

NIHHIS Southwest Regional Pilot: 2017 Winter Work Streams Meeting Summary

Authors: Sarah LeRoy (University of Arizona), Gregg Garfin (University of Arizona), and Hunter Jones (NOAA)

Introduction

On January 18th, 2017, the working groups (referred to as “work streams”) of the National Integrated Heat Health Information System (NIHHIS) Southwest Pilot Project met in El Paso, Texas, to advance the priorities identified during the July 2016 workshop on “Developing an Integrated Heat Health Information System for Long-Term Resilience to Climate and Weather Extremes in the El Paso-Juárez-Las Cruces Region”. The primary goals of the January 18 meeting were to foster ongoing communication among the work streams, and to plan for the upcoming heat season. The participants developed ideas for new research initiatives, and identified community engagement opportunities, information needs, and approaches for increasing awareness and building capacity to improve preparedness for regional extreme heat episodes. Specific efforts were also focused on finalizing and preparing for heat-health surveys to be distributed in Las-Cruces and El Paso in the spring season.

The following four ideas received the largest support from participants for building awareness of the health risks of extreme heat in the region (see Table 1 at the end of this document for a complete listing of ideas).

1. Developing a heat-health binational task force, with a common mission to identify and address capacity building and public education needs, and to communicate information and messages in both English and Spanish. The task force would be composed of organizations in each of the three cities, including, but not limited to, the offices of sustainability, offices of emergency management, health departments, the Extreme Weather Task Force, school district committees, the U.S.-Mexico Border Health Commission, and the Red de Promotoras Paso del Norte. One immediate goal of the proposed task force would be to develop a curriculum, for promotoras, on awareness of heat-health risks and best individual and household-level practices to address risks. The prospect of gaining certified Continuing Education Units (CEU) would provide incentive for promotoras to participate in training.
2. Connect with local media and the Extreme Weather Task Force (EWTF), to hold a press event. Ensure that messages are also communicated via social media.
3. Hold a “tactical urban-style event,” modeled on El Paso’s *Cycle for Salsa*, in May, where we can distribute materials (e.g., fans or brochures containing heat-health information). Make it a fun event, while demonstrating a tangible example (e.g., planting trees to reduce urban heat effects), and build toward sustained engagement.
4. Make the month of May “Heat Awareness Month” in all three cities. Leverage the EWTF press conference (#2 above) and garner commitments for heat-health proclamations and announcements from the mayors of each city. We will need to connect the sustainability offices in each city to make this happen. This could be combined with other national efforts, such as the U.S. Federal Emergency Management Agency’s (FEMA) heat week.

Work Stream Progress Updates

The meeting began with a progress update from each of the work streams, which led to fruitful discussion and ideas for further progress. Below are summaries from discussion of each group.

Work Stream A: Historical Climatology and Vulnerability (Hist. Clim. & Vuln.)

This work stream is developing several outputs aimed at creating a baseline of existing public health and weather/climate data and expertise in the region. In addition to catalogs of this information, the group is gathering related literature and other resources (e.g., websites), and is planning to create a resource document outlining the heat/health issue in the region, including its impacts. This resource document would contain background information and language that can be used in grant applications.

Work Stream B: Linkages between Heat Parameters and Health Outcomes (Heat/Health)

At the workshop in July 2016, it was revealed that there is a perception in the region that heat is not an issue. This led to the design of a community vulnerability survey by the *Heat/Health* work stream, in collaboration with the *Communication and Engagement* group (Work Stream D). Jenny Hernandez (El Paso Office of Resilience and Sustainability) in the *Communication and Engagement* group is spearheading the survey in El Paso, Lisa LaRocque (Las Cruces Office of Sustainability) in the *Heat/Health* group is spearheading a survey in Las Cruces, and the Oficina de Resiliencia Juárez (represented at the work streams meeting by Diana Talavera) will distribute a survey there once they get feedback from the other two surveys. To help with survey distribution in El Paso, Margie Resendez at 2-1-1 offered to ask survey questions when residents call the department requesting fans distributed by the Extreme Weather Task Force. The support staff could ask survey questions, or questions related to background research (e.g., to help determine where vulnerable populations are located).

Further discussion related to the surveys focused on outdoor workers. According to the Office of Emergency Management, many outdoor workers in El Paso refuse to go to the hospital, because they are from Ciudad Juárez and don't have health insurance, are here illegally, or they don't want to lose their job. Because of these issues, several participants suggested including survey questions related to occupation and outdoor workers, for example: "Are you allowed to take breaks while working outside for work?" or "When you experienced illness due to heat, were you working outside?" Since this would add several new questions to the survey, it was suggested that the vulnerability survey move forward as is, but that more targeted surveys be designed and distributed when more funding becomes available.

The other main point of discussion during the progress report by the *Heat/Health* work stream concerned the ability to gather health data. It is costly and hard to find, and the group is looking

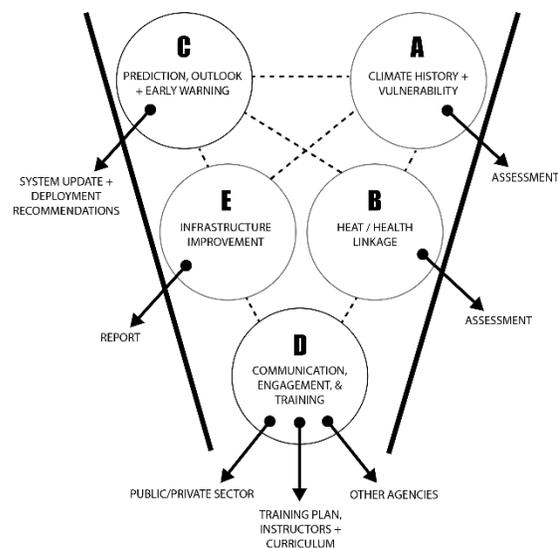


Figure 1. NIHHIS Southwest Pilot Work Streams

for funding sources to collect this type of data, and further developing a running list of sources of available health data. Two potential opportunities illuminated during discussion are working with the El Paso Department of Health, and with the El Paso Office of Emergency Management, which has a database of extreme-heat related calls. To obtain data from the Department of Health, it would be best to have a specific research project to present to them.

Work Stream C: Prediction, Outlooks, Early Warning (Predictions)

This group is trying to build capacity to use seasonal and longer-range forecasts, and to customize forecast information for different needs. To do this, they need help and input from the other work streams about what decisions are made and the concrete requirements for the types of predictions that are needed. For example, Patrick Stafford (New Mexico Department of Health) has connected with Home Medical Equipment (HME)—a company that provides and delivers medical equipment to people’s homes. If there is a power outage, it is harder for them to provide the appropriate equipment to their clients. The *Predictions* group is working on determining the kinds of predictions that would be useful to this company. In this vein, this work stream is also working with El Paso Electric to learn about opportunities to better prepare energy companies to cope with extreme heat through demand management.

The group is also trying to integrate new extreme heat predictions, that Augustin Vintzileos (NOAA, Univ. of Maryland) is developing, into the operational NWS operational requirements that already exist in the El Paso-Ciudad Juárez-Las Cruces region, and to use the area as a testbed for new forecasts and information. Lastly, the group is thinking about long-term weather and climate changes, such as those that impact building codes, but they are finding it difficult to gain people’s interest and attention to discuss issues that encompass these longer time scales. It was suggested that the group talk with Anne Stoner (Texas Tech University) who has funding from the National Science Foundation to study climate changes and infrastructure.

Work Stream D: Communication and Engagement

As described in the progress update of the *Heat/Health* group, the *Communication & Engagement* group is focused on designing and developing a community vulnerability survey for El Paso. They have recruited Edward Ramirez (UTEP Department of Marketing and Management) to review the survey and continue work on it. Dr. Ramirez will also help with the Institutional Review Board (IRB) process. The group plans to distribute the survey in April; they will have a quick summary of the results by the beginning of May and full results by the end of May. The bilingual survey will be launched through the UTEP survey distribution, an online pdf, and in paper form. Bea Martinez (Texas State Health Department) explained that the promotoras network could help with distribution, but they will need incentives. It was also suggested that we create an incentive for people to take the survey (e.g., they will be entered into a raffle, for which there is a worthwhile prize).

Work Stream E: Capacity Building and Training (Cap. Buil. & Train.)

The *Cap. Buil. & Train.* group has had trouble recruiting participants, and this could be partly due to the fact that the group is so closely related to the *Communication & Engagement* group. It was suggested that these two groups combine into one work stream, which was later approved by the steering committee. The group has successfully recruited participation by the Oficina de

Resiliencia Juárez. Diana Talavera, from the Oficina de Resiliencia Juárez, explained that there has recently been a large change in the Juárez administration, but their office is presenting this project to the new administration, who is very engaged, to begin this work in Ciudad Juárez.

To contribute to an overall assessment, and the catalogs being compiled by Work Stream A, the group is considering developing a database of existing capacity in the region (e.g., AYUDA, promotoras network, etc.), that will also help to identify gaps and needs. The County of El Paso has a database of all organizations that will help with development of the database. The El Paso Department of Health already distributes information about extreme heat at the end of the summer, and it would be helpful to have a large database. But questions arose, such as: “Who is going to do this?” “What is the information to give them?” “Who is going to pay for it?” The question of funding was a major theme throughout the meeting, as funding is important for a sense of responsibility and crucial for motivation. It was also suggested that this work stream define those segments of the population that can do trainings, such as promotoras or school teachers. Training groups, such as business owners and sports departments might also prove useful.

Work Stream F: Infrastructure Improvement

The purpose of the *Infrastructure Improvement* work stream is to make recommendations for mitigating the urban heat island effect (UHI), based on the best practices of other cities and research on the design of the built environment. Raed Aldouri (UTEP) presented information on Landsat data and UHI maps for El Paso. The areas of El Paso with the largest UHI are downtown, the Mesa corridor, and the colonias outside of town. Representatives from the El Paso Metropolitan Planning Organization (MPO) (Alexandra Riccillo, Claudia Valles, and Marketa Vavrova) presented information from a recent report that addresses the UHI and other issues for the city, such as street-level ozone pollution (which can cause respiratory illnesses and exacerbate heat-related health risks), and illustrates the increase in demand for electricity (about 2%) for every increase in degree F.

The group has reached out to UTEP, TTU, Border Environment Corporation Commission (BECC), the El Paso MPO, the Texas Department of Transportation, and the local capital improvement department. They ultimately hope to inform physical design and budget decisions, and educate professionals, such as landscape architects, on green infrastructure techniques. The group aims to frame the issue in terms of dollars (not climate change or moral obligation), and where the most effective investments can be made. They also hope to dovetail efforts with a recent transportation plan that was developed by an Urban Land Institute (ULI) panel.

2017 Heat Season Planning

During breakout groups, each work stream brainstormed ideas for raising awareness of extreme heat in the region, and in particular they focused on efforts that can be implemented prior to the next heat season, in May, 2017. The following table lists all of the ideas, ranked according to popularity amongst the participants.

Table 1: Votes from participants for outreach and community engagement ideas.

Idea	Votes
Formalize heat-health binational task force with common message in both English/Spanish (including development of a curriculum that can train promotoras through CEUs)	17
Connect with media and EWTF Press Event (Local TV/Social Media)	12
Tactical urban style event (like Cycle for Salsa) – can distribute outputs	10
Make May Heat Awareness Month in all 3 cities (with proclamation from mayors – leverage EWTF Press Conference)	9
Celebrity Video (local congressmen, local athletes (UTEP?), Chico the Chihuahua)	7
Outreach via clinics, foundations, centers	6
Fans with messages, to be passed out events (including, e.g., baseball games)	5
Targeted predictions for vulnerable populations messaging (provide information to key players, e.g., utilities, pharmacies)	5
Materials (e.g., factsheets, comics) and distribute at schools and businesses	3
Outreach materials related to kids/pets in cars (e.g., NWS)	2
Earlier and more specific PSAs (prepare 2-1-1 staffing, sports and military training schedule)	2
Evaluation of evaporative cooling vs. A/C	1
Radio advertisements	0
Billboards	0
Better messaging related to heat index/length of time it takes to get heat stroke at certain temperatures	0

Steering Committee Debrief

Immediately following the work streams meeting, the steering committee met to debrief from the day and plan a path forward, taking into account the ideas and thoughts from the meeting, and endorsing the highest priorities identified by participants (Table 1—top four items). The points below are additional steps to move forward, determined by the steering committee:

- Combine the *Communication and Engagement* (D) and *Capacity Building and Training* (E) work streams into one group. This would make Work Stream D *Communication, Engagement and Training*, and Work Stream E *Infrastructure Improvement*.
- To address the issue of “hidden data”—people being affected by extreme heat but it not being recorded due to various factors, such as fear of deportation or job loss—the committee will work with the Office of Emergency Management to gather data on calls related to extreme heat, including if they refuse to be taken to the hospital. Funding for this work could come from the National Institutes of Health (NIH).
- Create a project website, to provide an online presence for the project when applying for funding opportunities. The website will also be a connection between project partners and the public, and a tool for project partners to communicate with each other. Suggestions for what the website should include are:
 - Project description and map of area, including description of NIHHIS
 - Brief biographies of the steering committee and work stream members, including links to their institutional pages

- Upcoming events, such as workshops or public events
 - Chat forum for project partners to share ideas
 - Safety tips for the public, on what to do during extreme heat
 - Method for joining and participating in the initiative
- Create a database of funding opportunities, including due dates, and send opportunities to the steering committee and work streams every two months
 - Look at NIH for funding opportunities related to creating curriculum for CEUs for promotoras
 - Submit proposal to Haury Program in Environment and Social Justice at the University of Arizona
 - Submit proposal to NASA DEVELOP project to develop UHI and vulnerability maps for Las Cruces
- Develop a white paper on key unmet needs, research questions, data issues (e.g., issue of hidden data described above), and existing and potential connections