Table 1. Summary: problem definitions by Task Force members (from survey and focus group input) and changes to the project made by the larger research team, in response to Task Force input.

	Positive aspects	**Negative aspects**	**Changes to the project by researchers, in response to input from Task Force**
Air quality	Refineries are a source of jobs, economic strength, and national importance[2]	Refineries are a source of pollution	Added air pollution strategies to co-production focus, which originally had focused only on flooding strategies
Health	n/a	Linked to air quality Linked to aging housing stock Linked to water quality	Health impacts were not emphasized at the proposal stage, but in response to Task Force input, the larger research team expanded focus to include health data
Water quality	n/a	Linked to aging housing stock Linked to aging infrastructure	Concerns about water quality and housing stock not included at the proposal stage; in response to Task Force input, a PhD student associated with the team shifted focus of their research to include water quality
Community	Strong, connected, caring community	At risk of harm from air pollution, flooding, restructuring of the economy, aging housing stock and infrastructure	In response to Task Force input, the larger research team increased focus on health aspects of air pollution

Economy	The region is an important provider of products for the US and global markets	The region is a sacrifice zone: people outside the area don't fully recognize these economic contributions and their associated harms; this pattern repeats at smaller scales within the region (for example, Port Neches very high cancer rates)	Developed strategies at both the regional and also the local level; broadened focus of strategies beyond just flooding
Nature	Nature is an asset that provides benefits such as fishing, crabbing, recreational spaces, clean air and water provisioning, flood protection, etc.	Nature is a source of risk and harm (for example, flooding, heat exposure, mosquito-borne illness)	In response to Task Force input, the larger research team added a co-led pilot project focused on redesigning an abandoned golf course for increased nature access and recreation
Flooding	n/a	From hurricanes and tropical storms From inadequate drainage infrastructure From riverine flooding From upstream communities	Inadequate drainage infrastructure and relationship to upstream communities not included at the proposal stage but were identified by Task Force members; the overall research team shared these additional flooding concerns shared with sub-team doing the flood modeling

Strategies to address flooding and air quality	Physical infrastructure: grey and green Potential for green infrastructure to be multifunctional and provide co-benefits Social infrastructure (for example, communication and outreach improvements)	n/a	Proposal focused on physical infrastructure strategies; in response to Task Force input, the overall research team expanded strategy focus to include social infrastructure (for example, communication and outreach plans, K-12 education about flooding, etc.). For example, the overall research team added new project outputs to address this feedback, including a podcast series about the research, one-page communication briefs about each research output for public dissemination, a college design studio capstone class focused on community engagement and outreach, and a subproject focused on plan analysis.

Table 2. Task Force ideas for potential solutions or strategies to address problems defined by members.

Physical infrastructure	redesign streets to reroute water; better manage flow of water both day-to-day and during storms; keep people/move people out of areas that flood repeatedly; ensure that places of work are safe from flooding, too (not only residential areas); interest in making floodwater detention areas multifunctional/dual use; focus on nature-based solutions in addition to drainage infrastructure.
Social infrastructure	better evacuation routes and communication about those routes; preparedness exercise and drills; public education and outreach about preparedness, response, recovery; clearer, simpler communication; better outreach and accessibility about existing information and data.
Knowledge	more research needed to better understand combined impact of different types of risk (air quality, flooding, etc.; air, water, soil) and local data about air and water quality.
Planning	better land use planning and future development; a new vision for the community that reduces fossil fuel dependance and that focuses on where it is safe to live; moving people out of harm's way.
Regulatory changes	improved laws to prevent pollution; enforcement of existing laws.
Scale	concern that building and development in the upper watershed is making flooding worse in Southeast Texas
Just transitions	moving away from fossil fuel use and an economy based on their use; need investment from rest of the state and US: Southeast Texas produces a lot of economic value but does not get much respect or investment in return
Concerns about strategies	concerns that recommended strategies will be too expensive, not cost effective, or that they will have a negative impact on jobs and industry; perception that environmental regulations prevent needed drainage improvements and needed dredging; current cost-benefit ranking for funding doesn't take industrial infrastructure into account—just residential areas