@ogilvy.com;
Paradise, Jeanne < Jeanne. Paradise@fema.dhs.g	ov>; Green, Dan	iel <daniel.green3@< td=""><td>ofema.dhs.gov>;</td></daniel.green3@<>	ofema.dhs.gov>;
(b)(6) @ogilvy.com			
Subject: Region VIII news clips July 17, 2018			

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COLORADO

Colorado wildfire update: Frequent lightning, higher risk of flash floods forecast Tuesday (Denver Post, Denver, CO)

Kirk Mitchell, July 17, 2018

The expression "double-edged sword" has often been used to describe Colorado's 2018 fire season whenever storm clouds approach.

On Tuesday, it'll likely be used with regularity across the state as a powerful weather front creeps over burn areas with the potential to drop large hail stones and bring frequent lightning strikes and brief heavy rain.

The storm could help firefighters extend fire lines and mop up a dozen active wildfires from Costilla County in the southern part of Colorado all the way to the Wyoming border. It could also be the harbinger of new headaches including flash floods, lightning-sparked spot fires and high winds spreading fires.

Forecasters warn that flash flooding and winds up to 60 mph are possible Tuesday over burn areas.

"We don't want too much rain," said Jennifer Costich, spokeswoman for the Christine Lake fire a mile west of Basalt.

In burned-out fire areas, stripped of trees and other vegetation, as little as .03 inches of rain in a short period of time can trigger a "very dangerous situation," according to the National Weather Service.

Flash flooding typically occurs in waterways, along creek and river beds, but it can also occur along roadways, in ravines and in most any down slope area — places that don't usually carry or channel water.

People in areas under flash flood watches and warnings should be prepared to take action and move to higher, safe ground at a moment's notice.

416 FIRE

The fire area north of Durango is under a flash flood watch Tuesday afternoon through Tuesday evening.

The burn scar area in northwest La Plata County could see heavy rainfall and residents in the area, especially along the U.S. 550 corridor near Hermosa, "should prepare for potential flooding impacts," the weather service said. "Elsewhere, be prepared for flash flooding and debris flows on many area highways and roads."

The fire, which started June 1, has burned more than 54,000 acres and was 50 percent contained Monday afternoon, fire officials said.

SPRING CREEK FIRE

Moderate, cooler weather and ongoing rains, including thunderstorms along the eastern edge of the fire area, has increased chances of flash flooding, fire officials said. Lightning in recent days has also been a concern.

"Fire weakened trees continue to pose a hazard and flash floods are occurring in areas that receive rainfall," fire officials said Monday.

Isolated to scattered thunderstorms are possible Tuesday afternoon and evening, the weather service reports. "Dangerous cloud-to-ground lightning, with wind gusts up to 40 mph and locally heavy rainfall will be the primary storm risks," the weather service said. "Any heavy rainfall which occurs on burn scars could produce dangerous flash flooding."

Chances for thunderstorms will decrease mid- to late-week as drier air pushes into the region. But lightning, brief heavy rainfalls and winds up to 50 mph will still be possible and could raise concerns.

Thunderstorm chances ramp up again Friday and into the weekend as monsoon moisture returns.

The fire, in Costilla and Huerfano counties, has burned more than 108,000 acres and was 91 percent contained Monday night.

LAKE CHRISTINE FIRE

On Sunday, fire crews built hand lines along the northwestern edge of the fire, officials said Monday.

"Much of the burned area has exposed soils which could lead to an increased potential for erosion or runoff during rainfall," fire officials said.

Utility companies continue repairs along damaged transmission lines. Late in the afternoon Sunday, some isolated flareups, creeping fire, smoldering and isolated torching occurred in the northern fire section. The northern end of the fire remains uncontained. Burning in steep, rugged

terrain, the fire will likely continue to spread north. Smoke will continue to plume for some time and flames may be visible in the evening.

The fire has burned just over 6,800 acres and was 59 percent contained Monday night.

WESTON PASS FIRE

Cooler temperatures and a chance for rain are expected to impede fire growth and help fire crews reach full containment.

The lightning-sparked 13,023-acre wildfire nine miles southwest of Fairplay is at 93 percent containment.

Hot, dry temperatures Thursday through Sunday are another concern.

Colorado wildfire update: Post-fire flooding big concern after blazes decimated vegetation (Denver Post, Denver, CO)

Kirk Mitchell, July 16, 2018

As the majority of Colorado wildfires approach 100 percent containment, Forest Service teams are beginning to visit burn areas on U.S. Forest Service lands to assess their vulnerability to flooding, landslides and other fire-related catastrophes.

Nine of the 12 wildfires still plotted on the U.S. Forest Service fire map are at 90 percent containment or higher, including the largest wildfire in 2018, the Spring Creek fire in south-central Colorado.

The aftermath of the wildfires will pose hazards for years to come because hills and mountain sides are stripped of vegetation, according to Forest Service officials. Fire can destroy roads and homes while leaving communities downstream of burn areas at risk of flooding and rock slides, according to Forest Service officials.

The U.S. Forest Service has assembled a team of hydrologists, soil scientists, road engineers, wildlife specialists and fisheries biologists to assess damage caused by wildfires to make recommendations for emergency mitigation work to protect human life as well as cultural and natural resources.

"Everyone near and downstream from the burned areas should remain alert and stay updated on weather conditions that may result in heavy rains over the burn scars," according to a Forest Service report. "Flash flooding may occur quickly during heavy rain."

Here's a wrap-up of the largest wildfires in Colorado:

SPRING CREEK FIRE

A flash flood warning is in effect through 6 p.m. today.

Rain has dramatically reduced the activity of the 108,045-acre wildfire five miles northeast of Fort Garland. It is now 91 percent contained.

The number of firefighters still tasked to the fire has fallen to 594 and most of them are stationed in a steep wilderness area on the northwest corner of the fire.

The Spring Creek fire is the third largest in state history.

416 FIRE

Steady rains have taken the punch out of the wildfire that started 13 miles north of Durango on June 1.

In early June, more than 1,000 firefighters were tasked to the fire. Now only 21 people are assigned to the wildfire, mostly to repair fire lines when needed.

The fire is 50 percent contained. The wildfire is burning in wilderness in the San Juan National Forest where containment is not a goal.

All the areas along the eastern flank and southern end of the fire are completely contained.

LAKE CHRISTINE

The 6,822-acre wildfire, which started July 3 about a mile from Basalt, is 59 percent contained.

"We got some sprinkles last night and that helped out. We don't want too much rain or that could cause flooding," fire spokeswoman Jennifer Costich said Monday.

Fire crews are picking their battles in heavily forested areas to avoid risk to firefighters. Some areas in the more active northwest corner of the wildfire only have one entry and exit road, which is dangerous for fire crews, she said.

"It may take a long time to get there because of the safety issue," Costich said.

Firefighters are attacking scree areas, where rock slides limit vegetation, to build fire lines, she said. Helicopters are dropping water and retardant on hot spots once they begin to smolder.

Two people are accused of igniting the wildfire while firing tracer bullets at a shooting range near Lake Christine, according to the district attorney's office. The 2,100 people who were evacuated have since been allowed to return home. The fire destroyed three homes.

WESTON PASS FIRE

Isolated rain is expected Monday morning beginning at around 6 a.m. Increasing rain showers and thunderstorms are expected between noon and 8 p.m.

Containment on the 13,023-acre wildfire located nine miles southwest of Fairplay has ballooned to 93 percent.

The remaining 272 firefighters still tasked to the blaze are mostly building fire lines and putting out hot spots.

A bird's-eye view of what floods may bring (The Durango Herald, Durango, CO)

Ryan Simonovich, July 17, 2018

A perfect storm could send debris hurtling down canyons and potentially damage property adjacent to the 416 Fire burn scar. To prepare for the worst-case scenario, La Plata County Office of Emergency Management is using a drone to get a bird's-eye view of problem areas.

On Monday, Tom McNamara, emergency management coordinator, flew a drone with a camera attachment along Hermosa Creek to survey what kind of debris may become problematic in case it floods. He has done the same behind the Falls Creek subdivision and above the Lower Hermosa Campground.

"Primarily, there's trees - old, dead fall that's made its way into the creek," McNamara said.

When trees are swept downstream by rushing water, they could become caught on bridges and dam the river, he said. If there is flooding, large debris could smash into structures and homes.

Despite warnings from the National Weather Service and emergency officials, no floods had occurred as of Monday afternoon near the burn scar. However, it's just a matter of the right storm conditions in the right area, said Butch Knowlton, director for La Plata County Emergency Management.

"If it's a dump in a short period of time, then that pushes a lot of stuff down in a hurry," Knowlton said. "If it's the way it's been for the last few days ... then we do see a little bit of ash movement, but it hasn't created any significant problems yet."

Areas of specific concern include Dyke Canyon, Tripp Creek and the Hermosa Creek Drainage.

The goal of the drone work is to have a better idea of what lies upstream that is waiting to come down. Then, emergency officials can inform homeowners who are in the path of a potential debris flow.

When a big storm comes, they can also send emergency notifications and issue evacuations or pre-evacuations for areas expected to be hit hard by debris flows.

"If we get enough information, and understand what's happening well enough, we should be able to be in a better position to keep people out of the way when something bad may happen or is happening," McNamara said.

In addition to drone flyovers, emergency planners have existing flood maps, terrain modeling and geologic data such as soil types and slope gradient. Another good resource includes historic accounts from longtime residents who have experienced floods in the past.

Many residents remember the mudslides and debris flows that came after the 2002 Missionary Ridge Fire, which caused significant property damage to homes on East Animas Road (County Road 250), Florida Road (County Road 240) and the Vallecito area, among others.

In some cases, mud and rock broke through doors and flooded basements, garages and main living floors of homes.

"We have the experience," Knowlton said, referring to the aftermath of Missionary Ridge. "We have the knowledge of what could occur."

McNamara adds that a large part of the planning is finding areas that previously wouldn't have posed a problem. Before the fire, hillsides might have been able to handle a lot of rain. Now, because they are void of vegetation, heavy rain will create mudslides or flooding.

The hope is that officials will be better prepared for danger, because with the drone imagery, they will be able to predict whether an area will flood or have large debris flows.

According to the National Weather Service, there is up to a 40 percent chance of thunderstorms Tuesday and a 20 percent chance Wednesday. Chances of storms decrease later in the week.

Whatever the weather does, there will be danger lurking on the mountain.

"The material is up there, the terrain is up there, the risk is up there," Knowlton said. "It's all solely dependent on the volume of rain that comes with each storm."

Wildfires initially tough on wildlife, but some can benefit long-term (The Daily Sentinel, Grand Junction, CO)

Dennis Webb, July 17, 2018

When the Divide Fire raged through remote terrain in rural Moffat County in late June and early July, it not only consumed multiple residences — it torched nearly 20,000 acres of priority habitat for the imperiled greater sage-grouse.

The fire served as a reminder that wildfires have consequences for wildlife, too. Other reminders have come in the story of a bear cub that is being rehabilitated after its paws were severely burned in the 416 Fire north of Durango, and officials warning residents in the Basalt area to

watch for hungry, displaced bears and other wildlife after a bear was spotted along the fire line of the 6,600-acre Lake Christine Fire and another showed up at the firefighter camp.

But while animals can be among the casualties when blazes break out, the overall impacts of fires can be not just negative but positive, depending on the species, particularly over the long term.

Brad Petch, senior wildlife biologist in northwest Colorado for Colorado Parks and Wildlife, said any fire results in local loss of wildlife.

"The larger the fire, the more significant that is," he said.

But larger animals such as big game and mobile ones such as adult birds often are able to move quickly enough to escape, he said. Younger animals tend to fare worse.

"Fawns and calves disproportionately get caught for deer and elk," he said.

While bigger, faster-burning fires create more challenges for animals trying to escape, Petch said oftentimes there are pockets within the fire perimeter that don't get burned.

"It's not uncommon for wildlife to hole up in those," he said.

Petch said he doesn't want to minimize the loss that occurs due to animals being trapped and killed by fires.

"But it's not as severe, often at least for larger wildlife, as it looks like it must be to watch a fire burn across a landscape."

Petch said wildlife have adapted to wildfire over generations. He added that once a fire is out, wildlife returns to a burned area pretty quickly.

"Particularly in a little bit wetter year than this one, it's not uncommon to see antelope back in a fire before the ashes are cool. Within a day or two you have antelope really using fire scars and working out what green vegetation is left," he said.

Drier, hotter fires result in less early regrowth, but still, plants often begin to recover within a few weeks, and are highly attractive to wildlife, Petch said.

He said among the first big-game species to come back after a fire are elk. They're predisposed by their size, movement and focus as grazers to take advantage of the grasses that are among the first types of vegetation to regenerate, and elk particularly benefit over the first decade after blazes, Petch said.

Later, perhaps 20 to 40 years afterward, shrubs have flourished, leading to positive responses by other animals such as deer, he said.

He said there's less benefit from fire for animals such as sage-grouse and species that nest in trees.

"The longer-term effects are variable by species, but in the long run, at least for big-game species, they tend to benefit more from fire than they are harmed by it," Petch said.

Bureau of Land Management spokesman David Boyd said young, new native vegetation that sprouts after a fire can be highly nutritious for animals such as big game.

Fire also can create mosaic patterns of vegetation with openings where animals can feed and areas of unburned cover where they can hide and be out of the elements, Boyd said. Land managers often strive to create such mosaic patterns when they use prescribed fires or mechanically treat landscapes to mimic wildfires, he noted.

Bigger fires may be less beneficial to animals, burning through an area more uniformly, burning so hot it's harder for plants to recover, and killing important microorganisms in soil, Boyd said.

Petch said there are more front-end negatives in the case of bigger fires. He said a 40,000-acre fire is very different for wildlife than a 5,000-acre fire, depending on the species and factors such as its range over the course of a year. But he said sometimes a fire that resets a landscape "can be a tremendously valuable thing for wildlife" 30 or 40 years down the road.

He said it can be hard to talk about the potential long-term benefits of fire to some wildlife when it's the middle of fire season and people are out of their homes due to evacuations, or when fires limit hunting access. But those are short-term impacts, he said, while a fire's benefits can last for generations to come.

Unfortunately, that's not so much the case for the sage-grouse habitat that recent flames have consumed in northwest Colorado. The greater sage-grouse ranges over a number of western states and the BLM has imposed numerous restrictions on activities such as oil and gas development and livestock grazing to try to keep it from needing protection under the Endangered Species Act. In Colorado, it's found only in the northwestern part of the state, and particularly in Moffat County. So the Divide Fire, along with the 1,636-acre Thornburg Fire west of Maybell in Moffat County, were setbacks to the bird and its habitat.

Fire has been identified in the Great Basin, a multistate region west of Colorado, as a big threat to sage-grouse habitat. Boyd said there's a concern that after large fires especially, such as the Divide Fire, annual grasses can move in that make it hard for sagebrush to re-establish itself. Cheatgrass, an invasive species that sprouts up after fires and also is prone to burning, can perpetuate the fire cycle.

Petch said Colorado is less susceptible to cheatgrass infestation than some other states, but losing thousands of acres of sagebrush all at once can have at least short-term effects on sage grouse. He said it can take 20 to 30 years for sagebrush to come back after fires, particularly in the case of hotter ones.

He said some of the sage-grouse habitat that burned is among the wetter habitat in Colorado for the bird, which will aid in recovery, but it's still "not moist by any means," so that recovery still will take a while.

Petch said he believes the Divide Fire burned an area that doesn't contain many sage-grouse leks, or springtime breeding grounds, but does contain habitat the birds use a lot in the summer.

Nanci Limbach, who runs the Pauline S. Schneegas Wildlife Foundation wildlife rehabilitation facility near Silt, said the Basalt-area fire occurred as hawks were fledging and probably on the ground, so she expects many fledglings died.

Her center has gotten calls from people about hawks in their yards. Limbach said the birds probably flew from the fire and were exhausted.

"We've just had people leave them and so far every one of them within a day has managed to fly off," she said.

Her center once treated a hawk that had feathers burned in a wildfire in the Battlement Mesa area before a firefighter was able to hose it off and save it.

In the past, the center also has worked on deer whose legs were burned.

"Some of them make it and some don't. It depends on the extent of the burn," she said.

She said amputation isn't an option because it's not allowed for rehabbing wildlife in Colorado.

Limbach said the center has had deer with ears burned off as well. They can live without ears, she said. But she said the stress and pain can be fatal. She said for deer and other ruminants, just the stress of running long distances to escape flames can be deadly.

Limbach and her husband are partners in a honeybee yard she said got wiped out by the Lake Christine Fire. She said the fire unfortunately went through the one part of the property containing the hives. Ironically, bees are kept calm in their hives by beekeepers using smoke.

Petch said people living near burn areas should be aware of the increased chances for seeing displaced wildlife, including bears. Authorities are asking that homeowners near fires secure food sources so as not to attract bears in particular and get them used to living near homes,

Petch said wildlife officials ask that if people see a fire-injured animal, they don't try to care for the animal themselves but mark where it is and let CPW know.

"Oftentimes the most humane thing is to try to put those animals down but we do try to care for and rehabilitate the ones that have a chance of recovery," he said.

MONTANA

Why There's Only \$4 Million In Montana's Firefighting Fund (Montana Public Radio, Missoula, MT)

Eric Whitney, July 16, 2018

The State's fire fighting savings account started this month with the second lowest balance since it was created a decade ago.

There's only about \$4 million in the fund's reserves for this fire season. That's about a fifth of what the state needs to cover an average fire season bill.

But John Tubbs, the head of Montana's Department of Natural Resources and Conservation, says that won't stop the state from sending out crews and aircraft to put out fires this year.

"When the balance is low, firefighting will remain a priority and we go into the supplemental appropriations approach," he says.

That means DNRC will spend whatever it has to to fight fires, pulling in money it's set aside for other purposes, with the expectation that during the next legislative session lawmakers will backfill that spending, through what's called a supplemental appropriation.

While the state gets some federal reimbursement and it can draw on other emergency funds, Tubbs says it isn't ideal for the state's fire reserves to get zeroed out.

"It is better to have the fire fund with a balance so that we don't impact the next Legislature."

When DNRC has to ask the Legislature to backfill its firefighting costs, it eats into what the state can build in for its next budget. The cost of the 2017 fire season had lot to do with last year's state budget crisis, and, Nancy Ballance who sits on the Legislative Finance Committee, says depending on what happens this fire season it could happen again.

"If we look at the possibility of an extreme fire season like we had last time, then yes we do see a potential shortfall in 2019-2021 that we will need to cover somehow when we go into the next budget session," Ballance said.

Last summer, the state's firefighting costs were far in excess of the savings built up in the fire fund. That issue was compounded after, in the regular session, lawmakers took out half of the fire fund to plug other holes in the state budget.

Then, after the big firefighting bills were added up, Governor Bullock called a special legislative session in November, in part to pay off 2017 firefighting costs, and to provide money for this year's fire season.

Lawmakers were able to set aside money to pay last year's fire debt, but then political debates stalled. Together, lawmakers and the governor failed to set aside much money to fight fires this year.

"I'm not surprised that the balance is lower than we had hoped," says Senate Minority leader Jon Sesso, also a member of the Legislative Finance Committee.

Sesso says Republicans didn't agree to tax increases, including some on lodging and rental cars, that could have raised more money for the state, including its firefighting costs.

"When we left the special session we left with our work unfinished," Sesso says. "Proposals that we walked in to the special session weren't passed. We didn't put one extra percent on beds and we didn't do the rental cars. And we didn't do the fee that we hoped to raise on stock brokers; all of which we thought, I thought, were very reasonable to raise the dollars necessary to replenish and to prepare a reasonable fund for calendar year 2018 fire season."

Governor Steve Bullock also blames the Republicans for the lack of fire money available because they didn't support his ideas to increase revenue through taxes.

When Republicans declined to vote for the proposed tax increases they instead passed legislation pushing for Governor Bullock to make a deal to extend the contract of the state's only private prison in Shelby, run by CoreCivic. Some of the money from that deal would have gone into the fire fund.

Republican Senator Llew Jones says, "There had been the thought process that with Shelby included there would be enough for an average season, which is around \$25 million."

Governor Bullock negotiated with CoreCivic, but in April rejected a deal extending the private prison contract.

And, since the special session was called, additional fire costs from 2017 have stacked up, setting the state fire fund back even further.

Last month Governor Steve Bullock received his annual fire season briefing at Fort Harrison, in Helena, where forecasters said to expect above average temperatures and fire conditions running into the fall. News broke then that the fire fund had around four million dollars in it heading into the summer.

"As far as how we'll address it, it's way too premature to talk about it," Bullock said. "What I can convey to both Montanas and to any member of the Legislature that are saying 'well, now what do we do,' that we'll address it. And I will expect the Legislature to be partners in figure out how to do that."

It was at the same annual fire briefing last year that Bullock was told by forecasters the state would likely see average fire conditions in 2017. That forecast was wrong, and Montana's government budget fell apart amid what turned out to be a historic fire season.

The ripples of that fiscal crisis left the state's fire fund just under \$20 million short of covering an average fire season. The extent of this year's burn will have a lot to do with how big a budget challenge state lawmakers face when they return to the capitol in January.

Two areas listed for moderate drought; most of state normal (Bozeman Daily Chronicle, Bozeman, MT)

Michael Wright, July 17, 2018

All but two parts of Montana have avoided drought conditions so far this summer, something state officials are happy to see after last year's droughts turned into a large fire season.

Michael Downey, chief of the water planning section for the state's Department of Natural Resources and Conservation, told the Montana Legislature's Water Policy Interim Committee on Monday that north central Montana and the northwestern corner are drier than normal, with portions of each considered to be in moderate drought. The rest of the state remains near normal.

Downey said that's certainly better than 2017, when much of the state went bone-dry and fueled several large wildfires. That could all still happen, though, and he said it all depends on what comes next.

"It's going to depend on what we get for precipitation in the next few weeks and really how hot it gets," Downey said.

Drought problems are looking significantly worse elsewhere in the West, according to the National Drought Mitigation Center's website. Montana has appeared better off for most of the year, as the snow piled high and broke records.

But a warm May sent the abundant snow downhill quickly, setting streamflow records and causing significant flooding on several of the state's rivers.

Downey said this past May was the warmest on record, with only four days recording low temperatures below 32 degrees.

"It wasn't that our highs were so high," he said. "It was that our lows tended to be quite a bit higher."

June counteracted that, bringing plenty of rain and temperatures that didn't climb too high. But the June moisture blast missed the north central and northwest, making for this month's moderate drought conditions.

The Climate Prediction Center's monthly outlook predicts above normal precipitation through this month for the south central and southeastern parts of the state. It also predicted below normal temperatures for all but the easternmost parts of the state through the same time period.

Reser Reservoir being drained following damage (Billings Gazette, Billings, MT)

July 17, 2018

Reser Reservoir, a Bureau of Land Management reservoir located about 18 miles northwest of Chinook, will be slowly drained throughout the summer due to structural damage at the dam.

A small washout was discovered this spring, and repair and maintenance to the dam is necessary to avoid a complete loss.

Montana Fish, Wildlife & Parks is working with BLM staff to coordinate the drawdown while trying to salvage and transfer as many gamefish as possible. FWP personnel is setting trap nets to collect yellow perch, bluegill, black crappie, and largemouth bass. These fish are then placed into tanks and transferred to other waterbodies.

The perch and black crappie will be going to Bailey's reservoir, the bluegill to Salmo Reservoir, and the largemouth bass to Dry Fork Reservoir.

FWP encourages anglers to go to Reser Reservoir and enjoy this fishing opportunity while it lasts. Once repairs are made to the dam and water returns, FWP will stock fish and re-establish the popular fishery.

For more information contact fisheries biologist Cody Nagel at 406-265-6177.

NORTH DAKOTA

Emergency manager wants radar for Watford City after tornado (Houston Chronicle, Houston, TX)

Associated Press, July 16, 2018

WATFORD CITY, N.D. (AP) — A local emergency manager is pushing for better weather radar coverage in western North Dakota after a tornado ripped through the area.

The closest Doppler radars to Watford City are about 140 miles (225 kilometers) away near Minot, the Bismarck Tribune reported . Radars at that distance detect storms forming at least 10,000 feet (3,048 meters) above ground, said John Paul Martin, a warning coordination meteorologist for the National Weather Service in Bismarck.

Emergency manager Karolin Jappe is advocating for a radar closer to McKenzie County, which leads the state in oil production.

"We're the epicenter of the oilfield, and we have so much risk here it's scary," Jappe said.

Watford City faced an EF2 classification tornado last week that killed a newborn baby and injured more than two dozen people. The Weather Service issued a severe thunderstorm warning

with a statement about a possible tornado about an hour before the twister hit the city, Martin said.

Officials aren't clear whether better radar coverage would've changed the outcome, but Gov. Doug Burgum said state officials plan to look into the issue.

"When the dust is settled and the cleanup has happened and we've taken care of all the immediate needs, we want to make sure we don't lose sight of lessons learned," Burgum said. "One way that you prevent this kind of tragedy is to make sure that you've got good warning systems."

Meteorologist Daryl Ritchison doesn't believe having a radar closer to Watford City would have led to a more advanced warning of the tornado, but he said he would still like to see a Doppler radar better cover the region.

"It was a unique type of tornado that is very, very difficult to pick up," said Ritchison, interim director of the North Dakota Agricultural Weather Network. "It was just a tornado at the wrong place at the wrong time."

Watford City Local creates business for tornado victims (KFYR, NBC Affiliate, Bismarck, ND)

Jemeisha Lyde, July 16, 2018

WATFORD CITY, N.D. - A tornado ripped through a path of this section in Watford City causing damage to RV's and trailers at Prairie View Park.

"The cleanup efforts are going actually really well. We had so many people call up and they wanted to do all they could and we had all sorts of big companies that are here in McKenzie County and we made a list," said McKenzie County Emergency Manager Karoline Jappe.

Residents salvaged any items they could before being taken to the shelter.

"We worked for three days straight trying to find temporary housing and more permanent housing because we had 75 families and people displaced because there was 75 RV's that were totally unlivable," said Jappe.

The relief teams at the Red Cross and surrounding cities stepped up to donate useful items like food and water to the victims. It's a generous effort, but is still a long way to recovery.

"I think if we had a few more companies help us we could get dishes, silverware that kind of thing," said Jappe.

That's when #WatfordStrong was created. It's an online T-Shirt business that's become popular in the Bakken raising proceeds for those affected from the tornado.

"It's one of those opportunities where you just feel called to step up," said Katie McGilvray, Founder of #WatfordStrong.

#WatfordStrong has been in operation for only six days. It's become the latest media buzz in Watford that's bringing aid to victims.

"I was telling one of my friends we went to eat lunch after we dropped our clothes and stuff off and I said I just feel like I need to do something more and she said "What?" and I said "What if we made a shirt," said McGilvray.

McGilvray says it's been mind-blowing seeing the community come together during tough times like this and because of the support her business has raised nearly \$15,000.

"When I opened my account I was like oh my goodness you know and it's been incredible, so incredible," said McGilvray.

It's a lot of money, but Katie says it's been far worth the effort.

"We are going to go through the Chamber of Commerce and some of the different churches in town to figure out which families need help with medical bills or back to school stuff," said McGilvray.

Disaster can strike at any given moment, but when you have a community like this there's nothing the city can't face. For more information about hashtag Watford Strong, you can go to.

28 more homes to face demolition with changes to Fargo-Moorhead flood diversion project (Inforum, Fargo, ND)

Tu-Uyen Tran, July 16, 2018

FARGO — On the big screen, Phil and Ellen Sondreal and their neighbor Sue Nelson could see an aerial photo of their cul-de-sac with their properties outlined in red along with four other properties, Monday, July 16.

Their riverside homes are among 28 the city expects it will have to condemn to make way for new dikes as part of an effort to win approval for the Fargo-Moorhead flood diversion from Minnesota regulators.

The dikes are needed because more Red River floodwater would be allowed through Fargo-Moorhead to reduce upstream impact.

The Sondreals and Nelson accepted that they might have to leave the Riverwood Addition they've called home for 25 years, but they had a lot of questions about how they'll be treated.

"Are we going to get dinged with a low assessment because of our location and that's going to make them buy us out at a lower price?" Ellen Sondreal wondered, fearing appraisers would lower the value of homes that will be condemned.

"It's something we don't want to do," her husband said. "We want to stay where we're at, but if we have to leave of course we want to have a fair assessment."

Nelson said she feared getting hurt twice, once by getting less money from the city than her home's worth and again when trying to buy a comparable home, which will be higher in value.

However, Nathan Boerboom, the city's top engineering official working on the diversion project, said appraisers typically value homes as if they're not being condemned.

Under the previous diversion plan, an upstream dam would release floodwater into the Red River through Fargo and Moorhead until the river gauge near Fargo's water treatment plant reaches 35 feet. The rest of the water would go through the diversion channel or remain behind the dam.

Swayed by upstream landowners complaining about disproportionate impact, a task force working with Minnesota regulators agreed to allow the gauge to reach 37 feet.

Many dikes Fargo and Moorhead have built over the years as part of the diversion project will contribute to that, according to Boerboom. But more and higher dikes are needed in several areas where they weren't needed before.

These include:

- An industrial area just north of Hector International Airport where easements are needed but no properties will be bought. An easement is where the city buys the right to build a dike on private land.
- Riverwood Addition in the city's northeast corner where the city plans to buy out six properties and pay for easements on one.
- Royal Oaks Drive north of the wastewater treatment plant where the city plans 12 buyouts.
- Woodcrest Addition near the Veterans Administration hospital where the city plans four buyouts and five easements.
- Elm Circle north of Mickelson Field where the city plans four buyouts.
- The Oak Grove neighborhood near downtown where the city plans two buyouts.
- The drainway going under Interstate 29 near Mills Fleet Farm where no buyouts or easements are needed.

The Sondreals and Nelson, for their part, were already thinking about how the buyouts will change their lives.

"I don't think we're going to buy a river lot again," Phil Sondreal said. "But we sure enjoy it out there. That's why we went there, it's because it's beautiful — and the great neighbors, of course."

SOUTH DAKOTA

South Dakota hail storms caused so much damage, you can see it from space (Argus Leader, Sioux Falls, SD)

Jeremy J. Fugleberg, July 16, 2018

Hail pounded through western and central South Dakota last month, as storm-hurled balls of ice blasted car windows and shredded crops.

How bad was it? NASA can help.

Because you can see the damage from space.

That's right. The space agency's satellites can see the damage left by the late-June hail, a light-brown tear stretching across more than half the state. In some spots, the hail scar is 6 miles wide.

"Crops and grasslands can present a very uniform and green background when observed from space. With wind-driven hail capable of shredding the vegetation, the storm damage becomes visible in satellite imagery," said Jordan Bell, a research meteorologist with NASA's Short-term Prediction Research and Transition Center (SPoRT), in a NASA news post.

The damage was so severe, it shows up on NASA satellite sensors that detect land surface heat. Hail-stripped areas run hotter than surrounding areas, because they lack protection from crops and other vegetation.

The first storm swept from southwestern North Dakota into north central South Dakota on June 27, just missing Pierre. Another storm on June 29 developed over Wyoming and swung into western South Dakota, spawning tornadoes and 4.5-inch hail stones, according to the National Weather Service.

The damage will fade in time. A similar situation in 2003 resulted in hail scars visible to satellites for about six weeks.

Official Cautions: Be Wary On The River (Yankton Daily Press & Dakotan, Yankton, SD)

Randy Dockendorf, July 16, 2018

Flooding isn't the only concern with the rising Missouri River.

As the "Mighty Mo" continues its high flow, the Yankton County Office of Emergency is warning about debris.

Yankton County Emergency Manager Paul Scherschligt posted a warning Monday on his Facebook page.

"(Our office) wants to remind people that with the higher flow on the Missouri River, they are going to see more trash in the river due to a faster current. Therefore, this will produce hazardous conditions due to the intensity of water flow," he said.

"There will be hidden objects in the water that may damage your boat, tear your inner tubes, and/or flip your watercraft. Use extreme caution when on the river or Lewis and Clark Lake. Always wear life jackets when on any body of water."

The objects have ranged across the board, with some of considerable size, Scherschligt said.

"There have been reports of floating trees and other types of debris in the water due to the higher flows and higher lake levels," he said.

"Conditions can change rapidly, so use precautions when out on the water during this high water event."

The Corps of Engineers recently announced plans to increase the releases from Fort Randall Dam at Pickstown and Gavins Point Dam near Yankton.

U.S. Army Corps of Engineers officials said the increased flows are intended to evacuate flood waters out of the mainstem reservoirs. The planned called for increasing the flows by about 25,000 cubic feet per second (cfs), while taking into account downstream tributaries and flooding.

Gavins Point flows currently stand at 54,000 cfs, Scherschligt said. The Corps will increase the flow to 60,000 cfs by July 23, with the Corps maintaining those releases through the summer and possibly into autumn.

The National Weather Service has issued a flood warning until further notice for the Missouri River at Verdel, Nebraska; Niobrara, Nebraska; and Springfield.

At 8 a.m. Monday, the stage stood at 11.03 feet at Springfield, while the flood stage is 10 feet. At stages nearly 12 feet, some camping areas at Springfield Recreational Area will be flooded.

At 8 a.m. Monday, the stage stood at 23.99 feet at Verdel, with the flood stage at 24 feet. At stages near 25 feet, boat docks at Lazy River Acres near Verdel will be flooded and some homes will be surrounded by water.

At 8 a.m. Monday, the stage stood at 21.72 at Niobrara, with the flood stage at 21 feet. At stages near 22 feet, the bottom road floods near Springfield.

Recent heavy rainfalls and other conditions have created problems for roads and bridges.

In Knox County, Nebraska, one portion of one road was closed starting Monday.

A portion of 531st Ave. north of Center, Nebraska, will remain closed until further notice for road repairs, according to Highway Superintendent Kevin Barta.

The closure will affect 886 Road to 889 Road on 531 Avenue. Work is estimated to be completed in two weeks.

A weekend incident near Parkston reinforced the importance of observing road barricades for flooded areas.

On its Facebook page, the South Dakota Highway Patrol posted photos and the narrative Saturday about an accident that occurred when the driver ignored a warning.

"Troopers responded to a crash about four miles northeast of Parkston. The driver of a Chevrolet Equinox drove past a road closed sign, vaulted across a wash out, and came to rest with the front bumper and back bumper on each side of the washout," the post said.

"The driver was wearing a seat belt and was transported to a hospital with serious, non-life threatening injuries. The Parkston Police Department, Hutchinson County Sheriff's Department, Parkston Fire and Rescue, Parkston EMS and Tracy's Towing assisted."

The Highway Patrol released more information Monday to the Press & Dakotan about the accident, which occurred around 10:40 a.m. Saturday.

Erin Geidel, 35, of Dimock was driving southbound in a 2015 Chevrolet Equinox at the intersection of 272nd Street and 413th Avenue. The vehicle kept going south through the intersection, bypassing a posted road closed sign. The vehicle traveled another 100 yards before colliding with a washout caused by previous rainfall.

Geidel was wearing a seatbelt and suffered serious non-life threatening injuries. The lone passenger was a juvenile male (age unavailable). He was properly secured in a child restraint and suffered no injuries.

Both persons were transported to the Parkston hospital.

The Highway Patrol investigated the incident, with charges pending.

The Highway Patrol concluded its Facebook post with a strong reminder.

"We have posted pictures before about driving around 'Road Closed' signs," the post said.

"Please..... DON'T DO IT. There is a reason the sign is in the middle of the road — the road is CLOSED."

UTAH

Dollar Ridge Fire 65% contained; smoke may be visible for weeks to come (Fox 13, Salt Lake City, UT)

Mark Green, July 16, 2018

DUCHESNE COUNTY, Utah — The Dollar Ridge Fire in Duchesne County is 65% contained as of Monday and is no longer threatening structures, but officials say smoke from the fire will be visible for weeks.

The fire has burned an estimated 56,734 acres and forced hundreds of people to evacuate earlier this month, though those evacuations have since been lifted. The fire destroyed dozens of homes and hundreds of trailers, sheds and outbuildings.

Fire crews say that while the fire no longer currently poses any threats to the public or structures, smoke from the fire area may be visible for weeks to come.

Officials say they have mopped up the majority of hot spots along the fire line, but due to safety reasons firefighters will not be extinguishing every individual hot spot within the containment area.

"Hot spots are more noticeable at night, and often appear larger than they actually are," fire officials stated Monday. "Generally, if a hot spot is campfire size, it poses no threat. If a group of trees torch out, or fire is seen outside the fire containment line, please inform fire officials."

Evacuations to be lifted for area impacted by Dollar Ridge Fire (Deseret News, Salt Lake City, UT)

Ashley Imlay, July 16, 2018

FRUITLAND, Duchesne County — As firefighters increase containment of the Dollar Ridge Fire, residents in areas of the evacuation zone can soon return to their homes, Duchesne County Sheriff's Office announced on Monday.

About 470 firefighters were still fighting the human-caused blaze, which has burned more than 56,700 acres and was 85 percent contained Monday.

The evacuation order will change to pre-evacuation status at noon on Tuesday for residents with property along 11500 South, Strawberry River Road west of Camelot, and in Timber Canyon, officials said, allowing property owners to return to their homes.

Residents will not be required to leave their homes "unless it becomes necessary to evacuate the area again for their safety," the office said.

Only property owners will be able to go to those areas beginning Tuesday. Officials hope to open the areas back up to the public "on or about" July 25, the estimated containment date for the fire, according to officials.

Firefighters Monday were continuing to build an "indirect fire line" on the uncontained southwestern side of the fire.

"This is an area of the fire where a lot of bug-killed timber is still standing and posing a threat to firefighters, so an indirect line is the safest option," state fire officials reported in a press release.

With warmer weather and less humidity expected in coming weeks, officials said smoke from the fire would continue to be visible but shouldn't pose a threat to the public or to buildings as the smoke is "in the interior of the fire area."

However, if someone spots fire burning outside the containment line, they should contact fire officials, the release stated.

Flash flooding causes havoc from Georgia to Utah (The Washington Post, Washington, DC)

July 17, 2018

WASHINGTON — Flash flooding has been rampant across the United States since the spring, and it continued over the weekend in several states from the Southeast to the Mountain West.

Two men in a vehicle got caught up in a flash flood Saturday evening in Bonne Terre, Mo., south of St. Louis. As much as 4 inches of rain had fallen in the area, causing several streams and creeks to overflow.

When emergency officials arrived, the car was already downstream. One man had already made it to dry land, but the other was still in the water, hanging on to a tree branch for at least an hour.

Nine miles southeast, first responders rescued a woman who drove into the flood and was locked in her car after water shorted the vehicle's electronics.

In Georgia, flash flooding prompted officials to evacuate an apartment complex in Jonesboro, a suburb of Atlanta, Saturday.

In Colorado, torrential rain caused landslides and road closures when a creek west of Pueblo overflowed.

In the Flagstaff, Ariz., area, flooding was bad enough on Sunday that the American Red Cross opened a shelter at a middle school for families affected.

Floods add to long Southern Utah history of water-caused damage (St George Spectrum & Daily News, St George, UT)

July 16, 2018

Emergency crews and volunteers were still working Monday to clean up after the damage done to Washington County communities by flash flooding over the past five days.

In Dammeron Valley, consecutive heavy storms Thursday and Friday swamped dozens of homes and yards with mud and debris. Even after a considerable community effort on Sunday, when about 1,500 volunteers showed up to pitch in with clean-up efforts, some homeowners still faced ruined basements and expensive rebuilds.

Some residents measured more than three inches of rain falling in a single storm late Thursday, all coming over the course of a few hours.

In Washington City, flood waters followed a similar path into basements and low-lying yards, with neighbors rushing to help limit the damage.

The rain forced the temporary closure of the Zion-Mount Carmel Highway inside Zion National Park, and officials closed several of the park's most popular hiking routes after rockfalls, mudslides and other debris took out large chunks of trails.

Neighboring Kane County had seen major flooding as well, with rocks and debris carving into homes and inundating area roadways.

A history of flooding

No deaths or significant injuries have been attributed to this week's floods, but they add to an extensive history in and around Zion and the greater St. George area. Such events have always claimed lives and property, but the damage has increased in recent years as the population has grown and more of the area has developed.

Some of the more significant flooding incidents in the area include:

2015

- On Sept. 14, 2015, in the deadliest known flash flood event in Utah's history, three mothers and 10 of their children were believed to have been killed in Hildale when their two vehicles were washed into a nearby flood channel. Three young boys survived, with 12 found dead. One boy, presumed dead, is still missing.
- On the same day, 20 miles to the north in Zion National Park, there were no survivors among a
 group of seven adventurers who wandered into a slot canyon to go canyoneering.

• In a separate incident the same day in the nearby Arizona Strip, a local man was found dead several miles away from where his heavily-damaged vehicle sat in a floodplain.

2010

- Several days of sustained rain in December of 2010 destroyed several small bridges and damaged homes in various parts of the county. Across the Arizona border in Littlefield, flooding in the Beaver Dam Wash destroyed several homes in the Beaver Dam Resort area, undercutting the banks and sending the houses plunging into the muddy water.
- Two men who had reportedly intended to build a log raft and float down the Virgin River through the Narrows in Zion National Park were found dead downstream.

2005

 The most memorable flooding for many current residents was in January 2005 when the Santa Clara River swelled from heavy rains and melting snow, cutting through its river banks and sending homes toppling into the water. More than \$200 million in damages were reported and 50 families lost their homes.

One death was reported - a man driving near Quail Creek Reservoir was washed away after climbing onto the roof of his vehicle when trying to drive through a flooded wash.

1998

 Another flood in the Narrows in 1998 left two California hikers dead. A heavy rainstorm had caused the river to flow at more than 700 percent its normal range.

1997

 Eleven people were either killed or lost and presumed dead in a 1997 flash flood that swept through a normally dry wash in Antelope Canyon near Lake Powell. Only one person, a trail guide, survived the event by reportedly grabbing onto a ledge. His clothes were torn off by the force of the water.

1961

 Five Boy Scouts were presumed dead when their party experienced a flash flood while hiking the Narrows. A group of 26 Scouts from the Salt Lake City area camped overnight before heading into the popular hiking area, where a wall of water and debris swept through and carried off five members.

'Severe' flood alert issued for City of Kanab, Kane County (Fox 13, Salt Lake City, UT)

Taylor Hartman, July 16, 2018

KANAB, Utah – A flash flood warning for Kanab Creek and southern portions of Kane County was announced Monday, and the City of Kanab warned residents to exercise caution.

According to the National Weather Service Salt Lake City, the warning was issued for Kanab Creek, which drains down into the city of Kanab.

The flash flood warning will be in effect until 6:30 p.m. Monday, and Kanab City advised residents to exercise caution and "keep out of canyons and drainages."

Flood waters destroy popular Zion National Park trails (Good4Utah, Salt Lake City, UT)

Kierra Dotson, July 16, 2018

ZION NATIONAL PARK (News4Utah)- Clean up continues in Zion National Park after a flood swept through the area last week, causing mudslides and rockfalls.

Officials at the park say several popular trails remain closed Monday. Including Angels Landing, Kayenta, Upper Emerald Pools, and West Rim from the Grotto to Cabin Springs.

Shuttles are running as normal. They will not be visiting the Grotto Shuttle Stop.

Officials in the park released the following updates on damages:

Riverside Walk -

Sand, debris and small rockfalls were the issue on Riverside Walk. In one area, the sand was three feet deep covering the trail. Trail crews worked all day Wednesday and Thursday morning on clearing the trail. In the meantime, the Zion Shuttle turned around at Big Bend and there was no access to The Narrows from the Temple of Sinawava. Now that Riverside Walk is clear, shuttles have resumed their full route.

Zion-Mount Carmel Hwy (SR-9) -

Mud and debris on the Zion-Mount Carmel Highway was 3-4 feet deep in several areas, overwhelming the road drainage culverts and making the road impassable. Dozens of vehicles were initially stranded in the 1.1 mile tunnel and some stuck in the mudflow, Roads crews were able to plow a path to the vehicles to get them out late Wednesday night. Crews finished clearing the rest of the road and the culverts by late afternoon Friday.

West Rim Trail (access to Angels Landing from Zion Canyon) -

There is major damage on the West Rim Trail, in the area of Refrigerator Canyon. A section of retaining wall failed, causing an 18-foot gap in the trail that is over 5 feet deep. The West Rim

between Cabin Spring (near campsite #1) and the Grotto is closed. This includes Zion's popular Angels Landing Trail. There is no estimate for when the trail will be reopened. Visitors are encouraged to use Observation Point Trail or Hidden Canyon Trail as alternatives. The West Rim campsites are open and accessible from Lava Point.

Emerald Pools Area Trails -

Much of the Emerald Pools Trail complex is also closed due to major damage. Just past the alcove at the end of Lower Emerald Pools Trail, a 20 foot by 10-foot boulder that was supporting part of the trail fell, leaving a deep void in the trail. Two large retaining walls also failed. On the Kayenta Trail, numerous large boulders completely crushed approximately 50 feet of trail. The Kayenta Trail, Upper Emerald Pools Trail and a small section of Lower Emerald Pools Trail will remain closed until repairs can be made. There is no estimate for when the repairs will be complete. The Lower Emerald Pools waterfall is still visible from the Lower Emerald Pools Trail, but visitors can no longer walk behind it. Watchman Trail, Weeping Rock, and Riverside Walk are suggested alternatives.

The damage after the floods – locals look at their properties in Richfield (Fox 13, Salt Lake City, UT)

Erin Cox, July 16, 2018

RICHFIELD, Utah - Locals in Richfield are recovering after devastating flash floods over the weekend.

"I was running around trying to stop the water from coming down, but after a while, there's not much you can do," recalled Kirk Harris, who lost more than 200 acres of his sod farm in just 4 hours.

Harris said that kind of loss will likely cost him more than a million dollars.

Pointing out pipelines and water channels ruined because of the flood's flow, Harris said it may take until 2020 to get his sod business back on track.

After working with 30 percent less water this year, Harris said they scrimped and saved to make it through, and now, they still don't have enough to replant.

"We'll probably have to shut down for a year," Harris said.

But he's not the only one hurting. Harris said he helped other neighbors minimize the damage to their homes and land.

Surveying his property, Harris also pointed out the damage done to a gravel pit company down the road from him.

The pit was entirely filled up with water, and a bulldozer sat right in the middle, barely peaking up above the water.

"It's going to take a while to get it all cleaned up," Harris said.

Harris said he's working with Sevier County on a few projects to help minimize flood damage in the future.

Sevier County Commissioner Tooter Ogden said he's been working on getting funding for research projects on the water tables so they can know how to better handle floods in the future.

"Now, we're trying to make it," Ogden said. "Identify these areas; hopefully we can get the funding to help with trying to put in some detention dams.

WYOMING

Wyoming Wildfire Danger Slightly Lower Than Typical (Casper Star-Tribune, Casper, WY)

Shane Sanderson, July 16, 2018

CASPER, Wyo. (AP) — The Badger Creek Fire has burned for more than a month along the Colorado border, consuming more than 32 square miles (82 square kilometers) in the process. Six hours north, the Terek Fire, more than twice the size of its southern counterpart, has burned for more than a week.

The fires, which were almost completely contained Friday, will likely not be the last to ignite in Wyoming this summer.

This summer shouldn't bring with it an inferno, however. Authorities are predicting a relatively mild fire season in a state historically prone to bouts of burning wildland throughout the summer months. Those forecasts come with a significant disclaimer, however.

"As always, it all depends on our short-term weather," said Wyoming State Forester Bill Crapser.

The National Weather Service does not predict an unusually dry summer, according to drought outlook maps provided by the agency. Current conditions indicate nearly all of the state should remain untouched by drought through September, the maps show.

However, short-lived events, the agency warns, can impact the predictive power of the mapping.

And it is short-lived events — like an exceptionally hot and dry week — that can lead to rapid wildfire spread, Crapser told the Casper Star-Tribune.

The Badger Creek Fire, first began in early June, grew with the help of a week like that. On June 1, low temperatures meant low fire danger in the area. Just more than a week later, after fuel

sources had been dried out by a heat wave, the fire ignited and spread rapidly. The fire's spread resembled that of an early-August burn, Crapser said.

The Terek Fire, burning near Worland, spread after a wind ribbon pushed lightning-caused fires across cheat grass, Crapser said. The invasive species, once dry, "will burn like gasoline," Crapser said.

Although Wyoming had a wet spring, Crapser said, it won't necessarily limit fire risk. The heavy rainfall promoted plant growth. When those plants dry out, they serve as additional fuel for wildfires.

A heavy rain won't rehydrate dried plants, Natrona County Emergency Manager John Harlin said. Once a plant has dried out, it will remain dead — and prime material to feed wildfires, he said.

"Even a torrential rainstorm won't change ... overall fuel levels too much," he said.

For the month of July, the danger is "below normal" in northern Wyoming, according to maps provided by the National Interagency Fire Center. Through October, the entire state's wildfire potential is rated as "normal."

Update: Park Firefighters Located, Suppressing Beaver Creek Fire (Jackson Hole News & Guide, Jackson Hole, WY)

Frederica Kowley, July 16, 2018

Monday afternoon at about 1:30 p.m., Grand Teton National Park firefighters located and started suppressing the small fire that started smoking Sunday evening west of the Beaver Creek area.

Officials received a smoke report at approximately 5:15 p.m. Sunday, July 15 from a park employee. An engine and firefighters on foot were dispatched to the scene at that time, said Denise Germann, the public information officer for Grand Teton National Park.

Park officials believe the cause of the fire was a lightning holdover from last week's storm, she said. Heavy rain showers following the storm prevented firefighters from locating the fire until it began smoking yesterday.

The fire is approximately one-tenth of an acre in area, Germann said.

It's important to completely put out campfires so they are cold to the touch and immediately call 911 or the interagency fire dispatch if park visitors see smoke, she said.

"It's a good reminder for everybody as we get into the middle of July and vegetation starts drying out," Germann said.

Jack Corcoran

Program Support Specialist – External Affairs FEMA Region VIII 303.235.4944 (desk) 202.320.2378 (cell)

john.corcoran@fema.dhs.gov

Sender:	Greff, Stacie
Recipient:	"Dick, Jennifer "
Sent Date:	2018/07/17 14:06:29
Delivered Date:	2018/07/17 14:06:30

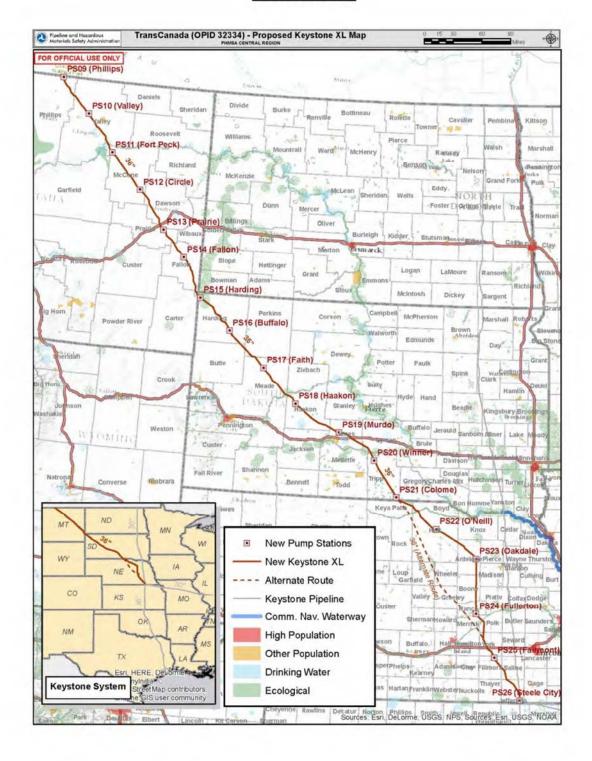
Background

The proposed Keystone XL project consists of an 881-mile long 36" pipeline and related facilities to transport up to 830,000 barrels per day (bpd) of crude oil from Alberta, Canada and the Bakken Shale Formation in Montana. The pipeline would cross the U.S. border near Morgan, Montana and continue through Montana, South Dakota, and Nebraska where it would connect to existing Keystone pipeline facilities near Steele City, Nebraska. There are 18 pump stations on XL.

TC Oil Pipeline installed the existing Keystone pipeline system from 2008 to 2013. It consists of a 30" line from the North Dakota /Canadian border to Steele City, NE. A 30" line leaves Steele City and goes east towards Woodriver, IL and on to Patoka, IL. Also, a 36" line goes south from Steele City, NE to the Gulf Coast in TX. See Exhibit A for the detailed map.

The original Keystone is operating under a special Permit. For Keystone XL, the operator will not apply for a Special Permit. However, the Special Conditions have been incorporated into the US Department of State (DOS) Final Supplemental Environmental Impact Statement (Final SEIS) and will be adopted by the operator as the DOS granted a Presidential Permit for the project (See Appendix C for the Special Conditions). Keystone will incorporate the conditions into their written design, construction, and operation and maintenance plans and procedures. This will provide PHMSA the ability to enforce the Special Conditions.

Exhibit A



From:	Greff, Stacie	
To:	"Americanos, Christopher "	
Subject:	Keystone XL	
Date:	2018/07/31 16:35:00	
Priority:	Normal	
Туре:	Note	

Chris - This was what I sent to Jen previously. 2 documents rec'd from Lee. Stacie

From: Greff, Stacie

Sent: Tuesday, July 17, 2018 12:06 PM

To: Dick, Jennifer < Jennifer. Dick@fema.dhs.gov>

Subject: Keystone XL

From: Greff, Stacie

Sent: Tuesday, July 17, 2018 9:10 AM

To: Dragani, Nancy <nancy.dragani@fema.dhs.gov>

Subject: Keystone XL

He may have sent to you separately. Just making sure as it ties back to the clip I sent this a.m.

From: Depalo, Lee

Sent: Saturday, July 14, 2018 12:26 PM

To: Greff, Stacie <Stacie.Greff@fema.dhs.gov> Cc: Floyd, Megan <Megan.Floyd@fema.dhs.gov>

Subject: Keystone XL

FYSA especially with the response

SA especially with t			
Sender:	Greff, Stacie		
Recipient:	"Americanos, Christopher (FYDIBOHF23SPDLT)/cn=Recipients/cn=d139c9fe4f134b54b23322cf204322fd-Americanos,>"		
Sent Date:	2018/07/31 16:35:16		
Delivered Date:	2018/07/31 16:35:00		
From:	b)(6) @state.sd.us>		
To:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:50:19		
Priority:	Normal		
Type:	Note		

Chairman's response.

Beg

From: (b)(6)	@gmail.com>
Date: July 13, 2018 a	
To: (b)(6)	@state.sd.us>
Subject: Re: [EXT]	
And his response is n	o surprise 🗆 🗆
On Fri, Jul 13, 2018,	
	.sd.us> wrote:
Thanks (b)(6) Thanks	nis is very interesting.
(b)(6)	
	2
Region 3 Coordinato	
Aberdeen, SD 57401	ergency Management
Office: (b)(6)	
Office.	
Click here for a two	question customer experience survey-
Confidentiality Note:	The information contained in this
	ntial or privileged material and is
intended only for use	by the individual or entity to whom th
are addressed. Use of	or distribution of information contained
	any other individual or entity not
intended to receive t	his is strictly prohibited.
On Jul 13, 2018, a	t 11:07 AM, (b)(6)
(b)(6) agmail.co	m> wrote:
Thought you	might find this interesting.
	032659330109127.jpeg>

Sender:	(b)(6) pstate.sd.us>		
Recipient:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Sent Date:	2018/07/14 13:50:07		
Delivered Date:	2018/07/14 13:50:19		
From:	(b)(6) @state.sd.us>		
То:	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:48:43		
Priority:	Normal		
Type:	Note		

This is just an FYI as you should be aware of the Chairman's response for overall situational awareness. I'll send his response in next email.

From: (b)(6) @gmail.com>
Date: July 13, 2018 at 11:07:22 AM CDT
To: Patti Pudwill- Region 3 Coordinator
(b)(6) @state.sd.us>
Subject: [EXT] Keystone XL

Thought you might find this interesting.

×

Sender:	(b)(6)	Distate.sd.us>
Recipient:	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"	
Sent Date:	2018/07/14 13	:48:31
Delivered Date:	2018/07/14 13	:48:43

From:	Greff, Stacie	
To:	"Dick, Jennifer "	
Subject:	Keystone XL	
Date:	2018/07/17 14:06:00	
Priority:	Normal	
Type:	Note	

From: Greff, Stacie

Sent: Tuesday, July 17, 2018 9:10 AM

To: Dragani, Nancy <nancy.dragani@fema.dhs.gov>

Subject: Keystone XL

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Sent: Saturday, July 14, 2018 12:26 PM

To: Greff, Stacie < Stacie.Greff@fema.dhs.gov>
Cc: Floyd, Megan < Megan.Floyd@fema.dhs.gov>

Subject: Keystone XL

FYSA especially with the response

Sender:	Greff, Stacie		
Recipient:	"Dick, Jennifer "		
Sent Date:	2018/07/17 14:06:17		
Delivered Date:	2018/07/17 14:06:00		
From:	(b)(6) Dstate.sd.us>		
To:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:50:19		
Priority:	Normal		
Туре:	Note		

Chairman's response.

Begin forwarded message:

From: (b)(6) @gmail.com>
Date: July 13, 2018 at 11:33:39 AM CDT
To: (b)(6) @state.sd.us>
Subject: Re: [EXT] Keystone XL

And his response is no surprise \Box

On Fri, Jul 13, 2018, 10:31 AM (b)(6)

(b)(6)

@state.sd.us> wrote:

Thanks (b)(6)

This is very interesting.

Region 3 Coordinator
SD DPS-Office of Emergency Management
Aberdeen, SD 57401
Office: (6)(6)

Click here for a two question customer experience survey.

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On Jul 13, 2018, at 11:07 AM, (b)(6)

@gmail.com > wrote:

Thought you might find this interesting.

<received_2032659330109127.jpeg>

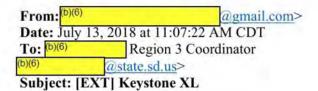
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Sender:	(b)(6) @state.sd.us>
Recipient:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "
Sent Date:	2018/07/14 13:50:07
Delivered Date:	2018/07/14 13:50:19
From:	(b)(6) Ostate.sd.us>

То:	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Subject:	Fwd: Keystone XL
Date:	2018/07/14 13:48:43
Priority:	Normal
Type:	Note

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Tina



Thought you might find this interesting.



Sender:	(b)(6)	@state.sd.us>
Recipient:	"Dragani, Nancy "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"	
Sent Date:	2018/07/14 13:4	8:31
Delivered Date:	2018/07/14 13:4	8:43

From:	Depalo, Lee	
To:	"Greff, Stacie "	
CC:	"Floyd, Megan "	
Subject:	Keystone XL	
Date:	2018/07/14 14:26:19	
Priority:	Normal	
Туре:	Note	

FYSA especially with the response

Sender:	Depalo, Lee		
Recipient:	"Greff, Stacie "; "Floyd, Megan "		
Sent Date:	2018/07/14 14:26:15		
Delivered Date:	2018/07/14 14:26:19		
From:	(b)(6) ostate.sd.us>		
То:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:50:19		
Priority:	Normal		
Type:	Note		

Chairman's response.

Begin forwarded message:

ail.com>
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te.sd.us

Thanks (b)(6)

Region 3 Coordinator
SD DPS-Office of Emergency Management
Aberdeen, SD 57401
Office: (b)(6)

Click here for a two question customer experience survey.

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agmail.com > wrote:

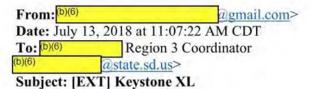
Thought you might find this interesting.

<received_2032659330109127.jpeg>

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Sender:	(b)(6) @state.sd.us>
Recipient:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "
Sent Date:	2018/07/14 13:50:07
Delivered Date:	2018/07/14 13:50:19
From:	(b)(6) @state.sd.us>
	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Subject:	Fwd: Keystone XL
Date:	2018/07/14 13:48:43
Priority:	Normal
Type:	Note

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Sender:	(b)(6)	@state.sd.us>
Recipient:	(FYDIBOHF2: "/o=Exchang	ncy 3SPDLT)/cn=Recipients/cn=0192d7decf9a4c21af3ac4c267429dd5-Dragani, Na>"; eLabs/ou=Exchange Administrative Group 3SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Sent Date:	2018/07/14 1	3:48:31
Delivered Date:	2018/07/14 1	3:48:43

From:	Greff, Stacie
To:	"Dragani, Nancy "
Subject:	Keystone XL
Date:	2018/07/17 11:10:00
Priority:	Normal
Туре:	Note

He may have sent to you separately. Just making sure as it ties back to the clip I sent this a.m.

From: Depalo, Lee

Sent: Saturday, July 14, 2018 12:26 PM

To: Greff, Stacie <Stacie.Greff@fema.dhs.gov> Cc: Floyd, Megan <Megan.Floyd@fema.dhs.gov>

Subject: Keystone XL

FYSA especially with the response

Sender:	Greff, Stacie		
Recipient:	Dragani, Nancy "		
Sent Date:	2018/07/17 11:10:16		
Delivered Date:	2018/07/17 11:10:00		
From:	(b)(6) @state.sd.us>		
То:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:50:19		
Priority:	Normal		
Туре:	Note		

Chairman's response.

Begin forwarded message:

Subject: Re: [EXT] Keystone XL

And his response is no surprise \Box

Region 3 Coordinator
SD DPS-Office of Emergency Management
Aberdeen, SD 57401
Office: (b)(6)

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On Jul 13, 2018, at 11:07 AM, (b)(6)

@gmail.com> wrote:

Thought you might find this interesting.

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Sender:	(b)(6) @state,sd.us>		
	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "		
Sent Date:	2018/07/14 13:50:07		
Delivered Date:	2018/07/14 13:50:19		
From:	(b)(6) pstate.sd.us>		
То:	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"		
Subject:	Fwd: Keystone XL		
Date:	2018/07/14 13:48:43		
Priority:	Normal		

Type: Note	

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From: (b)(6) @gmail.com>
Date: July 13, 2018 at 11:07:22 AM CDT
To: (b)(6) Region 3 Coordinator
(b)(6) @state.sd.us>
Subject: [EXT] Keystone XL

Thought you might find this interesting.



Sender:	(b)(6)	@state.sd.us>
Recipient:	(FYDIBOHF23 "/o=Exchange	cy SPDLT)/cn=Recipients/cn=0192d7decf9a4c21af3ac4c267429dd5-Dragani, Na>"; Labs/ou=Exchange Administrative Group SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Sent Date:	2018/07/14 1	3:48:31
Delivered Date:	2018/07/14 1	3:48:43

From:	Greff, Stacie
To:	"Dick, Jennifer "
Subject:	Keystone XL
Date:	2018/07/17 14:06:20
Priority:	Normal
Type:	Note

From: Greff, Stacie

Sent: Tuesday, July 17, 2018 9:10 AM

To: Dragani, Nancy <nancy.dragani@fema.dhs.gov>

Subject: Keystone XL

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From: Depalo, Lee

Sent: Saturday, July 14, 2018 12:26 PM

To: Greff, Stacie < Stacie.Greff@fema.dhs.gov>
Cc: Floyd, Megan < Megan.Floyd@fema.dhs.gov>

Subject: Keystone XL

FYSA especially with the response

Sender:	Greff, Stacie			
Recipient:	Dick, Jennifer "			
Sent Date:	2018/07/17 14:06:17			
Delivered Date:	2018/07/17 14:06:20			
From:	(b)(6) @state.sd.us>			
To:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "			
Subject:	Fwd: Keystone XL			
Date:	2018/07/14 13:50:19			
Priority:	Normal			
Туре:	Note			

Chairman's response.

Begin forwarded message:

From: (b)(6) agmail.com>
Date: July 13, 2018 at 11:33:39 AM CDT
To: (b)(6) astate.sd.us>
Subject: Re: [EXT] Keystone XL

And his response is no surprise \(\Box

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<received 2032659330109127.jpeg>

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Sender:	(b)(6)	@state.sd.us>
Recipient:	(FYDIBOHF23SPDLT)/ "Dragani, Nancy <td>=Exchange Administrative Group /cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; =ExchangeLabs/ou=Exchange Administrative Group /cn=Recipients/cn=0192d7decf9a4c21af3ac4c267429dd5-Dragani, Na>"</td>	=Exchange Administrative Group /cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; =ExchangeLabs/ou=Exchange Administrative Group /cn=Recipients/cn=0192d7decf9a4c21af3ac4c267429dd5-Dragani, Na>"
Sent Date:	2018/07/14 13:50:07	
Delivered Date:	2018/07/14 13:50:19	
From:	(b)(6)	@state.sd.us>

	"Dragani, Nancy "; "/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Subject:	Fwd: Keystone XL
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Date: July	13, 2018 at 11:07:22 AM CDT
To: (b)(6)	Region 3 Coordinator
(b)(6)	@state.sd.us>
Subject: [H	XT] Keystone XL

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Sender:	(b)(6) @state.sd.us>
Recipient:	Dragani, Nancy /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"
Sent Date:	2018/07/14 13:48:31
Delivered Date:	2018/07/14 13:48:43

Civil Disturbance Planning Meeting 28 Nov 2018

(b)(6)	Presentation
during th an incide coming i	Lincoln County Emergency Manager, has worked in very simple county EOCs with 3 people in them and has also worked in the State EOC (SEOC) when it was filled with people to 2011 floods. To 100 noted the importance of having someone who can document everything. If the expands far enough, the county will need to activate their EOC to take control of information in, social media, and resource ordering. Law Enforcement won't be able to do resource requests the if the incident is too large.
EOC pri- disaster, coordina	Douglas County Emergency Manager, activated his county EOC in response to the 2015 tornado. His county was only somewhat ready to respond to the incident. had never used are to that incident, and now believes in EOCs fully. Their incident was not declared a federa but the EOC was utilized to track finances and develop situation reports, plan operations, and te activities such as resource ordering with the SEOC. Tracking resources via the EOC is really their city finance person and county auditor also assisted with this.
some of	anty EOC structure had pre-determined personnel for specific positions prior to the incident, but those people were directly affected by the tornado. IMAT was ultimately called in to assist with particularly with plans, logs, and ops with local people working alongside them.
Emerger	ncy Management Functional Discussion Session
Facilities	Flowchart (attached)
	The local command post will be where tactical operations are being discussed and performed. The sheriff will be leading the operations with Highway Patrol and other law enforcement assisting. The command post will flow information to the county EOC, to include resource
a c r I	ordering, situation reporting, and IAP planning. The county will need to decide who will be relaying this information. The county EOC will continue this flow of information to the State EOC. A decision will need to be made at the local level as to who will be sending that information to the SEOC.
a c r I i	elaying this information. The county EOC will continue this flow of information to the State

an expenditure or to explain to them why something is needed. [0](6] makes a call to his county commissioner for anything beyond normal budgetary needs to inform the commissioner of the need. The Commissioner gave (0)(6) a \$15,000 spending limit before additional approval is needed. This is something each county emergency manager needs to discuss with their county

working so fast and won't be updating the Emergency Manager as fast as necessary, and they'll be doing most of their resource ordering via dispatch prior to the EOC being activated. Harding County has created trigger points for certain actions during a civil disturbance incident as it relates to activating their EOC. (D)(6) thinks they could be on their third trigger point before they are

notified the EOC might need to be activated. (b)(6)

Harding County Emergency Manager, shared concern that law enforcement will be

commissioner.

Haakon County Emergency Manager,

said a way to prevent that is to sit down with local law enforcement and discuss, "When exactly will you notify me in an incident? How will you be notifying me of updates?"

Law enforcement will need to contact the EOC for resource ordering in any case because they won't have access to certain resources at their local level.

noted an incident in Kimball where dispatch was used for resource ordering. The Emergency Manager opened up the fire hall for law enforcement to warm up from cold. Equipment ordering was still done via dispatch. In this situation, (b)(6) said they did not have a good handle on how many law enforcement were involved, which is something that would've been accounted for if there had been an EOC; an EOC fosters accountability for personnel and resources.

- ICS is flexible and adaptable. In most situations, the sheriff will likely be the IC. A sheriff needs to decide if they want to be the IC because that means they'll be the IC over the entire incident, to include fire/EMS needs as related to the incident. A sheriff would decide if they wanted to run things at the command post or from the EOC. The sheriff might also be more comfortable running the tactical operation where they wouldn't be in charge of the entire incident. If this were to occur, then someone else at the local level would need to be identified as the IC. These are the discussions that need to happen locally with the sheriff and have sorted out prior to an incident occurring.
- The EOC will help divide up duties at the local level so no person is tasked with too much. ICS is
 a delegation of responsibilities so not all duties should be placed on one person.

A sheriff can appoint someone to take their place when an incident becomes long. The sheriff should have this arranged prior to the incident, perhaps with a neighboring sheriff. If it gets to the 4th or 6th operation period, then they might be reaching farther out for replacements to develop a rotating schedule. A good rule of thumb is if the incident goes longer than 12 hours then the county should look at activating their EOC.

 Highway Patrol would most likely already be working alongside local law enforcement but not taking over since the incident is the responsibility of the county. As seen in previous responses, the state wouldn't charge for Highway Patrol doing normal duties, and the same with DOT.

Communications Flowchart (attached)

- (b)(6) State Radio Engineer, held a committee meeting to discuss how to best assist with communication needs during a civil disturbance incident. Out in the field, they intend to use VTAC digital repeaters that have encryption. North Dakota has a cache of 150 portable radios they've agreed to partially lend to South Dakota on an EMAC agreement and (b)(6) is actively in communication with them. The command post could receive communications from the field and forward requests to the county EOC. Special Ops channel encryption could be used at the county EOC to communicate to command post.
- (b)(6) is developing an informational sheet that has information regarding how to get encryption on specific radios. (b)(6) clarified to get a specific encrypted channel on a radio, the radio would need to have it programmed in. This costs about \$1,100.00 per radio.
- A county EOC needs at least one encrypted radio to monitor communications between county EOC and the command post and having three or four for the county would be ideal for the command post, county EOC, and law enforcement leads in the field to communicate to the command post. These suggested numbers are based on the bare minimum, keeping in mind encrypted radios are expensive. Not every radio needs to be encrypted, as there are a lot of actions and resource ordering that can be done via radio that don't need to be encrypted, i.e. porta-potty's, etc.
- The state could only send one or two radios to the locals without stretching the state thin.
- FirstNet would send out extra cell phones if so.

- FirstNet can prioritize phones and capacity should not be a problem in the counties. Normal cell
 towers only get overwhelmed with the Sturgis Rally or large Sioux Falls-type events.
- . There is no cost for FirstNet to come out to an incident.
- There are currently about 2,000 FirstNet subscriptions in the state. (b)(6) wanted to know if OEM can help track how many each county has so they can know ahead of time what needs there might be in each area. OEM will work on obtaining that information from AT&T and Verizon.
- Verizon has a similar service to FirstNet and costs about the same.

Regional EOC Flowchart (attached)

 In a Regional EOC, each county would have their own IC. Alternatively, unified command might be used.

Other Questions

- For resource requests, county EMs have access to a resource list. For any other resources, county
 EMs could call the State EOC, who would track down the requested resource and try to find
 multiple options for the request. The State would also prioritize based on needs. Ex.: generators
- Discussions were had on charging all costs to one county when resources will be used between
 counties/along borders. A county should talk to their attorneys first about this because each county
 is still required to meet their 2 mill. level before any state financial system will be granted. Counties
 need to have a system in place to track their costs individually even if shared.
- Harding County said their state's attorney disagreed with setting up a designated protest area near courthouse.
 said Hughes County did that and (b)(6) said Marshall County did as well. State's attorneys could reach out to those counties for advice on this.

Law Enforcement Functional Discussion Session

- The group went over the handouts and discussed the purpose of an EOC and how it can reduce
 the workload for law enforcement, so they can focus on their primary responsibilities. It's
 important that ICs don't over commit themselves at the command post.
- It's crucial to keep the county and State EOCs in the loop regarding what is happening in the field.
- To avoid duplication of efforts, law enforcement should keep emergency managers in the loop as
 to how they're handling certain functions.
 - Some law enforcement members remarked they aren't sure what they want or need yet, so it is difficult to communicate. Having a law enforcement liaison stationed at the EOC would be helpful for any decision making.
- Operational/tactical information may not be needed for EOC purposes depending on the functions being conducted there.
- A regional EOC would require more effort on the financial front. Resource ordering can be facilitated much easier with if information flow occurs between the command post, commissioners, and the EOCs.
 - Staffing a regional EOC would require at least one representative from each county.
 - A regional EOC would better support a civil disturbance situation that moved locations.
 - A regional EOC would make it more difficult for the IC to come out for meetings, but these meetings could be attended via a phone call or other means.

- If local law enforcement support the use of a Regional EOC, they should communicate
 this to their county commissioners.
- A communications working group was created and is using North Dakota as the optimal model.
 - Vtac and Vlaw channels can be switched to digital and used on a repeater.
 - DS encryption was hacked in North Dakota, so AES256 multi-key encryption is the best choice.
 - Only pre-identified leaders would be given encrypted radios. It's also a possibility to
 assign radios to other officers during duty hours and have them return the radios at the
 end of their shifts.
 - Each county should acquire radio information for their county and send it to (b)(6)
 (b)(6)
 as State Radio is the only entity that can verify is a radio is capable of getting AES encryption.
 - It was decided that having a tactical dispatcher at the command post would be necessary.
 - The HSIN page can also be used to communicate. Different pods/pages can be created and used for communication on different levels (tactical, PIO, EOC), and there's also a chat feature. All information entered here would be saved for documentation purposes.
- Highway Patrol created a Rules of Engagement policy for civil disturbance incidents. This policy
 includes tiers of protest actions and the pertinent reactions by law enforcement. This plan can be
 shared if requested.
- Highway Patrol can also share a field guide with information on formations, laws, etc.
- One of North Dakota's lessons learned was how important it is to enforce the rule of law, otherwise the situation can get away from the enforcement officials.
- It is vital for law enforcement, court systems, and state's attorneys to all be on the same regarding what will be enforced. This topic should be addressed again in future meetings

Breakout Session Reports

Law Enforcement (b)(6)

- Regional EOCs discussed. Most in the group were in support of a regional EOC for a large-scale incident. A working group was created to discuss communications issues. (b)(6) told the group a policy for civil disturbance was created by Highway Patrol that can be shared. The group agreed that EMs, law enforcement, and state's attorneys should be in agreement on issues in order to move forward more easily.
- (b)(6) is going to send information out to counties on how to go about determining if current radios can be encrypted and the process to get it completed.

Court Services, (b)(6)

No state's attorneys in the group. Future ideas were discussed for state's attorneys. All state's
attorneys were invited to participate in a phone call a month ago. Another being held later this
week.

Emergency Management, (b)(6)

The group talked about communications issues and went over flowcharts with the idea that these
are starting points for counties to change to fit their needs. The general consensus is that a small
county should have 3 to 4 State digital trunked system encrypted radios, ideally. Some encrypted

- radios can come from the North Dakota cache, but these are not compatible with the South Dakota state trunk system. These radios could be used to talk locally on the incident but could not talk through the State digital trunked system.
- Discussions were had on FirstNet and plans to determine approximately how many people have switched over to FirstNet per county. It was also emphasized that the liaison positions in the flowcharts and the flow of information are important and will make for good information flow.
- For resource ordering, county EMs will tell the state what capability they're trying to fill, and the state will track down multiple options, as available.
- Overall, these discussions are important for planning with the understanding that the details of the
 potential incident/s cannot be predicted.

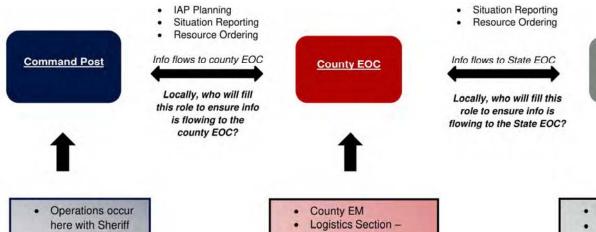
Final Discussions

- [b)(6) emphasized how helpful it is to hear from the local level regarding what needs there are for
 future meetings. Harding County noted that these meetings could potentially become more themeoriented. For example, having a social media themed meeting instead of multiple types of issues in
 one meeting.
- When asked about how social media issues would be handled, (b)(6) responded with information regarding a Joint Information System plan. There is the possibility to get a presentation on this for the next meeting.
- b)(6) talked about how the ACLU submitted an open records request regarding all pipeline-related matters. She remarked jurisdictions are required to respond within 10 business days to the request. If a request is received, States Attorney's should be consulted on a response to discuss exemptions allowed in SDCL 1-27.
- In terms of a federal response in this type of incident, any information from the federal level would come through the Fusion Center, which is then shared to the local level through the HSIN page.

 (b)(6) from Homeland Security had discussions to get a SEAR rating that would open up other federal resources for the state.

 (b)(6) added that the situation has been given a "4" rating which essentially only puts the situation on the federal radar. The rating can be changed as the situation changes.
- Next meeting is January 24th at 10:00 am.

Civil Disturbance Facilities/Functions



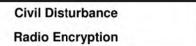
Tactical response

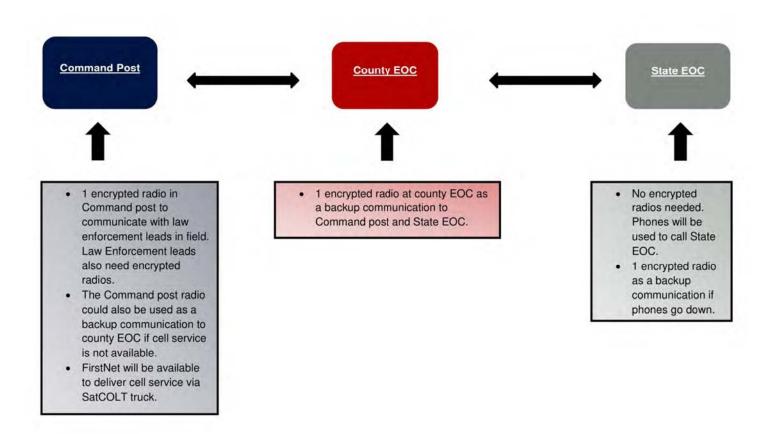
- provides needed resources
- PIO works w/ State PIO for consistent public messages
- Finance Section tracks costs for the event
- Planning Section produces situation reports, IAP
- Incident Commander could be here or at the location of field activities

State EOC

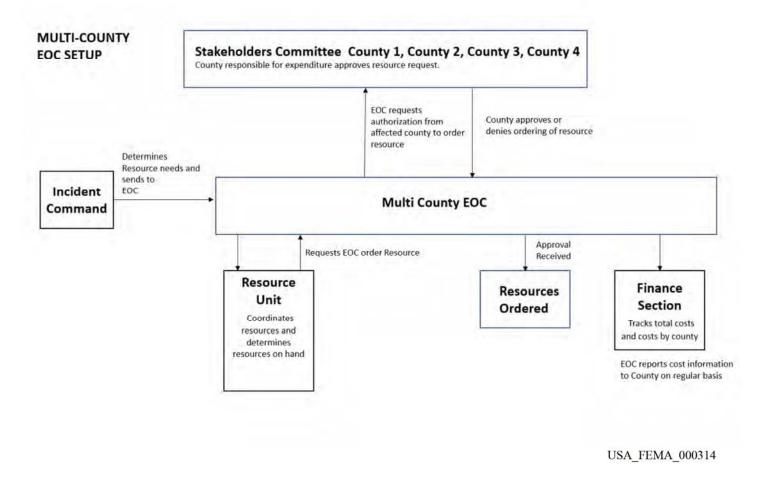
- State agency staff
- Logistics
- **Planning**
- Operations
- Finance
- PIO

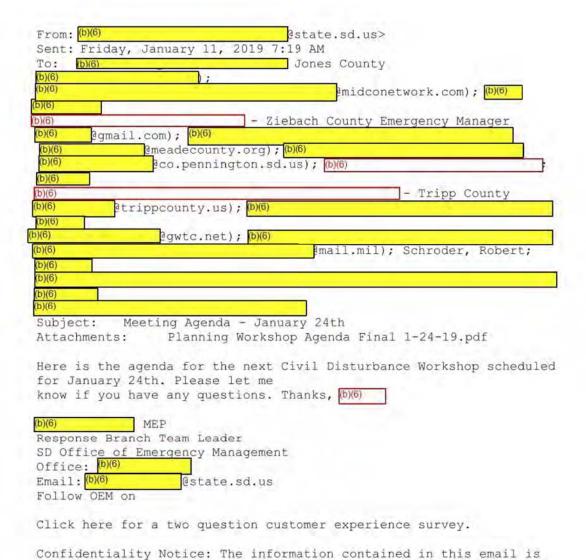
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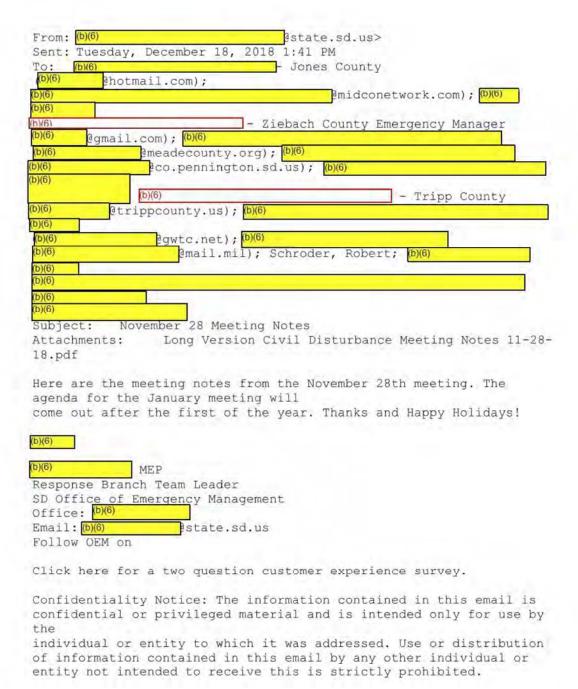
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Civil Disturbance Meeting Oct. 24, 2018

Opening Statements:

- (b)(6) reminded everyone to sit with their county team in the row labeled for their county. State agency rep's could fill in throughout the available seating.
- Changes to the agenda: The meeting will start with a video, then go into the county scenarios.
 Lunch break, then more of the video. Representatives from TransCanada will be at the meeting to provide a law enforcement briefing and answer questions after lunch. After the TransCanada briefing, then any county scenarios remaining from the morning session will be discussed

Video: The Rise and Fall of Standing Rock: https://youtu.be/wIVQhhPVG64

Scenarios

· Counties were given 15 minutes to discuss their county specific scenarios.

Perkins County Scenario:

- Command Structure: ICS structure would be used. Actions would depend on if the protesters
 were violent or not. Forward operating base. A regional EOC might be an option if Meade
 County was willing. Actions might also depend on what existing relationship there is between the
 county and the protesters.
- Resources: The county is geographically large. The ambulance would come out of Faith. Law enforcement would also be needed to ensure safety of EMS. They might have to communicate with the camp on how injured would be retrieved from them. These types of decisions could already be in place based on pre-existing relationship with the camp. Response to the camp would be about 50 miles one way. Highway Patrol will most likely be called if there are any in the area.
 (b)(6) said HP could assist, though there might not be many in the area. Flight might also be a necessity depending on the urgency of the situation.
- Communications: Good state radio coverage in that area. Spotty cell phone coverage. Would
 hope to have encryption to protect law enforcement. It would take approximately 3 hours to get
 the tower and cache of radios to the location.
- Operation Periods: If things are peaceful, Perkins can sustain with Sheriff's office for more than
 one operational period.
- Laws allow law enforcement to remove protesters in that area. Counties are encouraged to discuss
 applicable laws with their state's attorneys. This particular statute is 5-4-18.

Pennington County Scenario:

- Command Structure: Joint Command from inside the building. Special Response Team (SRT)
 and Mobile Response Team would be there, along with EM and a federal representative. Law
 Enforcement would let the protesters stay for now since they're not blocking anything, and there
 are several alternative routes. They'd block off the area with barricades and patrol cars.
- Resources: The SRT and Highway Patrol would provide enough assistance for this scenario.
- Communications: No comms issues noted. There are mutual aid channels they can use
 depending on the scale of the incident. They feel they will need to have encrypted channels. The
 process for that is ongoing currently in the county. There would be more communication issues
 the farther out in the county the incident would be, but no issues in downtown RC.
- Operation Periods: No issues with operational periods; Rapid City has enough officers to cover.
 Would need to keep in mind getting the officers rested and fed but no issues foreseen there.

Harding County Scenario:

- Command Structure: Sheriff would act as IC. No EOC used, would just run things through
 dispatch as things are currently peaceful. If requested, HP would come and assist as usual and
 command would remain with the county.
- Resources: Detours would be needed on a state highway. DOT would make alternate routes as needed on state roads and Harding County would need to make detours for local roads.
- Communications: No issues foreseen for this incident which is in town. A deployable cell on
 wheels can be requested via BIT from AT&T or Verizon for any area that has spotty cell phone
 coverage within 14 hours.

Lyman County Scenario:

- Command Structure: Utilize local resources for staging areas. Dispatch would be used for resource requests.
- Resources: HP and/or law enforcement from neighboring counties. Staging area for ambulance
 and fire service. Amount of fire service available would be dependent upon time of year. Might
 contact DOT for detours at a later point but wouldn't move the protesters at this time.
- Communications: No cell coverage in this area and no state radio service in part of the area.
 They'd request resources from AT&T/Verizon/State Radio. With FirstNet, commercial traffic would get kicked out if there were too many people utilizing it, and responders would still have the access as priority.
- Operation Periods: Would need mutual aid to cover multiple operations periods.

Meade County Scenario:

- Command Structure: Will need law enforcement to divert around cattle. Unified Command between Meade County, HP, and the workforce camp's security team if they have one.
 Investigation will occur. HP would work jointly with the sheriff to assist with what they want to do regarding the state highway.
- Resources: Housing responders would occur in Sturgis or Faith, and meals brought to LE.
- Operation Periods: Date would dictate how challenging this scenario would be for the county.
 County could handle the feeding or housing if the scale isn't too large and the time of year is agreeable.
- Counties should not make decisions based on who would order what and the costs associated, because ultimately the Governor could decide a resource is needed that hasn't been ordered at any time. Payment will be decided afterword, but counties are ultimately responsible for the costs up to the 2 mill amount per state law and then the Governor can determine what percentage to pay after the 2 mill amount is met, but not more than 60%.

Butte County Scenario:

- Command Structure: Staging area would be needed.
- Resources: Fire, DOT, law enforcement. If it stays small, they should have the resources. This is
 close to the Perkins County line so mutual aid might come from there.
- Communications: Digital radio is in-and-out, and cell phone coverage is almost non-existent.
 Towers, etc. might need to be brought in. BIT says there is a tower in that area; Butte says there are hills and other parts of the area that are worse than others.
- Operation Periods: More than one operational period would be a struggle and other options
 would need to be found.

Haakon County Scenario:

Command Structure: ICS with Sheriff as IC out of his vehicle.

- Resources: HP, DOT to assist with rerouting traffic and disseminating obstruction information.
 Would be difficult to have a staging area at both areas with lack of personnel but would have
 them ready on standby. Fire/EMS from other counties needed. DOT requires contractor to do
 signage/flagging if state highways are impacted by construction. Communications: Might need
 to bring in boosters, towers, etc. to boost cell and radio service.
- Operation Periods: Would be very difficult to maintain for more than one operational period, particularly for housing and feeding.

Jones County Scenario:

- Command Structure: Divide the situation into two incidents. No EOC activated unless longer
 operational periods are needed. Two IC's. Reroute. Park will have city and HP officers. Interstate
 will have sheriff and HP officers.
- Resources: Will need DOT assistance for barricades. No issues for radio or cell service. DOT
 would need to be involved in any operation involving shutting down an interstate because of the
 huge impact to the transportation system.

TransCanada Briefing/Questions:

(b)(6)	Head of Security
b)(6)	: Security Liaisons between TransCanada and the state and local levels of
government.	

- The pipeline will meet two other pipelines in Steele City, NE.
- The pipeline areas are divided into "spreads" spreads 5 and 6 are the two areas in South Dakota
 that will see construction starting in May 2019 and will continue until January/February 2020.
- Work crews will arrive in May and begin installing the pipe June through November.
- Pipe yards and work camps are being created in preparation for work to begin. One work camp is 1 miles North of Philip and one is near Opal.
- Haul roads are being built up now to handle the increase in truck traffic.
- This Fall there are crews clearing the first 30 miles of where the pipeline will be laid so it's
 prepared for next spring's construction. This includes creating right-of-way's and clearing
 trees/bushes/etc., so wildlife does not nest or occupy the area in the spring when construction will
 begin.
- Once the pipe starts arriving to the pipe yards, private security hired by the pipe company will be
 in place 24/7 including surveillance cameras. This will be in place until the last piece of pipe
 leaves the yard. Pipe yards are located near Bridger and Philip.
- Pipe coming in is 80 ft. long with three pieces of pipe to a trailer. The pipe basically are the
 trailer and they put wheels underneath the pipe for transport. Similar to how the wind towers are
 trucked is how they will truck the pipe. It is being shipped via rail first from North Dakota and
 then will be trucked to the pipe yards.
- 26 buildings coming into the Philip work map, including dormitories, dining facilities, exercises facilities, and recreation areas.
- Workers for the pipeline aren't like oil field workers who learn a skill on site for what's needed.
 These are union workers that have a particular skill needed for the pipeline construction. This job
 is their livelihood. Their behavior is highly regulated. If they mess up they lose their job and are
 sent home and their career may be over.
- Community meeting held in Philip 10/23/18 with county and city officials. Additional
 community meetings will be occurring in the near future.
- There will be fire suppression capabilities within the work camp with adequate fresh water supply
 on site to ensure firefighting capabilities and drinking water does not take away from the

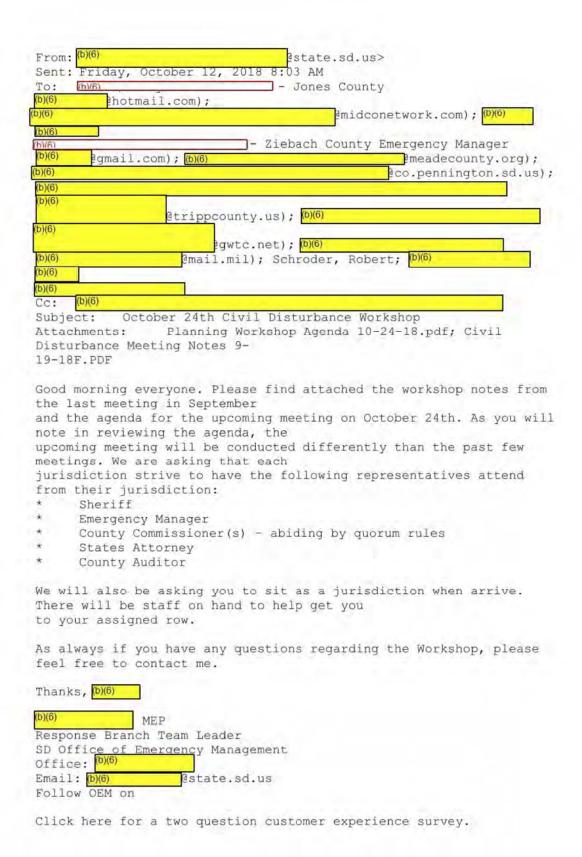
- community needs outside the work camp area. Philip will also provide some water for fire suppression for their work camp. A water reservoir will be created to accommodate this.
- Typical workday: 6:00 am start. 10-12 hours a day, 6 days a week. Potential for 7-day work
 weeks. Workers bussed between work camp and work site, with 10 12 miles between the sites.
 TransCanada wants to minimize traffic on these roads. Specialized work trucks will also travel
 with the worker busses carrying tools and other items needed for their work.
- Summer 2019 will see up to 40 miles of open work site area at any given time in SD. Montana
 will also have pipeline being built during this same time period which will spread out the work
 area more and hopefully as a result, protestor activity will not be concentrated to one area.
- Buildings within the work camp will be set up far enough away from each other that a fire
 incident in one building would not endanger the other buildings.
- There will be 300 RV spots for workers at the camps if they prefer to bring in their own camper.
 Workers are highly incentivized with money to stay on site at the work camps.
- Some workers bring a spouse with them. Some couples have both spouses working for the
 company. Any visitors must be verified as a true family member by their employer. The family
 member will be scanned in an out of the camp each time. All workers are also scanned in and out
 of the work camp for accountability. No one is allowed inside the work camp who does not have
 a badge and has not been signed in.
- 50 extra beds available in the work camp for off-duty law enforcement who provide security for the camps.
- Alcohol is allowed in the dormitories/RV's. No public alcohol consumption allowed.
- Drug-testing can be done on site. Any personnel testing positive for drugs will be fired and removed immediately.
- Two active work zones in 2020 in Lyman/Tripp County in the Winner area and in Harding County. Nebraska will be getting pipeline work in 2020 and work in Montana will be finishing up at that time.
- Any wear and tear done to local roads because of trucks associated with the pipeline or heavier local traffic on roads that are being used more heavily because they are staying away from the construction haul roads can be addressed with TransCanada after the work is completed.
- TransCanada is willing to accommodate safety requests for the camps such as beacons on top of
 the buildings to alert emergency responders of the building that is in need of assistance. For fire
 incidents, TransCanada will take any fire suppression support the county can provide, but full fire
 suppression teams will be on site from TransCanada because they know not all areas can support.
- Contact TransCanada personnel to get access to the TransCanada website and get access to maps.

 You may contact (b)(6)
- TransCanada makes an effort to hire as many local personnel as possible. For contractors, there is a potential vendor list that is created through Community Relations. There will be RFP's as applicable. RFP decisions for contractors should be made around January. Those contractors will then go to the communities and job fairs will be held on-site so locals can get jobs with the contractors themselves. Security will also be hired locally, and TransCanada will bear all costs associated with their security for the work camps and their onsite security they supply at the work-sites.
- TransCanada is willing to have these discussions on what they can do to assist with protest response costs.
- TransCanada has grant information on their website. TransCanada is in favor of legacy gifts i.e. using the grants to purchase items such as body cam's and first responder vehicles that the county can keep after the pipeline work is over. Grants are not used for what would be perceived as militarizing the police.
- There will be a helipad on site or airport access nearby of the work camps, along with a triage area and ambulance.

- TransCanada would work directly with law enforcement for any questioning or arrests that are made of workers.
- TransCanada will hire PIO's. PIO's trained in ICS from TransCanada will be used for any
 JIC/EOC issues. All law enforcement and security will have body cam's. This will be used as
 evidence and to get the true message out of what's going on during these incidents.
 Videographers are being hired to videotape everything. All data on body worn cam's can be
 immediately turned over to local law enforcement for their use in investigations. Data will be
 stored via either SD cards or a cloud-based solution.
- Cell boosters will be brought to workcamps. TransCanada is in contact with local cell providers
 on what capacity they already have and what additional needs there are to ensure there is enough
 capacity for the increased cell traffic.
- Construction in Canada (Alberta, Saskatchewan) will begin next year, but they do not foresee the same amount of opposition in Canada as they see in the U.S. However, they do still have plans in place.
- (b)(6) with TransCanada will send a weekly e-mail for situational awareness to the SD Fusion Center for public officials in all nine counties. Fusion Center is also pushing the same information through the HSIN page.

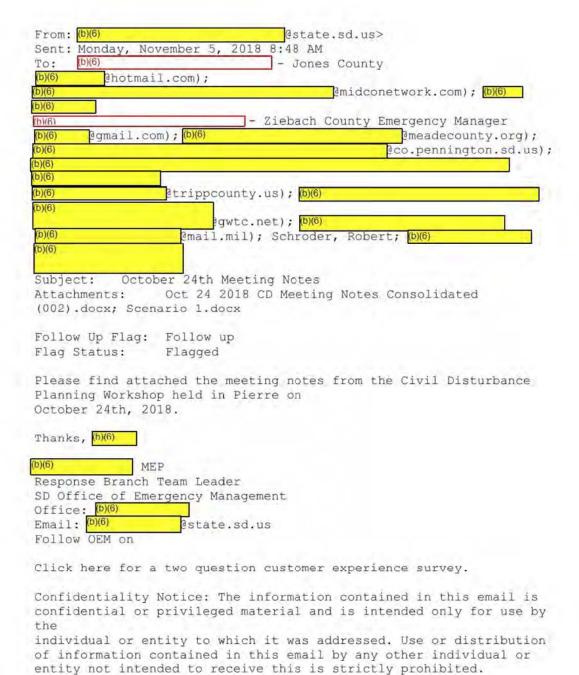
Final Discussion:

- The State has a JIC established in the Pierre EOC. There is a robust social media plan if/when
 protests are involved, and the plan is flexible to county needs. Someone from the state can work
 directly with a county PIO to strategize and create social media posts and plans. They can also
 place a state PIO in the county if necessary.
- The state only has jurisdiction to arrest on tribal land if the incident only involves non-tribal
 members. If any tribal members are involved, HP cannot arrest. Because of this, it is believed
 protest camps will be made on tribal land just on the border where neither state nor local law
 enforcement has authority to arrest. It would take a federal injunction to re-open a road on tribal
 land. TransCanada's route avoids tribal-owned land.
- November 28th is the current rescheduled date of the next meeting. Input requested from attendees
 on preference between large group meetings and breakout groups with disciplines.
 - Meetings will start making specific planning decisions.
 - o [b)(6) will work on getting PUC invited to the next meeting. State will ask if newly appointed state officials will be able to attend any future meetings. TransCanada is invited to every meeting from here on out.
 - Starting in December, scheduling of the meetings will try to avoid Tuesdays and Wednesdays.
- (b)(6) introduced herself as the new Interim Secretary of Public Safety and thanked everyone for coming. She hoped the group could continue to work together and communicate. Feedback from attendees is very helpful.



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CC:	"Gafkjen, Jeffrey "	
Subject:	Pipeline Protest	
Date:	2018/09/12 16:44:48	
Priority:	Normal	
Туре:	Note	

Speaking with Scott Behunin here in SLC – concern [b)(6) spoke to this at State Directors meeting) from MT and SD regarding intel coming in reference Keystone pipeline; specifically, resource limited state and local agencies being overwhelmed if/when this activity ensues. Homeland Security reps from S. Dakota here in SLC are trying to assess where assisting resources/funding could come from to support what could be a years' long incident. It may be a good idea to convene a meeting with the expected players, both government and P/S to gain SA, game plan and set expectations amongst all stakeholders. We have lessons learned from ND, but this could dwarf what happened there if it comes to be.

V/R

Lanney D. Holmes Federal Preparedness Coordinator FEMA Region VIII Denver, CO 80225 303-235-4629

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Recipient:	"/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8afa30658c2749c7b60053a1127f3733-Depalo, Lee"; "Dragani, Nancy "; "Knapp, Nathan "; "Carroll, Thomas "; "Greff, Stacie "; "Gafkjen, Jeffrey ";	

	"Warren, Ronnie "; "Nyquist, Daniel "
Sent Date:	2018/09/12 16:44:47
Delivered Date:	2018/09/12 16:44:48



DEPARTMENT OF PUBLIC SAFETY

Civil Disturbance Planning Workshop

October 24, 2018

10:00am – 3:00pm Central Time Mickelson Building, Pierre SD

Agenda:

10:00am to 10:15am Opening Remarks & Instructions
10:15am to 10:30am Jurisdiction Scenario #1 Discussions
10:30am to 12:00pm Jurisdiction Scenario #1 Reports

Butte
Haakon
Harding
Jones
Lyman
Meade
Pennington
Perkins
Tripp
Ziebach

12:00pm to 1:00pm Lunch on your own

1:00pm to 1:15pm Jurisdiction Scenario #2 Discussions 1:15pm to 2:30pm Jurisdiction Scenario #2 Reports

Ziebach
Tripp
Perkins
Pennington
Meade
Lyman
Jones
Harding
Haakon

Butte

2:30pm to 3:00pm Review of Discussion, Key Concept Capture, & Recap

3:00pm End of Meeting



Meeting Description:

For the October 24th meeting, as noted at our last meeting, we will be changing the format of the meeting. This meeting will be organized as noted in the agenda above by holding two sessions that will be based upon presenting specific jurisdictional scenarios to each jurisdiction and having them present their planned response to these scenarios. Everyone will be given 15 minutes with their jurisdiction to discuss their response to the scenario. After this 15 minutes, each jurisdiction will be called upon to report on their scenario answering the following questions:

- How is your incident management organization (ICS) structured for this incident? (Incident Commander, EOC, Forward Operating Base, Staging Areas, etc.)
- What resources do you require to respond to this incident? Do you have all resources necessary
 within your jurisdiction? Will you need mutual aid resources? Will you need resources above and
 beyond mutual aid resources? If you do need additional resources, how will you request them?
- What is your communications plan for this scenario; i.e. how will you communicate (Radio, cell
 phone, encryption required, portable towers required, etc.)? Do you anticipate any communications
 issues?
- What challenges do you identify if this scenario extends into multiple operational periods? Multiple days? Multiple weeks?

Each scenario will be specifically crafted for your jurisdiction to include location. Below is a sample scenario:

Your Sheriff's Office has just been notified that there are two large banners, protesting the XYZ pipeline, that are draped from one of the two interstate bridges within your jurisdiction, hanging down all the way to the road surface and blocking all lanes of traffic. There are also a dozen protestors that are suspended by ropes and harnesses hanging from the bridge in front of the banners. Traffic is already backed up for 1 mile in each direction and there are news reporters at the scene. Individual protestor signs read "Pull me up, I cut the rope".

You are encouraged to bring the following positions to the meeting so you can develop a comprehensive plan for each scenario:

- Sheriff
- Emergency Manager
- 1 or 2 County Commissioners
- States Attorney
- County Auditor

Note: When you arrive at the amphitheater in the Mickelson Building you will be asked to sit as a jurisdiction in your assigned row marked by signs.



Civil Disturbance Planning Workshop

January 24th, 2019 10:00am – 3:00pm Central Time Mickelson Building, Pierre SD

Agenda:

10:00am to 10:15am Opening Remarks

10:15am to 12:00pm Functional Discussion Sessions

-Emergency Management/County Commissioners and Law Enforcement

Breakout Sessions

12:00pm to 1:00pm Lunch on your own 1:15pm to 3:00 pm TransCanada Briefing

> Federal Updates PIO Briefing

Breakout Session Reports / State Agency Capability and Q & A Discussions

Law Enforcement General:

Discussion focus areas have been selected. The focus of this meeting will be to make decisions and start formulating a plan.

- 1. Updates:
 - a. Radio / Cell Phone Inventory
 - b. Judicial & Law Enforcement Meeting
 - c. Radio Communications Recording
- 2. HSIN Demonstration Tactical Situational Awareness
- 3. Rules of Engagement Coordination / SDHP Policy Review & Consensus
- 4. Jail, Holding, and Transport Information discussion

Emergency Management and County Commissioners

Discussion focus areas have been selected. The focus of this meeting will be to make decisions and start formulating a plan.

- 1. Radio Encryption
- 2. Common Radio Channels/Vtac Channels/Portable Repeater Needs
- 3. Communication Between Field Operations to Local EOC to State EOC
- 4. County Credential Equipment Preparations
- 5. County Housing Plans for First Responders



Civil Disturbance Planning Workshop

September 19, 2018 10:00am – 3:00pm Central Time Mickelson Building, Pierre SD

Agenda:

10:00am to 10:30am Opening Remarks

10:30am to 12:00pm Functional Discussion Sessions

-Emergency Management, County Commissioners, Law Enforcement, and Court

Systems Breakout Sessions

12:00pm to 1:00pm Lunch on your own

1:00pm to 3:00pm General Assembly –Breakout Session Reports / State Agency Capability

and Question & Answer Discussions

Individual Group Functional Discussion Questions:

Law Enforcement General:

Discussion focus areas have been selected. The focus of this meeting will be related to judicial, jailing, and transport.

- 1. Social media information
- Use of force investigations
- 3. School and Public Lands concerns
- 4. Temporary holding facilities
- 5. Housing first responders
- 6. Radio communications
- 7. What questions do you have for State Officials?
 - a. Dept. of Transportation
 - b. Dept. of Public Safety
 - c. Dept. of Health
 - d. Dept. of Ag / Wildland Fire
 - e. Dept. of Game Fish & Parks
 - f. BIT / State Radio Communications



g. DCI / Attorney

General's Office

- h. UJS
 - i. Others?

Emergency Management

Discussion focus areas have been selected. The focus of this meeting will be related to staffing EOC, regional EOC concepts, to include joint EOC ordering for multi-county incident response efforts.

- RFP for Forward Operating Base
- 2. Radio communications
- 3. What questions do you have for State Officials related to judicial, jailing and transport? Specifically outline 1-2 questions related to the following state agencies so these questions can be addressed and additional planning can occur.
 - a. Dept. of Transportation
 - b. Dept. of Public Safety
 - c. Dept. of Health
 - d. Dept. of Ag / Wildland Fire
 - e. Dept. of Game Fish & Parks
 - f. BIT / State Radio Communications
 - g. DCI / Attorney General's Office
 - h. Others?

State's Attorney and Judges

- 1. What concerns do you have with draft ordinances that emergency managers presented to the county related to temporary campgrounds and protest areas?
- Discuss questions related to Governor's powers, state laws, and other concerns related to civil disturbance planning.

County Commissioners

Discussion focus areas have been selected. The focus of this meeting will be related to the two-mill requirement per SDCL 34-48A-30 and follow-up discussions from last meeting.

SDCL 34-48A-1(7) "Local effort," the expenditure for emergency or disaster purposes within the twelve-month period preceding the date of the request, of an amount equal to two mills of the assessed valuation, exclusive of capital asset purchases, in each county for the assessment date preceding the date of the request under an emergency or disaster declaration by the Governor:



SDCL 34-48A-30. Minimum local effort required for state aid. In order to qualify for state financial assistance to meet the costs of an emergency or disaster declared by the Governor, a county shall meet the minimum standard of local effort as specified in subdivision 34-48A-1(7).

SDCL 34-48A-32. Amount of state financial assistance-Additional assistance authorized. In those counties in which the Governor has officially declared an emergency or disaster and in which local effort requirements have been met, the state will provide financial assistance for such additional operational costs needed for the particular emergency or disaster situation up to a maximum of sixty percent of additional local effort expenditures; provided, however, that the Governor upon finding it necessary for the preservation of life and property may authorize additional state financial assistance.

- 1. How will the county fund a large-scale response when state financial assistance is not available per SDCL 34-48A-32 until you meet the two-mill assessed valuation?
- 2. What mechanisms do you have to be able to seek additional county funds for the response costs?

General Assembly Questions for Federal / State Agencies:

- 1. If requested how long will it take for your agency staff to be on-scene?
- What specific resources does your agency have which may be requested during a large scale Civil Disturbance Event.
- 3. What technical capabilities does your staff have which could be offered either remotely or onscene at an event?
- 4. What other critical pieces of information do you as a supporting agency need from local law enforcement or county emergency management officials in order to plan for a Civil Disturbance Event?



Civil Disturbance Planning Workshop

November 28th, 2018 10:00am – 3:00pm Central Time Mickelson Building, Pierre SD

Agenda:

10:00am to 10:30am

10:30am to 12:00pm

Functional Discussion Sessions
-Emergency Management/County Commissioners, Law Enforcement, and Court Systems Breakout Sessions

12:00pm to 1:00pm

1:00pm to 2:00pm

TransCanada Briefing

2:00pm to 3:00pm

Breakout Session Reports / State Agency Capability and Question & Answer Discussions

Law Enforcement General:

Discussion focus areas have been selected. The focus of this meeting will be to make decisions and start formulating a plan.

- 1. Communications Encryption
- 2. Rules of Engagement Coordination
- Incident Management (Incident Command Post, Emergency Operations Center, Forward Operating Base, etc.)
- 4. Personnel Resource Processing (swearing in, single processing point, workers comp, etc.)

Emergency Management and County Commissioners

Discussion focus areas have been selected. The focus of this meeting will be to make decisions and start formulating a plan.

- Communications Encryption
- 2. Coordination between counties
- Incident Management (Incident Command Post, Emergency Operations Center, Forward Operating Base, etc.)
- 4. Resource Ordering Process



Court System:

Discussion focus areas have been selected. The focus of this meeting will be to make decisions and start formulating a plan.

- 1. Case Processing.
- 2. Legal Assistance Coordination/Cross-Deputization.

From:	Schroder, Robert		
To:	"Knapp, Nathan "; "Dick, Jennifer "; "Greff, Stacie "; "Williams, Tamara "; "Espinosa, Adam "		
Subject:	Proposed Placeholder SD CD discussion this was earliest date and time		
Date:	2018/11/09 13:41:34		
Start Date:	2018/11/13 11:45:00		
End Date:	2018/11/13 12:15:00		
Priority:	Normal		
Type:	Schedule.Meeting.Request		
Location:	RRCC Policy Room or 1-800-320-4330 Conf. Code 478252		
Attendees:	Knapp, Nathan; Dick, Jennifer; Greff, Stacie; Williams, Tamara; Espinosa, Adam		

Jennifer had suggesting meeting on Tuesday to discuss SD CD meetings and what we can do such as Technical Support or what we can't do.

It might be best to meet following the Sync meeting on Tuesday if anyone can adjust their schedule a little?

Otherwise in checking everyone's Outlook schedule it looks like Friday 11/16 11:30-12:00 MST is the first open time for most. I'm traveling to and from a class in Aniston on Tuesday and Friday so I'm very limited.

My thought is since Nate, Jennifer, and Stacie are key and then either Adam, since he has been involved previously as SD LNO, or Tamara as SD Alternate LNO perhaps the group could work out a date and time that might work better for those available that week and just keep me posted it might work best.

Bob

Sender:	Schroder, Robert
Recipient:	"Knapp, Nathan "; "Dick, Jennifer "; "Greff, Stacie "; "Williams, Tamara "; "Espinosa, Adam "

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Sent Date:	2018/11/09 13:41:32	
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Region VIII Clips

Monday, October 1, 2018

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Fire updates: Murdock Fire near Kamas closes highway after making 'run to the north' - KSL.com Salt Lake City

Utah County wildfires nearly contained-Good4Utah TV

FEMA announces federal grant that helps retrofit Wasatch Fault homes from earthquakes – KUTV News Salt Lake City

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<u>Utah absorbed 6,000 evacuees, proving civil society is alive and well – Deseret News</u>

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Wyoming forest fire human caused - Billings Gazette

Massive human-caused wildfire near Grand Teton 40 percent contained after burning 55 homes - Jackson Hole Daily News & Guide

U.S. Forest Service: Ryan Fire In Southern Wyoming Is Human-Caused- K2 Radio, Casper

Firefighters making progress on Roosevelt Fire in Wyoming -Wildfire Today
Cooler weather may help firefighters – Jackson Hole Daily News

Rock Springs hunters escape Roosevelt fire with burns - Casper Star Tribune

REGION VIII TWEETS

Beginning today we will include Region VIII Tweets.

September 28

FEMA-RELATED STORIES

STORIES

COLORADO

Volunteers clean up Ute Valley Park to decrease fire risk KKTV 11, NBC CO Springs

Jenna Middaugh, September 29, 2018

COLORADO SPRINGS, Colo. (KKTV) - A group of teenagers and community volunteers spent their Saturday clearing dead branches from Ute Valley Park.

It's part of a 300-acre mitigation project the Colorado Springs Fire Department is conducting with money from a \$1 million FEMA grant it got this year.

"We have a year-round fire season here in Colorado Springs, and some people have been here long enough to understand that some of our worst fires in Colorado history are actually in the winter months," said Jeremy Taylor, the fire department's wildfire mitigation program administrator.

More than 20 people from The Friends of Ute Valley Park and TwoCor Youth Corps helped cut, drag and haul dead tree branches from the park.

"I feel like Colorado is pretty dry, and so cutting down all these dead branches is probably stopping a lot of these forest fires from spreading," said Dante Lutinski, a 15-year-old TwoCor volunteer.

TwoCor is a local nonprofit that gives training experience to troubled youth. As long as the weather is decent, Dante said they work every Saturday.

"I'm really into working with my hands," he said. "We do a lot of hard work on Saturdays and a lot of experiential activities on Mondays and Tuesdays."

Dante said he's learned a lot from clearing brush.

"It raises my awareness to fire and how much goes into it to stop the fires and how it's still a big issue," he said.

The fire department wants everyone who helps with this project to realize the power of working together.

"This isn't about just dragging brush, picking on dead trees and just working up a sweat," Taylor said. "It's more that it's a community that's coming together, and it's folks like the Friends group that understands the risks and wants to help do something about the risk and take pride in protecting our parks here in the city of Colorado Springs."

Colorado wildfire update: U.S. Forest Service determines Ryan fire was human-caused – Denver Post

Jessica Seaman, September 29, 2018

Saturday's warm temperatures, dry air and wind created harsh conditions for the wildfires burning throughout Colorado.

The weather conditions spurred an expansion of the red flag warning, which now covers the rest of the mountains. The red flag is in effect Saturday from 10 a.m. to 7 p.m., according to the National Weather Service in Boulder.

"There's a lot of smoke out there," said Carin Vadala.spokesperson for the U.S. Forest Service. "It's growing."

Eagle River Fire Protection District posted on Twitter and Facebook that crews were responding to a report of a wildland fire at the Minturn gun range.

A spokesperson for the district could not immediately be reached for comment.

A roundup of the largest active wildfires in the state follows. Ryan Fire The U.S. Forest Service said it has determined that the Ryan fire, which is burning in Northern Colorado and Wyoming, was human-caused, possibly the result of an escaped campfire.

Investigators have determined where the fire, which has been burning since Sept. 15, originated. The fire remains under investigation.

The fire, located 27 miles northwest of Walden, is at 22,121 acres with 35 percent of it contained. There are 327 personnel assigned to the fire.

A red flag warning is in effect for the fire from 12 p.m, to 6 p.m. on Saturday because of the weather conditions, which include southwest winds gusting up to 35 miles per hour, according to an incident overview.

Silver Creek Fire

Silver Creek fire, located 16 miles northwest of Kremmling, is at 18,757 acres and 60 percent contained, according to an incident overview.

Warm and windy conditions led to "moderate fire behavior" Friday, and it doesn't appear the weather Saturday will be any better. The warm temperatures triggered a red flag warning for the fire from 12 p.m. to 6 p.m.

Bull Draw Fire

The fire, which is about 12 miles northwest of Nucla, is 36,549 acres and 95 percent contained.

As with the other wildfires, a red flag warning is also in effect for the area of the Bull Draw fire because of the warmer weather. High winds are also a concern because it can cause weakened trees and healthy aspens with shallow root systems can come down on roads and trials, according to an incident overview.

Crews fight Wilkerson fire near Lake George - The Denver Post Debbie Kelley, September 30, 2018

About 45 firefighters continue to work on a wildfire that started Saturday afternoon in Park County, according to the U.S. Forest Service.

The Wilkerson fire, reported at 2:37 p.m., has burned about 18 acres of forest land about 3 miles northwest of Lake George in the area known as South Park.

Up to 70 firefighters were on the scene previously, including U.S. Forest Service and Park County crews.

A fire line is being constructed in the steep rocky terrain, officials reported Sunday morning.

Mapping reduced the size of the area burned from 25 acres to 18.

One large and two small air tankers and a helicopter were reported to be fighting the fire Saturday, along with ground crews.

It is unknown whether any structures could be threatened.

The wildfire is believed to be human caused, unofficial social media reports say.

Both Park County and the Teller County enacted restrictions on open burning and outdoor fires Saturday due to red flag warnings, indicating hot, dry, windy weather conditions could fuel wildfires.

Minturn Fire: Eagle County, Colorado, Wildfire Sparks At Gun Range Newsweek

Juliana Rose Pignataro, September 29, 2018

A wildfire broke out at Minturn gun range in Eagle County, Colorado, on Saturday, local fire authorities said. The Eagle River Fire Protection District confirmed it was responding to the fire and asked people to avoid the area.

The National Weather Service confirmed the fire was burning along US 24 near Minturn. Colorado State Patrol asked that people avoid Highway 24 to allow emergency crews to get through. Roads were likely to close in the area.

It was not immediately clear how the fire started, though Stage 1 fire restrictions were in place on Saturday, the Aspen Times reported. During such fire restrictions, shooting at gun ranges is allowed though some restrictions are placed on the activity.

The fire continued to spread thanks to strong winds. Helicopters were deployed for air drops to aid in containing the fire, according to the Vail Daily News.

Multiple agencies were on scene to aid in the firefight including the Greater Eagle Fire Protection District, the Vail Fire Department, the Eagle County River Fire Protection District and the Eagle County Sheriff's Office.

It was not immediately clear whether any structures were threatened by the fire.

416 Fire inspires new Red Cross volunteer - Durango Herald Patrick Armijo, October 1, 2018

A combination of factors – moving to Southwest Colorado at the start of the 416 Fire, a previous stint with the American Red Cross and some time on her hands – merged to place Madeline

Marquardt in Wilmington, North Carolina, for two weeks helping with relief efforts after Hurricane Florence.

Madeline and her husband, Brian, both 58, have been visiting Durango for years—enchanted by the climate, the mountains and the history of the ancient Puebloans. Six years ago, they bought land near Hesperus with the intent to retire there.

When GE, Brian's employer, allowed him to telecommute, the couple accelerated their plans and moved from Cincinnati to a place near Hesperus on June 2 – the second day of the 416 Fire.

"We were eyeing Durango for years," Madeline said. "We ski, we hike, we bike. It is the perfect place for us, and we were trying to escape the rain of Cincinnati."

But the Marquardts' arrival in Southwest Colorado was anything but opportune.

After experiencing the smoke from the 416 Fire, and internet outages they were told was firerelated, and with plenty of time on her hands after the move, Madeline thought about a stint she spent in the Red Cross 20 years ago.

"Just going through that forest fire, day after day, the smoke, seeing the people who had to evacuate, watching the plumes, and then the floods – we were spared – but I thought: I could give more," Madeline said.

She decided to volunteer for a second stint with the Red Cross, the agency chartered by Congress to help in natural disasters and emergency situations such as house fires.

"My thought was I'd be able to help in Durango next year if there are more fires or for house fires," Madeline said. "But literally, the next week they called and asked if I could deploy to help out with Hurricane Florence in the Carolinas."

On Sept. 13, Madeline reached out to the Red Cross. On Sept. 14 and 15, she completed online classes, had a health check and underwent a background check. On Sept. 17, the phone rang. It was the Red Cross with a request: Would Madeline consider deploying to North Carolina to help with Hurricane Florence relief?

"They asked: 'Can you respond?' I'm like: 'Oh, well – I guess. I guess I can pack my bags in one day."

By 5 p.m. Sept. 17, Madeline was on a flight to North Carolina.

Mauri Moore Shuler, a public information volunteer with the Red Cross, said Madeline has the ideal qualities to be a great volunteer: She's resourceful and she thinks fast on her feet.

"In these disaster situations, you're working in fragile situations with things that are not whole," Shuler said. "Because of the storm you have to be adjustable, resourceful and you have to maintain a good, positive mood. You have to find a way to get to the word 'yes," Shuler said.

Besides being resourceful, Shuler said, Madeline works without losing "her outlook of kindness." She added: "That's not an easy thing to do because you're working long hours in stressful settings."

Madeline was in charge of getting a Wilmington shuttered private gym in shape to serve as a home base for more than 80 Red Cross relief workers from across the country.

The old gym had electricity and running water, but little else.

Madeline and two other Red Cross volunteers were in charge of setting up living quarters with cots and blankets, getting restroom facilities in shape to use and providing a secure area where relief volunteers could keep their personal belongings while they were out in the field.

"I know the old gym had lights, but they did not go out; not good when you have relief workers that have to sleep. But the lights go out now," Shuler said. "I'm not sure how Madeline managed that, but she did."

Currently, Madeline is playing host to what she calls "a second wave of volunteers" – mostly people who work in the field of mental health – nurses and handlers working with comfort dogs to help people deal with the strain and health consequences that build when dealing with a natural disaster.

On Wednesday, Madeline said about 35 volunteers are at her shelter in the old gym, down from a peak of more than 80 from the first wave of relief workers – people operating high-centered, emergency response vehicles to get food and to evacuate people from homes and towns cut off by the rising rivers.

Madeline said the North Carolinians' spirit and their sense of community to overcome the worst Florence threw at them, inspires her.

"There's so much negativity and division now in politics, but when you get here, and you have to deal with tough situations, there are no politics. People just help people. We have a common goal to overcome this disaster.

"It shows to me that Americans, when we're called to meet a higher purpose, we can do it," she said.

MONTANA

Wintry weather creating hazardous driving conditions in Glacier National Park – 3KRTV.com - Great Falls

David Sherman /September 29, 2018

(GREAT FALLS) Going-to-the-Sun Road is temporarily closed between Avalanche Creek on the west side of the park and Jackson Glacier Overlook on the east side of the park.

Park officials said in a press release on Saturday afternoon that winter weather in high elevation areas of the road has created hazardous driving conditions, including freezing temperatures, black ice, accumulating snow, and decreased visibility.

Logan Pass – East View (GNP webcam on Saturday, September 29, 2018) The park found that standard two-wheel drive vehicles were unable to maintain traction along the alpine sections of the road.

The National Weather Service has issued a winter weather advisory in effect from 9 pm tonight until 3 pm on Sunday for the west side of the park. A winter weather advisory is already in effect for the east side of the park. Up to six inches of snow is likely above 4,500 feet west of the Continental Divide. Three to six inches of snow are expected east of the Continental Divide, with localized amounts over 12 inches possible.

Park staff will continue to monitor road conditions and road crews will work where they are able to do so safely. However, given the short-term weather forecast, it is likely that the Going-to-the-Sun Road will remain closed at higher elevations for one or more days.

The park will continue to provide updates via the Current Road Conditions section of the park website and on Twitter. Visitors should monitor these webpages for additional road information, including other roads that may be impacted by winter weather in Two Medicine and Many Glacier.

Snowfall in Great Falls - KULR TV 8 Great Falls

Posted: Sep 30, 2018 7:36 PM

GREAT FALLS- While people living in other places around Montana may have seen more snow than Great Falls did today, residents still had some opinions about the early snowfall.

This morning residents woke up to roofs covered with a dusting of snow. Even our news antennas at the station had a little snow on them. The National Weather Service said we received a tenth of an inch of snowfall. NWS also said while it may have snowed earlier last year, we had more measurable snowfall today.

"I love snow, but It's a little early still. October 31st is when we're supposed to have our real first snow," said Carol Sturdivant.

"I'm a little bit happy. It means hunting season is just right around the corner," said Braden Wounkan.

"I definitely wouldn't like snow this early, but it is what it is. At least happy to see it's still snowing," said Kolten Hill.

Of course, getting snow around this time of the year is pretty normal, but NWS tells us, the earliest significant snowfall in Great Falls was recorded back on Aug. 22nd through Aug. 23rd in 1992 when we got 8.3 inches of snow.

Montana to receive pipeline safety and emergency preparedness grant-KMMS AM 1450 Bozeman

Updated: Fri 4:46 PM, Sep 28, 2018

HELENA, Mont. - Sen. Steve Daines, R-Mont., says Montana is receiving a grant that will improve pipeline safety and emergency preparedness. The US DOT's Pipeline and Hazardous Materials Safety Administration is funding the over \$457,000 grant - \$269,902 to enhance emergency preparedness in the state and a \$187,960 grant for pipeline safety.

"Pipelines are critical pieces of infrastructure and provide strong economic benefits to the counties that host them," Daines said. "It is important that we do all we can to make the transportation of oil and natural gas safer. These funds will give Montana counties more resources to be ready for potential spills and accidents."

NORTH DAKOTA

Disaster planning highlighted during National Preparedness Month-Dickinson Press

By James Miller on Sep 28, 2018 at 12:15 p.m.

Disasters often occur with very few signs of warning or time to prepare. Emergency service agencies across North Dakota are actively coordinating with FEMA on a project aimed at raising awareness and providing best practices in preparation against disaster.

Homeland Security Secretary Kirstjen Nielsen, stated in a message published online that National Preparedness Month is "an opportunity for us to remind our families, friends, and communities to get ready for disasters and emergencies before they strike. Thinking ahead can save lives."

In Stark County, Bill Fahlsing, director of emergency management, said, "Preparedness is key for everybody. Emergency planning consists of a lot of information."

As the winter, then spring months approach, Stark County Emergency Services wants people to be aware of the assortment of weather and emergency challenges facing the region from tornadoes, blizzards and home fires to flooding and power outages. Knowing what disasters and hazards could affect your area and planning for them are hallmarks of National Preparedness Month.

Fahlsing said his agency has sought to increase awareness through their social media pages by providing vital information on how people can help emergency services through their own personal planning in drafting a household blueprint for disaster.

"It's important for everyone to have a general emergency plan and go-bag with supplies, cash and documents," Brian Hvinden, a spokesperson with FEMA Region 8, said, "but locally people should get to know their neighbors who will be the initial point of mutual support in a disaster."

According to a recent study by J.D. Power, the average cost of homeowner's or renter's insurance in the U.S. is \$707 per year, and in Stark County the prices range from \$1,136 to \$1,772 per year.

Reviewing insurance policies with consideration for rebuilding after a disaster is an important initial step.

"Proper coverage is essential for your belongings. I would encourage everyone to speak with their insurance provider to ensure coverage is current and appropriate for their covered items," Fahlsing said.

Following a disaster, a host of documents will be needed to begin the process of rebuilding. Car registrations, birth certificates, insurance policies and health insurance cards are vital documents that should be safeguarded.

"Compile physical and virtual copies of all your vital paperwork. Make sure you have the title to your house, if possible." Hvinden said. "Double-check your credit cards and bank cards and keep them handy."

Placing documents in a waterproof bag or portable waterproof container are one method of securing your first step toward recovery. Another method, more in keeping with modern technology, would be to scan documents and upload them to a secure, password-protected online storage space for easy access from a public computer.

"Before a disaster hits, check all your online passwords and codes to ensure that you'll be able to access your accounts from a public computer. While it's great to save your passwords in a secure place, it pays to memorize them—after all, you don't want to be stranded if you get separated from your phone." Hvinden said.

Disasters are expensive, both as it occurs and in the first few months thereafter. According to the Red Cross, the average family should maintain \$2,400 in an emergency fund account. Building an emergency savings fund require a few dollars from every paycheck but can go a long way toward reducing the stress of a disaster.

"Carefully consider the costs of preparing for storm, including boarding up your windows and nonperishable food, toiletries, and medicine supplies. Consider the budget you may need to evacuate to a hotel and pay for gas." Hvinden said.

Following Hurricane Florence, which hit the Carolinas this month, experts predict that it will take weeks to fully restore electricity to many communities. For this reason, Stark County Emergency Services have recommended to keep a cash or traveler's checks on hand to ease the hardships faced in the event of an outage separating you from your money.

As you prepare your plan, it is important to tailor them to your family and your specific daily living needs and responsibilities. Most importantly, practice your plan with your family or household once a month.

"Certainly, North Dakotans are known for knowing their neighbors and that advantage really helps during a time of need following a disaster," Hvinden said. "Including neighbors in a disaster plan, especially elderly neighbors, is a great inclusion I'd recommend."

For more information on how to prepare for a disaster, visit Stark County Emergency Services' social media page or www.starkcountynd.gov/des.

SOUTH DAKOTA

Before homes 'burned to the ground,' but now Standing Rock tribe finally getting fire department- The Jamestown Sun

By <u>Blair Emerson / Bismarck Tribune</u> on Sep 28, 2018 FORT YATES, N.D. — The Standing Rock Sioux Tribe has used a federal grant to start a volunteer fire program.

Last year, the tribe received a more than \$260,000 grant from the Federal Emergency Management Agency to recruit and train volunteer firefighters. Through the grant, the Akicita Fire Program was established.

A long-term goal for the tribe is to create a department staffed 24/7 by professional firefighters. The tribe has never had a structural fire station nor a group of individuals trained to suppress structural fires.

"This is going to be a first for Standing Rock," said Tribal Chairman Mike Faith. "We've talked about it over the years, and it's become a reality within a short period of time."

A group of 14 to 18 men have been training in the volunteer fire program since April. The grant is managed by Heartland Consulting Group, an emergency management consulting firm based in Bismarck.

Last week, the volunteers hooked up a fire hose to a Bureau of Indian Affairs fire truck and carried the hose to an abandoned gas station for a mock fire drill.

Kurt Stein, an instructor with Heartland Consulting Group, has been training the volunteers once a week in the Tribal Employment Rights Office building in Fort Yates. The group began conducting full-fledged fire exercises this week, with about a month left before graduation. The volunteers shook off their first-time jitters and ran a drill at the tribal administration building last week, where two people posed as victims who needed to be rescued from the faux burning building.

"It's been a learning experience. A lot of knowledge in a short period of time," said volunteer firefighter Wyatt Red Tomahawk, 32. "The community doesn't have a structural fire department, so it'd be nice to be a part of the foundation that's being laid for future firefighters."

The volunteers are ages 19 to 56. Some have experience with the BIA Forestry and Wildland Fire Management in Fort Yates, while others have no experience at all.

Daniel Eagleshield, 19, a student at Sitting Bull College, decided to volunteer for the program to gain experience. At the training last week, Eagleshield said he's familiar with wearing heavy firefighter gear, as he once played football.

"I thought (the fire program) was a good opportunity to gain some experience," he said. "Honestly, I've thought about pursuing firefighting as a career."

On the reservation, which spans 2.3 million acres of land, the only fire suppression team is the BIA Wildland Forestry and Fire Management, which responds only to wildfires. The BIA once operated a fire station in Fort Yates, but that was established only to protect federally owned buildings.

"We don't have a structural fire department, so if we have a fire, the house just burns to the ground," said Elliott Ward, tribal emergency manager.

Because the FEMA grant didn't cover any structural fire equipment, Ward contacted the BIA to request equipment, including two trucks and the old Fort Yates Fire Station; the building will be used to house the new volunteer fire program.

Because the reservations sits in North Dakota and South Dakota, Faith said the tribe would like to set up two fire stations: one in Fort Yates and one in Little Eagle, S.D., or nearby in McLaughlin, S.D.

Faith says he's encouraged by the volunteer fire department. Last week, he spoke at the Sitting Bull College student summit to encourage students to pursue fields in fire management. The volunteer fire department may not be a "fix-all," he said, but "if we respond and save one life, it's well worth it."

The tribe's last fire fatality was in May, when a 58-year-old man was killed and a boy was injured in a mobile home fire in Fort Yates township. Faith said the Bureau of Alcohol, Tobacco, Firearms and Explosives was called to investigate, and evidently the fire was caused by a space heater being placed too close to furniture.

Since then, there have been a few structure fires, including at an abandoned mobile home, and at two school storage buildings, which burned within the span of three weeks. "Arson, who knows," Faith said.

The tribe's two-year FEMA grant will end November 2019, according to Derek Hanson, president and CEO of Heartland Consulting Group. In March, the fire program will train a second group of volunteers, he said.

After the FEMA grant runs out, Faith said the tribe hopes to sustain the program by reviewing a variety of funding options, including additional grants and insurance savings. High premiums for homes on the reservation could be reduced if there's a structural fire department.

"The bottom line is to try to be self-sufficient into the future," Faith said.

The volunteer fire program, once established, will only respond within the reservation boundaries, but eventually Faith said signing agreements with towns beyond the reservation borders is being considered.

For more information on the Akicita Fire Program, visit www.akicitafire.org.

The Solar Warrior of Pine Ridge - US News and World Report

By Laura Brickman Contributor/Sept. 28, 2018

PINE RIDGE INDIAN RESERVATION, S.D. — Henry Red Cloud built Lakota Solar Enterprises and the Red Cloud Renewable Energy Center on his family's land, a plot of some 30 acres near a remote stretch of highway here. On an isolated expanse of the Northern Plains, it's one of the harshest environments in the U.S., where temperatures in the winter can drop below zero, the frigidity punctuated by fierce storms able to drop power lines in furies of ice and wind. But Red Cloud doesn't see the extreme conditions as a handicap. For the last two decades, he has thrown himself into establishing a renewable energy program that can serve as an anchor for heating, electricity and job growth on Pine Ridge, home to the Oglala Lakota Sioux tribe.

"You can just watch the clouds blowing through the sky, dumping huge amounts of snow and rain, and you see the potential we have to create an economy around wind and solar," he says.

South Dakota's resources and small population have made the state a leader in renewable energy production. According to the <u>U.S. Energy Information Administration</u>, almost 75 percent of the state's electricity comes from hydroelectric power and wind, the latter of which has grown fifteenfold in the last decade and marks <u>South Dakota</u> as a top-five state for electricity generated by wind. Area power produced is delivered in the central and western U.S. by public utility the <u>Western Area Power Administration</u>, creating a grid that incentivizes further investment in the industry.

Yet census estimates show less than a third of residents in each of the three counties containing Pine Ridge reservation land – Oglala Lakota, Bennett and Jackson – have relied on electricity for home heating in recent years, with more than half in each place using bottled, tank or liquid propane gas. Between roughly 5 percent and 10 percent have used wood.

In the U.S. overall, some 38 percent of people have used electricity for heat, census estimates show, while approximately 5 percent have relied on propane and 2 percent on wood. Nearly half have had their homes heated by gas piped from a central system.

Like reservations across the country, Pine Ridge has been passed over by state and federal infrastructure projects since state and federal governments were created. WAPA spokeswoman Lisa Meiman says the utility constructed a transmission line that runs through Pine Ridge in 1964, but the line never serviced the reservation itself. It took more than half a century before a private company, <u>Lacreek Electric</u>, extended the line to distribute power to Pine Ridge – a project that was finished this past July.

Even with the transmission line, Josh Fanning, member services and procurement manager for Lacreek Electric, says it costs \$7.50 per foot on average to bring service to people's homes. It reportedly can cost upward of \$60,000 just to install lines and meters for remote residences.

That means on a roughly 2 million-acre reservation – where census <u>estimates</u> show the median household income is approximately <u>\$31,000</u> and more than half of people live below the poverty line – it can be more feasible for residents to buy propane and wood to burn for heat, often consuming a significant portion of a household's income and leaving less for other needs.

Last year, the U.S. Energy Information Administration <u>forecast</u> that households using propane to heat their homes during the winter would spend \$1,661 on average, compared with those predicted to spend \$980 on electricity during the same period.

Walter Yellow Hair, who has has worked with Red Cloud on Pine Ridge, says winter is "expensive" and he'll spend around a few hundred dollars a year on wood, which he uses "every time I cook." "Sometimes I get donations," he says.

When fuel runs out, people on Pine Ridge may have to choose between food and paying to heat their homes, which in winter can become a life-or-death decision. In 2014, Native American woman <u>Debbie Dogskin</u> in <u>Fort Yates, North Dakota</u> – on the Standing Rock Sioux Indian Reservation – froze to death in a mobile home that had run out of propane. It was February, and overnight temperatures had dropped below zero.

Red Cloud's work is for people like Dogskin, who was 61. Over the last 15 years, he's furnished thousands of stand-alone solar heating units for residents of Pine Ridge and other reservations, freeing people to use more of their money on things like food and health care, instead of burning it up on gas and wood.

Yet there have been limits to how far his help can go. If residents don't have access to a grid, there's no way they can store or sell solar-generated power, meaning scaling up to establish an industry that can provide desperately needed jobs is so tantalizingly close, yet so out of reach.

"The issue is how do you store the power, and the grid functions like a battery that can be sold back to the energy company," says Don Kelley, who serves as chairman of the Black Hills chapter of community organizing group Dakota Rural Action and has <u>installed solar panels</u> at his home near Rapid City.

"It comes back to economics; there's no industry on the reservation," Kelley says. "There are so many people that don't have power and they're not going to get it because it's just about money. You're never going to get access to the grid like we have in the rest of the state."

For several years, Kelley says he pushed to establish <u>net metering</u> across the state – a policy that essentially allows small-scale solar users to <u>sell excess energy</u> to a utility for use on a public power grid, offsetting power and installation costs for the user. Kelley says each time the effort was killed in the state Legislature after utility-company opposition, as utilities would be required to pay customers for the power they generate.

The South Dakota Public Utilities Commission "is only responsive to utilities. ... We're kind of up against a brick wall," Kelley says. "The reality is small-scale solar is becoming so cheap that it's going to happen whether the utility companies want it or not."

Steve Willard, a lobbyist who has testified against net metering before the Public Utilities Commission, says net metering bills are "a distraction in the Legislature" and one hasn't been brought by lawmakers for some time. "It incentivizes investment in solar but ... the utilities shouldn't carry the burden of the individuals with the means or desire to put energy into the system," Willard says.

Meanwhile, Pine Ridge's extreme conditions and lack of many resources – much of the land is not farmable on an industrial scale – created a need for innovation. In 1995, Red Cloud first started to explore stand-alone renewable energy systems, and on a dial-up internet connection found Front Range Renewable Energy, then located near <u>Pueblo, Colorado</u>, which specialized in off-grid renewables.

Working with Front Range, Red Cloud learned how to construct portable power stations and generators, and brought his newfound knowledge back to Pine Ridge. Soon after, Richard Fox with <u>Trees, Water & People</u> – a Colorado nonprofit that focuses on energy poverty as a human rights issue – had foundation money to install 200 solar heating systems in Pine Ridge, and asked Red Cloud to do the work.

During the project, Red Cloud dropped one of the units, shattering the exterior and giving him an opportunity to look inside and see how the system worked. The units apply a 1970s concept of air heating and feature a 32-square-foot absorbing panel, heat sensor and thermostat that in full light can reach 190 degrees. A DC blower transfers the heat generated to people's homes. "It's pretty old-school," Red Cloud says.

Eventually, Red Cloud opened <u>Lakota Solar Enterprises</u>, using the knowledge he'd gleaned to build the stand-alone solar heating units that families throughout the reservation can install and use at no cost. In 2008, Lakota Solar and Trees, Water & People established the <u>Red Cloud Renewable Energy Center</u>, which provides training in renewable energy applications for any indigenous person who wants it.

Since then, Red Cloud has led 1,500 trainings for representatives of dozens of tribes in the Northern Plains region.

"Everybody's starting to get solar panels," Yellow Hair says, recalling Red Cloud helping a family get a generator with solar paneling, light connections and the capability to charge a cellphone.

Sustainability and respect for the environment are deeply rooted in Lakota culture, and as awareness of climate change and energy alternatives increases, Red Cloud's work has gained recognition. The <u>Massachusetts Institute of Technology</u>, for example, <u>recently awarded</u> him a grant to expand work he did in the Standing Rock area, <u>where he installed solar equipment</u> to serve protesters opposing the Dakota Access pipeline.

"We as warriors, we bring resources to the tribe, we bring back buffalo and all that, but it was always protecting the earth and looking out for the tribe," Red Cloud says. "We're doing our warrior deeds in the 21st century."

As solar technology becomes cheaper and more efficient, off-grid power generation and the ability to store that power have become more viable than ever, and efforts to establish grid connections are ongoing.

In fact, Wircon GmbH, a German renewable energy development firm, is hoping to construct a 110-megawatt solar-generating facility called Lookout Solar Park I on Pine Ridge. The roughly \$25 million dollar project would finally establish a transmission line connecting the reservation to the WAPA grid, opening the doors for the industrial-scale solar infrastructure that Red Cloud has imagined for decades.

Christian Bohn, group general counsel for Wircon, says the company hopes to begin construction as early as 2019, and has already leased 800 acres from a tribe member to build the facility. The investment also holds the promise of something residential solar simply doesn't have the bandwidth to provide on a large scale: jobs.

"Solar plays a huge role in our song and ceremony," Red Cloud says. "This work is about honoring that old way and creating economic opportunity."

UTAH

Fire updates: Murdock Fire near Kamas closes highway after making 'run to the north' - KSL.com Salt Lake City

By Liesl Nielsen, KSL.com | Posted - Sep 30th, 2018 @ 12:40pm

KAMAS — The Murdock Fire in the Mirror Lake Complex east of Kamas made a "run to the north" Saturday, and caused the closure of state Route 150 Sunday, officials said

As of Saturday night, the fire was a half mile from Blythe Lake in the High Uintas Wilderness and burned to the foot of Mount Agassiz, according to a tweet from Utah Fire Info. The blaze created a smoke column so large it was visible from Evanston, Wyoming.

State Route 150, also known as Mirror Lake Highway, closed to traffic Sunday, from the Murdock Basin turnoff to Ruth Lake campground, because of the excessive smoke in the area and firefighting efforts nearby, according to a tweet from the Utah Department of Transportation.

The Slate Fire is also still burning in the same area as the Murdock Fire. Together, the two fires have burned 5,137 acres and are 17 percent contained.

Utah County wildfires nearly contained-Good4Utah TV

UTAH COUNTY (News4Utah)- Fire crews in Utah County have made significant progress on the Pole Creek and Bald Mountain wildfires.

As of Monday morning, both fires were more than 80 percent contained.

Monday UPDATE

Pole Creek: 102,188 Acres, 81% containment Bald Mountain Fire: 18,620 acres, 97% containment

Closures: The Uinta-Wasatch-Cache and Manti-La Sal National Forests implemented an area closure for the fire areas, until further notice. The full closure order and map can be found under the closure tab on the Pole Creek Fire InciWeb page. The area closure includes areas currently in the Bald Mountain Fire and the Coal Hollow area.

https://inciweb.nwcg.gov/incident/closures/6199/

Evacuations: Covered Bridge, Right Fork Hobble Creek and Diamond Fork areas remain in effect.

FEMA announces federal grant that helps retrofit Wasatch Fault homes from earthquakes – KUTV News Salt Lake City

(KUTV) -- The Federal Emergency Management Agency announced a federal grant of nearly \$2 million to help retrofit homes against earthquakes.

FEMA announced in a press release Monday that they will provide a \$1,916,396 grant for Utah to help retrofit 100 Salt Lake City homes built along the Wasatch Fault.

The money will go toward roof-to-wall connections, chimney bracing as part of Utah's Fix the Bricks program, and enhance life safety for residents during an earthquake. The approximately \$1.9 million grant represents a federal cost-share of the total project cost of \$2,555,194.

The funding is provided by FEMA's Pre-Disaster Mitigation Grant Program, which is designed to assist states, U.S. territories, federally-recognized tribes and local communities with implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to the population and structures from future hazards, while reducing reliance on federal funding for future disasters.

2018 water year: 'Miserable' winter and 'hot' summer – Deseret News
SALT LAKE CITY — The 2018 water year that ended Sunday was about anything but water for most of Utah.

"It was a miserable, horrible winter and it was a hot, dry, smoky summer," said Troy Brosten, a hydrologist and the acting data

The survey, operated within the U.S. Department of Agriculture's Natural Resources Conservation Service, is finalizing its numbers this week, and most water watchers expect Utah Gov. Gary Herbert will then declare the entire state in emergency disaster due to drought. "We certainly have the conditions to justify it," said Mike Styler, executive director of the Utah Department of Natural Resources.

Last month, as required under state law, Utah leaders and weather experts convened an emergency meeting due to the drought that continues to spread across the state.

With the exception of 0.04 percent of the state's 54 million acres, Utah is in some category of drought — ranging from moderate to exceptional, the latter being the worst category. A little less than half the state is either in exceptional or severe drought as of late September, according to the National Integrated Drought Information System.

"Water may be a renewable resource, but the last couple of winters what we have seen is that it is not renewing," Styler said.

During the 2018 snowpack accumulation season, the state saw just half the volume of snowpack it typically does.

Brian McInerney, senior hydrologist with the National Weather Service in Salt Lake City, said the worst seasonal conditions combined to produce a dreary year for water supply.

"It was bad all the way around. There are a couple of ways to look at it: record low snowpack in central and southern Utah in the wintertime, below average runoff and then an incredibly hot and dry summer," he said.

Styler said the 2018 water year basically turned into the water year that wasn't. Yuba Reservoir, where Styler depends on water for a family farm, began the irrigation season at 38 percent.

The reservoir in Juab and Sanpete counties can hold 236,000 acre-feet of water, Styler said. "Right now it is down to 4 percent. We are going into the fall with reservoirs that are basically empty."

Tage Flint, general manager of the Weber Basin Water Conservancy District, cut short his service area's irrigation season beginning Monday, ending it two weeks early to bank an extra 6,000 acre-feet. Some individual irrigation companies within the district cut allotments of water by half earlier this year to last through the remaining irrigation season.

"There are local mountain streams on the Wasatch Front north of Salt Lake City that had some of the lowest yields in history," Flint said. "Farmington Creek didn't even peak. We also know that the last three months we are breaking records of the lowest precipitation in at least the last 20 years. What that has done is drive up the demand."

Hryum Reservoir south of Logan in Cache Valley is just 26 percent full and Echo Reservoir is in worse shape, at 13 percent full, according to the U.S. Bureau of Reclamation.

Some reservoirs like Deer Creek and Jordanelle are holding on, at 56 percent and 68 percent full, respectively.

Across Flint's entire district, reservoirs on average are sitting at 51 percent. "The good news is that we are going into next season at half full," he said.

Generally, Utah reservoirs had more carry-over this time last year than now.

McInerney said that hold over is what saved irrigators, for the most part, over the dry winter and searing dry summer.

"All that carry over we've used up. It's like money in the bank, and we didn't work that much this year, and now we have a lot less money in the bank," McInerney said.
"If we get an average year, we will be good."

What happens in the coming season for water is anyone's guess at this point, however. But McInerney pointed out the importance of having a steady supply of average years, or even a couple months where snowfall is relentless and setting records.

From 2012 to 2017, the region had below average snowpack and runoff — setting up the West for its extreme drought, he said.

But in December of 2016 and January 2017, blockbuster snowpack at 300 to 400 percent of average saved many areas.

"It was those two months that filled reservoirs across the West that saved those five years of drought," McInerney said.

He added that the changing climate and warming trends should have people perking up and paying attention.

"This is our future. We are playing with loaded dice."

One sprinkle of hope is that next week, the dry weather pattern is expected to shift and rain from Hurricane Rosa will move into the state.

Utah absorbed 6,000 evacuees, proving civil society is alive and well – Deseret News

Deseret News editorial board/Published: October 1, 2018 6:00 am

A helicopter drops retardant to battle the Pole Creek fire in Woodland Hills on Friday, Sept. 21. What does it take for a community to absorb 6,000 evacuees running from natural disaster? A strong civil society seems to do the trick.

Shortly after two fires started blazing across the hills south of Spanish Fork in Utah County in early September, evacuation orders went out to thousands of residents in the surrounding communities. Gov. Gary Herbert called the situation "a real emergency," saying the fires could become the costliest loss in the history of the state should they devour the homes in harm's way. As of last week, the Pole Creek and Bald Mountain fires had burned a total of 120,500 acres. Where did nearly 6,000 residents go? Many found sanctuary with relatives, friends and even mere acquaintances, demonstrating the power of strong communities and a functioning civil society.

It's hard to imagine many other places that can so readily take in thousands of people within a few days. High school gymnasiums, armories and sports arenas are typical go-to places during extreme weather events, but in this case it seems a unique number of close-by relatives and friends have largely replaced traditional shelters.

Much of the effort has been orchestrated by The Church of Jesus Christ of Latter-day Saints, which owns this paper. The church, known for its swift response to natural disasters and for providing aid around the world, has opened chapels for community gatherings and has enabled local leaders to coordinate efforts.

Utahns have demonstrated it doesn't take a bureaucratic organization to be the gift others need in times of crisis.

The response from the many Utahns was so overwhelming officials asked locals to stop donating to the Red Cross shelter, which closed shortly after evacuations took effect because of underutilization. And a Utah County public information officer announced on Twitter there was a waiting list for people willing to offer up their homes.

Organizations haven't totally been overlooked, with some providing shelter, food and resources to those who in need, and other evacuees have stayed in hotels covered by their insurance plans. But it's abundantly clear Utah's civil society is alive and well.

Yet, a growing technological isolation threatens to undermine the framework of civil society across the country. One-third of Americans have never interacted with their current neighbors, according to a 2015 City Observatory study. General sociality is on the decline. Churches, little leagues, community centers and backyard potlucks are the heartbeat of community health, and efforts to support and maintain these institutions need to continue.

The fires persist, but updates as of last week report the Pole Creek Fire is at least 65 percent contained, and the Bald Mountain Fire is more than 70 percent contained. We commend the fire crews risking their lives to tamp out the blaze and tirelessly protect residents and their property. Between firefighters and open doors, Utahns have demonstrated it doesn't take a bureaucratic organization to be the gift others need in times of crisis.

WYOMING

Wyoming forest fire human caused - Billings Gazette

Associated Press, September 30, 2018

PINEDALE, Wyo. — Firefighters in western Wyoming say a wildfire that has destroyed 55 homes and forced the evacuation of about 500 rural residents was caused by an abandoned warming fire that had been left unattended.

The fire has burned about 90 square miles since it was first reported Sept. 15. Firefighters reported Saturday that it was about 40 percent contained and remains south of a highway that leads to the Jackson Hole region.

About 1,160 personnel have been fighting the fire, with a special focus on the southwest side of the fire in hopes of protecting homes.

Firefighters also have been shoring up fire lines to keep the flames from crossing U.S. 189/191.

Warm, dry and windy weather conditions ideal for fire growth were expected to persist through Sunday.

Massive human-caused wildfire near Grand Teton 40 percent contained after burning 55 homes - Jackson Hole Daily News & Guide

Kylie Mohr, September 29, 2018

As of 8 a.m. Saturday morning, the Roosevelt Fire in western Wyoming was 57,969 acres and 40 percent contained.

Officials now say the human-caused fire was ignited by an abandoned warming fire left unattended around Sept. 14-15 on a steep slope in the upper reaches of the Hoback River drainage.

Investigators are asking anyone with information as to the cause, or people responsible, to contact U.S. Forest Service Law Enforcement at 208-557-5852.

Stage 1 fire restrictions remain in effect, meaning that campfires and warming fires are allowed only in designated places and must be fully extinguished. Strong winds and dry fuels still persist today, and a red flag warning remains in effect.

There were 1,160 people working on the fire Saturday. Firefighting efforts Saturday focused on the southwest side of the fire in the North Dry Beaver Creek area west of Jim Bridger Estates.

Additional resources were allocated to this area, allowing firefighters to make "steady progress" in securing fire lines to keep the fire from moving to the east. A structure protection group is also working ahead of the fire to protect homes.

Highway 191 is now fully open through the fire area. Further closures are not expected but, depending on fire activity, may be necessary. Power has also been restored to the Kendall Valley and Upper Green area.

A total of 55 homes have been lost. Recovery efforts in Hoback Ranches area are continuing in order to let residents back in. Lower Valley Energy and Rocky Mountain Energy are working to restore destroyed infrastructure and firefighters are clearing dangerous snags and putting out hotspots as they occur. These efforts will continue for a number of days until the area is deemed safe for residents to return.

U.S. Forest Service: Ryan Fire In Southern Wyoming Is Human-Caused- K2 Radio, Casper

Tom Morton, September 28, 2018

The U.S. Forest Service has determined someone who did not control a campfire caused the Ryan Fire, which has burned over 33 square miles in southern Wyoming and northern Colorado, according to a news release from the Forest Service on Friday.

Wildland fire investigators located the origin area of the fire three miles southeast of Hog Park Guard Station, two miles south of the state line, and two miles west of Buffalo Ridge Trailhead, in Jackson County, Colo.

The fire remains under investigation.

The Ryan Fire was first reported on Sept. 15, and restrictions were in place at that time prohibiting campfires outside of approved Forest Service fire rings. Those restrictions remain in effect throughout the Routt National Forest and the Sierra Madre Range, Medicine Bow National Forest.

The fire has grown to nearly 33 square miles and is 35 percent contained. The recent moderate weather has slowed the spread of the fire burning largely in beetle-killed lodgepole pine and spruce/fir, and 321 firefighting personnel have determined two structures and 10 outbuildings were destroyed last weekend.

Hotter and drier temperatures are expected to return through the end of the week creating the chance for increased fire behavior.

An area closure is in place for National Forest System lands surrounding the Ryan Fire to protect the public and fire personnel, and will remain in effect until rescinded. This closure is on portions of both the Medicine Bow and Routt national forests. The closure area primarily affects hunters with licenses in game management unit 161 in Colorado, and elk area 13 and deer area 81 in Wyoming. Hunters are encouraged to obtain a copy of the area closure map before heading into the field. The complete closure order and map are available on the Ryan Fire InciWeb page.

Forest Service law enforcement received information from the public, but needs more.

If you have information, please call the Fire Information line at (307) 314-9408 about activity along the National Forest System Trail 1152 (Encampment trailhead to the north, Diamond Park trailhead to the south) and the Encampment River, and in the extreme northern tip of the Mount Zirkel Wilderness, Routt National Forest.

Officers are particularly interested in hearing from hunters who may have been in the Colorado Game Management Area 161.

When calling the Fire Information line, be ready to provide your name or contact information; and information about the date, time, location, and any identifying facts about the activity being reported. A Forest Service Law Enforcement Officer will follow up with members of the public who provide tips. Details and facts will be helpful in identifying responsible individuals.

Firefighters making progress on Roosevelt Fire in Wyoming -Wildfire Today Bill Gabbert, September 30, 2018

Firefighters have accomplished a great deal on the Roosevelt Fire since it started September 15 south of Bondurant, Wyoming but it has grown to over 60,000 acres, and only about half of the 172-mile fire perimeter has completed fireline.

The focus Sunday was on the southwest side of the fire in the North Dry Beaver Creek area west of Jim Bridger Estates. Firefighters have secured fire lines there, which reduces the threat. Additional resources have been allocated and a structure protection group is working the area ahead of the fire to protect homes.

On the north side of the fire adjacent to the highway, containment lines are in place and holding the fire south of the highway.

In Hoback Ranches, recovery efforts are underway in preparation of an organized repopulation of residents. Lower Valley Energy and Rocky Mountain Energy are working to restore destroyed infrastructure, while firefighters are clearing dangerous snags and suppressing hotspots as they occur. These efforts will continue for a number of days until it is safe for residents to return.

Personnel on the fire could receive help Tuesday night through Wednesday with a 30 to 70 percent chance of precipitation. There could be as much as a quarter-inch on Tuesday. From

Thursday until Sunday the chance of additional precipitation is from 20 to 60 percent. Nighttime temperatures will be in the 20s and 30s.

Investigators determined that the fire was caused by an abandoned warming fire. Highway 191 is fully open through the fire area with reduced speed limits and lane restrictions.

Cooler weather may help firefighters - Jackson Hole Daily News

Tom Hallberg Jackson Hole Daily, September 30, 2018

The weather may be approaching a fortunate turn for firefighters battling the Roosevelt Fire. Red-flag conditions — low humidity and high winds — were present throughout much of last week, but cooler weather with a chance of rain in the next few days could help the nearly 1,200 personnel assigned to the blaze.

As of press time, the fire had burned 60,752 acres and was 45 percent contained. The containment number has slowly increased as crews conducted burnout operations near Highway 191 to hold the blaze south of the road and dug fire lines on the fire's southern flank.

Fire activity has slowed in the Hoback Ranches subdivison, but the most active part of the blaze is now on the southern end near North Dry Beaver Creek, according to a video update from information officer Don Jaques.

"We want to keep the fire from burning south of there because if it moves south and then we get a west wind, it could threaten the Jim Bridger Estates," he told the Jackson Hole Daily.

Relief efforts continue for the roughly 500 people displaced by the Roosevelt Fire. The American Red Cross now has a list of requested donations, and a <u>GoFundMe</u> set up by the Pinedale Lions Club. The Bondurant Community Club has raised nearly \$18,000.

Old Yellowstone Garage and Million Dollar Cowboy Steakhouse owner Paulie O'Connor is heading to Bondurant on Monday evening to feed the firefighters and evacuees. The dinner will start between 5 and 6 p.m., and O'Connor will leave boxes of food for day-shift firefighters if they are late getting off the fire.

Rock Springs hunters escape Roosevelt fire with burns – Casper Star Tribune

Ann Jantz Rocket Miner / Sep 29, 2018

ROCK SPRINGS — It started out like any other ordinary hunting trip. Steve Knezovich and his son, Dakota, were out in the Bridger-Teton National Forest wilderness doing what any other hunter does at this time of year — looking for game.

Instead, what they saw on opening day was a small fire in the distance, among the trees and steep hillside. Steve tried to call it in to report the fire but kept getting disconnected and put on hold. He then called his wife, Deb Knezovich, who managed to call in the fire, giving the GPS coordinates of it from a photo of the fire her husband took on his cellphone.

Later that night, Steve and Dakota watched helicopters fly over the area. They thought the fire was being dealt with.

They did not know the fire was continuing to grow, pushed by ever-changing and gusting winds. And it was near the trailhead leading back to their truck.

Their ordeal was about to begin.

Steve and Dakota were lucky, they admit. They became caught by the Roosevelt Fire, which has destroyed numerous homes in the Hoback Ranches near Bondurant.

When asked how they escaped the fire with their lives, Deb said her husband and son walked out, on their own, encouraging each other every step of the way.

"Both of them thought they were going to die," she told the Rocket-Miner in an email Wednesday, sent from the University of Utah burn unit in Salt Lake City. "Steve told Dakota if he goes down, to leave to make sure he keeps going and gets out. Dakota said, 'I won't leave you.' "

As Steve and Dakota attempted to walk out to their truck, they could see the fire on their righthand side. The trail was clear until the wind shifted, and suddenly the two were surrounded by fire. Deb said her husband and son described the scene as flames everywhere, with trees exploding around them. It happened fast.

"Dakota wanted to run, and his dad said 'We are hurt; we need to move steady so we don't go into shock,' "Deb said, recounting the story they told her.

The two made it to the river bottom. Deb said Steve remembers his son screaming that they were going to die. Steve also was afraid they were not going to make it out; he thought he was going to have a heart attack or go into shock and Dakota would die trying to carry him out. Dakota said he didn't think his dad was going to make it out but was the one that encouraged him to keep going, talking them through the ordeal.

Dakota and Steve eventually made it back to their truck. Meeting them as they walked out of the burn area were Steve's brother, Paul Knezovich, and Steve's nephew, Hunter Knezovich, as well as two ambulances. Dakota and Steve were transported first to St. John's Medical Center in Jackson and then were transferred to the University of Utah Medical Center.

"Their love for each other and their determination to save the other got them through it," Deb said. "They lived and kept going to save each other."

Both men did not exit the deluge of flames without injury. Deb said they both suffered secondand third-degree burns, with Steve's being mostly third-degree. Dakota was burned on his left hand, arm, shoulder, neck and face. Steve was burned on both hands, shoulder, left arm, calf, face, neck, back and the back of his head.

Deb said her husband's burns were deeper, and he has already had surgery to remove the dead skin. Skin grafting has also been done on his leg, arm and back, she added.

Deb said Dakota was accepted into a research program which is used in Europe but which has not yet been approved in the United States. Once they agreed to the treatment, his name was entered into a lottery. Deb noted that the odds were 50/50 he'd be accepted into the program. Her son was the first patient from the University of Utah Hospital Burn Center to beat the odds and make it into the program.

She said the process is supposed to reduce the need for surgical removal of dead tissue and grafting of the skin.

Nexobrid, as the new treatment agent is called, is an enzymatic agent used to dissolve the damaged tissue.

"Time will tell," Deb said about the new treatment. "He could still require surgery." Dakota will be in the research program for two years.

Steve's burns, being the more serious, will require the most care and recovery time. Deb said her husband's left hand suffered the worst damage, including burned tendons, and a polyurethane layer was put on the wound to help the blood vessels and tissue grow back. Once that occurs, skin will be grafted onto the wound.

Deb said her husband is currently bedridden to allow the skin grafts to adhere. His left hand must remain immobilized for four to five weeks before doctors graft it.

"The doctor said it was worse than they had originally hoped and would require a longer recovery time," she said. "It will be a few months with surgery and grafting, and up to a year with physical therapy for a full recovery —barring no infections or other complications. They are also watching Steve's ear and neck; they may require grafting, too."

Deb noted that Steve will have additional surgeries in the upcoming weeks and months.

The one thing Deb said she can't believe is how supportive the community has been during her family's crisis. Fundraisers have been planned and a GoFundMe page has been set up to help the family meet the financial burden of medical care and recovery.

Accounts have also been set up at Trona Valley Bank and US Bank in Rock Springs.

"I really want my family and friends in the community to know we are very humbled and grateful for all the love and support that has been shown us," Deb said. "We are truly blessed."

It will be a long road to recovery for Steve and Dakota. Despite this life-changing and harrowing experience, the injuries and the many months —even years — filled with treatments and surgeries they will have to endure, they are determined to make a full recovery. Deb is sure of it. Most of all, she is grateful to have the two men in her life back, alive.

"I just feel blessed my guys made it out alive, and we will get through it together," she said. "They are grateful they made it out; they worry more about each other than themselves. Their stories sum up why I am so convinced they are still here and why I am confident they will recover, if not for themselves, for each other and for the love of family and friends."

REGION VIII TWEETS

September 28: https://twitter.com/femaregion8/status/1045770060357390336
 Emergencies can occur any time, with or without notice. What happens if you're displaced? How long could you stay in a hotel? Or afford to eat out? Would you have money to return home? These are reasons to save for emergency. For more, visit http://ready.gov/#IWDeaf2018

FEMA-RELATED STORIES

From:	(b)(6) pstate,sd.us>
To:	"McGuire, Bruce
CC:	(b)(6)
Subject:	radio encryption project
Date:	2018/12/14 12:34:02
Priority:	Normal
Type:	Note

Bruce,

To re-cap our conversation we just had, we identified a radio gap through our planning process with counties on response to a civil disturbance type event whether it be for the Keystone Pipeline project that is slated to be constructed through our state or any other potential civil disturbance event that may occur. In any event like this, it will be important for our statewide interoperable radio communications system to be secure (disrupters not able to listen to response tactics over a scanner). This was a major lesson learned from North Dakota in their response to the DAPL protests. To ensure this for the safety and security of our emergency management and law enforcement officials, we need to add radio encryption to our statewide interoperable radios we have in place. This requires each radio to have programming added to allow for the encryption. The cost for this software programming is \$1,100 per radio and we are proposing to have this added to approximately 3 radios in each county as well as a cache of radios at the state level and our OEM radio's. Total cost will be about \$189,000 for this plan.

We will report these activities in our EMPG workplan under the objective for sustaining all other emergency management activities and our budget narrative captures this as well in the area for equipment where we have funds set aside for needs related to items identified in gap analysis', which this clearly fits that because it is an identified gap through our planning process and interoperable radio communication is an EMPG authorized equipment list item and this radio encryption will be placed on the statewide interoperable radio system.

Through our discussion today, it was understood that this project doesn't require any changes to our EMPG workplan or budget narrative, but if you have more thoughts about it after our discussion, we are more than welcome to accommodate any request you may have for us to make any required updates to our work plan or budget as needed. We will begin moving forward with this project as discussed to ensure we are prepared for the identified gap.

Thank you for speaking to us this morning and helping us talk through this process to ensure we are meeting all the requirements for our EMPG.

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(b)(6)

SD Dept. of Public Safety | Office of Emergency Management

b)(6)	
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Sender:	(b)(6)	@state.sd.us>
Recipient:	"McGuire, Bruce (FYDIBOHF23SPDLT)/d (b)(6) (b)(6)	ExchangeLabs/ou=Exchange Administrative Group cn=Recipients/cn=7161d464404d4ba8a41cf4cf875da113-McGuire, Br>";
Sent Date:	2018/12/14 12:33:42	
Delivered Date:	2018/12/14 12:34:02	

From:	Carlson, Dan
То:	"McGuire, Bruce "; "Hufford, Bradford "
Subject:	RE: radio encryption project
Date:	2018/12/17 15:27:12
Priority:	Normal
Туре:	Note

Hello

Yes, this is fine.

Thanks

Dan C.

From: McGuire, Bruce

Sent: Monday, December 17, 2018 12:29 PM

To: Hufford, Bradford bradford.hufford@fema.dhs.gov; Carlson, Dan Carlson, Dan Dan <a href="mailto:Carlson@fema.d

Subject: FW: radio encryption project

Brad & Dan,

I received the following message from (b)(6) on Friday that summarizes a discussion I had with him the same day. I have attached their budget which contains a non-specific line item as he mentions in the email below. I looked on the AEL and found the following items which are allowable expenditures for EMPG. Please review details below and let me know if you have any questions and if you would like any modification to their budget. I did ask if any funding was available under HSGP and apparently there is not.

I do not see anything that would prevent South Dakota from making this purchase. Thanks.

Bruce McGuire Region VIII Grants Division (303) 235-4625 w (303) 720-2126 c

Bottom of Form

05EN-00-ECRP - Software, Encryption

Encryption software for protecting stored data files or email messages.

05EN-00-ETRN - Encryption, Data Transmission

A class of network access solutions, usually for remote access, that provide encrypted user access. May be used for remote access, point to point, or link encryption. Includes virtual private networks, and encrypted transmission modes such as SSH and SSL.

From: (b)(6)	@state.sd.us]		
Sent: Friday, Decem	ber 14, 2018 10:34 AM		
To: McGuire, Bruce	<bruce.mcguire@fema.dhs.gov></bruce.mcguire@fema.dhs.gov>		
Cc: (b)(6)	@state.sd.us>; (b)(6)	@state.sd.us>	
Subject: radio encry	ption project		

Bruce,

To re-cap our conversation we just had, we identified a radio gap through our planning process with counties on response to a civil disturbance type event whether it be for the Keystone Pipeline project that is slated to be constructed through our state or any other potential civil disturbance event that may occur. In any event like this, it will be important for our statewide interoperable radio communications system to be secure (disrupters not able to listen to response tactics over a scanner). This was a major lesson learned from North Dakota in their response to the DAPL protests. To ensure this for the safety and security of our emergency management and law enforcement officials, we need to add radio encryption to our statewide interoperable radios we have in place. This requires each radio to have programming added to allow for the encryption. The cost for this software programming is \$1,100 per radio and we are proposing to have this added to approximately 3 radios in each county as well as a cache of radios at the state level and our OEM radio's. Total cost will be about \$189,000 for this plan.

We will report these activities in our EMPG workplan under the objective for sustaining all other emergency management activities and our budget narrative captures this as well in the area for equipment where we have funds set aside for needs related to items identified in gap analysis', which this clearly fits that because it is an identified gap through our planning process and interoperable radio communication is an EMPG authorized equipment list item and this radio encryption will be placed on the statewide interoperable radio system.

Through our discussion today, it was understood that this project doesn't require any changes to our EMPG workplan or budget narrative, but if you have more thoughts about it after our discussion, we are more than welcome to accommodate any request you may have for us to make any required updates to our work plan or budget as needed. We will begin moving forward with this project as discussed to ensure we are prepared for the identified gap.

Thank you for speaking to us this morning and helping us talk through this process to ensure we are meeting all the requirements for our EMPG.

Click	here t	0	complete	2	two	question	customer	experience	SURVEY
CIICK	nere t	U.	complete	a	LWO	question	Customer	experience	Survey

D)(b)	
SD Dept. of Public Safety Office of Emergency Management	
(b)(6)	
Description: M:\DOL\Publications\ images\other logos\Social Media\so	cial-media-icons[1]\Social-
Media-Icons.jpg ■ Description: M:\DOL\Publications\ images\other logos	Social Media\social-media
icons[1]\Social-Media-Icons.jpg OEM logo trademark	

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Sender:	Carlson, Dan
Recipient:	"McGuire, Bruce "; "Hufford, Bradford "
Sent Date:	2018/12/17 15:27:10
Delivered Date:	2018/12/17 15:27:12

From:	McGuire, Bruce
To:	(b)(6)
CC:	"Hufford, Bradford "; "Carlson, Dan "
Subject:	RE: radio encryption project
Date:	2018/12/18 11:12:55
Priority:	Normal
Туре:	Note



I ran this by Dan as well and he didn't indicate any revisions to the budget were necessary. I can see the need for this software based on your gap analysis and real world events. This type of equipment is allowable according to the AEL/SEL and probably applicable to a few categories. I found <u>05EN-00-ECRP - Software</u>, <u>Encryption</u> to be relevant here. Your project to purchase and deploy approximately three software encryption applications per county in addition to a "cache" or radios on hand at the state is approved. The approximate cost will be \$189,000. Once you actually purchase the software and install it to the relevant sites I would appreciate it if you could provide the final radio count and actual cost. In addition, as your gap analysis finds other areas that may need equipment purchases please keep us apprised of the projects so we can track them based on your budget submission.

I hope this software assists your efforts in the emergency management efforts in South Dakota. Your cooperation is appreciated.

Bruce McGuire Region VIII Grants Division (303) 235-4625 w (303) 720-2126 c

From: (b)(6) @state.sd.us]

Sent: Friday, December 14, 2018 10:34 AM

To: McGuire, Bruce <Bruce.McGuire@fema.dhs.gov>

Cc: (b)(6)	@state.sd.us>; (b)(6)	@state.sd.us>
Subject: radio encryption	project	

Bruce,

To re-cap our conversation we just had, we identified a radio gap through our planning process with counties on response to a civil disturbance type event whether it be for the Keystone Pipeline project that is slated to be constructed through our state or any other potential civil disturbance event that may occur. In any event like this, it will be important for our statewide interoperable radio communications system to be secure (disrupters not able to listen to response tactics over a scanner). This was a major lesson learned from North Dakota in their response to the DAPL protests. To ensure this for the safety and security of our emergency management and law enforcement officials, we need to add radio encryption to our statewide interoperable radios we have in place. This requires each radio to have programming added to allow for the encryption. The cost for this software programming is \$1,100 per radio and we are proposing to have this added to approximately 3 radios in each county as well as a cache of radios at the state level and our OEM radio's. Total cost will be about \$189,000 for this plan.

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Thank you for speaking to us this morning and helping us talk through this process to ensure we are meeting all the requirements for our EMPG.

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(b)(6)
SD Dept. of Public Safety | Office of Emergency Management
(b)(6)

Description: M:\DOL\Publications\ images\other logos\Social Media\social-media-icons[1]\Social-Media-lcons.jpg

Description: M:\DOL\Publications\ images\other logos\Social Media\social-media-icons[1]\Social-Media-lcons.jpg

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Sender:	McGuire, Bruce
Recipient:	(b)(6) (b)(6) (FYDIBOHF23SPDLT)/cn=Recipients/cn=7d43848dac0b4e1cbecf34a1cda21f77-b)(6) ; "Hufford, Bradford (FYDIBOHF23SPDLT)/cn=Recipients/cn=1e347b181a2a4a349544582a9122c08a-Hufford, Br>"; "Carlson, Dan (FYDIBOHF23SPDLT)/cn=Recipients/cn=1e347b181a2a4a349544582a9122c08a-Hufford, Br>"; "Carlson, Dan (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6e97073f5764f0c878c34b572308424-Carlson, Da>"
Sent Date:	2018/12/18 11:12:23
Delivered Date:	2018/12/18 11:12:55

From: Espinosa, Adam Sent: Wednesday, August 8, 2018 12:43 PM To: Moore, Jkevin Cc: Knapp, Nathan; Panzer, Scott; Schroder, Robert Subject: RE: Civil Disturbance Meeting Notes - September 24th Follow Up Flag: Follow up Flag Status: Flagged See below it looks like they want some Federal Folks at the table in Pierre. Dates include ; 8-30 9-19 10-24 11-14 Adam, sorry it's taken a little bit to get back to you. From the Federal side, our thoughts are if we could get the Forrest Service (probably from the zone that has Harding County, I think it's served out of Montana), BLM, Corps of Engineers, and yourself for the emergency management side, that would be great. We also realize it's fairly short notice, so if people can make that will be great, if not, we can

always plan on the next meeting. The other Federal contacts we are

Enforcement side to invite as I think they have already been in

contacts. Please let me know if you have any questions or want to

contact with them and have their

discuss further. Thanks, (b)(6)

going to leave to the Law

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individual or entity to which it was addressed. Use or distribution of information contained in this email by any other individual or entity not intended to receive this is strictly prohibited.

From: Espinosa, Adam

Sent: Thursday, August 2, 2018 7:15 AM

To: Moore, Jkevin < Jkevin. Moore@fema.dhs.gov>

```
Cc: Knapp, Nathan <nathan.knapp@fema.dhs.gov>; Lyman, Aaron
(aaron.lyman@fema.dhs.gov)
<aaron.lyman@fema.dhs.gov>
Subject: FW: Civil Disturbance Meeting Notes - September 24th
For discussion.
From: (b)(6)
                                         @state.sd.us]
Sent: Wednesday, August 1, 2018 12:07 PM
To: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>
Subject: FW: Civil Disturbance Meeting Notes - September 24th
Sorry Adam, meant to include you on this email as well. Any
questions, let me know.
Thanks, (b)(6)
              MEP
Response Branch Team Leader
SD Office of Emergency Management
Office: (b)(6)
Email: (b)(6)
                    estate.sd.us
Follow OEM on
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From: (b)(6)
Sent: Wednesday, August 1, 2018 12:00 PM
To: (b)(6)
                                  @state.sd.us>; (b)(6)
                @state.sd.us>;
                   @state.sd.us>; (b)(6)
              @state.sd.us>; (b)(6)
              state.sd.us>; (b)(6)
                                                       @state.sd.us>
Subject: Civil Disturbance Meeting Notes - September 24th
Good morning everyone. On September 24th, we held a Civil
Disturbance Planning Workshop in Pierre in
order to facilitate discussions on response issues, planning, and
coordination to a civil disturbance
event. We concentrated this meeting with invitees from county
emergency management agencies and
local law enforcement agencies. The meetings went very well and a
number of questions and topics
were brought forward for additional discussion. We are sending this
message to you this morning for
two reasons, first, to invite you as a representative of your agency
to future meetings, and two, to
```

provide you information on the questions that were raised to help develop answers or responses to them.

I've attached the notes from the workshop in preparation for our next meeting scheduled in Pierre at

the Mickelson Building, scheduled for Thursday August 30th beginning with breakout sessions at

10:00am. An agenda and more specific morning discussion topics will be distributed in a few weeks.

The dates for additional future meetings after the August meeting are:

- * September 19th
- * October 24th
- * November 14th

If you have any questions regarding the meetings or the notes, please feel free to contact me.

Thanks, (b)(6)

(b)(6) MEP
Response Branch Team Leader
SD Office of Emergency Management
Office: (b)(6)
Email: (b)(6) State.sd.us
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From:	Panzer, Scott
SentVia:	Panzer, Scott
To:	(b)(6) Dstate.sd.us>"
CC:	"Espinosa, Adam "
Subject:	RE: Civil Disturbance Stakeholder Workshop - Thursday August 30th
Date:	2018/08/28 11:28:00
Priority:	Normal
Туре:	Note

Good Morning (b)(6)

I unfortunately will not be able to make it to the Planning Workshop on Thursday. Apologies for the back and forth on this one.

Adam and I look forward to continue working with you in the future when we are both back into the office.

V/R,

Scott Panzer

Good Morning(b)(6)

Operations Branch FEMA | Region VIII | Response scott.panzer@fema.dhs.gov (tel) (303) 235-4864 (c) (303) 859-6035

From: (b)(6)	@state.sd.us]
Sent: Monday, Aug	gust 27, 2018 12:42 PM
To: Panzer, Scott <	scott.panzer@fema.dhs.gov>
Subject: RE: Civil D	isturbance Stakeholder Workshop - Thursday August 30th
Sounds good Scott.	See you on Thursday. Thanks, (b)(6)
From: Panzer, Scot	tt <scott.panzer@fema.dhs.gov></scott.panzer@fema.dhs.gov>
Sent: Monday, Aug	gust 27, 2018 12:05 PM
To: (b)(6)	@state.sd.us>
Subject: RE: [EXT]	Civil Disturbance Stakeholder Workshop - Thursday August 30th

Adam Espinosa has been deployed to help support Hawaii and asked that I attend this Workshop in his place. I look forward to meeting with you, and apologies for the last minute change.

V/R,

Scott Panzer

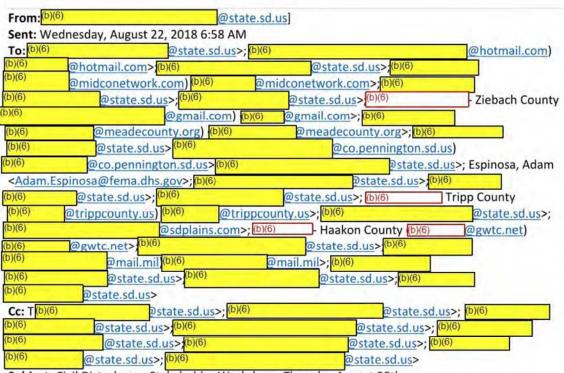
Operations Branch FEMA | Region VIII | Response scott.panzer@fema.dhs.gov (tel) (303) 235-4864 (c) (303) 859-6035

From: Espinosa, Adam

Sent: Friday, August 24, 2018 7:57 AM

To: Panzer, Scott <scott.panzer@fema.dhs.gov>

Subject: FW: Civil Disturbance Stakeholder Workshop - Thursday August 30th



Subject: Civil Disturbance Stakeholder Workshop - Thursday August 30th

Here is the agenda for next week's meeting including the topic areas and questions that we will be discussing in the various morning breakout sessions. If you have any questions, please feel free to contact me.

Thanks, (b)(6)

MEP
Response Branch Team Leader
SD Office of Emergency Management
Office (b)(6)
Email: (b)(6) @state.sd.us
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icons[1]\Social-Media-Icons.jpg Description: M:\DOL\Publications_images\other logos\Social
Media\social-media-icons[1]\Social-Media-lcons.jpg [™] <u>OEM logo trademark</u>

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Sender:	Panzer, Scott; Panzer, Scott
Recipient:	(b)(6)
Sent Date:	2018/08/28 11:28:21
Delivered Date:	2018/08/28 11:28:00

From:	Dick, Jennifer
To:	"Knapp, Nathan "; "Greff, Stacie "
CC:	"Schroder, Robert "
Subject:	RE: October 24th Meeting Notes
Date:	2018/11/08 10:16:00
Priority:	Normal
Туре:	Note

ATTORNEY-CLIENT PRIVILEGED

Hi Nate,

I did talk with Nancy last Friday (Lee was out of office that day). She concurred that LNOs should continue to monitor and maintain situation awareness (as we've been doing), and also be available if the State seeks out specific technical assistance, however we don't appear to have a specific role in these State planning meetings/workshops. Therefore, we advise that we do not send regional representation.

Feel free to give me/Stacie a call if you want to follow up. Thanks,

Jennifer Dick, Regional Counsel FEMA Region VIII (303) 235-4903 (303) 563-9230

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From: Knapp, Nathan

Sent: Wednesday, November 7, 2018 8:02 PM

To: Dick, Jennifer <Jennifer.Dick@fema.dhs.gov>; Greff, Stacie <Stacie.Greff@fema.dhs.gov>

Cc: Schroder, Robert < Robert. Schroder@fema.dhs.gov>

Subject: FW: October 24th Meeting Notes

Jen and Stacie,

Need to provide direction to the state LNOs on whether to attend or not. Think the recommendation is that this situation is outside our statutory lane at present, but want to confirm and see if you've had any

additional coord with the RA/DRA and gain a consolidated recommendation, then pass to the Bob and Tamara for action with the state.

Thanks, Nate

From: Schroder, Robert

Sent: Wednesday, November 7, 2018 8:58 AM
To: Knapp, Nathan <nathan.knapp@fema.dhs.gov>

Cc: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>; Williams, Tamara

<Tamara.Williams@fema.dhs.gov>

Subject: FW: October 24th Meeting Notes

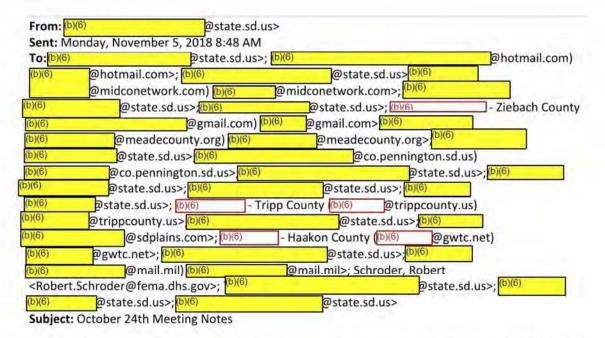
Hi Nate,

Below is the latest update from (b)(6) pn their CD discussions.

If you could give me a call later today when you have a moment that would be great.

I need to give (b)(6) a call back.

Bob



Please find attached the meeting notes from the Civil Disturbance Planning Workshop held in Pierre on October 24th, 2018.

Thanks, (b)(6)

(b)(6)	MEP
Response I	Branch Team Leader
SD Office	of Emergency Management
Office: (b)(6)	
Email: (b)(6)	@state.sd.us
Follow OE	M on ■ Description: M:\DOL\Publications_images\other logos\Social Media\social-media-
icons[1]\Sc	cial-Media-Icons.jpg Description: M:\DOL\Publications_images\other logos\Social
Media\soci	al-media-icons[1]\Social-Media-Icons.jpg OEM logo trademark

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Sender:	Dick, Jennifer
Recipient:	"Knapp, Nathan "; "Greff, Stacie "; "Schroder, Robert "
Sent Date:	2018/11/08 10:16:31
Delivered Date:	2018/11/08 10:16:00

Туре:	Note
Priority:	Normal
Date:	2018/11/08 09:25:42
Subject:	Re: October 24th Meeting Notes
	"Knapp, Nathan "; "Dick, Jennifer "; "Greff, Stacie "
	Schroder, Robert

Nate, next SD CD meeting has been moved out to 11/28.

Bob

Get Outlook for iOS

From: Knapp, Nathan

Sent: Wednesday, November 7, 2018 8:02:16 PM

To: Dick, Jennifer; Greff, Stacie

Cc: Schroder, Robert

Subject: FW: October 24th Meeting Notes

Jen and Stacie,

Need to provide direction to the state LNOs on whether to attend or not. Think the recommendation is that this situation is outside our statutory lane at present, but want to confirm and see if you've had any additional coord with the RA/DRA and gain a consolidated recommendation, then pass to the Bob and Tamara for action with the state.

Thanks, Nate

From: Schroder, Robert

Sent: Wednesday, November 7, 2018 8:58 AM
To: Knapp, Nathan <nathan.knapp@fema.dhs.gov>

Cc: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>; Williams, Tamara

<Tamara.Williams@fema.dhs.gov>

Subject: FW: October 24th Meeting Notes

Hi Nate,

Below is the latest update from (b)(6) on their CD discussions.

If you could give me a call later today when you have a moment that would be great. I need to give (b)(6) a call back. Bob From: (b)(6) @state.sd.us> Sent: Monday, November 5, 2018 8:48 AM @state.sd.us>; (b)(6) To: (b)(6) Jones County @hotmail.com>; (b)(6) b)(6)@hotmail.com)(b)(6) b)(6) @state.sd.us>(b)(6) @midconetwork.com) b)(6) @midconetwork.com>;(b)(6) @state.sd.us>;(b)(6) b)(6) @state.sd.us>; (b)(6) Ziebach County Emergency Manager @gmail.com>(b)(6) @gmail.com)(b)(6) b)(6) @meadecounty.org) (b) @meadecounty.org>(b)(6) @state.sd.us>; b)(6) @co.pennington.sd.us) b)(6) @co.pennington.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; Pierce, Jeff Dstate.sd.us>(b)(6) - Tripp County (b)(6) @trippcounty.us) b)(6) @trippcounty.us>;(b)(6) @state.sd.us>;(b)(6) b)(6) @sdplains.com>; (b)(6) Haakon County (b)(6) @gwtc.net>; (b)(6) @state.sd.us>; (b)(6) b)(6) @mail.mil)(b)(6) @mail.mil>; Schroder, Robert <Robert.Schroder@fema.dhs.gov>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>;(b)(6) @state.sd.us> Subject: October 24th Meeting Notes Please find attached the meeting notes from the Civil Disturbance Planning Workshop held in Pierre on October 24th, 2018. Thanks, (b)(6) MEP Response Branch Team Leader SD Office of Emergency Management Office: (b)(6) Email: allan.miller@state.sd.us Follow OEM on Description: M:\DOL\Publications_images\other logos\Social Media\social-media-icons[1]\Social-Media-Icons.jpg 🗵 Description: M:\DOL\Publications_images\other logos\Social Media\social-media-icons[1]\Social-Media-Icons.jpg Self OEM logo trademark Click here for a two question customer experience survey. Confidentiality Notice: The information contained in this email is confidential or privileged material and is intended only for use by the individual or entity to which it was addressed. Use or distribution of information contained in this email by any other individual or entity not intended to receive this is strictly prohibited.

Sender:	Schroder, Robert
Recipient:	"Knapp, Nathan "; "Dick, Jennifer "; "Greff, Stacie "
Sent Date:	2018/11/08 09:25:41
Delivered Date:	2018/11/08 09:25:42

From: Schroder, Robert Sent: Thursday, November 8, 2018 1:38 PM To: Knapp, Nathan Subject: RE: October 24th Meeting Notes Nate, Will do. Jen suggested we get together with you on Tuesday when your back in the office. I will propose an Outlook meeting. Bob From: Knapp, Nathan Sent: Thursday, November 8, 2018 11:03 AM To: Schroder, Robert < Robert. Schroder@fema.dhs.gov> Subject: Re: October 24th Meeting Notes Bob, Please share Jen's reply with Tamara and Adam. We can discuss more next week. No need to reply here. Thanks, Nate Get Outlook for iOS From: Schroder, Robert Sent: Thursday, November 8, 2018 9:25:41 AM To: Knapp, Nathan; Dick, Jennifer; Greff, Stacie Subject: Re: October 24th Meeting Notes Nate, next SD CD meeting has been moved out to 11/28. Bob Get Outlook for iOS From: Knapp, Nathan Sent: Wednesday, November 7, 2018 8:02:16 PM To: Dick, Jennifer; Greff, Stacie Cc: Schroder, Robert Subject: FW: October 24th Meeting Notes Jen and Stacie, Need to provide direction to the state LNOs on whether to attend or not. Think the recommendation is that this situation is outside our statutory lane at present, but want to confirm and see if you've had any additional coord with the RA/DRA and gain a consolidated recommendation, then pass to the Bob and

Tamara for action with the state.

```
Thanks,
  Nate
  From: Schroder, Robert
  Sent: Wednesday, November 7, 2018 8:58 AM
  To: Knapp, Nathan <nathan.knapp@fema.dhs.gov>
  Cc: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>; Williams, Tamara
  <Tamara.Williams@fema.dhs.gov>
  Subject: FW: October 24th Meeting Notes
  Hi Nate,
  Below is the latest update from (b)(6)
                                                    on their CD
  discussions.
 If you could give me a call later today when you have a moment that
would be great.
  I need to give (b)(6) a call back.
  Bob
  From: (b)(6)
                                        @state.sd.us>
  Sent: Monday,
                  November 5,
                                2018 8:48 AM
  To: (b)(6)
                                 @state.sd.us>; (b)(6)
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                                                           @mail.mil>;
                        @mail.mil) (b)(6)
  Schroder, Robert
  <Robert.Schroder@fema.dhs.gov>; (b)(6)
                    @state.sd.us>; (b)(6)
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Click here for a two question customer experience survey.

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individual or entity to which it was addressed. Use or distribution of information contained in this email by any other individual or entity not intended to receive this is strictly prohibited.

```
From: Schroder, Robert
 Sent: Tuesday, October 30, 2018 12:59 PM
  To: Williams, Tamara
  Subject: RE: SD Civil Disturbance - November Meeting ?
  Thanks I will drop up.
From: Williams, Tamara
  Sent: Tuesday, October 30, 2018 2:59 PM
 To: Schroder, Robert < Robert. Schroder@fema.dhs.gov>
 Subject: RE: SD Civil Disturbance - November Meeting ?
Hi Bob; yes I am at my desk; visit anytime ....
  From: Schroder, Robert
  Sent: Tuesday, October 30, 2018 12:34 PM
  To: Williams, Tamara < Tamara. Williams@fema.dhs.gov>
  Subject: RE: SD Civil Disturbance - November Meeting ?
 Hi Tamara,
Are you in your office?
Bob
 From: Williams, Tamara
  Sent: Tuesday, October 30, 2018 1:44 PM
  To: Schroder, Robert < Robert. Schroder@fema.dhs.gov>
  Subject: SD Civil Disturbance - November Meeting ?
 Bob,
  Your thoughts?
 I think we should ask (0)(6) if he wouldlike us to call in for the
 next meeting on 14 November.
  Perhaps we could request a calendar meeting invite, with call in
 Let me know if you would like me to email him this question (copying
  you of course).
  VI,
  Tamara Williams
 FEMA Region VIII
  Logistics
 tamara.williams@fema.dhs.gov
  Cell 303.810.9755
  Office 303.235.4335
 From: Espinosa, Adam
  Sent: Tuesday, October 30, 2018 9:56 AM
  To: Knapp, Nathan <nathan.knapp@fema.dhs.gov>
  Cc: Schroder, Robert < Robert. Schroder@fema.dhs.gov >; Williams,
  <Tamara.Williams@fema.dhs.gov>
  Subject: FW: Civil Disturbance Meeting Notes - September 24th
```

For discussion From: (b)(6) @state.sd.us] Sent: Wednesday, August 1, 2018 12:07 PM To: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov> Subject: FW: Civil Disturbance Meeting Notes - September 24th Sorry Adam, meant to include you on this email as well. Any questions, let me know. Thanks, (b)(6) (b)(6)MEP Response Branch Team Leader SD Office of Emergency Management Office: (b)(6) Email: (b)(6) estate.sd.us Follow OEM on Click here for a two question customer experience survey. Confidentiality Notice: The information contained in this email is confidential or privileged material and is intended only for use by individual or entity to which it was addressed. Use or distribution of information contained in this email by any other individual or entity not intended to receive this is strictly prohibited. From: (b)(6) Sent: Wednesday, August 1, 2018 12:00 PM To: (b)(6) @state.sd.us>; (b)(6) (b)(6)@state.sd.us>; (b)(6)@state.sd.us>; state.sd.us>; (b)(6 @state.sd.us>; (b)(6) @state.sd.us> Subject: Civil Disturbance Meeting Notes - September 24th Good morning everyone. On September 24th, we held a Civil Disturbance Planning Workshop in Pierre in order to facilitate discussions on response issues, planning, and coordination to a civil disturbance event. We concentrated this meeting with invitees from county emergency management agencies and local law enforcement agencies. The meetings went very well and a number of questions and topics were brought forward for additional discussion. We are sending this message to you this morning for two reasons, first, to invite you as a representative of your agency to future meetings, and two, to provide you information on the questions that were raised to help develop answers or responses to them.

I've attached the notes from the workshop in preparation for our next meeting scheduled in Pierre at

the Mickelson Building, scheduled for Thursday August 30th beginning with breakout sessions at

10:00am. An agenda and more specific morning discussion topics will be distributed in a few weeks.

The dates for additional future meetings after the August meeting are:

- * September 19th
- * October 24th
- * November 14th

If you have any questions regarding the meetings or the notes, please feel free to contact me.

Thanks, (b)(6)

(b)(6) MEP
Response Branch Team Leader
SD Office of Emergency Management
Office: (b)(6)
Email: (b)(6) State.sd.us
Follow OEM on

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 From:
 Corcoran, John

 To:
 R8 External Affairs

 Subject:
 RE: Region VIII news clips July 17, 2018

 Date:
 Tuesday, July 17, 2018 8:44:31 AM

Additional story of interest:

Cheyenne River Sioux Tribe chairman to pipeline builder: 'We will be waiting' (Rapid City Journal, Rapid City, SD)

Christopher Vondracek, July 17, 2018

On July 11, TransCanada sent a letter to the chairman of Cheyenne River Sioux Tribe about upcoming construction for the Keystone XL Pipeline.

A day later, Harold Frazier responded with four words: "We will be waiting."

In November, TransCanada received approval from a board in Omaha to begin the final buildout phase of its XL pipeline project, which will carry crude oil in a 36-inch pipe from the Alberta Tar Sands to a refinery in Illinois.

The 1,000-plus mile line will cross treaty land ceded to the Cheyenne River Sioux Tribe in the 1851 Treaty of Fort Laramie. Tribal spokesman Remi Bald Eagle said the pipe will also cross the Cheyenne River closely upstream from the reservation and the nature of riparian lands means "so the pipeline will ultimately be on the reservation at some point."

Under federal law, consultation must take place. However, consultation can be fulfilled by TransCanada merely communicating to the tribes its intentions.

The July 11 letter from Nadine Busmann, senior manager of Indigenous Relations, Keystone XL, with TransCanada was "an opportunity to provide you with a further update." The letter stated TransCanada would move materials and "prepare construction-related sites in Montana and South Dakota" beginning in July. Activities could include truck and trailer traffic and new equipment to "staging areas and pipe yards."

The letter also acknowledges the "distinct relationship to the land" held by tribal nations and "the concern" tribes may have with construction of the pipeline. Busmann says TransCanada remains committed to dialogue and open to "discuss potential opportunities for participation in the project."

On TransCanada's website, the Keystone XL Pipeline is described as a "safe, reliable and environmentally responsible way to deliver crude oil to markets in the U.S."

In 2016, protest initiated by the Standing Rock Sioux Tribe culminated in thousands trekking to the Cannonball River in North Dakota to protest the Dakota Access Pipeline. That pipeline

received expedited review under President Donald Trump and began pumping oil in May 2017.

Following the protest on Standing Rock, the South Dakota legislature passed Senate Bill 176, which allows the governor the authority to establish "public safety zones" of 20 people or fewer.

Thanks, Jack

Jack Corcoran

Program Support Specialist – External Affairs FEMA Region VIII 303.235.4944 (desk) 202.320.2378 (cell) john.corcoran@fema.dhs.gov

From: Corcoran, John Sent: Tuesday, July 17, 2018 8:41 AM To: R8 ALL PFTs-CORES <R8ALLPFTs-CORES@fema.dhs.gov>; R8 All Hands <R8AllHands@fema.dhs.gov> Cc:(b)(6) @mail.mil;(b)(6) @state.co.us; (b)(6) @nd.gov; @state.sd.us; (b)(6) @state.sd.us; (b)(6) @utah.gov; (b)(6) @wyo.gov; (b)(6)@usace.army.mil; Peterson, Mark J < Mark.Peterson2@fema.dhs.gov>; (b)(6)@hhs.gov; (b)(6) @hhs.gov; (b)(6) Alexander, Daniel < Daniel. Alexander@fema.dhs.gov>; (b)(6) @atf.gov; (b)(6) @aveshka.com; Carlson-Sherbo, Diana < Diana. Carlson-Sherbo@fema.dhs.gov>; (b)(6) @ogilvy.com; @ogilvy.com; Paradise, Jeanne < Jeanne.Paradise@fema.dhs.gov>; Green, Daniel <daniel.green3@fema.dhs.gov>;(b)(6) @ogilvy.com Subject: Region VIII news clips July 17, 2018

Region VIII Clips

Tuesday, July 17, 2018

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COLORADO

Colorado wildfire update: Frequent lightning, higher risk of flash floods forecast Tuesday (Denver Post, Denver, CO)

Kirk Mitchell, July 17, 2018

The expression "double-edged sword" has often been used to describe Colorado's 2018 fire season whenever storm clouds approach.

On Tuesday, it'll likely be used with regularity across the state as a powerful weather front creeps over burn areas with the potential to drop large hail stones and bring frequent lightning strikes and brief heavy rain.

The storm could help firefighters extend fire lines and mop up a dozen active wildfires from Costilla County in the southern part of Colorado all the way to the Wyoming border. It could also be the harbinger of new headaches including flash floods, lightning-sparked spot fires and high winds spreading fires.

Forecasters warn that flash flooding and winds up to 60 mph are possible Tuesday over burn areas.

"We don't want too much rain," said Jennifer Costich, spokeswoman for the Christine Lake fire a mile west of Basalt.

In burned-out fire areas, stripped of trees and other vegetation, as little as .03 inches of rain in a short period of time can trigger a "very dangerous situation," according to the National Weather Service.

Flash flooding typically occurs in waterways, along creek and river beds, but it can also occur along roadways, in ravines and in most any down slope area — places that don't usually carry or channel water.

People in areas under flash flood watches and warnings should be prepared to take action and move to higher, safe ground at a moment's notice.

416 FIRE

The fire area north of Durango is under a flash flood watch Tuesday afternoon through Tuesday evening.

The burn scar area in northwest La Plata County could see heavy rainfall and residents in the area, especially along the U.S. 550 corridor near Hermosa, "should prepare for potential flooding impacts," the weather service said. "Elsewhere, be prepared for flash flooding and debris flows on many area highways and roads."

The fire, which started June 1, has burned more than 54,000 acres and was 50 percent contained Monday afternoon, fire officials said.

SPRING CREEK FIRE

Moderate, cooler weather and ongoing rains, including thunderstorms along the eastern edge of the fire area, has increased chances of flash flooding, fire officials said. Lightning in recent days has also been a concern.

"Fire weakened trees continue to pose a hazard and flash floods are occurring in areas that receive rainfall," fire officials said Monday.

Isolated to scattered thunderstorms are possible Tuesday afternoon and evening, the weather

service reports. "Dangerous cloud-to-ground lightning, with wind gusts up to 40 mph and locally heavy rainfall will be the primary storm risks," the weather service said. "Any heavy rainfall which occurs on burn scars could produce dangerous flash flooding."

Chances for thunderstorms will decrease mid- to late-week as drier air pushes into the region. But lightning, brief heavy rainfalls and winds up to 50 mph will still be possible and could raise concerns.

Thunderstorm chances ramp up again Friday and into the weekend as monsoon moisture returns.

The fire, in Costilla and Huerfano counties, has burned more than 108,000 acres and was 91 percent contained Monday night.

LAKE CHRISTINE FIRE

On Sunday, fire crews built hand lines along the northwestern edge of the fire, officials said Monday.

"Much of the burned area has exposed soils which could lead to an increased potential for erosion or runoff during rainfall," fire officials said.

Utility companies continue repairs along damaged transmission lines. Late in the afternoon Sunday, some isolated flareups, creeping fire, smoldering and isolated torching occurred in the northern fire section. The northern end of the fire remains uncontained. Burning in steep, rugged terrain, the fire will likely continue to spread north. Smoke will continue to plume for some time and flames may be visible in the evening.

The fire has burned just over 6,800 acres and was 59 percent contained Monday night.

WESTON PASS FIRE

Cooler temperatures and a chance for rain are expected to impede fire growth and help fire crews reach full containment.

The lightning-sparked 13,023-acre wildfire nine miles southwest of Fairplay is at 93 percent containment.

Hot, dry temperatures Thursday through Sunday are another concern.

Colorado wildfire update: Post-fire flooding big concern after blazes decimated vegetation (Denver Post, Denver, CO)

Kirk Mitchell, July 16, 2018

As the majority of Colorado wildfires approach 100 percent containment, Forest Service teams are beginning to visit burn areas on U.S. Forest Service lands to assess their vulnerability to flooding, landslides and other fire-related catastrophes.

Nine of the 12 wildfires still plotted on the U.S. Forest Service fire map are at 90 percent

containment or higher, including the largest wildfire in 2018, the Spring Creek fire in south-central Colorado.

The aftermath of the wildfires will pose hazards for years to come because hills and mountain sides are stripped of vegetation, according to Forest Service officials. Fire can destroy roads and homes while leaving communities downstream of burn areas at risk of flooding and rock slides, according to Forest Service officials.

The U.S. Forest Service has assembled a team of hydrologists, soil scientists, road engineers, wildlife specialists and fisheries biologists to assess damage caused by wildfires to make recommendations for emergency mitigation work to protect human life as well as cultural and natural resources.

"Everyone near and downstream from the burned areas should remain alert and stay updated on weather conditions that may result in heavy rains over the burn scars," according to a Forest Service report. "Flash flooding may occur quickly during heavy rain."

Here's a wrap-up of the largest wildfires in Colorado:

SPRING CREEK FIRE

A flash flood warning is in effect through 6 p.m. today.

Rain has dramatically reduced the activity of the 108,045-acre wildfire five miles northeast of Fort Garland. It is now 91 percent contained.

The number of firefighters still tasked to the fire has fallen to 594 and most of them are stationed in a steep wilderness area on the northwest corner of the fire.

The Spring Creek fire is the third largest in state history.

416 FIRE

Steady rains have taken the punch out of the wildfire that started 13 miles north of Durango on June 1.

In early June, more than 1,000 firefighters were tasked to the fire. Now only 21 people are assigned to the wildfire, mostly to repair fire lines when needed.

The fire is 50 percent contained. The wildfire is burning in wilderness in the San Juan National Forest where containment is not a goal.

All the areas along the eastern flank and southern end of the fire are completely contained.

LAKE CHRISTINE

The 6,822-acre wildfire, which started July 3 about a mile from Basalt, is 59 percent contained.

"We got some sprinkles last night and that helped out. We don't want too much rain or that

could cause flooding," fire spokeswoman Jennifer Costich said Monday.

Fire crews are picking their battles in heavily forested areas to avoid risk to firefighters. Some areas in the more active northwest corner of the wildfire only have one entry and exit road, which is dangerous for fire crews, she said.

"It may take a long time to get there because of the safety issue," Costich said.

Firefighters are attacking scree areas, where rock slides limit vegetation, to build fire lines, she said. Helicopters are dropping water and retardant on hot spots once they begin to smolder.

Two people are accused of igniting the wildfire while firing tracer bullets at a shooting range near Lake Christine, according to the district attorney's office. The 2,100 people who were evacuated have since been allowed to return home. The fire destroyed three homes.

WESTON PASS FIRE

Isolated rain is expected Monday morning beginning at around 6 a.m. Increasing rain showers and thunderstorms are expected between noon and 8 p.m.

Containment on the 13,023-acre wildfire located nine miles southwest of Fairplay has ballooned to 93 percent.

The remaining 272 firefighters still tasked to the blaze are mostly building fire lines and putting out hot spots.

A bird's-eye view of what floods may bring (The Durango Herald, Durango, CO)

Ryan Simonovich, July 17, 2018

A perfect storm could send debris hurtling down canyons and potentially damage property adjacent to the 416 Fire burn scar. To prepare for the worst-case scenario, La Plata County Office of Emergency Management is using a drone to get a bird's-eye view of problem areas.

On Monday, Tom McNamara, emergency management coordinator, flew a drone with a camera attachment along Hermosa Creek to survey what kind of debris may become problematic in case it floods. He has done the same behind the Falls Creek subdivision and above the Lower Hermosa Campground.

"Primarily, there's trees - old, dead fall that's made its way into the creek," McNamara said.

When trees are swept downstream by rushing water, they could become caught on bridges and dam the river, he said. If there is flooding, large debris could smash into structures and homes.

Despite warnings from the National Weather Service and emergency officials, no floods had occurred as of Monday afternoon near the burn scar. However, it's just a matter of the right storm conditions in the right area, said Butch Knowlton, director for La Plata County Emergency Management.

"If it's a dump in a short period of time, then that pushes a lot of stuff down in a hurry,"

Knowlton said. "If it's the way it's been for the last few days ... then we do see a little bit of ash movement, but it hasn't created any significant problems yet."

Areas of specific concern include Dyke Canyon, Tripp Creek and the Hermosa Creek Drainage.

The goal of the drone work is to have a better idea of what lies upstream that is waiting to come down. Then, emergency officials can inform homeowners who are in the path of a potential debris flow.

When a big storm comes, they can also send emergency notifications and issue evacuations or pre-evacuations for areas expected to be hit hard by debris flows.

"If we get enough information, and understand what's happening well enough, we should be able to be in a better position to keep people out of the way when something bad may happen or is happening," McNamara said,

In addition to drone flyovers, emergency planners have existing flood maps, terrain modeling and geologic data such as soil types and slope gradient. Another good resource includes historic accounts from longtime residents who have experienced floods in the past.

Many residents remember the mudslides and debris flows that came after the 2002 Missionary Ridge Fire, which caused significant property damage to homes on East Animas Road (County Road 250), Florida Road (County Road 240) and the Vallecito area, among others.

In some cases, mud and rock broke through doors and flooded basements, garages and main living floors of homes.

"We have the experience," Knowlton said, referring to the aftermath of Missionary Ridge. "We have the knowledge of what could occur."

McNamara adds that a large part of the planning is finding areas that previously wouldn't have posed a problem. Before the fire, hillsides might have been able to handle a lot of rain. Now, because they are void of vegetation, heavy rain will create mudslides or flooding.

The hope is that officials will be better prepared for danger, because with the drone imagery, they will be able to predict whether an area will flood or have large debris flows.

According to the National Weather Service, there is up to a 40 percent chance of thunderstorms Tuesday and a 20 percent chance Wednesday. Chances of storms decrease later in the week.

Whatever the weather does, there will be danger lurking on the mountain.

"The material is up there, the terrain is up there, the risk is up there," Knowlton said. "It's all solely dependent on the volume of rain that comes with each storm."

Wildfires initially tough on wildlife, but some can benefit long-term (The

Daily Sentinel, Grand Junction, CO)

Dennis Webb, July 17, 2018

When the Divide Fire raged through remote terrain in rural Moffat County in late June and early July, it not only consumed multiple residences — it torched nearly 20,000 acres of priority habitat for the imperiled greater sage-grouse.

The fire served as a reminder that wildfires have consequences for wildlife, too. Other reminders have come in the story of a bear cub that is being rehabilitated after its paws were severely burned in the 416 Fire north of Durango, and officials warning residents in the Basalt area to watch for hungry, displaced bears and other wildlife after a bear was spotted along the fire line of the 6,600-acre Lake Christine Fire and another showed up at the firefighter camp.

But while animals can be among the casualties when blazes break out, the overall impacts of fires can be not just negative but positive, depending on the species, particularly over the long term.

Brad Petch, senior wildlife biologist in northwest Colorado for Colorado Parks and Wildlife, said any fire results in local loss of wildlife.

"The larger the fire, the more significant that is," he said.

But larger animals such as big game and mobile ones such as adult birds often are able to move quickly enough to escape, he said. Younger animals tend to fare worse.

"Fawns and calves disproportionately get caught for deer and elk," he said.

While bigger, faster-burning fires create more challenges for animals trying to escape, Petch said oftentimes there are pockets within the fire perimeter that don't get burned.

"It's not uncommon for wildlife to hole up in those," he said.

Petch said he doesn't want to minimize the loss that occurs due to animals being trapped and killed by fires.

"But it's not as severe, often at least for larger wildlife, as it looks like it must be to watch a fire burn across a landscape."

Petch said wildlife have adapted to wildfire over generations. He added that once a fire is out, wildlife returns to a burned area pretty quickly.

"Particularly in a little bit wetter year than this one, it's not uncommon to see antelope back in a fire before the ashes are cool. Within a day or two you have antelope really using fire scars and working out what green vegetation is left," he said.

Drier, hotter fires result in less early regrowth, but still, plants often begin to recover within a few weeks, and are highly attractive to wildlife, Petch said.

He said among the first big-game species to come back after a fire are elk. They're predisposed

by their size, movement and focus as grazers to take advantage of the grasses that are among the first types of vegetation to regenerate, and elk particularly benefit over the first decade after blazes, Petch said.

Later, perhaps 20 to 40 years afterward, shrubs have flourished, leading to positive responses by other animals such as deer, he said.

He said there's less benefit from fire for animals such as sage-grouse and species that nest in trees.

"The longer-term effects are variable by species, but in the long run, at least for big-game species, they tend to benefit more from fire than they are harmed by it," Petch said.

Bureau of Land Management spokesman David Boyd said young, new native vegetation that sprouts after a fire can be highly nutritious for animals such as big game.

Fire also can create mosaic patterns of vegetation with openings where animals can feed and areas of unburned cover where they can hide and be out of the elements, Boyd said. Land managers often strive to create such mosaic patterns when they use prescribed fires or mechanically treat landscapes to mimic wildfires, he noted.

Bigger fires may be less beneficial to animals, burning through an area more uniformly, burning so hot it's harder for plants to recover, and killing important microorganisms in soil, Boyd said.

Petch said there are more front-end negatives in the case of bigger fires. He said a 40,000-acre fire is very different for wildlife than a 5,000-acre fire, depending on the species and factors such as its range over the course of a year. But he said sometimes a fire that resets a landscape "can be a tremendously valuable thing for wildlife" 30 or 40 years down the road.

He said it can be hard to talk about the potential long-term benefits of fire to some wildlife when it's the middle of fire season and people are out of their homes due to evacuations, or when fires limit hunting access. But those are short-term impacts, he said, while a fire's benefits can last for generations to come.

Unfortunately, that's not so much the case for the sage-grouse habitat that recent flames have consumed in northwest Colorado. The greater sage-grouse ranges over a number of western states and the BLM has imposed numerous restrictions on activities such as oil and gas development and livestock grazing to try to keep it from needing protection under the Endangered Species Act. In Colorado, it's found only in the northwestern part of the state, and particularly in Moffat County. So the Divide Fire, along with the 1,636-acre Thornburg Fire west of Maybell in Moffat County, were setbacks to the bird and its habitat.

Fire has been identified in the Great Basin, a multistate region west of Colorado, as a big threat to sage-grouse habitat. Boyd said there's a concern that after large fires especially, such as the Divide Fire, annual grasses can move in that make it hard for sagebrush to re-establish itself. Cheatgrass, an invasive species that sprouts up after fires and also is prone to burning, can perpetuate the fire cycle.

Petch said Colorado is less susceptible to cheatgrass infestation than some other states, but

losing thousands of acres of sagebrush all at once can have at least short-term effects on sage grouse. He said it can take 20 to 30 years for sagebrush to come back after fires, particularly in the case of hotter ones.

He said some of the sage-grouse habitat that burned is among the wetter habitat in Colorado for the bird, which will aid in recovery, but it's still "not moist by any means," so that recovery still will take a while.

Petch said he believes the Divide Fire burned an area that doesn't contain many sage-grouse leks, or springtime breeding grounds, but does contain habitat the birds use a lot in the summer.

Nanci Limbach, who runs the Pauline S. Schneegas Wildlife Foundation wildlife rehabilitation facility near Silt, said the Basalt-area fire occurred as hawks were fledging and probably on the ground, so she expects many fledglings died.

Her center has gotten calls from people about hawks in their yards. Limbach said the birds probably flew from the fire and were exhausted.

"We've just had people leave them and so far every one of them within a day has managed to fly off," she said.

Her center once treated a hawk that had feathers burned in a wildfire in the Battlement Mesa area before a firefighter was able to hose it off and save it.

In the past, the center also has worked on deer whose legs were burned.

"Some of them make it and some don't. It depends on the extent of the burn," she said.

She said amputation isn't an option because it's not allowed for rehabbing wildlife in Colorado.

Limbach said the center has had deer with ears burned off as well. They can live without ears, she said. But she said the stress and pain can be fatal. She said for deer and other ruminants, just the stress of running long distances to escape flames can be deadly.

Limbach and her husband are partners in a honeybee yard she said got wiped out by the Lake Christine Fire. She said the fire unfortunately went through the one part of the property containing the hives. Ironically, bees are kept calm in their hives by beekeepers using smoke.

Petch said people living near burn areas should be aware of the increased chances for seeing displaced wildlife, including bears. Authorities are asking that homeowners near fires secure food sources so as not to attract bears in particular and get them used to living near homes.

Petch said wildlife officials ask that if people see a fire-injured animal, they don't try to care for the animal themselves but mark where it is and let CPW know.

"Oftentimes the most humane thing is to try to put those animals down but we do try to care for and rehabilitate the ones that have a chance of recovery," he said.

MONTANA

Why There's Only \$4 Million In Montana's Firefighting Fund (Montana Public Radio, Missoula, MT)

Eric Whitney, July 16, 2018

The State's fire fighting savings account started this month with the second lowest balance since it was created a decade ago.

There's only about \$4 million in the fund's reserves for this fire season. That's about a fifth of what the state needs to cover an average fire season bill.

But John Tubbs, the head of Montana's Department of Natural Resources and Conservation, says that won't stop the state from sending out crews and aircraft to put out fires this year.

"When the balance is low, firefighting will remain a priority and we go into the supplemental appropriations approach," he says.

That means DNRC will spend whatever it has to to fight fires, pulling in money it's set aside for other purposes, with the expectation that during the next legislative session lawmakers will backfill that spending, through what's called a supplemental appropriation.

While the state gets some federal reimbursement and it can draw on other emergency funds, Tubbs says it isn't ideal for the state's fire reserves to get zeroed out.

"It is better to have the fire fund with a balance so that we don't impact the next Legislature."

When DNRC has to ask the Legislature to backfill its firefighting costs, it eats into what the state can build in for its next budget. The cost of the 2017 fire season had lot to do with last year's state budget crisis, and, Nancy Ballance who sits on the Legislative Finance Committee, says depending on what happens this fire season it could happen again.

"If we look at the possibility of an extreme fire season like we had last time, then yes we do see a potential shortfall in 2019-2021 that we will need to cover somehow when we go into the next budget session," Ballance said.

Last summer, the state's firefighting costs were far in excess of the savings built up in the fire fund. That issue was compounded after, in the regular session, lawmakers took out half of the fire fund to plug other holes in the state budget.

Then, after the big firefighting bills were added up, Governor Bullock called a special legislative session in November, in part to pay off 2017 firefighting costs, and to provide money for this year's fire season.

Lawmakers were able to set aside money to pay last year's fire debt, but then political debates stalled. Together, lawmakers and the governor failed to set aside much money to fight fires this year.

"I'm not surprised that the balance is lower than we had hoped," says Senate Minority leader

Jon Sesso, also a member of the Legislative Finance Committee.

Sesso says Republicans didn't agree to tax increases, including some on lodging and rental cars, that could have raised more money for the state, including its firefighting costs.

"When we left the special session we left with our work unfinished," Sesso says. "Proposals that we walked in to the special session weren't passed. We didn't put one extra percent on beds and we didn't do the rental cars. And we didn't do the fee that we hoped to raise on stock brokers; all of which we thought, I thought, were very reasonable to raise the dollars necessary to replenish and to prepare a reasonable fund for calendar year 2018 fire season."

Governor Steve Bullock also blames the Republicans for the lack of fire money available because they didn't support his ideas to increase revenue through taxes.

When Republicans declined to vote for the proposed tax increases they instead passed legislation pushing for Governor Bullock to make a deal to extend the contract of the state's only private prison in Shelby, run by CoreCivic. Some of the money from that deal would have gone into the fire fund.

Republican Senator Llew Jones says, "There had been the thought process that with Shelby included there would be enough for an average season, which is around \$25 million."

Governor Bullock negotiated with CoreCivic, but in April rejected a deal extending the private prison contract.

And, since the special session was called, additional fire costs from 2017 have stacked up, setting the state fire fund back even further.

Last month Governor Steve Bullock received his annual fire season briefing at Fort Harrison, in Helena, where forecasters said to expect above average temperatures and fire conditions running into the fall. News broke then that the fire fund had around four million dollars in it heading into the summer.

"As far as how we'll address it, it's way too premature to talk about it," Bullock said. "What I can convey to both Montanas and to any member of the Legislature that are saying 'well, now what do we do,' that we'll address it. And I will expect the Legislature to be partners in figure out how to do that."

It was at the same annual fire briefing last year that Bullock was told by forecasters the state would likely see average fire conditions in 2017. That forecast was wrong, and Montana's government budget fell apart amid what turned out to be a historic fire season.

The ripples of that fiscal crisis left the state's fire fund just under \$20 million short of covering an average fire season. The extent of this year's burn will have a lot to do with how big a budget challenge state lawmakers face when they return to the capitol in January.

Two areas listed for moderate drought; most of state normal (Bozeman Daily Chronicle, Bozeman, MT)

Michael Wright, July 17, 2018

All but two parts of Montana have avoided drought conditions so far this summer, something state officials are happy to see after last year's droughts turned into a large fire season.

Michael Downey, chief of the water planning section for the state's Department of Natural Resources and Conservation, told the Montana Legislature's Water Policy Interim Committee on Monday that north central Montana and the northwestern corner are drier than normal, with portions of each considered to be in moderate drought. The rest of the state remains near normal.

Downey said that's certainly better than 2017, when much of the state went bone-dry and fueled several large wildfires. That could all still happen, though, and he said it all depends on what comes next.

"It's going to depend on what we get for precipitation in the next few weeks and really how hot it gets," Downey said.

Drought problems are looking significantly worse elsewhere in the West, according to the National Drought Mitigation Center's website. Montana has appeared better off for most of the year, as the snow piled high and broke records.

But a warm May sent the abundant snow downhill quickly, setting streamflow records and causing significant flooding on several of the state's rivers.

Downey said this past May was the warmest on record, with only four days recording low temperatures below 32 degrees.

"It wasn't that our highs were so high," he said. "It was that our lows tended to be quite a bit higher."

June counteracted that, bringing plenty of rain and temperatures that didn't climb too high. But the June moisture blast missed the north central and northwest, making for this month's moderate drought conditions.

The Climate Prediction Center's monthly outlook predicts above normal precipitation through this month for the south central and southeastern parts of the state. It also predicted below normal temperatures for all but the easternmost parts of the state through the same time period.

Reser Reservoir being drained following damage (Billings Gazette, Billings, MT)

July 17, 2018

Reser Reservoir, a Bureau of Land Management reservoir located about 18 miles northwest of Chinook, will be slowly drained throughout the summer due to structural damage at the dam.

A small washout was discovered this spring, and repair and maintenance to the dam is necessary to avoid a complete loss.

Montana Fish, Wildlife & Parks is working with BLM staff to coordinate the drawdown while

trying to salvage and transfer as many gamefish as possible. FWP personnel is setting trap nets to collect yellow perch, bluegill, black crappie, and largemouth bass. These fish are then placed into tanks and transferred to other waterbodies.

The perch and black crappie will be going to Bailey's reservoir, the bluegill to Salmo Reservoir, and the largemouth bass to Dry Fork Reservoir.

FWP encourages anglers to go to Reser Reservoir and enjoy this fishing opportunity while it lasts. Once repairs are made to the dam and water returns, FWP will stock fish and re-establish the popular fishery.

For more information contact fisheries biologist Cody Nagel at 406-265-6177.

NORTH DAKOTA

Emergency manager wants radar for Watford City after tornado (Houston Chronicle, Houston, TX)

Associated Press, July 16, 2018

WATFORD CITY, N.D. (AP) — A local emergency manager is pushing for better weather radar coverage in western North Dakota after a tornado ripped through the area.

The closest Doppler radars to Watford City are about 140 miles (225 kilometers) away near Minot, the Bismarck Tribune reported. Radars at that distance detect storms forming at least 10,000 feet (3,048 meters) above ground, said John Paul Martin, a warning coordination meteorologist for the National Weather Service in Bismarck.

Emergency manager Karolin Jappe is advocating for a radar closer to McKenzie County, which leads the state in oil production.

"We're the epicenter of the oilfield, and we have so much risk here it's scary," Jappe said.

Watford City faced an EF2 classification tornado last week that killed a newborn baby and injured more than two dozen people. The Weather Service issued a severe thunderstorm warning with a statement about a possible tornado about an hour before the twister hit the city, Martin said.

Officials aren't clear whether better radar coverage would've changed the outcome, but Gov. Doug Burgum said state officials plan to look into the issue.

"When the dust is settled and the cleanup has happened and we've taken care of all the immediate needs, we want to make sure we don't' lose sight of lessons learned," Burgum said. "One way that you prevent this kind of tragedy is to make sure that you've got good warning systems."

Meteorologist Daryl Ritchison doesn't believe having a radar closer to Watford City would have led to a more advanced warning of the tornado, but he said he would still like to see a Doppler radar better cover the region.

"It was a unique type of tornado that is very, very difficult to pick up," said Ritchison, interim director of the North Dakota Agricultural Weather Network. "It was just a tornado at the wrong place at the wrong time."

Watford City Local creates business for tornado victims (KFYR, NBC Affiliate, Bismarck, ND)

Jemeisha Lyde, July 16, 2018

WATFORD CITY, N.D. - A tornado ripped through a path of this section in Watford City causing damage to RV's and trailers at Prairie View Park.

"The cleanup efforts are going actually really well. We had so many people call up and they wanted to do all they could and we had all sorts of big companies that are here in McKenzie County and we made a list," said McKenzie County Emergency Manager Karoline Jappe.

Residents salvaged any items they could before being taken to the shelter.

"We worked for three days straight trying to find temporary housing and more permanent housing because we had 75 families and people displaced because there was 75 RV's that were totally unlivable," said Jappe.

The relief teams at the Red Cross and surrounding cities stepped up to donate useful items like food and water to the victims. It's a generous effort, but is still a long way to recovery.

"I think if we had a few more companies help us we could get dishes, silverware that kind of thing," said Jappe.

That's when #WatfordStrong was created. It's an online T-Shirt business that's become popular in the Bakken raising proceeds for those affected from the tornado.

"It's one of those opportunities where you just feel called to step up," said Katie McGilvray, Founder of #WatfordStrong.

#WatfordStrong has been in operation for only six days. It's become the latest media buzz in Watford that's bringing aid to victims.

"I was telling one of my friends we went to eat lunch after we dropped our clothes and stuff off and I said I just feel like I need to do something more and she said "What?" and I said "What if we made a shirt," said McGilvray.

McGilvray says it's been mind-blowing seeing the community come together during tough times like this and because of the support her business has raised nearly \$15,000.

"When I opened my account I was like oh my goodness you know and it's been incredible, so incredible," said McGilvray.

It's a lot of money, but Katie says it's been far worth the effort.

"We are going to go through the Chamber of Commerce and some of the different churches in town to figure out which families need help with medical bills or back to school stuff," said McGilvray.

Disaster can strike at any given moment, but when you have a community like this there's nothing the city can't face. For more information about hashtag Watford Strong, you can go to.

28 more homes to face demolition with changes to Fargo-Moorhead flood diversion project (Inforum, Fargo, ND)

Tu-Uyen Tran, July 16, 2018

FARGO — On the big screen, Phil and Ellen Sondreal and their neighbor Sue Nelson could see an aerial photo of their cul-de-sac with their properties outlined in red along with four other properties, Monday, July 16.

Their riverside homes are among 28 the city expects it will have to condemn to make way for new dikes as part of an effort to win approval for the Fargo-Moorhead flood diversion from Minnesota regulators.

The dikes are needed because more Red River floodwater would be allowed through Fargo-Moorhead to reduce upstream impact.

The Sondreals and Nelson accepted that they might have to leave the Riverwood Addition they've called home for 25 years, but they had a lot of questions about how they'll be treated.

"Are we going to get dinged with a low assessment because of our location and that's going to make them buy us out at a lower price?" Ellen Sondreal wondered, fearing appraisers would lower the value of homes that will be condemned.

"It's something we don't want to do," her husband said. "We want to stay where we're at, but if we have to leave of course we want to have a fair assessment."

Nelson said she feared getting hurt twice, once by getting less money from the city than her home's worth and again when trying to buy a comparable home, which will be higher in value.

However, Nathan Boerboom, the city's top engineering official working on the diversion project, said appraisers typically value homes as if they're not being condemned.

Under the previous diversion plan, an upstream dam would release floodwater into the Red River through Fargo and Moorhead until the river gauge near Fargo's water treatment plant reaches 35 feet. The rest of the water would go through the diversion channel or remain behind the dam.

Swayed by upstream landowners complaining about disproportionate impact, a task force working with Minnesota regulators agreed to allow the gauge to reach 37 feet.

Many dikes Fargo and Moorhead have built over the years as part of the diversion project will

contribute to that, according to Boerboom. But more and higher dikes are needed in several areas where they weren't needed before.

These include:

- An industrial area just north of Hector International Airport where easements are needed but no properties will be bought. An easement is where the city buys the right to build a dike on private land.
- Riverwood Addition in the city's northeast corner where the city plans to buy out six properties and pay for easements on one.
- Royal Oaks Drive north of the wastewater treatment plant where the city plans 12 buyouts.
- Woodcrest Addition near the Veterans Administration hospital where the city plans four buyouts and five easements.
- Elm Circle north of Mickelson Field where the city plans four buyouts.
- The Oak Grove neighborhood near downtown where the city plans two buyouts.
- The drainway going under Interstate 29 near Mills Fleet Farm where no buyouts or easements are needed.

The Sondreals and Nelson, for their part, were already thinking about how the buyouts will change their lives.

"I don't think we're going to buy a river lot again," Phil Sondreal said. "But we sure enjoy it out there. That's why we went there, it's because it's beautiful — and the great neighbors, of course."

SOUTH DAKOTA

South Dakota hail storms caused so much damage, you can see it from space (Argus Leader, Sioux Falls, SD)

Jeremy J. Fugleberg, July 16, 2018

Hail pounded through western and central South Dakota last month, as storm-hurled balls of ice blasted car windows and shredded crops.

How bad was it? NASA can help.

Because you can see the damage from space.

That's right. The space agency's satellites can see the damage left by the late-June hail, a light-brown tear stretching across more than half the state. In some spots, the hail scar is 6 miles wide.

"Crops and grasslands can present a very uniform and green background when observed from space. With wind-driven hail capable of shredding the vegetation, the storm damage becomes visible in satellite imagery," said Jordan Bell, a research meteorologist with NASA's Short-term Prediction Research and Transition Center (SPORT), in a NASA news post.

The damage was so severe, it shows up on NASA satellite sensors that detect land surface heat. Hail-stripped areas run hotter than surrounding areas, because they lack protection from crops and other vegetation.

The first storm swept from southwestern North Dakota into north central South Dakota on June 27, just missing Pierre. Another storm on June 29 developed over Wyoming and swung into western South Dakota, spawning tornadoes and 4.5-inch hail stones, according to the National Weather Service.

The damage will fade in time. A similar situation in 2003 resulted in hail scars visible to satellites for about six weeks.

Official Cautions: Be Wary On The River (Yankton Daily Press & Dakotan, Yankton, SD)

Randy Dockendorf, July 16, 2018

Flooding isn't the only concern with the rising Missouri River.

As the "Mighty Mo" continues its high flow, the Yankton County Office of Emergency is warning about debris.

Yankton County Emergency Manager Paul Scherschligt posted a warning Monday on his Facebook page.

"(Our office) wants to remind people that with the higher flow on the Missouri River, they are going to see more trash in the river due to a faster current. Therefore, this will produce hazardous conditions due to the intensity of water flow," he said.

"There will be hidden objects in the water that may damage your boat, tear your inner tubes, and/or flip your watercraft. Use extreme caution when on the river or Lewis and Clark Lake. Always wear life jackets when on any body of water."

The objects have ranged across the board, with some of considerable size, Scherschligt said.

"There have been reports of floating trees and other types of debris in the water due to the higher flows and higher lake levels," he said.

"Conditions can change rapidly, so use precautions when out on the water during this high water event."

The Corps of Engineers recently announced plans to increase the releases from Fort Randall Dam at Pickstown and Gavins Point Dam near Yankton.

U.S. Army Corps of Engineers officials said the increased flows are intended to evacuate flood

waters out of the mainstem reservoirs. The planned called for increasing the flows by about 25,000 cubic feet per second (cfs), while taking into account downstream tributaries and flooding.

Gavins Point flows currently stand at 54,000 cfs, Scherschligt said. The Corps will increase the flow to 60,000 cfs by July 23, with the Corps maintaining those releases through the summer and possibly into autumn.

The National Weather Service has issued a flood warning until further notice for the Missouri River at Verdel, Nebraska; Niobrara, Nebraska; and Springfield.

At 8 a.m. Monday, the stage stood at 11.03 feet at Springfield, while the flood stage is 10 feet. At stages nearly 12 feet, some camping areas at Springfield Recreational Area will be flooded.

At 8 a.m. Monday, the stage stood at 23.99 feet at Verdel, with the flood stage at 24 feet. At stages near 25 feet, boat docks at Lazy River Acres near Verdel will be flooded and some homes will be surrounded by water.

At 8 a.m. Monday, the stage stood at 21.72 at Niobrara, with the flood stage at 21 feet. At stages near 22 feet, the bottom road floods near Springfield.

Recent heavy rainfalls and other conditions have created problems for roads and bridges.

In Knox County, Nebraska, one portion of one road was closed starting Monday.

A portion of 531st Ave. north of Center, Nebraska, will remain closed until further notice for road repairs, according to Highway Superintendent Kevin Barta.

The closure will affect 886 Road to 889 Road on 531 Avenue. Work is estimated to be completed in two weeks.

A weekend incident near Parkston reinforced the importance of observing road barricades for flooded areas.

On its Facebook page, the South Dakota Highway Patrol posted photos and the narrative Saturday about an accident that occurred when the driver ignored a warning.

"Troopers responded to a crash about four miles northeast of Parkston. The driver of a Chevrolet Equinox drove past a road closed sign, vaulted across a wash out, and came to rest with the front bumper and back bumper on each side of the washout," the post said.

"The driver was wearing a seat belt and was transported to a hospital with serious, non-life threatening injuries. The Parkston Police Department, Hutchinson County Sheriff's Department, Parkston Fire and Rescue, Parkston EMS and Tracy's Towing assisted."

The Highway Patrol released more information Monday to the Press & Dakotan about the accident, which occurred around 10:40 a.m. Saturday.

Erin Geidel, 35, of Dimock was driving southbound in a 2015 Chevrolet Equinox at the intersection of 272nd Street and 413th Avenue. The vehicle kept going south through the

intersection, bypassing a posted road closed sign. The vehicle traveled another 100 yards before colliding with a washout caused by previous rainfall.

Geidel was wearing a seatbelt and suffered serious non-life threatening injuries. The lone passenger was a juvenile male (age unavailable). He was properly secured in a child restraint and suffered no injuries.

Both persons were transported to the Parkston hospital.

The Highway Patrol investigated the incident, with charges pending.

The Highway Patrol concluded its Facebook post with a strong reminder.

"We have posted pictures before about driving around 'Road Closed' signs," the post said.

"Please..... DON'T DO IT. There is a reason the sign is in the middle of the road — the road is CLOSED."

UTAH

Dollar Ridge Fire 65% contained; smoke may be visible for weeks to come (Fox 13, Salt Lake City, UT)

Mark Green, July 16, 2018

DUCHESNE COUNTY, Utah — The Dollar Ridge Fire in Duchesne County is 65% contained as of Monday and is no longer threatening structures, but officials say smoke from the fire will be visible for weeks.

The fire has burned an estimated 56,734 acres and forced hundreds of people to evacuate earlier this month, though those evacuations have since been lifted. The fire destroyed dozens of homes and hundreds of trailers, sheds and outbuildings.

Fire crews say that while the fire no longer currently poses any threats to the public or structures, smoke from the fire area may be visible for weeks to come.

Officials say they have mopped up the majority of hot spots along the fire line, but due to safety reasons firefighters will not be extinguishing every individual hot spot within the containment area.

"Hot spots are more noticeable at night, and often appear larger than they actually are," fire officials stated Monday. "Generally, if a hot spot is campfire size, it poses no threat. If a group of trees torch out, or fire is seen outside the fire containment line, please inform fire officials."

Evacuations to be lifted for area impacted by Dollar Ridge Fire (Deseret News, Salt Lake City, UT)

Ashley Imlay, July 16, 2018

FRUITLAND, Duchesne County — As firefighters increase containment of the Dollar Ridge Fire, residents in areas of the evacuation zone can soon return to their homes, Duchesne County Sheriff's Office announced on Monday.

About 470 firefighters were still fighting the human-caused blaze, which has burned more than 56,700 acres and was 85 percent contained Monday.

The evacuation order will change to pre-evacuation status at noon on Tuesday for residents with property along 11500 South, Strawberry River Road west of Camelot, and in Timber Canyon, officials said, allowing property owners to return to their homes.

Residents will not be required to leave their homes "unless it becomes necessary to evacuate the area again for their safety," the office said.

Only property owners will be able to go to those areas beginning Tuesday. Officials hope to open the areas back up to the public "on or about" July 25, the estimated containment date for the fire, according to officials.

Firefighters Monday were continuing to build an "indirect fire line" on the uncontained southwestern side of the fire.

"This is an area of the fire where a lot of bug-killed timber is still standing and posing a threat to firefighters, so an indirect line is the safest option," state fire officials reported in a press release.

With warmer weather and less humidity expected in coming weeks, officials said smoke from the fire would continue to be visible but shouldn't pose a threat to the public or to buildings as the smoke is "in the interior of the fire area."

However, if someone spots fire burning outside the containment line, they should contact fire officials, the release stated.

Flash flooding causes havoc from Georgia to Utah (The Washington Post, Washington, DC)

July 17, 2018

WASHINGTON — Flash flooding has been rampant across the United States since the spring, and it continued over the weekend in several states from the Southeast to the Mountain West.

Two men in a vehicle got caught up in a flash flood Saturday evening in Bonne Terre, Mo., south of St. Louis. As much as 4 inches of rain had fallen in the area, causing several streams and creeks to overflow.

When emergency officials arrived, the car was already downstream. One man had already made it to dry land, but the other was still in the water, hanging on to a tree branch for at least an hour.

Nine miles southeast, first responders rescued a woman who drove into the flood and was locked in her car after water shorted the vehicle's electronics.

In Georgia, flash flooding prompted officials to evacuate an apartment complex in Jonesboro, a suburb of Atlanta, Saturday.

In Colorado, torrential rain caused landslides and road closures when a creek west of Pueblo overflowed.

In the Flagstaff, Ariz., area, flooding was bad enough on Sunday that the American Red Cross opened a shelter at a middle school for families affected.

Floods add to long Southern Utah history of water-caused damage (St George Spectrum & Daily News, St George, UT)

July 16, 2018

Emergency crews and volunteers were still working Monday to clean up after the damage done to Washington County communities by flash flooding over the past five days.

In Dammeron Valley, consecutive heavy storms Thursday and Friday swamped dozens of homes and yards with mud and debris. Even after a considerable community effort on Sunday, when about 1,500 volunteers showed up to pitch in with clean-up efforts, some homeowners still faced ruined basements and expensive rebuilds.

Some residents measured more than three inches of rain falling in a single storm late Thursday, all coming over the course of a few hours.

In Washington City, flood waters followed a similar path into basements and low-lying yards, with neighbors rushing to help limit the damage.

The rain forced the temporary closure of the Zion-Mount Carmel Highway inside Zion National Park, and officials closed several of the park's most popular hiking routes after rockfalls, mudslides and other debris took out large chunks of trails.

Neighboring Kane County had seen major flooding as well, with rocks and debris carving into homes and inundating area roadways.

A history of flooding

No deaths or significant injuries have been attributed to this week's floods, but they add to an extensive history in and around Zion and the greater St. George area. Such events have always claimed lives and property, but the damage has increased in recent years as the population has grown and more of the area has developed.

Some of the more significant flooding incidents in the area include:

2015

 On Sept. 14, 2015, in the deadliest known flash flood event in Utah's history, three mothers and 10 of their children were believed to have been killed in Hildale when their two vehicles were washed into a nearby flood channel. Three young boys survived, with 12 found dead.
 One boy, presumed dead, is still missing.

- On the same day, 20 miles to the north in Zion National Park, there were no survivors among a group of seven adventurers who wandered into a slot canyon to go canyoneering.
- In a separate incident the same day in the nearby Arizona Strip, a local man was found dead several miles away from where his heavily-damaged vehicle sat in a floodplain.

2010

- Several days of sustained rain in December of 2010 destroyed several small bridges and damaged homes in various parts of the county. Across the Arizona border in Littlefield, flooding in the Beaver Dam Wash destroyed several homes in the Beaver Dam Resort area, undercutting the banks and sending the houses plunging into the muddy water.
- Two men who had reportedly intended to build a log raft and float down the Virgin River through the Narrows in Zion National Park were found dead downstream.

2005

 The most memorable flooding for many current residents was in January 2005 when the Santa Clara River swelled from heavy rains and melting snow, cutting through its river banks and sending homes toppling into the water. More than \$200 million in damages were reported and 50 families lost their homes.

One death was reported - a man driving near Quail Creek Reservoir was washed away after climbing onto the roof of his vehicle when trying to drive through a flooded wash.

1998

 Another flood in the Narrows in 1998 left two California hikers dead. A heavy rainstorm had caused the river to flow at more than 700 percent its normal range.

1997

 Eleven people were either killed or lost and presumed dead in a 1997 flash flood that swept through a normally dry wash in Antelope Canyon near Lake Powell. Only one person, a trail guide, survived the event by reportedly grabbing onto a ledge. His clothes were torn off by the force of the water.

1961

 Five Boy Scouts were presumed dead when their party experienced a flash flood while hiking the Narrows. A group of 26 Scouts from the Salt Lake City area camped overnight before heading into the popular hiking area, where a wall of water and debris swept through and carried off five members.

'Severe' flood alert issued for City of Kanab, Kane County (Fox 13, Salt Lake City, UT)

Taylor Hartman, July 16, 2018

KANAB, Utah – A flash flood warning for Kanab Creek and southern portions of Kane County was announced Monday, and the City of Kanab warned residents to exercise caution.

According to the National Weather Service Salt Lake City, the warning was issued for Kanab Creek, which drains down into the city of Kanab.

The flash flood warning will be in effect until 6:30 p.m. Monday, and Kanab City advised residents to exercise caution and "keep out of canyons and drainages."

Flood waters destroy popular Zion National Park trails (Good4Utah, Salt Lake City, UT)

Kierra Dotson, July 16, 2018

ZION NATIONAL PARK (News4Utah)- Clean up continues in Zion National Park after a flood swept through the area last week, causing mudslides and rockfalls.

Officials at the park say several popular trails remain closed Monday. Including Angels Landing, Kayenta, Upper Emerald Pools, and West Rim from the Grotto to Cabin Springs.

Shuttles are running as normal. They will not be visiting the Grotto Shuttle Stop.

Officials in the park released the following updates on damages:

Riverside Walk -

Sand, debris and small rockfalls were the issue on Riverside Walk. In one area, the sand was three feet deep covering the trail. Trail crews worked all day Wednesday and Thursday morning on clearing the trail. In the meantime, the Zion Shuttle turned around at Big Bend and there was no access to The Narrows from the Temple of Sinawava. Now that Riverside Walk is clear, shuttles have resumed their full route.

Zion-Mount Carmel Hwy (SR-9) -

Mud and debris on the Zion-Mount Carmel Highway was 3-4 feet deep in several areas, overwhelming the road drainage culverts and making the road impassable. Dozens of vehicles were initially stranded in the 1.1 mile tunnel and some stuck in the mudflow. Roads crews were able to plow a path to the vehicles to get them out late Wednesday night. Crews finished clearing the rest of the road and the culverts by late afternoon Friday.

West Rim Trail (access to Angels Landing from Zion Canyon) -

There is major damage on the West Rim Trail, in the area of Refrigerator Canyon. A section of retaining wall failed, causing an 18-foot gap in the trail that is over 5 feet deep. The West Rim between Cabin Spring (near campsite #1) and the Grotto is closed. This includes Zion's popular Angels Landing Trail. There is no estimate for when the trail will be reopened. Visitors are encouraged to use Observation Point Trail or Hidden Canyon Trail as alternatives. The West Rim campsites are open and accessible from Lava Point.

Emerald Pools Area Trails -

Much of the Emerald Pools Trail complex is also closed due to major damage. Just past the alcove at the end of Lower Emerald Pools Trail, a 20 foot by 10-foot boulder that was supporting part of the trail fell, leaving a deep void in the trail. Two large retaining walls also failed. On the Kayenta Trail, numerous large boulders completely crushed approximately 50 feet of trail. The Kayenta Trail, Upper Emerald Pools Trail and a small section of Lower Emerald Pools Trail will remain closed until repairs can be made. There is no estimate for when the repairs will be complete. The Lower Emerald Pools waterfall is still visible from the Lower Emerald Pools Trail, but visitors can no longer walk behind it. Watchman Trail, Weeping Rock, and Riverside Walk are suggested alternatives.

The damage after the floods – locals look at their properties in Richfield (Fox 13, Salt Lake City, UT)

Erin Cox, July 16, 2018

RICHFIELD, Utah - Locals in Richfield are recovering after devastating flash floods over the weekend.

"I was running around trying to stop the water from coming down, but after a while, there's not much you can do," recalled Kirk Harris, who lost more than 200 acres of his sod farm in just 4 hours.

Harris said that kind of loss will likely cost him more than a million dollars.

Pointing out pipelines and water channels ruined because of the flood's flow, Harris said it may take until 2020 to get his sod business back on track.

After working with 30 percent less water this year, Harris said they scrimped and saved to make it through, and now, they still don't have enough to replant.

"We'll probably have to shut down for a year," Harris said.

But he's not the only one hurting. Harris said he helped other neighbors minimize the damage to their homes and land.

Surveying his property, Harris also pointed out the damage done to a gravel pit company down the road from him.

The pit was entirely filled up with water, and a bulldozer sat right in the middle, barely peaking up above the water.

"It's going to take a while to get it all cleaned up," Harris said.

Harris said he's working with Sevier County on a few projects to help minimize flood damage in the future.

Sevier County Commissioner Tooter Ogden said he's been working on getting funding for research projects on the water tables so they can know how to better handle floods in the

future.

"Now, we're trying to make it," Ogden said. "Identify these areas; hopefully we can get the funding to help with trying to put in some detention dams.

WYOMING

Wyoming Wildfire Danger Slightly Lower Than Typical (Casper Star-Tribune, Casper, WY)

Shane Sanderson, July 16, 2018

CASPER, Wyo. (AP) — The Badger Creek Fire has burned for more than a month along the Colorado border, consuming more than 32 square miles (82 square kilometers) in the process. Six hours north, the Terek Fire, more than twice the size of its southern counterpart, has burned for more than a week.

The fires, which were almost completely contained Friday, will likely not be the last to ignite in Wyoming this summer.

This summer shouldn't bring with it an inferno, however. Authorities are predicting a relatively mild fire season in a state historically prone to bouts of burning wildland throughout the summer months. Those forecasts come with a significant disclaimer, however.

"As always, it all depends on our short-term weather," said Wyoming State Forester Bill Crapser.

The National Weather Service does not predict an unusually dry summer, according to drought outlook maps provided by the agency. Current conditions indicate nearly all of the state should remain untouched by drought through September, the maps show.

However, short-lived events, the agency warns, can impact the predictive power of the mapping.

And it is short-lived events — like an exceptionally hot and dry week — that can lead to rapid wildfire spread, Crapser told the Casper Star-Tribune.

The Badger Creek Fire, first began in early June, grew with the help of a week like that. On June 1, low temperatures meant low fire danger in the area. Just more than a week later, after fuel sources had been dried out by a heat wave, the fire ignited and spread rapidly. The fire's spread resembled that of an early-August burn, Crapser said.

The Terek Fire, burning near Worland, spread after a wind ribbon pushed lightning-caused fires across cheat grass, Crapser said. The invasive species, once dry, "will burn like gasoline," Crapser said.

Although Wyoming had a wet spring, Crapser said, it won't necessarily limit fire risk. The heavy rainfall promoted plant growth. When those plants dry out, they serve as additional fuel for wildfires.

A heavy rain won't rehydrate dried plants, Natrona County Emergency Manager John Harlin said. Once a plant has dried out, it will remain dead — and prime material to feed wildfires, he said.

"Even a torrential rainstorm won't change ... overall fuel levels too much," he said.

For the month of July, the danger is "below normal" in northern Wyoming, according to maps provided by the National Interagency Fire Center. Through October, the entire state's wildfire potential is rated as "normal."

Update: Park Firefighters Located, Suppressing Beaver Creek Fire (Jackson Hole News & Guide, Jackson Hole, WY)

Frederica Kowley, July 16, 2018

Monday afternoon at about 1:30 p.m., Grand Teton National Park firefighters located and started suppressing the small fire that started smoking Sunday evening west of the Beaver Creek area.

Officials received a smoke report at approximately 5:15 p.m. Sunday, July 15 from a park employee. An engine and firefighters on foot were dispatched to the scene at that time, said Denise Germann, the public information officer for Grand Teton National Park.

Park officials believe the cause of the fire was a lightning holdover from last week's storm, she said. Heavy rain showers following the storm prevented firefighters from locating the fire until it began smoking yesterday.

The fire is approximately one-tenth of an acre in area, Germann said.

It's important to completely put out campfires so they are cold to the touch and immediately call 911 or the interagency fire dispatch if park visitors see smoke, she said.

"It's a good reminder for everybody as we get into the middle of July and vegetation starts drying out," Germann said.

Jack Corcoran

Program Support Specialist – External Affairs FEMA Region VIII 303.235.4944 (desk) 202.320.2378 (cell) John.corcoran@fema.dhs.gov

Butte

While returning from a training flight, a CAP aircraft reports several small fires in the Northeast corner of Butte County. Upon further investigation the pilot reports he can see several vehicles and individuals discharging what appears to be fireworks. The pilot also reports the fires appear to be heading towards work crews for the XL Pipeline. With the coordinates provided by the CAP pilot, dispatch determined the approximate location of the fires at Cottonwood Township Rd & Zeona Rd. Another fire is reported by Hwy 79 and Norwegian Narrow Gage Rd. just north of Hoover.

<u>Dewey</u>

The Tribal Chairman and Council members have allowed water protestors to start a camp at the Rodeo grounds in Eagle Butte. There are reports coming into your Sheriff's office that non-tribal protestors are creating chaos within the camp and around the City of Eagle Butte. The City of Eagle Butte Police Chief confirms the information and is requesting your assistance as there is 400 protestors with an expected arrival of 600 protestors to arrive on buses tomorrow.

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10-15 People have gathered for the past two days at the pipe yard along Hwy 34/73. They blocked the driveway into and out of the yard until trucks start moving then slowly move out of the way. Each day it takes them longer to move and they are getting more vocal. This same procedure is being used at the workers compound north of Philip. A Facebook post is threatening that starting tomorrow there will be 50-100 people at each location and they will be shutting down the traffic in and out of these locations.

<u>Harding</u>

For one week now approximately 50 – 100 protesters have been camping at Lake Gardner. For the past 3 days, approximately 20 protesters have been peacefully protesting at the intersection of Hwy 85 and Hwy. 20. They have not restricted access to any of the businesses nor have they impeded the flow of traffic. Local law enforcement, requested mutual aid from Perkins and Butte County; each county responded with 2 deputies each. SD Highway Patrol responded also with two Troopers. Today, Bowman County (ND) Sheriff reports a large group was overheard at the truck stop stating they were on their way to Buffalo to stop the trucks to the work camp. The Bowman County Sheriff estimates 50 to 70 protesters.

Jones County

Murdo City Park has become a campground. There are 30 campers there and the city has ordered them to move on. The police office if requesting assistance in removing them. They are also manning a prayer chain on an over pass near the location where the pipeline will be bored under the interstate. They are also hanging a huge banner in protest to the pipeline over the interstate from the over pass.

Lyman County

A large group of protestors are attempting to block Hwy 53 south of I-90 to trucks hauling pipe and supplies to the crossing at the White River.

Meade

For several weeks protesters have been harassing workers at the work force camp by discharging fireworks in the middle of the night and trying to block their access to the work sites. Ranchers have reported fences being cut and their cattle being herded out onto Hwy 212. Due to this situation, several accidents have been reported. Several ranchers have threatened to take "matters into their own hands". In addition, several attempts have been made by the protesters to enter the work force camp at night. There are approximately 50 law enforcement officers on scene that are maintaining the peace. Intelligence now is reporting that they suspect multiple protests to take place two days from now; exact locations are not known. However, social media would indicate protesters plan on marching on the Capitol in Pierre while a special session is taking place. Other sites will include Haakon, Tripp and Harding counties all which are experiencing increase in activities by the protesters. Most of these activities are small in sizes which could best be described as "guerilla tactics". Law enforcement officers and resources are in short supply.

<u>Pennington</u>

Security officers at the Federal Courthouse located on 9th St. and Main St. Rapid City have reported several cars and three buses have stopped on ninth St. and approximately 100 individuals consisting of male and female adults with children have formed a line on the sidewalk in front of the Federal Building. This line extends from Main St. to St Joseph St. Several of the individuals are carrying signs opposing the XL Pipeline. Leaders are using bull horns to lead anti pipeline chants. So far, they are not blocking traffic and are allowing free access and egress to the building. However, many in the group appear to be more agitated then the others and are making more threats about taking the building. They are requesting law enforcement to maintain the peace.

Perkins

The NWS has issued a Severe Thunderstorm watch for SE Harding County, NE Butte County and SW Perkins County. This area includes the McKenna Ranch School and Public Lands, where 80-100 protesters have established a camp. From this camp they have been protesting at the work force camp on Hwy 212 located within a few miles of the Ben Ash Monument. At 1100 hours, dispatch received a call that an ambulance was needed at the McKenna Ranch. A 56-yearold female was having chest pains and difficulty breathing. NWS has issued a Severe Thunderstorm Warning with large hail and winds up to 70 mph within this area.

Tripp County

Protestors are blocking the road to the White River crossing as it goes across tribal lands east of the sight.

Ziebach

The Tribal Chairman has allowed water protestors to establish camp on the reservation land near Bridger and the Cheyenne River, which encompasses tribal and non-tribal members. There are reports of the camp size currently being around 300 protesters. There are several social media sites that say, "We welcome anyone willing to fight the great fight to our camp near Bridger, #waterprotestors #saveourland #tribalnationsunite." There are also an expected 500 more protesters arriving in buses tomorrow according to the social media sites.

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From: Schroder, Robert

Sent: Thursday, November 8, 2018 1:42 PM

To: Williams, Tamara < Tamara. Williams@fema.dhs.gov>; Espinosa, Adam < Adam. Espinosa@fema.dhs.gov>

Cc: Knapp, Nathan <nathan.knapp@fema.dhs.gov>

Subject: FW: October 24th Meeting Notes

Tamara and Adam,

Below is the info from Jennifer Dick. I also briefly talked to her and she suggested that Nate, Jennifer, Stacy, me and my recommendation is both of you have a meeting Tuesday when Nate is back to briefly discuss before we talk with Allen. I will propose a time based on everyone's calendar.

Bob

From: Dick, Jennifer

Sent: Thursday, November 8, 2018 10:14 AM

To: Knapp, Nathan <nathan.knapp@fema.dhs.gov>; Greff, Stacie <Stacie.Greff@fema.dhs.gov>

Cc: Schroder, Robert < Robert. Schroder@fema.dhs.gov>

Subject: RE: October 24th Meeting Notes

ATTORNEY-CLIENT PRIVILEGED

Hi Nate,

I did talk with Nancy last Friday (Lee was out of office that day). She concurred that LNOs should continue to monitor and maintain situation awareness (as we've been doing), and also be available if the State seeks out specific technical assistance, however we don't appear to have a specific role in these State planning meetings/workshops. Therefore, we advise that we do not send regional representation.

Feel free to give me/Stacie a call if you want to follow up. Thanks,

Jennifer Dick, Regional Counsel FEMA Region VIII (303) 235-4903 (303) 563-9230

This communication, along with any attachments, is covered by federal and state law governing electronic communications and may contain confidential and legally privileged information. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, use or copying of this message is strictly prohibited. If you have received this in error, please reply immediately to the sender and delete this message. Thank you.

From: Knapp, Nathan

Sent: Wednesday, November 7, 2018 8:02 PM

To: Dick, Jennifer <Jennifer.Dick@fema.dhs.gov>; Greff, Stacie <Stacie.Greff@fema.dhs.gov>

Cc: Schroder, Robert < Robert. Schroder@fema.dhs.gov>

Subject: FW: October 24th Meeting Notes

Jen and Stacie,

Need to provide direction to the state LNOs on whether to attend or not. Think the recommendation is that this situation is outside our statutory lane at present, but want to confirm and see if you've had any additional coord with the RA/DRA and gain a consolidated recommendation, then pass to the Bob and Tamara for action with the state.

Thanks, Nate
From: Schroder, Robert
Sent: Wednesday, November 7, 2018 8:58 AM
To: Knapp, Nathan <nathan.knapp@fema.dhs.gov></nathan.knapp@fema.dhs.gov>
Cc: Espinosa, Adam <adam.espinosa@fema.dhs.gov>; Williams, Tamara <tamara.williams@fema.dhs.gov></tamara.williams@fema.dhs.gov></adam.espinosa@fema.dhs.gov>
Subject: FW: October 24th Meeting Notes
Hi Nate,
Thus a second of the second of
Below is the latest update from (b)(6) on their CD discussions.
If you could give me a call later today when you have a moment that would be great.
I need to give (b)(6) a call back.
Bob
From: (b)(6) @state.sd.us>
Sent: Monday, November 5, 2018 8:48 AM
To: (b)(6)
(b)(6)
@midconetwork.com) (b)(6) @midconetwork.com>;(b)(6)
(b)(6) @state.sd.us>;(b)(6) @state.sd.us>;(b)(6) Ziebach County Emergency
(b)(6) @state.sd.us>; (b)(6) @state.sd.us>; Ziebach County Emergency (b)(6) @gmail.com) @gmail.com>; (b)(6) @meadecounty.org) (b)(6) @state.sd.us>; (b)(6)
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(b)(6) @state.sd.us>; (b)(6) @state.sd.us>; Ziebach County Emergency (b)(6) @gmail.com) @gmail.com>; (b)(6) @meadecounty.org) (b)(6) @co.pennington.sd.us) (b)(6) @state.sd.us>; (b)(6) (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>; (b)(6) @state.sd.us>;
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Dife
Dife @state.sd.us>; Dife @state.sd.us>; Dife @meadecounty.org

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From: Espinosa, Adam
 Sent: Tuesday, October 30, 2018 10:09 AM
 To: Schroder, Robert; Williams, Tamara
          FW: SD request for assistance info
DOJ info I provided the state . A little background the state asked
 Lee what his response would be to a
 EM/DR request for this type of event. So senior leadership is aware
                                    @state.sd.us]
 From: (b)(6)
 Sent: Monday, August 20, 2018 8:15 AM
 To: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>; (b)(6)
             @state.sd.us>
 Cc: (b)(6)
                 @usdoj.gov; Depalo, Lee <lee.depalo@fema.dhs.gov>;
 Jones, Susan K
 <Susan.Jones2@fema.dhs.gov>
 Subject: RE: SD request for assistance info
 Great info. Thanks Adam
(b)(6)
 From: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>
 Sent: Monday, August 20, 2018 8:44 AM
 To: (b)(6)
                                @state.sd.us>
 Cc: (b)(6)
                            state.sd.us>; (b)(6)
                                                        Pusdoj.gov;
 Depalo, Lee
 <lee.depalo@fema.dhs.gov>; Jones, Susan K
 <Susan.Jones2@fema.dhs.gov>
Subject: FW: [EXT] SD request for assistance info
 As promised.
 Thanks for the contact info (b)(6)
               @usdoj.gov (b)(6)
 From: (b)(6)
                                                   @usdoj.gov]
 Sent: Friday, August 17, 2018 1:34 PM
 To: Espinosa, Adam <Adam.Espinosa@fema.dhs.gov>
                  @usdoj.gov; (b)(6)
                                            @usdoj.gov; Depalo, Lee
 Cc: (b)(6)
 <lee.depalo@fema.dhs.gov>;
 (b)(6)
                 @usdoj.gov
 Subject: SD request for assistance info
In regards to South Dakota and civil unrest issues, there are a few
 potential sources of financial
support.
 1. - The US Department of Justice manages the Emergency Federal Law
    Enforcement Assistance
 (EFLEA) program, which is designed to assist local agencies with
 incidents that exceed their
 capabilities. It is currently funded with $16m, and would require
 that the state apply for and be granted
 those funds.
```

- 2. USDOJ also manages the Justice Assistance Grant (JAG) program. In recent past, they were able to assist San Bernardino and Orlando with expenses following the attacks there. This would also be a grant application, and would have to be approved.
- 3. The state can request reprogramming a portion of your JAG grants, and SD could also apply for potential emergency JAG grant funds.

With all EFLEA and JAG grants, funding is not guaranteed.

SD's contact for DOJ funding sources is JAG Deputy Director (b)(6)

(b)(6)

Susdoj.gov

She may also be able to help identify other potential funding reprogramming, and

4. - Your FEMA liaison can assist with determining if any SHSGP or other DHS funding can be provided or reprogrammed from existing programs to assist with your

Please feel free to contact me with any questions or concerns.

identifying other eligible funding sources.

needs.

ESF #13 Regional Field Coordinator - CO, MT, ND, SD, UT, WY
US Department of Justice
(b)(6)
(b)(6)
Pusdoj.gov

Butte

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```
From: Schroder, Robert
 Sent: Tuesday, December 18, 2018 2:58 PM
 To: Knapp, Nathan; Williams, Tamara
 Subject: FW: November 28 Meeting Notes
                   Long Version Civil Disturbance Meeting Notes 11-28-
 Attachments:
18.pdf
 Follow Up Flag: Follow up
 Flag Status:
                    Flagged
 Nate and Tamara,
 SD Minutes.
Bob
 From: (b)(6)
                                       estate.sd.us>
 Sent: Tuesday, December 18, 2018 1:41 PM
                              @state.sd.us>; (b)(6)
 To: (b)(6)
 (b)(6)
                   Photmail.com)
 (b)(6)
            hotmail.com>; (b)(6)
 b)(6)
                  @state.sd.us>;
              @midconetwork.com)
                                                @midconetwork.com>; (b)(6)
 (b)(6)
                state.sd.us>; (b)(6)
                                                       @state.sd.us>;
 b)(6)
                    - Ziebach County
                              gmail.com) (b)(6)
                                                    egmail.com>; (b)(6)
 b)(6)
 b)(6)
             estate.sd.us>;
 b)(6)
                                 state.sd.us>; (b)(6)
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Subject:	November 28 Meeting	Notes

Here are the meeting notes from the November 28th meeting. The agenda for the January meeting will come out after the first of the year. Thanks and Happy Holidays!

(b)(6) MEP
Response Branch Team Leader
SD Office of Emergency Management
Office: (D)(6)
Email: (b)(6) @state.sd.us
Follow OEM on

Click here for a two question customer experience survey.

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Civil Disturbance Planning Meeting 28 Nov 2018

Opening Remarks

(b)(6)	Presentation
during an inc	Lincoln County Emergency Manager, has worked in very simple county EOCs with 2 or 3 people in them and has also worked in the State EOC (SEOC) when it was filled with people g the 2011 floods. (b)(6) noted the importance of having someone who can document everything. If cident expands far enough, the county will need to activate their EOC to take control of information in in the social media, and resource ordering. Law Enforcement won't be able to do resource requests spatch if the incident is too large.
EOC disast coord	Douglas County Emergency Manager, activated his county EOC in response to the 2015 ont tornado. His county was only somewhat ready to respond to the incident. [b)(6] had never used an prior to that incident, and now believes in EOCs fully. Their incident was not declared a federal er, but the EOC was utilized to track finances and develop situation reports, plan operations, and inate activities such as resource ordering with the SEOC. Tracking resources via the EOC is really al. Their city finance person and county auditor also assisted with this.
some	county EOC structure had pre-determined personnel for specific positions prior to the incident, but of those people were directly affected by the tornado. IMAT was ultimately called in to assist with OC, particularly with plans, logs, and ops with local people working alongside them.
Emer	gency Management Functional Discussion Session
Facili	ties Flowchart (attached)
	The local command post will be where tactical operations are being discussed and performed. The sheriff will be leading the operations with Highway Patrol and other law enforcement assisting. The command post will flow information to the county EOC, to include resource ordering, situation reporting, and IAP planning. The county will need to decide who will be relaying this information. The county EOC will continue this flow of information to the State EOC. A decision will need to be made at the local level as to who will be sending that information to the SEOC. The SEOC will locate and provide needed resources to the county EOC that they are unable to fulfill with their local resources, mutual aid or contracts they have in place. [D)(6)
10	

said a way to prevent that is to sit down with local law enforcement and discuss, "When exactly will you notify me in an incident? How will you be notifying me of updates?"

Law enforcement will need to contact the EOC for resource ordering in any case because they won't have access to certain resources at their local level.

moted an incident in Kimball where dispatch was used for resource ordering. The Emergency Manager opened up the fire hall for law enforcement to warm up from cold. Equipment ordering was still done via dispatch. In this situation, (b)(6) said they did not have a good handle on how many law enforcement were involved, which is something that would've been accounted for if there had been an EOC; an EOC fosters accountability for personnel and resources.

- ICS is flexible and adaptable. In most situations, the sheriff will likely be the IC. A sheriff needs to decide if they want to be the IC because that means they'll be the IC over the entire incident, to include fire/EMS needs as related to the incident. A sheriff would decide if they wanted to run things at the command post or from the EOC. The sheriff might also be more comfortable running the tactical operation where they wouldn't be in charge of the entire incident. If this were to occur, then someone else at the local level would need to be identified as the IC. These are the discussions that need to happen locally with the sheriff and have sorted out prior to an incident occurring.
- The EOC will help divide up duties at the local level so no person is tasked with too much. ICS is
 a delegation of responsibilities so not all duties should be placed on one person.

A sheriff can appoint someone to take their place when an incident becomes long. The sheriff should have this arranged prior to the incident, perhaps with a neighboring sheriff. If it gets to the 4th or 6th operation period, then they might be reaching farther out for replacements to develop a rotating schedule. A good rule of thumb is if the incident goes longer than 12 hours then the county should look at activating their EOC.

 Highway Patrol would most likely already be working alongside local law enforcement but not taking over since the incident is the responsibility of the county. As seen in previous responses, the state wouldn't charge for Highway Patrol doing normal duties, and the same with DOT.

Communications Flowchart (attached)

- (b)(6) State Radio Engineer, held a committee meeting to discuss how to best assist with communication needs during a civil disturbance incident. Out in the field, they intend to use VTAC digital repeaters that have encryption. North Dakota has a cache of 150 portable radios they've agreed to partially lend to South Dakota on an EMAC agreement and (b)(6) is actively in communication with them. The command post could receive communications from the field and forward requests to the county EOC. Special Ops channel encryption could be used at the county EOC to communicate to command post.
- (b)(6) Is developing an informational sheet that has information regarding how to get encryption on specific radios. (b)(6) clarified to get a specific encrypted channel on a radio, the radio would need to have it programmed in. This costs about \$1,100.00 per radio.
- A county EOC needs at least one encrypted radio to monitor communications between county EOC and the command post and having three or four for the county would be ideal for the command post, county EOC, and law enforcement leads in the field to communicate to the command post. These suggested numbers are based on the bare minimum, keeping in mind encrypted radios are expensive. Not every radio needs to be encrypted, as there are a lot of actions and resource ordering that can be done via radio that don't need to be encrypted, i.e. porta-potty's, etc.
- The state could only send one or two radios to the locals without stretching the state thin.
- FirstNet would send out extra cell phones if so.

- FirstNet can prioritize phones and capacity should not be a problem in the counties. Normal cell
 towers only get overwhelmed with the Sturgis Rally or large Sioux Falls-type events.
- . There is no cost for FirstNet to come out to an incident.
- There are currently about 2,000 FirstNet subscriptions in the state. (b)(6) wanted to know if
 OEM can help track how many each county has so they can know ahead of time what needs there
 might be in each area. OEM will work on obtaining that information from AT&T and Verizon.
- Verizon has a similar service to FirstNet and costs about the same.

Regional EOC Flowchart (attached)

 In a Regional EOC, each county would have their own IC. Alternatively, unified command might be used.

Other Questions

- For resource requests, county EMs have access to a resource list. For any other resources, county
 EMs could call the State EOC, who would track down the requested resource and try to find
 multiple options for the request. The State would also prioritize based on needs. Ex.: generators
- Discussions were had on charging all costs to one county when resources will be used between counties/along borders. A county should talk to their attorneys first about this because each county is still required to meet their 2 mill. level before any state financial system will be granted. Counties need to have a system in place to track their costs individually even if shared.
- Harding County said their state's attorney disagreed with setting up a designated protest area near courthouse. (b)(6) said Hughes County did that and (b)(6) said Marshall County did as well. State's attorneys could reach out to those counties for advice on this.

Law Enforcement Functional Discussion Session

- The group went over the handouts and discussed the purpose of an EOC and how it can reduce
 the workload for law enforcement, so they can focus on their primary responsibilities. It's
 important that ICs don't over commit themselves at the command post.
- It's crucial to keep the county and State EOCs in the loop regarding what is happening in the field.
- To avoid duplication of efforts, law enforcement should keep emergency managers in the loop as
 to how they're handling certain functions.
 - Some law enforcement members remarked they aren't sure what they want or need yet, so it is difficult to communicate. Having a law enforcement liaison stationed at the EOC would be helpful for any decision making.
- Operational/tactical information may not be needed for EOC purposes depending on the functions being conducted there.
- A regional EOC would require more effort on the financial front. Resource ordering can be facilitated much easier with if information flow occurs between the command post, commissioners, and the EOCs.
 - Staffing a regional EOC would require at least one representative from each county.
 - A regional EOC would better support a civil disturbance situation that moved locations.
 - A regional EOC would make it more difficult for the IC to come out for meetings, but these meetings could be attended via a phone call or other means.

- If local law enforcement support the use of a Regional EOC, they should communicate
 this to their county commissioners.
- A communications working group was created and is using North Dakota as the optimal model.
 - Vtac and Vlaw channels can be switched to digital and used on a repeater.
 - DS encryption was hacked in North Dakota, so AES256 multi-key encryption is the best choice.
 - Only pre-identified leaders would be given encrypted radios. It's also a possibility to
 assign radios to other officers during duty hours and have them return the radios at the
 end of their shifts.
 - Each county should acquire radio information for their county and send it to (b)(6)
 as State Radio is the only entity that can verify is a radio is capable of getting AES encryption.
 - It was decided that having a tactical dispatcher at the command post would be necessary.
 - The HSIN page can also be used to communicate. Different pods/pages can be created and used for communication on different levels (tactical, PIO, EOC), and there's also a chat feature. All information entered here would be saved for documentation purposes.
- Highway Patrol created a Rules of Engagement policy for civil disturbance incidents. This policy
 includes tiers of protest actions and the pertinent reactions by law enforcement. This plan can be
 shared if requested.
- Highway Patrol can also share a field guide with information on formations, laws, etc.
- One of North Dakota's lessons learned was how important it is to enforce the rule of law, otherwise the situation can get away from the enforcement officials.
- It is vital for law enforcement, court systems, and state's attorneys to all be on the same regarding what will be enforced. This topic should be addressed again in future meetings

Breakout Session Reports

Law Enforcement, (b)(6)

- Regional EOCs discussed. Most in the group were in support of a regional EOC for a large-scale incident. A working group was created to discuss communications issues. (b)(6) told the group a policy for civil disturbance was created by Highway Patrol that can be shared. The group agreed that EMs, law enforcement, and state's attorneys should be in agreement on issues in order to move forward more easily.
- (b)(6) is going to send information out to counties on how to go about determining if current radios can be encrypted and the process to get it completed.

Court Services, (b)(6)

No state's attorneys in the group. Future ideas were discussed for state's attorneys. All state's
attorneys were invited to participate in a phone call a month ago. Another being held later this
week.

Emergency Management, (b)(6)

The group talked about communications issues and went over flowcharts with the idea that these
are starting points for counties to change to fit their needs. The general consensus is that a small
county should have 3 to 4 State digital trunked system encrypted radios, ideally. Some encrypted

- radios can come from the North Dakota cache, but these are not compatible with the South Dakota state trunk system. These radios could be used to talk locally on the incident but could not talk through the State digital trunked system.
- Discussions were had on FirstNet and plans to determine approximately how many people have switched over to FirstNet per county. It was also emphasized that the liaison positions in the flowcharts and the flow of information are important and will make for good information flow.
- For resource ordering, county EMs will tell the state what capability they're trying to fill, and the state will track down multiple options, as available.
- Overall, these discussions are important for planning with the understanding that the details of the
 potential incident/s cannot be predicted.

Final Discussions

- (b)(6) emphasized how helpful it is to hear from the local level regarding what needs there are for
 future meetings. Harding County noted that these meetings could potentially become more themeoriented. For example, having a social media themed meeting instead of multiple types of issues in
 one meeting.
- When asked about how social media issues would be handled, (b)(6) responded with information regarding a Joint Information System plan. There is the possibility to get a presentation on this for the next meeting.
- (b)(6) talked about how the ACLU submitted an open records request regarding all
 pipeline-related matters. She remarked jurisdictions are required to respond within 10 business days
 to the request. If a request is received, States Attorney's should be consulted on a response to
 discuss exemptions allowed in SDCL 1-27.
- In terms of a federal response in this type of incident, any information from the federal level would come through the Fusion Center, which is then shared to the local level through the HSIN page.

 [b)(6) from Homeland Security had discussions to get a SEAR rating that would open up other federal resources for the state. (b)(6) added that the situation has been given a "4" rating which essentially only puts the situation on the federal radar. The rating can be changed as the situation changes.
- Next meeting is January 24th at 10:00 am.

Civil Disturbance Facilities/Functions

- Command Post
- IAP Planning
- Situation Reporting
- Resource Ordering

Info flows to county EOC

Locally, who will fill this role to ensure info is flowing to the county EOC?





Resource Ordering

Info flows to State EOC

Locally, who will fill this role to ensure info is flowing to the State EOC?





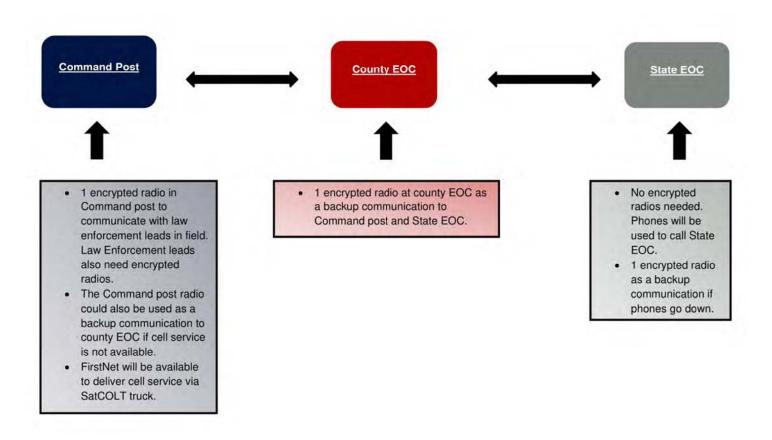
- Operations occur here with Sheriff
- Tactical response

- County EM
- Logistics Section provides needed resources
- PIO works w/ State PIO for consistent public messages
- Finance Section tracks costs for the event
- Planning Section produces situation reports, IAP
- Incident Commander could be here or at the location of field activities

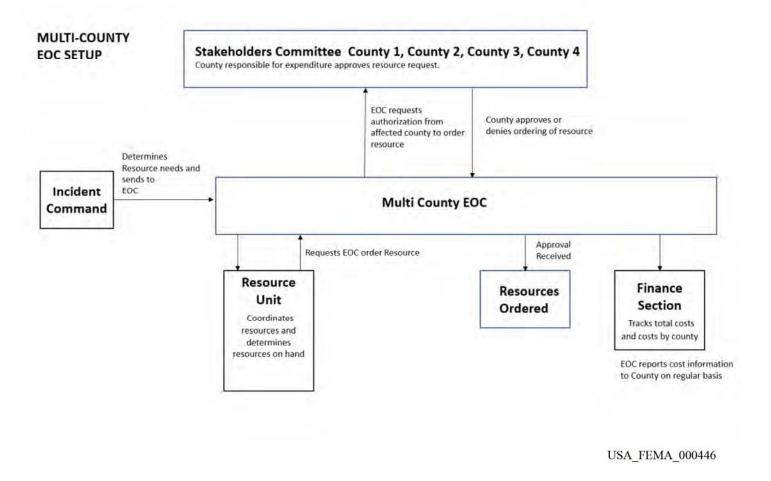
- · State agency staff
- Logistics
- Planning
- Operations
- Finance
- · PIO

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Civil Disturbance
Radio Encryption



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Civil Disturbance Planning Workshop July 24, 2018

Future Meeting Dates 10 AM-3PM CT:

- Aug 30
- Sept. 19
- Oct. 24
- Nov. 14

Please feel free to invite County Commissioners to future meetings if you desire. Please ensure they do not violate any open meeting regulations in terms of too many in attendance etc.

We will put together specific topics to be discussed during the morning individual breakout sessions. That information will be shared prior to each meeting.

Funding & Two Mills Discussions:

Provided funding handouts related to costs and two mills. Here are three scenarios to clarify when costs incurred will count towards the two mills local effort before state financial assistance can be received.

Scenario 1: The county has a two mills requirement of \$1 million to expend on an emergency or disaster before state financial assistance is provided. They have a civil disturbance event on January 1, 2019 and they spend \$1.3 million on the response between January 1 and January 10. The State responds as well and the Governor subsequently declares a State of Emergency in this county on January 15, 2019. Since the Governor declared a State of Emergency on January 15th, the county expenses related to this Governor's declared State of Emergency (civil disturbance event) from the prior 12 months counts towards the county two mills requirement. In this scenario, since the county spent \$1.3 million relating to the Governor's declared State of Emergency for civil disturbance within the prior 12 months and their two mills requirement is \$1 million, then they may be eligible for state financial assistance for the amount over their required two mills local effort requirement or in this case \$300,000. The Governor will then determine at what rate the \$300,000 is reimbursed, not to exceed sixty percent of the \$300,000.

Scenario 2: Using a similar scenario, but a different timeline. The county has a two mills requirement of \$1 million to expend on an emergency or disaster before state financial assistance is provided. They have a short, but costly civil disturbance event on January 1, 2019 and they spend \$1.3 million on the response between January 1-2, 2019. The State did not need to respond and the Governor did not declare a State of Emergency in this county. No state financial assistance is available for this event.

Scenario 3: Once again using a similar scenario. The county has a two mills requirement of \$1 million to expend on an emergency or disaster before state financial assistance is provided. They have a short, but costly civil disturbance event on January 1, 2019 and they spend \$1.3 million on the response between January 1-2, 2019. The State did not need to respond to this short-lived event and the Governor did not declare a State of Emergency in this county. No state financial assistance is available for this event. Then on January 3, 2020, another civil disturbance event explodes and lasts for 30 days and costs another \$900,000. The State responds and the Governor declares of State of Emergency for this event. No financial assistance is available for this event either because it is below the required two mills requirement and pay close attention to the date.

References:

Case 9:18-cv-00154-DWM Document 35-5 Filed 04/19/19 Page 195 of 253

SDCL 34-48A-1(7) "Local effort," the expenditure for emergency or disaster purposes within the twelve-month period preceding the date of the request, of an amount equal to two mills of the assessed valuation, exclusive of capital asset purchases, in each county for the assessment date preceding the date of the request under an emergency or disaster declaration by the Governor;

SDCL 34-48A-30. Minimum local effort required for state aid. In order to qualify for state financial assistance to meet the costs of an emergency or disaster declared by the Governor, a county shall meet the minimum standard of local effort as specified in subdivision 34-48A-1(7). SDCL 34-48A-32. Amount of state financial assistance-Additional assistance authorized. In those counties in which the Governor has officially

declared an emergency or disaster and in which local effort requirements have been mer, the state will provide financial assistance for such additional operational costs needed for the particular emergency or disaster situation up to a maximum of sixty percent of additional local effort expenditures; provided, however, that the Governor upon finding it necessary for the preservation of life and property may authorize additional state financial assistance.

State Agency Discussions & Follow-up Questions:

We are working with agencies now to gather additional information on these topics as needed also-

- DENR-Authorities related to sanitation for large groups related to ground water, solid waste disposal etc. Are there any steps the locals can take to speed up the process by which the state could come in and give fines etc.? Co EMs discussed how some Co Commissions are hesitant to pass ordinances which would limit land owners rights on their own property—such as passing the draft camping or gathering ordinances. Private land vs public lands and authority questions exist. Info provided: Local laws can be enforced by States Attorney. Proof must be established, which can take weeks or months to prove that a violation has occurred. Regulations in place depends on certain circumstances, fines can be misdemeanor to \$10,000/day once violation is proven. It is not a fast process to document and enforce these regulations.
- DOH-Will Staff be on the ground to monitor disease outbreak within the camps? Does DOH have a database or way of identifying individuals who may be willing to deploy and assist local clinics, EMS etc?
- BIT- Network capabilities, data transfer rates
 - State Radio-Encryption, Re-encryption, Laws related to encryption, Codes, Extenders, portable towers, and other equipment needs, First Net Capabilities, Portable COWs and locked down capabilities, Staff Support at Command and Local EOCs, JIT equipment training if needed, Cache of radios availability for local operations and support staff to program and encrypt these radios. Determine what areas are good signal areas and which would not be good locations for Command or FOBs etc. They have a VHF extender unit with VHF radio, which will connect to the trunk system and can be programmed into other radios. They also have a cache of portable radios that can be programmed and brought in for availability to an incident. Their encryption is set up as OFB not AES (Federal side). They can also change the encryption key daily or as needed.
- GF&P-Discuss GIS capabilities. Authorities or issues with a lack of some authorities so not placed in the wrong missions, support activities and resources available.
- DOA-
 - Wildland Fire- Would staff who are not otherwise involved in fire activity be available to assist as a Command Support Team, support setting up appropriate feeding and other logistics, would any current contracts for feeding etc. that Wildfire has in place able to be used for feeding operations for this type of event? If yes, how would these resources be ordered? Will strike teams be available if there is a high fire danger, especially given the large # of acres of land within Harding Co which are state owned.
- DOT-Can DOT shop yards be used for vehicles, trailers etc. since these are somewhat secure facilities or could
 easily be guarded as needed? Traffic Control/Reroute Plans discussions needed, are there additional resources
 such as barricades available, does this depend on the time of year or would private resources be needed? What
 is the protocol for Federal Highways if they are blocked off?
- DPS-

- PIO-Open Records Info, Social Media Team Support, Local PIO Support, PIO Training, Video Capabilities (ground and air)
- HP-State Highway Response- who will respond if a highway is blocked, task force to respond immediately, 1st Amendment Training- beginning during fall district meetings and will be open to locals as well. Ensure troopers come self-sufficient for 24-48 hours. Determine if MREs or other prepackaged food is needed as this will relieve stress in initial feeding ops.
- OEM-Cell phone company support, cell phone encryption capabilities, IMAT team information to include duration of deployments (need and availability of) and expertise in areas such as comms, tactical dispatcher, EOC support, command post support, GIS, Sheltering information, resource information- lay out a menu almost of what resources may be needed and are available- need to ask ND what they had to bring in for support resources as this will be a good starting point, EOC Training- develop a short almost refresher type training
 - Do we have a resource for Portable showers
 - Verify with NG that they can still support feeding operations with personnel including setting up of tents. <u>Update we are currently working on an RFP to get a contractor on stand-by to be able to rapidly (within 72 hours) set-up a large forward operating base to include feeding operations, housing operations, command buildings, shower units, and bathroom units. The contract will be for a scalable operation starting with a base for 50 responders on up.</u>
- Judicial In subsequent meetings can agency report out as to any unique issues they foresee or are planning for to include additional security at courthouses, additional hours for judges, clerk of court staff etc.

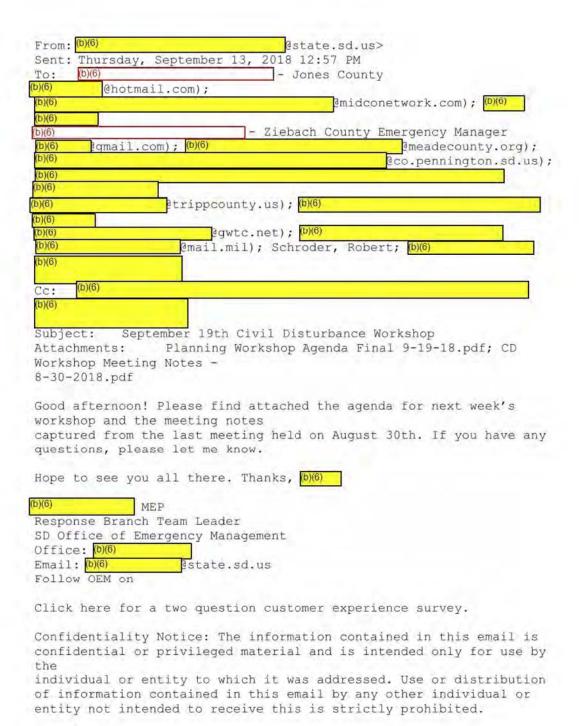
Other Topics:

- GIS-a separate working group will be formed to discuss this topic, will determine State agencies who
 may have GIS Support Staff who can assist with GIS and analytics prior to and during incident response.
 Check with colleges for GIS support.
- Discussed the remote areas, need to feeding operation support from mutual aid resources by day 2 of the operation. Will need additional feeding support from others for the duration of the incident. (see note above under OEM and the contractor being established for this issue.)
- Sheltering trailers will be needed to support sheltering of additional personnel. Site of the incident and
 availability of structures to house individuals will need to be immediately assessed. Additional
 resources, such as tents etc. may be needed. (see note above under OEM and the contractor being
 established for this issue.)
- Shortage of available volunteers or people to work the incident and be in the Local EOC is a big concern.
 This is amplified in areas which have work camps as people who may have had free time to volunteer are now employed supporting the man camps.
- Discussed need to recognize an incident is moving beyond local capabilities and transition from ordering
 resources through dispatch to establishing a local EOC with a single order point so the State EOC can
 more effectively fulfill resource requests and avoid duplication which can lead to unnecessary
 deployments and costs. It was discussed that after the first 24 hour ops period is generally when it
 would switch to a single ordering point and 12 hour Ops periods. This will also ensure additional law
 enforcement and others will have the necessary logistics they need to support their missions.
- Increase Federal partners involvement in planning efforts to include BIA.
 - Credentialing- need to ID and verify as well as track resources
 - Discussed mass arrests, booking, jailing, transport and the need for additional discussions around these topics in order to develop plans etc.

- Determine landowners who are likely welcome protesters in advance
 - State Agency planning and activities, need to share this information with everyone.
- Need for counties to lean on mutual aid from others such as Penn Co. through the Reg. 4 Mutual Aid agreement in the first 24 hours for support such as meals etc.
- Will the pipeline be willing to support feeding operations for responders at the onset. For how long.
 This would not mean the responders going into man camps instead food could be picked up from the
 camps and delivered to the feeding area. This is a stop gap measure until other feeding support can be
 obtained.
- What technology can be obtained ahead of an incident to ensure good information sharing and communications between the various sites to include the State EOC.
- Further discussions related to command operations are needed
- Ensure state staff who deploys come self-sufficient for a period of time as this will lesson impact on feeding operations.
- Remember that resources are not close at hand in most scenarios with an event along this pipeline.
 Areas will be very remote and grocery stores etc. may not be available or could be quickly overrun by additional people in the area.
- Pre-identify facilities where sleeping operations could occur in towns along the pipeline. Have discussions beforehand on the use of these facilities for responder operations.
- Discussed that some entities, churches, business etc. may not want to support this type of incident.

Law Enforcement General Discussion Topics

- Discussed creating a multi-agency task force to respond to initial incidents.
- Discussed getting a solid list of federal resources. BLM land
- Discussed ensuring that all jurisdictions should be utilizing Salamander system for credentials.
- Discussed the DOT traffic plan. They have one in place if needed to re-route traffic due to civil disturbance issues.
- Talked about OEM setting up some basic EOC training. Short course/refresher.
- Talked about the need for PIO assistance at the local level. This is part of the state planning efforts.
- Discussed the need to develop a plan or ideas on how large numbers of prisoners could be transported to jails.
 Need more discussion on this topic at another meeting.
- Discussed First Net and cellular services. COWs and State Radio coverage for radios/portable towers.
- Discussed BIT (network side) about the possible need for increased bandwidth for data transfer. BIT is working on this.
- Discussed 1st amendment training. HP will be doing it at district meetings this fall and it will be open to other
 agencies.
- Talked about visiting with land owners in advance about people trespassing on their land and how LE would respond.
- Discussed the need for counties to pass local ordinances for camping, large gatherings on private land. Need for emergency plan, wastewater disposal etc.
- Discussed setting up another meeting for Sheriffs and other LE to discuss response and tactics. This will be set for late August.
- Discussed the need to educate county commissions on potential issues including costs associated with response to civil unrest.
- Discussed sharing the state planning efforts when it gets past draft form.



POTENTIAL RELEASES AND PIPELINE SAFETY

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ACRONYMS AND ABBREVIATIONS

AC	alternating current	LP	Limited Partnership
ACVG	alternating current voltage gradient	MDEQ	Montana Department of
API	American Petroleum Institute		Environmental Quality
ASME	American Society of Mechanical	MFL	magnetic flux leakage
	Engineers	MFSA	Major Facilities Siting Act
ASTM	American Society of Testing and	MLV	mainline valve
	Materials	MOP	maximum operating pressure
AUT	automated ultrasonic testing	NACE	National Association of Corrosion
BS&W	basic sediment and water		Engineers
C	Celsius	NDE	nondestructive examination
CE	carbon equivalent	NDEQ	Nebraska Department of
C-FER	Reliability Based Prevention of		Environmental Quality
	Mechanical Damage to Pipelines	NTSB	National Transportation Safety
CFR	Code of Federal Regulations		Board
CIS	close interval survey	PAH	polycyclic aromatic hydrocarbon
CP	cathodic protection	PHMSA	Pipeline and Hazardous Material
CPM	continuous pipeline monitoring		Safety Administration
CPSs	contributory pipeline segments	PSL	product specification level
CRM	control room management	RBWMD	Rainwater Basin Wildlife
CSA	Canadian Standards Association		Management District
$dB\mu V$	decibel-microvolts	RFI	request for information
DCVG	direct current voltage gradient	ROW	right-of way
EIS	Environmental Impact Statement	RP	Recommended Practice
ERP	Emergency Response Plan	R-STREN	NG remaining strength
ES	Executive Summary	SCADA	
ESA	Endangered species Act		Acquisition
F	Fahrenheit	SMYS	specified minimum yield strength
FBE	fusion bond epoxy	SME	subject matter experts
FEIS	Final Environmental Impact	SOP	standard operating procedures
	Statement	SRP	spill response plan
FRP	Facility Response Plan	T&E	threatened and endangered
FPR	failure pressure ratio	TPD	Third Party Damage
HCA	High-Consequence Area	TPIC	Third Party Inspection Company
IIW	International Institute of Welding	USFWS	U.S. Fish and Wildlife Service
ILI	in-line inspection	USGS	U.S. Geological Survey
IMP	Integrity Management Plan	UT	ultrasonic test
IR	current (I) flowing through a	V	volt
	resistance (R)		
LDS	leak detection system		

Keystone XI Pr	oject
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1.0 INTRODUCTION

This appendix includes those measures that Keystone has committed to implementing for the proposed Keystone XL Project, including:

- Special Conditions recommended by PHMSA;
- Mitigation measures recommended in the Battelle and E^xponent risk reports; and
- · Additional mitigation measures.

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2.0 SPECIAL CONDITIONS RECOMMENDED BY PHMSA

Table 1 presents Special Conditions that PHMSA recommended, a comparison to requirements in 49 CFR 195, and benefits of the proposed conditions.

Table 1 Special Conditions Recommended by PHMSA

Condition	Keystone XL ¹	49 CFR 195	Benefits
1	Steel Properties: Skelp/plate must be micro-alloyed, fine grained, fully killed steel with calcium treatment and continuous casting.	Less prescriptive; references American Petroleum Institute (API) 5L standard, which does not require latest steel making properties.	These properties help ensure high quality carbon steel which may reduce the chance of a pipeline release.
2	Manufacturing Standards: Pipe must be manufactured according to American Petroleum Institute Specification 5L, Specification for Line Pipe (API 5L 44th Edition), product specification level 2 (PSL 2), supplementary requirements for maximum operating pressures and minimum operating temperatures. Pipe carbon equivalents must be at or below 0.23 percent based on the material chemistry parameter, carbon equivalent (CE) (Pcm) formula (Ito-Bessyo formula), or 0.40 percent based on the C-IIW formula (International Institute of Welding formula).	Less prescriptive; references API 5L standard.	Help ensure the steel is weldable when the pipe joints are joined together in the field using manual and mechanized welding processes based on the various alloys used to make up the chemical nature of the high strength carbon steel.
3	Fracture Control: API 5L and other specifications and standards addressing the steel pipe toughness properties needed to resist crack initiation and crack propagation, and to ensure crack arrest during a pipeline failure caused by a fracture must be followed. Keystone must prepare and implement a fracture control plan addressing the steel pipe properties necessary to resist crack initiation and crack propagation. The plan must include acceptable Charpy Impact and Drop Weight Tear Test values, which are measures of a steel pipeline's toughness and resistance to fracture. The fracture control plan must be in accordance with API 5L (44th Edition) and include the following tests: a) Fracture Toughness Testing for Shear Area: Test results must indicate at least 85 percent minimum average shear area per test for all X-70 heats	Less prescriptive; references API 5L standard.	Helps ensure that the pipe is resistant to initiation of and propagation of a flaw and that, if a failure does occur, the steel has adequate properties so that the pipe will not have a running fracture over multiple joints of pipe:

¹ PHMSA recommends that the State Department require TransCanada Keystone Pipeline, LP (Keystone) to include the Special Conditions in its written design, construction, and operating and maintenance plans and procedures.

Condition	Keystone XL ¹	49 CFR 195	Benefits
	and 85 percent minimum shear area for all X-80 heats with a minimum result of 80 percent shear area for any single test. The test results must also ensure a ductile fracture and arrest; b) Fracture Toughness Testing for Absorbed Energy in accordance with Annex G and a minimum of 50 ft-lb per heat on a full sized specimen at -5 degrees C/23 degrees F; and c) Fracture Toughness Testing by Drop Weight Tear Test for All New Pipeline Segments or Pipe Replacements: Test results must be at least 85 percent of the average shear area for all heats with a minimum result of 60 percent of the shear area for any single test. The test results must also ensure a ductile fracture and arrest.		
	The above fracture control plan must account for the entire range of pipeline operating temperatures, pressures and product compositions planned for the pipeline diameter, grade, and operating stress levels, including maximum pressures and minimum temperatures for shut-in conditions. Where the use of stress factors, pipe grade, operating temperatures, and product composition make fracture toughness calculations non-conservative, correction factors must be used.		
4	Steel – Plate, Coil, or Skelp Quality Control and Assurance: Keystone must prepare and implement an internal quality management program at mills involved in producing steel plate, coil, skelp, and pipe to be operated in the pipeline. These programs must be structured to detect and eliminate defects, inclusions, non-specification yield strength, and tensile strength properties, and chemistry affecting pipe quality.	General, less prescriptive in Code Section 195.112 and references API 5L.	These properties help ensur high quality carbon steel.
	A mill inspection program or internal quality management program must include the following:		
	a) Non-destructive test of the ends and at least 35 percent of the surface of the plate, coil, or pipe must be performed to identify imperfections such as laminations, cracks, and inclusions that may impair serviceability; 100 percent of the pipe sections must be tested. Surface ultrasonic must be done in accordance with American Society of Testing and Materials (ASTM) A578/A578M Level B or equivalent, to acceptance Level B. Pipe ends must be inspected by ultrasonic, magnetic particle or liquid penetrant methods, with acceptance criteria as outlined in Clause 9.10.4 or API 5L (44th Edition).		
	 A macro etch test or other equivalent method must be performed to identify inclusions that may form centerline segregation during the 		

Condition Keystone XL¹ 49 CFR 195 Benefits

continuous casting process. Use of sulfur prints is not an equivalent method. The test must be carried out on a slab from the first heat of each sequence, and graded with an acceptance criteria of one or two on the Mannesmann scale or equivalent;

- A quality assurance monitoring program implemented by the operator must include evaluations of:
 - i. All steelmaking and casting facilities;
 - ii. Quality control plans and manufacturing procedure specifications;
 - iii. Equipment maintenance and records of conformance;
 - Procedures for controls on superheat and casting speeds, steel rolling temperatures and cooling temperatures;
 - Additional mechanical and chemical properties tests based on steel grade, plate, or coil, and must be selected based on knowledge of patterns of property variability in the coils and plate based on the steel making process and rolling and cooling temperatures to assure that steel properties are not variable;
 - A verification program to ensure the pipe mill is taking into account all yield and tensile strength losses that may occur in the coiling and pipe rolling processes to ensure that the finished pipe has yield and tensile strengths that meet API 5L specifications;
 - vii. Coils and plate with casting and rolling process deviations that may affect steel properties must have a re-verification of mechanical and chemical properties on the pipe heat conducted at pipe location to ensure there is no variability in the pipe;
 - viii. The pipe supplier must notify Keystone of all instances that do not meet the above items before supplying the pipe to Keystone; and
 - Procedures for centerline segregation monitoring to ensure mitigation of centerline segregation during the continuous casting process.
- d) Pipe end tolerances must be applied so that there are no flat spots on the pipe that could affect welding quality. From each pipe mill, the end tolerances on pipe diameter must not exceed the range given in API 5L, Forty-Fourth (44th) Edition, Table 10, for any given pipe wall thickness. Keystone must demonstrate compliance with API 5L 44th Edition, Table 10 by providing to the appropriate Pipeline and Hazardous Materials Safety Administration (PHMSA) Region Director(s), Central, Western, and Southwest Region, a histogram of end tolerance and wall thickness data representing physical evidence of

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Condition	Keystone XL ¹	49 CFR 195	Benefits
	compliance for a minimum of 10 percent of the pipe manufactured by each pipe mill facility.		0
	 e) During construction, if pipe supplied from varying pipe mills cannot be preferentially strung, histograms and field weldability tests should be conducted to ensure that excessive high low is not in production or field welds. 		
5	Pipe Seam Quality Control: Keystone must prepare and implement a quality assurance program for pipe weld seams. The pipe weld seam tests must meet the minimum requirements for tensile strength in API 5L for the appropriate pipe grade properties.	General, less prescriptive in Code Section 195.112 and references API 5L.	These properties help ensure that welded seams (helical and straight) are an equivalent or stronger strength to the pipe.
	A pipe weld seam hardness test using the Vickers hardness testing of a cross-section from the weld seam must be performed on one length of pipe from each heat. The maximum weld seam and heat affected zone hardness must be a maximum of 280 Vickers hardness (Hv10). The hardness tests must include a minimum of 3 readings for each heat affected zone, 3 readings in the weld metal and 2 readings in each section of pipe base metal for a total of 13 readings. The pipe weld seam must be 100 percent ultrasonic tested (UT) inspected after expansion and hydrostatic testing per APL 5L.		
6	Monitoring for Seam Fatigue from Transportation: Keystone must inspect the double submerged arc welded seams of the delivered pipe using properly calibrated manual or automatic ultrasonic testing techniques. For each lay down area, a minimum of one pipe section from the bottom layer of pipes of the first five rail car shipments from each pipe mill must be inspected. For longitudinal weld seams, the entire seam must be tested. For helical seam submerged arc welded pipe, the weld seam in the area along the transportation bearing surfaces and all other exposed welded areas during the test must be tested. All the results must be appropriately documented. Each pipe section test record must be traceable to the pipe section tested.	General, less prescriptive in Code Sections 195.200 and 195.204.	This condition may result from a National Transportation Safety Board (NTSB) failure analysis finding from a historical pipeline failure. This spot-check—post-rail transportation to site—is an added check that no damage is present on pipe after rail transport.
7	Puncture Resistance: Steel pipe must be puncture resistant to an excavator weighing up to 65 tons with a general purpose tooth size of 3.54 inches by 0.137 inches. Puncture resistance will be calculated based on industry established calculations such as the Pipeline Research Council International's Reliability Based Prevention of Mechanical Damage to Pipelines calculation method.	General, less prescriptive; no defined requirement.	Additional steel properties to resist external mechanical damage, the most common cause of pipeline failure.

Condition	Keystone XL ¹	49 CFR 195	Benefits
8	Mill Hydrostatic Test: The pipe must be subjected to a mill hydrostatic test pressure of 95 percent specified minimum yield strength (SMYS) or greater for 10 seconds. The 95 percent stress level may be achieved using a combination of internal test pressure and the application of end loads imposed by the hydrostatic testing equipment as allowed by API 5L, Clause 10.2.6.6.	Sections 195.3 and 195.112.	Validates mainline pipe and seam integrity in the plant prior to final hydrotest in field.
9	Pipe Coating: The application of a corrosion-resistant coating to the steel pipe must be performed according to a coating application quality control program. The program must address pipe surface cleanliness standards, blast cleaning, application temperature control, adhesion, cathodic disbondment, moisture permeation, bending, minimum coating thickness, coating imperfections, and coating repair. All pipe must be protected against external corrosion by non-shielding: coatings, repair coatings, and protective material used to protect the pipe from rock damage. Holiday detection must include appropriate calibration of jeeping equipment on a holiday that extends through the coating to the metal of the pipe to be jeeped prior to use each working day. Jeeping voltages must be set at a minimum of 2,500 volts (V) for fusion bond epoxy (FBE), with higher voltages to be considered based on the coating type, thickness (maximum and minimum), grounding, and field conditions that day. For other coatings, minimum voltage settings need to be established by determining the nominal coating thicknesses and coating type. The pipe should be free of any excess debris prior to running the jeeping equipment over the area. Visual inspection for holidays and coating damage should complement the use of jeeping equipment. All pipe coating must be checked with holiday detection equipment prior to backfill and FBE-coated pipe must be checked with holiday detection equipment set at a minimum of 2500V prior to backfill. All coating defects must be repaired and rechecked prior to backfill. To the extent practical, Keystone must jeep the coating at the same voltage in the coating mill as in the field.	Less prescriptive, Code Section 195,004 requires inspection.	Detailed application process requirements help to ensure quality control of coating process.
10	Field Coating: Keystone must implement field girth weld joint coating application specification and quality standards to ensure pipe surface cleanliness, application temperature control, adhesion quality, cathodic disbondment, moisture permeation, bending, minimum coating thickness, holiday detection, and repair quality. Field joint coatings must be non-shielding to cathodic protection (CP). Field coating applicators must use valid qualified coating procedures and be trained to use these procedures.	Less prescriptive; Code Section 195,204 requires inspection, does not require level of specificity.	Helps ensure that personnel are trained and aware of the requirements when applying field joint corrosion protection

Condition	Keystone XL ¹	49 CFR 195	Benefits
	Holiday detection must include appropriate calibration of jeeping equipment on a holiday that extends through the coating to the metal of the pipe to be jeeped prior to use each working day. Jeeping voltages must be set at a minimum of 2,500V for FBE, with higher voltages to be considered based on the grounding and field conditions that day. For other coatings such as for girth weld coatings, minimum voltage settings need to be established by determining the nominal coating thicknesses (maximum and minimum) and type of coating used for application. The pipe should be free of any excess debris prior to running the jeeping equipment over the area. Visual inspection for holidays and coating damage should complement the use of jeeping equipment.		
11	Coatings for Trenchless Installation: Coatings used for directional bore, slick bore, and other trenchless installation methods must be capable of resisting abrasion and other damage that may occur due to rocks and other obstructions encountered in this installation technique.	Less prescriptive, Code Section 195.202 and 195.246 require specification, does not require level of specificity.	Helps ensure that corrosion protection coating is not damaged during installation using trenchless methods.
12	Bends Quality: Keystone must obtain and retain certification records of factory induction bends and factory weld bends. Bends, flanges, and fittings must have carbon equivalents (CE) equal to or below 0.42 or a pre-heat procedure must be applied prior to welding for CE above 0.42 on the CE-IIW formula.	Less prescriptive, Code Section 195.118 requires specifications, does not require level of specificity.	Helps ensure that pipeline materials are traceable for the life of the pipeline and weldable.
13	Fittings: Pressure-rated fittings and components (including flanges, valves, gaskets, pressure vessels, and pumps) must be rated for a pressure rating commensurate with the pipeline's maximum operating pressure (MOP).	Less prescriptive, Code Section 195.118 requires specifications, does not require level of specificity.	Helps ensure that correct components are used that match the pipeline design pressure.
14	Pipeline Design Factor – Pipelines: Pipe installed must comply with the 0.72 design factor in 49 CFR 195.106. a) At least 6 months before starting the Keystone XL pipeline construction, Keystone must review with the appropriate PHMSA Regional Directors in Central, Western, and Southwest Regions how High Consequence Areas (HCAs) which could be affected, as defined in 49 CFR 195.450 (commercial navigable waterways, high population areas, other populated areas, and unusually sensitive areas including aquifers as defined in 49 CFR 195.6), were determined, and the pipeline design associated with those segments. Keystone must identify piping and the design of piping within pump stations, mainline valve assemblies, pigging facilities, measurement facilities, road crossings, railroad crossings, and segments operating immediately downstream	Less prescriptive, Code Section 195.106 requires 0.72 design factor, does not specify timing for review prior to and post-construction. Code Section 195.452 has additional requirements for pipeline integrity management in HCAs.	Provides regulatory oversight of design compliance to federal codes and standards and helps ensure that encroachments near the pipeline such as urban development or new wellhead protection areas are factored into integrity management plans.

Condition	Keystone XL ¹	49 CFR 195	Benefits
	and at lower elevations than a pump station. Keystone must also provide an overland spread analyses in accordance with Section 195.452(f) to support could-affect determinations for water bodies more than 100 feet wide from high-water mark to high-water mark.	- 1000	
	b) Post-construction, Keystone must conduct a yearly survey, not to exceed 15 months, to identify changes on the pipeline system that would affect its designation or design.		
15	Temperature Control: Normal pump discharge temperatures should remain at or below 120 degrees Fahrenheit (°F). If the temperature exceeds 120°F, Keystone must prepare and implement a coating monitoring program in these areas, using ongoing direct current voltage gradient (DCVG) surveys or alternating current voltage gradient (ACVG) surveys, or other testing to demonstrate the coating integrity.	General, less prescriptive in Code Sections 195.400, 195.401, 195.402, 195.559, and 195.561.	Helps provide protective measures are in place for corrosion coating protection.
	Non-continuous discharge temperature spikes above 120°F for less than ½-day duration will not be a cause for implementing the procedure, but Keystone must inform the appropriate PHMSA Regional Director if regular operation above 120°F at pump station discharges will occur. Under no circumstances may the pump station discharge temperatures exceed 150°F without sufficient justification that Keystone's long-term operating tests show that the pipe coating will withstand the higher operating temperature for long-term operations, and approval from the appropriate PHMSA region(s).		
	Pump Station Discharge Temperature – operating above 120°F and up to 150°F maximum, FBE coating: a) Keystone must monitor coating performance in areas where operating temperatures have exceeded or will exceed 120°F to provide additional data on the long-term durability and integrity of FBE coatings at these		
	temperatures. Cathodic protection current requirements and coating surveys with DCVG (soil cover) and ACVG (pavement cover) will indicate if there is deterioration in the coating at the higher temperatures.		
	b) The DCVG and ACVG coating evaluation survey results will be addressed as follows: The threshold survey indication values are 35 percent IR ² for DCVG and 50 decibel-microvolts (dBμV) for ACVG. These values represent the mid-range of the Minor category in the		

² IR = current (I) flowing through a resistance (R)

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condition	Keystone XL ¹	49 CFR 195	Benefits
	severity classification used to characterize survey indications in an External Corrosion Direct Assessment program. c) Keystone must excavate and remediate all indications found above the threshold values: Minor, Moderate, and Severe categories. d) Keystone must conduct a calibration dig on at least two anomalies of each classification that are classified as Minor, Moderate, and Severe to ensure that findings not in the remediation plan are not detrimental to the pipeline. e) Keystone must perform Holiday voltage tests (jeep), coating adhesion, and coating cure tests at excavations. f) Keystone must remove disbonded or blistered coating (with cracking and other damage that will compromise cathodic protection) found during excavations and must apply new coating. g) Keystone must perform baseline DCVG 2½ years and 5 years after operating above 120°F, and in concert with future in-line inspection (ILI) and close-interval (CIS) surveys, both initial and second ILI tool runs, not to exceed 90 days before or past the schedule interval. h) Keystone must monitor surface temperatures of the pipe during winter and summer operating conditions at '0' miles and at a downstream mileage to assure that the surface temperatures do not exceed 120°F. If it is determined that the temperature at this point exceeds 120°F, the survey distance will be increased to the point where the temperature measurements or a minimum of 20 miles downstream of each pump station operating above 120°F. Keystone must make repairs to FBE coatings with a compatible coating system that will bond together, be resistant to soil stresses, and not shield cathodic protection.		
16	Overpressure Protection Control: Keystone must limit mainline pipeline overpressure protection to a maximum of 110 percent MOP during surge events consistent with 49 CFR 195.406(b). Before commencing operation, Keystone must perform a surge analysis showing how the pipeline will be operated to be consistent with these overpressure protection conditions. Keystone must equip the pipeline with field devices to prevent overpressure conditions. Remotely actuated valves should be fitted with devices that will	Required in Section 195.406(b), but less prescriptive on surge analysis.	Helps provide additional assurance that overpressure protection measures are in place.

Condition	Keystone XL ¹	49 CFR 195	Benefits
	expected. Sufficient pressure sensors, on both the upstream and downside side of valves, must be installed to ensure that an overpressure situation does not occur. Sufficient pressure sensors must be installed along the pipeline to conduct real time hydraulic modeling, which can be used to conduct a surge analysis to determine whether pipeline segments have experienced an overpressure condition.		
17	Construction Plans and Schedule: At least 90 days prior to the anticipated construction start date, Keystone must submit its construction plans and schedule to the appropriate PHMSA Directors in Central, Western, and Southwest Regions for review. Subsequent plans and schedule revisions must also be submitted to the appropriate Directors, PHMSA Central, Western, and Southwest Regions on a monthly basis.	Part 195 Code does not require the operator to notify PHMSA of construction plans and schedule.	Provides that PHMSA is fully aware of construction plans prior to construction.
18	Welding Procedures for New Pipeline Segments or Pipe Replacements: For automatic or mechanized welding, Keystone must use the 20th Edition of API 1104, Welding of Pipelines and Related Facilities, for welding procedure qualification, welder qualification, and weld acceptance criteria. Keystone must use the 20th Edition of API 1104 for other welding processes. At least twenty-one (21) days prior to the beginning of any welding procedure qualification activities, Keystone must notify the appropriate PHMSA Directors in Central, Western, and Southwest Regions. Keystone must submit automated or manual welding procedure documentation to the same PHMSA regional office. a) Should nondestructive testing of field girth welds be conducted by automated ultrasonic testing (AUT) API 1104 Appendix A, Keystone must conduct stress analysis for the welding procedures as required in API 1104, Appendix A, Paragraph A.2. b) Should API 1104, Appendix A, be used for welding, Keystone must conduct steel suppliers. c) All welding procedures, AUT procedures and pipe lifting procedures for field construction crews must be documented in construction procedures and field construction crews must be trained in the procedure requirements prior to conducting welding and girth weld AUT in accordance with API 1104, Appendix A. d) Keystone must nondestructively test girth welds in accordance with 49 CFR Sections 195.228, 195.230, and 195.234.	Nondestructive tests required in Code Sections 195.228, 195.230, and 195.234 but not same detail—general, less prescriptive. Only requires 10 percent of each welder's girth welds made each day to be nondestructively tested.	This condition, and Keystone's normal practices, help ensure that every weld is inspected.

Condition	Keystone XL ¹	49 CFR 195	Benefits
19	Depth of Cover: Keystone must construct the pipeline with soil cover at a minimum depth of 48 inches in areas, except in consolidated rock. The minimum depth in consolidated rock areas is 36 inches. Keystone must maintain a depth of cover of 48 inches in cultivated areas and a depth of 42 inches in other areas. In cultivated areas where conditions prevent the maintenance of 48 inches of cover, Keystone must employ additional protective measures to alert the public and excavators of pipeline presence.	Code Section 195.248 requires 36 inches of cover and 30 inches of cover in rock. Code does not require future cover maintenance as required in XL Condition 19 a and b.	Helps reduce the probability of mechanical damage through deeper pipeline burial. Requires depth of cover to be maintained at prescribed levels for life of pipeline.
	The additional measures must include:		
	 Placing warning tape and additional line-of-sight pipeline markers along the affected pipeline segment, 		
	b) In areas where threats from chisel plowing or other activities are threats to the pipeline, the top of the pipeline must be installed and maintained at least 1 foot below the deepest penetration above the pipeline, not to be less than 42 inches of cover.		
	If a routine patrol (ground and/or aerial) or other observed conditions during maintenance, where farming, excavation, or construction activities are ongoing, or after weather events occur, indicate the possible loss of cover over the pipeline, Keystone must perform a depth-of-cover study and replace cover as soon as practicable, not to exceed 6 months, to meet the minimum depth of cover requirements specified herein.		
	In addition to any depth-of-cover maintenance activities that may take place as a result of routine patrols. Keystone must perform a detailed depth-of-cover survey along the entire Keystone XL pipeline as frequently as practicable, not to exceed once every 10 years, and replace cover as soon as practicable, not to exceed 6 months, to meet the minimum depth-of-cover requirements specified herein.		
20	Construction Tasks: Keystone must prepare and follow an Operator Qualification Program for construction tasks that can affect pipeline integrity. The Construction Operator Qualification Program must comply with 49 CFR 195.501 and must be followed throughout the construction process for the qualification of individuals performing tasks on the pipeline.	General, less prescriptive. Construction personnel training, such as reading project specifications.	Helps ensure that girth weld inspection and repair, and other tasks related to pipeline construction, are performed by qualified individuals.
	If the performance of a construction task can affect the integrity of the pipeline segment, the operator must treat that task as a covered task, notwithstanding the definition in 49 CFR 195.501(b), and must implement the requirements of Subpart G. Keystone must retain qualification records for each individual performing covered tasks during and after the construction of the pipeline, whether company or contract employee.		

Condition	Keystone XL ¹	49 CFR 195	Benefits
	Keystone must prepare and follow a Construction Quality Assurance Plan, to ensure quality standards and controls of the pipeline, throughout the construction phase. Such a plan must include, at a minimum, provisions for the following: pipe inspection (at the last pipe shipping or storage location prior to stringing on the construction right-of-way, whether rail yard or pipe yard), hauling and stringing, field bending, welding, nondestructive examination of girth welds, applying and testing field applied coating, lowering of the pipeline into the ditch, padding and bekiflling, and hydrostatic testing. These tasks can affect the integrity of the pipeline segment and must be treated as covered tasks. The individuals driving the pipe stringing trucks to the pipeline right-of-way would not need to be Operator Qualification Program qualified, unless they are responsible for the pipe unloading.		
	Other tasks that can affect pipeline integrity which must be treated as covered tasks include, but are not limited to, surveying, locating foreign lines, one-call notifications, ditching, alternating current (AC) interference mitigation and mitigation, CP system surveys, mitigation and installation, conducting directional drills, anomaly evaluations and repairs, right-of-way cleanup (including installing line markers), and quality assurance monitoring.		
	Keystone must provide its construction Operator Qualification Program plan to the appropriate PHMSA Regional Director for review before beginning construction.		
	Girth welds must be inspected, repaired, and nondestructively examined in accordance with 49 CFR 195.228, 195.230, and 195.234. The nondestructive examination (NDE) examiner must have required and current certifications.		
21	Interference Currents Control: Control of induced AC from parallel electric transmission lines and other interference issues that may affect the pipeline must be incorporated into pipeline design and addressed during the construction phase. Issues identified and not originally addressed in the design phase must be brought to the attention of the applicable PHMSA Director(s) in Central, Western, and Southwest Regions. Within 6 months after placing the pipeline in service, Keystone must develop and implement an induced AC program to protect the pipeline from corrosion caused by stray currents.	Related to 49 CFR 195.577.	May minimize occurrence of corrosion caused by stray currents.

Condition	Keystone XL ¹	49 CFR 195	Benefits
22	Pressure Test Levels: The pre—in-service hydrostatic test must be to a pressure producing a hoop stress of a minimum 100 percent SMYS for mainline pipe and 1.39 times MOP for pump stations for 8 continuous hours. The hydrostatic test results from each test must be submitted in electronic format to the applicable PHMSA Directors in PHMSA Central, Western, and Southwest Regions after completion of each pipeline.	Less prescriptive. Code Section 195.304 requires pressure test 1.25 times, or more, of MOP for at least 4 continuous hours and for pipeline that is not visually inspected for leakage during the test, for at least an additional 4 continuous hours at a pressure equal to 1.1 times or more of MOP.	Helps provide final proof test of the pipeline including testing at greater pressure than required by Code at pump stations prior to placing inservice.
23	Assessment of Test Failures: Pipe failure occurring during the pre- in-service hydrostatic test must undergo a root cause failure analysis to include a metallurgical examination of the failed pipe. The results of this examination must preclude a systemic pipeline material issue and the results must be reported to PHMSA headquarters and the applicable PHMSA Director(s) in Central, Western, and Southwest Regions within 60 days of the failure.	Part 195 Code does not require operator to conduct assessment of test failures of hydrotest failures prior to placing inservice.	Help provide no systemic issues are present should a pre in-service hydrotest failure be experienced.
24	Supervisory Control and Data Acquisition (SCADA) System: Keystone must develop and install a SCADA system to provide remote monitoring and control of the entire pipeline system.	General, less prescriptive. Code Section 195.134 states that a leak detection system must comply, but does not directly state a SCADA system is required.	Helps provide state-of-the-art monitoring and control of the pipeline.
25	SCADA System - General:	General, less prescriptive, although most items are either explicitly listed or inferred as part of the Control Room Management (CRM) regulations through Code Section 195.446.	Provides NTSB findings are included from previous pipeline failure investigations.
	 Scan rate must be fast enough to minimize overpressure conditions (overpressure control system), provide very responsive abnormal operation indications to controllers, and detect small leaks within technology limitations. 		
	 b) Must meet the requirements of regulations developed as a result of the findings of the NTSB, SCADA in Liquid Pipelines, Safety Study, NTSB/SS-05/02 specifically including; i. Operator displays must adhere to guidance provided in API 1165 (First Edition), Recommended Practice for Pipeline SCADA Displays. This must be implemented and performed at any location on the Keystone XL system where a SCADA system is used and where an individual is assigned the responsibility to monitor and respond to SCADA information (tanks terminals or facilities also). 		

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- ii. Operators must have a policy for the reviewing and auditing alarms for false alarm reduction and near-miss or lessons-learned criteria. This alarm review must be implemented and performed at any location on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (tanks terminals or facilities also).
- iii. SCADA controller training must include simulator for controller recognition of abnormal operating conditions, in particular leak events. A generic simulator or simulation must not be allowed by itself as a means to meet this requirement. A full simulator (console screens respond and react as actual console screens) must be required and used for training of abnormal operating conditions wherever possible.
- iv. See item 29(b) below on fatigue management.
- Install computer-based leak detection system on all lines unless an engineering analysis determines that such a system is not necessary.
- c) Develop and implement shift change procedures for a controller that are scientifically based, set appropriate work and rest schedules, and consider circadian rhythms and human sleep and rest requirements in line with guidance provided by NTSB recommendation P-99-12 issued June 1, 1999.
- d) Verify point-to-point display and SCADA system inputs before placing the line in service. This must be implemented and performed at locations on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (tanks terminal or facilities also).
- e) Implement individual controller log-in provisions.
- f) Establish and maintain a secure operating control room environment.
- g) Establish and maintain the ability to make modifications and test these modifications in an off-line mode. The pipeline must have controls in place and be functionally tested in an off-line mode prior to changes being implemented after the line is in service and prior to beginning the line fill stage.
- h) Provide SCADA computer process load information tracking.

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Condition	Keystone XL ¹	49 CFR 195	Benefits
26	SCADA – Alarm Management: Alarm Management Policy and Procedures must address: a) Alarm priorities determination. b) Controllers' authority and responsibility. c) Clear alarm and event descriptors that are understood by controllers. d) Number of alarms. e) Potential systemic system issues. f) Unnecessary alarms. g) Controller's performance regarding alarm or event response. h) Alarm indication of abnormal operating conditions. i) Combination abnormal operating conditions or sequential alarms and events. j) Workload concerns. k) This alarm management policy and procedure review must be implemented and performed at locations on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (such as for tanks, terminals, or other associated facilities).	General, less prescriptive, although most items are explicit as part of the CRM regulations through Code Section 195,446.	Helps provide state-of-the-ar monitoring and control of the pipeline.
27	SCADA – Leak Detection System (LDS): The LDS Plan must include provisions for: a) Implementing applicable provisions in API Recommended Practice 1130, Computational Pipeline Monitoring for Liquid Pipelines (API RP 1130, 1st Edition 2007).	General, less prescriptive Code Section 195.134 and 195.444, not as detailed.	Helps provide state-of-the-ar monitoring and control of the pipeline.
	 b) Addressing the following leak detection system testing and validation issues: Test routinely to ensure degradation has not affected functionality. Validate the ability of the LDS to detect small leaks and modify the LDS as necessary to enhance its accuracy to detect small leaks. Conduct a risk analysis of pipeline segments to identify additional actions that would enhance public safety or environmental protection. 		
	c) Developing data validation plan (ensure input data to SCADA is valid)		
	d) Defining lead detection criteria in the following areas: i. Minimum size of leak to be detected regardless of pipeline conditions(slack, transient, etc., as related to the Keystone XL pipeline configuration.		

Condition	Keystone XL ¹	49 CFR 195	Benefits
	 Leak location accuracy for various pipeline conditions. 		0'-1'-
	iii. Response time for various pipeline conditions,		
	 e) Providing redundancy plans for hardware and software and a periodic test requirement for equipment to be used live (also applies to SCADA equipment). 		
28	SCADA – Pipeline Model and Simulator: The Thermal-Hydraulic Pipeline Model/Simulator including pressure control system must include a Model Validation/Verification Plan.	General, less prescriptive, although measure is inferred as part of the CRM regulations through Code Section 195.446.	Helps provide state-of-the-art monitoring and control of the pipeline.
29	SCADA – Training: The training and qualification plan (including simulator training) for controllers must:	General, less prescriptive, although most items are either	Helps provide state-of-the-art monitoring and control of the
	 Emphasize procedures for detecting and mitigating leaks. 	explicitly listed or inferred as part of the CRM regulations	pipeline.
	b) Include a fatigue management plan and implementation of a shift rotation schedule that minimizes possible fatigue concerns and that is scientifically based, sets appropriate work and rest schedules, and considers circadian rhythms and human sleep and rest requirements in line with NTSB recommendation P-99-12 issued June 1, 1999.	through Code Section 195.446.	
	c) Define controller maximum hours of service limitations.		
	 Meet the requirements of regulations developed as a result of the guidance provided in the American Society of Mechanical Engineers Standard B31Q, Pipeline Personnel Qualification Standard (ASME B31Q, September 2006), for developing qualification program plans. 		
	 e) Include and implement a full training simulator capable of replaying for training purposes near-miss or lesson learned scenarios. 		
	f) Implement tabletop and field exercises no less than five times per year that allow controllers to provide feedback to the exercises, participate in exercise scenario development, and be active participants in the exercise.		
	Include field visits for controllers accompanied by field personnel who will respond to call outs for that specific facility location.		
	 Provide facility specifics regarding the position to which certain equipment devices will default upon power loss. 		
	 Include color blind and hearing provisions and testing if these are required to identify alarm priority or equipment status. This review must be implemented and performed at any location on the Keystone 		

Condition Keystone XL 49 CFR 195 Benefits XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (such as for tanks, terminals, or other associated facilities). Task-specific abnormal operating conditions and generic abnormal operating conditions training components. k) If controllers are required to respond to "800" calls, include a training program conveying proper procedures for responding to emergency calls, notification of other pipeline operators in the area when affecting a common pipeline corridor, and education on the types of communications supplied to emergency responders and the public using API RP 1162, Public Awareness Programs for Pipeline Operators (1st edition, December 2003, or the most recent version incorporated in 49 CFR 195.3). 1) Implement on-the-job training component intervals established by performance review to include thorough documentation of all items covered during oral communication instruction. m) Implement a substantiated qualification program for requalification intervals addressing program requirements for which circumstances will result in qualifications being revoked; implementing procedure documentation regarding how long a controller can be absent before a review period, shadowing, retraining, or re-qualification is required; and addressing interim performance verification measures between requalification intervals. 30 SCADA - Calibration and Maintenance: The calibration and General, less prescriptive. Helps provide state-of-the-art maintenance plan for the instrumentation and SCADA system must be although measure is essentially monitoring and control of the developed using guidance provided in API RP 1130, Computational required as part of the CRM pipeline through fully functional SCADA system. Pipeline Monitoring for Liquid Pipelines (1st Edition 2007). Instrumentation regulations through Code repairs must be tracked and documentation provided regarding Section 195.446 (c) (2) that prioritization of these repairs. Controller log notes must be periodically requires point-to-point reviewed for concerns regarding mechanical problems. This information verification between SCADA must be tracked and prioritized. displays and related field Maintenance of field related instrumentation repairs affecting SCADA data (local or remote) must also be tracked, prioritized, and documented at any location on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (such as for tanks, terminals, or other associated facilities).

Condition	Keystone XL ¹	49 CFR 195	Benefits
31	SCADA – Leak Detection Manual: The Leak Detection Manual must be prepared using guidance provided in Canadian Standards Association (CSA), Oil and Gas Pipeline Systems, CSA Z662-03, Annex E, Section E.5.2, Leak Detection Manual.	General, less prescriptive. Many elements inferred through Code Sections 195.134 and 195.444 for leak detection, but code references API 1130 specifically.	Helps provide state-of-the-art monitoring and control of the pipeline reflecting exacting standards.
32	Mainline and Check Valve Control: Keystone must design and install mainline block valves and check valves on the Keystone XL system based on the worst-case discharge as calculated by 49 CFR 194.105. Keystone must locate valves in accordance with 49 CFR 195.260 and by taking into consideration elevation, population, and environmentally sensitive locations to minimize the consequences of a release from the pipeline. Mainline valves must be placed based on the analysis above or no more than 20 miles apart, whichever is less. Mainline valves must contain transit inhibit switches that prevent the valves from shutting at a rate (and in conjunction with pumps being shutdown) so that no pressure surges can occur, or other damage caused by unintended valve closures or by closures that are too rapid.	General Valve Requirements in Code Section 195,260.	Helps provide more instrumentation feeding back data to reduce leak detection times, helps reduce potential spill volumes though prescriptive valve spacing, and helps ensure that valves can close when loss of primary power is experienced. Also helps ensure prompt response time to non-automated valve locations.
	Valves must be remotely controlled and actuated, and the SCADA system must be capable of closing the valve and monitoring the valve position, upstream pressure, and downstream pressure so as to minimize the response time in the case of a failure. Remote power backup is required to ensure communications are maintained during inclement weather. Mainline valves must be capable of closure at all times. If it is impracticable to install a remote-controlled valve, Keystone must submit a valve design and installation plan to the appropriate PHMSA Region Director(s), Central, Western, and Southwest Region to confirm the alternative approach provides an equivalent safety level. For valves that cannot be remotely actuated, Keystone must document on a yearly basis not to exceed 15 months that personnel response time to these valves will not take more than an hour.		
33	Pipeline Inspection: The entire Keystone XL pipeline (not including pump stations and tank farms) must be capable of passing ILI tools. Keystone must prepare and implement a corrosion mitigation and integrity management plan for segments that do not allow the passage of an ILI device.	ILI required in Code Section 195.120, but no requirements for station piping inspection.	Provides pipeline capable of internal inspection and require direct assessment plan for pump stations and other facilities.

Condition	Keystone XL ¹	49 CFR 195	Benefits	
34	Internal Corrosion: Keystone must limit basic sediment and water (BS&W) to 0.5 percent by volume and report BS&W testing results to PHMSA in the annual report. Keystone must also report upset conditions causing BS&W level excursions above the limit.	General, less prescriptive in Code Section 195.579, which requires mitigation of internal corrosion.	Helps provide management of internal corrosion threat durir operations.	
	a) Keystone must run cleaning pigs twice in the first year and as necessary in succeeding years based on the analysis of oil constituents, liquid test results, weight loss coupons located in areas with the greatest internal corrosion threat, and other internal corrosion threats. At a minimum in the succeeding years following the first year Keystone must run cleaning pigs once a year, with intervals not to exceed 15 months.			
	 Liquids collected during the cleaning pig runs, such as BS&W, must be sampled, analyzed and internal corrosion mitigation plans developed based upon the lab test results. 			
	c) Keystone must review the program at least quarterly based on the crude oil quality and implement adjustments to monitor for, and mitigate the presence of, deleterious crude oil stream constituents.			
35	Cathodic Protection: The initial CP system must be operational within 6 months of placing a pipeline segment in service.	Required in Code Sections 195.563—within 1 year.	Helps provide early management of external corrosion threat during operations.	
36	Interference Current Surveys: Keystone must perform interference surveys over the entire Keystone XL pipeline within 6 months of placing the pipeline in service to ensure compliance with applicable National Association of Corrosion Engineers (NACE) International Recommended Practices (RP) 0169 (2002 or the latest version incorporated by reference in Section195.3) and 0177 (2007 or the latest version referenced through the appropriate NACE standard incorporated by reference in 49 CFR 195.3) (NACE RP 0169 and NACE RP 0177) for interference current levels. If interference currents are found, Keystone must determine if there have been adverse effects on the pipeline and mitigate such efforts as necessary. Keystone must report the results of any adverse effects finding and the associated mitigative efforts to the applicable Director(s), PHMSA Central, Western, and Southwest Regions within 60 days of the finding.	Required in Code Sections 195.575 and 195.577-no timing guidelines.	Helps provide early management of external corrosion threat during operations.	

Condition	Keystone XL ¹	49 CFR 195	Benefits
37	Corrosion Surveys: Keystone must complete corrosion surveys within 6 months of placing the respective CP system(s) in operation to ensure adequate external corrosion protection per NACE RP 0169. The survey must also address the proper number and location of CP test stations as well as AC interference mitigation and AC grounding programs per NACE RP 0177. At least one CP test station must be located within each HCA with a maximum spacing between test stations of one-half mile.	Required in Code Sections 195.571 and 195.573—timing of 2 years.	Helps provide early management of external corrosion threat during operations.
	If placement of a test station is not practical within an HCA, the test station must be placed at the nearest practical location. If any annual test station reading fails to meet 49 CFR 195, Subpart H requirements, remedial actions must occur within 6 months. Remedial actions must include a CIS on each side of the affected test station to the next test station and all modifications to the CP system necessary to ensure adequate external corrosion control.		
38	Initial Close Interval Survey (CIS): A CIS must be performed on the pipeline within 1 year of the pipeline in-service date. The CIS results must be integrated with the baseline ILI to determine whether further action is needed. Keystone must remediate anomalies indicated by the CIS data including improvements to CP systems and coating remediation within 6 months of completing the CIS surveys. CIS along the pipeline must be conducted with current interrupted to confirm voltage drops in association with periodic ILI assessments under 49 CFR 195.452 (j)(3).	Part 195 Code does not require operator to conduct CIS to confirm cathodic protection systems are performing to protect the pipeline from corrosion.	Helps provide management of external corrosion threat during operations.
39	Coating Condition Survey: Keystone must perform a DCVG or ACVG survey within 6 months after operation to verify the pipeline coating conditions and to remediate integrity issues. Keystone must remediate damaged coating indications found during these assessments that are classified as Minor (i.e., 35 percent IR and above for DCVG or 50 dBμV and above for ACVG), Moderate, or Severe based on NACE International RP 0502-2002 Pipeline External Corrosion Direct Assessment Methodology, or the latest version incorporated by reference in Section 195.3. A minimum of two coating survey assessment classifications must be excavated, classified, and/or remediated per each survey crew and pump station discharge section.	Part 195 Code does not require operator to conduct coating surveys after the pipe has been backfilled and graded.	Helps provide early management of external corrosion threat during operations.
40	Pipeline Markers: Keystone must install and maintain line-of-sight markings on the pipeline except in agricultural areas or large water crossings such as lakes where line-of-sight signage is not practical. The marking of pipelines may also be subject to environmental permits and	Required in Code Section 195.410, but does not require same level of markers or marker replacement program.	May reduce probability of mechanical damage threat and public awareness of high pressure utility.

Condition	Keystone XL ¹	49 CFR 195	Benefits
	local restrictions. Additional markers must be placed along the pipeline in areas where the pipeline is buried less than 48 inches. Keystone must replace removed or damaged line-of-sight markers during pipeline patrols and maintenance on the right-of-way. Keystone, at a minimum, must identify and replace any missing or damaged line-of-sight markers during pipeline patrols (Condition 41). If pipeline patrolling for Condition 41 is performed via aerial patrolling and cannot consistently identify areas with missing or damaged line-of-sight markers, then Keystone must, on a calendar year basis, not to exceed 15 months, conduct ground patrols.		
41	Pipeline Patrolling: Patrol the right-of-way at intervals not exceeding 3 weeks, but at least 26 times each calendar year, to inspect for excavation activities, ground movement, unstable soil, wash outs, leakage, or other activities or conditions affecting the safe operation of the pipeline.	Required in Code Section 195.412, right-of-way patrols every 3 weeks and 26 times per year, but is less prescriptive on items to look for during surveys.	May reduce probability of mechanical damage threat, erosion control, and other threats.
42	Initial ILI: Within 3 years of pipeline segment in service, Keystone must perform a baseline ILI using a high-resolution magnetic flux leakage tool. Keystone must perform a baseline geometry tool run after completion of the hydrostatic strength test and backfill of the pipeline, but no later than 6 months after placing the pipeline in service.	Required in Code Section 195.452 within 5 years of placing in-service.	Helps provide early management of external and internal corrosion threat during operations.
43	Deformation Tool: Keystone must run a deformation tool through mainline piping prior to putting the product in the pipeline and remediate expanded pipe in accordance with PHMSA's Interim Guidelines for Confirming Pipe Strength in Pipe Susceptible to Low Yield Strength for Liquid Pipeline dated October 6, 2009 or subsequent PHMSA update to this guideline.	Not required in Part 195 Code, but PHMSA has issued advisory bulletin on low strength pipe.	Helps provide identification of construction damage and manufacturing defects.
-44	Future IL1: Future IL1 inspection must be performed on the entire pipeline on a frequency consistent with 49 CFR 195.452 (j) (3) assessment intervals or on a frequency determined by fatigue studies of actual operating conditions.	Required in Code Section 195.452(j)(3), but does not require a, b, and c.	Helps provide enhanced management of external and internal corrosion threat during operations while overlapping
	 Conduct periodic CIS along the entire pipeline with current interrupted to confirm voltage drops in association with periodic ILI assessments under Section 195.452(j) (3). 		data sets to cross check for issues.
	 CIS must be conducted within 3 months of running ILI surveys when using a 5-year ILI frequency, not to exceed 68 months, in accordance with 49 CFR 195.452 (j) (3) assessment intervals. 		
	c) CIS findings must be integrated into ILI Tool findings.		

Condition	Keystone XL ¹	49 CFR 195	Benefits
45	Verification of Reassessment Interval: Keystone must submit a new fatigue analysis to validate the pipeline reassessment interval annually for the first 5 years after placing the pipeline into service. The analysis must be performed on the segment experiencing the most severe historical pressure cycling conditions using actual pipeline pressure data. The fatigue analysis must be submitted to the appropriate PHMSA Director(s) in Central, Western, and Southwest Regions.	General, less prescriptive in Code Section 195.452, which requires reassessment intervals to be considered in high consequence areas.	Helps provide enhanced management of fatigue threat during operations and PHMSA review.
46	Flaw Growth Assessment: Two years after the pipeline in-service date, Keystone must use data gathered on the pipeline section experiencing the most severe historical pressure cycling conditions to determine effect on flaw growth that passed manufacturing standards and installation specifications. This study must be performed by an independent party agreed upon by Keystone and PHMSA.	General, less prescriptive in Code Section 195.452, which requires reassessment intervals to be considered in high consequence areas.	Helps provide enhanced management of fatigue threat during operations.
	Furthermore, Keystone must share this study with PHMSA and the appropriate Director(s), PHMSA Central, Western, and Southwest Regions within 60 days of its completion, and before baseline assessment is begun. These findings must determine if an ultrasonic crack detection tool must be launched in that pipeline section to confirm crack growth. The study must also define when follow-up review and analysis will occur, not to exceed 5 years, or sooner as determined by the study.		
47	Direct Assessment Plan: Headers, mainline valve bypasses, and other sections that cannot accommodate IL1 tools must be part of a Direct Assessment Plan or other acceptable integrity monitoring method using External and Internal Corrosion Direct Assessment criteria.	General, less prescriptive in Code Section 195.452, but not as detailed.	Helps provide enhanced management of corrosion threat during operation for non-pigable sections of piping inside facilities.
48	Damage Prevention Program: Keystone must incorporate the Common Ground Alliance's damage prevention best practices applicable to pipelines into its damage prevention program.	General, less prescriptive in Code Section 195.442, operator is not required to meet Common Ground Alliance's damage prevention best practices.	Helps provide enhanced public awareness as part of damage control programs.

Condition	Keystone XL ¹	49 CFR 195	Benefits
49	Anomaly Evaluation and Repair: Anomaly evaluations and repairs must be performed based upon the following:	General, less prescriptive. Required in Code Section	Helps provide timely investigation and prompt
	 a) Immediate Repair Conditions: Follow 49 CFR 195.452(h)(4)(i) except designate the calculated remaining strength failure pressure ratio (FPR) ≤ 1.16 for anomaly repairs; 	195.452, except Code does not require immediate repair when FPR is less than 1.16 (Code	repair of anomalies in the pipeline reported via in-line inspection.
	 60-day Conditions: Follow 49 CFR 195.452 (h)(4)(ii) except designate a FPR ≤ 1.25 for anomaly repairs; 	requires less than 1.0, which is less than MOP with no safety factor) and does not require	
	 c) 180-day Conditions: Follow 49 CFR 195.452 (h)(4)(iii) with exceptions for the following conditions which must be scheduled for repair within 180 days: Calculated FPR = < 1.39; Areas of corrosion with predicted metal loss greater than 40 percent; Predicted metal loss is greater than 40 percent of nominal wall that is located at crossing of another pipeline and; Gouge or groove greater than 8 percent of nominal wall. 	180-day repair if wall loss is less than 50 percent.	
	d) Each anomaly not repaired under the immediate repair requirements must have a corrosion growth rate and ILI tool tolerance assigned per the Integrity Management Program to determine the maximum reinspection interval.		
	e) Anomaly Assessment Methods: Keystone must confirm the remaining strength (R-STRENG) effective area method, R-STRENG-085dL, and ASME B31G assessment methods are valid for the pipe diameter, wall thickness, grade, operating pressure, operating stress level, and operating temperature. Keystone must use the most conservative method until proper method confirmation is made to PHMSA headquarters.		
	Flow Stress: Remaining strength calculations for X-80 pipe must use a flow stress equal to the average of ultimate (tensile) strength and SMYS.		
	g) Dents: For initial construction and the initial geometry tool run, Keystone must remove dents with a depth greater than 2 percent of the nominal pipe diameter unless the dent is repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe. For the purposes of this condition, a dent is a depression that produces a gross disturbance in the curvature of the pipe wall without reducing the pipe wall thickness. The depth of the		

Condition	Keystone XL ¹	49 CFR 195	Benefits
	dent is measured as the gap between the lowest point of the dent and the prolongation of the original contour of the pipe.	- 1000	
50	Reporting – Immediate: Keystone must provide immediate notification of reportable incidents in accordance with 49 CFR 195, and must notify the appropriate PHMSA regional office within 24 hours of non-reportable leaks occurring on the pipeline.	General, less prescriptive. Required in Code Sections 195.50, 195.52, 159.54, 195.55, and 195.56, except nonreportable leaks do not require reporting.	Provides enhanced transparency to PHMSA
51	Reporting – 180 day: Within 180 days of the pipeline in-service date, Keystone must report on its compliance with these conditions to the PHMSA Associate Administrator and the appropriate PHMSA Directors in Central, Western, and Southwest Regions.	Part 195 Code does not require operator to give PHMSA a 180-day overview of operations on new pipelines.	Provides enhanced transparency to PHMSA
52	Annual Reporting: Keystone must annually report by February 15 th each year the following to the PHMSA Associate Administrator and the appropriate Directors, PHMSA Central, Western, and Southwest Regions:	Part 195 Code does not require operator to give PHMSA an annual overview of operations	Provides enhanced transparency to PHMSA
	 The results of an ILI run or direct assessment results performed on the pipeline during the previous year; 	on new pipelines.	
	b) The results of internal corrosion management programs: i. BS&W analyses ii. Report of plant upset conditions where elevated levels of BS&W are introduced into the pipeline iii. Corrosion inhibitor and biocide injection iv. Internal cleaning program v. Wall loss coupon tests		
	 New integrity threats identified during the previous year; 		
	 An encroachment in the right-of-way, including the number of new residences or public gathering areas; 		
	e) HCA changes during the previous year;		
	f) Reportable incidents that occurred during the previous year;		
	g) Leaks on the pipeline that occurred during previous year;		
	 A list of repairs on the pipeline made during the previous year; 		
	 On-going damage prevention initiatives on the pipeline and an evaluation of their success or failure; 		
	j) Changes in procedures used to assess and monitor the pipeline; and		
	 Company mergers, acquisitions, asset transfers, or other events affecting regulatory responsibility of company operating the pipeline. 		

Potential Releases and Pipeline Safety

Condition	Keystone XL ¹	49 CFR 195	Benefits	
53	Threat Identification and Evaluation: Keystone must develop a threat matrix consistent with 49 CFR 195.452 to accomplish the following:	Part 195 Code does not require operator to develop a threat	Helps provide state-of-the-art integrity management practices	
	ia) Identify and compare increased risks of operating the pipeline; and Describe and implement procedures used to mitigate the risk. Where geotechnical threats exist that may impact operational safety, Keystone must run a geospatial tool and assess procedures to implement for conducting mitigative measures along the affected pipeline.	matrix on locations outside high consequence areas.	employed across the entire pipeline system that would identify risks and develop plans.	identify risks and develop
54	Right of Way Management Plan: Keystone must develop and implement a right-of-way management plan to protect the Keystone pipeline from damage due to excavation, third party, and other activities. In areas where increased activities or natural forces could lead to increased threats to the pipeline beyond the initial threat conditions, the management plan must include increased inspections. The management plan must also include right-of-way inspection activities to complement the following: a) Depth of Cover (Condition 19) b) Pipeline Markers (Condition 40) c) Pipeline Patrolling (Condition 41) d) Damage Prevention Program (Condition 48); and e) Threat Identification and Evaluation (Condition 53). The Right-of-Way Management Plan and all the above-listed right-of-way inspection activities, Conditions 19, 40, 41, 48, and 53, must be reviewed for effectiveness and procedures updated as required on a periodic basis as conditions change, but not longer than once per calendar year not to exceed 15 months.	Part 195 Code does not require operator to develop a Right-of-Way Management Plan for threats along the pipeline. This requirement is similar to the natural gas pipeline, Part 192 – Alternative Maximum Allowable Operating Pressure Rule, 80 percent SMYS.	Helps provide increased right- of-way inspections and protects against external damage to pipeline.	
55	Records: Keystone must maintain records demonstrating compliance with the conditions herein for the useful life of the pipeline.	Part 195 Code does not require operators to maintain compliance records for life of the pipeline.	Maintains compliance records for the life of the pipeline.	

Condition	Keystone XL ¹		49 CFR 195	Benefits
56	Certification: A senior executive following in writing:	ma temporar conto.	General less prescriptive, Part 195 Code does not require	Helps ensure senior management accountability
	a) That Keystone has met the co		senior executive to certify	and visibility to aspects of the
		Keystone pipeline have been updated to	compliance prior to operations at a certain pressure level.	project's design, construction, and operations.
	program relative to the Keyst elements required herein. Keystone must send a copy of the executive signature and date of signature	PHMSA Central, Western, and Southwest		
57	technical briefing, in person, to th Central, Western, and Southwest implementation of the requirementation required by Condition	e appropriate PHMSA Directors in Regions. The briefing must cover the ts of the conditions herein, including a 52. On the basis of PHMSA's review of and additional information provided at the	Part 195 Code does not require 1-year technical briefing of pipeline operations by operator to PHMSA.	Provides yearly in person reporting to PHMSA, increasing visibility and transparency to pipeline safety regulator.
AC = alternating current ACVG = alternating current voltage gradient API = American Petroleum Institute ASME = American Society of Mechanical Engineers ASTM = American Society of Testing and Materials AUT = automated ultrasonic testing BS&W = basic sediment and water C = Celsius CE = carbon equivalent CFR = Code of Federal Regulations CIS = close interval survey CP = cathodic protection		CRM = control room management CSA = Canadian Standards Association dBµV = decibel-microvolts DCVG = direct current voltage gradient F = Fahrenheit FBE = fusion bond epoxy FFR = failure pressure ratio HCAs = High Consequence Areas [IW = International Institute of Welding ILI = in-line inspection IR = current (1) flowing through a resistance (R LDS = Ieak detection system	PSL = product specification lev R-STRENG = remaining streng RP = Recommended Practice SCADA = Supervisory Control SMYS = specified minimum yi	of Corrosion Engineers ation on Safety Board lous Materials Safety Administration rel gth and Data Acquisition

In addition to the 57 Special Conditions listed above, two additional Special Conditions include:

- Keystone would develop and implement a Quality Management System that would apply to the construction of the entire Keystone XL project in the U.S. to ensure that this pipeline is from the beginning-built to the highest standards by both Keystone personnel and its many contractors; and
- 2. Keystone would hire an independent Third Party Inspection Company (TPIC) to monitor the construction of the Keystone XL project. PHMSA must approve the TPIC from among companies Keystone proposes. Keystone and PHMSA would work together to develop a scope of work to help ensure that all regulatory and technical EIS conditions are satisfied during the construction and commissioning of the pipeline project. The TPIC would oversee the execution and implementation of the Department-specified conditions and the applicable pipeline safety regulations and would provide monitoring summaries to PHMSA and Keystone concurrently. Keystone would address deficiencies or risks identified in the TPIC's assessments.³

3.0 MITIGATION MEASURES RECOMMENDED IN THE BATTELLE AND E^XPONENT RISK REPORTS

The following summarizes mitigation recommendations from the Battelle and E^xponent risk assessment reports. Keystone has committed to implement the following mitigation recommendations, including specifically addressing several issues in its Emergency Response Plan and Oil Spill Response Plan (and its risk analysis that is used in the development of those plans). The recommendations are grouped under numbered themes. Where recommendations were duplicate or very similar, the recommendations were combined and summarized under the theme. Acronym definitions are listed at the end of this summary.

- The Facility Response Plan (FRP), Integrity Management Plan (IMP), and other related plans
 would be updated to include more frequent inspections or the use of advanced or improved
 leak prevention/detection tools, technology, or resources based on demonstrated need,
 environmental sensitivity, and/or changing conditions identified during pipeline operation.
 - a. Preventing leaks is a primary goal because any leak could release product into potentially sensitive ecosystems or into critical resources. Flexibility is recommended in the inspection plan and requirements to ensure that prevention is effective over the lifecycle of the proposed Project.

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³ In response to a data request regarding this TPIC condition, Keystone responded: "Keystone agrees to hire an independent Third Party Inspection Company (TPIC) to monitor field construction activities of the Keystone XL project. Keystone understands that it will work jointly with PHMSA to define the scope of work, identify qualified companies and prepare a Request for Proposal. PHMSA will select the qualified TPIC and manage the work of the TPIC. PHMSA will retain authority for its mandate on the project, while the TPIC will provide supplementary resources to PHMSA staff to field monitor, examine, audit and report conditions as specified by DOS and applicable pipeline safety regulations. Keystone will address deficiencies as directed by PHMSA."

- b. A risk-based integrity management system would be used whereby the frequency and accuracy requirements of in-line inspection (ILI) are based on a quantitative risk assessment indicated by conditions found after each inspection.
 - c. Inspection for mechanical damage using other technologies would also be considered in selected areas where the chance for such damage is locally higher.
 - d. Use of in-line leak detection technology on a selected basis may be appropriate in more environmentally sensitive areas, in areas where third-party damage is more likely, and on segments after significant corrosion is indicated.
 - e. In-line leak detection also could be considered in the future for line segments that have experienced significant corrosion or on segments where excavation equipment may have impacted the pipeline.
 - f. In-line leak detectors would also be deployed as part of the pig trains run under the integrity management programs. Leaks are not expected to be frequent; however, because many failures are the result of human activities, it is recommended that Keystone assess in its ERP/Spill Response Plan (SRP) the efficacy of increasing aerial surveys and/or ground patrol frequency to once a week.
 - g. Analysis by E^xponent indicates that leaks larger than about 20 barrels could be detectable aboveground (visually or by other sensor) within a reasonable timeline. Spills of about 1,400 barrels could be detected within 2 hours under Keystone's⁴ current detection commitment. Reasonable expectations based on unpublished data suggest that this volume could be reduced to several hundred barrels detected within 45 minutes. Though encouraging, smaller leaks are still a concern. Given that leaks of less than 20 barrels are not easily detectable aboveground, consideration would be given to the use of automated leak detection technologies. These technologies could complement continuous pipeline monitoring (CPM) and the other schemes currently adopted, with the survey frequency matched to the specific technology considered.
 - h. Given that E^xponent's work indicates that leaks of more than 20 barrels could be recognized within a reasonable timeframe aboveground (detectable visually or by other sensor), the use of detection technologies would be considered, along with a patrol frequency that is matched to such technologies.
 - i. Given that E^xponent's work indicates that large leaks could be recognized within a reasonable timeframe aboveground (detectable visually or by other sensor), consideration would be given to the use of detection technologies that complements computational pipeline modeling/monitoring CPM and the other schemes currently adopted, and to a patrol frequency that is matched to such technologies.
 - j. E^xponent recommends that Keystone consider how to improve upon external leak detection through more frequent inspections and property owner education for wells within these areas of sensitive groundwater resources.
 - k. If significant corrosion is detected by the lower-cost ILI tools, then high-resolution magnetic flux leakage (MFL) tools, more frequent inspection, or better tools are recommended.

⁴ TransCanada Keystone Pipeline, LP (Keystone).

- In their original (January 2012) and final (June 2013) reports, Battelle recommended increased aerial pipeline surveillance beyond what is currently required by PHMSA regulations. Battelle believes this recommendation is a valid one. Survey/patrol frequency even at the nominal two-week interval is largely ineffective based on the following analyses:
 - Analyses done by Battelle over the years indicate that the likelihood of missing an encroachment action at a 2-week patrol frequency was high.
 - Work done by C-FER (Reliability Based Prevention of Mechanical Damage to Pipelines) likewise indicates about a 90 percent chance of non-detection at 2-week intervals.
- The IMP and other related plans would consider new developments in leak prevention and detection tools as these new technologies mature and demonstrate viable improvement.
 - a. No matter how effectively pipeline systems are designed and constructed, there will always be a finite chance that a leak will occur. Therefore, leak detection is essential across the range of potential release components of the pipeline. Because facility risks are significant, it is recommended that leak detection efforts be placed on both the mainline pipe sections and facilities (including tanks). As new leak detection technologies emerge and start to be deployed in the field, Keystone would continue evaluating these technologies and consider implementing them if they represent a significant increase in leak detection sensitivity.
 - b. Regarding small leak detection, Keystone would plan to consider those developments and aggressively move to implement viable technology as time passes and technology evolves and matures. Based on responses to inquiries made over the course of the work that show Keystone investing through ongoing industry activities, such actions would be a part of Keystone's change management practices. Alternative approaches to prevent leaks would also be considered.
 - c. Four types of emergency flow restricting devices exist: remote controlled valves, check valves, automatic control valves, and manually operated valves. There is evidence that all but automatic control valves are involved in the proposed Project (note that the manually operated valves are placed in conjunction with and just downstream of the check valves). Automatic control valves respond automatically to pipeline flow conditions, which poses the chance for anomalous response. Yet, an automatic control valve conceptually represents a simple leak detection system (LDS) and an emergency flow restricting device in one package. As the technology matures, consideration would be given to such devices as these become reliable and can be programmed to close and minimize surge.
- 3. The FRP, IMP, and other related plans would include periodic revisions throughout the lifecycle of the proposed Project as new information becomes available from Keystone's observations, inspections, and lessons learned, particularly in the context of updating equipment, tools, and standard operating procedures. Also, the FRP, IMP, and other related plans would include regular monitoring of all aspects of prevention, protection, and mitigation to ensure that operations are conducted in accordance with the current plans.
 - Equipment-related concerns represent a viable threat, which would either be addressed, or demonstrated through analysis or trending that they can be ignored.

- b. Incorrect operations would be included as a threat unless demonstrated that it is not relevant. Concern exists in this context regarding human error, failure to follow standard operating procedures (SOPs), and/or the existence of outdated SOPs.
 - c. Leak prevention is a primary goal because any leak could release product into potentially sensitive ecosystems or into critical resources. Flexibility is recommended in the inspection plan and requirements to ensure that prevention is effective over the lifecycle of the proposed Project.
 - d. Finally, all aspects of prevention, protection, and mitigation would be monitored to ensure that plans and commitments remain viable and are implemented as outlined to date. Care would also be taken to heed the guidance that is emerging from recent efforts to avoid potential incidents⁵ built in during construction.
- The IMP and other related plans would require that in-line leak detection be considered as part of a pig train run to assess the pipeline for corrosion.
 - a. It is recommended that in-line leak detection be considered as part of the pig train that would be run to assess the pipeline for corrosion. This helps ensure that no small leaks have developed and that any leaks missed by other schemes have minimal environmental impact, while also minimizing the impact to operations (as the pipeline throughput is already reduced during pigging).
- 5. The IMP and other related plans would require that consideration be given to the selective use of concrete-coated line pipe or other unique approaches (like concrete pads and berms) to protect location-specific elements, such as facilities sited in sensitive ecosystems.
 - a. Depending on the nature of the terrain, aspects of the water table, and other factors, consideration would be given to the selective use of concrete-coated line pipe, or an equivalent that, unlike concrete coating, can be field-bent and cathodically protected (CP).
 - b. For location-specific elements, like facilities that are currently sited in sensitive ecosystems or resources, Keystone would also consider unique approaches to protect those sites, such as containment of facility leaks through the use of concrete pads and berms.
- 6. The IMP and other related plans would include proactive performance of in-line inspections (ILIs) prior to the start of operations in addition to inspections during operations. ILIs along the mainline pipe could be performed proactively prior to the start of operations to detect major defects in welds and the pipe wall, as well as defects caused by pipe placement in the ground. Defects detected could be repaired before the start of operations, thereby reducing the probability that a leak would occur soon after the start of operations.
 - a. The objective of this task was to quantify the effectiveness of the current design, construction, and operation practices in preventing leaks. Along the mainline pipe, leak prevention focuses on detection of defects in the pipe itself, on the longitudinal welds made during fabrication, and on the girth welds that connect the line pipe across the right-of-way. Battelle's evaluation of leak prevention considered the effectiveness of wall

⁵ The terms *incident* and *accident* can be used interchangeably or with specified definitions in various agency reports and databases. For the purposes of this report, the term *incident* has been selected for consistency.

thickness, controls for steel and longitudinal seams, and the external coating placed on the pipe and on the girth welds, as well as on the CP system. It is recommended that ILIs be performed proactively before starting operations. These inspections are capable of detecting major defects in welds and in the pipe wall, as well as defects caused by placing the pipe in the ground. Any detected defects could be repaired before starting operations and thereby would reduce the probability that a leak would occur soon after the start of operations.

- 7. The FRP and other related plans would require response resources to comply with the 12-hour regulatory requirement under all circumstances and commit to a response time significantly less than the maximum response time required by 49 CFR 194, at all locations along the pipeline, as feasible. Keystone's Emergency Response Plan would identify the resources required and dispatch of these resources to satisfy this commitment and minimize impact to the public and sensitive ecological areas.
 - a. During the construction phase, response team and equipment needs would be identified based on the scope of transported products and their potential interaction with the ecosystems that the pipeline traverses. Keystone has recently stated concurrence with this action and has indicated that they would target response plans to the ecosystems and resources traversed and would commit to a response time significantly less than the maximum response time required by 49 CFR 194, at all locations along the pipeline, as feasible.
 - b. E^xponent recommends that the ERP consider the possibility that spilled oil may be entrained into sediments and that these types of conditions (sediment/oil mix) be anticipated as part of response and cleanup.
 - c. The ERP would also take into account the sensitive areas identified in our review (e.g., Rainwater Basin, small stream crossings associated with ecologically sensitive areas, and special downstream water bodies). For example, wildlife habitat for special status species, within close proximity of the pipeline could be designated as special and/or unique areas for purposes of the ERP.
- The IMP and other related plans would require that defect tolerance of girth welds is assessed and achieved, subject to the PHMSA process.
 - a. Regarding axially-oriented anomalies, analysis of anomaly response and trending of the incident causes as a function of the diameter clearly shows, according to the Battelle/E^xponent risk assessment, that the lineal portion of the proposed Keystone XL Project is robust from a preventive perspective. Regarding girth welds, care would be taken to ensure that similar analyses are considered, and that related defect tolerance is assessed and achieved, subject to the PHMSA process.
- 9. The FRP and other related plans would consider groundwater monitoring wells inside and outside high consequence areas (HCAs). The location for the monitor wells would take into consideration distance, elevation, population, environmentally sensitive locations, and geotechnical threats, all of which would be documented.
 - a. E^xponent does not recommend monitoring non-HCA clusters of wells or installing additional monitoring wells prior to an oil release. However, E^xponent recommends that non-HCA clusters of wells be considered while evaluating response plans.

- The IMP and other related plans would validate safe valve closure times (e.g., 12 minutes) for the pipeline.
 - a. Valve response times for liquid lines are limited by the potential of fluid hammer and related overpressure surge. The published literature points to issues regarding times of about 10 minutes, and much more in some cases. Therefore, concern exists regarding the closure interval, noted currently at 12 minutes. If this process transitions to the PHMSA, care would be taken to validate the underlying dynamic analysis and related plans.
- 11. The IMP and other related plans would consider more frequent scheduled maintenance for valves and other equipment, pre-service offsite leak checks, and equipment testing when inspection and maintenance data indicate an increased service need.
 - a. Since pipeline areas where seals and seats are present have a higher potential for spills (e.g., on equipment and pumps), Keystone would be diligent about material selection for seals and seats, from both the design and maintenance perspectives, over the lifecycle of the equipment. They would also consider more frequent scheduled maintenance for valves and other equipment, at least initially, and use pre-service offsite leak checks and equipment testing where plausible.
- 12. The risk assessment required by PHMSA in 49 CFR 195.452 would include the reasoning as to why other threats, which are included in American Society of Mechanical Engineers (ASME) B31.8S, are excluded. Keystone has used the threat categories in the guidance available in ASME B31.8S, which are similar, but not the same as those categories listed in ASME B31.8S. Other threats include those other than the following nine categories: external corrosion, internal corrosion, stress corrosion cracking, materials related, construction related, equipment, excavation, hydraulic events, and natural hazards.
 - a. A rationale would be provided for the exclusion of other threats included in ASME B31.8S.
- 13. The risk assessment required by PHMSA in 49 CFR 195.452 would include the use of a typical spill volume of 33 barrels, as calculated by Battelle for the system's mainline pipe section based on the geometric mean for reported incidents between January 2002 and December 2012.⁶
 - a. The PHMSA Liquid Hydrocarbon Incident Database should continue to be used, but the analysis should be limited to crude oil spills and should consider the very different spill performance data for major systems (i.e., mainline pipe). The results should be presented without the use of engineering adjustment factors. A conservative performance range could be presented if an updated spill frequency estimate is needed for the entire pipeline. Appendix K, Historical Pipeline Incident Analysis, of the Final Supplemental Environmental Impact Statement (EIS) should be used as the starting point for such an updated analysis. Until that re-evaluation is performed, it is recommended that, for planning purposes, a medium spill volume of 100 barrels be used. A larger volume may have to be used in locations where the terrain produces a hydraulic gradient.

⁶ This RFI (request for information) was generated based on a recommendation in Battelle's DRAFT October 16, 2013 letter, which supersedes the earlier recommendation in Battelle's June 2013 Independent Engineering Report to use a typical spill volume of 100 barrels.

- b. The Final EIS (FEIS)⁷ discusses the typical spill volume to be expected should a release occur from the Keystone XL pipeline. In the FEIS, TransCanada recommended 3 barrels; in the Independent Engineering Assessment, Battelle suggested 100 barrels as a typical spill volume. The TransCanada value was based on the median and the Battelle value was based on the arithmetic mean. Battelle has indicated the spill distribution to be lognormal, and the value for the typical spill should be the geometric mean. The geometric mean value for all spills that occurred between January 2002 and December 2012 is 33 barrels for the mainline pipe section of the system. The discussions on pages ES-3 and ES-4 and in Section 3.3 of the Engineering Assessment should now be based on the geometric mean value.
- 14. The risk assessment required by PHMSA in 49 CFR 195.452 would include a threat-based sensitivity analysis including scope and results. Battelle suggests that such a sensitivity analysis could help identify localized threats, but sensitivity analysis apparently was not used to understand underlying drivers for incidents when estimating spill frequencies.
 - a. Sensitivity analysis apparently was not used to understand underlying drivers for incidents by Keystone when estimating spill frequencies. Such analysis could help identify localized threats. Further, although Keystone might have relied on subject matter experts (SMEs) to help quantify infrequent events like flash floods, general flooding, landslides, etc., the scope and results of such activity are not clearly evident.
- 15. The risk assessment required by PHMSA in 49 CFR 195.452 would include incident likelihood related to applying alternative preventive, protective, and mitigative features along the pipeline, considering the importance of potentially large localized spill events and/or smaller periodic spill events.
 - a. Regarding expressions of average risk, care should be taken when stating a U.S. threat rate or a state-level incident rate because this downplays the absolute importance of potentially large localized and/or periodic events. This practice does not help focus preventive, protective, or mitigative actions at specific locations along the pipeline, so an alternative risk assessment approach should be adopted if the PHMSA approves construction. At that time, Keystone should assess incident likelihood considering the benefits of alternative, preventive, protective, and mitigative features in place.
- 16. The risk assessment required by PHMSA in 49 CFR 195.452 would include additional quantitative analyses of transport and fate processes similar to the modeling and analysis presented in E^xponent's report, as well as assessing overland flow (spreading) and transport along the new route, particularly for specific pipeline sections that intersect identified sensitive habitats.
 - a. Consideration should be given to additional quantitative analyses of transport and fate processes similar to the modeling and analysis presented in E*ponent's report. Proactive measures could help limit the likelihood of a spill to sensitive areas, as well as leak detection systems, which could limit the amount, and hence the spread, of crude oil released.

⁷ Published August 26, 2011.

- 17. The risk assessment required by PHMSA in 49 CFR 195.452 would include additional modeling as part of a final design of the proposed Project to further refine appropriate downgradient distance criteria that could be used for identifying sensitive clusters of wells (i.e., domestic wells, irrigation wells, etc.).
 - a. E^xponent developed and applied criteria to identify potentially sensitive environments downstream of small stream crossings, with a number of such environments identified along the pipeline route. From an engineering perspective, concern for small streams could and would be managed proactively during construction via micro-bore or such techniques. During construction, and continuing into the operational phase, further analysis would be done to assess overland flow (spreading) and transport for specific pipeline sections that intersect identified sensitive habitats, including the four streams identified by E^xponent. This modeling exercise could then be used to inform ERPs. Well depth and depth of release would also be assessed relative to the water table to screen/identify sensitive groundwater resources that may be more vulnerable to exposure to a hydrocarbon plume in the event of an oil spill. Finally, it is recommended that the presence of polycyclic aromatic hydrocarbons (PAHs) and naphthenic acids be better quantified for the products that are actually transported in the pipeline to better inform environmental remediation and response planning.
- 18. The risk assessment required by PHMSA in 49 CFR 195.452 would require a surface water spill distance of at least 10 miles downstream from the proposed pipeline centerline for identifying sensitive areas and contributory pipeline segments (CPSs) during the final design phase of the proposed Project.
 - a. Additional spreading analyses would be performed in areas where sensitive environmental receptors are found, to demonstrate that these areas are adequately protected and that additional valves would not have a net benefit. These calculations would be most useful early in the process, before the formal validation of valve placement, demonstrating that the placement does minimize spill volumes.
- 19. The risk assessment required by PHMSA in 49 CFR 195.452 would factor into its quantitative risk analysis the cause and effect of other, other outside force damage, and equipment cause categories and nulls in the PHMSA incident/accident dataset, to the extent that valid data exists to perform this work.
 - a. The Keystone analysis does not describe how the causes under the other, other outside force damage, and equipment cause categories were factored into the analysis and threat identification process. When the likelihood analysis more broadly expands to consider such incidents, as well as those at facilities, the nulls would be addressed. This would be considered in any update of the pipeline risk assessment if PHMSA gives approval for construction. Finally, the recommendations noted in the qualitative threats review done from a pipeline perspective are supported quantitatively.
 - b. A quantitative rationale would be presented for causes that have not been recognized as threats. Keystone would detail their data screening process and the method(s) to deal with nulls, so that a simple query could replicate the baseline frequencies on a threat-specific basis. Keystone employed a query process using the CAUSE and GEN_CAUSE fields to obtain their cause/threat results. Further, it appears that their outcomes exclude the facilities that are an essential element of any pipeline system. Therefore, Battelle suggests

- that the risk assessment could be recast in a more generic setting. While currently restricted to use by government agencies and selectively by operators, a better approach would capitalize on the PHMSA National Pipeline Mapping System website to geolocate the historic spill records as the means to better quantify localized threats.
- c. The PHMSA list of general cause codes is longer than the list of cause codes TransCanada developed using ASME B31.8S and American Petroleum Institute (API) 1160. ASME B31.8S and API 1160 list more sub-elements under fewer cause codes. For the EIS assessments, the damage codes used in the PHMSA database would be used. Over time, the damage codes from the standards would supplement these damage codes, but because they are more focused, they would not be used for EIS assessments.
- 20. Given the dominance of risks associated with the mainline pipe and other system components (i.e., those components other than mainline valves or tanks), the risk assessment required by PHMSA in 49 CFR 195.452 would consider a risk management program that addresses these two categories of system components to effectively reduce risk. In comparing the average risks associated with the four system components analyzed (mainline pipe, mainline valves, tanks, and other system components), 97 percent of the risk was related to the mainline pipe and other system component risks. These two risk components represent the risks associated with the mainline pipe and fixed facilities such as pumping stations. The risk assessment would assess the individual components and threats to the pipeline system separately when evaluating risk, conducting incident frequency calculations, and evaluating trends.
 - a. In comparing the average risks associated with the four system components analyzed (mainline pipe, mainline valves, tanks, and other system components) 97 percent of the risk was in the mainline pipe and other system component risks with the risk almost evenly split. These two risk components represent the risks associated with the mainline pipe and fixed facilities such as pumping stations. Given the dominance of these two system components, a risk management program that addresses these system components would be most effective in reducing risk.
 - b. As a result of an internal review of the Risk Assessment Report, Battelle performed a statistical analysis of both the onshore crude oil spill volumes and total damage costs reported to PHMSA. The statistical analyses revealed that both the spill volumes and total damage cost estimates were found to be lognormally distributed. As a result of this finding, it was shown that there is a statistically significant difference, at the 95 percent confidence level, between the spill volumes and total damage costs for the four system components used in the Risk Assessment and in Appendix K, Historical Pipeline Incident Analysis, of the Final Supplemental EIS.
- 21. Spill prevention as covered in the ERP, IMP, and related plans would consider a spill's effect on wetlands and streams used by federally protected species and candidate species throughout the lifespan of the proposed Project and Keystone would work with the USFWS as appropriate.
 - a. E^xponent does not recommend designating the entire whooping crane migration corridor as an HCA. Rather, E^xponent has recommended mitigation measures at the stream crossings and associated wetlands in the proposed Project area that bisect the whooping crane migration corridor as shown on the maps provided in E^xponent's Third-Party Consultant Review of the TransCanada Keystone XL Pipeline Risk Assessment.

- b. As with whooping cranes, E^xponent does not recommend designating the entire migration corridors as HCAs for other migratory special status species. Rather, E^xponent has recommended mitigation measures at the stream crossings and associated wetlands used by migratory special status species.
 - c. Critical habitat would be protected and it qualifies as an HCA. Data from the USFWS regarding critical habitat that could be affected by a spill would be included in the more detailed analysis required by PHMSA. E^xponent recommends that the stream crossings and attendant wetlands it has identified would also be mitigated as part of the ERP.
- d. Fifty-nine small stream crossings within the Rainwater Basin Wildlife Management District (RBWMD) have special status wetlands at the stream crossings that could potentially be used by whooping cranes and other wetland-dependent special status species. For this reason, E^xponent recommends that these stream crossings would be considered for additional mitigation measures to protect the whooping crane habitat of the RBWMD because of its importance as a stopover area for whooping crane feeding and resting.
- e. While most whooping cranes stay within their migration corridor, they are seen outside the corridor on a regular basis and may have even begun prospecting new areas. Related to this point, many other special status species are capable of using new areas on a yearly basis. A further complication is that, according to the United States Geologic Survey (USGS), many water bird habitats within the RBWMD may be in a state of deterioration, and may already be compelling whooping cranes to use unprotected wetlands within the proposed Project. Therefore, E^xponent suggests that Keystone would conduct a bi-annual consultation with U.S. Fish and Wildlife Service (USFWS) to identify areas of high potential for use by special status species and to update the proposed Project ERPs as appropriate.
- f. Given the 50-year projected lifespan of the proposed Project and the possibility that one or more special status species may move into the Project vicinity during that timeframe, Exponent concludes that the monitoring outlined in 49 CFR 195 may be insufficient to protect special status species over the lifespan of the Project. Specifically, Exponent recommends that, in addition to monitoring physical factors that might impact pipeline integrity, Keystone develop a biological monitoring plan for these special and unique special status habitats to periodically determine whether threatened and endangered (T&E) and other special status species are using these habitats within the Project area and whether they are afforded sufficient protection under the ERP.
- 22. Evaluation of the pipeline throughout the lifespan of the proposed Project would consider federally protected species and candidate species to assure that the provisions of the USFWS' Keystone XL Pipeline Biological Opinion under Section 7 of the Endangered Species Act (ESA) are met.
 - a. E^xponent does not recommend designating the entire whooping crane migration corridor as an HCA. Rather, E^xponent has recommended mitigation measures at the stream crossings and associated wetlands in the proposed Project area that bisect the whooping crane migration corridor as shown on the maps provided in E^xponent's Third-Party Consultant Review of the TransCanada Keystone XL Pipeline Risk Assessment.

- b. As with whooping cranes, E^xponent does not recommend designating the entire migration corridors as HCAs for other migratory special status species. Rather, E^xponent has recommended mitigation measures at the stream crossings and associated wetlands used by migratory special status species.
- c. Critical habitat would be protected and it qualifies as an HCA. Data from the USFWS regarding critical habitat that could be affected by a spill would be included in the more detailed analysis required by PHMSA. E^xponent recommends that the stream crossings and attendant wetlands it has identified would also be mitigated as part of the ERP.
- d. Fifty-nine small stream crossings within the RBWMD have special status wetlands at the stream crossings that could potentially be used by whooping cranes and other wetlanddependent special status species. For this reason, E*ponent recommends that these stream crossings would be considered for additional mitigation measures to protect the whooping crane habitat of the RBWMD because of its importance as a stopover area for whooping crane feeding and resting.
- e. While most whooping cranes stay within their migration corridor, they are seen outside the corridor on a regular basis and may have even begun prospecting new areas. Related to this point, many other special status species are capable of using new areas on a yearly basis. A further complication is that, according to the USGS, many water bird habitats within the RBWMD may be in a state of deterioration, and may already be compelling whooping cranes to use unprotected wetlands within the proposed Project. Therefore, Exponent suggests that Keystone would conduct a bi-annual consultation with USFWS to identify areas of high potential for use by special status species and to update the proposed Project ERPs as appropriate.
- f. Given the 50-year projected lifespan of the proposed Project and the possibility that one or more special status species may move into the Project vicinity during that timeframe, Exponent concludes that the monitoring outlined in 49 CFR 195 may be insufficient to protect special status species over the lifespan of the Project. Specifically, Exponent recommends that, in addition to monitoring physical factors that might impact pipeline integrity, Keystone develop a biological monitoring plan for these special and unique special status habitats to periodically determine whether T&E and other special status species are using these habitats within the Project area and whether they are afforded sufficient protection under the ERP.
- 23. Knowledge on the chemistry of dilbit continues to increase, and that new information should be incorporated into planning and operations as appropriate (e.g., to improve spill response planning).
- 24. Based on location-specific analyses of fate and effects of spills that Keystone would undertake prior to construction, Keystone should consider the use of additional valves and/or noninvasive boring technologies at the small stream crossings that E^xponent identified as associated with additional potentially sensitive ecological areas, and where Keystone's release analysis shows the potential exists for medium to very large spills.
- 25. Keystone should rely upon stream-specific scour analyses for small stream crossings to identify where the pipeline should be buried deeper than 5 feet or where horizontal

- directional drilling may be warranted. The particular small stream crossings identified by E^xponent should be given attention in this regard.
- 26. Both the likelihood (incident frequency) and the consequences were found to vary significantly between the discrete elements (e.g., stations, tanks, etc.) and lineal elements (e.g., pipeline, mainline valves, etc.) with large differences also evident between the system components and the facilities that comprise the discrete elements. Such results cast uncertainty on the use of aggregated metrics for risk, and equally cast uncertainty on the use of aggregated "professional engineering judgment," because the aggregation tends to mask potentially opposed trends. Accordingly, Keystone should assess risk at the level of these three elements, and use a rate other than a per-mile-year-average rate for the discrete elements.
- 27. Keystone should uncouple the currently coupled threats involving internal corrosion and external corrosion, and those involving material versus construction threats, unless statistically valid reasons are established to pool these data.
- 28. The model and the process that were used by Keystone in its previous risk analysis to ensure that valves are placed to minimize the total outflow from a breach appear to be correct and should continue to be used. Keystone will redo portions of the outflow analysis that reflect the proposed Project route.
- 29. Adopting the All Spills outcomes relative to those for other choices based on the General Cause categories in the PHMSA database could significantly underestimate the median spill volume relative to the environmental exposure along the pipeline right-of-way (ROW). Trending the cumulative distributions of spill volumes shows that the Keystone benchmark under-predicts the likelihood of larger spills except at the higher percentiles, where all trends converge. The results indicate that parsing on the Incorrect Operations, Natural Forces, Third-Party Damage (TPD), and Pipeline/Mainline Valve (MLV) General Cause categories lead to larger values for the median spill and at the 90th percentile. Accordingly, there is the potential for much larger spills than has been considered relative to the All Spills benchmark case. Because such trends represent a system-level analysis of historic incidents that typically involve much smaller diameter line pipe as compared to the proposed Project, there is the potential for still larger spills where unique site-specific threats exist along the ROW. Keystone's Risk Assessment should give consideration to a broader assessment of the environmental consequences relative to the probability of occurrence and spill volume, including the potential implications of pipe diameter. Spill analysis should focus on the threats associated with the major General Cause categories such as facilities, the pipeline, and its system components, which should present a clearer picture of the spill potential for the proposed Project. In turn, this should facilitate focusing the spill prevention, protection, and mitigation where it is most relevant.
- 30. To the extent practicable, future risk assessments should divide the pipeline system into component parts, assess the risk for each component, and then calculate the system risk from its components. The Battelle risk analysis shows that the subsystems that generate most of the risk are the mainline pipe and the fixed facilities such as the pumping stations. Thus, when developing preventive, protective, and mitigative programs, equal focus should be on the mainline pipe and the fixed facilities.

- 31. Naphthenic acids are a class of compounds found in crude oils (including Canadian oil sands) that can potentially result in aquatic toxicity if released into the environment; they have been the subject of significant research. Given the perceived link between tar sands processing and aquatic toxicity due to naphthenic acids, to the extent available, Keystone would obtain additional information on the naphthenic acid content of the oils to be transported.
- 32. Although PAH concentrations in petroleum are low compared to some environmental sources, this class of compounds can be a long-term driver for remediation and risk management following an oil spill. To the extent available, Keystone would obtain additional information on the chemistry of the oils as this information will be needed for developing cleanup and remediation plans. An understanding of the PAH profiles of pipeline oils would allow for differentiation between baseline and spill impacts.
- 33. Keystone, as part of the final Project design, should further evaluate overland flow (spreading analysis) of spilled oil, and further evaluate the transport of spilled oil in small streams (e.g., the downstream distance crude oil could travel from the proposed pipeline centerline) for purposes of the ERP. These analyses should take into account potential density and viscosity increases associated with the loss of volatiles from heavy crudes and diluted bitumen.
- 34. Keystone should use the screening criteria (e.g., well depth, depth of release compared to water table, lithology between pipeline and aquifer) suggested in [Exponent] report for identifying vulnerable/sensitive groundwater resources adjacent to the pipeline that do not classify as HCAs, but that may be more vulnerable to exposure to a benzene plume in the event of a an oil spill. For example, these could be defined as clusters of both domestic and irrigation wells within 1,000 feet of a pipeline segment where an oil spill could occur in or within a few feet of the water table. Exponent recommends that additional modeling be performed as part of the final Project design to further refine the appropriate downgradient distance criteria to be used for identifying sensitive clusters of wells. Exponent recommends that these non-HCA groundwater resources be afforded a degree of protection from the occurrence of an oil spill and from the consequences of a spill similar to what is currently afforded to groundwater resources that are defined HCAs.
- 35. It is recommended that Keystone use a distance of at least 10 miles downstream from the proposed pipeline centerline to identify sensitive areas and to identify contributory pipeline segments (CPSs) during the final Project design phase.8

4.0 ADDITIONAL MITIGATION MEASURES

Keystone has committed to a number of measures beyond the spill cleanup measures described above, including specifically addressing several issues in its Emergency Response Plan and Oil Spill Response Plan (and the detailed risk analysis used in developing those plans). These measures include:

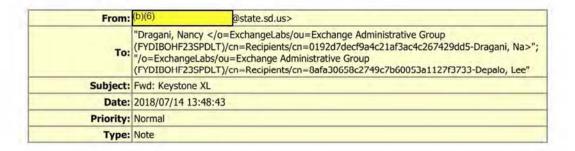
1. Develop a plan for long term sampling/monitoring in the event of an oil discharge to assess and monitor these impacts as part of the spill response plan.

⁸ Keystone has indicated that it uses a distance of 24 miles downstream per analysis provided by PHMSA Special Condition 14.

- Include spill contingency plans in the Emergency Response Plan to address submerged oil, floating oil, and cold-weather responses.
- Consider In detail locations to pre-position response assets, including equipment to address submerged oil, and actual pre-positioning of those assets.
- 4. Specify in the ERP that spill drills and exercises include strategies and equipment deployment to address floating and submerged oil.
- Consult and communicate with the Local Emergency Response Planning Committees and other emergency service agencies during ERP development to ensure ERPs are aligned.
- 6. In the event that a spill affects a paleontological resource, prepare a paleontological mitigation plan to protect significant fossil resources.
- 7. In the event that a spill contaminates potable water supplies, be responsible for cleanup and restoration. Keystone would be responsible for providing an appropriate alternative potable water supply of comparable volume and quality to those impacted or provide compensation, if this option is agreed upon by the affected parties and Keystone. For groundwater used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. If the permit were approved, Keystone would memorialize that agreement through an appropriate written agreement with the Environmental Protection Agency.
- File the following documents with Nebraska Department of Environmental Quality (NDEQ) by May 1 of each year:
 - a. Certificate of insurance as evidence that it is carrying a minimum of \$200 million in third-party liability insurance, with the NDEQ, as specified in the NDEQ's December 2012 Final Evaluation Report, and with the Montana Department of Environmental Quality (MDEQ), as required by Keystone's Certificate issued by MDEQ under the Montana Major Facility Siting Act (MFSA).
 - b. Copy of Keystone's Securities and Exchange Commission (SEC) Form 10-K and Annual Report. (Keystone's MFSA Certificate contains a similar requirement.)
- 9. On request, file the documents listed in item 8 above with other appropriate state agencies.
- 10. Continue to assess the efficacy of implementing groundwater monitoring wells based on results of its risk assessments accounting for significant threats and in situ conditions. In-line leak inspection using Smart Ball, MFL, and UT would remain the primary focus of leak detection and integrity management. In the event of a release either inside or outside of an HCA, Keystone would consider the installation of groundwater monitoring wells to delineate the release extent and the threat to groundwater resources.
- 11. In the event of a release, provide the specific Material Safety Data Sheets (MSDSs) of the product(s) shipped (and released) to emergency responders (including any state, local, or federal agencies involved in spill response actions) within 1 hour of the release. Keystone would maintain a point of contact who would be authorized to release the MSDS and chemical composition information to first responders. The point of contact would be available (when a release occurs) for requests for MSDSs and to identify the composition of

Keystone	XL	Pro	ect

the product (both crude and diluents) shipped in the pipeline. Keystone would establish a procedure for first responders to contact the point of contact with this hour timeframe.

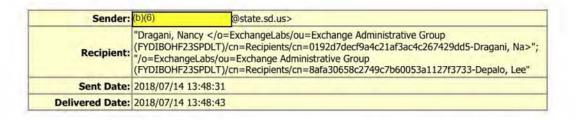


This is just an FYI as you should be aware of the Chairman's response for overall situational awareness. I'll send his response in next email.

From: (b)(6) @gmail.com>
Date: July 13, 2018 at 11:07:22 AM CDT
To: (b)(6) Region 3 Coordinator
(b)(6) @state.sd.us>
Subject: [EXT] Keystone XL

Thought you might find this interesting.





From: Garcia, Carol

To: Americanos, Christopher; Bello, Charles; Brazelton, James; Fisher, Dennis; Floyd, Megan; Garcia, Carol; Gelston,

Timothy; Gray, Patricia; Green, Daniel; Hillenburg, Mike; Liska, Robert; Phillips, Leigh-Andrea; Rivera, Luisa;

Roscoe, Scott; Valora, Emily; VanPool, John

Cc: R8 External Affairs
Subject: Tribal Articles

Date: Friday, September 28, 2018 11:48:21 AM

Standing Rock Sioux pledges support for pipeline protests

By BLAKE NICHOLSON Associated Press 10 hrs ago

BISMARCK, N.D. (AP) — An American Indian tribe that has led opposition to the Dakota Access oil pipeline for more than two years has formally pledged its support for protests against three other pipeline projects.

The Standing Rock Sioux Council approved resolutions this month supporting efforts by other tribes to oppose the Enbridge Line 3 project in Minnesota, the Keystone XL pipeline in Montana and South Dakota, and the Bayou Bridge pipeline in Louisiana.

The resolutions do not come with any promise of money or other aid, but are a payback of sorts for other tribes' support of Standing Rock's struggle against Dakota Access. "These are only to stand in solidarity with their fights," tribal spokeswoman Danielle Finn said.

Standing Rock led protests in 2016 and 2017 against Dakota Access, which is now moving oil from North Dakota to Illinois but is still the subject of a federal lawsuit spearheaded by the tribe. Thousands of people traveled to protest camps just outside of the reservation to support the tribe.

Standing Rock is formally backing the efforts of the Fort Peck Assiniboine and Sioux Tribes in Montana and the Cheyenne River Sioux in South Dakota to oppose TransCanada Corp.'s Keystone XL oil pipeline; the effort of the Leech Lake Band of Ojibwe to thwart Enbridge Energy's plans to replace its Line 3 pipeline across northern Minnesota; and the effort of the United Houma Nation to oppose the Bayou Bridge pipeline in southern Louisiana.

Mike Rounds: Celebrating the culture and contributions of Native Americans

Friday, September 28, 2018
Celebrating Native American History in South Dakota
By U.S. Sen. Mike Rounds (R-South Dakota)
rounds.senate.gov

While the Senate has been focused on the Supreme Court nomination hearing in Washington, we have continued to work on issues that affect South Dakotans. We'll discuss the Supreme Court hearing in one of our next weekly columns.

Every October, South Dakota celebrates the rich culture and the many contributions made by Native Americans who called this land home long before Europeans settled in the West. Native Americans' Day is a state holiday started in 1990, and it replaces what used to be called Columbus Day. The late Governor George S. Mickelson joined representatives from the nine tribal governments in South Dakota to proclaim 1990 as the <u>Year of Reconciliation</u>. Native Americans' Day is our state's way of observing and honoring tribal members in South Dakota.

It's a privilege for me to represent all South Dakotans in the Senate. I work with tribal members on a number of different federal issues that impact them. One area we've been focusing on since I took office is improving health care at the <u>Indian Health Service</u> (IHS).

The IHS has failed to fulfill its trust and treaty obligation to provide quality health care to tribal members. For decades, South Dakota's tribal members and other tribal members across the nation have been in the midst of a government-induced health care crisis due to serious management and leadership problems at the IHS. This is especially true of the Great Plains Area IHS, which includes South Dakota. This area has the worst health care disparities of all IHS regions including lowest life expectancy, highest diabetes death rate, highest TB death rate and highest overall age-adjusted death rate. This is unacceptable. Indianz.Com on SoundCloud: Senate Committee on Indian Affairs Business Meeting - September 26, 2018

In order to address the issues plaguing the IHS, I recently introduced legislation

that would require the Secretary of the Department of Health and Human Services (HHS) to contract an assessment of IHS's health care delivery systems and financial management processes. It is past time to address the ongoing crisis at the IHS. We were pleased the Senate Indian Affairs Committee recently voted to pass our legislation. It now heads to the Senate floor for full consideration. Our bill would only impact direct-care facilities, not those with 638 contracts. This means facilities that tribes have contracted to manage independently would not be impacted by our legislation. In the Great Plains Area, 67 percent of IHS facilities are direct-care facilities.

We are glad that progress is being made with our legislation, but rather than threatening deadlines, requesting extensions, changing administrators and pointing fingers, the IHS, HHS and the Centers for Medicare and Medicaid Services (CMS) need to work together – in close, real consultation with the tribes - to immediately resolve IHS' many problems and improve care for our Native American communities.

When state, federal and tribal governments work together, we have the opportunity to make real changes that will improve the lives of tribal members in our state.

This Native Americans' Day, I encourage South Dakotans to celebrate the history and culture of the tribes in our state by attending events in our communities. Sioux Falls is holding its first ever Native Americans' Day parade this year on October 8, and Rapid City will host their annual weekend festivities in conjunction with the 32nd Annual Black Hills Powwow on October 5-7.

South Dakota is home to more than 70,000 Native Americans, and these events help to strengthen our communities by bringing together many people of different backgrounds. I hope everyone has an enjoyable Native Americans' Day this year.

Sen. Mike Rounds (R-South Dakota) joined the <u>U.S. Senate</u> at the start of the 114th Congress in January 2015. He previously served as the 31st governor of South Dakota from 2003 to 2011. From 1991 to 2000, he was elected five times to the South Dakota State Senate. Born in Huron, Rounds is a lifelong South Dakotan. He currently resides in Fort Pierre with his wife, Jean. They are the proud parents of four grown children and 10 grandchildren.

Tribal citizens protest Trump's environmental rollbacks

Thursday, September 27, 2018
Oil field hazards: Venting, flaring and leaks
By Talli Nauman
Native Sun News Today
Health & Environment Editor
nativesunnews.today

MANDAREE, NORTH DAKOTA – Mandan Hidatsa and Arikara Nation residents, who live at the center of the oil fracking fields in the Bakken Formation here, were among the first on a raft of critics to scorn recently unveiled federal schemes for reducing regulations on toxic methane pollution at wellheads.

On September. 18, the Bureau of Land Management announced its rollback of the 2016 regulations for Waste Prevention, Production Subject to Royalties, and Resource Conservation, commonly called the Methane Rule.

That action came on the heels of the Environmental Protection Agency's September 11 proposal to gut the 2016 New Source Performance Standards (NSPS) for the Oil and Natural Gas Industry, a document that will be open to public comment for 60 days after its upcoming publication in the Federal Register.

Responding to the about-face, Fort Berthold Protectors of Water and Earth Rights (POWER) Chair Lisa DeVille, a member of the MHA Nation and resident of Mandaree, noted, "Our tribal communities are directly impacted by the Methane Rule.

"I see venting, flaring, and leaks of natural gas every day on the Fort Berthold Reservation, where I live. I know that our air is polluted from oil and gas extraction. I see how much gas is wasted and have experienced health effects from the emissions.

"It is our people who breathe in the toxins that can be prevented from spilling into our atmosphere. It is our children, my grandchildren, that are breathing it in." She vowed to defend the safeguards for the sake of health, environment and climate impact.

Long term exposure to methane emissions can result in health impacts such as asthma, cancer, neurological damage, pulmonary reduction, coronary problems, endocrine disruption, and headaches.

Methane is second-only to carbon dioxide in the size of its contribution to global warming, and its climate change potential is 25 times greater. It also contains volatile organic compounds such as benzene, a known carcinogen. Nearly 30 percent of all U.S. methane emissions come from oil and gas production, transmission and distribution, according to the EPA. A NASA study published in January confirms the global methane increase that coincided with the onset of the U.S. shale boom is largely attributable to oil and gas.

However, announcing the a

href="https://www.indianz.com/News/2018/09/27/2018-20689.pdf">BLM's new rule, Deputy Interior Secretary David Bernhardt said the 2016 version overlapped too many state, tribal and other federal regulations. Additionally, the agency determined that the previous Administration underestimated the cost of its application, which would be "unnecessarily burdensome on the private sector," he said.

"The Trump Administration is committed to innovative regulatory improvement and environmental stewardship, while appropriately respecting the clear and distinct authorities of the states, tribes, as well as the direction we receive from Congress," Bernhardt added in a media statement.

The states of California and New Mexico immediately sued the Trump Administration over the rule, which was a direct result of U.S. President Donald Trump's Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs, Executive Order 13783, Promoting Energy Independence and Economic Growth, and Secretarial Order 3349, American Energy Independence.

George Wilson: Want to know what tribal corruption looks like?

Thursday, September 27, 2018

Oyate: Want to know what corruption looks like?

By George Wilson

Native Sun News Today Columnist

nativesunnews.today

First I want to establish my credentials, I have been deeply involved in tribal social and economic development since 1970 when I left a career in the private sector to work with tribes.

I worked for several large corporations as a Controller/Business Manager

before I worked in tribal development and have studied business and finance in college as well. I have been Business Manager; Executive Director; Assistant to the Treasurer; Controller/Business Manager and General Manager of Prairie Wind Casino; Director of the Economic Development Office; Headstart Director; Empowerment Zone Director; and have done extensive contract and consulting work for OST and numerous other tribes. My opinions expressed herein are mine and mine alone, and they are based on hands-on experience; not speculation.

I believe the very first Economic Development Director was Carl Janis (Buzzy) and I worked with him in the late 60's and early 70's to try to create businesses and jobs. He worked very hard to do a good job in trying to create business opportunities. His main goal back then was to establish a tribal lumber yard and hardware business which was and is a no-brainer. He was stymied at every turn by tribal politics. Tribal politics was and still is the greatest obstacle to economic development and it seems it will never get better.

George Wilson. Photo courtesy Native Sun News Today

The OST-Economic and Business Development Committee (EBDC) is the problem, not the solution, and they know it but refuse to give up their total control of our tribal economy. None of the 15 members of the EBDC have real hands on business experience yet they act like they are experts, and they rely on people like Gary Ruse to guide the tribal development projects. Ruse has been convicted of banking irregularities and he is personally responsible for many of the failures like Nebraska Sioux Lean Beef, the Sandhills Water Bottling Company (where did the equipment and the \$285,000 you got from the EZ go?) and other fiascoes as well as putting the tribe in tremendous debt (I have heard our debt is over \$150 million) and he just keeps loading on.

The OST has wasted so many opportunities that it is almost impossible to list them and the opportunity cost runs in the tens of millions of dollars. Why? Simply because they have the power and the resources under their control and it gives them a reason to travel and to get glad handed by opportunists like Ruse who take advantage of their ignorance and gullibility. My frustration is deep because there is no reason for our tribe not to have successful businesses and projects-----the EBDC screws them up and our reputation is so bad it is hard to find capital.

Politics are nasty, I have been blacklisted by several council reps and the others do not have the political courage to stand up to them. The Prairie Wind Casino is a disaster. Hospitality and customer service is terrible, their marketing efforts have always been amateurish at best and the most egregious fact is that we have had 23 (at my last count) General Managers since I resigned the job in 1997 due to political harassment.

Arthur Zimiga: The plantation mentality in Indian Country

Wednesday, September 26, 2018
American Southern Plantation Colonial Mentality
By Dr. Arthur W. Zimiga
Native Sun News Today Columnist
nativesunnews.today

The American Southern Plantation Colonial Mentality as described by foreign governments and many Americans is for example their thoughts on the Pine Ridge Indian Reservation in Western South Dakota. As a matter fact this includes all the created American Indian Reservations in the United States. Indian Reservations have been depicted as unworthy cultural entities, the most reprehensible characterized groups within the United States. For example, the Lakota Oyate many dehumanizing words far inappropriate have been used to disgrace and label the Lakota people. The fear and resentment was followed by hatred was created by the US Military, Governmental Administration and US Congress. It became a common practice in middle of the 1800's for squatters, homesteaders, merchants, and governmental officials to openly scorn the Lakota people. Many US Citizens used this phrasing which had its orientation in the deep American Southern Plantation Colonial Settlements. Even in the eastern United States it was a common practice to mock the Lakota people relating to them as a defeated Nation having only limited abilities to govern themselves. As the War against Brothers ended, the American Civil War 1861-1865, as the Lakota called it, started the Lakota land grab in the West. The same tactics of Treaty Making with the United States and US Military begin with the Lakota people in 1851 and 1868. The United States Government was bankrupt after the American Civil War with large deficit spending besides increase growing poverty in the East and South. New politicians' solutions were seeking the coming of the second El Dorado in the west. The vision focused on the trespassing gold discovery in the Black Hills of the Dakota Territory. Bankers, land developers, speculators, immigrants, miners and swarming unemployed

city people all looked to the West for the second coming of exploitation and wealth gathering. The only problem was the Lakota Oyate owned the land and the resources upon them. The Americans interpretation allegedly they held the area in trust under government agreement stated in the US Constitution and the Bill of Rights recognized by the United State Government. The 1868 Treaty in fact clearly spell it out and declaring the area in question was Lakota Homeland.

The United States could not legally take Lakota land without just compensations as established by International Law. They were a Sovereign Nation as stated in the US Constitution with all the nationality legal rights to govern and determine for their selves their own destiny as a free people. These over failing treaty arrangements stated clearly the Lakota people did not want the enactment of US Federal powers settlements. They were not US Citizens and they did not want to be governed by the United States. The Lakota Nation already had treaties and trade agreements before with England, Spain, France and other Tribal Nations identifying Lakota sovereignty and their place of origin. It would be Lakota Oyate land as long as the grass grows and the waters flow was stated in the 1851 and 1868 Treaties as written declarations. A sovereign nation established with all the rights given to them by their Creator and ancestral privileged authenticities included language, customs, rituals, and ownership.

Pine Ridge Sioux Indian Reservation once the Red Cloud Agency was and still is made into a primary American Southern Plantation Colonist Settlements. The Reservation was and still has a strong characteristic identification with colonialism and racism. These historical facts and the Lakota peoples journey of intervention with imposing US federal laws, Treaties of Broken Promises, limited Lakota culture and heritage education was forced with the description of being called Oglala Sioux. Then followed was the mandatory narrative designated as the Pine Ridge Oglala Sioux Indian Reservation. This was imposing to say the less by totally negating the sovereignty of the Oglala Lakota Teton Oyate. The foreigner names: Sioux, Indian, American Indian, family name changes or indigenous was substituted to disenfranchise and disinherit the Lakota Oyate (Nation) from their homeland, culture and natural resources. The United States Government had implemented its own classic "INDIAN GOVERNMENTAL REFORM POLICY", This Indian Governmental Reform Policy was created in order to have oversite and authority over Sioux People whom they described in their American political congressional strategies and administration.

The United States historical texts of these implanted names were used in creating the identifications for the destruction of the Lakota people. The facts these reports were used solely for the purposes of dehumanizing, racist prejudice, white superiority, and colonial governance in order to destroy Lakota

leadership. When Lakota leadership called for the Lakota Reform Policy of the governing powers of the United States in 1873 many were threatened, jailed, beaten, murdered or regard as unworthy to be called Sioux Leaders by the United States Government and US Military. They were named the Wild Oglala, renegades, and hostiles because they wanted to insure the freedom to be called the Lakota Oyate Nation/people not US Government Indians.

Large numbers of Free Lakota did not sign any treaty. They had been promised to have their own Lakota set aside lands so they could live their lives away from the drunkenness and exploitation by outsiders. These tormenting behaviors by those who continually frequent the Government forts, Indian agencies, frontier towns and mining camps created discontentment and encouraged lawlessness, rape, prostitution, women suffrage, human tariffing and discontentment amongst the Wasicu (fat taker) and also between the Lakota they called Indians. Disruption of the life style chosen for them by the US Government was a life sentence of dissatisfaction and social suffering. All the while the Free Lakota' were being forced with rifles, swords, pistols and bayonets pointed at their backs by U.S. Soldiers and mounted US Calvary prodding the Lakota families. Free Lakota leadership grudgingly marched to the US Federal chosen Indian Reservation lands fearful the people would be killed if they did not follow.

The dream of reform for the Lakota people never left their minds and has been pasted down from one generation to another. The Free Oglala leadership had and has seen the weakness of those who were selected to lead and knew of the disappointments that would follow. Several small Lakota families escaped to the Black Hills where they were born and raised. They continued to reside there without any federal intervention because the US Government did not want to recreate any new problems while the majority of the Reservation Indians submitted to US Federal directives. This is even true today a great number of Oglala Lakota people live off the Pine Ridge Indian Reservation as well as other Sioux Reservations in the Black Hills seeking a better life for themselves and their families. Rapid City has one of the largest numbers of Lakota people living there in the entire State of South Dakota followed by Sioux Falls. This is the dark continues legacy and shabby treatment by the US Government toward the Lakota people who suffer the injustice of being denied human rights and agonized in unashamed discrimination. It can be said of American History, "from the various religious pulpits, to the lectern stand of education institutions, federal and state legislators, governmental agencies, Presidential decrees and US Congressional hearings and legal chambers the colonized word

Sioux, Reservation and wards of the government can still be heard. Every immigrant, homesteader, pilgrims, refugee and illegal alien in search of the American Dream looking for freedom are walking on the backs of Native Americans sufferings of the past and present.

Carol A. Garcia FEMA Region VIII Tribal Liaison/External Affairs Denver, CO Phone: 303-202-8959

Cell: 720-415-4816