Bernard Meier - Letter of Interest Statement

As a Lead Forecaster with the National Weather Service (NWS), my main duties are to protect life and property by issuing forecasts, watches, and warnings for northeast Colorado. A normal shift consists of looking at current data, forecast model data, and collaborating with fellow forecasters to issue a forecast. What is missing in this process is any mention of public perception. What are the societal impacts of an accurate or inaccurate forecast? By attending the WAS*IS workshop, I hope to learn more about the social impact of our products. I also anticipate this workshop will offer ideas and tools to do personal research about the social impact of the weather in our area.

There are a number of specific issues related to the NWS that I believe have significant impact on the public. Research tailored to each issue is important in order to continually learn and improve. The first issue I am interested in is tornado warnings. Specifically, is there a negative impact on the public when a warning has been made and no tornado occurs or it misses the warned area? The second issue I would like to learn more about is the social impact of Red Flag Warnings and Red Flag conditions.

Last year, the Boulder NWS issued 58 tornado warnings. Of these 58 tornado warnings, only 18 were verified. Plus, nine tornados were not warned for. I have noticed that our warnings often cover a large area. A tornado or possible tornado will usually affect a small area. As a result, areas are over-warned or warned unnecessarily. Do people become desensitized when they are warned repeatedly, but nothing occurs? Another issue is that Colorado does not have a state wide warning siren system. It is the responsibility of local governments to decide if and what type of warning system is used. Is this because tornados are not viewed as major threat, or is it because of the "cry wolf syndrome" of over-warning? Obviously, available funding plays an important role in the lack of a state-wide siren warning system. Could something cheaper be designed, but be just as effective?

Red Flag Warnings were created to warn fire fighting agencies and land management agencies that conditions are ideal for wildland fire ignition and propagation. The warnings were only disseminated to these agencies. Over the past five to ten years, Red Flag Warnings have gained attention from the media, public, as well as state and local agencies. I would like to know how city and county fire fighting agencies react when a Red Flag Warning is issued, and/or Red Flag conditions are present. Does staffing increase or stay the same? Do they approach a wildfire differently? At a recent Boulder County Commissioner meeting, commissioners gave preliminary approval for an ordinance to ban most prescribed and agricultural burning in Boulder County when the NWS issues a Red Flag Warning. If someone burns on a Red Flag day they could be fined. I would like to know how a new ordinance will impact local farmers and fire fighting agencies.

A better understanding of the social impacts of these weather events and the corresponding NWS products has the potential to help improve the agency. Based on the proposed research, we may need to change our criteria for issuing tornado and Red Flag Warnings. It is also possible that dissemination methods would need to be modified. Additionally, we may need to change how we educate our customers about these products. We might even find ways to improve our products that have not been considered. The lessons learned from the proposed studies and changes made from them will hopefully give the public a better understanding of our products and result in better weather related decisions.