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RESPONSE AND RECOVERY TO ENVIRONMENTAL

CONCERNS FROM THE 2017 HURRICANE SEASON

TUESDAY, NOVEMBER 14, 2017

House of Representatives

Subcommittee on Environment

Committee on Energy and Commerce

Washington, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m., in Room 2123 Rayburn House Office Building, Hon. John Shimkus [chairman of the subcommittee] presiding.

Members present: Representatives Shimkus, McKinley, Barton, Murphy, Blackburn, Olson, Johnson, Flores, Hudson, Walberg, Carter, Walden (ex officio), Tonko, Ruiz, Peters, Green, DeGette, Dingell, Matsui, and Pallone (ex officio).

Staff present: Ray Baum, Staff Director; Mike Bloomquist, Deputy Staff Director; Allie Bury, Legislative Clerk, Energy/Environment; Karen Christian, General Counsel; Jerry

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26 Couri, Chief Environmental Advisor; Wyatt Ellertson, Research  
27 Associate, Energy/Environment; Adam Fromm, Director of Outreach  
28 and Coalitions; Theresa Gambo, Human Resources/Office  
29 Administrator; Jordan Haverly, Policy Coordinator, Environment;  
30 A.T. Johnston, Senior Policy Advisor, Energy; Mary Martin, Deputy  
31 Chief Counsel, Energy & Environment; Alex Miller, Video  
32 Production Aide and Press Assistant; Tina Richards, Counsel,  
33 Environment; Dan Schneider, Press Secretary; Hamlin Wade, Special  
34 Advisor, External Affairs; Everett Winnick, Director of  
35 Information Technology; Andy Zach, Senior Professional Staff  
36 Member, Environment; Jeff Carroll, Minority Staff Director;  
37 Jacqueline Cohen, Minority Chief Environment Counsel; Caitlin  
38 Haberman, Minority Professional Staff Member; Rick Kessler,  
39 Minority Senior Advisor and Staff Director, Energy and  
40 Environment; Jon Monger, Minority Counsel; Alexander Ratner,  
41 Minority Policy Analyst; Andrew Souvall, Minority Director of  
42 Communications, Outreach and Member Services; Tuley Wright,  
43 Minority Energy and Environment Policy Advisor; C.J. Young,  
44 Minority Press Secretary; and Catherine Zander, Minority  
45 Environment Fellow.

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46 Mr. Shimkus. We will ask staff to close the back door,  
47 please, and ask the committee to now come to order, and I will  
48 recognize myself for five minutes for an opening statement.

49 I want to thank all our witnesses for joining us today. We  
50 are especially grateful for those of you who have traveled  
51 significant distances to be with us today to share your stories  
52 about the hurricanes that tore through our  
53 country this fall and about the impact of those hurricanes on the  
54 environment.

55 We know that many of you are still in the trenches of  
56 dealing with the response and recovery efforts, so your  
57 willingness to take the time to be here today does not go  
58 unnoticed.

59 This fall, the continental United States and some United  
60 States territories in the Caribbean experienced severe weather  
61 from five hurricanes, including extensive damage due to landfall  
62 from four storms.

63 Hurricane Harvey impacted Texas and Louisiana; Hurricane  
64 Irma hit Florida, Georgia, Puerto Rico, and the U.S. Virgin  
65 Islands; Hurricane Maria, again, hit Puerto Rico and the U.S.  
66 Virgin Islands; and Tropical Storm Nate impacted Louisiana and  
67 Mississippi.

68 The Energy and Commerce Committee is conducting a series of  
69 hearings to look at the response and recovery efforts conducted  
70 during this hurricane season so we can figure out what went well

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71 and what we could we have done better, what we need to do is going  
72 -- and what we need to do going forward.

73 We are also focused on what Congress can do to assist the  
74 impacted communities as they work to get back on their feet.

75 Today we are focused on the environmental impacts of these  
76 hurricanes and the response efforts. No two hurricanes are alike  
77 and a storm's individual characteristics like the speed,  
78 intensity, and amount of precipitation, play a large role in the  
79 extent of the storm's impact on natural resources and the  
80 environment.

81 For example, as we will hear from several of our witnesses,  
82 Hurricane Harvey may have significantly  
83 impacted several Superfund sites in Houston because of the record  
84 rainfall and flooding.

85 Likewise, in Puerto Rico, Hurricanes Irma and Maria  
86 uncovered the intensified issues associated with aging and  
87 inefficient energy infrastructure, contaminated sites that are  
88 rapidly multiplying, landfills that are already overflowing, and  
89 possibly the most contaminated  
90 drinking water supply in the United States.

91 Residents across the island are still without power and  
92 reliable source of -- and a reliable source of drinking water.  
93 Many are drinking potentially contaminated water because water  
94 purification systems have largely failed in the wake of the storm,  
95 and in the municipality of Dorado citizens resorted to drinking

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96 well water from Superfund sites.

97       Today, we will look at the response efforts by the  
98 Environmental Protection Agency and the states for the impacted  
99 communities. We will consider environmental issues in the  
100 hurricane-impacted communities such as the availability of clean  
101 drinking water, the potential for air  
102 releases, the impact on Superfund sites and solid and hazardous  
103 waste disposal facilities, and risk management and emergency  
104 response plans.

105       We hope to hear from the affected EPA regional administrators  
106 about their efforts, what they accomplished, what remains to be  
107 done, and what can be done better in the future and how Congress  
108 can assist.

109       We will also hear from several private sector witnesses from  
110 academia as well as people who are serving in the boots-on-the  
111 ground roles in Texas and Puerto Rico, and people who can weigh  
112 in on what needs to be done regarding the drinking water systems  
113 in the affected communities.

114       Again, I thank all our witnesses for being here. I hope the  
115 discussions will start today about the response and recovery  
116 efforts, the National Response Framework, and about whether  
117 statutory or other changes need to be made.

118       We will adjust the beginning as we continue to oversee and  
119 assist the federal and state governments as they carry out the  
120 response and recovery efforts for the communities impacted by the

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121 hurricanes.

122 And before I yield back my time, I am going to yield 30 seconds  
123 to Marsha Blackburn.

124 Mrs. Blackburn. Thank you, Mr. Chairman.

125 I want to welcome our witnesses. So pleased that everyone  
126 is here. There are so many different aspects to preventing,  
127 planning for, responding to the natural disasters, as the chairman  
128 has said, and these events are taking a toll on our communities,  
129 also on our nation.

130 And so much is involved in it -- today, the environmental  
131 aspects, but also looking at the health aspects and we know that  
132 they all have to work hand in hand.

133 I have got a piece of legislation, H.R. 1876, the Good  
134 Samaritan Health Professionals Act, that deals with that one  
135 component of making certain that people are cared for  
136 appropriately.

137 But we thank you for being here. We want to do what is right,  
138 we want to be helpful to the process, and we want to make certain  
139 that citizens are cared for in these situations.

140 And I yield back.

141 Mr. Shimkus. Gentlelady yields back her time to me, and  
142 before I turn to the ranking member I also want to mention that  
143 we will have sitting in with us Jenniffer Gonzalez, who is the  
144 resident commissioner of Puerto Rico. She's going to be sitting  
145 at the dais but per committee rule she can't ask questions. She

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146 can't make an opening statement. But when she comes I will make  
147 sure I recognize her.

148 With that, I yield back my time and yield five minutes to  
149 the ranking member, Mr. Tonko, for five minutes.

150 Mr. Tonko. Thank you, Mr. Chair.

151 It is important that we are holding this hearing and I thank  
152 you for doing that.

153 I was sad to hear the news that our friend, the former ranking  
154 member of this subcommittee and the current ranking member of our  
155 Health Subcommittee, Gene Green, will be retiring at the end of  
156 the 115th Congress.

157 I know Gene was here a few moments ago. But I want to thank  
158 him for his friendship and know that he will -- and I certainly  
159 know that he will be fighting for disaster assistance for  
160 Houstonians for the next 13 months. So we wish him well.

161 And I thank all of our witnesses for being here. It is great  
162 to have EPA witnesses join us on this very important topic. I  
163 hope Administrator Pruitt will appear before the subcommittee at  
164 some point in the near future as well.

165 I want to especially take this opportunity to welcome  
166 Administrator Peter Lopez. Mr. Lopez and I have worked together  
167 for many years. His former Assembly district overlapped a  
168 portion of New York's 20th Congressional District.

169 Our constituents were hit hard by Hurricane Irene and  
170 Tropical Storm Lee, and we well know that disasters don't

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171 discriminate.

172 Peter, you are an outstanding public servant and I wish you  
173 well in your new role and it is great to have you at the witness  
174 table today.

175 Mother Nature does not discriminate. She doesn't care if  
176 you are a Republican or a Democrat, and our government must be  
177 ready to respond to help everyone get back on their feet.

178 So I hope you can take the lessons learned over the years  
179 both in the response and recovery efforts and apply them to assist  
180 our fellow Americans in need now.

181 We know the recovery effort will be long. But, sadly, in  
182 Puerto Rico and the United States Virgin Islands the response  
183 effort is still underway.

184 Far too many Americans continue to live without electricity  
185 or safe drinking water and that is simply unacceptable.

186 On today's panels we will hear about the work done in the  
187 aftermath of Hurricanes Harvey, Irma, and Maria, to address  
188 environmental concerns.

189 EPA plays an important role in disaster response by assessing  
190 and restoring water systems and Superfund sites, responding to  
191 chemical and oil spills, and monitoring air quality.

192 I know there will be a wide variety of issues addressed today  
193 including Superfund, chemical safety, air emissions, and debris  
194 management.

195 I am particularly concerned about water systems, which we

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196 know are often aging and in disrepair, even without the stress  
197 of a disaster.

198         There are legitimate questions as to whether state revolving  
199 fund loans are the most appropriate vehicle to get communities  
200 back on their feet following such devastation.

201         In Texas and in Florida, flood waters were contaminated with  
202 bacteria and toxins. Water included high concentrations of E.  
203 coli as well as elevated levels of lead, arsenic, and other heavy  
204 metals.

205         In Puerto Rico, we have heard stories of people drinking from  
206 and bathing in contaminated rivers. There have been a number of  
207 reported cases of leptospirosis.

208         The media even reported people using a well located -- a well  
209 located on Superfund site, which only after the fact was  
210 determined to meet federal drinking water standards.

211         These examples show the direness of the circumstances that  
212 Americans faced following these disasters -- no power, no clean  
213 water, and driven to acts of desperation.

214         These hurricanes should serve as a reminder that EPA is one  
215 of our nation's most essential public health agencies. EPA has  
216 important work to do as recovery for these disasters begins.

217         But the drastic proposed reduction to EPA's budget,  
218 personnel, and environmental safeguards will make it harder to  
219 fulfil its mission including supporting disaster response and  
220 disaster recovery.

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221 Preserving a strong EPA is critical to the health of  
222 Americans. These storms have made that clear. A robust EPA will  
223 make communities more resilient.

224 For example, today we will hear about the risks posed to  
225 Superfund sites by disasters and the work EPA has done to assess  
226 these sites both before and after storms.

227 But the best and perhaps only way to mitigate the risks to  
228 these sites is through actual remediation. Reducing funding to  
229 the Superfund program will not make cleanups happen any quicker  
230 and will not make sites less vulnerable to storms.

231 I would also be remiss if I did not mention climate change  
232 and the role EPA should be playing in addressing that threat. If  
233 we continue to ignore climate change, increasingly severe  
234 disasters will become the new normal and we can expect many more  
235 hearings like this one in the future.

236 I hope we can work together to ensure EPA has the resources  
237 necessary to support disaster response efforts and make our  
238 communities more resilient to disasters before they occur.

239 I look forward to hearing from the witnesses today and yield  
240 back and, again, thank you, Mr. Chairman.

241 Mr. Shimkus. Gentleman yields back the time.

242 The chair now recognizes the chairman of the full committee,  
243 Mr. Walden, for five minutes.

244 The Chairman. I thank the gentleman.

245 Today marks the third hearing our committee has held to

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246 examine the response and recovery efforts for the hurricanes that  
247 ravaged our communities along the Gulf Coast and our island  
248 territories in the Caribbean.

249 And I would note for the committee in response to our concern  
250 about the situations especially in the island territories we will  
251 be having a congressional delegation -- a pretty high level  
252 limited seating capacity trip -- to Puerto Rico and the Virgin  
253 Islands coming up most likely early next month to have -- get a  
254 firsthand look at the situation. You will get more information  
255 as we go along.

256 Hurricane response and recovery deals with human tragedy.  
257 These storms didn't just damage property and displace residents.  
258 They delayed dreams and fundamentally altered the lives and  
259 fortunes of millions of Americans in ways big and small.

260 While we cannot undo the damage of these storms we can work  
261 to ensure the federal government is diligently doing its job to  
262 aid recovery and not making it harder to get that job done.

263 Public health risks typically associated with natural  
264 disasters including drinking water contamination and the leeching  
265 of hazardous waste are varied and include heightened risk of  
266 infectious disease, as you all know.

267 These risks can be particularly dangerous for vulnerable  
268 populations such as individuals with immuno suppressed and the  
269 elderly and infants, clearly.

270 Our job this morning is to better understand who in the

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271 context of environmental concerns that bear on public policy is  
272 engaging in the tough work to help speed recovery, what they are  
273 doing or not doing to make hurricane victims lives better and the  
274 challenges they face, when will something resembling normalcy  
275 return and where are the resources coming from to make recovery  
276 a reality and what private efforts can be leveraged. So it is  
277 all the who, what, when, where, and why and how.

278 We also need to determine whether the federal presence is  
279 helping or hurting that recovery and, if so, how do we -- how do  
280 we change things that need to be changed.

281 Some of the areas we hope to cover today will have to go  
282 unaddressed for now. We had hoped to have a Puerto Rico solid  
283 waste official testify via video conference about the situation  
284 on the ground there.

285 Last week, she confirmed she would testify but then,  
286 unfortunately, power went down on the island and our ability to  
287 communicate with her was lost.

288 We also hoped to hear from the Federal Emergency Management  
289 Agency about its work leading response efforts and improving  
290 funding for recovery activities. But they were unable to find  
291 someone who could testify. Pretty remarkable.

292 We will continue working with FEMA to ensure these questions  
293 are answered so we can feel confident in both statutory authority  
294 and administrative practice, support rational decision making,  
295 and promote the needs on the ground.

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296           That said, I want to welcome our witnesses today. Thank you  
297 for being here. Some of you have come great distances but each  
298 of you has important lessons for our committee to learn and we  
299 appreciate your participation.

300           I am confident that in the midst of all this bad news you  
301 will provide us some stories of dedication, innovation, gumption,  
302 acts of personal sacrifice, kindness, and courage.

303           These should inspire us to be equally fearless and committed  
304 in our work ahead. And in this committee and its broad  
305 jurisdiction we do roll up our sleeves and search for solutions  
306 to the various challenges that present themselves after a major  
307 disaster and we want to make sure the agencies under our  
308 jurisdiction are well prepared, responding appropriately, and  
309 that lives are improving as a result.

310           If not, we want to know about it so that we can fix it. I  
311 expect that this will be an excellent hearing for us to identify  
312 vulnerabilities and assess what is needed to better prepare and  
313 respond to this and future storms and disasters.

314           So thank you for being here. We look forward to working with  
315 you. I know the former chairman of the committee, the vice  
316 chairman, has a special announcement he'd like to make now about  
317 some of our folks in the audience who are with us today.

318           So with that, Mr. Chairman, I would yield to the gentleman  
319 from Texas the remainder of my time, Mr. Barton.

320           Mr. Barton. Well, I thank you, Chairman Walden. Thank you,

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321 Chairman Shimkus and Mr. Tonko, for holding this hearing.

322 I had the privilege way back when -- have been a White House  
323 fellow under President Reagan back in 1981 and part of 1982 and  
324 today I have the current class of White House fellows on their  
325 visit to the Hill.

326 They are in the back lefthand corner. They are 14 of the  
327 best and brightest young Americans. They work for Cabinet  
328 secretaries or agency heads. They are full of vim and vinegar  
329 and I told them they are in the best committee in the House. So  
330 we want to welcome our White House fellows and wish them the very  
331 best in the years ahead.

332 [Applause.]

333 I also want to welcome our two Texas witnesses, Dr. Shaw and  
334 Mr. Sam Coleman. Mr. Coleman is the acting administrator --  
335 regional administrator, Region 6, at EPA in Dallas, and Dr. Brian  
336 Shaw is head of the TCEQ down in Austin, Texas. They are both  
337 good men and good friends of mine. We welcome them to the  
338 committee.

339 With that, I yield back, Mr. Chairman.

340 Mr. Shimkus. Gentleman yields back his time.

341 The chair now recognizes the ranking member of the full  
342 committee, Mr. Pallone.

343 Mr. Pallone. Thank you, Mr. Chairman.

344 Environmental impacts from this season's hurricanes have  
345 wreaked havoc and continue to threaten public health in serious

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346 and unacceptable ways.

347           The federal government's response to these hurricanes has  
348 been disorganized and in the instance of both Puerto Rico and the  
349 Virgin Islands it has been too little and too late and we must  
350 step up our efforts.

351           Two weeks ago, the Subcommittee on Energy held a hearing  
352 focused on energy infrastructure recovery efforts, which is a  
353 central and ongoing concern, and last week we saw a major setback  
354 in the recovery of the electric grid in Puerto Rico when a repair  
355 transmission line failed.

356           And today, more than two months after Hurricane Maria, more  
357 than half of the island is still without power and that is  
358 adversely affecting everything from health care to access to safe  
359 drinking water.

360           This lack of electricity puts lives at risk and must be  
361 addressed. Unfortunately, at this point, it does not appear that  
362 any agency within the federal government is standing up and taking  
363 full control of this effort.

364           The Army Corps and FEMA say the other is in charge and that  
365 is unacceptable. Someone needs to take the lead now.

366           This is also far from the only challenge facing communities  
367 in Texas, Florida, Puerto Rico, and the Virgin Islands.

368           First and foremost is the lack of safe drinking water. This  
369 has been a problem in all of the areas affected by these hurricanes  
370 and it continues to threaten lives.

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371           The severity of these issues show the weaknesses in our  
372 drinking water infrastructure and how important it is for our  
373 drinking water systems to be more resilient to extreme weather  
374 and climate change.

375           Drinking water infrastructure has been a priority for this  
376 subcommittee this year and an issue that we have worked on  
377 together, and several of the provisions included in the  
378 committee's bipartisan drinking water bill could have helped  
379 water systems prepare for these storms.

380           But I think we are learning that we need to do even more and  
381 that we need to provide more resources to these affected areas,  
382 and I hope that we can continue to work together in a bipartisan  
383 manner to address the concerns we hear about today.

384           Superfund sites also pose serious risks when natural  
385 disasters strike. Several of these dangerous sites were damaged  
386 during this hurricane season and we are still struggling to  
387 understand the health impacts of that damage.

388           An extreme -- as extreme weather events become more frequent,  
389 it is even more important that we clean up Superfund sites quickly  
390 and thoroughly.

391           With greater funding for Superfund cleanups we might have  
392 avoided some of the damage we have seen and, again, I hope my  
393 Republican colleagues will join me in working to address this  
394 issue as well.

395           And these hurricanes have also led to significant air

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396 pollution with real public health impacts. In Texas, we saw an  
397 accidental release of benzene at the Valero refinery and a  
398 dangerous series of chemical fires at the Arkema plant.

399 In Puerto Rico and the Virgin Islands, we continue to see  
400 dangerously high air emissions from diesel generators which could  
401 worsen dramatically as debris management efforts being in  
402 earnest.

403 And if we can't get the power turned back on soon, if we can't  
404 get safe drinking water out to our citizens, more Americans are  
405 going to die. This is a humanitarian crisis and we must do  
406 everything we can to fix it.

407 As Congress prepares the next emergency spending bill, we  
408 need to consider all these environmental concerns and do what is  
409 necessary to protect human health and the public welfare.

410 We can and should be doing more to increase access to safe  
411 drinking water, to secure and remediate Superfund sites, and to  
412 limit air pollution.

413 So I just want to thank the witnesses who traveled here today  
414 from Texas, Puerto Rico, from the Virgin Islands and from Georgia,  
415 and, Mr. Chairman, I look forward to hearing from you. I don't  
416 know if any of our Democratic members want the time.

417 If not, I will yield back.

418 Mr. Shimkus. Gentleman yields back his time.

419 We want to thank all our witnesses for being here today and  
420 taking the time to testify before the subcommittee.

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421 Today's witnesses will have an opportunity to give an opening  
422 statement followed by a round of questions from the members. Of  
423 course, your full statements are going to be submitted for the  
424 record.

425 Our first witness panel for today's hearing will include Mr.  
426 Peter Lopez, Regional Administration, Region 2, Environmental  
427 Protection Agency; Mr. Trey Glenn, Regional Administrator, Region  
428 4, of the Environmental Protection Agency; Mr. Sam Coleman, Acting  
429 Regional Administrator, Region 6, Environmental Protection  
430 Agency; and Dr. Brian Shaw, chairman of the Texas Department of  
431 Environmental Quality.

432 And with that, we will turn first to Mr. Lopez. You have  
433 five minutes, sir.

434 Welcome.

STATEMENTS OF PETER LOPEZ, REGIONAL ADMINISTRATOR, U.S.  
ENVIRONMENTAL PROTECTION AGENCY, REGION 2; TREY GLENN, REGIONAL  
ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 4;  
SAM COLEMAN, ACTING REGIONAL ADMINISTRATOR, U.S. ENVIRONMENTAL  
PROTECTION AGENCY, REGION 6; DR. BRYAN SHAW, CHAIRMAN, TEXAS  
DEPARTMENT OF ENVIRONMENTAL QUALITY

STATEMENT OF MR. LOPEZ

Mr. Lopez. Thank you, Chairman Shimkus and Chairman Walden,  
Ranking Members Tonko and Pallone, and fellow Energy and Commerce  
Committee members.

I am Pete Lopez. I am the regional administrator for Region  
2, which includes all of New York, New Jersey, the Virgin Islands,  
and eight federally recognized Indian nations.

It is a privilege to join you today on this important  
conversation and my testimony today, please understand, is a  
snapshot of what's happening as a result of Hurricanes Irma and  
Maria.

Please understand that we are very much in an emergency  
response mode and that the testimony we offer today is subject  
to change on a daily basis. So we are doing our best here.

Just to preface, in my years as a member of the state  
legislature, I was intensely involved in a response very similar  
to what's happened in the Caribbean.

So in upstate New York in 2011, we were ravaged by Hurricane

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460 Irene and Tropical Storm Lee. Mr. Tonko and I were partners there  
461 working on this issue.

462 In this instance, my parents were homeless. My family was  
463 homeless. We had eight feet of water in my village. A similar  
464 situation with infrastructure, communications, power grids. The  
465 socioeconomic conditions very much the same.

466 If you understand New York geography, northern Appalachia.  
467 So what we found -- and this is a critical issue for the committee  
468 and for the administration -- is that the more disadvantaged the  
469 community, the more painful and slow the recovery.

470 So I just -- I can't understate that message and I just wanted  
471 to bring it to the committee's conscious thought.

472 Recently, I had a chance to travel to Puerto Rico and it was  
473 with my colleague, Deputy McCabe, who is with me today, and I was  
474 struck by the incredible destruction, and I have to tell you that  
475 the sights, the sounds, the smells were all too familiar.

476 And as with Irene and Lee, I also have family on the islands  
477 in the Arecibo and Camuy area. Lopez family corderos are there  
478 as well and we are very concerned about their safety.

479 The focus of the trip was not just to be on the ground but  
480 to connect. We met with leaders. We met with leaders of the  
481 territories and the Commonwealth, local officials, and our main  
482 goal was to connect with them, to identify problems and issues  
483 and really help them problem solve.

484 So we are very committed and I have to say the experience

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was both sobering but also galvanizing. I found that my colleagues on the ground are very passionate about the work they are doing and treat individuals as subjects, not objects. We are concerned about individual families, communities, and the integrity of the entire population.

As was noted by some of the introductory remarks, a major challenges remains with the power grid and here, as you can imagine, virtually everything relies on electricity.

So whether it is pollution controls at Superfund sites, drinking water and wastewater system operation, all of those things are challenged.

Our response has been working with FEMA and Army Corps to place strategically-placed generators at key locations. The challenge, of course, that it provides an alternate power source but the reliability in the long term is at risk here.

So they require fuel and even the generators themselves are subject to mechanical failure. So as we try to run around the island we are challenged with the electricity issue.

Just want to say in their defense for both FEMA and Army Corps, their job is unprecedented, and I don't want to draw too much of a parallel to Europe after World War II where we talk about the Marshall Plan and off script a little, but the challenges on the island are unique.

So in defense of our colleagues with FEMA and Army Corps, their job is extraordinary.

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510 EPA has about 325 employees and contractors on the ground  
511 and in the Virgin Islands. We hope to have that number increased  
512 to about 400 in December.

513 In your testimony you'll see greater detail on the status  
514 of power plants -- excuse me, drinking water facilities, hazardous  
515 waste facilities, wastewater treatment, Superfund sites,  
516 hazardous debris, comingled debris, and sunken vessels. You'll  
517 see all that in front of you in your testimony.

518 Just as a quick note, we made great progress. We still face  
519 a number of changes -- challenges. The power -- outside of the  
520 power we have been dealing with waste -- medical waste that has  
521 been building up due to logistical limitations.

522 Many roads are still impassable and, as you know, weather  
523 conditions have further compromised with mudslides and flooding.  
524 That includes area flooding, chronic flooding, as well as  
525 destruction to other property.

526 So accessibility on the island is an ongoing challenge.  
527 Humanitarian aid -- we have stepped out of our comfort zone and  
528 where we are the first responders we are bringing additional  
529 humanitarian aid with our staff as we go into the mountainous  
530 terrain.

531 So looking to the future, quickly, we know there are unique  
532 challenges. The issue of backup power, we heard reference to what  
533 do we do for the future. Having backup power and supplies on the  
534 island is critical.

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535           Positioning those supplies in key areas, particularly with  
536 storms advancing, would be very helpful. And, again, we know  
537 there are opportunities for improvement always but we welcome the  
538 committee's engagement and thank you for this opportunity to be  
539 here with you.

540           Thank you so much, Chairman.

541           [The prepared statement of Mr. Lopez follows:]

542  
543 \*\*\*\*\*INSERT 1\*\*\*\*\*

544 Mr. Shimkus. Gentleman's time has expired.

545 And let me for -- just for the record ask the regional  
546 administrators to state where the headquarters is and remind our  
547 colleagues what states that they represent. We did this in the  
548 Energy Sub and I think that is just helpful to keep that all in  
549 perspective.

550 So with that, so Mr. Lopez, what are the states and,  
551 obviously, protectorates that you cover?

552 Mr. Lopez. Yes, Chairman.

553 So New Jersey, New York, Puerto Rico, Virgin Islands, and  
554 eight recognized Indian nations -- tribes and we are headquartered  
555 at -- in Broadway, New York City -- 290 Broadway.

556 Mr. Shimkus. So let me now turn to Mr. Glenn, Region 4  
557 administrator.

STATEMENT OF MR. GLENN

Mr. Glenn. Good morning. Mr. Chairman and esteemed members of this committee, I am Trey Glenn, regional administrator for EPA Region 4, which comprises eight southeastern states.

That is Alabama, Florida, Georgia, Mississippi, Tennessee, North Carolina, South Carolina, and Kentucky, and we also have six federally-recognized tribes.

Thank you for the opportunity to appear before you today to discuss the impacts of Hurricane Irma and EPA's response and recovery efforts and to continue the productive discussion that we had last month with the subcommittee.

I have been on the job a little over two months now and I can honestly say that I am in awe of the caliber and expertise and dedication of the regional staff.

These environmental professionals work each day to meet EPA's mission of protecting human health and the environment and this commitment was demonstrated consistently throughout the EPA's response to the devastating hurricanes we experienced this past season.

The 2017 hurricane season was indeed unprecedented in the number and intensity of major storms that impacted the United States and the U.S. territories. The damage from these hurricanes is still being assessed. The recovery will continue for the foreseeable future.

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583 EPA Region 4 is fully engaged in a number of response and  
584 recovery activities and we are working in close coordination with  
585 our federal, state, local, and tribal partners as well as  
586 businesses and local communities.

587 The core of our emergency response program in Region 4  
588 consists of 28 on-the-scene coordinators and 57 additional staff  
589 within a response support corps.

590 Prior to landfall of these storms, I personally reached out  
591 to the environmental directors of the four states that were in  
592 the potential path of this storm to inform them of Region 4's  
593 ability to assist if needed.

594 We also reached out to our tribal partners that might be  
595 impacted by the storm and Florida was the only state that requested  
596 EPA assistance relative to Hurricane Irma.

597 We deployed our Region 4 on-scene coordinator to provide  
598 direct coordination and planning support to the state. We also  
599 provided a liaison to the FEMA regional response coordination  
600 center and deployed EPA regional senior leaders to south Florida  
601 and myself to Tallahassee.

602 We worked closely with EPA headquarters to issue fuel waivers  
603 and no-action assurances to assist in not only the preparation  
604 but also the response activities for these great storms.

605 We positioned 12 field hazard assessment teams for  
606 deployment when and where needed. These teams were deployed at  
607 Florida's request to provide oil and hazardous substance response

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support. We further provided support to the state for orphan container assessment and recovery, vessel pollution response and mitigation, and debris management technical support.

Region 4 also assisted with water and wastewater system technical support. We coordinated with the state to monitor the status of more than 1,600 community drinking water systems and over 2,000 wastewater systems.

Concurrently, Florida also requested assistance in contacting small noncommunity drinking water systems such as schools and restaurants and the water division completed over 1,200 call-down assessments of those facilities.

Our hazardous assessment team performed field assessments at more than 200 chemical and oil storage facilities identified as priorities.

We conducted reconnaissance for pollution incidents and orphan containers and there were no significant storm-related hazardous substance or oil pollution incidents in Region 4.

We also assisted with orphan container and vessel recovery in the Florida Keys and deployed personnel to provide support to the state and assessment of disaster debris management sites.

Our operation in the Florida Keys continues as we speak. We have collected more than 700 orphan containers that are stored in a secure staging area for waste characterization and recycling or disposal.

Our EPA team has recovered oil and hazardous materials for

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633 more than 65 sunken or grounded vessels and moved these craft to  
634 land-based staging areas where they were transferred to the  
635 custody of the Florida Fish & Wildlife Commission.

636 Prior to landfall, we assessed vulnerabilities at all  
637 Superfund sites in Florida. We also deployed six teams to conduct  
638 boots-on-the-ground assessments of all national priority list  
639 sites and as a further measure we also deployed teams to assess  
640 these NPL sites in Alabama, Georgia, and South Carolina, and all  
641 we found is that sites experienced very little impact from  
642 Hurricane Irma.

643 Post-landfall we worked with our state partners to ascertain  
644 the status of oil storage facilities required to maintain facility  
645 response plans as well as chemical facilities required to maintain  
646 risk management plans.

647 Overall, there were very minimal reports of oil and hazardous  
648 substance spills that could be attributed to the storm and only  
649 one of the RMP facilities contacted reported a hazardous substance  
650 release, the source of which was very quickly mitigated.

651 Moving forward, we continue to meet mission assignments  
652 under the response phase and have initiated recovery with FEMA  
653 and other federal partners under the national disaster recovery  
654 framework, and under this framework EPA supports federal partners  
655 primarily on community planning and capacity building,  
656 infrastructure systems and recovery and natural and cultural  
657 resources.

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658           We are excited to have the opportunity to work with our  
659 federal, state, tribal, and local partners on this very innovative  
660 initiative.

661           Again, I thank you for the opportunity to be here and share  
662 with you what I consider to be a great example of cooperative  
663 federalism to assure and restore public safety and recovery from  
664 disaster.

665           I look forward to answering your questions that you have.

666           [The prepared statement of Mr. Glenn follows:]

667

668           \*\*\*\*\*INSERT 2\*\*\*\*\*

669 Mr. Shimkus. The gentleman yields back his time.

670 The chair now recognizes Mr. Sam Coleman, acting regional

671 administrator of Region 6.

672 Sir, you are recognized.

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STATEMENT OF MR. COLEMAN

Mr. Coleman. Good morning, Mr. Chairman and fellow committee members. I am Sam Coleman, acting regional administrator for EPA Region 6, which covers Texas, New Mexico, Oklahoma, Arkansas, Louisiana, and their 66 federally-recognized tribes. We are headquartered in Dallas, Texas in downtown.

Thank you for the privilege of joining you here today for this very important conversation. I am here to speak directly about EPA's response to the devastating impacts of Hurricane Harvey in Region 6 and our associated response activities.

As we have seen in the past three months, every disaster presents unique challenges. Hurricane Harvey hit Corpus Christi as a category four hurricane, then lingered over the Texas Gulf Coast, dropping more than 50 inches of rain in Harris and the surrounding counties, and this impacted over 7 million people.

EPA worked with Texas and local officials to assess more than 2,200 drinking water systems and more the 1,700 wastewater systems.

We retrieved over 950 loose containers and, according to FEMA, we worked with the state to make sure that over 20 million cubic yards so far of debris has been properly disposed of.

At one point, the Texas commissioner of environmental quality had over 500 people working on the response and EPA had over 250 people assisting the state in those response activities.

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698           One of the most noteworthy aspects of the response to  
699 Hurricane Harvey was the positive and collaborative relationship  
700 between EPA and the state of Texas.

701           Because we worked very closely with the state agencies and  
702 the governor's office, our collective strength of our efforts were  
703 greater than the sum.

704           By augmenting state resources where needed and providing  
705 some specialized monitoring capabilities, together we were able  
706 to address many challenges prevented by Hurricane Harvey in a  
707 timely manner.

708           After my 29 years of working at EPA and experiencing events  
709 following Hurricane Katrina and the Deepwater Horizon oil spill,  
710 I have learned a few key lessons regarding the response activities  
711 to assure success.

712           I am going to go over a few of those. First is exercises  
713 -- our federal agency's plan for such catastrophic events by  
714 conducting exercises to prepare. It is very apparent that these  
715 practices lead us to discover our weaknesses and to have time to  
716 correct those efficiencies before the real emergency occurs.

717           It is difficult to prepare for such an event as devastating  
718 as Hurricane Harvey. However, the state of Texas was as well  
719 prepared as I've seen and integrations of our organizations was  
720 exceptional.

721           Second is prior coordination. Because EPA has open  
722 communication and a longstanding cooperative relationship with

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our state counterparts and other emergency response agencies, it clears the path for success that benefits the citizens that are impacted by a disaster.

When a storm is imminent, EPA begins the coordination efforts before landfall. As soon as the storm passes, we have teams that are standing by to begin the assessment of drinking water and wastewater systems to begin evaluating the environmental integrity of impacted businesses, to begin investigating citizen complaints, and to respond to any reported spills or other damaged areas as well as sharing key information with the public.

Next is the experienced staff. An effective response infrastructure includes experienced first responders who are able to address unforeseen circumstances both swiftly and effectively.

Staff development during the preplanning time is of grave importance and should not be underestimated. Experienced responders are the first boots on the ground and they provide the most efficient assistance to communities.

And then, finally, is having the right equipment. EPA employed assets during Hurricane Harvey response to assist the responders that were not available elsewhere. EPA often responds to reports of environmental impacts from air emissions or from other plumes that may be dangerous to a community.

In response to these complaints and odors and fumes during Hurricane Harvey, EPA deployed a TAGA bus. TAGA stands for the trace atmospheric gas analyzer.

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748           This is a mobile pollution detection vehicle that is able  
749 to provide air quality results quickly by collecting constant  
750 real-time data of outdoor air quality.

751           The TAGA bus monitored ambient air in the vicinity of  
752 approximately 25 facilities and adjacent neighborhoods and during  
753 that time they covered over 640 miles going back and forth in those  
754 communities.

755           The results of this we were able to detect actionable  
756 emissions to work -- then to work with those affected facilities  
757 and to work with the state to make sure that they were properly  
758 addressed.

759           There was also widespread coverage of the fires at the Arkema  
760 facility in Crosby, Texas. That facility housed volatile  
761 chemicals that required refrigeration to prevent them from  
762 self-igniting.

763           When the facility lost power, the conditions deteriorated  
764 at the facility, which required an evacuation of the facility and  
765 surrounding areas. Ultimately, there was a series of fires that  
766 were spontaneous combustion from those materials stored at the  
767 site.

768           EPA used the ASPECT aircraft for air sampling above the  
769 facility and in the nearby surrounding areas. ASPECT stands for  
770 the airborne spectral photometric environmental collection  
771 technology.

772           And I know that is a mouthful but, basically, it is an

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airplane that EPA rents that is packed full of EPA-owned monitoring equipment so that we can look into the plume to determine if there are harmful levels of chemicals or if there is any danger either downwind or in the communities surrounding the plant.

The ASPECT flew 28 flights over 112 hours -- 28 flights and over 112 hours, covering miles of pipeline. We looked at 134 risk management facilities and 456 drinking water plants and also 105 wastewater facilities in support of the Hurricane Harvey response.

The data was invaluable and assessed the risk quickly in responding appropriately to the emergency and the technology was not available through any other parties involved.

The third asset that we used was a mobile laboratory called PHILIS. PHILIS stands for the portable high through-put integrated laboratory identification system.

The PHILIS lab is a mobile laboratory that we deployed in Houston that allowed us to get 48-hour turnaround on volatile and semi-volatile samples.

This allowed us to quickly assess the conditions at all of the Superfund sites and also any other samples that we needed a quick turnaround.

If EPA did not have access to these tools, our response and the dissemination of information to the public would not have been as informative and robust. I believe that these EPA assets are

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798 critical to effective preparedness and response.

799 EPA remains activated as an agency continues to respond to  
800 Hurricanes Maria and Irma. The agency taps resources from our  
801 sister regions during these times of great need.

802 I have seen the agency continue to grow in our capabilities,  
803 learn from each response and apply lessons learned as we face new  
804 challenges.

805 We are able to make more data available to the public. For  
806 example, we use story boards as we presented this information to  
807 the public so that they could understand what each sample meant  
808 and how it impacted them personally.

809 EPA will continue to develop more methods and improve our  
810 responses by working with our state, local, and other federal  
811 agency partners.

812 While the response has its own unique challenges, we want  
813 to remain flexible to address the individual needs. I am very  
814 proud of the EPA and the other responders when called to duty in  
815 these times of great need.

816 I am happy to answer any questions about the great work we've  
817 done and look forward to continuing to serve.

818 Thank you.

819 [The prepared statement of Mr. Coleman follows:]

820

821 \*\*\*\*\*INSERT 3\*\*\*\*\*

822 Mr. Shimkus. Thank you.

823 Now, last but not least is Dr. Shaw, chairman of the Texas

824 Department of Environmental Quality. You have five minutes, sir.

825 Welcome.

STATEMENT OF MR. SHAW

Mr. Shaw. Good morning. Thank you, Chairman Shimkus, Chairman Walden, and Ranking Member Tonko and members of the committee. It is a pleasure to be here.

For the record, my name is Bryan Shaw. I am the chairman of the Texas Commission on Environmental Quality and I am happy to discuss our response in recovery efforts related to Hurricane Harvey.

First, my agency's primary mission is to protect the public health and natural resources by ensuring that the air and water and waste are clean and disposed of safely.

This is a critical part of what we work to is fulfilling that mission in the aftermath of a disaster such as Hurricane Harvey.

While we recognize the many challenges that we face and the severity of the -- of the storm that we had, the key to making the response as successful as it was you have heard demonstrated through the cooperative nature that we have experienced both with our federal allies as well as other state and federal agencies in responding to the hurricane.

As was mentioned by Mr. Coleman, TCEQ deployed about 500 people dedicated to the Hurricane Harvey response. The 250 or so folks that worked from EPA to work hand in hand with us were critical to addressing one of the major issues we face and that is communication.

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At the time that the storm rolls through it is very challenging to have the adequate communication and get information in a timely manner because, quite frankly, the local elected officials aren't always as prepared for a hurricane as we might want them to be because typically they are spaced out far enough that this is, in most cases, their first experience at dealing with a hurricane and when you have one of this magnitude it becomes even more critical in having a cooperative relationship between the state and federal agencies that respond.

It is critical both to providing that information as well as reassuring those local officials where help is and help is on the way.

This cooperation, I think, clearly demonstrates how well state and federal agencies can work together. We tend to work very well with EPA in previous natural disaster response but never better than we worked in this response and I think considering the unprecedented nature of the severity of the storm and, quite frankly, the fact that this storm sort of parked over Texas and dumped rain continually, it is -- if you look at the tragic losses we had but in hindsight considering the severity of the storm, the state fared very well and that is attributable to the prior planning, it is attributable to the cooperative relationship we had amongst our different state agencies and, quite frankly, it is attributable to the resiliency and the good neighbors that we have in our state of Texas that we are blessed with that come to

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876 the aid of their -- of their neighbor in time of crisis.

877 I think this fits very well into the Cooperative Federalism  
878 2.0 effort that is underway and I think that is -- I applaud this  
879 committee for looking at finding ways to be able to ensure that  
880 the state and federal agencies are working together.

881 The Environmental Council of the States has a process  
882 underway called Cooperative Federalism 2.0 which is trying to  
883 incentivize and encourage us moving to that relationship that was  
884 demonstrated, and so I am very much encouraged by that.

885 I will talk briefly because I know we were running short on  
886 time from the standpoint of my allocated time but I want to touch  
887 on some of the issues that are ongoing.

888 Obviously, debris management is one of those issues that  
889 continues to be a challenge. This is often what I refer to as  
890 the slow tragedy associated with an event like this.

891 You see some of that initially when you see the debris from  
892 what is taken out through wind, the tornadoes associated with a  
893 hurricane, as well as the surge -- the storm surge.

894 But oftentimes the flood damage you don't see initially  
895 because those houses seem to be unaffected until you start seeing  
896 the residents return back and removing the debris from inside of  
897 the houses, getting the drywall out, moving it to the curbs and  
898 to the temporary sites.

899 And so it is critical that we move quickly to be able to help  
900 that happen because having those materials remain indoors leads

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901 to mold and other types of biological contamination that can be  
902 poor for health as well as making it very difficult for communities  
903 to rebuild.

904 We move it quickly to the curb but you need to move it from  
905 there quickly because you have vector issues -- mice, rats, other  
906 things -- that can be there -- mosquitoes breeding. And so we  
907 want to make sure that we have that process moving along.

908 And then from the temporary site getting it into a landfill  
909 and making sure that we are providing for ultimately,  
910 environmental and health protections become very critical.

911 We are working probably most of our time at this point dealing  
912 with the ongoing tragedies and needs related to disposing of  
913 debris, working to quickly identify the temporary sites, ensure  
914 that we are working with those local officials not just to make  
915 sure that all the bureaucratic I's are dotted and T's are crossed  
916 but in making sure that we are both safe, protective, and ensuring  
917 that we don't have issues that will prevent them from getting  
918 reimbursement from those recovery efforts because those  
919 communities have already been hard hit from the loss of their tax  
920 base, their houses, and their businesses. And so we work very  
921 diligently to ensure that moves quickly.

922 So we are continuing to have success there but we will  
923 continue to have those calls that come as judges and mayors realize  
924 that the removal process is too slow and we work and continue to  
925 provide resources to help them both from a technical standpoint

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926 as well as, when we can, providing physical labor and the expertise  
927 on the ground.

928 Air monitoring -- we have heard some discussion from Mr.  
929 Coleman so I won't go into a lot of detail other than to point  
930 out that we have a plan in place, our -- I call it our common sense  
931 approach where we make sure that prior to a storm's landfall we  
932 take down equipment that is going to likely be damaged or destroyed  
933 in a hurricane and then very quickly bring it back up.

934 That takes some time, especially when, in many cases, we had  
935 to wait until we had power restored to an area to be able to get  
936 air monitors in place.

937 We relied very heavily on our federal partners to be able  
938 to do sampling as we had case by case needs as well as deploying  
939 monitors that we could bring in to assess plumes and other issues  
940 associated with potential emissions from facilities.

941 I will quickly wrap with drinking water, wastewater issues.  
942 As was mentioned, we had a couple thousand drinking water systems  
943 that were in the path of the storm. We still have two of those  
944 that are inoperable. They are small systems and arrangements  
945 have been made to allow for them to have water brought in so those  
946 residents are getting their needs served.

947 But we still have 24 systems that are under boil water notice,  
948 some of that because of damage to the system and some of that  
949 because, frankly, they're still adjusting to the source water  
950 changes associated with the storm.

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951           Wastewater and sewage, we still have three of those systems  
952 that are inoperable compared to the 40 at the height of the  
953 process. So it does take a good bit of time.

954           I will close with talking about our hazmat, and we do work  
955 cooperatively but we take the lead with regard to identifying  
956 containers that may be washed away or moved away during the storm.

957           And to date, we've had about almost 1,200 of those containers  
958 that have been located and properly disposed of as well as dealing  
959 with the spills associated with the storm.

960           So you can see that there is a broad range of issues that  
961 have to be addressed and working cooperatively allows us the best  
962 chance of being most responsive to our citizens.

963           And with that, I will thank you for the opportunity to visit  
964 with you about this issue. We do have many resources available  
965 on our website and I am happy to provide those web links as needed.  
966 Those are very helpful both in informing the public as well as  
967 elected officials about resources that are available to them.

968           I am happy to answer questions. Thank you, sir.

969           [The prepared statement of Mr. Shaw follows:]

970

971 \*\*\*\*\*INSERT 4\*\*\*\*\*

972 Mr. Shimkus. The gentleman's time is expired.

973 And before I start with the opening question, I want to  
974 recognize Jenniffer Gonzalez, the resident commissioner from  
975 Puerto Rico.

976 She's here at a good time to hear the opening statements but  
977 also, as I go to my first round of questioning, the first one is  
978 going to go to Mr. Lopez.

979 So I recognize myself for five minutes for questions. Mr.  
980 Lopez, there have been a number of press reports about people who  
981 are without clean drinking water, drinking from a well on a  
982 Superfund site in Dorado, Puerto Rico.

983 Can you explain the situation there and whether it has been  
984 resolved?

985 Mr. Lopez. Certainly, Chairman, and thank you for that  
986 question.

987 So, again, of course, there was a lot of attention to early  
988 concerns of the individuals drinking from the wells. Those  
989 reports were incorrect.

990 So, in essence, there has been some understandable confusion  
991 with the way the infrastructure is designed and operable in that  
992 area.

993 So wells in question are sealed. They are not accessible.  
994 Water has been made accessible through spigots at those well sites  
995 that are part of the super aquifer tied to process infrastructure.

996 When we first learned about the concern, our first response,

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of course, was humanitarian and we brought bottled water and had Army Corps bring water buffaloes to the sites because the main concern was we want to protect human health and safety, take them away from sites where we had any question, and make sure people had potable water.

From there we engaged in immediate sampling and from the results of the sampling we found chlorine residual from those spigots. Certainly, wells are not prone to have chlorine in them inherently and so our initial deduction was that that was treated water.

We have gone forward to do additional sampling and are doing full spectrum analysis. Thus far, our results reaffirm and process also reaffirm that along with the Department of Health from Puerto Rico that that is part of process water supply. They are not from the contaminated wells.

Mr. Shimkus. Are there any other places on the island where this issue may be an issue?

Mr. Lopez. Not to our knowledge and, again, the concern -- and just to highlight, Chairman, the concern with the Superfund site -- and this is part of the challenges -- Superfund site doesn't mean that every water source within the designated area is in question.

What it means in this case with the Dorado site we identified a target area -- we, at EPA -- just to monitor. So where sites were known to have contamination those sites have been locked

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1022 down. Other sites we continue to test -- I say we, the Puerto  
1023 Rico Department of Health -- PRASA -- on a regular basis to make  
1024 sure that those supplies remain potable and within Safe Drinking  
1025 Water Act thresholds.

1026 Mr. Shimkus. Was the Puerto Rican water utility the entity  
1027 distributing water at the Dorado site?

1028 Mr. Lopez. The Puerto Rico Well Authority -- PRASA -- was  
1029 not literally distributing the water. The areas in question were  
1030 fenced and signed. There are spigots there and the sites were  
1031 entered into and PRASA was not knowingly willingly distributing.

1032 But we -- again, our main concern there was to make sure that  
1033 the water was safe and that is why we brought temporary water until  
1034 we could ascertain the status of the true supply.

1035 Mr. Shimkus. So in your written statement, Mr. Lopez, when  
1036 you -- in your written testimony you note that 20 of the 115  
1037 drinking water plants are out of -- out of service. What is --  
1038 what are you doing to remedy the situation about people not having  
1039 access to potable water in Puerto Rico?

1040 Mr. Lopez. Well, our challenge, of course, Chairman, is we  
1041 assess. So we determine where there are deficiencies, whether  
1042 it be collapse of trunk sewers, whether power be out, and then  
1043 we work with Army Corps, which is mission assigned to work with  
1044 PRASA to make the repairs.

1045 So funding is provided through the Stafford Act to help make  
1046 necessary improvements. We continue to help provide advisories

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1047 to the population and, again, we are working with our partners  
1048 to make necessary repairs as quickly as possible.

1049 Mr. Shimkus. Let me, in my last minute and a half, turn to  
1050 Mr. Shaw, or Dr. Shaw. My sister-in-law move out of Houston right  
1051 before the storm.

1052 But she has a lot of friends back there and she visited over  
1053 the weekend and it raises the point about waste management that  
1054 you were referring to.

1055 On her return she showed a picture of her friend's house.  
1056 About two and a half to three feet of drywall had been ripped out.  
1057 I mean, still, the house will be -- take a year probably or I don't  
1058 know how long to get it. But so that -- so when we see storm  
1059 damage, which we have in tornado season, you see the initial pile  
1060 of refuse on the streets. But then over time you're going to see  
1061 the refuse from being torn out. They're probably going to be in  
1062 dumpsters and they're going to be hauled someplace.

1063 So the question is, is there sufficient land -- landfill  
1064 capacity with this hurricane debris?

1065 Mr. Shaw. The answer -- the short answer is yes. And you  
1066 are right, part of that process is moving from the house to the  
1067 curb. Usually there is about three passes of removing from the  
1068 curb as well. So it is sort of a cyclical process.

1069 We looked at it very closely and initially estimates were  
1070 quite high what the debris might be.

1071 The issue is we have enough capacity in those landfills in

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1072 the areas. The real challenges have been twofold. One, does it  
1073 reduce the length of life of that landfill, which is obvious.

1074 The second part of that is sometimes those landfills, because  
1075 they build them out in cells, they may not have a cell that is  
1076 built out ready to receive all that debris, and so in some cases  
1077 they may have to exceed their permitted height and we have a  
1078 process whereby they can apply to make that happen on an emergency  
1079 basis.

1080 What will happen is following the passing of the storm they  
1081 will either have to come in and remove that extra cap or they will  
1082 have to go through a permit amendment to get approval to leave  
1083 that landfill at a height that was higher than was permitted and  
1084 then they can build out another cell, if you will, and move that  
1085 waste or at least begin taking new waste.

1086 Mr. Shimkus. I am way over my time and I thank you for the  
1087 answer.

1088 The chair now recognizes the ranking member, Mr. Tonko, for  
1089 five minutes.

1090 Mr. Tonko. Thank you, Mr. Chair.

1091 Administrator Lopez, as I mentioned earlier, the committee  
1092 has heard alarming reports of people without access to safe  
1093 drinking water in Puerto Rico and the United States Virgin  
1094 Islands, and I heard the exchange with the chair here just moments  
1095 ago.

1096 Let's get a little deeper into the drinking water and

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1097 wastewater system issue. Many remain inoperable. Can you help  
1098 us understand what are the sources of those problems of  
1099 inoperation?

1100 Mr. Lopez. Much of the problem lies with damaged sewer --  
1101 excuse me, water mains. We have damaged distribution lines.  
1102 Power is a considerable issue.

1103 We, again, are working on generators but those generators  
1104 do not always remain operable. So access is an issue. We have  
1105 had plants that, because of mudslides or rain, river action, we  
1106 have had them -- access to them denied.

1107 So at this point, 85 percent of the PRASA system users have  
1108 water and PRASA represents about 97 percent of all the water supply  
1109 to the island.

1110 There are additional water supply sources -- non-PRASA  
1111 systems, very small sources. There are very -- there are about  
1112 237 independent water treatment systems throughout the mountains.

1113 We are working with mission assignment, with nongovernmental  
1114 operations to do work there. In some of those cases we are, again,  
1115 trying to get those systems back and running. But power, in some  
1116 case physical damage, in some case access. We also have debris  
1117 issues. In some case, intakes are clogged with debris and that  
1118 has been a challenge for some of our operators.

1119 Mr. Tonko. And just what percent or whatever expression we  
1120 can get from you is concerning electricity failure?

1121 Mr. Lopez. Oh, my gosh, I have -- I have some detail. So

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1122 I can go through -- I have -- I have a number. I will just run  
1123 through -- I have a list. Arecibo alternate power unit out of  
1124 service. Esperanza, alternate power service out of Muñiz. We  
1125 have quite a few. Most of it is power units.

1126 We do have waterline pipes broken. We do have some cases  
1127 of water supply -- raw water supply clogged. But much of it is  
1128 power and, again, we are using generators and other means to try  
1129 to activate those systems. Some systems were flooded and they  
1130 had to be reassessed even before power could be fully restored.

1131 Mr. Tonko. And you had mentioned the infrastructure  
1132 failure. What about source water contamination as an issue? Is  
1133 that --

1134 Mr. Lopez. We are -- of course, we are very concerned about  
1135 it and I used a phrase Ms. Colon would understand, agua es vida  
1136 -- water is life.

1137 So whether it be water for drinking, water for bathing, water  
1138 for washing your clothes, water for any purpose, we are all very  
1139 concerned.

1140 We have been -- in terms of the contamination of water our  
1141 role has been, first, direct resources to restore water and  
1142 systems to be operable. That's the main goal.

1143 With individual homes and families we are working with the  
1144 CDC, Puerto Rico Department of Health, and others to provide  
1145 advisories. So boiled water advisories are in effect, have been  
1146 in effect.

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1147           We are also warning people to be -- to avoid using these  
1148 supplies for potable purposes. We have worked with the CDC to  
1149 provide alternate disinfection where possible -- chlorine tablets  
1150 and other alternate disinfection. So we are taking --

1151           Mr. Tonko. Oh, go ahead.

1152           Mr. Lopez. As broadly as we can we are trying to respond.  
1153 But the challenge is we can't control individual human behavior  
1154 and people need water. So our main goal is get water to them as  
1155 quickly as we can -- potable.

1156           Mr. Tonko. Peter, you had mentioned PRASA and with those  
1157 independent systems -- those beyond PRASA -- are they continuing  
1158 to struggle to provide safe drinking water?

1159           Mr. Lopez. They are. We are working with them and, again,  
1160 it is case by case. Just mind you that a number of the systems  
1161 are mountainous and access to them continues to be an issue.

1162           So we are working on assignment to get to them. But at this  
1163 point, we had -- we have assessed -- bear with me a second. Just  
1164 going to pull up my notes here on non-PRASA. There are 237  
1165 independent community systems and we have assessed them all. But  
1166 getting them all operational is a challenge.

1167           Mr. Tonko. And of those 237, which are operating?

1168           Mr. Lopez. Let me -- bear with me just a second. About 170  
1169 of the 237 are operational.

1170           Mr. Tonko. Okay. Thank you.

1171           And is EPA testing water quality at small water systems?

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1172 Mr. Lopez. We do. Well, the Department of Health -- let  
1173 me say this -- the Department of Health for Puerto Rico is the  
1174 authority. So our sampling is really not something we do as a  
1175 norm.

1176 We did sample in the Dorado case where there were concerns  
1177 about drinking from contaminated wells and there we wanted to do  
1178 rear guard action for the Puerto Rico Department of Health.

1179 But Puerto Rico Department of Health maintains primacy with  
1180 those -- with those sites.

1181 Mr. Tonko. Thank you.

1182 Mr. Chair, I yield back.

1183 Mr. Shimkus. Gentleman yields back his time.

1184 Chair now recognizes the gentleman -- the chairman of the  
1185 full committee, Mr. Walden, for five minutes.

1186 The Chairman. And I thank the chairman and I thank, again,  
1187 our witnesses for your testimony on all these issues our citizens  
1188 face.

1189 I know, Mr. Lopez, you've talked a lot about the drinking  
1190 water and we know when the power goes off the pumps don't run and  
1191 purification doesn't work unless you get generators and all that.

1192 But I would like to move beyond that and ask about the ability  
1193 to clean up Superfund sites. How is that being impacted along  
1194 the way here?

1195 Mr. Lopez. So, Chairman, the Superfund sites were assessed  
1196 -- they have been assessed routinely. They were assessed before

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1197 the storm events -- Irma. They were assessed after Irma. They  
1198 have been assessed after Maria.

1199 And much of those sites really are groundwater  
1200 contamination. So they were not really moved by the storm. The  
1201 issue for the storm and where there was damage were in terms of  
1202 fencing and also pump and treat systems, which required power.

1203 So in those cases, we worked to restore those functions.  
1204 That's what we've been working to do and the -- in terms of damage  
1205 --

1206 The Chairman. How --

1207 Mr. Lopez. I am sorry, sir.

1208 The Chairman. How far along are you on that -- the Superfund  
1209 site protection?

1210 Mr. Lopez. To my -- to my knowledge, that is -- things are  
1211 locked down.

1212 The Chairman. Okay.

1213 Mr. Lopez. So if we've seen additional concerns -- for  
1214 example, we found an orphan container that was removed -- but we  
1215 are to lock those sites down, Chairman.

1216 The Chairman. Mm-hmm. All right. Is that true for the  
1217 other sites, too? I mean, are we talking about issues in Houston  
1218 or Florida? Are there any Superfund issues we need to be aware  
1219 of?

1220 Mr. Coleman. With regards to Texas, there were 34 federal  
1221 Superfund sites in the state of Texas. We have done the

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1222 assessment of all. There was one site that we listed, the San  
1223 Jacinto Waste Pits site, that did require some additional  
1224 follow-up.

1225 We have been working with the responsible parties. They  
1226 have plans in place to both do repairs to that site and then there  
1227 is some additional repairs on the river side of the site where  
1228 there was scouring that the PRPs are in the process of placing  
1229 some additional rock to stabilize that portion of the site. That  
1230 is ongoing.

1231 The Chairman. All right.

1232 Mr. Shaw. And I would just add there is -- I believe there  
1233 are 17 state Superfund sites and at those we worked very closely  
1234 with EPA on both the federal and the state and secured the sites.

1235 All those sites we're finding there was a release potentially  
1236 from one that was a sheen that we saw on water and that has been  
1237 dealt with. So but no offsite concerns at this point.  
1238 Everything is locked down.

1239 The Chairman. So can you call give us assurance then that  
1240 when it comes to the issue of Superfund sites we are not  
1241 contamination into drinking water, that these sites are secured  
1242 best they can be, that you've got this under control?

1243 Mr. Shaw. Yes, sir.

1244 Mr. Coleman. Yes, sir.

1245 Mr. Glenn. Yes, sir.

1246 Mr. Lopez. Yes, sir.

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1247           The Chairman. Perfect. That's good news. I think that  
1248 had a lot of us worried, including, I am sure, all of you. You  
1249 know, that is the most dangerous things we face.

1250           Beyond that, you know, as we -- as we keep hearing about the  
1251 power going on and going off in Puerto Rico and we knew they had  
1252 a bad grid to begin with, what should we be worried about here?

1253           What can we do to help here on that issue of power and how  
1254 much of this is really the responsibility of the grid owner and  
1255 the power provider in Puerto Rico?

1256           Mr. Lopez. Well, Chairman, again, I think part of the  
1257 challenge is, as I mentioned in the my testimony, the system itself  
1258 is old.

1259           The Chairman. Right.

1260           Mr. Lopez. And we heard testimony from Army Corps with the  
1261 infrastructure -- Transportation Infrastructure Committee  
1262 suggesting that their average age of power plants are much younger  
1263 than Puerto Rico's.

1264           So we are dealing with a system that was old and challenged  
1265 to begin with and I think part of our goal is, one, how do we put  
1266 power back on but the long-term and --

1267           The Chairman. Keep it on.

1268           Mr. Lopez. -- and for Señora Colon [Speaking foreign  
1269 language] -- my family has that name as well -- how do we make  
1270 sure that it is sustainable and survivable for future events. So  
1271 that is an open question.

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1272           The Chairman. And from what you have seen on the ground,  
1273 again, on Puerto Rico or the Virgin Islands especially, are there  
1274 -- are there enough crews? Are the various agencies  
1275 communicating well with each other?

1276           Are there gaps in that communication we should be aware of?  
1277 It is always hard in these situations, I know, but --

1278           Mr. Lopez. So, Chairman, we work under a command and control  
1279 function. We work with our incident commanders. There's very  
1280 close communication with FEMA, Army Corps, our other partners.

1281           Our regions have been providing support where we signal. We  
1282 have been very thankful to my colleagues here for their staff  
1283 support as well.

1284           I would say that the communications are strong. The  
1285 challenge is making sure that we can get the resources when we  
1286 need them.

1287           The other challenge which we have been working at is also  
1288 making sure that we are working with the local authorities and  
1289 respecting their process -- their decision making capability, and  
1290 that is -- that means in some cases we have to put things in front  
1291 of them and give them time, recognizing -- and this is the  
1292 challenge for those in the situation -- if you have been in a storm  
1293 event and you are under constant duress, we are rotating crews  
1294 in and out routinely --

1295           The Chairman. They are there --

1296           Mr. Lopez. -- they are working under constant duress. So

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1297 part of our challenge is helping support their decision making  
1298 and give them time and support they need so they can be at peace  
1299 with mission objectives and corrective action.

1300 The Chairman. Okay. Did you have something you wanted to  
1301 -- no? Okay.

1302 My time has expired. Mr. Chairman, thank you all for the  
1303 great work you and your teams and the teams from all the agencies  
1304 are doing the best they can in these circumstances and we  
1305 appreciate that.

1306 But, again, we want to know if there is a problem that you  
1307 need help on or they need help on, and I know that our resident  
1308 commissioner has been terrific at bringing us all up to speed and  
1309 keeping us up to speed.

1310 So with that, Mr. Chairman, I yield back.

1311 Mr. Shimkus. Gentleman's time has expired.

1312 The chair now recognizes the ranking member of the full  
1313 committee, Mr. Pallone, for five minutes.

1314 Mr. Pallone. Thank you, Mr. Chairman.

1315 Five years ago, Superstorm Sandy caused major damage to my  
1316 congressional district including Superfund sites and water  
1317 treatment facilities and we have seen even more of that with the  
1318 latest hurricanes.

1319 So I would like to focus briefly on the importance of  
1320 investing and making our environmental infrastructure more  
1321 resilient.

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1322 In the aftermath of Sandy, I saw the importance of this  
1323 firsthand when the storm badly damaged the Bay Shore Regional  
1324 Sewage Authority, which treats the wastewater from a number of  
1325 the towns in my district, and the authority completed a \$28 million  
1326 project to rebuild the plant and make it more resilient to future  
1327 storms.

1328 But I don't think we should have to wait for disasters to  
1329 make our infrastructure more resilient. So let me ask Mr. Lopez,  
1330 what can EPA do to help communities in Puerto Rico and the Virgin  
1331 Islands improve their drinking water and wastewater  
1332 infrastructure to make it more resilient?

1333 Mr. Lopez. Thank you. Thank you, Chairman.

1334 So part of the challenge is, again, part of it is the time  
1335 we are in. Under the Stafford Act, we are in response. So this  
1336 is an emergency. So it is my understanding that Stafford Act  
1337 funding means you build in kind -- you replace in kind.

1338 So the issue is, and this goes back to you as our partner  
1339 and our colleagues here, where do we signal programmatic and  
1340 funding flexibility to allow other sorts of investment.

1341 Now, just as an example, with the nongovernmental allies that  
1342 we have had with the nonprocess sites, we have been able to put  
1343 solar systems in a few isolated incidents.

1344 Mr. Pallone. All right.

1345 Well, let me ask you this. Do you think that we need to  
1346 invest more federal dollars though in environmental

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1347 infrastructure in general as part of this recovery or is it just  
1348 your concern that we are not focusing on long term?

1349 Mr. Lopez. So I am a little bit above my pay grade,  
1350 Congressman, but bear with me. So I am going to speak from the  
1351 heart.

1352 So, effectively, it is a function of targeting dollars --  
1353 making sure dollars are reachable and also ensuring that the broad  
1354 purposes can be served.

1355 So, again, we have many various funding streams. It is not  
1356 generally one funding stream, like my colleague, Mr. Cochran  
1357 knows.

1358 Mr. Pallone. Okay.

1359 Mr. Lopez. So to answer your question, I think part of our  
1360 challenge here would be to look at funding streams, look at  
1361 resources, ensure that we have maximum flexibility in their use.  
1362 Part of this --

1363 Mr. Pallone. Okay. And particularly the emphasis on  
1364 looking at long-term rather than just short-term to fix things.

1365 All right. I am just rushing through because I wanted to  
1366 ask a question about the Superfund, too. As you know, Hurricane  
1367 Harvey damaged a lot of Superfund sites in Texas including one  
1368 site where hazardous dioxins were exposed and I think we should  
1369 be doing more to limit the impact of severe weather on Superfund  
1370 sites.

1371 So let me ask Mr. Coleman. You only briefly mentioned

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1372 Superfund. But is it -- it is a priority, I think, for a lot of  
1373 communities. Do you agree that more resources for Superfund  
1374 cleanups would mean few contaminated sites vulnerable to extreme  
1375 weather?

1376 Mr. Coleman. So the site in Texas that you mentioned -- the  
1377 San Jacinto Waste Pits site, is a site that is under EPA oversight  
1378 but there are accountable responsible parties who are both  
1379 responsible for the day to day security of the site as well as  
1380 --

1381 Mr. Pallone. But my question is do you agree that more  
1382 resources for Superfund cleanup would mean fewer contaminated  
1383 sites vulnerable to extreme weather? You can just say yes or no.  
1384 I mean, I just want to know if you think money or resources would  
1385 make a difference.

1386 Mr. Coleman. Well, we are working with the funds that are  
1387 appropriated to make sure that those sites that require federal  
1388 funding are cleaned up as expeditiously as possible.

1389 Mr. Pallone. All right. All right.

1390 Let me go back to Mr. Lopez. We heard troubling reports out  
1391 of Puerto Rico, citizens drawing drinking water from a well on  
1392 an unsecured Superfund site. What more could EPA do to protect  
1393 public health from exposures to toxic sites after severe weather  
1394 strikes?

1395 Mr. Lopez. So, Chairman, as I was mentioning to your  
1396 colleagues, the contamination in the groundwater was really not

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1397 affected by the storms, to our knowledge.

1398           The issue was making sure that the mitigation methods that  
1399 were in place were functioning as intended -- fencing, pump and  
1400 treat seat systems.

1401           The -- in Dorado, the wells in question were not accessible.  
1402 Power supplies had been disabled. There was no ability to pull  
1403 water from the wells. So the source of water, again, was from  
1404 the -- from PRASA, from the public --

1405           Mr. Pallone. Do you think that we could do more to protect  
1406 -- could EPA do more to protect public health from exposure to  
1407 toxic sites after severe weather strikes or, again, this is just  
1408 simply fixing damage?

1409           I mean, the concern I have is, again, what you said -- that  
1410 maybe we are just simply fixing damaged fences, blocking access  
1411 to these sites. I mean, this goes back maybe to what you were  
1412 saying before. But just --

1413           Mr. Lopez. So at those sites the wells were not accessible  
1414 of for public access, again, the groundwater contamination was  
1415 there before the storm and remains and that is something we  
1416 continue to work on.

1417           So our challenge is to mitigate -- again, track any plumes,  
1418 for example, in the Dorado site. We are tracking a plume so we  
1419 test water supplies. We test -- vigilance is really the issue  
1420 here.

1421           We remain vigilant and we certainly understand the

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1422 importance of making sure that we are staying within Safe Drinking  
1423 Water Act standards, keeping people under those threshold with  
1424 their water supply.

1425 Mr. Pallone. All right.

1426 Mr. Lopez. So monitoring, continue testing -- those are --  
1427 and then mitigation remain the tools available to us.

1428 Mr. Pallone. All right. Thanks a lot.

1429 Mr. Shimkus. Gentleman's time expired.

1430 The chair now recognizes the vice chairman of the  
1431 subcommittee, Mr. McKinley, for five minutes.

1432 Mr. McKinley. Thank you, Mr. Chairman, and thank you again  
1433 for having this hearing on this.

1434 Let me skip from Region 2, 4, and 6 and move to Region 3 out  
1435 of Philadelphia. There's an area that -- the flooding that had  
1436 taken place the hurricanes had an impact not only in Texas and  
1437 Florida and Louisiana, along the coast, but it had a demonstrative  
1438 effect in north central West Virginia, in eastern Ohio, northern  
1439 West Virginia, western Maryland, western Pennsylvania in the  
1440 streams.

1441 The water that -- the amount of water that came down during  
1442 that period of time we washed out -- our streams were full of  
1443 debris, full of items that should have been dredged, and as a  
1444 result we had water lines lost, exposed.

1445 We had septic systems that were destroyed. We had water  
1446 pumping stations that went down because of this. So I am just

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1447 curious -- and we had loss of life in north central West Virginia  
1448 as a result of this.

1449 So it is not just happening with hurricanes in the coastal  
1450 areas that we are talking about -- the ravaging that took place.  
1451 It has had an effect on the central part of this country as well.

1452 So my question, when they try to get the dredging of these  
1453 streams so that they can mitigate the potential loss, often we  
1454 are hearing from the region -- the EPA is they won't give permits.

1455 They go through an extended permitting period. Either that,  
1456 or FEMA steps in the way or an environmental group steps in the  
1457 way.

1458 So if we are going to mitigate the potential loss and the  
1459 environmental impact, what would you suggest that we do in other  
1460 areas to clean up our streams if the EPA continues to stand in  
1461 the way of dredging? Any one of you?

1462 Mr. Lopez. Yes. Yes, sir, I can help with that and, again,  
1463 it is funny how life brings you -- moves you forward.

1464 So with Irene and Lee in northern Appalachia -- again, we  
1465 are just north of you. I had Southern Tier. I had the  
1466 Susquehanna River Valley. We had the Catskill region.

1467 To answer your question, part of our challenge is, is as we  
1468 get into these streams we have to be very careful because any  
1469 impact upstream can have an impact downstream.

1470 In my home community, the urgent response was to just dig  
1471 into streams and we wound up channelizing our streams. Water

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1472 began flowing faster and destabilizing the stream banks and  
1473 emergency evacuation routes were compromised.

1474         Short story is as we get in, we are working with NRCS, others  
1475 -- DEC and New York State -- to try to look at it from a watershed  
1476 basis.

1477         Some of it means restoring flood plains. Some of it means  
1478 restoring the natural flow of the streams. Getting in to clear  
1479 debris can be an ongoing mission but we also have to recognize  
1480 that we have to give room for streams almost like a living organism  
1481 to get rid of energy and to have a place --

1482         Mr. McKinley. I understand.

1483         Mr. Lopez. So --

1484         Mr. McKinley. But the EPA and FEMA are standing in the way  
1485 of permitting to do that. We have got to -- we had -- at  
1486 Follansbee, West Virginia, they have had a -- their stream is eight  
1487 feet of gravel and sand have built up in that so as a result of  
1488 this they had no capability of absorbing the amount of water that  
1489 came down and homes were washed out as a results of this.

1490         Mr. Lopez. So -- so --

1491         Mr. McKinley. So I am saying --

1492         Mr. Lopez. You know, Chairman, respectively, I have Region  
1493 2 so I am your neighbor in New York, in particular, similar  
1494 topography.

1495         I can only tell you that the partnership there has been with  
1496 the state agent. DEC has been the agent in charge. EPA has

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1497 worked --

1498 Mr. McKinley. The state keeps blaming the federal  
1499 government. What -- where are we supposed to get through this  
1500 so that we can mitigate the potential loss?

1501 We can eliminate a lot of these damages and the environmental  
1502 impact if we could clean our streams out. But they -- other people  
1503 keep blaming Region 3.

1504 Is there something you can suggest? Is it happening in other  
1505 areas that you're seeing a more successful relationship to dredge  
1506 these --

1507 Mr. Lopez. Congressman, if I may, what I'd like to do with  
1508 your permission is take your information back to our headquarters  
1509 --

1510 Mr. McKinley. Please.

1511 Mr. Lopez. -- see if we could research this issue for you.

1512 Mr. McKinley. Please. The other has to do also when Rick  
1513 Perry say said that hitting a Category 4 which had such devastating  
1514 effect on the petrochemical industry and has been suggesting that  
1515 we build a secondary facility in Appalachia with a ethane storage  
1516 facility in the north central eastern Ohio and western  
1517 Pennsylvania. As a result, maybe we wouldn't have such loss of  
1518 product if we had something other.

1519 So I really appreciate the fact that the commissioner and  
1520 Pruitt all are working together to try to find a secondary source  
1521 on this -- a supply.

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1522 I think it would eliminate some problem because we know that  
1523 when that hit -- Hurricane Harvey hit, out of the 23 cracker  
1524 facilities in the -- in the Houston area 17 went down.

1525 So as a result, it had that ripple effect all across the  
1526 country that people couldn't get resident supplies and companies  
1527 had to reduce their workforce as a result of it.

1528 So I am hoping that we can continue to learn from this problem  
1529 that has occurred and how we can have a secondary source, and we  
1530 are not going to have both environmental impact and economic  
1531 impact.

1532 I yield back.

1533 Mr. Shimkus. Gentleman's time has expired.

1534 The chair now recognizes the gentleman from California, Mr.  
1535 Peters, for five minutes.

1536 Mr. Peters. Thank you, Mr. Chairman, and thanks to the  
1537 witnesses for being here.

1538 You know, I think -- I spend a lot of time when I see these  
1539 awful disasters come they -- they, obviously, cause a lot of  
1540 dislocation and tragedy.

1541 They also cost us a ton of money at the federal government  
1542 for cleanup, and I think a lot about what you might have learned  
1543 as part of the cleanup that you might advise us to invest in ahead  
1544 of time.

1545 So what are the things that maybe you've observed that you  
1546 think, boy, if the federal government had invested in this

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1547 beforehand we would have saved a lot of money in the long run.

1548 Anything in general that you gentleman saw? Maybe Dr. Shaw?

1549 Mr. Shaw. Yes. Thank you.

1550 Certainly, that is part of what we -- we have an ongoing  
1551 process of trying to do the lessons learned and to that end we  
1552 are in our second week of our after action review to learn the  
1553 right lessons from this.

1554 Part of what I think addresses your question is the fact that  
1555 we have -- the governor has put together a commission to rebuild  
1556 Texas and part of what we are looking at there is identifying what  
1557 are those resilience issues, opportunities, and needs both to  
1558 build back infrastructure but also what do you do -- what is that  
1559 next step you would do if you had additional funds or funds --

1560 Mr. Peters. Anything in particular in mind right now?

1561 Mr. Shaw. There are things like several -- sometimes it is  
1562 a reservoir -- excuse me, a retention systems. We have dykes and  
1563 levy systems that have been proposed and often are waiting on  
1564 funding.

1565 Mr. Peters. Okay.

1566 Mr. Shaw. And so there are projects that had been approved  
1567 and are just waiting on funding that would help to mitigate some  
1568 of those flood issues.

1569 So those sorts of things are obvious and so we are trying  
1570 to put together a better holistic package of what it looks like  
1571 statewide but especially in the Hurricane Harvey impacted area.

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1572 Mr. Peters. That seems wise to me.

1573 Before I leave you, Dr. Shaw, have you had -- we have had  
1574 a lot of -- we have had issues with massive sewer spills that have  
1575 flowed and come from Tijuana up into San Diego, which I represent.

1576 I wanted to see if you've had any experience in dealing with  
1577 clean water and health issues with the CDC or FDA in connection  
1578 with the issues you face in Texas.

1579 Mr. Shaw. Not specifically.

1580 Mr. Peters. How has that been?

1581 Mr. Shaw. Not specifically CDC and FDA. We partner,  
1582 obviously, with EPA very closely on our -- on our water quality  
1583 issues but I've not had experiences with CDC and FDA on those  
1584 issues.

1585 Mr. Peters. Okay.

1586 Maybe, Mr. Lopez, if you had any general responses to that  
1587 question about Puerto Rico. I had a specific one, but any general  
1588 thoughts about what resiliency the federal government might be  
1589 involved in building in so that we don't face the quantity of  
1590 destruction that we saw this time next the wastewater --

1591 Mr. Lopez. Thank you, Congressman.

1592 And, again, we mentioned a little bit about flexibility with  
1593 funding to ensure that as rebuild occurs or as we move forward,  
1594 because recognize that once we leave the response mode we head  
1595 into recovery and that is going to be a very long conversation.

1596 And for any of my colleagues here we know that that is not

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1597 just months. That may be years, and that may include additional  
1598 rebuilding, reinvestment, flexibility of funding.

1599 The other thing that I was discussing with my colleague --  
1600 my deputy, Ms. McCabe -- is the issue of, in that case, having  
1601 resources available or prepositioned, having --

1602 Mr. Peters. Right.

1603 Mr. Lopez. -- because of -- because of their isolation  
1604 having resources prepositioned would be very helpful.

1605 Mr. Peters. Let me go back a step, because you are still  
1606 -- I think you are still -- you are still framing the response  
1607 issue. Let me just --

1608 Mr. Lopez. We are very raw there. Yes, sir.

1609 Mr. Peters. -- give you an example of something that I just  
1610 read about, which is Tesla restoring power to the Children's  
1611 Hospital in Puerto Rico with a solar and storage project.

1612 Now, it seems to me, I know -- I think that Puerto Rico burns  
1613 bunker fuel, which is a logistical issue. You've got to get that  
1614 -- you got to get there and, obviously, it speaks to the age of  
1615 the power plant.

1616 You have got -- I mean, I am sure you had a grid issues that  
1617 are affected by the wind. But it does seem to me -- what I noticed  
1618 in Puerto Rico was after the storms stopped, the sun was shining,  
1619 and had there been distributed energy through solar -- smart solar  
1620 investments, things like hospitals would be up online ahead of  
1621 time.

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1622 I would certainly suggest that that is something we ought  
1623 to be thinking about in these island places which are so isolated  
1624 you can't just send a truck of bunker fuel out there.

1625 Had we invested in solar in some of these facilities,  
1626 particular the -- around the critical infrastructure like  
1627 hospitals -- the Children's Hospital -- ahead of time, I think,  
1628 you know, a lot of these people wouldn't -- wouldn't have been  
1629 affected in the same tragic ways.

1630 I guess -- maybe I will turn to Mr. Glenn and Mr. Coleman.  
1631 Do you have any sort of lessons learned in terms of pre-disaster  
1632 investments we might be considering right now so that next time  
1633 this happens we won't be so on our heels?

1634 Mr. Glenn. Well, I am fairly new to the federal government.  
1635 I have been here two months --

1636 Mr. Peters. Welcome.

1637 Mr. Glenn. -- and prior to that in the private sector.  
1638 Thank you. I am enjoying it. Here is what --

1639 Mr. Peters. I enjoy it sometimes.

1640 [Laughter.]

1641 Mr. Glenn. Here is what I walked in and observed literally  
1642 day one on this was the communications interaction and  
1643 relationships that we had with our peers at the state level and  
1644 at the local level as well.

1645 So the one lesson I learned was we cannot do enough  
1646 coordination with our state and local and tribal partners to make

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1647 sure that we know what their systems are, we know who the people  
1648 are and we train together and work together so that we can respond  
1649 to this and that is the huge takeaway I had from this for the --  
1650 relative to the impacts in our region.

1651 Mr. Peters. Thank you.

1652 Mr. Coleman, my time is expired but maybe someone else will  
1653 as you the question.

1654 Thank you. I yield back.

1655 Mr. Shimkus. Gentleman yields back his time.

1656 The chair now recognizes the gentleman from Houston, Texas,  
1657 Mr. Olson, for five minutes.

1658 Mr. Olson. I thank the chair.

1659 I would like to start out with a point of personal privilege.  
1660 Yesterday we found out that --

1661 Mr. Shimkus. Not again.

1662 Mr. Olson. -- found out that a fellow Texan -- this is good.  
1663 Not good but sad. A fellow Texan, Gene Green, announced this will  
1664 be his last term in Congress.

1665 He is a dear friend, a great Texan. We will miss you, but  
1666 thank you for your service, my friend.

1667 Welcome to our four witnesses. A special Texas Aggie howdy  
1668 to Chairman Shaw, and my question will be for you, Chairman Shaw  
1669 and you, Mr. Coleman.

1670 First of all, could both of you talk about the sorts of  
1671 hazards you saw in the Houston area and all of the area impacted

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1672 by Harvey after Harvey left?

1673 I know, for example, we had some pretty foul water that  
1674 threatened with bacterial infections and we had debris piles that  
1675 were magnets -- as mentioned, snakes, rates, other animals.

1676 In fact, a young girl who lives in Texas 22 in Sienna  
1677 Plantation was out working in Wharton, was bit by a copperhead  
1678 snake in a pile of wet soaked clothes. So my question is do we  
1679 know anything about how to respond to these threats with Harvey  
1680 or was it just a larger scale of what you know you have to deal  
1681 with when a storm hits like Harvey did?

1682 Mr. Shaw. Thank you, Congressman.

1683 Certainly, with regard to this event, it is -- a lot of the  
1684 issues you see are common to a flood event but uncommon from this  
1685 nature of the magnitude and the breadth of the impacted area.

1686 So with regard to flood waters, anytime we have floodwaters  
1687 that are going to inundate wastewater treatment plants you are  
1688 going to have bacterial contamination and that is why our response  
1689 cooperatively with the EPA was to provide information about how  
1690 to deal with contamination from flood water.

1691 With regard to the debris, certainly the magnitude of the  
1692 debris is a challenge and it is exacerbated because of the fact  
1693 that you have waste haulers, for example, that may have contracts  
1694 up and down the coast and when you have -- the impacted area is  
1695 up and down the coast you don't have enough resources there  
1696 potentially to respond in a timely manner and it is just, you know,

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1697 30-plus million cubic yards of debris is an awful lot of debris  
1698 to deal with.

1699 Mr. Coleman. And I would just say that during a natural  
1700 disaster or any type of disaster there are many, many hazards.  
1701 Our goal really is to inform the public very quickly of how they  
1702 can best protect themselves while they are also trying to restore  
1703 and recover their own property.

1704 With regards to flood waters, we really advise people to  
1705 minimize their exposure because the waters are contaminated and  
1706 there are many hazards associated with that.

1707 You mentioned some of the other things. People have to  
1708 really wear protective equipment and be completely vigilant as  
1709 they work on their individual property to restore that. I meant,  
1710 that is very, very important and we work closely with our state  
1711 and local partners to make sure that that information is put into  
1712 the hands of every individual so that they understand what they  
1713 have to deal with.

1714 Mr. Olson. You mentioned the constant threats out there.  
1715 For example, a first responder in Missouri City had a flesh-eating  
1716 virus. Somehow, it got into his -- he had a little small cut  
1717 probably from working through a debris field and got exposed to  
1718 that virus. So thank you, thank you for getting ahead of the  
1719 curve.

1720 And you guys mentioned, I think -- if I quote you correctly,  
1721 Mr. Coleman, you said the coordination between you and Dr. Shaw

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1722 was, quote, "exceptional," and I think it was on the ground and  
1723 that is what -- that is my opinion as well.

1724 But I have concern. You said you prepared for that with  
1725 exercise after exercise with TCEQ. How do you do that with a storm  
1726 like Harvey, a big storm like that, and also how about with three  
1727 storms?

1728 You have Irma and Marie hit at that same time. Can you  
1729 coordinate with different regions as opposed to TCEQ? I mean,  
1730 boy, that is a big challenge, isn't it?

1731 Mr. Coleman. Yes, sir. It is a big challenge. We work  
1732 very closely. There is an annual hurricane exercise that the  
1733 state organizes that involves EPA, the Corps of Engineers, other  
1734 state agencies as well where we really go through the game planning  
1735 as to who does what making sure we have all of the proper contact  
1736 information, everybody knows what their lane is, and what  
1737 capabilities that they bring to the table.

1738 So we participate in that. We also work on a daily basis  
1739 to deal with much smaller incidents with the state so that our  
1740 staff and their staff know each other well and they work seamlessly  
1741 together to respond to these incidents.

1742 Mr. Olson. Dr. Shaw, you want to add something to that?

1743 Mr. Shaw. Yes. I would -- I would say that we actually --  
1744 in one of those exercises we had the foresight to mock up a response  
1745 to a Category 3 hurricane making landfall in Corpus Christi.

1746 Harvey was a 4, making landfall just north of Corpus Christi,

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1747 but it points out the fact and the way I usually characterize the  
1748 importance of these exercises is we need to make sure that whenever  
1749 we show up for the real thing we are not making introductions to  
1750 our colleagues and counterparts in other agencies.

1751 We already know who they are. We know them by face and by  
1752 name, and so those exercises are priceless so that we can hit the  
1753 ground running, not having to make introductions to try to figure  
1754 out a game plan.

1755 We already have the game plan. We've already practiced it.  
1756 We begin implementation.

1757 Mr. Olson. Thank you. Mr. Chairman, I noticed my time has  
1758 expired and I will close by saying at 9:54 this morning all four  
1759 witnesses confirm they are happy my Houston Astros won the World  
1760 Series title.

1761 I yield back.

1762 Mr. Shimkus. I hadn't heard that before so thanks for  
1763 letting us know that.

1764 The chair now recognizes Mr. Green for five minutes.

1765 Mr. Green. Well, I am proud of the Astros, too. But I want  
1766 to thank our panel for being here and thank the chair and the  
1767 ranking member for holding the hearing today on Hurricanes Harvey,  
1768 Irma, and Maria.

1769 I also want to thank our panelists -- for the panel,  
1770 particularly Administrator Coleman and Dr. Shaw, and I know the  
1771 partnership that you've had between our regional office of EPA

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1772 and the state has been -- even when I was in the legislature years  
1773 ago.

1774 And I want to thank the EPA for the decision last month after  
1775 our new administrator viewed the site to remove the cancer-causing  
1776 dioxins out of the San Jacinto Waste Pits, and that is both on  
1777 the north side of Interstate 10 and the south side of Interstate  
1778 10. And it is an important issue in east Harris County.

1779 I have represented it off and on over the years, first as  
1780 a state senator and then in Congress and I shared it with Ted Poe.  
1781 Now I share it with Congressman Brian Babin.

1782 So we need to fully remove the contaminated soil and  
1783 accelerate it with the recovery -- discovery of the damage and  
1784 the temporary cap during Hurricane Harvey.

1785 Administrator Coleman, what is the time line for EPA to begin  
1786 the removal of the contaminated material from the San Jacinto  
1787 Waste Pits?

1788 Mr. Coleman. Thank you, Mr. Green, for that question.

1789 So, as you know, we've issued the recommended decision in  
1790 October. We are working with both the Justice Department and the  
1791 responsible parties on this special notice and negotiating a  
1792 consent decree that will facilitate the specific design and then  
1793 removal.

1794 Specifically, we expect the negotiations to take six to 12  
1795 months in working with the responsible parties. The design  
1796 activities can take as long as another six to 12 months and then

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1797 the work will start.

1798 So I can't give you a specific time frame because those  
1799 negotiations are complex and do involve a number of issues that  
1800 we have to work through with them.

1801 So but that is generally what we expect to see.

1802 Mr. Green. Okay. Well, I would hope you would provide  
1803 information and EPA has been doing it to the constituents out there  
1804 for, like I said, mostly Congressman Babin now. But I sure have  
1805 a lot of people who go out and crab and fish right near those sites  
1806 and I would -- we'd like to make sure they're not, well, consuming  
1807 that but also to make it much more safer.

1808 And so the process will take almost a year, and I understand  
1809 the difference because the temporary cap is about a \$20 billion  
1810 and then the permanent cap or the permanent removal is anywhere  
1811 -- the latest estimate, I think, from EPA was almost \$120 billion.

1812 Mr. Coleman. That is correct -- \$115 million to \$120  
1813 million.

1814 Mr. Green. And so I expect the responsible parties have the  
1815 option of going to the courthouse and making that decision. But  
1816 I understood the original report from the regional office to the  
1817 national office was really strong opinion on what needed to be  
1818 done.

1819 Our district also includes -- and this is in our district  
1820 and has been forever, it seems like -- the U.S. oil recovery in  
1821 Pasadena, Texas, it is actually on a -- near a bayou in Texas.

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1822 Pete's gone but it is Vince Bayou coming through Pasadena and into  
1823 the Houston ship channel or Buffalo Bayou. And many members of  
1824 the public and local media voiced concern about that toxic  
1825 material mitigating into the Vince Bayou.

1826 Was there any information from that site that it -- did any  
1827 of that site bleed into the -- into Vince Bayou and ultimately  
1828 Buffalo Bayou and the Houston ship channel?

1829 Mr. Coleman. Again, thank you for that question.

1830 As you know, the U.S. oil site consists of two nearly adjacent  
1831 locations but they are separated by a road and they are different  
1832 in elevation.

1833 So the former city of Pasadena wastewater treatment plant  
1834 was flooded and because of the nature of what they did there, which  
1835 was treat wastewater, we do recognize that there were probably  
1836 some releases of things that were at that site. But we also know  
1837 that they never stored hazardous waste or recycled oil on that  
1838 portion of the site.

1839 The second portion of the site, which is located at a higher  
1840 elevation, where they did process oils to recover, that site  
1841 actually did not flood.

1842 It did, of course, sustain over 50 inches of rainfall. So  
1843 some of the buildings which are in somewhat disrepair there was  
1844 rainfall that entered the buildings.

1845 There was some -- we would call it storm water runoff that  
1846 occurred and we did assess Vince's Bayou. We looked very closely

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1847 at the receding waters and collected samples. We did not see that  
1848 anything significant left that upper portion where the waste oil  
1849 was processed.

1850 So we feel confident that Vince Bayou only received some  
1851 runoff from that lower area that was the former Pasadena  
1852 wastewater treatment plant.

1853 Mr. Green. Okay. Is there a viable --

1854 Mr. Shimkus. Quickly, please.

1855 Mr. Green. -- or responsible party for the U.S. oil site?

1856 Mr. Coleman. Yes, sir. We are working with the responsible  
1857 parties. They say a group of investors who are actually working  
1858 to both maintain stabilization of the site as well as working with  
1859 us on a more thorough investigation and, ultimately, a cleanup  
1860 of that site.

1861 Mr. Green. Thank you, Mr. Chairman.

1862 Mr. Shimkus. Gentleman's time has expired.

1863 The chair now recognizes the gentleman from Ohio, Mr.  
1864 Johnson, for five minutes.

1865 Mr. Johnson. Thank you, Mr. Chairman, and gentlemen, thank  
1866 you for joining us today.

1867 Mr. Lopez, prior to the hurricanes hitting Puerto Rico this  
1868 season, most people would have characterized the municipal solid  
1869 waste landfills as a mess even on a good day, with 19 of the 29  
1870 landfills operating out of compliance with federal law.

1871 So what's the status of the landfills in the -- in the wake

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1872 of the hurricanes today?

1873 Mr. Lopez. So the landfill status, of course, as you  
1874 mentioned, we had challenges and continue to be challenges on the  
1875 island.

1876 Debris management, which is really the response, is a  
1877 complicated undertaking. So there is pressure, of course, to put  
1878 more material into the landfills.

1879 But what we are attempting to do, working with Army Corps  
1880 and our partners, is to separate the waste streams and dispose  
1881 of them in a fashion that relieves pressure on the landfills.

1882 So whether it be vegetative debris or hazardous medical waste  
1883 -- any number of elements that could wind up in a landfill -- we  
1884 are working aggressively to separate out and dispose of, working  
1885 with the authorities in a proper fashion.

1886 Mr. Johnson. So are they still a mess?

1887 Mr. Lopez. So a landfill situation that existed prior to  
1888 the hurricane remains --

1889 Mr. Johnson. No. No. What are -- what's the status today?

1890 Mr. Lopez. So the landfills continue to operate as they did  
1891 before. There has been no change in that.

1892 Our challenge -- incident challenge is handling the debris,  
1893 keeping the landfills functioning but also handling the debris  
1894 which could accumulate in the landfills if not properly  
1895 intercepted.

1896 Mr. Johnson. Do you -- do you think that Puerto Rico should

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1897 keep its delegation authority under Subtitle D?

1898 Mr. Lopez. Ultimately, the -- and, again, we -- this will  
1899 be a longer-term conversation, Congressman. So our challenge  
1900 will be to help support the local authorities. I feel that that  
1901 is the appropriate thing to do.

1902 We want to support them, give them capability, help provide  
1903 resources where we can and also address other ways other than  
1904 landfilling to address their solid waste.

1905 But recognize that that is not EPA's function as a -- as a  
1906 role. We don't usually do solid waste management. We defer to  
1907 the local government authorities for the actual management of  
1908 solid waste.

1909 Mr. Johnson. Is it -- is it fair to say that current debris  
1910 removal since the hurricanes -- current debris removal is going  
1911 to further overload the already filled capacity in those  
1912 landfills?

1913 Mr. Lopez. We are working to intercept it. There is a  
1914 danger -- there is always a possibility. But we are working very  
1915 aggressively and thoughtfully with the leadership to identify  
1916 waste streams and properly provide siting to separate them out  
1917 and mitigate them appropriately. So there is always a potential  
1918 but we are working to minimize the impact.

1919 Mr. Johnson. Okay.

1920 Mr. Coleman, in your testimony you write that while each  
1921 response has its own unique challenges, we remain flexible to

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1922 address individual needs.

1923           So as you indicated, things like geographical constraints,  
1924 economic conditions, damage extent, and infrastructure  
1925 vulnerabilities are all factors that shape federal agency  
1926 response when a natural disaster strikes.

1927           In other words, how we respond to Houston's challenges is  
1928 clearly different than those of Puerto Rico's challenges. So how  
1929 does the EPA currently ensure response efforts take these  
1930 challenges and regional characteristics into consideration?

1931           Mr. Coleman. So we work -- we have a national cadre of  
1932 responders that work very closely together on training and that  
1933 forms the baseline of how we respond.

1934           As I mentioned, we have a set of technical assets -- the  
1935 ASPECT, TAGA, PHILIS -- that also provide that specialized  
1936 equipment. But then we work very closely with our state partners  
1937 in each location as well as those other state agencies that we  
1938 work with with our FEMA regional offices, with things called  
1939 regional response teams that then do additional specialized  
1940 training and facilitation as it relates to the specific incidents  
1941 that may occur in different geographic areas.

1942           So those multiple layers of training exercises, having the  
1943 right equipment, allows us to then be adaptable and flexible in  
1944 responding to all types of different disasters and events.

1945           Mr. Johnson. Okay. Is there room for improvement?

1946           Mr. Coleman. I believe that there's always room for

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1947 improvement and, as Chairman Shaw indicated, the state does a  
1948 after-action report. We do -- we are doing a similar exercise.  
1949 We participate with the state side.

1950 But we also have them participate and critique our work so  
1951 that we can make improvements and we do that after each event and  
1952 we memorialize those lessons learned so that as we incorporate  
1953 that into our training going forward we are able to make those  
1954 improvements.

1955 Mr. Johnson. Okay. All right.

1956 Thank you, Mr. Chairman. I yield back.

1957 Mr. Shimkus. Gentleman's time has expired.

1958 The chair now recognizes Dr. Ruiz from California for five  
1959 minutes.

1960 Mr. Ruiz. Thank you, Mr. Chairman.

1961 I want to throw out a compliment to my colleague from Ohio  
1962 who just asked those questions. Those are very good questions,  
1963 very insightful. Thank you for asking those questions.

1964 I want to continue on that line in terms of coordination and  
1965 some local flexibility problems that I saw when I went to Puerto  
1966 Rico myself that was an unscripted visit.

1967 I went on my own accord and I visited a lot of locations  
1968 impromptu so I can get the real story and not the script that folks  
1969 would like to give you, and I had great assistance when I was on  
1970 the ground as well.

1971 And by way of background, I am an emergency medicine

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1972 physician trained in public health and also trained in  
1973 humanitarian disaster response from the Harvard Humanitarian  
1974 Initiative and other locations.

1975 We talked about coordination. Let me just ask an open-ended  
1976 question. Mr. Lopez, who is running the show in Puerto Rico? Who  
1977 is -- who is really in charge?

1978 Mr. Lopez. So, understandably, we are under a command and  
1979 control structure, as we mentioned. Again, FEMA makes the  
1980 mission assignments.

1981 Mr. Ruiz. Okay.

1982 Mr. Lopez. So mission assignments are handed out by FEMA.

1983 Mr. Ruiz. So you would say FEMA is in charge?

1984 Mr. Lopez. Through our command and control structure.

1985 Mr. Ruiz. Yes.

1986 Mr. Lopez. That -- that is -- again, as we interact we take  
1987 mission assignments from FEMA --

1988 Mr. Ruiz. Okay.

1989 Mr. Lopez. -- and we work with our headquarters in our  
1990 regional offices for support.

1991 Mr. Ruiz. Okay. And how are you coordinated? Where --  
1992 like, how does that information get down to the EPA folks that  
1993 are in the field?

1994 Mr. Lopez. So we have a command and control structure and  
1995 in our region we have an incident coordinator.

1996 Mr. Ruiz. Yes, and where is that incident coordinator

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1997 located?

1998 Mr. Lopez. He is in Edison, New Jersey. We also have staff

1999 --

2000 Mr. Ruiz. In New Jersey.

2001 Mr. Lopez. -- we also have staff -- and this is -- this

2002 is critical for Puerto Rico -- we also have staff embedded on the

2003 island. So --

2004 Mr. Ruiz. Where -- were exactly are they embedded?

2005 Mr. Lopez. Guaynabo.

2006 Mr. Ruiz. Guaynabo.

2007 Mr. Lopez. And also out of San Juan.

2008 Mr. Ruiz. And where else are they embedded? In San Juan?

2009 Mr. Lopez. San Juan.

2010 Mr. Ruiz. Okay.

2011 Mr. Lopez. So we have staff embedded there. We also have

2012 some staff --

2013 Mr. Ruiz. Okay. So, you know, the point I am making is that

2014 when I was there the number-one thing you need is clarity in

2015 leadership, in roles and responsibilities, and having to bring

2016 in all the -- all the local players, as Mr. Coleman was talking

2017 about, and everybody in a very flexible rapid response group and

2018 I didn't see that in Puerto Rico.

2019 We are using a spoke and hub model that is basically run out

2020 of San Juan. Very top-down heavy information is being sent out.

2021 All the different agencies are working in silos. They

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2022 weren't even communicating with each other. So there is things  
2023 like you mentioned, obstacles in being able to reach certain  
2024 geographic locations.

2025 I worked with the 82nd Airborne closely in Port-au-Prince  
2026 right after Haiti. Those -- those men and women can move  
2027 mountains to get supplies anywhere in the world and I didn't see  
2028 that kind of coordination on the ground to get those supplies,  
2029 to get the people where they needed to go.

2030 So here is what I am proposing, and I am speaking to every  
2031 else, is, you know, the challenges of Puerto Rico are very  
2032 different than the challenges in Houston and Florida.

2033 You don't have a large concentration of population with an  
2034 infrastructure that is intact -- electricity and communication.  
2035 You still have the majority of people without power. You still  
2036 have the majority of people who have difficulty finding that clean  
2037 water. And you say some of the -- some of the water systems are  
2038 operational.

2039 What does that mean, operational? Because I have been into  
2040 some hospitals they say are operational but that is only one floor  
2041 of the five floors of the hospital, but yet people want to tout  
2042 them as operational.

2043 So what we need to talk about is capacity and what is the  
2044 capacity of the infrastructure to reach how many people.  
2045 Oftentimes, gentlemen, we get -- we get the reports of how many  
2046 people on the ground, how many water bottles, how many systems.

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2047 But that is not the way that you manage or that you count  
2048 accountability in a disaster response. We have to talk about  
2049 capacity. So what is the capacity of the different agencies and  
2050 the different infrastructure systems to provide the much-needed  
2051 services?

2052 And you are right, Mr. Lopez. Agua es vida -- water is life  
2053 and so tell me, is there a water task force in Puerto Rico with  
2054 different stakeholders and where is that water task force -- how  
2055 is that water task force managed and who are the stakeholders in  
2056 that task force?

2057 Mr. Lopez. So it is a small group. So we have, again, FEMA.  
2058 We have mission assignment. Our offices -- we work with the EQB  
2059 -- environmental quality -- and with the state health -- excuse  
2060 me, the territory health department.

2061 So those are the principal actors.

2062 Mr. Ruiz. Okay.

2063 Mr. Lopez. And just, Congressman, if I may, we are on track  
2064 on a regular basis. We do regular meetings with the island --  
2065 conference calls and interdiction of --

2066 Mr. Ruiz. Great. My proposal is to have field command  
2067 posts with all the different stakeholders to address local issues  
2068 with local mayors and NGOs and the Puerto Rican government, the  
2069 federal government, and other agencies working together -- pretty  
2070 much what Mr. Coleman talked about that is occurring in other  
2071 locations but have that in Puerto Rico more in the field so that

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2072 you can have better decision making, coordination, and  
2073 responding.

2074 Your role is to test and monitor and to track changes. But  
2075 then that needs to get translated to actual implementation in a  
2076 much more rapid way so that goods and repairs can be made in a  
2077 transparent and prioritized way on the ground.

2078 And so that is -- my time is up -- so that is my -- that is  
2079 my recommendation, given my experience and I think that we need  
2080 to move forward in trying to implement some of those.

2081 Mr. Shimkus. Thank you, Dr. Ruiz. I agree.

2082 We had a very similar hearing like this on the Energy  
2083 Subcommittee and the question I asked, well, who's in charge.

2084 Mr. Ruiz. Yes, and --

2085 Mr. Shimkus. I would have loved for --

2086 Mr. Ruiz. -- and right now we heard FEMA but then when I  
2087 was on the ground FEMA said Puerto Rico --

2088 Mr. Shimkus. I -- I --

2089 Mr. Ruiz. -- and Puerto Rico says FEMA.

2090 Mr. Shimkus. I don't disagree and I -- I wish that the  
2091 administration would have just parachuted 82nd there --

2092 Mr. Ruiz. I would have loved to have seen that.  
2093 Absolutely.

2094 Mr. Shimkus. -- to some of the very small villages and I  
2095 think we all would have been better -- best served. Then we could  
2096 have worried about who is responsible later. But you need to get

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2097 service there immediately.

2098 Mr. Lopez. Chairman, if I -- just briefly, too. And not  
2099 last but not least, there is a joint field operations center there  
2100 and we do have EPA incident commanders and we have branch leaders  
2101 in Puerto Rico.

2102 So there is an incident command center there. Those other  
2103 agencies are embedded but --

2104 Mr. Ruiz. See, when you say that, though, Puerto Rico is  
2105 big, you know, and you leave us with the impression that it is  
2106 somewhere.

2107 But where exactly, and are they in the different  
2108 municipalities and do we have the right people working in a group  
2109 out in the field in those different municipalities, because when  
2110 I was there they didn't exist.

2111 FEMA told me they didn't have field command posts. DMAT did  
2112 not have field command posts. I spoke to different agencies that  
2113 did not -- they said that this would be a good idea and something  
2114 that they would be very willing to work with and actually I am  
2115 meeting with HHS later today to address this concept.

2116 Mr. Shimkus. Great. Thank you. Thank you very much.

2117 The chair now recognizes the gentleman from Texas, Mr.  
2118 Flores, for five minutes.

2119 Mr. Flores. Speaking of HHS, that is going to be my  
2120 question.

2121 I want to thank the chairman and ranking member for the --

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2122 for holding this hearing. I want to thank the panel for joining  
2123 us today.

2124 Under Emergency Support Function Number 8, the Department  
2125 of Health and Human Services, or HHS as it is commonly called  
2126 around here, is the primary agency for ESF Number 8 and includes  
2127 support for potable drinking water, solid waste disposal, and  
2128 other environmental issues related to public health.

2129 I have got a question -- this question for Mr. Lopez and Mr.  
2130 Coleman, starting with Mr. Coleman. Number one, have you worked  
2131 with HHS to carry out this function regarding providing potable  
2132 water and also solid waste and debris removal in communities  
2133 affected by hurricane damage this season.

2134 Mr. Coleman. Yes, sir. We do work with HHS. As specific  
2135 to Hurricane Harvey, as the state and FEMA determined the specific  
2136 federal assistance that is necessary. In this particular  
2137 response, that role of HHS was somewhat limited because of, A,  
2138 the state capacity was quite extensive and we had done a lot of  
2139 coordination work with them, but embedded with my staff I have  
2140 three members from the Centers for Disease Control and they  
2141 coordinate and have reach back capability to both the CDC  
2142 headquarters and HHS in general as any issue comes up and we are  
2143 able to quickly address those and provide the support as requested  
2144 by the state.

2145 Mr. Flores. Okay. Thank you, Mr. Coleman.

2146 Mr. Lopez, do you have anything to add regarding --

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2147 Mr. Lopez. The only thing I would say, again, is that HHS  
2148 is part of the unified command structure so that they are immersed  
2149 in that conversation.

2150 Our local engagement has been with the Puerto Rico Department  
2151 of Health. So, ultimately, we do have the representation of  
2152 health interests.

2153 Mr. Flores. Okay.

2154 Mr. Glenn, do you have anything to add?

2155 Mr. Glenn. No, sir. It's part of that structure and we have  
2156 been working with them.

2157 Mr. Flores. Okay.

2158 Mr. Shaw, you gave us a breakdown of TCEQ's costs for dealing  
2159 with the hurricane response and you indicated that the funds to  
2160 reimburse you would be coming from FEMA. Has FEMA been a good  
2161 partner in working with the state of Texas and dealing with the  
2162 response and recovery efforts?

2163 Mr. Shaw. Yes, and there is sort of various aspects of how  
2164 that operates. We have, in the initial public assistance  
2165 reimbursement from FEMA, about \$700,000 anticipated for that cost  
2166 and that is the initial travel and what have you, working with  
2167 the initial response.

2168 We also have a \$15 million authorization from FEMA for us  
2169 to work with EPA in dealing with the field operations, which  
2170 includes a lot of our command and control -- our assessment and  
2171 location of containers displaced and what have you in the field

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2172 operations.

2173 So \$700,000 for the initial component and \$15 million to work  
2174 with EPA on those field operations.

2175 Mr. Flores. Okay. What can be improved upon in terms of  
2176 that process? It sounds to me like it has worked pretty smoothly.  
2177 Do you have any suggestions for improvement?

2178 Mr. Shaw. It is working well. Communications is the  
2179 primary issue and we have a lot of lessons learned. So yes, I  
2180 think we will learn more but I think the key thing is to point  
2181 out one of the issues, for example, are lessons learned. We work  
2182 very closely with EPA. In this event, we were able to very quickly  
2183 deal with things such as fuel waivers that took weeks in past  
2184 events and took hours in this event and that allowed us to focus  
2185 on those critical issues, making sure we got water, wastewater,  
2186 and immediate harm issues addressed quickly.

2187 Mr. Flores. Okay. In this process, have you come across  
2188 anything where Congress can help in terms of making statutory  
2189 improvements to the Stafford Act or any other related federal  
2190 statutes to deal with catastrophes like this?

2191 Mr. Shaw. There are -- there is room for improvement and  
2192 the challenges, quite frankly, Congressman, are going to be those  
2193 tradeoffs because, you know, as you look at -- and this is sort  
2194 of outside of my lane -- but one example is dealing with the repairs  
2195 on the recovery side of that to homes, for example, and I think  
2196 there's opportunities to be able to get that done much more quickly

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2197 and to do permanent repairs as opposed to something that is  
2198 temporary.

2199         The reason that I am interested in that is because getting  
2200 those folks back into their homes has such a huge health and  
2201 environmental impact because the longer it takes to get those  
2202 homes repaired the longer you have those health issues associated  
2203 with debris with people that are outside or displaced from their  
2204 housing and then the economics associated with all those.

2205         So there are room for improvement. A lot of those have to  
2206 do with making sure that Congress is making the types of decisions  
2207 about how to improve the efficiency of getting those repairs done  
2208 as well as making sure that they're ensuring that those funds are  
2209 expended properly and you avoid -- there is going to be foul play  
2210 involved and that becomes a huge issue as how much you balance,  
2211 making sure you get the funds out there but you minimize the money  
2212 that is fraudulently spent.

2213         Mr. Flores. Okay.

2214         Thank you for your responses. Again, I thank the panel for  
2215 joining us. I yield back the balance of my time.

2216         Mr. Shimkus. Gentleman yields back.

2217         The chair now recognizes the gentlelady from Colorado, Ms.  
2218 DeGette, for five minutes.

2219         Ms. DeGette. Thank you so much, Mr. Chairman, and thanks  
2220 to the witnesses for coming.

2221         Mr. Glenn, before Hurricane Irma, you and the other leaders

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2222 in Region 4 increased staffing of the Regional Emergency  
2223 Operations Center, the deployed on-scene coordinators to the  
2224 state emergency operations center, and you provided a Region 4  
2225 liaison to the FEMA Regional Coordination Center. Is that right?

2226 Mr. Glenn. Yes, ma'am.

2227 Ms. DeGette. And do you -- can you estimate how many senior  
2228 leaders were deployed prior to the hurricane's landfall?

2229 Mr. Glenn. Prior to the landfall, as far as our executive  
2230 leadership I, myself, went down and we had two other senior leaders  
2231 that worked directly for me went to south Florida, and then some  
2232 individuals from headquarters were also down in Florida.

2233 Ms. DeGette. Okay. Were you the most senior person down  
2234 there before landfall or was there someone more senior to you?

2235 Mr. Glenn. Prior to landfall, I was the most senior person  
2236 in the Region 4 down there.

2237 Ms. DeGette. Okay. And, you know, it is like Mr. Coleman  
2238 was saying, there was a lot of coordination with the state and  
2239 local officials down there. Is that right?

2240 Mr. Glenn. Absolutely. Yes, ma'am.

2241 Ms. DeGette. So, Mr. Lopez, I want to -- I know you didn't  
2242 arrive on the scene until September 28th but I want to ask you  
2243 the same question, if you know.

2244 Before Hurricane Irma hit Puerto Rico, did the leaders in  
2245 Region 2 increase staffing in the Regional Emergency Operations  
2246 Center?

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2247 Mr. Lopez. So, again, I started actually on October 11th.

2248 Ms. DeGette. Oh, okay.

2249 Mr. Lopez. But --

2250 Ms. DeGette. So do you -- do you know what kind of staffing  
2251 was increased?

2252 Mr. Lopez. I would have to -- I would have to get back with  
2253 you for detail.

2254 Ms. DeGette. Okay.

2255 Mr. Lopez. I have some assessments but I don't want to be  
2256 inappropriate with a response. So I'd be happy to respond.

2257 Ms. DeGette. Okay. And so the questions -- you'll probably  
2258 need to get back to me on the staffing, the onsite coordinators,  
2259 and who the senior leaders were who were there prior to landfall.

2260 The anecdotal evidence that we have is that whereas in Region  
2261 4 they were all there before it hit, in Region 2 what happened  
2262 was they were all rushed -- aside from the people who were already  
2263 embedded there that you testified about before that we were  
2264 already behind the curve because we had to send a lot of people  
2265 in. So if you can get me that information that would be really  
2266 helpful.

2267 And I want to ask you again -- to continue, Mr. Glenn, now,  
2268 on September 12th there were 12 field hazard assessment teams  
2269 conducting facility assessment support at chemical and oil  
2270 storage facilities. Is that right?

2271 Mr. Glenn. Yes, ma'am.

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2272 Ms. DeGette. Now, Mr. Lopez, do you know how many field  
2273 assessment -- field hazard assessment teams were operating in  
2274 Puerto and the U.S. Virgin Islands two days after Irma made  
2275 landfall?

2276 Mr. Glenn. I can't tell you the number of teams but I can  
2277 tell you that teams were on the ground so --

2278 Ms. DeGette. You don't -- can you get me that answer,  
2279 please, of the number?

2280 Mr. Lopez. I can get you the number, of course.

2281 Ms. DeGette. And how about Maria? Same thing?

2282 Mr. Lopez. I will have to get you the same thing. Again,  
2283 the sites --

2284 Ms. DeGette. Okay.

2285 Mr. Lopez. -- as I mentioned in my testimony, were assessed  
2286 prior and afterwards. So there have been assessments ongoing.  
2287 But I can't tell you the number.

2288 Ms. DeGette. Right.

2289 But, again, you know, in Region 4 they had 12 teams on the  
2290 ground two days after. So what I want to know, and as several  
2291 of my colleagues on both sides of the aisle have said, is Puerto  
2292 Rico is a lot larger physically and more complex because of  
2293 transportation needs and other issues.

2294 So I am just wondering two days after landfall in Puerto Rico  
2295 and the U.S. Virgin Islands how many teams did we have and what  
2296 were they doing.

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2297 Now, Mr. Lopez, I bet you can't answer this either.

2298 Mr. Lopez. I will do my best, ma'am.

2299 Ms. DeGette. Do you know how many teams did Region 2 have  
2300 in making boots on the ground assessments of Superfund sites two  
2301 days afterwards -- after Irma?

2302 Mr. Lopez. As I mentioned, the --

2303 Ms. DeGette. If you can get me that information, too.

2304 Mr. Lopez. We will get you the specific numbers.

2305 Ms. DeGette. Sure.

2306 Mr. Lopez. But just to be clear, Congresswoman, there was  
2307 a presence --

2308 Ms. DeGette. Uh-huh.

2309 Mr. Lopez. -- and folks were on the ground assessing before  
2310 and after.

2311 Ms. DeGette. I am certainly not trying to imply there was  
2312 no presence.

2313 Mr. Lopez. I understand. I just don't have the correct  
2314 number.

2315 Ms. DeGette. But like Mr. Glenn -- correct me if I am wrong  
2316 -- Region 4 had six teams on the ground on September 12th that  
2317 were making boots on the ground assessment of Superfund sites.  
2318 Is that right, Mr. Glenn?

2319 Mr. Glenn. Yes, ma'am.

2320 Ms. DeGette. So that is what I am wondering, Mr. Lopez, and,  
2321 frankly, I am a little concerned that you don't know. I realize

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2322 you didn't come in until October. But we need to know how robust  
2323 and how quick the response was and the very fact that we are having  
2324 this hearing, Mr. Chairman, and they can't answer any of these  
2325 questions for Region 2 -- Region 4 has it Johnny-on-the-spot --  
2326 just goes to the concern that we are all -- that we are all  
2327 expressing today and if I can get your answers maybe --

2328 Mr. Lopez. Sure.

2329 Ms. DeGette. -- maybe my concerns will be alleviated. But  
2330 I fear that they will not.

2331 Thank you. I yield back.

2332 Mr. Shimkus. The gentlelady yields back her time and I thank  
2333 her for those questions. It just goes to my point of a standard  
2334 operating procedure and why are regions different when there is  
2335 a disaster heading in a certain area.

2336 Ms. DeGette. Why is it one thing in one region and another  
2337 thing in another region?

2338 Mr. Shimkus. Right. So thank you very much.

2339 The chair recognizes the gentleman from North Carolina, Mr.  
2340 Hudson, for five minutes.

2341 Mr. Hudson. Thank you, Mr. Chairman, and thank you to all  
2342 the witnesses for being here today.

2343 Mr. Glenn, I particularly want to say welcome to you.  
2344 Obviously, Region 4 includes my home state of North Carolina. I  
2345 look forward to getting to know you better and working with you  
2346 in the future.

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2347           While the damage in Puerto Rico and the U.S. Virgin Islands  
2348 is significant, Region 4, including Florida, sustained  
2349 substantial damage from Hurricane Irma on the heels of rebuilding  
2350 after the 2016 hurricane season.

2351           There were several reports after Hurricane Irma of issues  
2352 with drinking water systems and several communities under boiled  
2353 water advisories.

2354           What is the status, Mr. Glenn, of drinking water systems in  
2355 Region 4? Are there still people without access to safe drinking  
2356 water?

2357           Mr. Glenn. The information I have is that all drinking water  
2358 systems are operational in Region 4. We are not aware of any  
2359 people served by a system that are without access to potable  
2360 drinking water.

2361           Mr. Hudson. Great. What about right after the storm? How  
2362 did the drinking systems fare during the hurricane?

2363           Mr. Glenn. Well, as you know, any time a storm like this  
2364 comes through it has impacts. It has immediate impacts, and so  
2365 almost every municipality that was in the path of the storm did  
2366 experience some type of impact at varying levels.

2367           The impact you've heard today -- physical damage, power  
2368 outages, personnel, chemical supply interruptions, and the like  
2369 -- so almost every system was impacted and --

2370           Mr. Hudson. In terms of water systems -- drinking systems?

2371           Mr. Glenn. Yes, sir. Drinking systems. Correct.

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2372 Mr. Hudson. Well, just on your assessment, are there any  
2373 improvements to the drinking water systems that we could look at  
2374 to help in future situations like this?

2375 Mr. Glenn. Well, as you know, we operate under the  
2376 permission authority of the Stafford Act and we will continue to  
2377 do so and fulfill whatever authorizations are provided for in that  
2378 act.

2379 Mr. Hudson. Got you.

2380 For everybody, the whole panel, in June 2016 the National  
2381 Infrastructure Advisory Councils recommended FEMA consolidate  
2382 federal emergency response roles and responsibilities for water  
2383 into a single ESF within the annex of the national response  
2384 framework to improve coordination and reduce confusion and  
2385 improve the information sharing and communication.

2386 The 2016 recommendation repeats an NAIC recommendation from  
2387 2009 that declared DHS should elevate water services to its own  
2388 ESF within the NRF to achieve higher prioritization of water  
2389 systems during emergency response that opens up to at least  
2390 everyone from FEMA.

2391 And Dr. Shaw, you're welcome to join in too, but do you  
2392 believe making this change is a wise move? I would just ask the  
2393 FEMA regional folks to chime in.

2394 Mr. Coleman. So with regards to that recommendation, we  
2395 think that and my personal experience is that water infrastructure  
2396 is extraordinarily important. It essentially sets the basis for

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2397 when people can repopulate an area.

2398           So, you know, I think it is very important. I don't have  
2399 a specific opinion on if it should be its own emergency support  
2400 function but I think that working very closely with the state  
2401 governor's office, et cetera, to make sure that in a response you  
2402 restore service as soon as possible is the most important thing.

2403           Mr. Hudson. So you don't -- you don't want to say whether  
2404 making its own ESF would help with that coordination?

2405           Mr. Coleman. I actually -- from my personal experience the  
2406 coordination with the governor's office and the local officials  
2407 is the most important coordination that needs to take place and  
2408 when that takes place you're able to actually get the right  
2409 equipment, infrastructure, or support to bring those systems back  
2410 online.

2411           Mr. Hudson. Got you.

2412           Dr. Shaw, I see you are chomping at the bit. Please.

2413           Mr. Shaw. And I am going to be supporting what Mr. Coleman  
2414 said as well and that is that I think the key point is in my state  
2415 it may be difficult for me to assess whether that -- what that  
2416 need would change because we have such a focus on water and  
2417 wastewater as our initial response in that.

2418           I am thinking back through the days before, during, and after  
2419 the landfall and I don't -- I have not identified the place where  
2420 that would have changed things because we work cooperatively and  
2421 our mission is first and foremost to get out and assess those

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2422 issues that are immediate harm and key among those are water and  
2423 wastewater systems and getting those back online.

2424           We have partners such as with Texas -- I always get this wrong  
2425 -- the Texas American Waterworks Association -- our TXWARN system  
2426 which helps us to bring together different resources from  
2427 different services that are available to get equipment in places.  
2428 Those things are all working very well. And so my only concern  
2429 with changes is making sure we don't lose what's working well  
2430 because it is working well in the state of Texas. Obviously, you  
2431 want it quicker, but those are tweaks as opposed to major  
2432 overhauls.

2433           Mr. Hudson. Got you.

2434           I have got a little over 10 seconds. Do either -- Lopez or  
2435 Glenn, do you have an alternate opinion?

2436           Mr. Lopez. Just to reinforce, I was a local official and  
2437 I was also on the ground during Irene and Lee. The issue of  
2438 communication is really the critical issue.

2439           So whether it is a single function or a coordinated function,  
2440 you really need to be in the heads of the plant operators who know  
2441 exactly what they need and how to get up and running. So if you  
2442 can penetrate to that level quickly, that is really what you need.

2443           Mr. Hudson. Great.

2444           Mr. Chairman, my time has expired. I will yield back.  
2445 Thank you.

2446           Mr. Shimkus. The gentleman yields back his time.

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2447 We want to thank this panel. You can tell -- we know you've  
2448 travelled far and there is still a lot of work to do and so we  
2449 are very appreciative of your efforts.

2450 And there are some members who have asked questions for you  
2451 to respond. If you can do so in a timely manner, that would also  
2452 be appreciated. Thank you for what you do and now go back to your  
2453 regions and get to work.

2454 And with that, we will dismiss this panel and ask for the  
2455 second panel to join.

2456 Okay. Vamanos. Let us go. You Texas Aggies, get out of  
2457 the hearing room.

2458 [Laughter.]

2459 Olson, let's go. Hallway.

2460 Okay. We want to thank all our witnesses for being here  
2461 today, taking the time to testify before the subcommittee. Our  
2462 second witness panel for today's hearing includes Mr. Mike Howe,  
2463 executive director and secretary treasurer for the Texas Section  
2464 of American Waterworks Association; Mr. Mark Lichtenstein, chief  
2465 of staff, chief sustainability officer, State University of New  
2466 York, College on Environment Science and Forestry; Ms. Lyvia N.  
2467 Rodríguez del Valle, executive director of Corporacion del  
2468 Proyecto ENLACE del Caño Martín Peña; and Mr. Trent Epperson,  
2469 assistant city manager administration, City of Pearland.

2470 So you were able to be here for the -- obviously, the first  
2471 panel. This will be a smaller group but still as important as

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2472 we get your statements into the record.

2473           There will be some of us who will be here to ask the questions,  
2474 as you saw in the first panel. We do appreciate you being here  
2475 and with that we will start with Mr. Howe. You are recognized  
2476 for five minutes and your full statement is submitted for the  
2477 record.

2478           You are recognized, sir.

2479 STATEMENTS OF MIKE HOWE, EXECUTIVE DIRECTOR, TEXAS SECTION OF  
2480 AMERICAN WATER WORKS ASSOCIATION, ON BEHALF OF AMERICAN WATER  
2481 WORKS ASSOCIATION; MARK LICHTENSTEIN, CHIEF OF STAFF AND CHIEF  
2482 SUSTAINABILITY OFFICER, SUNY COLLEGE OF ENVIRONMENTAL SCIENCE AND  
2483 FORESTRY; LYVIA N. RODRÍGUEZ DEL VALLE, EXECUTIVE DIRECTOR,  
2484 CORPORACIÓN DEL PROYECTO ENLACE DEL CAÑO MARTÍN PEÑA; TRENT  
2485 EPPERSON, ASSISTANT CITY MANAGER, CITY OF PEARLAND, TX

2486

2487 STATEMENT OF MR. HOWE

2488 Mr. Howe. Thank you much and good afternoon, Chairman  
2489 Shimkus and members of the subcommittee.

2490 My name is Mike Howe, the executive director of the Texas  
2491 Section AWWA and we manage the Texas Water/Wastewater Agency  
2492 Response Network, or TXWARN.

2493 The mission of TXWARN is to provide emergency preparedness  
2494 disaster response and mutual aid assistance for water and  
2495 wastewater utilities. TXWARN began after Hurricane Katrina when  
2496 it was apparent that the coordination and prioritization of water  
2497 utility needs was disjointed under the existing national response  
2498 framework.

2499 We in the water sector realized that we needed to develop  
2500 a utility-to-utility mutual aid system. AWWA spearheaded the  
2501 WARN initiative and collaborated with other stakeholders to  
2502 facilitate the growth of WARN from the two-state program in 2006  
2503 to the 50 programs we have nationwide today.

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2504 Membership in TXWARN is free and is available to all public  
2505 and private utilities in Texas, making it the largest  
2506 utility-to-utility mutual aid program in the country with more  
2507 than 1,200 utility members that provide services to 78 percent  
2508 of the population of the state of Texas.

2509 The Texas Section AWWA manages TXWARN and receives partial  
2510 funding from the TCEQ via the state revolving fund program to  
2511 facilitate training and exercises.

2512 Hurricane Harvey made landfall as a Category 4 hurricane in  
2513 Nueces and Aransas Counties on August 25th and, as you know,  
2514 meandered to the northeast over the upper Texas coast for four  
2515 days.

2516 It presented water utilities with unique challenges. As the  
2517 storm approached, we activated the TXWARN system on October --  
2518 August 23rd. We first began preparing support teams for the  
2519 inevitable aid requests.

2520 Ground zero for Hurricane Harvey was the small coastal town  
2521 of Port Aransas. At daylight after the storm the local water  
2522 utility manager assessed the damage to the community and the water  
2523 system.

2524 The power was out for the water pumps, one of the water supply  
2525 lines from Corpus Christi was out of service, and the majority  
2526 of the community's water systems were leaking.

2527 As Harvey crossed Aransas Bay, it brought significant  
2528 similar damage to Rockport's water and wastewater system. The

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2529 first major request for TXWARN came early Sunday morning on behalf  
2530 of Port Aransas. The water system had to be operational before  
2531 authorities could bring the population back.

2532 TXWARN contacted the San Antonio Water System, or SAWS, a  
2533 little more than two hours away from Port Aransas and its  
2534 management agreed to send equipment and manpower to Port Aransas.  
2535 In less than 24 hours, SAWS had deployed 20 field staff and by  
2536 Friday of that week they had completely restored service.

2537 SAWS also responded to Rockport, performing repairs to it  
2538 water and wastewater systems. TXWARN arranged to relief SAWS  
2539 crews after 10 days from this grueling work with crews from the  
2540 Austin water utility.

2541 During the nearly two-week response period TXWARN was full  
2542 activated, we managed more than 50 similar requests for large and  
2543 small systems. We are very pleased with our response operations  
2544 during Harvey but there is always room for improvement.

2545 Specifically, I would like to call your attention to how the  
2546 needs of the water sector are prioritized and coordinated as part  
2547 of the national response framework, or NRF.

2548 The current organizational structure of the NRF largely  
2549 reflects the 1992 federal response plan prepared by FEMA. That  
2550 was 25 years ago. The experiences of the water sector since then  
2551 suggest that this current model requires a thorough review and  
2552 update.

2553 The loss of drinking water and wastewater services compounds

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the complexities of all response activities and impacts the ability of first responders to sustain shelters, hospitals, and other first responding units.

Therefore, prioritizing the recovery of water and wastewater service is essential to bringing normalcy and commerce back to any community.

The disaggregated approach under the national response framework means that no single entity at the federal level has total responsibility for the water mission. This is our issue, and others at the federal level has also recognized this.

In 2009, the National Infrastructure Advisory Council recommended the Department of Homeland Security elevate water services to its own ESF category within the national response framework.

Seven years later, the NAIC recommended that DHS direct FEMA to consolidate federal emergency response roles and responsibility into a single ESF.

Implementing these recommendations will be consistent with the approaches applied for similar critical infrastructure such as transportation, communications, and energy.

We urge Congress with its oversight jurisdiction and responsibilities to direct FEMA to reconsider how the NRF is used to support disaster response and recovery. This is vital for protecting public health, the environment, and all the communities we serve.

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2579

And thank you very much. [The prepared statement of Mr. Howe f

2580

2581

\*\*\*\*\*INSERT 5\*\*\*\*\*

2582 Mr. Shimkus. Thank you, sir.

2583 And now I would like to recognize Mr. Mark Lichtenstein from  
2584 the State University of New York. You are recognized for five  
2585 minutes.

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2586 STATEMENT OF MR. LICHTENSTEIN

2587

2588 Mr. Lichtenstein. You pronounce my name better than I do.  
2589 Thank you.

2590 Chair Shimkus, Chair Walden, Ranking Members Tonko and  
2591 Pallone, and honorable subcommittee members, thank you for the  
2592 opportunity to participate.

2593 Having just returned from Puerto Rico and the Virgin Islands,  
2594 I have many observations and concerns. But today I am only going  
2595 to focus on disaster debris.

2596 I have more than three decades of waste management experience  
2597 including with disasters. I am employed by the State University  
2598 of New York College of Environmental Science and Forestry -- ESF  
2599 -- in Syracuse. It is a different ESF than we have been talking  
2600 about.

2601 As immediate past president of the National Recycling  
2602 Coalition, I helped create a task force on sustainable disaster  
2603 debris management immediately after Harvey.

2604 I have helped address issues in the island since 2009,  
2605 working with colleagues like my partners to the left, and I am  
2606 a member of the board for Island Green, a U.S. Virgin Islands  
2607 nonprofit.

2608 I have been working with local people to devise a sustainable  
2609 approach for the storm debris. Some U.S. government responders  
2610 are appreciated.

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2611           However, there is concern from some residents and other  
2612 experts regarding the potential ecological and human health  
2613 impacts of a disaster debris management method of choice of the  
2614 Army Corps of Engineers -- air curtain incineration.

2615           ACI is a past practice of FEMA and the Corps in these  
2616 situations and they have proposed it for the Virgin Islands and  
2617 possibly Puerto Rico as well.

2618           This would add insult to injury, especially considering that  
2619 much of the debris is clean vegetation. There are better ways.

2620           During Superstorm Sandy in New York City, the Corps planned  
2621 to use ACIs continuously for four months but they stopped after  
2622 one month because they could not get them to function properly.

2623           Air quality was exceeded during days of high humidity and  
2624 this was November in New York City. Humidity is routinely  
2625 extremely high on the islands. Local people and others are  
2626 concerned that ACIs will emit pollutants that could cause  
2627 pulmonary aggravation, particularly for individuals with asthma  
2628 or cardiac diseases.

2629           Diesel and gasoline generators, which you have heard about  
2630 already today, and exposure to indoor mold are already aggravating  
2631 existing respiratory conditions.

2632           If burning moves forward in any manner, appropriate agencies  
2633 should be asked to address potential health issues, especially  
2634 regarding existing conditions. The agency for toxic substances  
2635 and disease registries should be requested to do a review of the

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2636 health impacts of burning before it commences. EPA should be  
2637 asked to establish air monitors downwind of the burners and  
2638 burning should not commence until monitors are established and  
2639 EPA immediately shares results with the public.

2640 Much of the topsoil has been lost through storm water. They  
2641 have been hammered with rain since the hurricanes. So it is  
2642 critical that the vegetative debris remain to help replenish the  
2643 soil that the plants of the islands need.

2644 When considering options like burning, it is essential to  
2645 incorporate externality costs -- costs for which it is hard to  
2646 calculate an immediate number like climate change, the impacts  
2647 of depleted soils on the ecosystem, or health effects of air  
2648 pollution.

2649 These impacts can be reduced through other viable options  
2650 and this is one reason groups like the National Recycling  
2651 Coalition have opposed ACIs.

2652 FEMA and the Corps have said they will take the governor's  
2653 lead. Many in the Virgin Islands have asked their governor to  
2654 oppose incineration. Experts from Puerto Rico, the Virgin  
2655 Islands, and stateside have worked to develop a viable alternative  
2656 including recovery of hardwood and then mulching and composting.  
2657 This all could be done safely and efficiently.

2658 Composting is a process that nature has perfected over  
2659 millions of years. It has been successful in many locations at  
2660 large scales and with other disasters like Superstorm Sandy.

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2661 Puerto Rico officials are working towards a similar  
2662 sustainable plan. Providing a valid option to incineration can  
2663 serve as a positive framework for other disaster-impacted areas  
2664 in the future and that is key, and it represents a new sustainable  
2665 scheme for debris and waste on the islands, going forward.

2666 This is a once and done opportunity to get a leg up on  
2667 acquiring the infrastructure needed for management of the  
2668 island's long-term organic waste problem, which is about 50  
2669 percent of the island's normal waste stream. This gets to the  
2670 questions about landfills earlier.

2671 To help this sustainable option move forward, assistance  
2672 could come in the form of a waiver of the matching funds  
2673 requirement for the next 18 months while the islands build towards  
2674 this more resilient and future-focused infrastructure.

2675 Right now, FEMA is requiring the debris management solution  
2676 to be fully implemented in 180 days and this is considered  
2677 unrealistic for composting or burning.

2678 The residents and visitors of Puerto Rico and the Virgin  
2679 Islands deserve our focused attention. They deserve clean air  
2680 and a healthy ecosystem.

2681 The hurricanes were certainly not desired, but this is a  
2682 great opportunity to build a more resilient and sustainable future  
2683 so that the islands can come back better than before.

2684 Thank you on behalf of my institution, ESF, and SUNY, and  
2685 we stand ready to assist the subcommittee as it continues its work.

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2686 [The prepared statement of Mr. Lichtenstein follows:]

2687

2688 \*\*\*\*\*INSERT 6\*\*\*\*\*

2689 Mr. Shimkus. Thank you very much.

2690 Next, we would like to turn to -- I don't know if it is Señora

2691 or Señorita. Señor? Rodríguez del Valle.

2692 You are recognized for five minutes.

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2693 STATEMENT OF MS. RODRÍGUEZ

2694

2695 Ms. Rodríguez. A disaster within a disaster --

2696 Mr. Shimkus. One moment, please. There is a -- just press  
2697 a button there. You'll be fine.

2698 Ms. Rodríguez. Thank you. I will start again.

2699 A disaster within a disaster -- that is what the eight  
2700 densely-populated communities on the Caño Martín Peña and others  
2701 that were already under environment distress prior to Irma and  
2702 Maria have been experiencing since the hurricane struck.

2703 The 25,000 U.S. citizens living on the eastern half of the  
2704 Martín Peña tidal channel already feared rain. They knew about  
2705 flooding. An average of twice a year heavy rainfall translated  
2706 into severe floods with wastewater.

2707 Accounts of raw sewage coming out of the shower and toilets  
2708 or of waking up in the middle of the night to a wet bed and water  
2709 to your knees and waste were common.

2710 They knew having to dry a wet mattress in the sun to have  
2711 somewhere to lay down to sleep at night. They also knew disease.  
2712 The prevalence of gastrointestinal disease in the Cano was of 31  
2713 percent in three months, compared to 20 percent in a full year  
2714 for Puerto Rico.

2715 Forty-four percent of the children five years of age and  
2716 under living close to the Caño had asthma. People had experienced  
2717 the dengue fever, zika, and chikungunya epidemics. There have

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2718 been reports of leptospirosis, a disease transmitted mainly by  
2719 contact with the urine of rats and other animals and which can  
2720 be fatal.

2721         The Martín Peña channel stretches for 3.7 miles across San  
2722 Juan, connecting San Juan Bay, where Puerto Rico's busiest port  
2723 is, to the inland San Jose Lagoon to the east, vital for the  
2724 stormwater management of the adjacent Luis Muñoz Marín  
2725 International Airport. It is part of the San Juan Bay, recognized  
2726 by the EPA for its national significance.

2727         From a 200- to 400-feet wide navigable channel, today it is  
2728 barely five feet wide in some areas. Adjacent communities lack  
2729 sewer systems and the stormwater system has collapsed. The San  
2730 Jose Lagoon has lost superficial area and depth, increasing the  
2731 risk of floods at the airport and other communities throughout  
2732 San Juan.

2733         If historic -- if history were to repeat itself, almost a  
2734 century ago after two major hurricanes and in the midst of an  
2735 economic depression, persons migrated to San Juan and the wetlands  
2736 around the Caño became home.

2737         Prior to Maria, the barrios which survived decades of  
2738 eviction and gentrification were already a symbol of resiliency,  
2739 empowerment, and grass roots organization.

2740         Residents engaged in an unprecedented participatory  
2741 planning process that led to the creation of the comprehensive  
2742 development ENLACE Caño Martín Peña project. Since then,

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2743 together with the public and private sectors, they moved forward  
2744 an agenda of long-term resiliency that has the potential of  
2745 transforming the city by reconnecting its navigable bodies of  
2746 water.

2747         Recovering the Caño with participation means healthier and  
2748 safer conditions for the residents without fear of gentrification  
2749 thanks to a community land trust recognized last year with the  
2750 United Nations World Habitat Award.

2751         And then Irma and Maria struck. Close to 1,000 families lost  
2752 totally or partially the roofs to their homes. Approximately 75  
2753 homes were totally destroyed. The communities experienced  
2754 another severe flood with raw sewage, only that this time around  
2755 it lasted for four days.

2756         Approximately half of the trees along the Caño fell and  
2757 together with the debris from the destroyed houses further blocked  
2758 the Caño and the storm sewers.

2759         Since Maria, it only takes 15 minutes of rain for floods to  
2760 start. It even floods on a sunny day. We already have had two  
2761 significant floods in the past two months, which have been  
2762 affecting other areas of San Juan as well.

2763         Since Maria, water quality throughout the estuary has  
2764 significantly worsened. The disturbance of the Caño and  
2765 uncollected debris from streets caused a rat infestation and  
2766 augmented the risk of mosquito-borne diseases. Alligators are  
2767 approaching people's homes. Tarps and Corps-installed blue

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2768 roofs are already in place. However, there is mold and water  
2769 filtration.

2770 Fifteen years of organizing allowed for ENLACE, the  
2771 grassroots G-8, and the land trust to work with partners and bring  
2772 aid. However, the crisis is far from over.

2773 Now, imagine living in a state of never-ending crisis and  
2774 trauma -- whole families sleeping on the floor on the room that  
2775 does not get wet after sleeping under the rain for many days in  
2776 the capital city of Puerto Rico, San Juan.

2777 Using federal recovery funds to support initiatives like the  
2778 ENLACE Caño Martín Peña project presents a unique opportunity for  
2779 an emblematic recovery process that increases Puerto Rico's  
2780 long-term resiliency and sound economic development.

2781 Investing in the ecosystem restoration of the Caño  
2782 infrastructure and related acquisitions and relocation supports  
2783 equitable development and participatory democracy.

2784 There is already a credible and proven institutional and  
2785 policy framework in place and engaged community and partners,  
2786 shovel-ready projects and NEPA compliance for the ecosystem  
2787 restoration piece elaborated under the Water Resources  
2788 Development Act of 2007.

2789 Due to the current crisis, the Caño cannot keep waiting for  
2790 ordinary processes to occur. At a time of severe political,  
2791 economic, fiscal, and financial challenges, support from the U.S.  
2792 federal government is crucial.

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2793 That is why I urge Congress to pursue the inclusion of this  
2794 project and all of its components in any upcoming disaster  
2795 recovery bill for Puerto Rico.

2796 This project is necessary and should be a priority due to  
2797 serious repercussions in the San Juan Bay Estuary, public health,  
2798 and safety.

2799 And finally, I want to stress the importance of ensuring that  
2800 any funding related to Martín Peña or other communities in a  
2801 similar situation promote on-site resilient recovery rather than  
2802 displacement and gentrification and for assistance policies to  
2803 be context sensitive to allow for a just and equitable disaster  
2804 recovery.

2805 We are concerned that FEMA individual assistance programs  
2806 requiring families in need for housing to leave outside the flood  
2807 plain can make families in desperate need to leave their  
2808 communities.

2809 When this happens in areas where resilient onsite  
2810 alternatives are visible and that have been under pressure of  
2811 displacement and gentrification due to their strategic location,  
2812 those who have struggled for their lands for decades can end up  
2813 being uprooted.

2814 No person should leave fearing the rain and no community  
2815 should be displaced when there is an alternative at hand. With  
2816 your support, long-term solutions that also keep Puerto Rico face  
2817 -- help Puerto Rico face its economic crisis such as this project

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2818 will become a reality.

2819 An official visit to Puerto Rico I do invite you to come and  
2820 visit the work we've done. Thank you.

2821 [The prepared statement of Ms. Rodríguez follows:]

2822

2823 \*\*\*\*\*INSERT 7\*\*\*\*\*

2824 Mr. Shimkus. Thank you very much.

2825 Now I would like to turn to Mr. Epperson. You are recognized

2826 for five minutes.

2827 STATEMENT OF MR. EPPERSON

2828

2829 Mr. Epperson. Good afternoon, Chairman, and members of the  
2830 subcommittee.

2831 My name is Trent Epperson. I am the assistant city manager  
2832 with the city of Pearland in Texas and I am pleased to be invited  
2833 here today to present to you the effects of Hurricane Harvey as  
2834 it occurred in the city of Pearland, especially as it relates to  
2835 critical water and wastewater infrastructure and the need to make  
2836 that infrastructure resilient and redundant.

2837 The city of Pearland is a suburban city of about 120,000  
2838 residents just south of the city of Houston. It has been one of  
2839 the fastest growing communities in the nation over the past 15  
2840 years.

2841 We have grown from a population of about a little over 30,000  
2842 in the year 2000 to today over 120,000 to where we are the third  
2843 largest city in the Houston Metro area.

2844 During Hurricane Harvey, with its unprecedented flooding,  
2845 Pearland experienced structural flooding affecting over 1,700  
2846 residents, 50 businesses, and flooding to critical infrastructure  
2847 including two wastewater treatment plants.

2848 Most of the flooding occurred along Clear Creek, which,  
2849 germane to this subcommittee is a 303D-listed impaired water body  
2850 for bacteria. With a 500-year storm event, it is -- it was  
2851 estimated before this storm that about 7,000 residents in the

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2852 Clear Creek watershed would flood. I believe we saw that or more  
2853 in Pearland and the downstream communities.

2854 There is, however, a U.S. Army Corps of Engineers drainage  
2855 project that has been on the books since the '60s but yet to be  
2856 funded.

2857 Based on the studies associated with that project,  
2858 approximately half of those residents that flooded in the  
2859 watershed would likely have been spared during Hurricane Harvey.

2860 Additionally, critical infrastructure within the watershed  
2861 would not have flooded and failed as well. Although the city of  
2862 Pearland has grown rapidly, our new development and our new  
2863 infrastructure follows current codes and standards.

2864 The result was that in those newer areas we experienced very  
2865 minimal flooding and that is in areas where we have added tens  
2866 of thousands of new rooftops over the past 15 years.

2867 So we see that along with the completion of the Clear Creek  
2868 drainage project what is needed is funding for continued sound  
2869 investment and resilient and redundant critical infrastructure,  
2870 especially to bring the older infrastructure to current  
2871 standards.

2872 The most critical of those infrastructure pieces are water,  
2873 wastewater, and the automated systems that control that  
2874 infrastructure. It is a critical life safety issue for any city  
2875 to have the ability to deliver clean safe drinking water during  
2876 a disaster.

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2877 For Pearland, this critical infrastructure must have  
2878 adequate generator power, flood proofing, and adequate elevation  
2879 to survive a minimum of a 500-year storm as well as able to  
2880 withstand Category 4 hurricane winds.

2881 During Hurricane Harvey, our water system performed very  
2882 well with only one water well sustaining minor damage due to power  
2883 surging. We never lost pressure and we were always able to  
2884 deliver that clean safe drinking water.

2885 Unfortunately, some of our adjoining communities and the  
2886 smaller water systems around us were unable to do that and did  
2887 have to issue boil water notices.

2888 Additionally, continuity of service in treating wastewater  
2889 is critical for citizens sheltering in place and the return of  
2890 evacuees when they return -- when they come back to their homes.

2891 We must ensure that wastewater is adequately treated and not  
2892 released during a flooding event because that can affect the  
2893 downstream water quality in our streams and bayous.

2894 In our area, wastewater facilities are often located in  
2895 low-lying areas near the stream that they outfall to, making them  
2896 vulnerable to flooding, and therefore a lot of them are in need  
2897 of the same resiliency and redundancy criteria applied to our  
2898 drinking water facilities.

2899 During Harvey, unfortunately our wastewater system did not  
2900 fare near as well as our wastewater system. Our Longwood  
2901 wastewater treatment plant, which was originally built in the

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1960s and is sited in one of the old oxbows of Clear Creek, was inundated with flood waters and inoperable for up to 72 hours during the event. The estimated damage to the plant is about a million and a half dollars.

But due to the proximity of the plant to the creek, instead of making those expensive repairs on a plant that is vulnerable to the next flood, this facility should have its flows redirected to an adequate plant to mitigate any future damage or loss of service.

One final critical piece of infrastructure to our utility operations is the Supervisory Control and Data Acquisition System, or SCADA.

What SCADA is is it is basically a system that allows us to monitor and control our critical water and wastewater facilities remotely.

These systems must be redundant and resilient to provide continuous connectivity to those facilities throughout an emergency event.

SCADA is indispensable to ensure the plants and the lift stations are operational and properly functioning when we cannot reach those facilities due to high water or debris.

During Hurricane Harvey, for three days we could not physically access 18 wastewater lift stations which are critical to getting the wastewater to the plants. Due to a lack of SCADA redundancy, we were also unable to monitor many of these

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2927 facilities remotely.

2928           The city of Pearland, although challenged, fared relatively  
2929 well through Hurricane Harvey and will recover stronger than we  
2930 were before the disaster.

2931           As we rebuild, we look to ensure our critical infrastructure  
2932 is able to withstand flooding, high winds, and other potential  
2933 disasters.

2934           To do this, we must have adequate recovery and mitigation  
2935 funding available so that we do not just rebuild our critical  
2936 infrastructure to its original state but we rebuild resilient  
2937 redundant infrastructure ready for the next disaster.

2938           Thank you, Mr. Chairman.

2939           [The prepared statement of Mr. Epperson follows:]

2940

2941 \*\*\*\*\*INSERT 8\*\*\*\*\*

2942 Mr. Shimkus. Thank you very much. I appreciate the opening  
2943 statements. I want to start by then recognizing myself for five  
2944 minutes for a round of questioning.

2945 And I have some here prepared in front of me but I really  
2946 want to go off script a little bit, and if you would hit the time,  
2947 too, Jerry.

2948 The -- you sat in on our -- the first panel, which was long  
2949 with a lot of extensive questioning and I think there was a  
2950 consensus by my colleagues on both sides that maybe we are just  
2951 not organized right and I think it addresses all three of your  
2952 kind of positions because, one, it deals with, you know, the debris  
2953 management issue, who makes the decision and for what purposes.

2954 Obviously, the estuary and the river systems, but we also  
2955 want to make sure that if we go in this direction how do we not  
2956 -- it was mentioned in the first panel -- how do we not stumble  
2957 on them having a centralized government get involved in things  
2958 that are working, right.

2959 So let me -- let me go and turn to each one of you and, Mr.  
2960 Howe, my questions were going to be -- going to be totally directed  
2961 to you but I really would like everyone's response because this  
2962 is kind of similar to the energy hearing where in some places there  
2963 is mutual agreements and when you have states or local service  
2964 areas you can coordinate and you can send folks to. Obviously,  
2965 islands much more difficult, as we saw with the Energy  
2966 Subcommittee.

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2967           So what would be a structure by which -- I think your  
2968 testimony was there are things that are working -- be careful not  
2969 to screw those up if there was a change in the -- in essence, a  
2970 change of the Stafford Act in some delineation of responsibility.

2971           Mr. Howe. In speaking to what I spoke in my remarks on the  
2972 written testimony, also the issue of the multiple ESFs that water  
2973 is under.

2974           Now, for lack of a better term, under the WARN program across  
2975 the country we have done a workaround. The WARN programs are  
2976 utilities supporting utilities and most of those programs are  
2977 operated independently of the state regulatory agency or the state  
2978 operation center, even though as you saw from Mr. Shaw earlier  
2979 we cooperate with them directly.

2980           We are partially funded and we are unique to this, by the  
2981 way. The Texas -- the TXWARN program is partially funded by the  
2982 TCEQ. So we work very closely with them and the state operations  
2983 center.

2984           But we have identified an issue that occurs in the state  
2985 operations center because they are broadly looking at public works  
2986 and the totality of it -- that even though we are in touch with  
2987 them and coordinating with them, they are not necessarily always  
2988 paying full attention to the water/wastewater side.

2989           So during Harvey we had situations where we would loop back  
2990 to them and have conversations and we would have to go through  
2991 a complete refresh --

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2992 Mr. Shimkus. I wonder if I can jump in so I --

2993 Mr. Howe. Yes, please.

2994 Mr. Shimkus. So your position is that, and I am learning  
2995 these acronyms as we go through the hearing, it should be raised  
2996 to an emergency support function level and that would help?

2997 Mr. Howe. In other words, it is disaggregated now. If it  
2998 was under one, then I think, as I've said to somebody before, that  
2999 then those in emergency management would have the same red light  
3000 flashing on water/wastewater as they do on lifesaving and  
3001 everything else that they do because it would be a single support  
3002 function and we know from the industry that there are -- you know,  
3003 we have only talked about three essential services -- police,  
3004 fire, and EMS. But without electric, water, and wastewater the  
3005 first three can't function.

3006 Mr. Shimkus. Okay. Let me go to Mr. Lichtenstein.

3007 Mr. Lichtenstein. It is a dichotomous thing. I drove all  
3008 around the islands -- Saint John, Saint Thomas, Puerto Rico,  
3009 Vieques. So need for plans ahead of time, clearly.

3010 Standard operating procedures -- we talked about those  
3011 earlier. But this is definitely a matrix thing. Can't be top  
3012 down. It is not linear but yet there is a critical role for the  
3013 U.S. government. What I saw, this dichotomous thing, was some  
3014 unbelievable local efforts of stepping up to the plate. On the  
3015 island of Vieques, and I don't know if you're familiar with that  
3016 island but that is an island on the --

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3017 Mr. Shimkus. We used to debate it a long -- couple years  
3018 ago all the time.

3019 Mr. Lichtenstein. Yes. So here's a story about  
3020 initiative. The U.S. Coast Guard, while Maria was still kind of  
3021 hanging out, the captain there used initiative and sent some  
3022 cutters over to Vieques before anybody else was there for days.

3023 So how do you -- how do you value that and how do you enhance  
3024 that kind of activity to help the locals? Clarity of leadership  
3025 is key.

3026 Mr. Shimkus. Right.

3027 Mr. Lichtenstein. What I saw was lack of clarity of  
3028 leadership. So this is matrixed and it is something that we are  
3029 going to have to figure out how to structure and how do you value  
3030 these local people that are just stepping up to the plate?

3031 Mr. Shimkus. And speaking of local people, Ms. del Valle  
3032 -- Rodríguez del Valle?

3033 Ms. Rodríguez. Yes. I have to totally agree with Mark  
3034 Lichtenstein's remarks. In our case being a community in San Juan  
3035 basically the after -- right after Maria it was the residents the  
3036 ones that took care of themselves and the institutions that have  
3037 been working with them for a very long time came in the next day  
3038 and that was the only outside help that they received in  
3039 practically a month and this was San Juan with a lot of partners  
3040 -- previously built partnerships.

3041 So the other thing that is helpful is for the -- in the case

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3042 of the federal government it was very critical for us to have  
3043 people on the ground that actually were able to listen, because  
3044 sometimes you design a program that you think is going to work  
3045 very well everywhere and not necessarily all the circumstances  
3046 are the same.

3047 So we were able to establish those relationships and improve  
3048 dramatically the type of help that was being brought to the  
3049 communities, particularly with the project of the blue roofs and  
3050 other assistance that we finally got from FEMA and the federal  
3051 government.

3052 Mr. Shimkus. Thank you.

3053 And let me, with my colleagues' permission so I can get Mr.  
3054 Epperson on the record, Texas, local community -- how do we be  
3055 careful that we are not part of the problem and, you know, we are  
3056 from the federal government -- we are here to help, and then we  
3057 end up not being helpful?

3058 Mr. Epperson. Thank you, Mr. Chairman.

3059 It is a very local response and effort from the beginning,  
3060 and with the experience of Hurricane Harvey we really could not  
3061 get out, could not get in for several days where we are located.

3062 We did -- we did -- we do have other local government contacts  
3063 throughout Texas that were able to send high water rescue vehicles  
3064 that were able to help out.

3065 So I think that initial response it is very local and how  
3066 you have to deal with that, and then once the flood waters recede

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3067 and we start talking about projects to -- the enhancement projects  
3068 and projects to make sure that the next time we have the high wind  
3069 event or the high water event, I believe that is where we can  
3070 partner with FEMA and the federal government and the other  
3071 agencies.

3072 Mr. Shimkus. Thank you very much, and I appreciate my  
3073 colleagues allowing me to go a few minutes over.

3074 Now I would like to turn to Mr. Tonko for five minutes.

3075 Mr. Tonko. Thank you, Mr. Chair.

3076 Ms. Rodríguez del Valle, where water systems are now working  
3077 in Puerto Rico are there still concerns with water safety?

3078 Ms. Rodríguez. Yes. Yes, and the people are being told to  
3079 boil the water before consumption. But when you have no power  
3080 at home, you know, and the gas is limited it is very hard to comply  
3081 with those basic health measures.

3082 Mr. Tonko. I have heard that there are over 200 independent  
3083 water systems on Puerto Rico but they serve a very small percentage  
3084 of the population.

3085 Can you characterize the types of communities or people  
3086 served by independent non-PRASA water systems?

3087 Ms. Rodríguez. Well, I am not an expert in this. But from  
3088 my knowledge, these are areas particularly in the mountain side  
3089 of Puerto Rico where it was very difficult to provide formal  
3090 services.

3091 So the families did community aqueduct systems decades ago

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3092 and they have been living on those for a long time.

3093 Mr. Tonko. Thank you.

3094 And Mr. Epperson, your testimony mentioned that you need to  
3095 make \$1.5 million worth in repairs to your water -- your wastewater  
3096 treatment plant. How important is it to protect your community's  
3097 investment by making sure that that facility is more resilient  
3098 to future flooding?

3099 Mr. Epperson. I think it is very important, you know, that  
3100 we do have the plant up and running with temporary repairs.

3101 Those are the more permanent repairs and -- but because of  
3102 the location of that plant we really are going to look at an  
3103 enhancement type project with that -- with that plant to send those  
3104 wastewater flows to one of our other plants, expand that plant,  
3105 because it is situated and located in a location less vulnerable  
3106 to the rising waters that we experienced at this plant.

3107 Mr. Tonko. And are there currently sufficient federal  
3108 funding opportunities to help the communities assess and mitigate  
3109 future vulnerabilities to their water supplies or water systems?

3110 Mr. Epperson. I believe there are opportunities. I am not  
3111 certain that they are sufficient. You know, we are exploring what  
3112 those opportunities are right now and moving through that process.

3113 Mr. Tonko. Thank you.

3114 And Mr. Howe, I am interested in how FEMA can improve its  
3115 emergency support functions for the water sector. How does it  
3116 compare to other critical infrastructure sectors?

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3117 Mr. Howe. I think the difficulty we have is because it is  
3118 spread out over multiple ESFs there is not a nationwide or entirety  
3119 of a single operating system so it can vary from region to region,  
3120 area to area.

3121 As I mentioned, we were -- we were successful in Texas because  
3122 we've almost -- we have made it happen that way. But it is not  
3123 -- it is not consistent. So there needs to be a consistent  
3124 structure of how that works and we believe under a separate ESF  
3125 that would happen.

3126 Mr. Tonko. Thank you.

3127 And Mr. Lichtenstein, what types of pollution occur -- can  
3128 occur from burning debris?

3129 Mr. Lichtenstein. Clearly, particulates or smoke. But  
3130 that is the question that we want to answer -- what else is  
3131 happening.

3132 So if it is a lower temperature burn there -- and if plastic  
3133 -- I saw plastic tangled up with the debris and if that is burned  
3134 it can potentially have dioxins, furans, polyaromatic  
3135 hydrocarbons and other chemicals. But that really needs to be  
3136 looked at.

3137 Mr. Tonko. Thank you.

3138 And I imagine that space is at a premium in areas like Puerto  
3139 Rico and the U.S. Virgin Islands. What is the current state of  
3140 the landfills there and what particular challenges exist because  
3141 of the land challenge itself?

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3142 Mr. Epperson. Yes. I can't speak with authority to the  
3143 landfills but I do have some knowledge. Some of them are really  
3144 exceeding capacity and exceeding federal regulations. Others  
3145 are well run and doing fine.

3146 The main island of Puerto Rico, of course, has more land than  
3147 the other islands. In the Virgin Islands there are serious  
3148 issues.

3149 There are only two landfills -- one on Saint Croix and one  
3150 on Saint Thomas. Both have capacity issues and operational  
3151 issues. So that is a big concern on those islands.

3152 Mr. Tonko. Thank you.

3153 And Ms. Rodríguez del Valle, if you had one recommendation  
3154 to this subcommittee or to the committee in general, what would  
3155 it be in regard to what you see right now in Puerto Rico?

3156 Ms. Rodríguez. I think disasters kind of bring out the best  
3157 of the -- of the society and also the institutional flaws, and  
3158 we are seeing a little bit of that currently in Puerto Rico, not  
3159 only regarding the way in which we have been able to address the  
3160 crisis.

3161 It has brought the best of the Puerto Rican people and its  
3162 capacity to organize and do a great job when nobody else was doing  
3163 it. But it has also brought to light issues regarding the way  
3164 in which disaster relief was organized, particularly during the  
3165 first days.

3166 It seemed to many of us living there that there was a lot

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3167 of disorganization and some of the decisions actually delayed  
3168 assistance to the people who needed it the most.

3169 I also wanted to add one point regarding Mr. Shimkus'  
3170 question and it has to do with federal government aid. Actually  
3171 being able to be culturally sensitive is something as simple as  
3172 having FEMA officers visiting people's homes to speak Spanish  
3173 because most people in Puerto Rico do not understand English and  
3174 sometimes decisions were being done regarding the type of aids  
3175 that these families received with a language barrier in the  
3176 middle.

3177 So perhaps that curtailed the ability of many of them to be  
3178 able to actually get the help they needed.

3179 Mr. Tonko. Thank you very much.

3180 And with that, I yield back, Mr. Chair.

3181 Mr. Shimkus. Thank -- the chair thanks the gentleman.

3182 The chair recognizes the gentleman from Texas, Mr. Olson,  
3183 for five minutes.

3184 Mr. Olson. I thank the chair.

3185 I am going to open with the praise and Texas brag about a  
3186 friend and leader back home in Texas 22, Trent Epperson. And  
3187 Trent, I should give you a proper Aggie greeting -- howdy, my  
3188 friend. Welcome.

3189 Trent is the assistant city manager of Pearland, Texas, as  
3190 he mentioned. Pearland is the largest city in Brazoria County  
3191 with over 120,000 people and growing, rapidly.

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3192 Trent helps to run their half a billion dollar capital budget  
3193 as well as overseeing both the city's public works and utilities  
3194 department.

3195 Chair, we are so proud of Pearland and Brazoria County's  
3196 response to Hurricane Harvey. Please tell the committee how many  
3197 people died in Brazoria County because of Hurricane Harvey.

3198 Mr. Epperson. There were no people that died in Brazoria  
3199 County during Hurricane Harvey.

3200 Mr. Olson. Zero. Nada. Nil. No deaths. That's  
3201 amazing, despite five feet of rain in parts of Brazoria County.  
3202 Is that correct?

3203 Mr. Epperson. Yes, sir.

3204 Mr. Olson. Okay. Now the fun stuff -- the questions.

3205 What kind of help did you get immediately after Harvey hit  
3206 outside of Brazoria County from the federal government, from the  
3207 EPA, maybe from FEMA, from other states, other entities?

3208 What would you change about the storm response lines of  
3209 communication now to the next storm that is coming? We know it  
3210 is coming.

3211 Mr. Epperson. As far -- as far as immediate help, I think  
3212 it was mostly locals that were able to do the -- all of the  
3213 immediate response needs.

3214 We have been working with FEMA, meeting with them on a weekly  
3215 basis since then. I believe that process for the immediate needs  
3216 and the debris removal and developing our damage assessments is

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3217 moving forward.

3218           One of the areas where I think that moving forward we want  
3219 to improve as well as working with the feds improve is a buy-out  
3220 program where we -- it has in the past been a -- kind of sporadic  
3221 when there is a disaster.

3222           We move forward with a buy-out program. It occurs several  
3223 months to maybe more than a year after the actual event itself.  
3224 And so we see a need for accelerating that. There are people that  
3225 are out of their homes right now and don't know whether to repair  
3226 those homes and make those repairs because they don't know whether  
3227 there is a buyout opportunity or not.

3228           So I think the ability to accelerate that and have that as  
3229 an ongoing program even when there is not a disaster that just  
3230 occurred would really help from a local's perspective.

3231           Mr. Olson. Anything else you wish from Washington -- what  
3232 we could do better to help you guys get through that? Because  
3233 you guys were awesome but we can help you I think a lot more, much  
3234 more -- much quicker.

3235           I mean, it just seemed like over and over people calling me  
3236 up, I can't get somebody to come out to my house to, you know,  
3237 look at my house and assess the damage.

3238           For example, Pearland had five large -- four large dump  
3239 trucks go in that heavy water. Three are flooded out. You are  
3240 down to one dump truck. And so I guess, you know, we are trying  
3241 to get resources to you.

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3242           Anything we can improve on here in D.C.? Because you all  
3243 do great but we want you to do better. We can help, I think.

3244           Mr. Epperson. Yes, sir. I think any of those resources  
3245 would help.

3246           Mr. Olson. The previous panel, Trent, talked about planning  
3247 scenarios with TCEQ and EPA. Has Pearland been involved in any  
3248 of those? Just -- have you been involved at that level planning  
3249 for another hurricane like Harvey? Have you been involved in that  
3250 or are you sort of outside looking in?

3251           Mr. Epperson. We work, you know, with our local county  
3252 emergency management as well as with the Texas Department of  
3253 Emergency Management. But we haven't had any direct contact or  
3254 work with those folks prepreparing for emergency.

3255           Mr. Olson. Have you had to adjust your plans for an 800 years  
3256 flood as opposed to a 500-year flood or a 100-year flood? I mean,  
3257 how much have you adapted to what happened in August with Hurricane  
3258 Harvey?

3259           Mr. Epperson. I think the big thing we have recognized is  
3260 that our newer infrastructure designed to current standards fared  
3261 very well even with the unprecedented flooding and that it is our  
3262 areas that have been there for many decades that were designed  
3263 to other standards or before standards were in place that were  
3264 mostly affected and that those are the areas we want to concentrate  
3265 on for future drainage improvement projects as well as other  
3266 resiliency projects to make sure that those areas also are able

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3267 to withstand the same type of flooding.

3268 Of greatest importance to that is the Clear Creek project  
3269 which is a project sponsored by the Harris County Flood Control  
3270 District and I believe that project has been submitted for federal  
3271 funding to move forward after this event.

3272 Mr. Olson. I am out of time and I want to say Gig'em my  
3273 friend. Thank you.

3274 Mr. Epperson. Gig'em.

3275 Mr. Shimkus. The chairman now turns to another Texan, Mr.  
3276 Green, for five minutes.

3277 Mr. Green. Well, I appreciate it and I married into the  
3278 Aggie family. My son and our son-in-law and my two grandchildren  
3279 now think they are going to be in the Corps Cadets.

3280 But be that as it may, Mr. Howe, in your testimony you know  
3281 that some of the city of Houston's wastewater operations were  
3282 overwhelmed during Harvey.

3283 Can you describe in detail on what locations? Was it mainly  
3284 upstream, Buffalo Bayou? Because every creek and bayou I have  
3285 in my area in east Harris County were out of their banks. But  
3286 it was mostly the city of Houston and Buffalo Bayou that the  
3287 wastewater treatment plants were overwhelmed?

3288 Mr. Howe. Yes, sir. It is my understanding on the west side  
3289 of Houston the wastewater plant was flooded out. Part of that  
3290 was due to controlled flooding out of the Addicks Reservoir, as  
3291 you are familiar with that area over there. They currently --

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3292 Mr. Green. I don't represent it but I am familiar with it.

3293 Mr. Howe. Yes, I understand. The -- I understand from the  
3294 city of Houston water utility they are currently dealing with a  
3295 wastewater line that is in Buffalo Bayou where the bayou is  
3296 sloughing off continually.

3297 They have a wastewater line that is on the side of that. It  
3298 is an ongoing issue. Obviously, there needs to be a coordinated  
3299 response on how that gets rebuilt and how their line gets  
3300 reinforced or moved.

3301 So it is these ongoing issues. The water system operated  
3302 just fine. They were able to put coffer dams around the northeast  
3303 water filter galleries to keep the water system operating fine  
3304 but wastewater, by its very nature, as Mr. Epperson mentioned,  
3305 are built in lower level areas and they had some significant  
3306 flooding, particularly in Houston's lift stations, too.

3307 Mr. Green. We have untold number of water districts outside  
3308 the city limits of Houston or Pasadena and I know they -- because  
3309 they are built on the bayou close to where they're -- they treat  
3310 the effluent and it goes -- they have permits to go into the bayous.

3311 Do you have any idea on how many of those were also impacted?

3312 Mr. Howe. I don't have specific numbers. The difficulty  
3313 for -- in our response during Hurricane Harvey, obviously, was  
3314 that there was a delayed response. No one could do an assessment  
3315 until the flood waters went down.

3316 Many of those operations were, obviously, shut down when the

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3317 flooding started but it doesn't mean there wasn't a pollutant.  
3318 I don't have specific numbers, though.

3319 Mr. Green. Okay. Well, I have the eastern part of the  
3320 county and, like I say, I could give you the watersheds from the  
3321 bayous and -- but Buffalo Bayou and the shipping port of Houston  
3322 actually runs right in the middle of our district, and whether  
3323 it be Brays or Sims, Sims Bayou looked like it was the one that  
3324 didn't flood as bad as Brays and on the north side I have Greens  
3325 Bayou, Carpenters Bayou in channel view, Hunting Bayou and --

3326 Mr. Howe. I grew up in Houston. I am familiar with all  
3327 these.

3328 Mr. Green. All these -- and all of them were and these were  
3329 multiple flooding experiences and we continue to work with the  
3330 Corps of Engineers and, of course, our Harris County Flood Control  
3331 District -- that a lot of our neighboring counties don't have flood  
3332 control districts but in Harris County we pay property taxes to  
3333 be able to have drainage ditches and, you know, take care of our  
3334 bayous along with the partnership with the Corps.

3335 So it is a big challenge. Your -- Mr. Howe, in your testimony  
3336 you said that the city of Houston was overwhelmed. What part of  
3337 the city did they -- did they shut down the wastewater system or  
3338 did --

3339 Mr. Howe. It is my understanding --

3340 Mr. Green. -- what part of the city was impacted?

3341 Mr. Howe. Excuse me. I am sorry.

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3342           On the west side of Houston they did have one of their  
3343 wastewater plants completely flooded out. It was out of service.  
3344 They were advising people not to flush, those who were still in  
3345 their residences, and they were -- they had the resources to get  
3346 that plant back online in three or four days, once the water --  
3347 the water receded.

3348           You know, as you may be familiar, most of Houston's  
3349 wastewater system is with forced mains or lift stations and they  
3350 have a significant number of those and I know a number of those  
3351 were flooded out.

3352           Houston proper was pretty resilient and a lot of that, much  
3353 like some of the other cities around there. So I don't have  
3354 specific details as to how they came back but they were very  
3355 resilient on their own.

3356           Since Hurricane Ike they have built up a lot of resiliency  
3357 within the city of Houston.

3358           Mr. Green. Well, in Harris County also many years ago,  
3359 because you recognize we were subsiding, the city of Houston is  
3360 now almost totally on surface water and they have surface water  
3361 rights.

3362           I know Pasadena I represent complains about having to pay  
3363 high water rates for the city of Houston.

3364           So we have a central location for surface water so we don't  
3365 continue to subside. Do you think there is -- should be an effort  
3366 to try and create mega wastewater treatment facilities and partner

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3367 with an untold number of water districts that we have and see how  
3368 that would work?

3369 Mr. Howe. You know, obviously, sir, that is a local  
3370 decision. The first thing, when you said it, that popped in my  
3371 head was the -- an example of the Trinity River Authority in the  
3372 Dallas-Fort Worth area, which is a mega wastewater operation  
3373 without regard to issue.

3374 You know, most of Houston's water comes from the discharge  
3375 in the Trinity River from TRA. That might be a possibility. I  
3376 mean, there are any number of small package plants in the muds  
3377 that you spoke of outside of the Houston area.

3378 There might be an effort to look at consolidating those in  
3379 a system that would be more efficient. There are enormous costs  
3380 involved in doing that and getting to that, you know, rerouting  
3381 sewer lines and everything else. But it is those sort of options  
3382 I think everybody needs to look at.

3383 Mr. Green. Well, and I am already over time, but with the  
3384 amount of money we are going to have to do to redo those plants  
3385 and also the houses and the businesses downstream who are in danger  
3386 of, you know, because of that effluent being in their houses and  
3387 their -- in their businesses.

3388 So thank you, Mr. Chairman.

3389 Mr. Shimkus. I thank my colleague.

3390 I want to thank the colleagues who stayed and participated  
3391 in the second panel. I personally really appreciate it. An

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3392 observation is that these disasters that we are talking about in  
3393 this event, if you noticed -- for the panelists, those of us who  
3394 have been through them really kind of the same type of story.

3395 I do think there is an opportunity for us to work collectively  
3396 and look at the Stafford Act. This is multi-jurisdictional,  
3397 though. This would be a long-term, five, six years trying to get  
3398 a response.

3399 I am -- you know, I just -- I keep thinking about big piles  
3400 of stuff and how do you separate them. I am a big trash energy  
3401 guy. I would like to see more of that. We have some locally that  
3402 I have toured.

3403 Buy-out programs -- we just had a flood five years ago.  
3404 People are just getting their checks now. So there is a lot of  
3405 ways these things can be fixed so we do appreciate your testimony.

3406 I also want to tell my -- to the committee that we have five  
3407 legislative days to submit opening statements. I forgot to do  
3408 that at the beginning of this.

3409 I want to thank you all for being here and pursuant to  
3410 committee rules, I remind members that they have 10 business days  
3411 to submit additional questions for the record.

3412 If you get those, if you would reply we would appreciate it  
3413 and I ask that you submit your responses within 10 business days  
3414 upon receipt of the questions.

3415 Of course, if your -- can't use your electric stuff because  
3416 you are in a place where there is no electricity that might be

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3417 a challenge. But we do appreciate you being here. There is a  
3418 lot of work for us to do.

3419 Thank you for your time and with that, I will adjourn the  
3420 hearing.

3421 [Whereupon, at 12:56 p.m., the committee was adjourned.]