

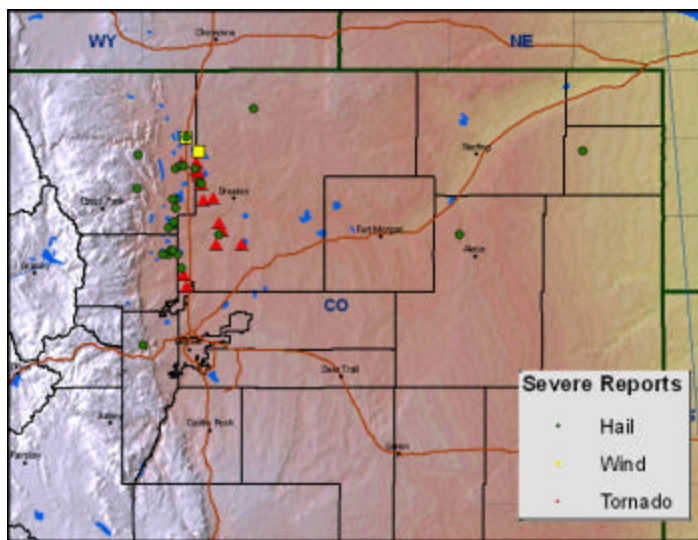
After Action Report

NAME/DATE OF INCIDENT: Weld County Tornadoes May 22, 2008

SITUATION:

Between 11:27am MST and 12:32pm MST, May 22, a reported six tornadoes touched down in Weld and Larimer Counties causing the destruction and damage to hundreds of structures near the jurisdictions of Gilcrest, Greeley, Johnstown (unincorporated), Platteville, and Windsor, with Windsor receiving the most damage. (Also see attachment 1 for reported touch downs and times and attachment 2 for damaged areas). This storm system continued north into Wyoming causing further damage.

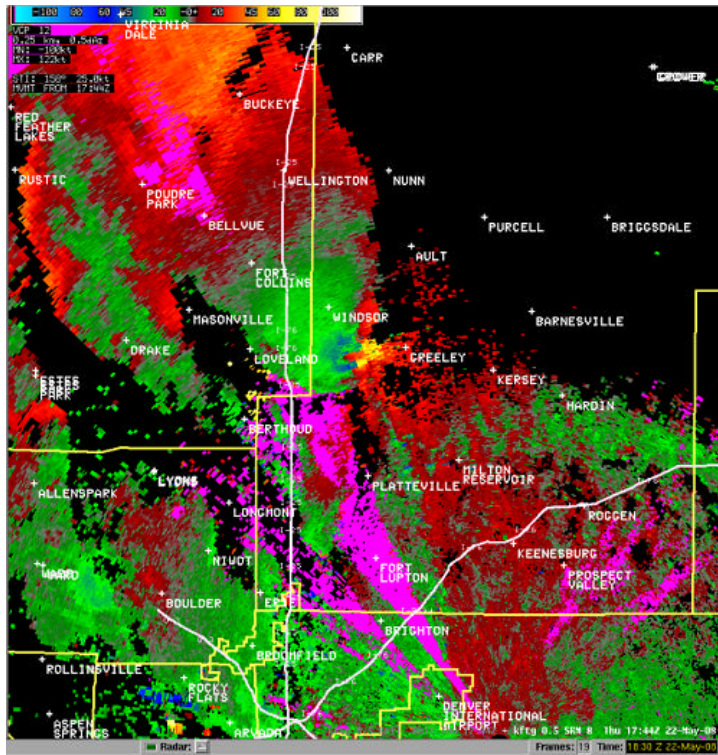
Preliminary estimates had 102 homes which were uninhabitable with an additional 154 structures receiving damage to varying degrees. One person was killed as a result of the tornado. (There were unconfirmed reports of three other deaths, which were later proved to be false.) Roads were temporarily closed. Electrical, gas, and water systems throughout Windsor were disrupted. Livestock and domestic animals were separated from their owners.



Source: National Weather Service



On the Enhanced Fujita (EF) Scale, the National Weather Service rated the main twister in Weld and Larimer counties carrying winds between 130 to 150 miles per hour, which would place the tornado at the high EF2 to medium EF3 range. May 22's big twister was more typical of Colorado tornadoes that occur in June and July. But warm weather and the stability of the storm system meant its reach was broad and fierce.



National Weather Service Doppler Radar (Velocity - Storm Relative Motion) Image at 11:44am MDT showing tornado-producing supercell thunderstorm near Windsor, Colorado.

Following the passage of this storm system, the primary response activities involved search and rescue; the shutting off of broken gas/water lines, and the restoration of electrical power. An estimated total of 580 responders plus 291 Xcel professionals were on the scene within hours of the tornados touching down.

Early estimates had 60,000 residences without power. In response to this, Xcel Energy deployed 38 crews for ground setting poles and restoring power. Early estimates had that power would be restored within five-to-seven days. As of May 23, a total of 23 gas leaks had been fixed and two lines have been repaired. Atmos Energy also was conducting a leak survey to check for natural gas leaks in their system.

Other response issues included: one request for an identification team to assist the Windsor funeral home which had been damaged. The Colorado Water/Wastewater Agency Response Network (CoWARN) was activated (for the second time in its history) to support two damaged waste water treatment facilities. Local mental health agencies are responding to Windsor and surrounding area. Two shelters were established at the Windsor Community Center and the Budweiser Events Center. Donations were being coordinated through Weld County United Way 2-1-1.

The Civil Air Patrol was deployed (Mission 08C-5536), arriving the evening of May 22 and remained through the evening of May 26. They were assigned to work with The Salvation Army as Logistical Support: everything from unloading, organizing, and reloading the food trailers to bringing food and water to the residents and workers in the disaster area. During their initial

assignment, they unloaded, sorted, organized, inventoried and reloaded a refrigerated food trailer.

State assistance (beyond what is assigned to the Northeast All-Hazards Region) consisted of: the Colorado National Guard to perform security operations; Colorado State Patrol to assist in the conduct security and traffic control; and the Colorado Department of Transportation providing front end loaders and dump trucks.

Recovery

In the area of volunteers and donations management, multiple agencies were actively involved in recovery operations. These agencies include: 7th-Day Adventist Community Service; ACS & COVOAD; American Red Cross; Christ our Savior Lutheran (Longmont); Citizen Emergency Response Team-Westminster Nazarene; Cornerstone Baptist Church (Windsor); Cornerstone Baptist Church (Windsor); CRWRC/DRS; Faith Community Service Fund; Federal Emergency Management Agency; First United Methodist (Windsor); Flatirons (Lafayette); Grace Place (Berthoud); Greeley Mennonite; Greeley Wesleyan Church; Journey Christian Church (Greeley); LifeBridge (Johnstown Campus); LifeBridge (Longmont); Mennonite Disaster Service; Journey C.C. (Greeley); Nazarene Disaster Response: American red Cross; Rocky Mountain Christian Church (Niwot); Salvation Army; The Gathering (Windsor); Timberline (Ft. Collins); Two Rivers Fellowship; Vineyard Church (Ft. Collins); Vineyard Church (Windsor); and Walk of Life Counseling.

Many area religious organizations were sending volunteers and/or donations to assist the victims. Two coordinated efforts were organized, one related to cleanup and rebuilding under the Mennonite Disaster Service (MDS), and the other related to accepting and distributing donated items under the Adventist Recovery Service (ARS). All organizations were encouraged to plug their volunteers into one of these two efforts as opposed to simply sending people separately out to help. This was done for a variety of reasons, including coordination and liability aspects.

For Cleanup/Rebuild -- Coordinated at Cornerstone Baptist Church -- 1200 Cornerstone Dr. in Windsor. Delmar Schroeder of MDS was on hand Monday through Saturday 8 am to 5 pm (closed on Sunday) through June 7th. Volunteers came to that location and checked in at the MDS table in the church lobby. Work sites were defined on a daily basis and supervised crews were sent out into the field.

The Donation Intake Center -- located at the southeast corner of 11th and Main St in Windsor at the old Steele's Market. This center utilized volunteers seven days a week between 10 am and 6 pm for accepting and sorting donated items. Contacts from the Adventist organization were June Spalding and Cathy Kissner.

The Donation Distribution Center -- located at 810 3rd Street in Windsor at the Mountain View Elementary school. This center used volunteers and was open 7 days a week from 10 am to 6 pm. The Donation Center was flooded with many types of donations. As of May 29, the donations priorities were: "Pull-up" style diapers; Baby shoes and baby food; Batteries; Duct

tape; Juice/pop; Laundry detergent; New underwear (all ages, sizes, genders); Non-perishable food; Paper goods (Kleenex, plates/cups, paper towels); Personal care items/toiletries (soap, deodorant, toothpaste, shampoo, shaving supplies, etc.); Tarps/ropes; and Trash bags.

The contact information for the incident were: FEMA: 1-800-621-FEMA (1-800-621-3362) and www.fema.gov; American Red Cross: 1-866-GET-INFO (1-866-438-4636) and <http://www.northerncolorado.redcross.org>

By May 29, a series of preliminary damage assessments were completed for the affected areas:

		Cat A	Cat B	Cat C	Cat D	Cat E	Cat F	Cat G	Total	Dollars
	2002	Debris	Protective	Road	Water	Buildings	Utility		Estimated	Per
County	Population	Clearance	Measures	Systems	Control	& Equip	Systems	Other	Damage	Capita
Weld	180,936	276,980	537,127	0	0	218,868	969,104	49,837	2,051,916	\$11.34
Larimer	251,494	0	0	0	0	105,000	59,400	0	164,400	\$0.65
State Agency			340,000						340,000	
Total Costs		276,980	877,127	0	0	323,868	1,028,504	49,837	2,556,316	
State Totals	4,301,261									\$0.59

Estimates of eligible Public Assistance under PL 93-288, as amended

As of May 27, not all reimbursement requests had been received. However, based upon initial estimates, the amount of funding committed from the State Disaster Fund was:

Categories	Amount (est)	Remarks
ACSDR Volunteers	\$5,000.00	Managing donated goods
Boulder County Equip	\$<unknown>	Type 1 engines
CO Fire Chief's Assoc	\$504.00	One individual
CO-TF-1 Search & Rescue	\$1,104.06	K-9 strike teams
Crisis Counselors	\$15,000.00	2-week deployment
DMVA	\$245,000.00	Deployment to Weld County
DMVA Helicopter	\$18,536.09	Governor's use on May 22 (UH-60)
DMVA Lodging	\$59.99	One person
Ft Collins	\$12,690.99 \$6,273.29 \$6,743.56 \$1,792.00 \$68,926.31	Personnel Overtime costs Apparatus and Single Resource Utilities Light & Power storm cleanup-personnel Utilities Light & Power storm cleanup-Equipment Windsor PD personnel & equipment
Type III IMT Staff	\$30,900.00	Eastern Colorado & Jefferson County members to SEOC, Weld County, and Town of Windsor
SEOC Food	\$643.89	Feeding SEOC staff
WY Equipment	\$<unknown>	Type 1 engines

TOTAL	\$413,174.18	
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*Colorado disaster number is CO-CDEM-39U

Federal, state, local, voluntary, and faith-based agencies worked in partnership to help residents of Larimer and Weld through the disaster recovery process. Long term recovery includes a combination of these federal, state, local and voluntary agency recovery programs. As of June 14, 2008, an update:

- a. 1,259 individuals from the disaster-declared counties have applied for federal disaster assistance.
- b. \$113,842 has been provided for housing assistance.
- c. \$88,061 has been approved for Other Needs Assistance, which may include grants for medical, personal property, transportation and other eligible expenses.
- d. 15 applications for U.S. Small Business Administration (SBA) low-interest home and business disaster loans have been approved, totaling \$565,200.
- e. 779 total visits have been made to the Disaster Recovery Centers (DRCs) throughout the affected areas.
- f. 434 housing inspections to verify applicant losses have been completed, with most inspections being completed within two days of initial registration.

The Rocky Mountain Insurance Information Association has provided advice for affected residents filing claims for damage.

- a. Be prepared to give your agent or insurance representative a description of any damage. Your agent will report the loss immediately to your insurance company or a qualified adjuster. Some companies also have 24-hour, 800 numbers for claims assistance.
- b. Take photos of the damaged areas. These will help with your claims process and will assist the adjuster in the investigation.
- c. Prepare a detailed inventory of all damaged or destroyed personal property. Be sure to make two copies-one for yourself and one for the adjuster. Your list should be as complete as possible, including a description of the items, dates of purchase or approximate age, cost at time of purchase and estimated replacement cost.
- d. Make whatever temporary repairs you can. Cover broken windows, damaged roofs and walls to prevent further destruction. Save receipts for supplies and materials you purchase. Your company will reimburse you for reasonable expenses in making temporary repairs.

e. Secure a detailed estimate for permanent repairs to your home from a reliable contractor and give it to the adjuster. The estimate should contain the proposed repairs, repair costs and replacement prices.

f. Serious losses will be given priority. If your home has been destroyed or seriously damaged, your agent will do everything possible to assure that you are given priority.

The following governmental / non-governmental agencies that were involved in response and recovery operations:

Adventist Community Services Disaster Response
American Red Cross
City of Firestone
City of Fort Morgan
City of Greeley
Colorado Bar Association
Colorado Civil Air Patrol
Colorado Department of Agriculture
Colorado Department of Human Services/ Division of Mental Health
Colorado Department of Local Affairs/Divisions of Emergency Management/Housing/Local Governments
Colorado Department of Public Health & Environment/all Divisions/CoWARN
Colorado Department of Public Safety/State Patrol/Division of Fire Safety
Colorado Department of Transportation
Colorado Fire Chiefs Association
Colorado National Guard
Colorado Veterinary Medical Foundation
Colorado Volunteer Organizations Active in Disaster (COVOAD)
CO-Task Force 1 (Search and Rescue)
Eastern Colorado Incident Management Team
FEMA Region VIII
Jefferson County Incident Management Team
Salvation Army
Town of Gilcrest
Town of Windsor
U.S Department of Homeland Security
Weld County
Xcel Energy

TIMELINE OF EVENTS:

May 22, 2008	11:45am	First reports of tornados on the ground in Weld County
	2:31pm	Two mobile command posts (Gilcrest and Windsor) were set up
	4:30pm	City of Greeley issues local disaster declaration Town of Windsor issues disaster declaration

	4:53pm	Weld County issues declaration of disaster emergency Colorado Building Inspectors were requested by Weld County
	5:46pm	American Red Cross setting up a shelter at the Budweiser Event Center and prepares to provide dinner
	6:33pm	Windsor schools were closed for the remainder of the school year
	7:04pm	210 tetanus doses and 200 Suture kits are delivered to the Windsor Community Center
	7:35pm	Medical surge trailer arrives at Weld County EOC Colorado National Guard logistics team on scene in Weld County
	8:33pm	Weld County United Way 2-1-1 establishes a donations 1-800 number
	10:00pm	Jefferson County Type III Incident Management Team assumes command of the incident
May 23, 2008	0:12am	Request submitted to Colorado Department of Agriculture for technical assistance for dairy livestock assessment and carcass disposal
	7:00am	Federal-State Preliminary Disaster Assessment teams form and deploy to Weld County
	7:33am	Colorado State Patrol suspend s oversize permit enforcement for vehicles transporting loads to disaster sites in support of relief efforts Governor declares disaster emergency (Executive Order D 011 08) ¹
May 24, 2008		Governor requests federal disaster assistance under the Stafford Disaster Relief and Emergency Assistance Act
May 25, 2008	3:00pm	Jefferson County Type III Incident Management Team relinquishes Command to the Town of Windsor
May 26, 2008		President approves federal disaster assistance request. Jefferson County Type III Incident Management Team demobilizes
May 27, 2008	11:00am	Volunteer Reception Center in Windsor is closed Disaster Recovery Center is opened at the Windsor High School
May 27, 2008		189 people have registered for FEMA Individual Assistance (temporary housing, basic repairs, and essential personal property not covered by insurance).
May 28, 2008		Joint Field Office (JFO) opens
May 31, 2008		Disaster Recovery Centers opened in Gilcrest and Wellington.

¹ This Executive Order: (1) activated the State Emergency Operations Plan; (2) releases funding for authorized expenditures (up to \$500,000) from the State Disaster Fund; (3) authorizes activation of Colorado National Guard; (5) authorizes department of Local Affairs to make excess housing available; (4) Colorado Department of Transportation is authorized to issue overweight and oversize permits for carriers responding to the incident(s) locations; and (5) Department of Human Services to expend Temporary Assistance to Needy Families (TANF) funds to suspend/waive licensing requirements for child care facilities.

June 4, 2008	7:00pm	Wellington mobile Disaster Recovery Center will close
June 7, 2008		Gilcrest Disaster Recovery Center closed
June 8, 2008		Windsor High School Disaster Recovery Center will be closed on Sundays
June 9, 2008		Colorado Bar Association and the Association's Young Lawyers Division will provide free legal services to affected residents in Larimer and Weld counties.
June 27, 2008		Deadline for residents to apply for Disaster Unemployment Assistance
June 28, 2008	2:00pm	Windsor Disaster Recovery Center closes after having 1,038 visits
		Small Business Administration demobilized
July 9, 2008	4:00pm	JFO Littleton closed and transitioned to an Individual Assistance Processing Center
July 25, 2008		Deadline to register for FEMA disaster assistance

LESSONS LEARNED:

ITEM: Tornado Incident Annex (January 2007) in SEOP

DISCUSSION: Following the close-out of this incident, a review of the Tornado Incident Annex to the SEOP was conducted to identify any gaps or updates that should take place. Tasks/responsibilities of the agencies specifically named remain valid. One area that could be added to this Annex would be the inclusion of the donations/volunteer management. Or an option would be to reference the Donation and Volunteer Supporting Annex.

RECOMMENDATION: Conduct another review of this annex following the next tornado occurrence that results in the activation of the SEOC.

ITEM: Need for P-Card

DISCUSSION: The Weld/Larimer county tornado incidents had an immediate impact upon the residents of these counties through the death of one individual, multiple injuries, and the destruction/damages of hundreds of homes resulting in them being uninhabitable. Most incidents (natural hazard, technological, or terrorism) that occur within the State of Colorado occur with no notice. The direct effects of these incidents include, but not limited to, are: life safety of human and animal populations, provision for immediate needs, restoration of basic services, protection of property, and the re-establishment of the jurisdiction's critical infrastructure. Altruism does not always come to the forefront during emergencies. During many of these incidents, response activities are time sensitive. The timely acquisition of such items as first aid material, water, fuel, generators, etc can have an immediate impact which could also be justified using a cost-benefit ratio (immediate expenditures vs long-term effects that could be measured in both soft and hard costs). The DEM Regional Field Managers are charged with facilitating the response and recovery activities for the impacted jurisdiction(s). However, they are not provided with all of the tools to rapidly and effectively succeed in their mission. The primary tool that is denied to these managers is the possession of a departmental purchase card (P-Card). Having a P-Card could allow them to immediately fill an identified need of the jurisdiction and its victims as well as clearly demonstrating State government's concern and ability to assist the victims of a disaster emergency. This was the second incident within three months where the Governor was

concerned enough to issue disaster emergency declarations, but these Regional Field Managers were constrained in their ability to fully respond.

RECOMMENDATION: With the appropriate guidance, issue each of the DEM Regional Field Managers a P-Card.

ITEM: Terminology

DISCUSSION: One of the principle components of the National Incident Management System is the use of a common terminology. Over the years, there have been too many incidents where mutual aid responders have shown up on scene or a different response discipline has been involved and confusion has occurred due to the use of an acronym or series of words that have different meanings. This could result in a delay of actions, inappropriate steps being taken, or the loss of life and/or property. To mitigate this challenge, education must take place across all response disciplines in an effort to enhance the meaning of words because in highly stressed situations instincts automatically kick in. All instincts are a by-product of education and experience.

RECOMMENDATION: During all training courses and exercises continue the reinforcement of using common terminology.

Issue: SEOC activation notification

Discussion: During the afternoon of May 22, the northern Colorado tornados prompted the activation of the State Emergency Operation Center (SEOC) at level I. Multiple members of the Division of Emergency Management (DEM) staff were working at the Centennial office when the activation was called. State agency Emergency Response Coordinators were notified and requested to come to the SEOC. However, other members of the DEM staff were out of the office. There appears to have been no effort to notify these members of this activation.

Recommendation: For years, on the DEM phone list, there has been a lettered procedure to relay information to DEM staff in an expedited manner for just such instances. In this case, that procedure was not used. If time tested procedures are to be discarded, then what is the point to have them?

Issue: Incident Action Plan

Discussion: For the second time this year, the Excel-based State level Incident Action Plan (renamed Incident Support Plan) was used to identify overall and individual agency objectives for future activities. Some lessons learned from the Alamosa salmonella incident were incorporated into this Plan process. Based upon these two recent incidents, this format should be used for future incidents and especially for the upcoming Democratic National Convention.

Recommendation: Continue to modify the internal format in order to better meet State-level incident management needs. Eventually, this version may be replaced by I-Suite.

Issue: ICS 213-RR form tracking system

Discussion: For only the second incident, the ICS 213-RR (Resource Request Message) form was used to track resource requests (to be paid for out of the State Disaster Fund). Most of these requests were processed by the Division of Fire Safety. The positive aspect of this was the establishment and continuation of a numbering system as an administrative system to keep track of these requests. This assisted the Admin/Finance Section when they created their spreadsheet of costs (estimated/ actual).

Recommendation: Continue the coordinated resource numbering system practice.

Issue: ICS 213-RR form process

Discussion: As mentioned above, this was the second incident where this form was used to track resource request and to document the approval process. The advantage of this would be to assist the Resource Unit Leader and the Admin/Finance Section in knowing what resource commitments have occurred, which in turn can be balanced against the designated budget for the incident. The result would provide necessary information to the decision-makers on the prioritization of other resource request. This process was relatively successful during the Alamosa salmonella incident. However, the process was not followed during this incident. Requests were not processed through the Operations Section to validate the request and subsequently were not sent through the Logistics Section for approval. When the ICS 213-RRs were discovered unsigned an attempt was to go back and capture the costs. It was then that the SEOC Manager was asked to sign the authorization. Numerous errors (lack of cost estimates, delineation of length of time the resource would be needed, mission request documentation missing, reporting location, etc) were noticed on these forms. A majority of these errors would have been discovered and corrected if the ICS 213-RR would have been routed through the appropriate channels. As of May 28, there are two major missions for which there is no documented paperwork authorizing them and two other resource request which still do not have cost estimates (currently \$317,000 out of the authorized \$500,000 have been committed).

Recommendation: The Incident Command System (ICS) has a formalized process for resource request submissions, validation, and approval. If the SEOC is truly going to continue to move towards real implementation of the National Incident Management System and ICS, then we need to follow the doctrine that is outlined. It may be a short-term challenge to follow; however, in the long-term (when the audits commence) it will provide the documentation needed to support the decisions that were made.

Issue: Situation PowerPoint

Discussion: Under the ICS structure, within the Plans Section is a Situation Unit. One responsibilities of this unit is to “prepare and maintain incident situation display(s) (these may be maps, forms, weather reports, victims or damage assessment information, and other reports for technical specialists).” At the Emergency Operations Center level, whether that is County, State, or National, one of the displays that have evolved has been the use of a PowerPoint-type rolling presentation that illustrates: objectives; key incident events (timeline); maps, graphics on injuries/deaths/distribution of resources; etc. During the last two incidents, there has been some difficulty in the establishment and update of this display.

Recommendation: In keeping with ICS, place the responsibility for this PowerPoint display within the Plans Section along with the requisite staffing increase.

Issue: Safety Officer

Discussion: For the second straight activation, no safety officer was appointed for the SEOC. Even though there are a limited number of hazards that exist at this location, hazards do exist which require the appointment of a safety officer. Under the standards outlined in the Division of Fire Safety’s Incident Management Team certification/recognition process, the safety officer is a required position that MUST be filled. (Reference: February 2007, Sponsorship Application, Colorado Type 3, Incident Management Team, page 4 published by the State of

Colorado Resource Mobilization Working Group.) During any and all incidents, life safety of the general public and the responders has always been a critical incident objective. This should also apply for those “responders” in the SEOC. In order to be consistent across the board (local and State) (as a guiding component of NIMS) a safety officer should be an early assignment by the SEOC Manager.

Recommendation: The SEOC Manager must start appointing an individual whose sole responsibility is Safety for those individuals reporting to the SEOC.

Issue: 24/7 operations in the SEOC

Discussion: During the early hours of this incident, statements were made that we need to be prepared for the SEOC to operate 24/7. With multiple agencies involved, which would be needed for each operational period, the decision to go with consecutive shifts needs to be made early so that the designated individuals could make the appropriate arrangements. In the SEOP, Annex 5 (Emergency Management), Appendix 3 (SEOC timeline) it recommends that this decision be made at hour five. On May 22, the decision was not made until approximately 11:00pm MST (after some staff had already worked thirteen hours beyond the two-to-three hours they had performed in their day-to-day positions prior to activation). If a second shift had been required it would have meant that these personnel were to stay longer until their replacements could be notified and arrived at the SEOC. A similar situation occurred on May 23, when two Section Chiefs were not told until approximately 7:30pm MST regarding shifts for May 24. It is the responsibility of the SEOC Manager to make this decision in a timely manner.

Recommendation: The decision to operate a second consecutive shift or a next day shift needs to be a thought out process and cannot be a last minute knee-jerk reaction.

