

**Expediting the Transfer of Technology:  
Defense Support to Civilian Authorities**

**California Homeland Security Consortium**

**September 19, 2008**

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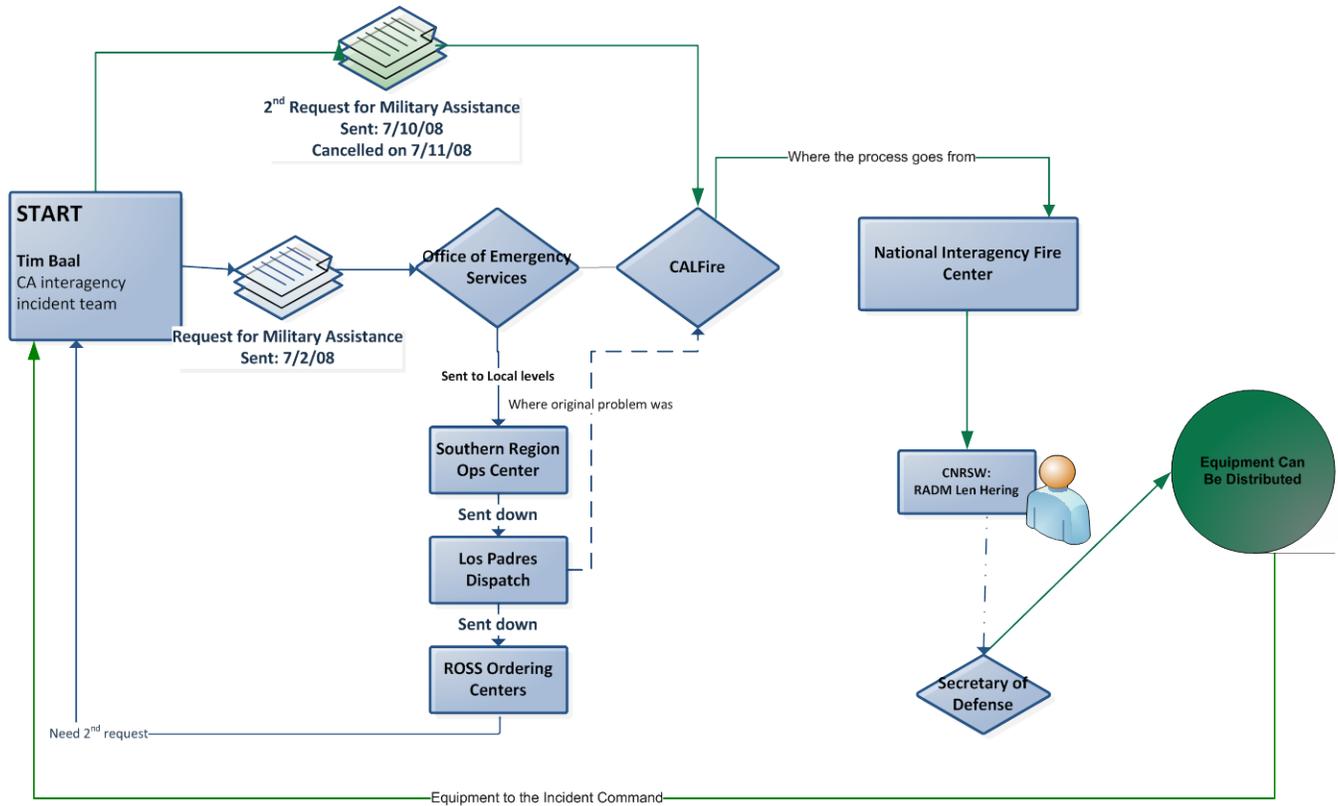
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## **Executive Summary**

Borne out of a failed attempt to supply local firefighters with GPS technology from the Naval Postgraduate School (NPS) this paper documents the need for a review of the Defense Support to Civilian Authorities (DSCA) policy. NPS and by association DoD attempted to coordinate with state fire command to support firefighters in Big Sur, California with equipment to help track fire movement, as well as ensuring more firefighter safety. The DSCA was enacted to impose barriers on the use of the American military as an executor of the laws on American soil, and has provided effective guidelines for the use of US Armed Forces in homeland security and emergency response situations. Although the DSCA plays an important role in controlling the use of military personnel and equipment from infringing on the primacy of local law enforcement and violating Posse Comitatus, which prohibits federal forces from interfering with state and local law enforcement, there needs to be a policy that allows exceptions to be made for passive and non-proprietary requests for military aid. For instance, in the case study of the Big Sur Fires and the NPS's attempt to aid the firefighters there, the technology that was offered was non-proprietary, required no military personnel, required little to no cost to the military, and would not affect the defense of the base (take away from NPS resources necessary to the base). In these instances, there needs to be a clearly delineated, simplified policy that does not require 'high level approval' (i.e. the Secretary of Defense's signature) to get the go ahead for the dispersal of this technology. The distribution of a clearly outlined policy to all levels of the government (local, state, and federal) is vital for the increased coordination that is necessary when responding to an emergency situation. An emergency situation, like the wildfires, is by definition a serious situation that occurs unexpectedly and demands immediate and urgent action or assistance. In such situations, it makes the speed-bumps of bureaucracy more difficult to traverse and less likely to be overcome by first responders who have more pressing matters at hand.

# Fire Incident Request for Military Assistance: Document Flowchart

## Fire Incident Request for Military Assistance: Document Flowchart

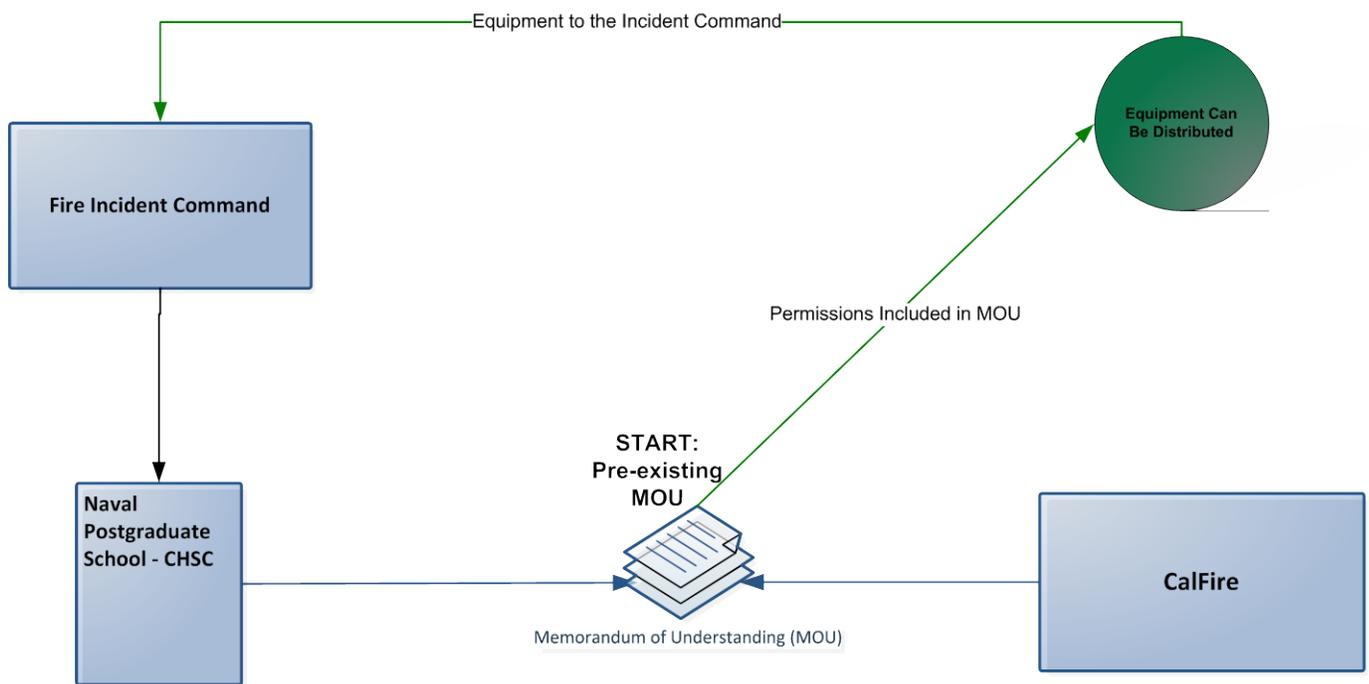


The figure above represents the flow of the two requests for military assistance sent from Fire Incident Planning Chief Tim Baal, from the Basin West Complex. The first request was sent to California Office of Emergency Service on July 2<sup>nd</sup> before being routed through the Resource Ordering and Status System (ROSS) and down to the local level. It was at this point in the process that NPS informed the Fire Command that the request must be coordinated between CalFire and the National Interagency Fire Center (NIFC). Tim Baal sent the second request to CalFire on July 10<sup>th</sup>, but it appears that the second request was inadvertently cancelled (by whom is unknown) at some point in the process, and no completion was ever reached. The most important lapse in this process was in the coordination of

the local/state systems to that of the federal/military system in that the would-be receiver of the equipment did not have the correct level of authorization to align with the military’s approval structure.

### First Option: Memorandum of Understanding

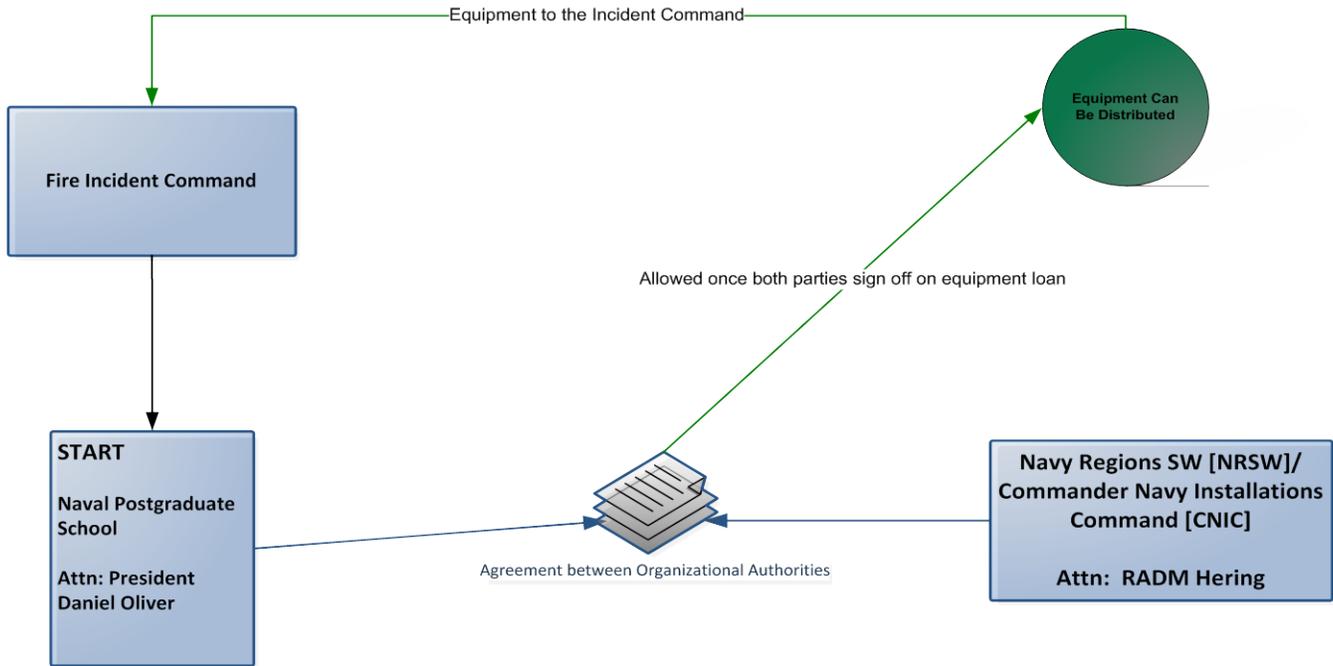
## First Option: Memorandum of Understanding (MOU) b/t Parties



The first option represented in the figure above is that of a Memorandum of Understanding (MOU) between the military (NPS) and local/state authorities (CalFire). An MOU is a bilateral or multilateral agreement to collaborate on a certain course of action. The major concern about an MOU as a policy option is that it must already be in place before the emergency in order to allow collaboration between the parties, and it would be difficult to cover all possible needs and identify all potential partners that would cover all contingencies in a natural disaster.

## Second Option: SECNAV Instruction 5820.7C

# Second Option: SECNAV Instruction 5820.7C – Equipment Approval



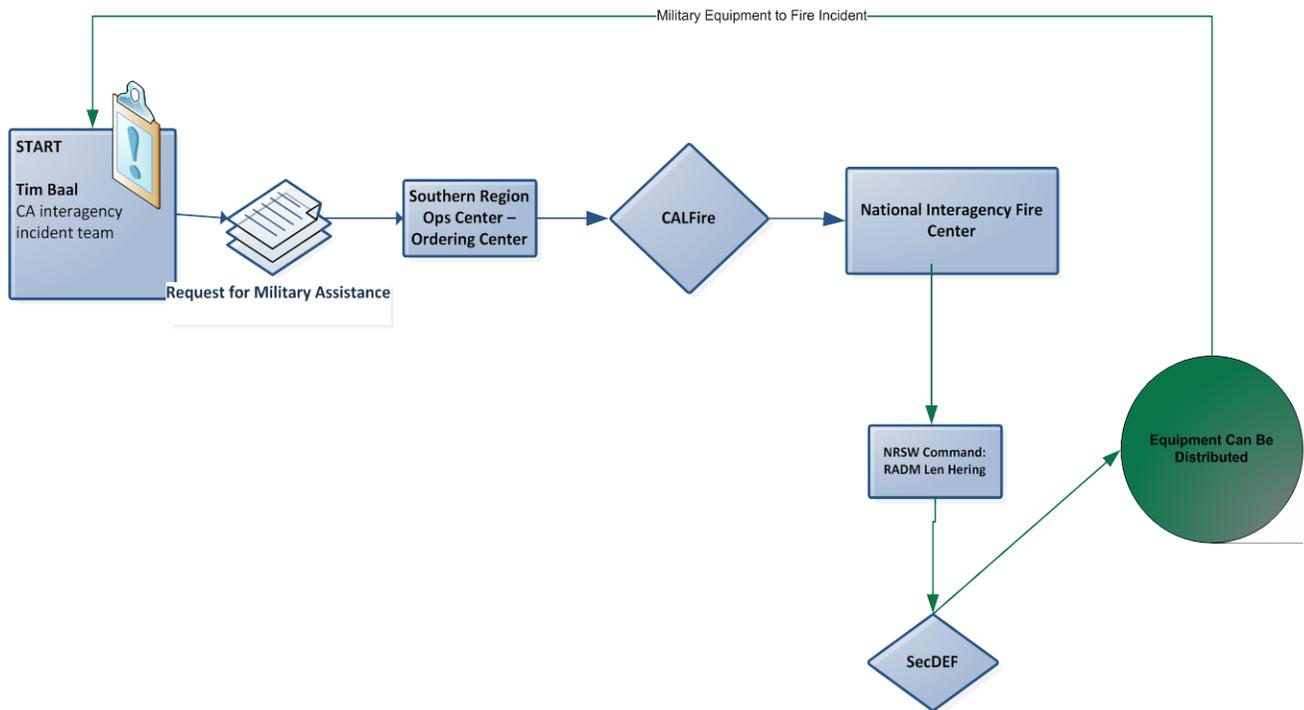
The second option is based on the ‘Equipment Approval’ section of SECNAV Instruction 5820.7C that states that “all requests from civilian law enforcement officials for use of Department of the Navy (DoN) equipment, facilities, or personnel under this instruction be submitted by the requested command via the chain of command to the designated approval authority” and that these requests can be done via telephone if the issue is time sensitive. In our example, the Base Commander NPS President VADM Daniel Oliver, would enter into what is labeled as an “Agreement between Organizational Authorities” in the above figure with RADM Hering at CNRSW (Commander Navy Region Southwest) to sign off on an authorization to loan out military equipment.<sup>1</sup> A possible complication of

<sup>1</sup> This option refers to SECNAV Instruction 5820.7C Section 6.b.2 which states that for any equipment loan of less than 60 days “may be approved by any of the following commands (or superiors to these commands): Naval Component and Fleet Commanders; Commanders and Commanding Officers of major Navy shore commands.”

using such an option would be for equipment loans that extend the 60 days allowance, which would then require approval from the Assistant Secretary of the Navy, Manpower and Reserve Affairs (ASN(M&RA)). The viability of this option lies in the fact that loaning out equipment from NPS is a form of passive assistance, rather than direct involvement in civilian affairs.

Third Option: Approval by the Secretary of Defense - 10 U.S.C. § 372

### Third Option: 10 U.S.C. § 372 – Approval by SecDEF



The third option is to get the approval of the Secretary of Defense (SecDef), as set out in the 10 U.S.C. § 372, which allows the use of military equipment and facilities by civilian authorities, under permission of the Secretary of Defense. Additionally, Department of Defense regulations allow federal resources and assistance to be provided to state and local authorities “to prevent human suffering,

save lives, or mitigate great property damage” in Domestic Support Operations (DSO).<sup>2</sup> This regulation defines the Defense Support to Civilian Authorities (DSCA) guidelines that NPS followed in order to gain the approval to distribute the equipment to the fire command. This paper recognizes the need for high level approval of the distribution of military equipment or personnel to avoid Posse Comitatus violations, but in our case, where the request was passive and asked for three GPS Iridium phones and accompanying tracking software, there should be an alternate policy that allows for approval levels to be more aligned with request levels. The need for the Secretary of Defense to sign off on small equipment loans of non-proprietary equipment seems to be an immoderate requirement under the circumstances.

Lower level matters of technology transfer need to have a lower level approval requirement as well. In our example of the Naval Postgraduate School, the NPS President, Vice Admiral Daniel Oliver should be allowed to give the go-ahead for the distribution of NPS equipment. As the head of the NPS ‘base’, the NPS President should be empowered to make a decision on whether to allow the ‘request for military aid’ to advance or if the request requires a higher level approval. This paper suggests the need for a policy that allows low level technology transfers with base commander approval. Such a policy would remove the hurdles of processing paperwork through local, state, and federal levels; and allow technology that would assist first responders in an emergency to be outfitted with the necessary equipment. This policy could follow the model of a Limited Purpose Cooperative Research and Development Agreement (LP-CRADA) for Material or Equipment Transfer. The details of this option are outlined in the Policy section at the end of this paper. In order to view the LP-CRADA process, please refer to the figure below.

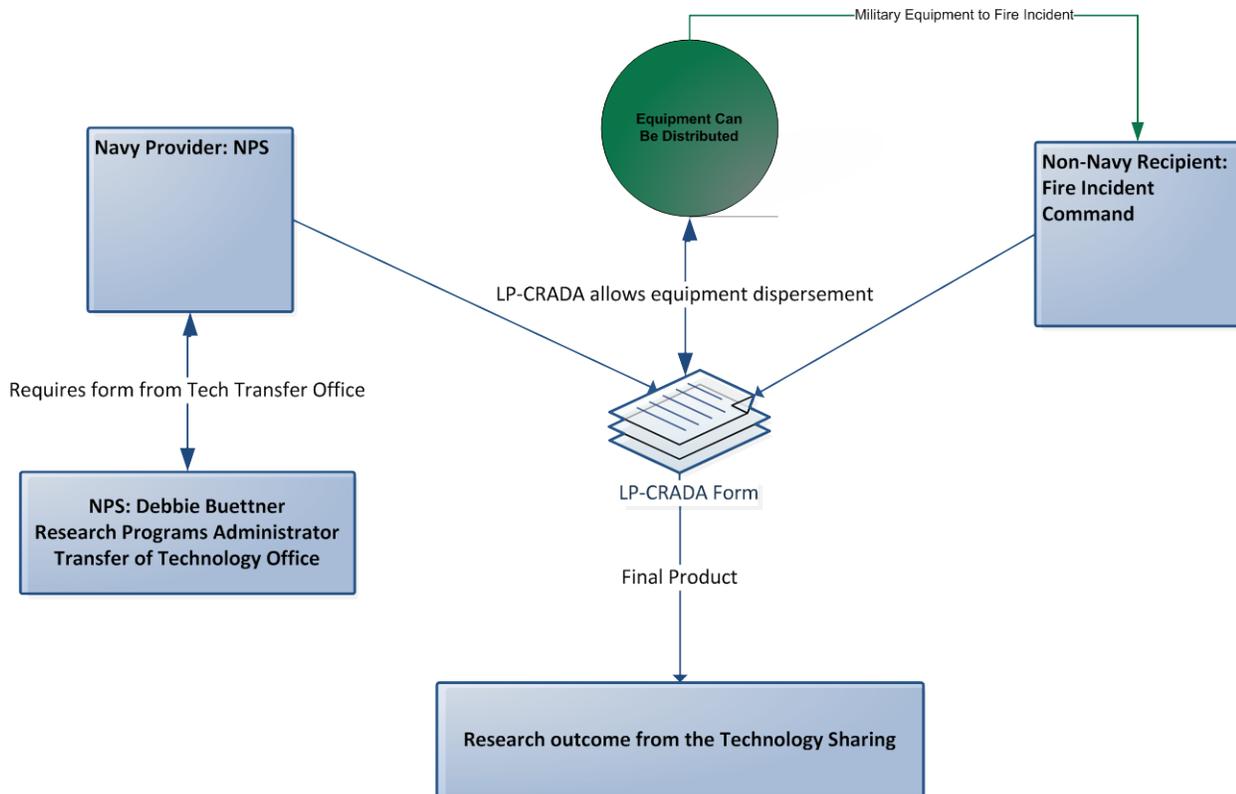
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<sup>2</sup> JP 3 -07.7 *Joint Tactics, Techniques, and Procedures for Domestic Support Operations* provides detailed information on DSO, including C2 relationships for different types of operations.

## Additional Option: LP-CRADA

# Additional Option: LP-CRADA and SecNAV Instruction 5700.16A

California Homeland Security Consortium



## Introduction

On June 21<sup>st</sup>, 2008, California wildfires broke out throughout California, but this paper will focus on the Basin Complex fire in the region just south of Monterey County, California. This paper will trace the process of that took place in attempting to acquire approval of military (Naval Postgraduate School) equipment for use by a civilian authority (Fire Incident Command). In addition, this paper will look at the legal precedents that dictate the guidelines for defense support to civilian authorities, and their implications under the Posse Comitatus Act. Lastly, the paper will offer several policy options for the streamlining of the approval process, in order to avoid similar roadblocks in the future.

## **Issue Statement**

The process of transferring federal resources, i.e. personnel and equipment, to local and state authorities in an emergency requires local-federal coordination to avoid bureaucratic roadblocks. In our case study of the Basin Fire Complex, the problems encountered by the Fire Incident Command, a civilian authority, in acquiring military equipment from NPS will be examined to extract lessons on streamlining the request processes to avoid or mitigate loss of lives and damage to property. In this example, both the military and civilian sides tried to use all the avenues available in order to distribute the equipment, but encountered difficulties in aligning the requests at the same level in the chain of command.

The issues this paper deals with focus on the nature of assistance that was offered by NPS, in that it was a “no harm” policy and would not incur any additional costs to the Navy. Since the nature of the assistance requested by the Fire Incident Command was non-proprietary equipment and there was no need for military personnel to participate in the demonstration or distribution, this case study differs from other situations, such as terrorist acts on American soil, which the laws and regulations are meant for.

Although there was a great deal of communication between NPS, Navy Region SW, and the Fire Incident Command, tracking the requests to ensure that they had traveled through the correct channels proved to be difficult. There was miscommunication regarding the question of whether the requests were considered “local” or needed to be routed up the chain of command for permission from the Secretary of Defense, which is described later in the case study. The original request was sent to the Office of Emergency Services – California, then down to the Southern Region to be processed through the state ordering service, ROSS. For the state level this is a required first step to ensure that

the state does not already have the capabilities that are being requested from a source outside of the state ordering system. From the state's point of view, they were under the impression that the request could be completed locally, and therefore was not sent up their chain of command to CalFire. It was not until several emails between CNRSW and NPS that this information was communicated to the local fire command contacts that the prior request was re-submitted through the system, so as to coordinate the request between CalFire and National Interagency Fire Center (NIFC). As of the date of the compilation of this paper, neither request was completed nor approved, which highlights the issues this paper addresses. In order to properly assist civilian authorities in emergency situations, i.e. natural disasters, there needs to be increased cooperation between federal and local authorities and a highly defined process for both sides to follow.

The failures of the process for completing the civilian authorities' request for military assistance are contrasted by the successes of private industry in contributing to the firefighter's efforts as well as assisting residents after being evacuated. Multiple companies, including Verizon, AT&T, and Language Line were able to provide communication technologies very quickly after the need was identified. Verizon provided a Cellular on Wheels (COW) unit to the fire command posts to facilitate their ability to communicate and map GPS coordinates to track the fire. In addition to the communication efforts, Blackbird Technologies Inc. distributed GPS tracking sensors to fire incident command posts on both the east and west sides of the fire. In making these technologies so readily available, the fire fighters were able to focus their efforts on the control of the fire, rather than maneuvering through "red tape".

It is important to examine the need for a new policy concerning military owned research equipment. The lessons learned from the Big Sur fire case study are: (1) The need for a well defined process with points of contact (POC) for federal and civilian authorities, (2) The need for an alternative

policy for low-level naval assistance in emergency situations, (3) The need to make all involved parties aware of the well-defined process and make that knowledge easily accessible for future needs, and (4) The need to keep an offer of assistance from becoming a hindrance.

## **Current Federal Policy**

*(This section is an in depth examination of the processes presented in the option diagrams at the opening of this paper.)*

The current role of the military and federal government in state and local emergencies is to abstain from action until their assistance is requested by the local authorities. There are several laws that regulate the use of military and federal resources, equipment, and personnel. All of these laws are meant to maintain the purpose of the Posse Comitatus Act of 1878, which was passed to preclude the use of the United States Army in domestic law enforcement, barring Constitutional or Congressional authorization. Although these laws do not explicitly apply to the Navy or Marine Corps, under 10 U.S.C. § 375, regulations by the Department of Defense (DoD) place these branches under similar constraints. The overall aim of Posse Comitatus is to prevent both the misuse of federal military assets in civilian affairs (i.e. use of military as police force) and federal interference in local law enforcement (i.e. military pulling ranking on local police). The main issue encountered in the Basin Fire Complex case study was determining which of these laws could be used to give support, and which of them took priority in taking action. The federal regulations currently in place for releasing federal/military resources to local/civilian authorities require that the civilian authorities begin the request process and coordinate to the correct levels of approval for coordination to the military counterparts.

There is no violation of the Posse Comitatus Act when the activity in question does not involve the use of a sector of the armed forces covered by the proscription and when the activity in question does not constitute “execution of the federal law by the military”. Per the Posse Comitatus Act, military forces can provide civil support, but cannot become directly involved in law enforcement. The civil support mission of USNORTHCOM (DoD’s homeland defense coordinating body) includes domestic disaster relief operations that occur during fires, hurricanes, floods, and earthquakes. The command provides assistance to a Lead Agency when tasked by the DoD. There are some Congressional exceptions to the Posse Comitatus Act, especially in cases where the armed forces will provide “passive” support to civilian authorities. Such an instance is found under 10 U.S.C. § 372, which states the use of military equipment and facilities by civilian authorities is allowed under permission of the Secretary of Defense. Additionally, DoD regulations allow federal resources and assistance to be provided to state and local authorities “to prevent human suffering, save lives, or mitigate great property damage”<sup>3</sup> in Domestic Support Operations (DSO).

In addition to the US Code, the Department of the Navy (DoN) has laid out its own guidelines for cooperation with civilian authorities, which are detailed in SECNAV Instruction 5820.7C (January 2006). In reference to the use of DoN equipment, facilities, and personnel, the Instruction states that “[a]ll requests from civilian law enforcement officials for use of DON equipment, facilities, or personnel under this instruction be submitted by the requested command via the chain of command to the designated approval authority (unless approval by higher authority is required by statute or DoD guidance).” Requests requiring DoD approval must be forwarded with a recommendation and

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<sup>3</sup> JP 3 -07.7 *Joint Tactics, Techniques, and Procedures for Domestic Support Operations* provides detailed information on DSO, including C2 relationships for different types of operations.

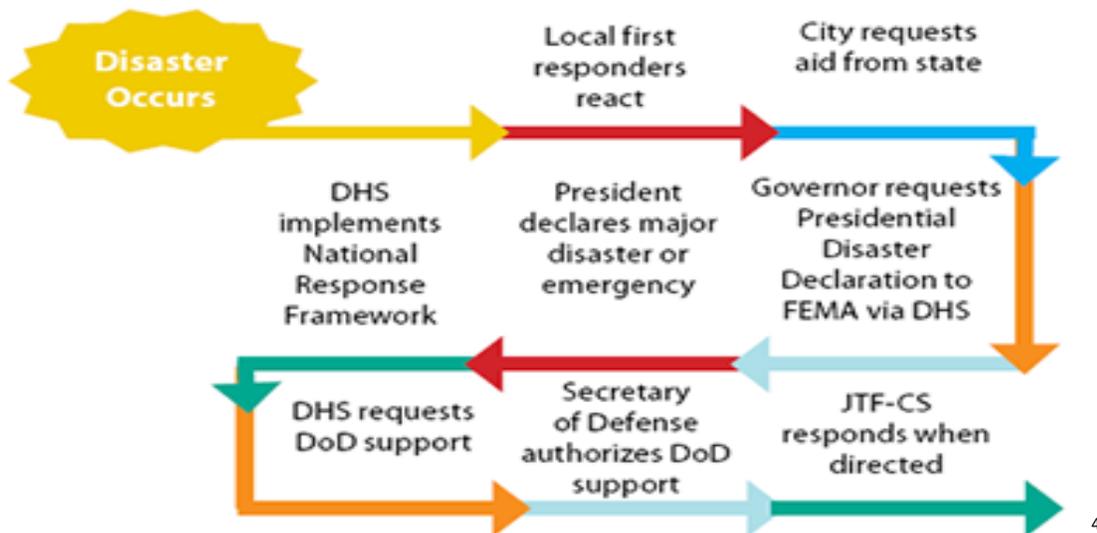
justification to approve or deny the request. Requests may be communicated by telephone when time and circumstances require immediate action.

The SECNAV Instruction goes on to detail the approval authority for the use of equipment and facilities. Firstly, requests for the loan or use of equipment or facilities for more than 60 days must be approved by the Assistant Secretary of the Navy (Manpower and Reserve Affairs). Secondly, all other requests may be approved by any of the following commands: Naval Component and Fleet Commanders or Commanders and Commanding Officers of major Navy shore commands.

There is also a policy called MSCA, or Military Support to Civilian Authorities, which falls under the broad term “Military Assistance to Civil Authorities” (MACA). MSCA is defined as DoD activities and measures in response to domestic, natural, and manmade disasters or to assist and support any civil government agency in planning, preparing for, or responding to the consequences of civil emergencies or attacks, including national security emergencies. The MSCA request and response process is well documented and defined. When a disaster occurs, local authorities, e.g. city and county fire fighters respond to the event. Under the Incident Command System (ICS), the designated local official establishes an incident command post to coordinate efforts of all first responders. If the magnitude of the disaster exceeds the capabilities of the local authorities, they request support from other local communities under mutual aid agreements (MAA). If these assets cannot meet requirements, the local commander contacts the state Emergency Operations Center (EOC) for additional support. The Governor assesses the situation, decides upon the level of response, and determines whether to declare a state emergency. Yet, if the magnitude of the disaster exceeds the state’s capabilities as well, the Governor may petition the President for federal assistance and declaration of a federal

disaster area, at which point the state EOC contacts the regional FEMA office to coordinate assistance. DoD involvement in disaster relief officially begins with the Presidential declaration.

According to the DSCA (Defense Support to Civilian Authorities) Final Draft PLANORD 3.B.3, DoD activities are not authorized to act on requests for assistance from civilian authorities, with the exception, that local commanders may take immediate response actions to save lives, prevent human suffering, or mitigate great property damage. This idea is further delineated in section 8.B.1, which states that “[a]ny military commander is authorized, when time does not permit prior approval from higher headquarters, and subject to supplemental direction, to take immediate actions in response to requests from domestic civil authorities in order to save lives, prevent human suffering, or mitigate great property damage. Such actions are referred to as Immediate Response (IR). IR is limited to 72 hours unless authorization to continue is received from a higher authority. Per REF G, after 72 hours of IR employment, USFF will coordinate continued operations with CDR USNORTHCOM.”



<sup>4</sup> This flow chart was taken from Sharon Anderson’s article “DoD’s Interoperability Communications Exercise - If you aren’t prepared you’re rolling the dice” in the July-September 2008 *Chips Magazine* and can be found online at [http://www.chips.navy.mil/archives/08\\_Jul/web\\_pages/DICE.html](http://www.chips.navy.mil/archives/08_Jul/web_pages/DICE.html).

Another option that is referred to in the DSCA Final Draft PLANORD is that of Mutual Aid Agreements (MAA), Memorandums of Agreement (MOAs), or Memorandums of Understanding (MOUs) in section 3.B.4. It states that “DoD activities can enter into MAAs, MOAs, or MOUs with local civil authority under various DoD directives and instructions. When such agreements have been executed, no reporting to the chain of command has been required. Effective immediately, when local or national media reports the event for which such agreement are or will be executed by CONUS Navy Regional Commanders or Local Commander, and OPREP-3 Navy Blue will be submitted.”

Lastly, the DSCA Draft makes reference to the Robert T. Stafford Act. The purpose of the Stafford Act is to provide continual assistance from the federal government to state or local governments in their responses to disasters. There are four means by which the Stafford Act states that the federal government can assist. The first case is if the President declares the area a “major disaster”, which includes any natural disaster. In order for the President to declare the area a major disaster the state governor must request the declaration, the state must have exceeded their own response capabilities, and the state agrees to cost share with the federal government. The second case is if the President declares the area an “emergency”, which is in the President’s purview to decide the definition, but it infers that federal assistance is required to save lives and protect property. The second case is similar to the first with the exception that the state governor must define the type and amount of aid needed. The third option, which is included in section 4.D of the DSCA Final Draft PLANORD, states that “For Domestic Incidents, the President may direct DoD to perform emergency work essential for the preservation of life and property as deemed practicable. Such emergency work may only be conducted for a period not to exceed ten days prior to the issuance of a PDD.” This case is known as the President’s 10-day Emergency Authority. The fourth case is that the President may send Federal assets into an area of emergency “in which the Federal government operates ‘primary

responsibility' by virtue of the Constitution or Federal statute.” An example of this power occurred in the aftermath of the Oklahoma City bombings in 1995.

Under the Stafford Act, the Federal Emergency Management Agency (FEMA) is responsible for coordinating the Federal response on behalf of the President. The coordination of structure, capabilities, and resources is outlined under the National Response Framework, formerly the National Response Plan. Under the National Response Framework, the Defense Support of Civilian Authorities (DSCA) refers to DoD support in response to requests for assistance.

There are several laws and statutes in place to maintain the concept of Posse Comitatus; some are part of the United States Code, some are more specialized to the Department of Defense, or even more specifically, to the Department of Navy. In cases where a request for military support to civilian authorities is necessary, it is vital that every level of the emergency response organization (i.e. local, state, regional, federal) knows what the applicable policy is and how to move the requests so that they get to the correct people.

## **Case Study**

Big Sur Fire 2008 Case Study<sup>5</sup>

*(Please see attachments for a visual representation of the communication flow)*

NPS and more specifically, the California Homeland Security Consortium (CHSC) became involved in the Big Sur Fire on July 1<sup>st</sup> when Congressman Sam Farr asked Dr. Tom Housel, director of CHSC, to help out. Dr. Housel suggested the use of some of the technology that his NPS colleagues, Dr.

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<sup>5</sup> This section is an abridged version of the communications and decisions made about the Big Sur Fire support. A full version can be found in the Appendix.

Alex Bordetsky and Mr. Jim Elhert and their research teams, were working on. This research included several Global Positioning System (GPS) Iridium phones that link to a web-based Geographic Information System (GIS).<sup>6</sup>

A demonstration of this technology was scheduled for the following day at the Basin West Fire Incident Command in the Andrew Molera State Park in Big Sur. It was after this step that the administration of NPS was made aware of the plans to loan the equipment to the firefighters at the Basin West complex. After becoming aware of the verbal request, NPS communicated to Dr. Housel that as a result of the Defense Support to Civilian Authorities (DSCA) statutes, CalFire would need to put a request for support through the Local Incident Commander that would then be directed to the Secretary of Defense for approval. Only after SecDef approved and an execution order for NPS' assets was sent to CalFire could the requested resources be deployed.

After the demonstration by the CHSC personnel, Chief Tim Baal, the incident commander for Basin West, agreed to submit a request for the CENETIX GIS tracking system to the Office of Emergency Services (OES) through the National Interagency Fire Center (NIFC). There was coordination with military channels through Colonel Smarsh at NPS to alert CNRSW about the incoming request.

The next day, July 3<sup>rd</sup>, LTJG Julio Peterson at CNRSW emailed NPS and CHSC personnel to inform them that an 'official' request from NIFC was sent to SecDef, and until the execution order came through, NPS was to "sit tight".

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<sup>6</sup> There was a field trial of this technology that NPS and CHSC provided to fellow Consortium members Fire Chief Sidney Reade with Carmel Valley FD and Chris Orman with North Monterey County FD. Chief Reade requested two Iridium Satellite Phones for Chief Orman to support the wildfire incidents in Carmel Valley. The phones were delivered on July 19<sup>th</sup> and used for two weeks, but the technology was not used extensively due to more than anticipated cellular coverage in the wildfire areas.

That same day, the CHSC team went down to demonstrate the COASTS RAPIDS technology to the Basin West complex, which led to a second request for military equipment being placed by Chief Baal for the RAPIDS technology.

On July 4<sup>th</sup> and 5<sup>th</sup> there was additional communication between the different agencies concerning the submitted requests and several problems with their processing. Colonel Smarsh communicated that the first request could not be approved by NIFC because the request was not routed through CalFire first. NIFC also stated that even if the paperwork was routed through the proper channels, the requests still might not be approved, although no more detail was added about possible reason why not. The confusion about the proper routing of these requests appeared to be borne out of the state ordering system (ROSS) which identifies if a resource is available at the local, state, or mutual aid level before sending it to the NIFC for approval. The first request that Chief Baal submitted was misrouted because the request was judged to be a “local” level matter.

On July 10<sup>th</sup>, the CHSC team went to the Basin West complex to demonstrate and loan several GPS trackers with preloaded brevity code messages, a private industry technology from Blackbird Technologies, Inc. This technology allows the user to track and mark locations in near real time, rather than waiting to download GPS information from a GPS locator once the user returns to home base. The next day, Gary Maddock of Blackbird Technologies and Dr. Housel went to the Basin East complex of the fire in King City to demo the same technology, and left trackers to be used there as well.

Although communication involving the laws that were involved in the requests for military support continued, there was never a final approval or denial of either of the requests from Chief Tim Baal.

## Industry Case Study

As a case study comparison to the military processes needed to distribute the NPS technology to the fire incident, there is also an account of independent industry support to the fire relief effort. Private industry efforts covered areas of telecommunication, translation services, and GPS tracking sensors. All of these contributions enabled the fire commands to respond more quickly and aided in the evacuation efforts.

On July 1<sup>st</sup>, the same day that the assistance was offered by CENETIX and COASTS, Mary Ann Leffel, a CHSC industry partner, contacted Lewis Provenzano Jr., the CEO of Language Line, a translation and interpretation company based out of Monterey, California. Ms. Leffel requested a donation of two specially equipped telephones for translation services. Language Line agreed to provide, at no cost, both the handsets and the translation services. After the headsets were delivered to Carmel Valley Middle School, Ms. Leffel discovered that the existing landlines at the Middle School were inadequate for the use of the translation headsets. To circumvent this obstacle, Ms. Leffel contacted Dr. Bettie Saxon, the Director of Government Relations at AT&T with a request for four additional lines to be installed for the duration of the evaluation process. AT&T, an industry partner of the CHSC, was able to have all four lines installed and operational in less than three hours.

Additionally, Ms. Leffel also contacted Commandant Sue Ann Sandusky at the Defense Language Institute (DLI) and Dr. Clara Yu at the Monterey Institute of International Studies (MIIS) to request student volunteers to participate with the translation services at Carmel Valley Middle School. Both schools responded in less than three hours, with each school sending three students to assist at the evacuation site.

The evacuees at the Carmel Valley Middle School were later allowed to go back to the Big Sur Village area and the Carmel Valley Middle School evacuation center was being vacated. AT&T and Language Line agreed to move the translation services and two lines down to the Big Sur Ranger Station. The Monterey Chapter of the Red Cross was seeking to retain the other phone. While AT&T and Language line were moving their capabilities from the evacuation center at Carmel Valley Middle School to Big Sur, CHSC, CENETIX, and the team of Fire Fighters at the Gallery Fire base camp were still waiting for approval to deploy three GPS-enabled Iridium phones.

Another such example of private industry making a contribution to the state efforts would be that of Gary Maddock and Blackbird Technologies Inc., with the GPS tracking sensors that were demonstrated and used by the firefighters at both the Basin West and Basin East complexes. According to Gary Maddock, “[t]he firefighters used the trackers to mark and track the positions of some of their fire observers and also used it to mark the fire line in near real time (NRT). Typically, the way they do it now, the fire line information is 12 hours old, at best, before it is plotted.” Another key component of this technology is “its ability to transmit via satellite when traditional line of sight communications would typically fail, such as the mountainous terrain they are operating in, unless repeaters are set in place. The ability to preload brevity code messages would allow firefighters to transmit critical messages if they find themselves in a no communication area.”

The industry case study illustrates that the necessity for expediency in an emergency situation is greatly facilitated by a less bureaucratic system, in contrast to the longer and more complex process that the military is required to follow.

## Policy Recommendations

The current policy: In the current DSCA policy, NPS is not authorized to provide direct support to the wildfires incident without direct authorization from the Secretary of Defense through Commander Navy Installations Command (CNIC) and Command Navy Region Southwest (CNRSW). In order to process the requests through this system, the state authorities must run the requests through their ordering system to ensure that no similar technology is available, before routing the request to the correct level. A possible deficiency of this process is there is no guarantee that the request will be routed to the correct level (i.e. local, state, federal), which is what occurred in our case study.

- **New Policy:** A new policy called "Passive Military Assistance to Civilian Authorities" would allow base commanders to approve requests for low-level technology transfers of military equipment without escalating the issue to the level of the Secretary of Defense. In this policy, the base commander could make the decision to approve the request, or if he/she judged the equipment to exceed the classification of "low level technology", the base commander could require that the request be sent according to DSCA policy for the approval of SecDef. This policy would allow for more flexibility in responding to time sensitive situations, such as natural disasters and emergencies, without having to process paperwork through multiple channels.
- **LP-CRADA:** A Limited Partner Cooperative Research and Development Agreement is used in the Transfer of Technology Office. It is an agreement between a Navy provider and non-Navy recipient, to be used when a laboratory and Non-Navy Collaborator both have an interest in the research outcome. An LP-CRADA, according to SECNAVINST 5700.16A, requires that a form be signed by the Commanding Office of the Laboratory. The contact person at NPS is Debbie Buettner, who helps to draft the LP-CRADA based on an information sheet. Then a hard and an electronic copy are sent to the ONR to the following mailing address:

Office of Naval Research

Attn: Ms. Dottie Vincent, Code 362

Industrial and Corporate Programs Department

800 North Quincy Street, Room 529

Arlington, VA 22217-5660

After the copies are sent to the ONR, the manager of the Office of Research and Technology Appropriations (CORTA) must enter the LP-CRADA information into the DTTIS (Defense Technology Transfer Information System) within 30 days after the LP-CRADA is completed. Since such an agreement requires the Commanding Officer's signature, this policy would expedite the transfer of the technology from NPS to the local responders in an emergency situation. Pre-provisioned LP-CRADAs in reference to multiple disaster scenarios (i.e. fire, flood, earthquake, etc.) would allow technology to be transferred immediately.

## Appendix

### Defense Support to Civilian Authorities Documents

“Any military commander is authorized, when time does not permit prior approval from higher headquarters, and subject to supplemental direction, to take immediate actions in response to requests from domestic civil authorities in order to save lives, prevent human suffering, or mitigate great property damage. Such actions are referred to as immediate response (IR). IR is limited to 72 hours unless authorization to continue is received from higher authority. Per Ref G, after 72 hours of IR employment, USFF will coordinate continued operations with CDR USNORTHCOM.”

“Immediate Response – Prior to a Presidential disaster declaration, DoD activities are not authorized to act on requests for assistance from civilian agencies, with the exception, that local commanders may take immediate response actions to save lives, prevent human suffering, or mitigate great property damage.”

Summary of the DSCA resource request policy: "Due to the DoD's Defense Support of Civil Authorities (DSCA) policy, NPS is not authorized to provide direct support to the wildfires incident without direct authorization from the Secretary of Defense through CNIC and CNRSW. NPS can provide CNRSW a consolidated list of our assets and capabilities that are deployable upon request. CALFire can request specific resource support through their Local Incident Commander. This request will be directed to the SecDef. Upon approval, an execution order will be directed from the SecDef and NPS' assets will be deployed for use by CALFire."

## Request for Military Support Letter



### National Interagency Fire Center

3838 S. Development Avenue

Boise, Idaho 83705

June 25, 2008

To: Executive Secretary of Department of Defense  
JDOMS

From: The National Forrest Service – Tim Ball, Planning Chief, Basin Complex West  
(timbaal@sbcfire.com and phone 805-8966986)

Subject: Request for Military Support

The State of California, through the National Interagency Fire Center (NIFC), seeks approval of Department of Defense (DoD) assets for wildland fire suppression assistance.

Based on historical records and the current circumstances, NIFC requests DoD's support with the following wildland fire fighting (WFF) assets:

- Iridium sets: three satellite phones and one Iridium GPS poster unit. The latter is comprised of the Iridium modem combined with the GPS sensor and embedded computer, which provides posting of the modem GPS location into the situational awareness map (in the possession of Dr. Alex Bordetsky, Associate Professor at the Naval Postgraduate School)
- Web-based situational awareness software, which provides tracking of firefighter location via the Google Earth map view (in the possession of Dr. Alex Bordetsky, Associate Professor at the Naval Postgraduate School).
- Two Naval Postgraduate School support personnel (from Alex Bordetsky's NPS research group) to assist in training fire fighters to use the equipment and system are also requested.
- Deployment location is the Basin Complex West, (Big Sur) California.

Request these 3 units be operational at 19:00 GMT July 3 2008 (or as soon as possible) at the Basin Complex West, (Big Sur) California.

The anticipated duration of need is 30 days unless released earlier by California State.

California has and is experiencing a high volume of lightning and new fires throughout the state. Extremely dry fuel conditions, high temperatures and low relative humidity exist and will continue.

All DoD incurred costs in direct support to firefighting will be absorbed by the Naval Postgraduate School (CHSC project).

This request has been reviewed by COL David Smarsh, Naval Postgraduate School.

The POC for the State of California is Mr. Loren Snell, CAL FIRE Headquarters @ 916-651-9180.

The POC for financial issues at NPS is Mrs. Jane Barreto, 831-6563397.

If you have questions concerning this Request for Assistance, contact Captain Tim Ball, Santa Barbara County Fire Department, Planning Chief for the Basin Complex West fire in Big Sur, California.



## National Interagency Fire Center

3838 S. Development Avenue

Boise, Idaho 83705

July 2, 2008

To: Executive Secretary of Department of Defense  
JDOMS

From: The National Forrest Service – Tim Baal, Planning Chief, Basin Complex West  
(tim.baal@sbcfire.com and phone 805-8966986)

Subject: Request for Military Support

The State of California, through the National Interagency Fire Center (NIFC), seeks approval of Department of Defense (DoD) assets for wildland fire suppression assistance.

The use of these additional resources with the level of technology they provide in real time will assist the incident in accurately tracking fire perimeter for intelligence needed in operational planning. This incident as well as many others in California are experiencing a shortage of resources and technology placing this system in high demand.

Based on historical records and the current circumstances, the Basin Complex West through NIFC requests DoD's support with the following wildland fire fighting (WFF) assets:

- Iridium sets: three satellite phones and one Iridium GPS poster unit. The latter is comprised of the Iridium modem combined with the GPS sensor and embedded computer, which provides posting of the modem GPS location into the situational awareness map (in the possession of Dr. Alex Bordetsky, Associate Professor at the Naval Postgraduate School)
- Web-based situational awareness software, which provides tracking of firefighter location via the Google Earth map view (in the possession of Dr. Alex Bordetsky, Associate Professor at the Naval Postgraduate School).
- Two Naval Postgraduate School support personnel (from Alex Bordetsky's NPS research group) to assist in training fire fighters to use the equipment and system are also requested.
- Deployment location is the Basin Complex West, (Big Sur) California.

Request these 3 units be operational at 19:00 GMT July 3 2008 (or as soon as possible) at the Basin Complex West, (Big Sur) California.

The anticipated duration of need is 30 days unless released earlier by California State.

California has and is experiencing a high volume of lightning and new fires throughout the state. Extremely dry fuel conditions, high temperatures and low relative humidity exist and will continue.

All DoD incurred costs in direct support to firefighting will be absorbed by the Naval Postgraduate School (CHSC project).

This request has been reviewed by COL David Smarsh, Naval Postgraduate School.

The POC for the State of California is Mr. Loren Snell, CAL FIRE Headquarters @ 916-651-9180.

The POC for financial issues at NPS is Mrs. Jane Barreto, 831-6563397.

If you have questions concerning this Request for Assistance, contact Captain Tim Baal, Santa Barbara County Fire Department, Planning Section Chief for California Interagency Incident Management Team 5 on the Basin Complex West fire in Big Sur, California.



## National Interagency Fire Center

3838 S. Development Avenue

Boise, Idaho 83705

July 4, 2008

To: Executive Secretary of Department of Defense  
JDOMS

From: The National Forest Service – Tim Baal, Planning Chief, Basin Complex West

Subject: Request for Military Support

The State of California, through the National Interagency Fire Center (NIFC), seeks approval of Department of Defense (DoD) assets for wildland fire suppression assistance.

The use of these resources with the level of technology and data they provide in real time will assist the incident in accurately tracking fire perimeter for intelligence needed in operational planning. This particular technology and it's capability of being utilized on different platforms will be well suited for incidents of this type. Incidents throughout California are experiencing a shortage of resources and technology placing systems like this in high demand.

Based on historical records and the current circumstances, NIFC requests DoD's support with the following wildland fire fighting (WFF) assets:

- RAPIDS C2 system (in the possession of Mr. Ivan Cardenas and Mr. Ryan Hale, (Contractors) and CRADA partners with Mr. James Ehlert at the Naval Postgraduate School). RAPIDS is a GPS based tracking system with a 3d manipulated, multifeatured user interface. The system consists of field radios connected to a GPS receiver that transmits positions (field tracking unit) and is displayed on a software interface connected to a receiver or one of the field tracking units with send/receive capability. The hardware and software are proprietary products customized at NPS and Kestrel (CRADA partner) direction.
- Support personnel from Naval Postgraduate School (Mr. Ehlert's NPS COASTS field experimentation research group) to assist in equipping and training fire fighters to use the equipment and system are also requested.
- Deployment location is the Basin Complex West, (Big Sur) California.

Request this unit be operational at 19:00 GMT July 8, 2008 (or as soon as possible) at the Basin Complex West, (Big Sur) California.

The anticipated duration of need is 30 days unless released earlier by California State.

California has and is experiencing a high volume of lightning and new fires throughout the state. Extremely dry fuel conditions, high temperatures and low relative humidity exist and will continue.

All DoD incurred costs in direct support to firefighting will be absorbed by the Naval Postgraduate School (CHSC project).

This request has been reviewed by COL David Smarsh, Naval Postgraduate School.

The POC for the State of California is Mr. Loren Snell, CAL FIRE Headquarters @ 916-651-9180.

The POC for financial issues at NPS is Mrs. Jane Barreto, 831-656-3397.

If you have questions concerning this Request for Assistance, contact Captain Tim Baal, Santa Barbara County Fire Department, Planning Section Chief for California Interagency Incident Management Team 5 on the Basin Complex West fire in Big Sur, California.

### Official Ross Order Forms

#1  
 ATTN: TIM BAAL  
 831 656-3395  
 831 656-3679  
 FAXED  
 7/15 1055

RESOURCE ORDER		Initial Date/Time		2. Incident / Project Name				3. Incident / Project Order Number				4. Incident Codes																							
EQUIPMENT		08/21/08 1854		WEST BASIN COMPLEX				CA-LPF-001649				FED007 (0120) PSDBMA (0507) (P1) State of Alaska 037013 PSDBKH DBMA																							
5. Descriptive Location Directions to the ICP and Coast Gallery Parking: Traveling from Hwy 101 - take exit HWY 46 WEST. This exit is between Templeton and Pismo Robles. Travel west approximately 30 miles until you reach Hwy 1. Go north Hwy 1. Drive toward Big Sur - Coast Gallery Parking is approximately 60 miles (6 miles south of the town of Big Sur and 5 miles south of Grimes point) - The ICP is at Andrew Molera State Park and is approximately 5 miles north of Big Sur. Coming from north of Monterey - Travel to Monterey. From Monterey take Hwy 1 south toward the town of Big Sur. The ICP is at Andrew Molera State Park which is approximately 5 miles north of Big Sur. The Coast Gallery Parking is 6 miles south of Big Sur.				6. TOWN		RNG		SEC		Base NDM		8. Incident Base / Phone Number																							
				106		4E		17		ML Diablo, CA		CA-LPCC (Dispatch) LPCC Expanded Equipment (805) 938-9142 x 224 John Blackley Linda Lowe Los Padres Dispatch 24 HR 805-861-8727 CA-LPCC (Dispatch) Los Padres Dispatch 805-938-9142 Ext 0 CA-LPCC (Dispatch) LP Expanded Dispatch - Overhead x220 CA-LPCC (Dispatch) LPCC Expanded Supply (805) 938-9142 x 220 Sawking 848-433-2158																							
				LAT. 36 16 53 N		LONG. 121 33 03 W						9. Jurisdiction / Agency Los Padres National Forest																							
												10. Ordering Office Los Padres Communications Center																							
11. Aircraft Information																																			
Bearing		Distance		VOR		Contact Name		Frequency Type		Assigned Frequency		Reload Base		Other Aircraft / Hazards																					
20		7		BSR				Air Traffic		172.4625 000.00		MC CLELLAN		Powerline																					
156		23		SMB				Command		189.90070N/170.55000W 000.00		PRB																							
284		44		ROM		Martin Mars		Air to Air		125.025		SAX																							
								Air to Ground		172.5125 000.00		VCV																							
								Air to Air		134.875																									
								Law Enforcement		184.625 000.00																									
12. Request Details																																			
Request Number		Ordered Date/Time		From		To		City		Resource Requested		Needed Date/Time		Deliver To		From Unit		To Unit		Assigned Date/Time		Resource Assigned Unit ID		Resource Assigned		MID Ind		Estimated Time Of Departure		Estimated Time Of Arrival		Released Date		Released To	
E-8007		07/02/08 1805 PST		CA-LPCC (Dispatch) Los Padres Dispatch 805-836-9142 Ext 0		CA-LPCC		1 Equipment Not in Catalog (SEE DOC)		07/02/08 1805 PST		Andrew Molera State Park (Big Sur, CA)		CA-LPCC		CA-LPCC		07/10/08 1457 PST		CA-LPF		NAVAL POST GRADUATE SCHOOL (CA-LPCC)		D		07/10/08 1649 PST		07/10/08 1648 PST		07/10/08 1648 PST		MONTEREY PENINSULA (ARMY)			
Travel Mode				Special Needs: FEMA/SRA MISSION for military assets. DOD Instructors available. GPS units from Naval post graduate school. Place with DES								Reporting Instructions																							
13. User Documentation																																			
Req. No.		Documentation														Entered By																			
E-8007		PER OHS SHOULD BE PLACED W/OSCC.														Barber, Charles N (CA-CRO2) 07/02/2008 1857 PST																			

Page 1 of 2  
 WEST BASIN COMPLEX  
 CA-LPF-001649  
 Run Date: 7/15/2008 12:47 CDT

13. User Documentation	Documentation	Entered By
Req. No.		
E-60007	Please see at the incident	Presson, Scott (CA-OSCC)
E-60007	Request E-60007 - 1 Equipment Not in Catalog (SEE DOC) - (CA-LPF-001648) WEST BASIN COMPLEX has been filled with NAVAL POST GRADUATE SCHOOL (CA-LPCC) by Pat Hammond@CA-LPCC ROSS.	Hammond, Pat (CA-LPCC) 07/10/2008 1457 PST

WEST BASIN COMPLEX CA-LPF-001648

<b>RESOURCE ORDER</b>		<b>Initial Date/Time</b>		<b>2. Incident / Project Name</b>				<b>3. Incident / Project Order Number</b>				<b>Financial Codes</b>					
		06/21/08 1054		<b>WEST BASIN COMPLEX</b>				<b>CA-LPF-001649</b>				F58007 (0520) F5D0MA (2602) [F] State of Alaska 837013 F5D8KH D0MA					
<b>EQUIPMENT</b>								<b>4. Office Reference Number</b>				<b>5. Jurisdiction / Agency</b> Los Padres National Forest					
<b>6. Descriptive Location</b> Directions to the ICP and Coast Gallery Parking: Traveling from Hwy 101 - take exit HWY 46 WEST. This exit is between Tompkins and Paso Robles. Travel west approximately 30 miles until you reach Hwy 1. Go north Hwy 1. Drive toward Big Sur - Coast Gallery Parking is approximately 40 miles (5 miles south of the town of Big Sur and 3 miles south of Grimes point) - The ICP is at Andrew Molera State Park and is approximately 5 miles north of Big Sur.  Coming from north of Monterey - Travel to Monterey. From Monterey take Hwy 1 south toward the town of Big Sur. The ICP is at Andrew Molera State Park which is approximately 5 mile north of Big Sur. The Coast Gallery Parking is 8 miles east of Big Sur.		<b>6. TWIN</b>		<b>RNG</b>		<b>SEC</b>		<b>Base MDM</b>		<b>8. Incident Base / Phone Number</b> CA-LPCC (Dispatch) LPCC Expanded Equipment (805) 938-0142 x 224 John Blackley Linda Lowe Los Padres Dispatch 24 HR 805-861-5227 CA-LPCC (Dispatch) Los Padres Dispatch 805-938-9142 Ext 0 CA-LPCC (Dispatch) LP Expanded Dispatch - Overhead x230 CA-LPCC (Dispatch) LPCC Expanded Supply (805) 938-9142 x 228 Steve King 848-439-2150				<b>10. Ordering Office</b> Los Padres Communications Center			
		19S		4E		17		Mt. Diablo, CA									
		<b>LAT. 36 16 53 N</b>															
		<b>LONG. 121 33 03 W</b>															
<b>11. Aircraft Information</b>																	
<b>Boasting</b>	<b>Distance</b>	<b>VOR</b>	<b>Contact Name</b>				<b>Frequency Type</b>				<b>Assigned Frequency</b>		<b>Reload Base</b>		<b>Other Aircraft / Hazards</b>		
20	7	BSR					Air Traffic				172.4025 000.00		MC CLELLAN		Powerline		
158	23	SNS					Command				169.900TXN/170.550RXN 000.00		PRB				
284	44	RCN	Martin Mass				Air to Air				125.025		SMX				
							Air to Ground				172.5125 000.00		VCV				
							Air to Air				134.875						
							Law Enforcement				164.025 000.00						
<b>12. Request Details</b>																	
<b>Request Number</b>	<b>Ordered Date/Time</b>	<b>From</b>	<b>To</b>	<b>Qty</b>	<b>Resource Requested</b>	<b>Need/Not Date/Time</b>	<b>Deliver To</b>	<b>From Unit</b>	<b>To Unit</b>	<b>Assigned Date/Time</b>	<b>Resource Assigned UNIT ID</b>	<b>Resource Assigned</b>	<b>REQ ID</b>	<b>Estimated Time Of Departure</b>	<b>Estimated Time Of Arrival</b>	<b>Released Date</b>	<b>Released To</b>
E-60044	07/10/08 1452 PST	CA-LPCC (Dispatch) Los Padres Dispatch 805-938-9142 Ext 0	CA-LPCC	1	Equipment Not in Catalog (SEE DOC)	07/10/08 1500 PST	Andrew Molera State Park (Big Sur, CA)	CA-LPCC	CA-LPCC	07/10/08 1458 PST	CA-LPF	NAVAL POST GRADUATE SCHOOL #2 (CA-LPCC)	D	07/10/08 1648 PST	07/10/08 1648 PST	07/10/08 1648 PST	MONTEREY PENINSULA (MRY)
<b>Travel Mode</b>		<b>Special Needs:</b> Experimental GPS tracking device being tested on West Basin by Naval Post Graduate School at no cost.				<b>Reporting Instructions</b>											

13. User Documentation	Documentation	Entered By
Req. No.		
E-60044	Request E-60044 - 1 Equipment Not in Catalog (SEE DOC) - (CA-LPF-001649) WEST BASIN COMPLEX has been filled with NAVAL POST GRADUATE SCHOOL #2 (CA-LPCC) by Pat Hammond@CA-LPCC ROSS.	Hammond, Pat (CA-LPCC) 07/10/2008 1458 PST

WEST BASIN COMPLEX CA-LPF-001648

DOCUMENTATION ONLY - FOR THE BLACK BIRD GPS TESTING UNITS.

RESOURCE ORDER		2. Incident / Project Name				3. Incident / Project Order Number				Financial Codes								
EQUIPMENT		WEST BASIN COMPLEX				CA-LPF-001649				F50007 (0520) P6D8MA (0507) (P) State of Alaska 037010 P5000H D8AA								
Initial Date/Time		6. TWN				7. Incident Base / Phone Number				9. Jurisdiction / Agency								
06/21/08 1954		RNG				CA-LPCC (Dispatch) LPCC Expanded Equipment (805) 938-9142 X 224 John Bischley Linda Lowe Los Padres Dispatch 24 HR 805-661-6727 CA-LPCC (Dispatch) Los Padres Dispatch 805-938-9142 Ext 0 CA-LPCC (Dispatch) LP Expanded Dispatch - Overhead x250 CA-LPCC (Dispatch) LPCC Expanded Supply (805) 938-9142 X 226 Steve King 840-433-2168				Los Padres National Forest								
5. Descriptive Location		SEC				Base MDM				10. Ordering Office								
Directions to the ICP and Coast Gallery Parking: Travelling from Hwy 101 - take exit HWY 48 WEST. This exit is between Temploteos and Paso Robles. Travel west approximately 30 miles until you reach Hwy 1. Go north Hwy 1. Drive toward Big Sur - Coast Gallery Parking is approximately 80 miles (6 miles south of the town of Big Sur and 3 miles south of Gaiques point) - The ICP is at Andrew Molera State Park and is approximately 5 miles north of Big Sur.  Coming from north of Monterey - Travel to Monterey. From Monterey take Hwy 1 south toward the town of Big Sur. The ICP is at Andrew Molera State Park which is approximately 5 miles north of Big Sur. The Coast Gallery Parking is 8 miles south of Big Sur.		19S				Mt. Diablo, CA				Los Padres Communications Center								
		LAT. 36 16 53 N																
		LONG. 124 33 03 W																
11. Aircraft Information																		
Bearing	Distance	VOR	Contact Name	Frequency Type	Assigned Frequency	Reload Base	Other Aircraft / Hazards											
20	7	BSR		Air Tactics	172.4625 000.00	MC CLELLAN	Powerline											
156	23	SNS		Command	189.000TXN/176.650RXN 000.00	PRB												
204	44	ROM	Martin Mars	Air to Air	125.025	SMX												
				Air to Ground	172.5125 000.00	VGV												
				Air to Air	134.875													
				Law Enforcement	164.625 000.00													
12. Request Number	Ordered Date/Time	From	To	Qty	Resource Requested	Needed Date/Time	Deliver To	From Unit	To Unit	Assigned Date/Time	Resource Assigned Unit ID	Resource Assigned	MID Inc	Estimated Time Of Departure	Estimated Time Of Arrival	Released Date	Released To	
E-80045	07/10/08 1043 PST	CA-LPCC (Dispatch) Los Padres Dispatch 805-938-9142 Ext 0	CA-LPCC	1	Equipment Not in Catalog (SEE DOC)	08/28/08 0800 PST	Andrew Molera State Park (Big Sur, CA)					Cancelled UTF						
Travel Mode		Special Needs EXPERIMENTAL OPS UNITS FROM NAVAL POST GRADUATE SCHOOL BEING TESTED AT NO COST. SEND TO CAL FIRE TO WARREN SNELL FOR VALIDATION/APPROVAL AND FORWARDED THRU THE MILITARY CHANNELS (NAVY REGIONAL SOUTHWEST)				Reporting Instructions												
13. User Documentation																		

Req. No.	Documentation	Entered By
E-80045	SEND TO CAL FIRE WARREN SNELL	HARRISON, Pat (CA-LPCC) 07/10/2008 1044 PST
E-80045	MUST BE FILLED WITH LOCAL RESOURCES AS REQUESTED	BROWN, Maryjo (CA-CRCC) 07/14/2008 1704 PST
E-80045	Cancel this request, per Ordering.	WESTERMAN, Brian (CA-LPCC) 07/11/2008 1749 PST

*CANCELLED WHY THIS WAS CANCELLED BY REDUNDANT DAY AFTER.*

## Detailed Case Study with Emails Included

The initial involvement of the Naval Postgraduate School and their resources occurred on July 1<sup>st</sup>, about a week after the Big Sur fires began. The request for assistance from NPS began on July 1<sup>st</sup> during the garland cutting ceremony for the California Homeland Security Consortium (CHSC), where Congressman Sam Farr was in attendance. After Congressman Sam Farr mentioned his desire to help the Big Sur fire effort Dr. Thomas Housel, the director of the CHSC, stated that Dr. Bordetsky and his research team at the Center for Network Innovation and Experimentation (CENETIX)<sup>7</sup> at NPS had the capability to provide Global Positioning System (GPS) Iridium phones that were linked to a web-based Geographic Information System (GIS). After the ceremony, both Dr. Bordetsky and Mr. Elhert (NPS-RAPIDS program) agreed to provide the GIS tracking and communication technologies demonstrated at the CHSC Garland cutting ceremony to the Fire Services team at Basin Complex Fire base camp.

Shortly after the request, the first mention of the requirements in the military procedure for supporting the Big Sur Fires was brought up. On Tuesday afternoon, CDR Lozano, the CNRSW Deputy N3 at DoD informed Lt. Stephanie Brown at NPS that "NORTHCOM mandates military procedures to support civilian agencies". Unless there's a "preexisting Mutual Aid Agreement defining specific support, [NPS] cannot provide support of any kind without the authorization of the SecDef." NRSW recorded the NPS resource and would have it on file for coordination if requested by the state. Although there is the concept of "Immediate Response" for supporting emergency situations, Lt. Brown stated that the assistance CHSC wanted to provide is not considered "Immediate Response" by definition. Colonel Smarsh passed this information on to CHSC to not deploy any equipment stating, "[d]ue to the DoD's Defense Support of Civil Authorities (DSCA) policy, NPS is not authorized to provide direct support to the wildfires incident without direct authorization from the Secretary of Defense through CNIC and CNRSW. NPS can provide CNRSW a consolidated list of our assets and capabilities that are deployable upon request. CALFire can request specific resource support through their Local Incident Commander (example attached). This request will be directed to the SecDef. Upon approval, an execution order will be directed from the SecDef and NPS' assets will be deployed for use by CALFire. Our CDO, LTJG Brown is working with the CAL Fire POC (Chief Ligman? to coordinate this request)".

The next morning, Wednesday, July 2<sup>nd</sup>, Dr. Housel, Dr. Bordetsky, the CHSC team, and the CENETIX team visited the Basin Complex fire base camp at Andrew Molera State Park in Big Sur, CA. The team gave a briefing to the Planning Station Chief, Tim Baal, detailing the CENETIX capabilities. Tim Baal requested that a demonstration of the technology be done for Mark Steel, the Situation Unit

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<sup>7</sup> "CENETIX supports advanced studies of wireless networking with unmanned aerial, underwater, and ground vehicles in close cooperation with NPS SUV, CIRPAS, and Human Factor Research centers. CENETIX focuses on the advanced studies of emerging collaborative architectures for manned-unmanned network-centric systems as well as adaptive management of sensor-unmanned vehicle-decision maker self-organizing environments."

Leader and Kevin Frye, the Fireman Rescue Specialist of the Technical Operations Section. After the briefing, Dr. Bordetsky, Eugene Bourakov, and Mike Clemmons from the CENETIX team suggested the use of GPS-enabled satellite radio communication systems that were linked to web-based GIS mapping service, based at the Naval Post Graduate School. The mapping service was browser-based and available via a password protected URL. The CENETIX team also demonstrated the GPS-enabled Iridium phones. In attendance for the demonstration was Congressman Sam Farr, who requested that CHSC proceed with aiding the fire complex. Dr. Housel informed Congressman Farr that the Consortium was in the process of obtaining Navy approval.

When the Consortium team visited the Basin Complex fire camp, they found that the camp had already established internet access and cellular service provided by Verizon via a Cell on Wheels (COW) to facilitate communication for the base camp and surrounding areas, which was a necessary component to the use of the GPS positioning equipment. After the demonstration, Chief Ball agreed to process the request for the CENETIX GIS tracking system and submitted it to the California Office of Emergency Services (OES), through the National Interagency Fire Center (NIFC). The proper form was sent to Tim Baal by Lt. Peterson that afternoon.

In an attempt to expedite the request, Col. Smarsh sent Dr. Housel and Dr. Bordetsky an email informing them that "As soon as request goes in from Tim Baal at the site to the Monterey County EOC, we can pass a copy and coordinate through our military channels (Navy Region Southwest) to help gain quicker approval."

In addition to the equipment offered to the Fire Incident by the California Homeland Security Consortium, another NPS Research Associate, Brian Steckler, emailed Colonel Smarsh and Dr. Bordetsky with an offer of additional services that the Hastily Formed Networks (HFN) Research Group. Brian Steckler's email portrayed the multiple advantages of the use of NPS equipment, in that his Hastily Formed Networks Center and their students would gain practical experience, as well as assisting the firefighters at the Big Sur fire. Colonel Smarsh informed Brian Steckler that a request would need to be submitted, as the request for Dr. Bordetsky's equipment had not yet been approved. "In order to provide any help [to the fire command], the following needs to occur.

1. The civilian agency must request our help through their channels
2. We can work with the Military Region EOC to coordinate once civilian agency submits
3. Obtain approval to provide support"

Brian Steckler's offer was well received by Robert Spencer, the Support Officer at the OES in Monterey County, who responded to the email, stating that the capabilities are desirable and requesting that Wendy Walsh relay the information and requests to Navy Southwest for approvals. "Even though the Basin Fire Complex is a "Unified Command" please relay to Navy Southwest that the county needs to be aware of what assets DOD would like to offer to the fire effort. Also, since

California fire efforts are under a Presidential Declaration more DOD assets may be forthcoming. Yep, FIRESCOPE, in Boise, ID, is quite a "clearing and collecting" and resource agency."

On the morning of July 3<sup>rd</sup>, LTJG Julio Peterson sent an email to Col. Smarsh, Mary Blankenship, Stephanie Brown, Charles Fury, Alex Bordetsky, and Tom Housel reporting that he "Just received a call from Mr. Mark Frederickson CNRSW EM Program Director. He told me in response to my below email (with attachment) that this is now an "official" request from National Interagency Fire Center Boise to SECDEF. NPS is to "sit tight" until we receive word from CNRSW to provide equipment, etc. No further action on our part until that happens." At this point in the process, it appears as if the request has wound its way to NIFC, which in turn will proceed on to the Secretary of Defense for final approval, and after that step the equipment will be released.

That same morning, the CHSC team and the COAST team, once again, met with Chief Baal and Chief Steel to demonstrate RAPIDS, which is a closed-loop, non-line of site, Radio Frequency (RF) based tracking system that provides a 3D GPS overlay on top of existing GIS data such as topographical maps in digital format. After the demonstration of the COAST RAPIDS technology, Chief Tim Baal submitted a second request for Military Assistance for the new technology. In order to keep the NPS points of contact in the loop, Tom Housel forwarded a copy of this request to Colonel Smarsh.

Colonel Smarsh emailed both the NPS President and Provost that morning with news regarding the fire and the current status of the requests for military assistance. "The request is being submitted through the fire agency channels and also being coordinated by our Command Duty Officer to receive approval through the Defense Support to Civilian Authorities (DSCA) process. Currently, Navy Region Southwest Regional Operations Center will act as the military approval for the request." On July 4<sup>th</sup>, Lt. Brown sent an email to Colonel Smarsh informing him that both requests (Iridium phone and web-based tracking software (1) and RAPIDS C2 System and support personnel (2)) were still pending approval through the DSCA process.

On July 5<sup>th</sup>, Colonel Smarsh emailed Lt. Brown with possible courses of action: "Please review and add as needed and we can discuss...Request #1 still pending. National Interagency Fire Center in Boise Idaho will not be approved due to the request not being coordinated through CAL Fire (POC Col Armstrong (NIFC Logistic Coordinator)). Col Armstrong also provided some guidance that even if the request was coordinated, that it would not likely be approved. Even if was approved, the civilian agency would still need to reimbursement due to the Economy Act. The only other way to provide the support is under a local MOU (doesn't exist) or by doing a training/research exercise (NRSW won't approve). Our options at NPS include: 1. Go ahead and provide support (not recommended as NIFC and NRSW has not approved) 2. NPS President to call NRSW Commander to gain NRSW approval for a training/research exercise (not recommended since this was already staffed at NRSW) 3. Do not provide support. Notify Tim Baal that request is pending until rerouted through CAL Fire (also share that likely that won't be validated plus will have to reimburse DOD regardless of what NPS wants to

offer). Continue to demo if needed. Note: Future support to emergency situations (do not have imminent life threatening situation within the first 72 hours) should have MOUs signed that would solve this coordination issue. Later that day in an update email to the NPS President and Provost, Colonel Smarsh stated that "NIFC also indicates that when proper routing is completed, requests may still not be validated due to several reasons". The reasons that the request might not be validated are never delineated in any other emails or communication available.

There continued to be confusion on whether the requests sent through the ROSS ordering system (local fire side) was the quickest method of receiving a "go ahead". Saturday evening, Tim Baal, the Planning Section Chief in the West Basin, communicated to Tom Housel that "Col. Armstrong suggested there was no need to go the Secretary of Defense for clearance to use this technology. He stated it would be more expeditious to keep it within the Navy Region Southwest Command out of San Diego or even for the School to authorize the use of the equipment utilizing their prerogative. There have apparently been conversations between a Col. Stanley and Col. Smarsh of the School on this subject but I do not know the particulars."

On Sunday, July 6<sup>th</sup>, Colonel Smarsh communicated to Tom Housel, Daniel Oliver, and Leonard Ferrari an email stating that the "[q]uickest way would be for Region to allow us to deploy this technology on an exercise concept...however that has been already tried. To change, it would require NPS President to discuss with Region Commander, RADM Herring. I talked to President Oliver on Saturday and received direction to continue in a hold status."

The need for the equipment from the fire incident command was relayed by Mary Ann Leffel who sent an email with information from Saturday night's briefing by Mike Dietrich, the Incident Commander. "He said lack of communication is really hampering their efforts when the fire starts to move." When natural disasters like forest fires start and continue to grow and spread, the need for quick action to provide as many resources as possible to the fire fighters is vitally important.

As the requests sent through the DSCA process were pending, Congressman Sam Farr made a call to RADM Hering concerning the support effort for the fire incident. According to Alec Arago in the Congressman's office, "Herring said in short that he would take care of it." Tom Housel transmitted the process information onto Tim Baal that Congressman Farr had spoken to RADM Herring and the next necessary step was to have CalFire approve and then route requests to NIFC which in turn will route the requests to RADM Hering (Cmdr of Navy Region SW).

Around 5pm on Sunday, John Joliffe identified a key question in the process of getting the requests approved: Did CALFIRE formally request to NIFC a RFA from DOD for this iridium technology? Adrian Lozano responded that "The requests (attached) were from The National Forest Service (Tim Baal, Planning Chief, Basin Complex West) to the Executive Secretary of Department of Defense JDOMS. It is the understanding that this was sent back (by COL Armstrong) because it did not go

through the proper channels (i.e. CALFIRE). It is unclear if a subsequent request from CALFIRE has been submitted."

John Joliffe emailed Adrian Lozano and Mark Frederickson about the request by Congressman Farr. "This is the first time I've seen these docs, but here are the facts as I know them: 1. FEMA has not issued COL Armstrong(DCO Region IX) a MA (mission assignment) to execute (though COL Armstrong knows FEMA is aware of this). 2. Since this is a firefighting resource or direct support to the firefighting effort, it doesn't come thru FEMA anyway. 3. This RFA(request for assistance) should go thru the normal firefighting resource process (ROSS), and if unable to fill at the local/mutual aid/state level, it ends up at NIFC. The DCO (COL Stanley) at NIFC has not seen it as a formal RFA for DOD, although he is aware of this subject. 4. There are three courses of action for the Navy at this point:

- (1)Let NPS and CALFIRE sort this out under some local mutual aid experimental training scenario at no cost to DOD/DON
- (2)NRSW/CNIC authorizes ....Don't be surprised if NPS wants to be reimbursed
- (3)LET THE PROCESS WORK --CALFIRE submits a RFA to NIFC that gets routed to the SECDEF...this is my recommendation...otherwise the right players are not involved, especially since everyone knows about this, even NORTHCOM .....LET THE PROCESS WORK...otherwise no one learns anything and we'll repeat these awkward time consuming scenarios in the months and years to come."

On July 10<sup>th</sup>, Gary Maddock, from Blackbird Technologies Inc., as well as Dr. Bordetsky and Tom Housel from NPS, went down to the Incident Command Post of the Basin Complex West Fire Incident Command to deliver 4 Blackbird GPS Trackers and train the fire command on the use of the equipment. The Blackbird trackers are small and portable, and allow continual GPS tracking accessible from any internet connection, and tracked on Google Earth software. In addition to the tracking capabilities, the sensors also are outfitted with "shortcut buttons" that allow the user to send messages back to the command post. After the demonstration, the Basin West complex continued to use the trackers until the incident command post was moved on July 13<sup>th</sup>.

On Thursday, July 10<sup>th</sup>, over a week into the request process, some details concerning the problems with the document processing began to emerge. 12:47pm, Colonel Smarsh added some additional information to the original email to Tim Baal by adding "You submitted two requests for support through your process last week. NIFC (Col Armstrong) determined that request he received was not routed through CALFIRE. I believe you resubmitted these and don't know if you received any validation or approval from CALFIRE. We have been trying to our channels to resolve, but bottom line, a CALFIRE validation/approval of the requests is needed in order to gain approval through our military channels (Navy Regional Southwest)". 6:08pm, Col. Smarsh also communicated the situation to Daniel Oliver, Len Hering, Pete Dausen, Kelsey St Louis, Leonard Ferrari, and Tom Housel explaining that "Earlier today, the original requests were canceled and resubmitted by Mr. Baal and routed

through the South Operations Center, then to CALFIRE. No indication on when requests will be processed, but a request number should be received back by Tim Baal once the South Operations Center processes. Tim Baal indicated that the original requests were turned back from the Office of Emergency Services because support was considered local."

On Thursday, Brigadier General Mike McDaniel, the Assistant Adjutant General and Michigan Homeland Security Advisor, sent an email to Tom Housel detailing justifications for the release of federal resources to local authorities. (*Detailed descriptions of justifications can be found under the "Current Federal Role" header*) "DoD Dir 2035.1 covers the ability of military officers to respond "to save lives, prevent human suffering, and mitigate property damage in imminently serious conditions when time does not permit approval from higher headquarters." The authority does not have a 72 hour limit, but the ability to respond is time sensitive and covers rescue, evacuation, and emergency treatment of civilian casualties, emergency restoration of power, debris removal, EOD functions, and food distribution. There's additional information in the DOPLAW handbook in Chapter 20, Civil Disasters and Emergencies, para. B(5). The DoD Directive 2035.1 is your standard MSCA guide book. This was the basis for my comment that you act first, and beg forgiveness later, since a bureaucrat would presume that if you have the time to push a request up the chain, then by definition, it cannot be an emergency. At this point though, my primary tactic would be to call this a training event and just send the stuff over. Finally, I am enclosing the excerpts from the Stafford Act that cover the usage of federal resources (as in the Guard not on State Active Duty) to provide support to a state."

Related to these communications was a conversation between Tom Housel of CHSC and NPS President Daniel Oliver, in which President Oliver told Tom Housel that he felt NPS should have "just gone ahead" and distributed the equipment, according to Dr. Housel. The conversation was a reiteration of the 'act now and apologize later' comment from Brig. Gen. McDaniels.

On July 11<sup>th</sup>, Gary Maddock, from Blackbird Technologies Inc. and Tom Housel traveled to the Basin East Incident Command post in King City to distribute two additional Blackbird Trackers to the fire command on the east side of the fire. The firefighters were given a demonstration of the software and determined that the trackers could be used in additional applications, such as by their biologist who conduct stream inventories on the fire area. The firefighters at the Incident Command reiterated the statements made by those at the Basin West Complex that the turn-around time on tracking the fire through their current GPS trackers to mapping it was longer than they would like, and any equipment that would allow for more 'real time' tracking would be helpful in their efforts.