



The American Weather and Climate Industry Association (AWCIA), through Steven A. Root, its President, formally submits these following comments on behalf of the AWCIA membership related to the NATIONAL WEATHER SERVICE NWS IMPACT-BASED DECISION SUPPORT SERVICES PHILOSOPHY of May 2016, as the NWS seeks stakeholder input as it formulates its plans for IDSS.

July 15, 2016.

Executive Summary

AWCIA is the trade association for the companies and professionals who make weather their business. AWCIA represents a diverse weather industry, and our members have a significant impact on how weather information is collected, disseminated and enhanced to provide custom services to weather-sensitive sections of the economy and the general public. AWCIA members build weather sensors, implement government weather programs, broadcast weather information to the nation, disseminate raw government and privately-owned weather data, generate weather products and services, and provide specialized services to a variety of markets. AWCIA members are the “value-added provider” or extension to government supplied weather data because its members assimilate and tailor information for specific commercial and consumer uses.

AWCIA member companies employ thousands of professionals in many states across nation and the world. Many members are recognized global leaders in weather information and digital media, serving more than a billion requests for weather content daily.

Weather and environmental content rendered to users and consumers through AWCIA members represents the highest quality, most reliable and accurate information available. Users and consumers of such value-added products and services are the beneficiary of a partnership between our members within the American Weather Industry (AWI), federal and state agencies, and academic entities, commonly referred to as America’s Weather Enterprise (AWE).

This partnership, which has been developed and enhanced over many decades, is essential to preserve American lives and protect the nation’s property and business interests, and to protect and grow American jobs and to ensure that the joint private/public efforts are the force protecting the nation, not just NWS activities alone or in isolation.

AWCIA members disseminate information, including NWS warnings to millions of Americans, directly saving lives and protecting property. In many instances, NOAA/NWS branded information is a vital part of this disseminated content.



We believe the NWS IDSS document of May 2016, raises substantial issues relative to the roles of the government and those of AWI as already established in other policies and programs and as needed to preserve and continue the growth of the critical functions referred to above. [By way of example, see the policy regarding support of venues in contrast to this philosophy document, here: <http://www.nws.noaa.gov/directives/sym/pd01018006curr.pdf>].

Among the concerning issues are:

- The AWI is the critical “CORE PARTNER” as it carries the major load of distributing NOAA/NWS information, forecasts and warnings and has been the developer of all of the major distribution channels of weather information to the public. This special and unique relationship needs to be nurtured, preserved, and expanded, yet this proposal fails to even recognize the significance of that situation and relationship.
- This proposed philosophy would result in a serious degradation of the core services that the NWS currently provides, and at the most critical time of imminent danger, to the detriment of public safety and economic well-being of the nation referred to above;
- This proposed philosophy would lead to a lack of consistency and unequal treatment of various agencies, institutions, and even for-profit companies and could create sufficient confusion to actually decrease appropriate preparation and response to severe weather events, when seconds and minutes count;
- The proposed philosophy seems to suggest that only NWS can do what is needed in dealing with vulnerability to extreme weather-dependent impacts. Indeed, the philosophy appears to break ground in new mission areas for the agency at a time of stretched resources and difficulties providing foundational data sets, and is aimed at impacts and agencies, rather than better science, data and information distribution, and warnings.
- The proposed philosophy creates the concept of “interpretative services” yet this is not an area of core competency or skills and training of the agency, nor should it be. Shifting resources from enabling better science and warnings to social science areas such as “interpretative services” raises the issue of a need for a broader look at the purpose of the agency in general.
- This proposed philosophy results in significant undue expansion of the government into roles and jobs currently served by the AWI. Much progress has been made in recent years in the relationship between NWS and AWI, to the ultimate benefit of the public safety and the economy of the nation. This proposed philosophy may result in a significant step away from the strong and



helpful relationships developed in recent years between NOAA/NWS and AWI and could revert back to a previous state in the AWE where there existed division between partners and lack of unity and mutual support. This consequence must be avoided. If implemented, this proposed philosophy, holds the promise of bringing significant and substantial adverse consequences which we believe are unintended by its framers.

- The definition of a new depth of decision support – “deep relationships core partners” – adds complexity, the potential for additional direct competition between the NWS and AWI in the domain of customized and individualized services and support, and the opening up of new areas for discriminatory decisions and services by the NWS.
- And most disturbingly, this proposed philosophy seems to ignore concentrated joint efforts of the past few years, across many meetings, where in the spirit of these meetings consensus agreement was reached to have members of AWE leverage each other in order to achieve mutually desired results. Again, AWCIA emphasizes AWE partner core competencies must be exploited, not duplicated, to best serve the American citizen.

These and additional issues with this proposed philosophy document are discussed below.

Detailed Comments

Lack of Consistency with Established Weather Enterprise Policy Trends

- This proposed philosophy represents expansion into areas currently served by AWI and which at the same time will degrade NWS and weather enterprise service to the nation as a whole.
- This proposed philosophy goes in the opposite direction of what has been written into various policy directives, such as that on NWS Support for Special Events. [See <http://www.nws.noaa.gov/directives/sym/pd01018006curr.pdf> which, among other items, states “2.4. NWS personnel will not provide specialized, site-specific forecasts or direct forecasting support to Special Event Organizers. 2.5. NWS personnel will not provide specialized weather support and customized consulting services to Special Event Organizers, organized and packaged to help make decisions about how to plan, run, or manage the event] and Weather-Ready Nation [Also see <http://www.nws.noaa.gov/com/weatherreadynation/#.UhQ-BH-wVfs>].



- In addition, the philosophy proposes that the NWS provide Impact-Based Decision Support Services to a large and expanding group of stakeholders within a very broad view of the emergency management community (EMC), without consideration of whether these agencies can be adequately served by other weather providers within AWI.
- The philosophy proposed in this document is contrary to the NWS Weather-Ready Nation Roadmap released in 2013 [See http://www.nws.noaa.gov/com/weatherreadynation/files/nws_wrn_roadmap_final_april17.pdf], which notes the importance of “Achieving cost efficiencies by leveraging ... public-private partnerships across the Weather Enterprise”.

Proposed Philosophy Will Distract from Core NWS Activities and Warnings.

- In this resource-strained environment (and all resource bounded environments), providing the services detailed in the document would shift resources and distract the NWS from the foundational products and activities it provides through public warnings, degrading these services which are critical to both its mission and to the support it receives in fulfilling its mission with and through its AWI partners.
- Given that NWS believes it does not have the resources and personnel to do that which is necessary for its mission (it and others claim there is no slack or “fat” in the system), it is difficult to understand, on a resource basis alone, how to justify adding tailored, directly provided, agency specific and local services. While stating these are not industry and business specific unless the business or industry has a public emergency management function, we see little ability to distinguish between any organization – be it business or NGO – from claiming an emergency management need and demanding free government tailored services. Additionally, such activities will adversely affect AWI and the private sector job creation engine it represents. [See, for example:
- http://www.washingtonpost.com/blogs/capital-weather-gang/post/national-weather-service-cutting-back-on-hiring-spending/2013/03/15/ebd98174-8d9b-11e2-9f54-f3fdd70acad2_blog.html
- <http://www.wsav.com/story/21212332/national-weather-service-fears-budget-cuts>
- <http://www.localmemphis.com/news/state/story/National-Weather-Service-Fears-Proposed-Budget/QaSyjT5lkEmpRD9ZZbjC1Q.csp>
- <http://www.examiner.com/article/president-obama-threatening-to-cut-the-budget-of-the-national-weather-service>]



American Weather and Climate Industry Association

- In addition, this proposed expansion of NWS customized services seems to conflict with current questions being raised by Congress and may increase the possibility of legislation further limiting the scope of NWS activities and its ability to fulfill its mission. [See, for example:
- <https://www.washingtonpost.com/news/capital-weather-gang/wp/2016/06/09/congress-is-considering-privatizing-key-roles-of-the-weather-service-thats-a-mistake/>]
- It seems clear that in the current budgetary environment, any addition of services by the NWS requires a corresponding cutback in other NWS or NOAA activities. This is especially true if NWS personnel provide direct and even dedicated embedded support for specific entities.
- The NWS and the NWSEO have expressed major concerns about budget cuts and not having enough resources to deliver basic services and warnings, even before providing the new and expanded services this document foretells : [See: <http://www.hngn.com/articles/3757/20130527/noaa-blames-budget-cut-government-poor-weather-forecasts.htm>]
- For example, in July of 2006, St. Louis was hit by a derecho which caused the largest power outage in its history. A second storm occurred just four days later. These storms knocked out power to an estimated 950,000 homes and businesses in Missouri and Illinois [See: <http://tdworld.com/vegetation-management/after-storms>]. This cost to the utility companies involved an estimated \$226 million, not to mention the economic blow to the area as a whole. The mayor of St. Louis reportedly, publicly criticized the National Weather Service for the lack of public warning for the first (the bigger) of the storms. Yet, as the derecho approached, it has been reported that the NWS office took time to make three telephone calls to the St. Louis Cardinals, devoting precious resources to a for-profit business while storm warnings to the public at large were needed. Such actions, while well-intended are actually counterproductive and endanger lives. All major league baseball teams and, for that matter, all major outdoor venues should contract for specialized services from AWI. These entities spend millions of dollars for the salary of a single player and can protect the entire event season event calendar for a tiny fraction of that cost. Yet, in thinking they can secure services for free from NWS, they hesitate to do so, and when NWS has to pick and choose who to support when overwhelmed in a severe weather event, the net effect is that lives are placed in danger – not protected.
- If this is true, and it certainly would become true under the proposed philosophy in a plethora of instances, then one can understand how such distraction would adversely impact the public by the NWS providing special services. One can see what greater distraction could do in time of high impact weather. At the very moment attention is needed to warning the general public of high impact events, staff are called away to give preferences for broadly defined members of the EMC in



businesses and operations, most of which are private for-profit or non-profit crowd-attracting events.

- If the approach proposed in this document is approved, it will lead to more situations where during major weather events critical core and warning functions of NWS are endangered; functions which are valuable to the entire weather enterprise and the public. And at the same time, the very entities NWS wishes to help, will see a strained workforce and uneven service to those entities.

Discrimination Issues

- The proposed philosophy would, by definition, provide for special services to some entities, while discriminating against other entities. Favoritism and decision-criteria become a fairness, legal, and liability issue of major proportion and possibly leading to issues which impugn the integrity of the agency.
- We only need to look at the example of Superstorm Sandy, which affected so many counties and municipalities, states and others in the EMC. The NWS could not possibly provide an on-site meteorologist for each of these entities.
- While the NWS proposes that each NWS field office “applies consistent criteria for identifying which of these core partners to designate as ‘deep relationship core partners’”, even the NWS recognizes that “not all core partners are the recipient of IDSS.”
- How would the NWS determine which agencies will receive an on-site meteorologist and which will not? Would Nassau County, NY and Atlantic County, NJ receive embedded meteorologists, but not Suffolk County, NY and Ocean County, NJ? Would ongoing private events also receive support?

Resource Competition and Depletion

- The longer the weather-event duration, the greater the resource demand on a 24/7 basis. NWS weather offices will become strained for staffing of core products (like public forecasts and warnings) and begin to compete for personnel with the very entities to which embedded meteorologists have been dispatched or assigned. This condition would lead to re-call and reassignment of meteorologists as demand grows and as personnel shifts change and at the very height of the storm conditions in many instances when such disruption will be damaging.



Reliability and Endangerment

- The above issues also create a compounded issue of reliability and related safety. For example, if an EMC member receives approval for deep relationship core partner services, it will have to make planning choices. The best emergency plans have reliability as a central factor. So it will need to assume NWS support or no NWS support (there may also be more complex and compound plans based on periodic support or withdrawal of NWS support at inopportune times). There will be a lack of certainty whether it will either need to contract with a company from AWI or choose to forego such arrangements assuming NWS support. If the NWS expected support in the plan does not materialize in the way, at the time, or in the manner expected, the emergency manager will be unsupported, and with no weather industry support in place.
- What will happen in a major severe weather event, when more core partners than the NWS can adequately serve with on-site or custom services have designed their activities based upon receiving that support – a level of support that the NWS cannot possibly provide? Will the constraints on NWS support, after it has been promised, be the direct cause of additional deaths, injuries and property damage than would have occurred had the emergency manager not relied on NWS services that could not possibly be delivered?
- Keep in mind that emergency managers and other entities that would be designated as “core partners” and “deep relationships core partners”, both in government and in the private sector, frequently contract with AWI for support. They usually have plans based on practiced and tiered responses, they can customize the support they need, and the meteorologist(s) location and his or her related tools, and be prepared to operationalize a well-practiced plan on committed resources. Certainty is assured.

Possible Confusion Caused By Periodic NWS Intervention with Weather Industry Customers

- In cases where an entity is supported by services from AWI and the NWS intervenes to supply the same or different services, conflicts may arise between the forecasts and counsel offered by the NWS and those provided by the AWI supplier. Given that AWI’s function is to provide customized services to individual entities, that it is staffed to handle this situation, and that it already has access to and in fact is the distributor for NWS forecasts, warnings, and other emergency bulletins, the likelihood is that these conflicts will cause confusion and lack of appropriate action, rather than being of benefit. Success is achieved by processes of advanced analysis of needs, development of protocols, and action plans – not sending a meteorologist to a site or responding on an uncertain basis. Also, there



is no protocol for NWS personnel to work with AWI suppliers in emergency situations and to train the NWS personnel on the processes, procedures, techniques and plans of the numerous AWI supplier(s).

Failure of Transparency and Environment of Arbitrariness in the proposed philosophy

- There is no mechanism for transparency in the NWS actions or decisions. The NWS will determine which entities qualify for the different levels of support and, in those cases where there is disagreement as to whether an entity qualifies; the NWS is also the sole arbiter. The criteria listed for determining which entities qualify leave substantial room for lack of consistency from one WFO to another and the possibility of favoritism and failure to meet the legal standard of not being “arbitrary, capricious and unreasonable” in making such determinations appears to loom large in these situations. Additionally, a mechanism is needed to provide reporting about decisions that are made, for internal and external review, as well as the possibility of an outside advisory panel.

Definition of the Emergency Management Community from a government service point of view Stretches Credulity

- In the proposed philosophy, the EMC has been defined very broadly - far beyond federal, state, local and tribal Emergency Managers working directly for a government agency to include any entity with a FEMA National Response Framework Emergency Support Function, which could include for-profit business entities in transportation, communication, logistics management, energy, etc. - all verticals served by AWI and generally agreed to be outside the scope of NWS activities.
- The entire approach described is overly broad and leaves much to the discretion and imagination of individual NWS offices. Core partner support under the terms of this approach can be expanded without apparent limit (“If a deep relationships core partner indicates the need to serve an entity (in writing), then they should be provided the service, but are not necessarily considered a core partner”). This effectively directs the NWS to provide essentially any service to any entity, without limitation, based upon the discretion of any deep relationships core partner. Such local discretion is the problem area NWS came from in the past few decades and is not a problem area it should be reintroducing through the lack of clarity on IDSS.
- There should be some other procedures in place that are less susceptible to favoritism and/or variable criteria. And, it also seems, at a minimum, there should be substantial and highly unique limits in the ability of business operations, whether profit or non-profit run, to qualify for this type of decision support.



- As currently detailed, this capability is unlimited and negates any mechanisms the NWS has in place to provide limits on the provision of discriminatory and customized services. Such is unsustainable and inappropriate.

The proposed philosophy usurps and duplicates core competencies of AWI

- The proposed approach provides for interactions with core partners and deep relationships core partners that are already provided for by AWI and are within the core competencies of AWI. These include:
 - “Webinars, briefings and email alerts”,
 - “Spot forecasts, plume modeling”,
 - “talks/training/exercises”,
 - “Specialized briefings, emails and graphics”,
 - “On-site deployments”, and
 - “After-action event reviews”.
- Most of these items are not areas of core competency or skills and training of the NWS, nor should they be.
- Shifting resources from NWS core functions to these areas raises the issue of a need for a broader look at the purpose of the agency in general.

Enabled Specialized NWS Services Are Antithetical to Current Operating Understandings in The Weather Enterprise

- The provision of “Specialized briefings, emails, and graphics” is troubling in that it assures that the NWS will provide information in custom formats, may use new forms and formats of services and delivery mechanisms, and will be familiar with users’ needs.
- Custom products and especially those created on the fly create serious concerns regarding integrity, consistency, quality, understandability, usability and transparency and distribution.
- It is unclear how all of these custom products will be made available in real time to the weather industry, the media, and non-favored entities, through established distribution channels in real time. This also is an aspect of transparency. For example, if an embedded meteorologist informs the New



York City emergency management office of a flood inundation level of a certain height and later the inundations surpass that level, how will the AWI and the media know what was predicted in real time by the embedded meteorologist.

- And there is a likelihood that at times the deployed NWS meteorologist would act as a “lone ranger”, rather than consistently following the message from the NWS office. This is an ever present danger.
- The idea that an on-site meteorologist would make a different forecast than the official forecast, do it on the fly, and with limited consultation, and communicated in a similar loose way with little or no documentation goes against the whole concept of a procedure and policy manual on which NOAA and NWS is based. And without such documentation we would have “secret” forecasts as the basis for life and death decisions.
- These situations lead to an agency not speaking with a single, trusted voice. Inevitable media attention and criticism will follow.
- Additionally, NWS manuals and policies have strict requirements in the use of words to avoid confusion. We need to look only to the command decision to stop calling Sandy a hurricane and the concern that caused to understand the confusion that could be caused by dozens of NWS embedded meteorologists in the field using imprecise words on site, to advise in decision making.
- The NWS offices are configured as command centers for uniform public distribution of critical warnings to the public in consistent formats and messaging under strict policies to government agencies.
- The agency is not, and we believe, should not, attempt to reconfigure itself to a dispersed external agency configuration in a one-off, event-driven basis.
- If the agency wants to change its structure from command center to dispersed, dispatched, meteorologists, then a much larger discussion seems in order relative to the concept of the agency itself, its needs, budgets, personnel, etc.

Overall Failure to Properly Consider the Roles in the Weather Enterprise and Endanger Private Sector Jobs

- AWI is not even mentioned directly in the document, and it provides no mention of the valuable function provided by AWI within the American Weather Enterprise. If considered at all within this



proposed philosophy, AWI is lumped together under the category “Members of the electronic media”, which is defined as “parties, and contract agents of parties, who have a need to actively participate in discussions with NWS forecast offices on imminent weather or other hazards, and operate systems that routinely and rapidly relay weather and water watches, advisories, warnings and forecast information to a significant part of the population served by an NWS office. Electronic media includes providers of weather content through electronic information distribution such as radio, television, internet, cellular, and other wireless means.”

- Although AWI is mentioned in one section of the document, the complete role of America’s Weather Industry in providing decision support directly to emergency managers and the broader range of users defined in the document is not well or appropriately understood or articulated in the proposed approach, which causes a failure in understanding how to better assist these people in partnership with AWI.

Essentially Unlimited Service and Discretion

- Although the document notes that “NWS does not intend to provide IDSS to ... general public ... private businesses ... (and) non-government partners of other NOAA line offices”, it defines NWS core partners which would receive this specialized support as “Government and non-government entities which are directly involved in the preparation, dissemination and discussions involving hazardous weather, water, or climate related National Weather Service information that supports decision making for routine or event-driven, high impact events.”
- It goes on to say that “Occasionally, organizations with large populations which are not formally government agencies employ personnel who routinely exercise authorities similar to the public safety officials described above and should be afforded similar support by NWS. With approval of the next highest management level (e.g., Regional management approval for local WFOs/RFCs or NCEP headquarters for NCEP Centers), NWS offices providing IDSS, may extend support to these organizations.”
- As such, the proposed philosophy is overly broad and could therefore be used to justify custom forecasts and on-site NWS meteorologists for nearly any public event, gathering, institution or entity.
- At a minimum, any NWS policy on the provision of these levels of service, such as those envisioned in the proposed philosophy, should be strictly and unambiguously limited to government EMAs and to extreme imminent, life-threatening events.



- Another concern with the proposed philosophy is that it proposes increased competition from the NWS with taxpaying businesses and endangers jobs in the private sector.
- The fact that large numbers of entities appear to be turning to the weather industry, even during weak economic times, indicates that AWI products and services are existent and robust in these areas. Nevertheless, "free" subsidized government services have a considerable appeal to those who do not understand the roles of the AWI and the NWS, and as happened in Canada two decades ago, the AWI and the public and individual choice could be severely and negatively impacted.

The NWS and AWI have reached an understanding as to their respective roles, and this has led to a highly-efficient state where each being able to support the other, to the benefit of the nation. This proposed philosophy seems to expand the NWS role well beyond the current demarcation, an expansion that does not seem justified by any change in circumstances and which the NWS would find difficult to carry out without adversely impacting its core services at times when they are most needed and without adversely impacting AWI and the EMA community it is trying to help.

Accordingly, for all the reasons detailed above, AWCIA strongly opposes the proposed approach to service presented in the NATIONAL WEATHER SERVICE NWS IMPACT-BASED DECISION SUPPORT SERVICES PHILOSOPHY of May 2016.

Thank you for the opportunity to provide comments on the National Weather Service NWS IMPACT-BASED DECISION SUPPORT SERVICES PHILOSOPHY Document of May 2016, and for seeking input from all members of the AWE.

A handwritten signature in black ink, appearing to read "S. Root", enclosed within a large, loopy oval shape.

Steven A. Root, CCM
AMS Fellow
President