PART 2
INTERFERENCE WITH HUMANITARIAN AID

DEATH & DISAPPEARANCE ON THE US-MEXICO BORDER

Part II: Interference with Humanitarian Aid
Death and Disappearance on the US–Mexico Border

Slashed gallons of water

Miguel, a 37-year-old man from Sinaloa, tried to cross the US–Mexico border on four separate occasions, each time walking between seven and eight days. On each of these trips he saw food and water gallons left out on trails. On the third day of one of his trips, he came across water gallons that had been vandalized:

> *"Yes. I saw the water bottles stabbed. They break the bottles so you can't even use them to fill up in the tanks. I needed water, some of the other people in the group needed water, but we found them destroyed. [I felt] helplessness, rage. They [the US Border Patrol] must hate us. It's their work to capture us, but we are humans. And they don't treat us like humans. It's hate is what it is. They break the bottles out of hate."*[1]

In the desert of the Arizona–Mexico borderlands, where thousands of people die of dehydration and heat-related illness, Border Patrol agents are destroying gallons of water intended for border crossers. Border Patrol agents stab, stomp, kick, drain, and confiscate the bottles of water that humanitarian-aid volunteers leave along known migrant routes in the Arizona desert. These actions condemn border crossers to suffering, death, and disappearance. **In data collected by No More Deaths from 2012 to 2015, we find that at least 3,586 gallon jugs of water were destroyed in an approximately 800-square-mile desert corridor near Arivaca, Arizona.**

1 Personal interview, September 20, 2016, Nogales, Sonora, Mexico.

Furthermore, Border Patrol agents in the Arizona borderlands routinely intimidate, harass, and surveil humanitarian-aid volunteers, thus impeding the administration of humanitarian aid. These actions call into question the Border Patrol's own claims to be humanitarian. The practice of destruction of and interference with aid is not the deviant behavior of a few rogue Border Patrol agents, it is a systemic feature of enforcement practices in the borderlands and a logical extension of the broader strategy of Prevention Through Deterrence. According to the logic of Prevention Through Deterrence[1], anything that makes the journey more dangerous or difficult for border crossers could be considered a reasonable tactic for enforcement, including the vandalization of safe drinking water.[2] While humanitarian-aid volunteers attempt to mitigate the crisis of death and disappearance, Border Patrol agents routinely sabotage this work and maximize the suffering of border crossers.

Part II of this three-part report series documents the interference with and obstruction of humanitarian-aid efforts in the Arivaca migration corridor in the Arizona borderlands. *Interference with Humanitarian Aid: Death and Disappearance on the US-Mexico Border* is divided into four sections.

The first section establishes the critical role that the provision of humanitarian aid plays in mitigating death and suffering for those crossing the US–Mexico border. An understanding of the perils of the border crossing, the deadly logic of Prevention Through Deterrence, and the medical consequences of dehydration and exposure to the elements are necessary to understand why people are dying and disappearing along the border.

The second section explores the vandalization of the water drops established by No More Deaths volunteers in the remote borderlands of Arizona. Drawing on data collected by volunteers over a three-year period, we use a Geographic Information Systems (GIS) analysis to provide evidence that Border Patrol agents are the most likely actor responsible for the destruction of water provisions. We also use GIS analyses to establish the potential consequences of these actions for border crossers.

The third section documents the obstruction of humanitarian-aid efforts. Testimonies offered by No More Deaths volunteers reveal the extent to which law-enforcement agencies have targeted humanitarian volunteers, preventing border crossers from accessing lifesaving resources and medical aid in the remote regions of the borderlands.

Finally, we demonstrate the need for a non-enforcement related response to the crisis of deaths and disappearances along the US–Mexico border. We demand the dismantling of the border-enforcement agencies and an end to the policies responsible for this human-made crisis. We also call for an end to interference with humanitarian aid.

1 US Border Patrol, Border Patrol Strategic Plan: 1994 and Beyond, July 1994, http://cw.routledge.com/textbooks/9780415996945/gov-docs/1994.pdf.

2 See the introduction to this report series for further analysis of Prevention Through Deterrence.

Data Sources

The data sources used in this report include logbook entries of all water drops serviced by No More Deaths during a three-year period; interviews with border crossers both at the No More Deaths remote aid station and in Nogales, Sonora, Mexico; and testimonies given by long-term No More Deaths volunteers.

GIS Analysis

Relying on logbook data provided by No More Deaths volunteers, a GIS-data-analysis team undertook to answer the following research questions: What is the extent of destruction at water-drop sites? What are the patterns of destruction and what can we infer from these patterns? We also used GIS analysis to explore some of the costs of Prevention Through Deterrence, specifically the caloric cost of crossing on foot through the rugged border landscape. This analysis then sheds light on how water vandalization works to maximize the hardship and suffering inflicted on border crossers.

Interviews with Border Crossers

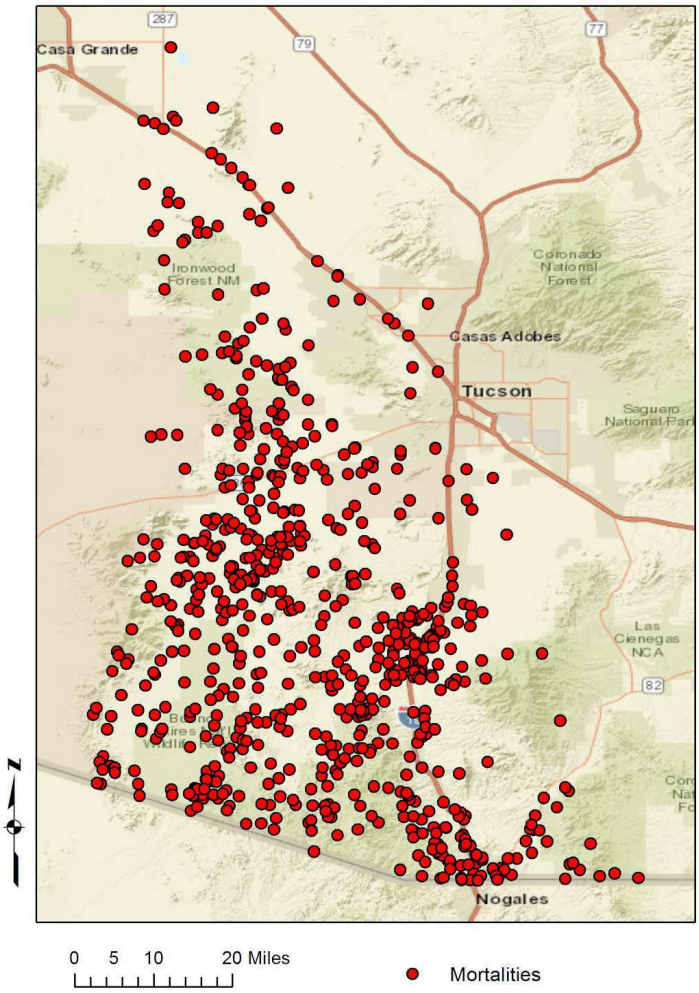
While the GIS data analysis reveals measurable patterns of water vandalism, we also value the personal experiences of those crossing the border. We include quotes and narratives offered to us by border crossers who we met both at the No More Deaths remote aid station and in Nogales, Sonora, Mexico to further illustrate the impacts and consequences of vandalizing water drops and obstructing humanitarian-aid efforts. These personal testimonies are included with express consent from the individual. All names have been changed or withheld to protect the anonymity of those quoted.

Testimonies from Long-Term Volunteers

Currently, No More Deaths does not have a formal documentation method for instances when volunteers experience law-enforcement harassment, surveillance, or obstruction while providing aid in the field. So to gain a more thorough understanding of the scope of these violations, we conducted interviews with 10 long-term volunteers.[1]

1 For the purpose of this study, long-term volunteer was defined as someone who had actively worked with the organization for five years or more.

Background: The Need for Humanitarian Aid



Map of study area with recovered human remains, 2012–2015

"The reality is you're looking at 114 degree temperatures, this very rugged terrain that you see behind us, and once they cross the border, many times they're abandoned there and left vulnerable to the elements."
—Manuel Padilla, Jr., Border Patrol Tucson Sector Chief, 2013–2015[1]

Over the last two decades, the remains of at least 7,000 people[2] have been recovered in the United States borderlands. During the three-year period of data collection for this study (FY2012–2015), the Pima County Office of the Medical Examiner received the remains of at least 593 border crossers.[3] The

1 "Border Patrol Rescue Beacons Let Immigrants Call for Help," Fox News, May 1, 2014, www.foxnews.com/us/2014/05/01/border-patrol-beacons-let-immigrants-call-for-help.html.

2 According to the US Border Patrol, 6,915 remains of people presumed to be migrants were recovered along the border between FY1998 and FY2016. According to the International Organization for Migration (https://missingmigrants.iom.int/), at least 239 migrant remains have been recovered in 2017 as of July 31, an increase over the same period last year despite drastically lower numbers of apprehensions.

3 Due to the remoteness of the terrain where people are crossing, only a fraction of those who perish in the desert are discovered, and those who are never found are considered disappeared.

cause of death in the majority of these cases is exposure to the elements, which includes extreme heat and cold, as well as dehydration from lack of access to water.

Medical professionals recommend that border crossers drink between 5 and 12 liters (1.3–3.1 gallons) of water daily depending on conditions, according to one study. However, because water sources are scarce, border crossers rely on water they can carry, which is rarely more than 7 liters (2 gallons) for the entire journey.[1] The quickest a border crosser in the Arivaca corridor could complete their journey is approximately four days. However, it is common for the journey to take much longer than that, and No More Deaths volunteers encounter border crossers who have been in the desert anywhere from over a week to nearly a month.

As we explore in the introduction to this report series, the policy of Prevention Through Deterrence ushered in the construction of more segments of border wall, bolstered the presence of armed agents, expanded the network of internal highway checkpoints, and developed surveillance technology in urban areas along the international boundary. The effect has been to funnel border crossers into "more hostile"[2] and remote terrain, as well as greatly extending the length of the journey. In Southern Arizona, these policing methods have intentionally pushed unauthorized migration into the far reaches of the Sonoran Desert—an extremely arid, sparsely populated region with few natural water sources. In the summer months this area of the desert regularly experiences temperatures over 100 degrees

1 S. J. Montain, M. Ely, W. R. Santee, and K. Friedl, Water Requirements and Soldier Hydration, Washington, DC: Borden Institute, 2010.

2 This language is taken directly from the Border Patrol's 1994 strategic plan: "The prediction is that with traditional entry and smuggling routes disrupted, illegal traffic will be deterred, or forced over more hostile terrain, less suited for crossing and more suited for enforcement." US Border Patrol, Border Patrol Strategic Plan: 1994 and Beyond, July 1994, http://cw.routledge.com/textbooks/9780415996945/gov-docs/1994.pdf.

Fahrenheit. Of the limited water sources that do exist, most are contaminated cattle tanks or other stagnant pools that, if drunk from, are likely to cause serious illness. Given the staggering length and ruggedness of the journey, it is physically impossible for anyone attempting to cross the border on foot to carry enough water and food supplies to survive. As a result, thousands of border crossers have died of thirst in the open desert.

In response to this crisis, humanitarian-aid volunteers have worked since at least 2002 to deliver caches of water and food to the most arid and remote regions of the Southern Arizona desert. **From 2012 to 2015, No More Deaths alone distributed over 31,558 gallon jugs of water on migration trails.** Over 86% of this water was used. This high level of water use underscores the urgent need for access to water in the borderlands.

The purpose of humanitarian aid is to save lives, alleviate suffering, and maintain human dignity after or during human-made crises and natural disasters. A short-term response intended as a stopgap until long-term relief is provided, No More Deaths' provision of water sources in the desert is a matter of basic life support.

When two men from Guatemala were preparing to cross into the United States from Sasabe, Sonora, Mexico, they were told that they would see destroyed water gallons on the journey. Later, humanitarian-aid workers encountered them in the field and the two men told this story:

During their crossing, US Border Patrol agents chased the men for half a day, forcing them to drop their supplies. When they tried to circle back around to where they had dropped their supplies during the chase, they found their belongings destroyed: the water was dumped out and the food strewn all over the ground. The Border Patrol also cut the straps of their backpacks so they could no longer use them. When asked why they thought the Border Patrol destroys food and water left for border crossers, they said:

> *They want to kill us. They are murderers. They treat us no better than animals. They know that without food and without water and without rest we will die. We are dogs to them. We have families, and they have families too but they never think of that, or see that we could be the same as them. The difference is that they [US Border Patrol agents] don't have to leave their homes because they have what they need here [in the United States] . . . It's not that people are dying, they are killing us. We are being killed.*[2]

The Destruction of Water

The data presented below was gathered over a 46-month period, from March 2012 to December 2015, by No More Deaths humanitarian-aid volunteers[1] who leave food and water on trails for those crossing the Sonoran Desert on foot. We refer to each location where we leave food and water as a water-drop site. In the time period examined in this report, every visit to a water-drop site was logged and the following information was recorded: the number of gallons found unused, the number that had clearly been vandalized, and the number of new gallons that were added. The analysis presented below is based on data from 139 water-drop sites distributed across an approximately 800-square-mile area of the Sonoran Desert southwest of Tucson, Arizona. For more information on methodology, see the appendix.

1 Many other organizations leave out food and water for people crossing the border. Humane Borders, the Tucson Samaritans, the South Texas Human Rights Center, and Border Angels are a few of these.

2 Anonymous, personal interview, September 21, 2016, Arivaca, Arizona.

In addition to vandalism of water jugs, No More Deaths also frequently finds cans of beans that have been dumped out or stabbed so the beans inside rot. Border crossers encountered by volunteers have often gone days without food.

Findings

During the 46-month period covered in this study, No More Deaths recorded 5,187 events—instances of volunteers servicing a particular water-drop site—during which volunteers placed a total of 31,558 water gallons along migrant trails in remote stretches of the Sonoran Desert. Of the distributed 31,558 gallons, records indicate that 27,439 gallons were used by those in need of water. On average, 5.4 gallons were found to have been used by border crossers on each visit to each site.

Occasionally, unused gallons of water were destroyed by birds, cattle, and other animals. A total of 533 gallons of water showed telltale signs of animal damage. The vast majority of destroyed gallons, however, were destroyed by people. We refer to this human-caused destruction as *vandalism*.

Vandalized Water Gallons

No More Deaths volunteers found water gallons vandalized a total of 415 times during our study period, or more than twice a week on average. In all, 3,586 gallons of water were vandalized during this time period.

Who Is Likely Responsible for Vandalizing Humanitarian Aid?

Hunters, hikers, birders, members of militia groups, ranchers, forest-service personnel, and wildlife-refuge personnel—as well as local residents—are all present in the area where No More Deaths works. There is limited reliable data we can collect that would catalogue the activities of all of these different actors. Although it is likely that multiple actors are responsible for the destruction of humanitarian aid at our water-drop sites, the results of our GIS data analysis indicate that US Border Patrol agents likely are the most consistent actors. We have arrived at this conclusion by using a series of statistical tests combining the logbook data with information about land jurisdiction and hunting seasons. Each geographical variable we looked at is keyed to the locations of the vandalized water-drop sites and the

time of visits to those sites. These tests clearly identify patterns of vandalism that are extensive across space and time.

Differences in land jurisdiction help us narrow down who is vandalizing humanitarian aid by asking the question, **Does vandalism occur more frequently on land where only some actors have access?**

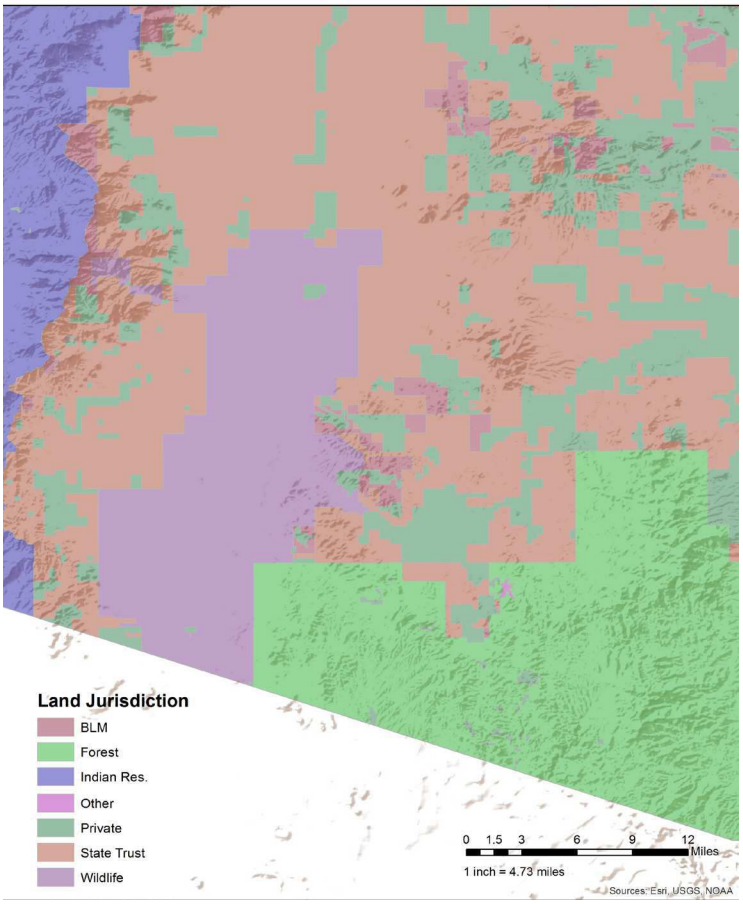
No More Deaths places water at drop sites in three different land jurisdictions in the Arivaca corridor: the Coronado National Forest (accessed by National Forest Service personnel, hunters, and militia), Arizona State Trust land (accessed by ranchers and miners), and private land (accessed by the landowners). In order to answer this question, we compared the three different land jurisdictions according to two normalized measurements[1] of humanitarian-aid vandalism.

1. Frequency of vandalism of water-drop sites
2. Volume of vandalism in gallons

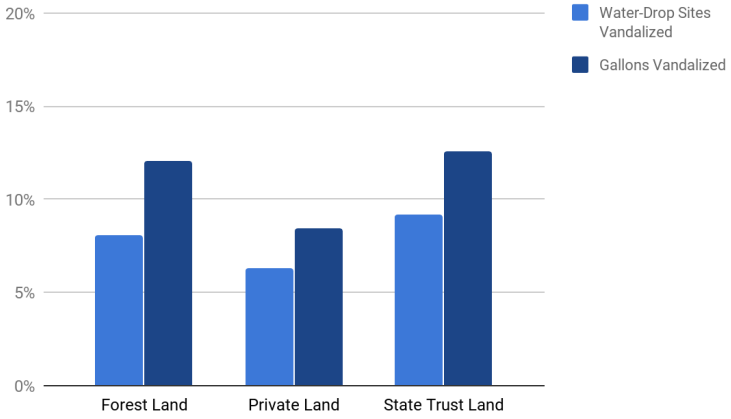
By either one of the two ways of measuring water-gallon vandalism, there is no statistically significant difference in vandalism according to land jurisdiction. In other words, vandalism is happening at a similar rate across land jurisdictions. The US Border Patrol is the only group that has regular access to and is consistently present in all three land jurisdictions.[2]

The second data set we examined was vandalism rates during hunting season in comparison to vandalism rates during the off-season, in order to answer the question, **How much humanitarian-aid vandalism is attributable to hunters?**

Land Jurisdiction in the Altar Valley



Vandalism Rates by Land Jurisdiction

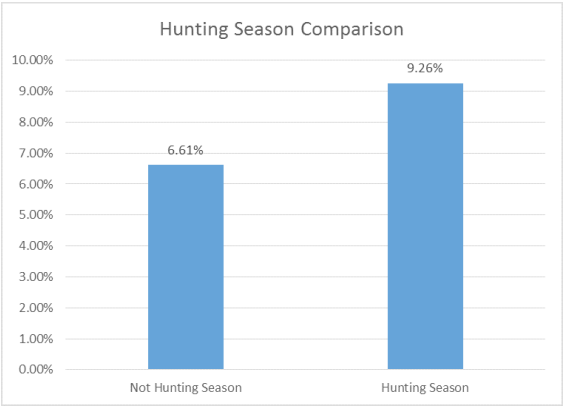


The area where we provide humanitarian aid is split into three hunting zones within Region V of the

1 See the appendix on methodology for more information on how each of these values was measured.

2 Section 287 of the US Immigration and Nationality Act gives the US Border Patrol "access to private lands . . . for the purpose of patrolling the border to prevent the illegal entry of aliens into the United States" within 25 miles of the international border.

Arizona Statewide Management Map.[1] Each of these hunting zones has distinct but overlapping hunting seasons depending on targeted species.[2] We found that during hunting season there is a vandalism-event rate at our water-drop sites of 9.3%. During the off-season for hunting, we find that there is a vandalism-event rate of 6.6%. This change in the rate of vandalism does indicate that recreational hunters play a role in vandalism. However, the baseline vandalism rate of 6.6% is especially interesting. This baseline rate, which persists even when there is no authorized hunting, demonstrates that hunters are not responsible for the majority of the destruction.



Several of the No More Deaths volunteers interviewed for this report discussed experiences where Border Patrol vehicles or agents were seen near a drop, or were seen on the trail hiking away from a water-drop site that was immediately afterward found to have been vandalized. While this is only anecdotal evidence, it is a common experience. On many of the trails where No More Deaths volunteers find water vandalized, Border Patrol agents are not only the most consistent but the only other people to frequent the area aside from border crossers. One volunteer reported being in a group that was stopped and questioned by two Border Patrol agents on a trail close to a drop site. When the volunteers continued to their water-drop site, they found recently slashed bottles and cans of beans dumped out. On another occasion, volunteers were out on patrol when Border Patrol agents approached their truck on ATVs and proceeded to detain and question the volunteers for around 20 minutes. One of the volunteers reported:

> *"[The agents] had come from the direction of where this person [a border crosser] had died and we had left water there. At the spot where he had died there's a cross. And when we went back there [the water] was slashed . . . It was the worst heat I have ever been in in the desert."*

Which Actor Is Capable of the Scope of Vandalism Recorded in the Arivaca Corridor?

As reflected in the analysis above, it is not our claim that the US Border Patrol is exclusively responsible for the vandalism of water supplies. In addition to hunters, we know that other actors in the area are periodically involved in destroying water. For instance, there is a small right-wing militia group with occasional presence near Arivaca, Arizona that publicized destroying humanitarian aid during the time period in which this data was collected. However, this militia presence was sporadic and generally confined to a small geographic area. Given the scope of destruction, we conclude that the only actors with a sufficiently large and consistent presence across a sufficiently wide area of the desert, during periods when hunting is both authorized and prohibited, are agents of the US Border Patrol.

In addition to the statistical analysis above, No More Deaths volunteers have ample anecdotal evidence of US Border Patrol agents destroying and confiscating humanitarian supplies, including multiple eyewitness accounts of agents pouring out or destroying water supplies and four separate occasions when this vandalism was caught on video (see pictures on pg 10).

1 Provided by the Arizona Game and Fish Department. See https://www.azgfd.com/hunting/units/.

2 For the sake of this analysis, we defined hunting season as any month during which any hunting of any species was authorized.

Documentation of Vandalism:

Border Patrol agent pouring out water left for border crossers, 2010

Border Patrol agent kicking water gallons left for border crossers, 2012

Border Patrol agent removing blanket left out for border crossers, 2017

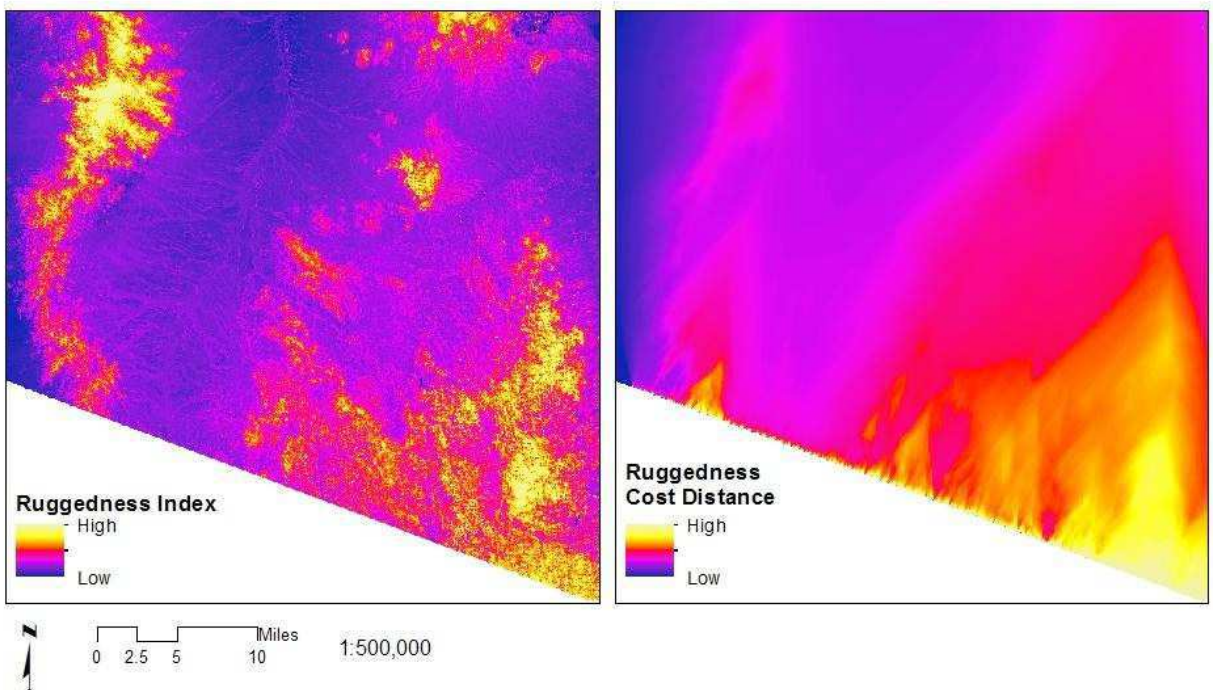
Border Patrol agent stabbing water gallons left for border crossers, 2017

Our analysis leads us to believe that Border Patrol agents engage in regular and widespread destruction of water supplies with little or no apparent consequence. The de facto state sanctioning of the destruction of humanitarian-aid supplies devalues the lives of border crossers and encourages other actors in the region to do the same.

Ruggedness and Caloric Cost

The destruction of humanitarian aid impacts the lives and well-being of border crossers. To quantify this impact we used the tools available through GIS analysis. Analyzing the terrain of the Arivaca corridor (accomplished via a ruggedness index) and the physiological difficulty of crossing this terrain on foot (referred to here as caloric cost) offers an understanding of the everyday harm and suffering imposed by the Border Patrol's strategy of Prevention Through Deterrence; applying these measurements of ruggedness and caloric cost to the water-drop sites that are most consistently vandalized demonstrates the specific contribution of water vandalization.

The ruggedness index was arrived at by calculating distance and exposure using various spatial data. These include pixel-level values for ground cover, slope, jaggedness of terrain (change in slope), and average daytime temperature (in July, consistently the hottest and deadliest month in Southern Arizona). As an alternative to Euclidian distance ("as the crow flies"), we calculated a cost distance (CD) using this ruggedness index to show the difficulty of traversing the landscape to reach any given point following a direct route from the international border.[2]

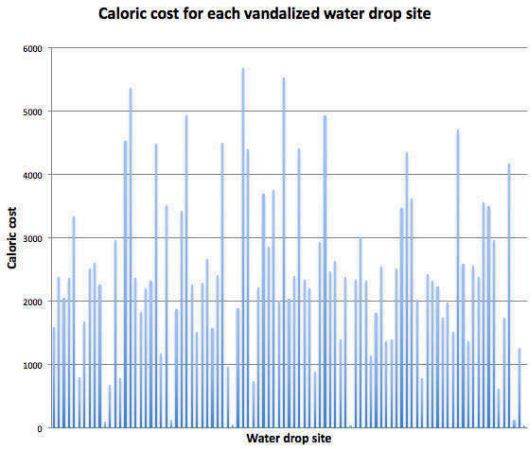


To provide a measurement of the physiological difficulty of traversing this rugged landscape we converted cumulative ruggedness-cost distance to a measurement of caloric expenditure (what we call

1 Anonymous, personal interview, August 2014, Tucson, Arizona.

2 We then measured the Euclidean distance (ED) from the border and normalized the cost distance using the formula (CD – ED)/ED. This produced a map measuring the ruggedness-based cost of reaching any given location that was not dependent on Euclidean distance from the border.

caloric cost). This was accomplished by calculating the values for the average weight, walking speed, and carrying load for one person, plus the slope, slope direction, and terrain that a person traversing the landscape on foot would encounter (with an assumption that the direction of travel is north).[1] We find that the average caloric expenditure to arrive at one of the vandalized water-drop sites is 2,390.433 calories, with a range from 41.230 to 5,677.548.[2] This average is slightly higher than the daily average human caloric use, which according to the US Department of Agriculture is 2,253 for active persons of any age group or gender.[3]



By analyzing caloric cost and ruggedness, we observe that water is vandalized in locations where its impact is likely to be lethal—locations where individuals have already experienced considerable physiological stress, based on the terrain and environment they have traversed, and beyond which it will become increasingly difficult for them to reduce this stress.

Apache Well sits low in a lush, grassy area surrounded by cottonwood trees. This water-drop site is part of a trail running north from the border, a trail that traverses mountains and canyons down to the grasslands between. Sitting about 10 linear miles north of the border and 11 miles south of a Border Patrol checkpoint, it is a natural resting stop in the long and arduous journey through the Sonoran Desert.

In the past, this water-drop site was so frequented that volunteers used to place 150 gallons of water and dozens of cans of beans there every week in order to keep up with the needs of border crossers. Beginning in 2010, however, Apache Well became an area where humanitarian aid was regularly vandalized. Despite aid workers' efforts to outmaneuver this vandalism, it became clear that any food or water left at Apache Well would quickly be slashed or confiscated.

In the fall of 2010, a border crosser reached the No More Deaths remote aid station with news that a very sick woman had been left behind in the hills toward the east. Volunteers set out to look for her. She was found deceased, lying under a tree at Apache Well. The coroner's report officially states her cause of death as hypothermia. Though we cannot say for certain if she would have survived had she had access to food, clean water, and blankets throughout her journey, we can assume that her chances would have considerably increased.

The woman's name was Rosalinda Toledano Toledano. At the time of her death she was 38 years old and was crossing to be reunited with her husband and four children in Texas. Under the tree where she spent her last moments, we have inscribed her name with white rocks. Aid workers continue to place food, water, and blankets there for Rosalinda and the many others who travel this trail.[1]

1 K. B. Pandolf, M. F. Haisman, and R. F. Goldman, "Metabolic Energy Expenditure, Terrain Coefficients for Walking on Snow," Ergonomics 19 (1976): 683–690; Devin A. White and Sarah Barber, "Geospatial Modeling of Pedestrian Transportation Networks: A Case Study from Precolumbian Oaxaca, Mexico," Journal of Archaeological Science 39 (2012): 2684–2696.

2 This calculation still assumes a direct and linear route of transit from the international border to the specific water-drop site to which the figure applies, rather than the additional distance travelled to circumnavigate impediments.

3 J. J. Otten, J. P. Hellwig, and L. D. Meyers, eds., Dietary Reference Intakes: The Essential Guide to Nutrient Requirements, Washington, DC: National Academies Press, 2006.

Obstruction of Humanitarian Aid

Border Patrol harassment of aid volunteers dates back to the initial efforts to provide humanitarian aid in the US–Mexico borderlands. One of the most publicized instances was the arrest and prosecution of Daniel Strauss and Shanti Sellz in 2005. Strauss and Sellz encountered a group of border crossers in need of emergency medical care. While driving these individuals to a medical clinic in Tucson, Arizona, they were arrested for and charged with trafficking and conspiracy to transport migrants. Between 2007 and 2008 eight humanitarian volunteers were detained by Border Patrol agents, who summoned US Fish and Wildlife Service personnel to ticket volunteers for "littering" after they left water gallons on migrant trails. Despite the fact that, in the first case, charges were ultimately dismissed and, in the second case, the littering convictions were overturned by the US Court of Appeals for the Ninth Circuit, a precedent of intimidation was set, and harassment of aid volunteers and surveillance of aid stations continues.

On June 15, 2017, after surrounding the No More Deaths medical-aid base camp for 48 hours, Border Patrol agents conducted a military-style raid. Approximately 30 agents, along with 15 trucks and a helicopter, entered the camp with a warrant to arrest four migrants receiving medical care. The raid took place in the midst of a record heat wave, with temperatures reaching well over 110 degrees Fahrenheit. During the most dangerous time of year in the borderlands, the Border Patrol's resources were focused on policing a humanitarian-aid station. According to the federal search warrant, the Border Patrol had placed sensors and cameras around the camp to track people entering to seek aid, turning the camp into a trap for enforcement. This raid followed months of increasing surveillance and harassment of humanitarian activities by the Border Patrol.

US Border Patrol agents outside No More Deaths' Humanitarian Aid Camp during raid on June 15th, 2017.

Throughout No More Deaths' history, Border Patrol agents have on multiple occasions surrounded and surveilled the medical-aid camp, threatened to obtain a warrant, or entered the property without one. Their actions create an atmosphere of fear and tension in a place where injured, ill, and often deeply traumatized people come in need of medical aid and respite. As one volunteer stated, the raids and surveillance "destroy . . . the environment of safety that camp requires in order to help people with healing." In addition, migrants in need of medical care can be frightened away and deterred from seeking help at the camp if they believe it will result in their arrest. For them, this means continuing to walk rather than seek help, potentially under conditions of severe dehydration and untreated injuries or illnesses.

Volunteers experience direct harassment from the Border Patrol in the field and at camp as they attempt to provide aid. Examples of Border Patrol harassment include:

- Threat of physical violence and arrest
- Aggressive interrogation
- Suggestion that volunteers are smugglers or cartel members
- Detention
- Brandishment of firearms
- Forcing volunteers' vehicles off the road with trucks
- Surveillance with low-flying helicopters
- Following volunteers in the field with helicopters, trucks, on horseback, and on foot

One humanitarian-aid volunteer recalls that, while delivering water to a drop site, "[a Border Patrol agent] came running out of bushes on horseback, with his gun pointed at us and screaming at us to get on the ground." Another volunteer was threatened by a Border Patrol agent who had entered the medical-aid camp: "As [the agent] turned around he put his hand on the handle of his gun and said, 'You better not follow me. If you do, I'm going to assume you're attacking me and it's not going to end well.'" Another volunteer was handcuffed to the steering wheel of a vehicle for nearly an hour in sweltering summer heat.

The interference with humanitarian aid and the harassment of humanitarian-aid volunteers, while discouraging and sometimes traumatic for the volunteers, has deadly implications for those crossing the border. Due to the history of abuse against border crossers, documented in previous reports, many are hesitant to seek assistance from law enforcement, even in cases of dire need. We believe that the unimpeded provision of non-enforcement related humanitarian assistance is essential.

The Border Patrol's False Self-Representation as "Humanitarian"

In recent years, in response to increased public pressure, the US Border Patrol has attempted to portray itself as a humanitarian organization. In 1998 the Border Patrol launched the Border Safety Initiative, with the stated goal of "the reduction of injuries and prevention of deaths in the southwest border region," while also claiming to build on "the longstanding public safety and humanitarian measures practiced by the United States Border Patrol." The Border Patrol has also routinely claimed to work with and support humanitarian-aid groups. In a meeting with several Tucson immigrant-rights groups—including representatives from No More Deaths—Acting Deputy Chief Patrol Agent Raleigh Leonard said in response to a question about agents destroying humanitarian aid:

> *I saw that video, by the way, of the guy cutting up the water bottles, and I still bring it up in the staff meetings. It was appalling. He's gone now. He retired from the Border Patrol, and I'm glad he's gone, because like the chief said, that doesn't represent this organization. That's not who we are . . . And if I hear about something like that, as acting deputy chief of the Tucson Sector, then I will initiate appropriate action against that person.*[1]

Despite such claims, the Border Patrol's policies and disciplinary procedures around humanitarian-aid vandalism are unclear. To our knowledge the Border Patrol agent that the deputy chief refers to above, who was caught on tape harassing aid workers and destroying humanitarian aid, was never disciplined. Instead, years later, he simply retired from the agency. Members of No More Deaths have met repeatedly with the Tucson Sector's chief patrol agent to state the purpose and scope of our work and to request respect for humanitarian efforts. Sometimes these attempts at dialogue have resulted in verbal agreements that water vandalization and surveillance of the aid station would stop. These agreements, however, never resulted in changes on the ground, and the vandalism of water and the interference with humanitarian aid persists.

"Yes, I remember people smashing and stepping on water bottles, I remember that being imparted to us in one way or another," one former Border Patrol agent told us. "I also remember that the logic behind that, the logic that was imparted to us with that action, was that you stomp on their water, and ransack their food cache, in order to expedite their apprehension." The stated logic of Prevention Through Deterrence is that through heightened Border Patrol presence throughout main migration corridors along the US-Mexican border, the threats of arrest and physical violence would be so great to individuals crossing that they would choose not to attempt to cross or choose to turn themselves in while crossing. In practice this policy not only prioritizes arrest over human life and dignity, it also funnels individuals into the most deadly, rugged, and remote parts of the US-Mexican borderlands and justifies Border Patrols destruction of life-saving aid. The US Border Patrol's own enforcement strategies are responsible for the crisis of death and disappearance of border crossers; the Border Patrol cannot adequately respond to this same crisis, only exacerbate it. Any effort by the Border Patrol to provide humanitarian aid is merely a band-aid solution to a crisis of its own making.

1 Nancy Montoya, "Rare Meeting Between Tucson Rights Groups, Border Patrol," Arizona Public Media, April 17, 2017.

Conclusion

"We would die without water, and they [the Border Patrol] don't want us to live."
—Border crosser [1]

"Humanitarianism is not a tool to end war or create peace. It is a citizen's response to political failure. It is an immediate, short-term act that cannot erase the long-term necessity of political responsibility."
—James Orbinski, of Médecins sans Frontières[2]

Humanitarian aid will never solve the crisis of death and disappearance in the borderlands of the US Southwest. This man-made catastrophe will only end when the walls come down, when the army of Border Patrol agents disappears, and when the paramilitary approach to border control is abandoned. Meanwhile, border crossers are forced to endure a gauntlet of surveillance technology and armed agents in the remote wilderness. The proliferation of surveillance towers, drones, and internal checkpoints, along with fear of apprehension by agents known for aggression and abuse, combine to force crossers to walk farther distances in increasingly rugged and remote terrain. To carry sufficient supplies for such a journey is impossible. In this deadly context, the provision of water is essential. Through video evidence and geographical analysis, as well as personal experience, our team has

1 Anonymous, personal interview, September 21, 2016, Arivaca, Arizona.

2 Nobel lecture by James Orbinski, Médecins sans Frontières, Oslo, December 10, 1999.

uncovered a disturbing reality: US Border Patrol agents participate in the widespread interference with essential humanitarian efforts. During the period of study, **at least 3,586 gallons left in the desert by humanitarian-aid volunteers were destroyed**. We attribute the majority of this destruction to the Border Patrol agents circulating in massive numbers throughout remote areas of the Sonoran Desert.

Hundreds of vandalism acts cannot be dismissed as the misguided behavior of a few bad apples. Rather, after extensive statistical analysis, we conclude that the culture and policies of the US Border Patrol as a law-enforcement agency both authorize and normalize acts of cruelty against border crossers. A culture of dehumanization is apparent in the destruction of water sources and, as discussed in part I of this report, in the routine, deadly policing practice of chasing and scattering border crossers in the remote backcountry. It is also apparent in the Border Patrol's failure to adequately respond to emergency calls concerning missing or distressed migrants, to be explored in part III, and it is explicit in the agency's enforcement doctrine, which aims to police the border by placing those crossing in "mortal danger."[1]

1 "Temperatures ranging from sub-zero along the northern border to the searing heat of the southern border effect [sic] illegal entry traffic as well as enforcement efforts. Illegal entrants crossing through remote, uninhabited expanses of land and sea along the border can find themselves in mortal danger." US Border Patrol, Border Patrol Strategic Plan: 1994 and Beyond, July 1994, http://cw.routledge.com/textbooks/9780415996945/gov-docs/1994.pdf.

Demands

The findings of this report oblige us to conclude that the US Border Patrol's obstruction of humanitarian efforts is widespread and routine, and that the agency as a whole is guilty of significant human-rights violations. Based on this investigation and the findings of our previous reports, it is clear that the depraved and murderous behavior exhibited by the Border Patrol reflects a deeply entrenched culture of violence within the agency. We therefore consider our first demand to be the most crucial:

(1) We call on Customs and Border Protection to permanently dismantle the US Border Patrol and to establish a reparations program for the families of all persons disappeared or deceased as a result of the US border policy of Prevention Through Deterrence.

We submit the following additional recommendations to Customs and Border Protection as provisional measures to address the problems outlined in this report:

(2) Designate the destruction of humanitarian-aid supplies and the obstruction of humanitarian-aid efforts as a fireable offense for US Border Patrol agents. Document these and all other internal disciplinary measures in publicly accessible records.

(3) End the harassment of humanitarian-aid volunteers and the obstruction of humanitarian-aid stations by establishing federal policy guidelines prohibiting the destruction and confiscation of water and other humanitarian-aid supplies. Cease and desist from any and all operations placing humanitarian-aid stations under surveillance or concentrating enforcement efforts around humanitarian-aid stations.

Additionally, we seek the following:

(4) We call on the United Nations and the Inter-American Commission on Human Rights to open inquiries into the US Border Patrol's obstruction of humanitarian-aid efforts. The actions of the Border Patrol detailed in this report constitute a clear violation of customary international human-rights law and should be investigated as such.

Appendix A: Extended Methodology

Data Normalization

The data used for the majority of the analysis came from No More Deaths' logbook data from March 2012 through March 2015. Entries were excluded when the written entry was illegible or the water-drops serviced were experimental drops (visited by volunteers less than 5 times during period of analysis).

In total, 4,459 logbook entries (restocking of water-drop sites) were used in this analysis. We used two distinct ways of normalizing the water gallon data. The first is by frequency of water-drop site visits and the second is by volume. These two ways of normalizing the data allows us to control for the effect of our re-stocking of humanitarian aid supplies on the dataset. For example, the number of water gallons used at a drop by border-crossers is affected by the number of water gallons we have left there and how many times we re-stocked that water-drop over a period of time. These two manners of normalizing the data were also used when looking at vandalism.

Frequency = Number of vandalism events/Number of visits to water-drop site
Volume = Number of gallons vandalized/total number of gallons left at water-drop site

Ruggedness

A 'ruggedness' index was developed using ArcGIS 10.3.1 (ESRI 2015) tools and various sources of spatial data. The primary parts of the index included temperature (T), groundcover (GC), slope (S), and jaggedness (J). Temperature was calculated, for the month of June of 2016, as Land Surface Temperature an adjusted remote sensing methodology(Rajeshwari and Mani 2014) requiring Landsat 8 data(Roy et al. 2014). The model uses Thermal Infrared Bands, Land Surface Emissivity, and numeric values for average air temperature and humidity to calculate the Land Surface Temperature (LST) (Buettner and Kern 1965).

NDVI was also used for groundcover and was calculated using the formula (Near Infrared - Red)/(Near Infrared + Red)(Rouse et al. 1974). Slope was calculated using a 1/3rd Arc-second Digital Elevation Model (DEM)(Gesch et al. 2002). Jaggedness served as a measure of the frequency of change in slope by calculating focal statistics of the range in a 3 X 3 cell moving window for each slope raster cell. Abrupt changes in slope would be more difficult to traverse than gradual changes and be typical of rugged terrain. Each variable was normalized to a value with a maximum value of 1000 using the formula ((value-min)/(max-min))*1000. An equally weighted sum of all variables served as the ruggedness index (RI) in the form T+GC+S+J=RI.

A cost distance (CD) was calculated, using RI, from the U.S./Mexico border and masked to the extent of the water stations. A Euclidean distance (ED) was also calculated from the same line and the same extent. The cost distance was normalized using the formula(CD-ED)/ED. This produced a raster surface measuring the ruggedness based cost that was not dependent on the Euclidean distance from the border, or a ruggedness cost distance (RCD).

Caloric Cost

The potential metabolic rate in watts (Pandolf et al. 1976; Wood & Wood 2006; White and Barber 2012) was calculated in watts as:

MR=M-C on downhill slopes and MR=M on uphill slopes, where
M = 1.5w +2.0(w + l)(l/w)2 +η(w +l)[1.5v2 +0.35vs]
and
C = η[(s(w+l)v)/3.5−(((w +l)(s+6)2)/w)+(25− v2)]

w being the average weight of a person in kilograms;
l is typical load carried in kilograms;
v is walking speed in meters per second;
s is slope in percentage;
η is terrain factor

Terrain types were determined by the National Land Cover Database (NLCD) (Homer et al. 2015) and were reclassified by terrain factor (Soule and Goldman 1972; White and Barber 2012) as seen in Table 1. Open water, such as reservoirs, was considered uncrossable.

Table 1: Terrain factors used to reclass land cover and calculate total calories per raster cell (Soule and Goldman 1972; White and Barber 2012)

NLCD Class	Description	Terrain factor
11	Open Water	Null (uncrossable)
21	Developed, Open Space	1
22	Developed, Low Intensity	1
23	Developed, Medium Intensity	1
24	Developed High Intensity	1
31	Barren Land (Rock/Sand/Clay)	2.1
42	Evergreen Forest	1.5
43	Mixed Forest	1.5
52	Shrub/Scrub	1.2
71	Grassland/Herbaceous	1
81	Pasture/Hay	1
82	Cultivated Crops	1.2
90	Woody Wetlands	1.8
95	Emergent Herbaceous Wetlands	1.8

As border crossers are generally moving from South to North, uphill and downhill slopes were determined by slope direction. All slopes from 90 to 270 in direction were calculated as uphill whereas all slopes from 0 to 90 and 270 to 360 were calculated as downhill. Wattage was then converted to Calories by accounting for cell size and time, creating a Caloric Index (CI).

Volunteer Interviews

To gain a more qualitative understanding of interference with humanitarian aid, we used a grounded theory methodology of 10 semi-structured interviews with long-term (5 to 13 years) humanitarian-aid volunteers, of a wide age range and differing genders. All of those interviewed shared stories of Border Patrol obstruction of humanitarian-aid activities but with varying levels of severity. From these interviews we were able to identify key events, patterns, and changes over time relating to Border Patrol obstruction of humanitarian aid, as well as their effect on the people involved.

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