Analysis of Writing Practices: Business Writing in a Scientific World

Brandon Ryan

For the Classroom

In this essay, the author analyzes the types of business writing conducted at the National Weather Service (NWS) with the view to examining not only how business writing can be classified as scientific writing, but also how such writing practices are conducted in a scientific world. The author notes that a majority of the scientific writing done can also be considered "business writing," especially those organizational pieces of writing such as memos, emails, public service announcements, reports, among others that are used to communicate certain information within the organization or to the general public.

The study adopts a mixed method approach to research. Official documents from the National Weather Service were collected and textually analyzed. Likewise, an interview was conducted to make sense of the analyzed documents. Using Elizabeth Wardle's Activity Theory, the study finds out that the primary purpose the business writings conducted at the NWS were to share information among local offices of the NWS, as well as to inform the teeming population of the United States about the weather condition using tools such as social media and their website.

As a class, identify what you think is the main claim of the author's argument, and choose key examples to support your answer. Compare your chosen claim and examples to those chosen by your classmates. Do they differ significantly? Can you agree on the author's overall takeaways and key examples?

Analysis of Writing Practices: Business Writing in a Scientific World

Brandon Ryan

Abstract
This report discusses and analyzes various types of business writing conducted in the National Weather Service office. This report focuses on three documents provided by Samantha Carr, a meteorologist at the National Weather Service office in Louisville. This report presents an analysis and discussion of each document, as well as an interview between Samantha and me about the various types of business writing done on a shift. The purpose of this report is to inform and educate individuals about the genre-specific types of writing to expect within the workplace and how to approach this writing in a professional and educated manner.

Introduction
In the scientific community, the term "business writing" does not usually come to mind. The type of writing we do is more often than not coined "scientific writing" instead. For me, when I hear business writing, I think emails or inter-departmental memos. Whereas, scientific writing would be case studies or research papers. However, a majority of the scientific writing done can also be considered "business writing". In today's changing society, many scientists struggle to keep up with the business side of their occupation, as it is not generally touched on in the academic setting. The business of the National Weather Service (NWS) is to "provide weather, water, and climate data, forecasts and warnings for the protection of lives and property and enhancement of the national economy" (NOAA, 2003). Within the National Weather Service, one must not only interact with fellow employee's but also the general public, and even companies who wish to utilize the information provided by the NWS.

This study analyzes the type of writing done by forecast meteorologists—an occupation that many undergraduate atmospheric scientists wish to pursue. Highlighting various documents that we do not normally come across in academia will hopefully give some insights as to the kind of writing expected within a professional setting. Samantha Carr was gracious enough to devote her time and energy to explain the kind of writing done on a daily basis as a forecast meteorologist, and how to best prepare for the professional world. Samantha Carr graduated from the University of North Dakota with a Masters in Atmospheric Science. With that, she has been a forecast meteorologist for over a year at the Louisville Office, while also working at NWS Charleston, prior.

Methodology
There were two ways in which this research was conducted. First, a document analysis was employed. I was supplied with three separate documents, 1.) An area forecast discussion, 2.) Shareholders reports, and 3.) Inter-office emails. The Area forecast discussion (AFD) and inter-office emails are both daily types of business writing done within the NWS. The AFD is a product which communicates the type of weather expected over a particular region. This product is published every six hours, in order to stay as current as possible. Inter-office emails cover a large breadth of topics but are important as they communicate anything individuals in the workplace may need to know. Lastly, the shareholders report is an annual report written and shared with individuals who hold stock within the NWS. It is meant to outline how these individuals' investments have been put to use within the NWS. An analysis of these documents provides insights into what choices are made within business writing in the NWS, and how these choices lead to effective communication in the workplace.

Second, an interview with Samantha Carr, a meteorologist at the NWS Office in Louisville, was conducted. In this interview, we discussed the different types of writing she does daily and
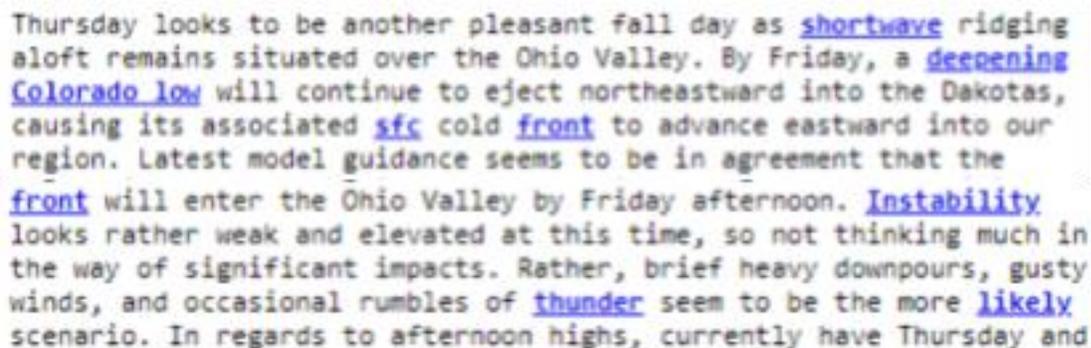
how she goes about completing said writing. Her insights, together with the analysis of these documents, allow the study to draw certain conclusions about the kind of workplace writing done within the NWS, and how to effectively and professionally conduct our writing.

Results

I. Area Forecast Discussion

The first document analyzed was an Area Forecast Discussion, AFD (Appendix A). The Area Forecast Discussion is an analytical report which describes expected weather over a region, in our case it will be central Kentucky. The AFD is one of the most important types of business writing done within the National Weather Service, NWS, and is an integral part of day to day operations within the NWS. Every AFD is written with two components in mind, its purpose and audience. Both of these elements interplay and dictate how the author will write their AFD.

The AFD's primary purpose is to inform the public, the primary audience, about short-term and long-term weather expected over a given region. One thing to note is that the general public (or a layperson) does not normally read the AFD. The public that reads the AFD tends to be other weather-junkies, or individuals, such as students, like myself, within the field. This means meteorologists have to juggle between using jargon and layman's terms in case a layperson happens across the AFD. With all of this in mind, we can better understand why certain choices were made within the document. Primarily, I will discuss how word choice, personality, visual elements, and structure lead to an effective AFD.

Thursday looks to be another pleasant fall day as shortwave ridging aloft remains situated over the Ohio Valley. By Friday, a deepening Colorado low will continue to eject northeastward into the Dakotas, causing its associated sfc cold front to advance eastward into our region. Latest model guidance seems to be in agreement that the front will enter the Ohio Valley by Friday afternoon. Instability looks rather weak and elevated at this time, so not thinking much in the way of significant impacts. Rather, brief heavy downpours, gusty winds, and occasional rumbles of thunder seem to be the more likely scenario. In regards to afternoon highs, currently have Thursday and

Fig. 1: Snippet of Area Forecast Discussion

The excerpt in Fig. 1 is a portion of an AFD written by Samantha Carr. According to Samantha, "I guess that [AFD] is where you can maybe go into more detail, maybe with sentence length, or like, explain the concept more in plain terms, rather than like a very concise short statement with just like a lot of jargon." An example of this is: "Instability looks rather weak…so not thinking much in the way of significant impacts. Rather, brief heavy downpours, gusty winds, and occasional rumbles of thunder." In this, Samantha included a rather scientific term, "instability". So, let us break this down and see why this is an effective excerpt. The first buzzword to note is "significant impacts", which in the context of this sentence is said to be very unlikely. However, at this point we may not know what she means by significant impacts. This is cleared up in the second part of the excerpt. She says that "brief downpours, gusty winds, and thunder…seem more likely". Therefore, we can infer that 1.) Significant impacts are unlikely, and 2.) A significant impact must be stronger [more significant] than the other events listed (heavy downpours, gusty winds, and occasional rumbles of thunder). Therefore, we can determine that weak instability will lead to

weaker events, whereas strong instability would likely lead to "significant impact" events. Thus, in this kind of writing, it is possible to explain a confusing concept by using simple words and examples to lead your reader to a conclusion.

Moreover, Samantha mentioned that the NWS has recently integrated a new, and very helpful feature for writing AFDs. In the excerpt above, there are many highlighted terms in the AFD. This is automatically done after the AFD has been generated. If clicked on, these hyperlinks, which are mainly included on scientific terms, redirect you to the NWS's glossary which contains a definition and example of the term. This is done because it helps the public understand certain concepts without having supplemental explanation. As a writer this is extremely helpful, because you do not have to spend time explaining every single term you use. Although, you can explain some of them, especially if it is relevant to the current weather, it is however not always necessary.

Another important aspect to keep in mind when writing an AFD is the use of geographic locations. In Fig. 1, the locations used are the "Ohio River Valley", and "Dakotas". These provide the public with a point of reference for understanding the weather report. Moreover, this is important for our secondary audience as well. Samantha talked about how they "usually collaborate with other offices", and including these locations helps these other offices in understanding how and when the predicted weather may affect them.

Visually and structurally, all AFDs are required to be the same. As outlined within the Public Weather Forecast Product Specifications publication, "AFDs must contain an introductory heading…such as SHORT TERM and LONG TERM" (Horvitz, 2017), as well as any optional subheadings. More specifics are outlined within this document, however having a rigid set of guidelines does two things: Firstly, it makes the document easy to read and more accessible. For instance, let us look at the font type used in the AFD (Appendix A). One can see that the font is extremely readable, especially because a sans-serif font has been used. An example of this can be seen in Figure 2.

`Well, well, well…how the turntables!(Sans-serif font)`

Well, well, well…how the turntables! (Serif font)

Fig. 2: Example of the same sentence using a serif vs. sans-serif font

Essentially, a sans-serif font does not have extraneous lines, which can be seen, for instance, at the bottom of 'A' or the top of 'M'. Many studies have been done in an attempt to examine the validity of this statement. One such study was done by Dan Boyarski of Carnegie Mellon University in which he and his colleagues conducted a series of reading tests using varying font types. Based on the test, it was concluded that most of the subjects preferred reading the sans-serif font, over a serif font (Boyarski, 1998). Moreover, the use of legible fonts allows individuals to find specific headings more easily. For instance, all AFDs in Louisville are required to include an Aviation weather discussion. Hence, using a legible font type for its specific headings in the AFDs will enable a company like UPS Freights to find relevant information such as weather which would affect air travel in a timely manner.

Secondly, having a rigid set of guidelines helps to create a uniform report throughout the NWS. Leslie Seawright, author of *Genre of Powe*r, outlines why this is important. In her book, she details her experience within the Jackson Police Department, and the writing of police reports within it. She notes, "Jackson PD, unlike other departments, does not have specific requirements on how reports are organized…(whereas) in other departments reports are often written according to very

detailed templates" (Seawright, pg. 8). She goes on to detail how this "freedom in how reports are organized and written" leads to a failure to report key information. This not only leads to disorganization within the office but could also confuse any outside audience that may come across the report. It is critical for the NWS to have this standardized template, especially because there is collaboration not only within the NWS office itself, but also with neighboring NWS offices. Because weather prediction is time sensitive, meteorologists need to know what they are looking for in a timely manner. If each office had its own way of organizing information, there would be valuable time lost just looking for information.

II. Shareholders Report

The next document I analyzed was the NWS Louisville's Annual Shareholders Report (Appendix B). This is a progress report meant to highlight various advances within the NWS to individuals who have invested money into the agency. Although this report is not a daily product, it is a type of writing which carries a lot of authority. Each member of the Louisville Office was tasked with writing a brief passage within the report, explaining a primary project they worked on throughout the year. Samantha, who is the Student Coordinator Lead, wrote about the various student interns the office had throughout the 2018 fiscal year, and what impacts they have had within the NWS.

The primary purpose of this report is to inform and persuade shareholders. The shareholders report needs to show and inform investors that their money is being put to good use. By proving that their money is of value, the report persuades those individuals to continue investing into the NWS. Word choice, formatting, and consideration of rhetorical moves such as ethos, logos, and pathos serve as the basis for analysis for determining the effectiveness of writing the shareholders report.

Samantha begins her report with, "many opportunities exist in the NWS for college students to gain valuable work experience, both as paid scholars and unpaid volunteers. In fact, many current NWS employees began their careers by having participated in such programs." These introductory sentences are extremely effective because they immediately appeal to the readers emotions (pathos). By mentioning that most NWS employees begin as volunteers, Samantha is giving a concrete example as to why the shareholders' continued support is necessary. These sentences also set up stories Samantha will tell later within the report, making the emotional connection even stronger. Samantha includes an infographic in her report, constituting an effective tool for playing to the audiences' emotions.

Fig. 3: Snippet of Shareholder's Report

First, an infographic like this (Fig. 3) breaks up the monotony of a paper. Rather than just having a page filled with words, including this image gives the reader a break, that way they are

more likely to retain the information being presented to them. Moreover, she also decides to include a photo of herself and a student volunteer. John Berger, in his short story *Photographs of Agony*, describes why photography is the most effective emotional medium. He states, "According to them (people), McCullin (Vietnam photographer) serves as an eye we cannot shut…they bring us up to short. The most literal adjective that could be applied to them is *arresting*. We are seized by them" (Berger, 1980). This gives us insight as to why we remember most major events through photography. *The Battle of Iwo Jima*, Nick Ut's *Terror of War*, or Dorothea Lange's *Migrant Mother* are just a few of the countless moments in history we remember through a camera lens.

Photographs are effective because they capture a single moment, and all the emotions which occur within that moment. In Samantha's case, the photograph shows that the NWS's student volunteer program is a positive and fun experience; and gives a visible face to the students mentioned within the report. All of these choices lead to what constitutes an effective and professional report.

III. Inter-Office Emails

The last document I analyzed was an inter-office email (Appendix C). An email is a daily business writing task, which is meant to convey an array of information. Primarily its task is to inform other employees of the NWS about different events, tasks, and news occurring on a daily or weekly basis. The email I was given access to was one of the previous messages sent to every employee of the Louisville Office. In it, it details the addition of three new student volunteers for the spring term and a description of each of the students.

Samantha stated that "it shows how I write casually. When I am writing to students (and other employees), I don't want to seem very intimidating." One thing to note is that the environment within the NWS Louisville office is very unique. From my experience, and accounts of others, many other offices are not as cordial and relaxed as NWS Louisville office when it comes to employee-to-student and employee-to-employee communication. However, because of the environment she is in, Samantha can use a more informal tone in many of her day-to-day emails. One indication of this is her use of the "😊" emoticon in the first paragraph of her email as seen in Fig. 4. Generally, emoticons would not be used in a very serious/professional email.

All,

Since the government shutdown has finally ended (fingers crossed for it to remain open), I am excited to announce that LMK will be hosting 3 Student Volunteers this Spring! I've put together a brief bio for each student below. Enjoy :)

Fig. 4: Snippet of inter-office email (Appendix C)

Samantha also mentioned that not all of her emails take this tone as the tone of her email message depends on whom she is sending such to. She said she would not take as a relaxed tone with John Gordon, the meteorologist in charge. But, since the email was to the entire staff, the more informal approach was acceptable.

Purdue OWL states, "Be sure to open your email with a greeting like Dear Dr. Jones, or Ms. Smith…write clear, short paragraphs and be direct and to the point… be friendly and cordial" — all of which Samantha reaffirms and presents in her own email. She begins her email with "All". While this may not be the best choice, it is perhaps the most effective option because she is emailing a large group of people. She also ensures that her email is succinct and does not unnecessarily waste the readers' time. Her purpose is to inform the staff about incoming student volunteers. She does not need to give a biography on each of the students, rather, one to two sentences are adequate. Lastly, to close her mail, she notes that "I always sign off with best or warm regards. I try not to just do your generic thing. So, I try to make it a little bit more personal. And then I have my signature with, you know, where I work and my phone number, in case they need to get in touch with me." This personal touch, seen in Fig. 5, not only shows she has put

time and effort into her email, but also gives the recipient contact information in case said individual would like to keep in touch.

Best,
Samantha Carr
Meteorologist
NWS Louisville, KY
502.

Fig. 5: Snippet of inter-office email closing (Appendix C)

Discussion
   Now that we know what kind of writing is expected within the NWS, we need to answer a few questions: What purpose does this writing serve, and what outcome does it help achieve? For this, we can primarily use Elizabeth Wardle's, a writing and rhetoric professor at Miami University, Ohio, discussion on *Activity Theory* in order to address these questions.

Tools
Physical things, representations, and systems of symbols (e.g. language and sign) that a subject uses to accomplish an activity

Motives
Purposes, reasons for the activity

Subject
Person or people engaged in activity who are the focus of a study

Object
Immediate goals of activity

Outcome
Long-term goals of activity

Rule
Laws, codes, conventions, customs, and agreements that community members adhere to while engaging in the activity

Community
People who shares knowledge, interests, stakes, and goals to accomplish an activity

Division of labor
How the works in an activity are divided among participants in an activity
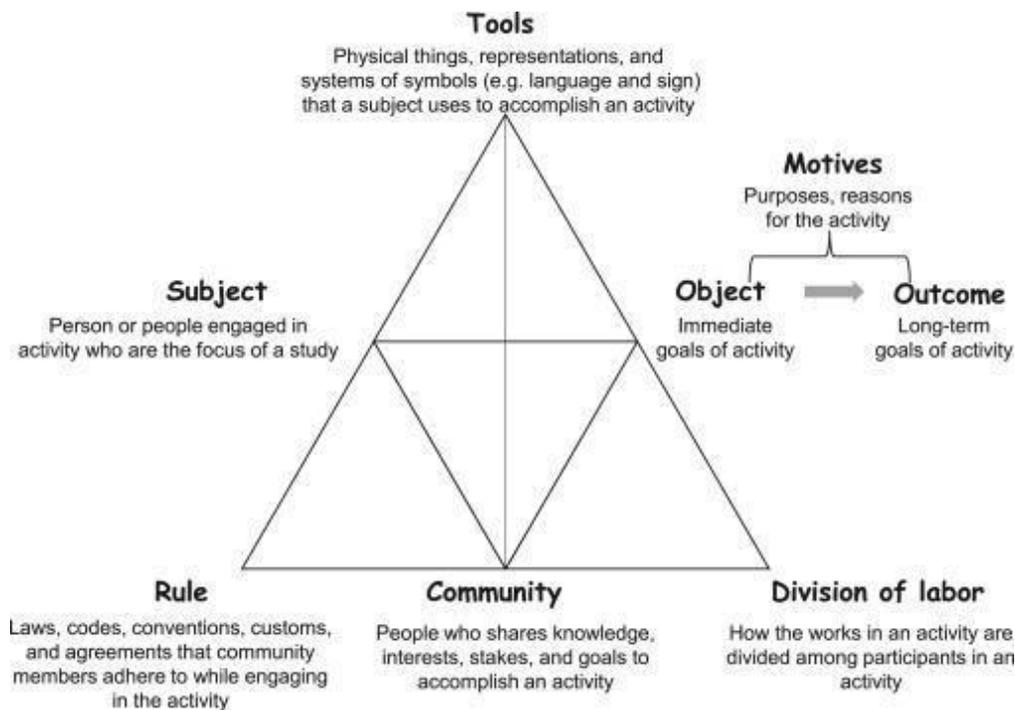
Fig. 6: Diagram outlining Activity Theory (ChulYoonc, 2016)

   First, the purpose of *Activity Theory* is to
        Focus on the relationships among shared activities within communities and individual participant's sometimes competing understandings of motives, conventions, and divisions of labor for

carrying out the activities, provides a framework for understanding the interactions of individuals, groups, and texts, that enables researchers to illustrate the complex interactions among various aspects of an activity system" (Wardle, 2004).

To put it more plainly, *Activity Theory* analyzes how different parts of an environment can influence a desired outcome within a system. As seen in Fig 6, there are multiple aspects of *Activity Theory*, all of which are inter-related and important to understanding how this desired outcome is reached. In this study, our "environment" is the NWS; and our outcome is the NWS's mission, which is to "provide weather, water, and climate data, forecasts and warnings for the protection of life and property and enhancement of the national economy" (NOAA, 2003). There are two key aspects of *Activity Theory* which dictate how effective the NWS's outcome will be, these are tools and community. Analyzing these two aspects specifically can help use answer the research questions.

In the NWS, a multitude of tools are used in order to achieve its desired outcome. For instance, there is a programming software called AWIPS, Advanced Weather Interactive Processing System, which is the cornerstone for meteorologists' forecasts. Other tools include the writing we discussed, as well as some writing I have yet to touch on. I asked Samantha which of the writings she did has the most credibility attached to it. She responded, "I feel like the social media with how much it's taken over that affects our credibility more." According to Nielson, an information and data measurement firm "57 million Americans made checking weather…part of their daily routine in June 2013. Overall, visitors spent an average of 24 minutes per person on these sites, and they checked for updates often—11 visits per person on average."

Moreover, NOAA/NWS were ranked 4th in the list of most visits by unique users. With so many Americans making checking weather a part of their routine, as well as an abundance of resources to get this information, it is important for the NWS to try and reach individuals over multiple platforms. This is especially important because the NWS ranks fairly low on average website visits. The NWS relies heavily on Facebook and Twitter to interact with consumers, in hopes to gain their trust and amass "clicks". At its core, the NWS is a business. Like any company it needs money to continue to operate and provide a service to the American public. More clicks mean more revenue, and more revenue allows the NWS office to continue to provide this service.

Fig. 7: Snippet of NWS tweet (NOAA, 2019)

The tweet above is in regard to a wind advisory for Louisville, Kentucky. The tweet contains a brief description of the event as well as an infographic. The infographic includes how confident

the NWS is of their forecast, depicting what individuals can expect along with extremely strong winds. Moreover, the NWS shows they care about the individual because they include some possible hazards one can expect if they are caught out in the storm. Tweets, such as this, show that the NWS cares about the safety and well-being of the individual, as well as their confidence in their ability to predict the weather. This allows the public to put their trust in the weather service, and therefore, more likely to use their services: NWS Website and social media platforms.

Seawright explains that "the public criticism of law enforcement creates a type of institutional insecurity for officers and their supervisors. Constant scrutiny from lawyers, judges, media, and the public can create an environment of hyper-awareness and fear of judgment in police departments" (pg. 34). This idea of insecurity persists within the world of meteorology; however, it is not to the extent (to what seems like near hysteria) outlined within this police department. Samantha said online information is the most accessible, and easy to digest for the public. So, it is important that everything posted to twitter is double checked and professional because if this information is wrong, they the National Weather Service will get called out.

There are many instances where this has happened and dampened the credibility of the office here in Louisville. This is a big deal because the "weather market" in Louisville, and around the world is so saturated. By that, I mean there are many avenues from where to get your weather updates (apps, T.V. etc). Therefore, if it seems like the NWS is getting the weather wrong a lot, people might no longer depend on them for weather posts on their Twitter and Facebook pages, or their website. That means less revenue, likes, clicks and so on, which could have a lot of implications on the office itself. Therefore, we can see how the public (community) plays a huge part in what writing (tools) will be used, in order for the NWS to achieve a successful outcome.

An interesting avenue of further research could be: How does the public's access to information affect writing styles within the NWS? This could be an interesting topic to delve into because people's attention spans have never been shorter. Further analysis into specific social media posts could give us more insight into this question. For instance, will posts in the future contain any words at all? Perhaps everything will be presented in pictures or infographics. Right now, a majority of weather posts include a graphic representing the weather expected, and the high and low for the day. It would also be interesting to see how further developments in the world of social media and technology will force the NWS to adapt their writing styles.

References

Berger, John. (1980). *About Looking: with 26 Illustrations*. Pantheon.

Boyarski, Dan, et al. (1998, April) "A Study of Fonts Designed for Screen Display." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems – CHI '98*, doi:10.1145/274644.274658.

Carr, Samantha. (2019, September 27). [Personal interview].

ChulYoonc, Wan. (2016, February 2). "Application of Activity Theory to Analysis of Human-Related Accidents: Method and Case Studies." *Reliability Engineering & System Safety*, Elsevier. Retrieved from www.sciencedirect.com/science/article/pii/S0951832016000223.

Nielson. (2013, February 8). "Today's Forecast: Millions of Americans Check The Weather Online." *Nielsen*. Retrieved from www.nielsen.com/us/en/insights/article/2013/today-s-forecast-millions-of-americans-check-the-weather-online/.

NOAA. (2003, April 10). "Mission Statement - NOAA's National Weather Service." *National Weather Service*. Retrieved from www.nws.noaa.gov/mission.php.

NOAA. (2019, November 26). Weather Story. *National Weather Service.* Retrieved from https://www.weather.gov/lmk/weatherstory

Purdue Writing Lab. "Email Etiquette // Purdue Writing Lab." *Purdue Writing Lab*. Retrieved from owl.purdue.edu/owl/general_writing/academic_writing/email_etiquette.html.

Seawright, Leslie. (2017). *Genre of Power: Police Report Writers and Readers in the Justice System*. National Council of Teachers of English, pp. 1-36.

United States, NWS Headquarters, and A. Horvitz. (2017). "WFO Public Weather Forecast Products Specifications", National Weather Service, pp. 1–23.

Wardle, Elizabeth. (2004) "Identity, Authority, and Learning to Write in New Workplaces." *Enculturation* 5.2. Retrieved from http://enculturation.net/5_2/wardle.html.

Appendix A

Area Forecast Discussion
Issued by NWS Louisville, KY

```
463
FXUS63 KLMK 082345
AFDLMK

Area Forecast Discussion
National Weather Service Louisville KY
745 PM EDT Tue Oct 8 2019

...Updated Aviation Discussion...

.Short Term...(This evening through Wednesday)
Issued at 230 PM EDT Tue Oct 8 2019

Easterly flow will continue through Wednesday as strong high
pressure over the Great Lakes retreats east into New England.
Main challenge is fog potential tonight as light winds and clear
skies will be favorable for radiational cooling. Given this
morning`s fog, will give more of a nod to the fog signals in the
guidance and include patchy fog for south-central and east-central
KY where small dewpoint spreads are maintained the longest.  Good
news is that with a warmer start to the evening and temps likely not
crossing over current dewpoints, fog should not be as dense as this
morning. Also enough 850mb moisture to raise the question of cloud
cover, but evening shift will need to watch trends.

Otherwise we`ll have Chamber of Commerce weather with plenty of
afternoon sunshine and mild temps.

.Long Term...(Wednesday night through Tuesday)
Issued at 200 PM EDT Tue Oct 8 2019

Thursday looks to be another pleasant fall day as shortwave ridging
aloft remains situated over the Ohio Valley. By Friday, a deepening
Colorado low will continue to eject northeastward into the Dakotas,
causing its associated sfc cold front to advance eastward into our
region. Latest model guidance seems to be in agreement that the
front will enter the Ohio Valley by Friday afternoon. Instability
looks rather weak and elevated at this time, so not thinking much in
the way of significant impacts. Rather, brief heavy downpours, gusty
winds, and occasional rumbles of thunder seem to be the more likely
scenario. In regards to afternoon highs, currently have Thursday and
Friday reaching the low 80s, however, temps could be a touch cooler
Friday depending on the onset of cloud cover.

By Saturday afternoon, most of the front will have exited the
region, leaving breezy conditions and cooler than normal
temperatures in its wake. In fact, Sunday morning will be quite
chilly, as morning lows across the region will be in the upper 30s!
Otherwise, a sfc high pressure building across the region Sunday
will allow for dry and pleasant conditions to prevail through
Tuesday, with afternoon highs ranging in the upper 60s to low 70s.

&&

.Aviation...(00Z TAF Issuance)
Issued at 745 PM EDT Tue Oct 8 2019

Another interesting forecast is setting up for the overnight. In the
meantime, expect VFR with light NE winds. Focus will be on the
stratus deck over eastern KY, and the expectation that it will
advect westward to LEX by 1-2Z, and possibly to BWG/SDF closer to
dawn. As a result, will forecast MVFR ceilings at LEX by Midnight or
so, with some possible minor vis restrictions toward dawn. A little
more optimistic at BWG/SDF as they should be on the western fringes
of this moisture plume, so only temporary restrictions if at all.
Think HNB has the best chance to stay VFR overnight, but can`t
completely rule out a little MVFR vis restriction toward dawn.

Otherwise, expect Few-Sct cu around 2-3 K feet on Wednesday with a
light E or ESE surface wind.

&&

.LMK WATCHES/WARNINGS/ADVISORIES...
IN...None.
KY...None.
&&

$$

Short Term...RAS
Long Term...SSC
Aviation...BJS
```

APPENDIX B

Students Have an Impact

Samantha Carr, *Meteorologist*

Many opportunities exist in the NWS for college students to gain valuable work experience, both as paid scholars and unpaid volunteers. In fact, many current NWS employees began their careers by having participated in such programs. While the unpaid volunteer opportunities generally are targeted at college students majoring in meteorology or atmospheric science, high school students are welcome to visit our office to shadow forecasters. College students learn about NWS forecast and warning services, network with professionals in the field, assist with storm reports, help conduct storm damage surveys, receive operational training, and develop necessary skills to become competitive in the job market.

In 2018, NWS Louisville was fortunate to host three talented volunteers. Kacy Cleveland, a senior at the University of Louisville, helped MIC John Gordon create an in-depth weather history presentation for college students. Carson Meredith, a senior at Western Kentucky University, helped Forecaster Zack Taylor analyze whether or not our Wind Advisory criteria met the needs of our partners. Lastly, Christopher (CJ) Padgett, also a senior at Western Kentucky University, created NWS Louisville's first interactive GIS story map, which recounts the atmospheric setup and devastation experienced from the March 2, 2012 tornado outbreak, including the Henryville EF-4.

Student Coordinator Samantha Carr and volunteer CJ Padgett

Contact NWS Louisville for student volunteer opportunities

w-lmk.webmaster@noaa.gov

Learn more about Ernest F. Hollings Scholarships

https://www.noaa.gov/office-education/hollings-scholarship

Undergraduates in their sophomore year of college are eligible to apply for the Ernest F. Hollings Scholarship, which includes tuition assistance for two years of full-time study and a 10-week, full-time paid internship at a NOAA facility during the summer between their junior and senior year. Additionally, the scholarship provides funds for each student to attend a professional conference during which they present research findings. After hosting 5 Hollings scholars at NWS Louisville during the summers of 2014-2016, we are looking forward to hosting our 2 new Hollings students, Kristine Chen of the University of Oklahoma and Melissa Piper from Iowa State University, in the summer of 2019.

9

https://www.weather.gov/media/lmk/shareholders/shareholders18.pdf

APPENDIX C

9/22/2019

2019 Spring Volunteers

Samantha Carr - NOAA Federal ██████████   Mon, Jan 28, 9:39 AM

to _NWS

All,

Since the government shutdown has finally ended (fingers crossed for it to remain open), I am excited to announce that LMK will be hosting 3 Student Volunteers this Spring! I've put together a brief bio for each student below. Enjoy :)

Brandon Ryan, a junior at UofL, will be joining us this Spring on Tuesdays from 1pm-7pm. He is a member of UofL's AMS Chapter, where he regularly helps post forecasts on Twitter and Facebook. Upon the completion of his undergraduate work, Brandon aspires to obtain a M.S. degree in Physical Oceanography, and ultimately hopes to work for either NOAA, the NPS, or the EPA in the future.

████████, a senior at UofL, will be joining us this Spring on Wednesdays from 9am-1pm. While Sarah originally started UofL as an engineer major, she slowly, just surely, found her passion for Meteorology along the way. Sarah is also a part of UofL's AMS Chapter, and loves all things weather related. She hopes volunteering will help narrow down her interests, as she would like to attend Graduate School in the near future. Like most, she would love to work for the National Weather Service or the private sector.

████████, a senior at WKU, will be joining us this Spring on Fridays from 9am-5pm. This past summer she was able to intern at the Midwest Regional Climate Center (MRCC), where she further improved her coding (Python) and GIS skills. Bailey is also an active member of WKU's White Squirrel Weather, and a contributor to WxomotBG. While her ultimate goal is to land a job with the National Weather Service, she is still keeping her options open for Graduate School.

Start Dates
Brandon Ryan: Jan 29
████████ Jan 30
████████: Feb 1
***These dates have been added to the Ops Calendar

Additional contact information for these students can be found on the Intranet under Administrative > Students.

Best,
Samantha Carr
Meteorologist
National Weather Service
Louisville, KY