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NOTE

This assessment was conducted by the Houston Health Department upon the request of the community. Interpretation of the findings in this report require caution since the number of respondents is small (30). This study utilized a convenience sampling method (not representative sampling method), which is likely to contribute to bias, limiting the generalizability of the findings for areas beyond the survey area.

EXECUTIVE SUMMARY

As requested by and in collaboration with the IMPACT Fifth Ward, the Houston Health Department (HHD) conducted a survey of residents in 110 properties located near the Union Pacific Railroad (UPRR) site in Northeast Houston. A census sample method was used to enumerate each house in the target area. To collect the information needed, a 28-item questionnaire was developed in partnership with the community. While there are 110 properties, 30 properties are vacant lots/ homes or non-residential or associated with registered sex offenders and 8 properties include businesses / churches. Thus, the potential households for surveys were Seventy-two. Interview teams successfully conducted 30 interviews, yielding a completion rate of 41.6% (30/72). Below are key findings:

- Forty-three percent of households (13/30) surveyed reported some type of cancer diagnosis; the Houston average for 'ever cancer diagnosis' is 6.1%.
- Twenty-two individuals were reported to have been diagnosed with cancer from those 13 households, of which 15 are deceased.
- Households with a cancer diagnosis experienced financial stress. Of the 13 households
 (HHs) with a cancer diagnosis, 7 HHs reported depleted savings, 5 HHs reported gone into
 debt, 6 HHs reported unpaid medical bills, 5 HHs reported services cut off for not paying
 bills.
- Of cancers associated with the chemicals of concern in the UPRR contamination as identified by the Texas Commission on Environmental Quality, lung cancer was the highest category among the respondents and reported family members.
- The median number of years lived in the neighborhood before the cancer diagnosis was 45 years.
- Of the 30 households interviewed, 28 (93%) were very concerned, concerned, or somewhat concerned about the environmental contamination in and around their neighborhood.
- Of the 30 households interviewed, 22 (73%) and 21 (70%) respondents, respectively, reported smelling an oily smell and noticing oily / rainbow water in their neighborhood.
- Residents reported being very confident about handling legal issues and their chronic disease condition but reported lower level of confidence about handling issues related to healthcare, finances and stress.
- Half of the respondents (50%) reported their self-rated general health as fair or poor. One-fifth (20%) reported their health as very good or excellent.
- Slightly more than a quarter (26%) of households reported having no one available to help with daily chores if they are sick and/or having no one to talk about problems.
- Nineteen out of 30 (63%) households use some form of public insurance for health care.

BACKGROUND

As requested by and in collaboration with the IMPACT Fifth Ward, the Houston Health Department (HHD) conducted a survey of residents in 110 properties located near the Union Pacific Railroad site in North-East Houston.

Mission Statement

The mission of the Fifth Ward Community Health Assessment was to better understand the needs of the community and gather information to support an assessment of the cancers and/or noncancer health effects known to be associated with the chemicals of concern in the contamination from the Union Pacific Railroad (UPRR) site as defined by the Texas Commission on Environmental Quality (TCEQ).

Objectives

The objectives of the assessment were to:

- ✓ Identify health concerns within the community, especially related to the chemicals of concern in the contamination from the UPRR site as defined by the TCEQ.
- ✓ Provide contextual information for health and environmental studies, including further cancer studies.
- ✓ Provide a process for residents of the affected area to participate in the assessment of the health conditions in the community to encourage development of community leadership and understanding of the situation.
- ✓ Provide informational handouts to the target community.

METHODS

The Houston Health Department, in collaboration with IMPACT Fifth Ward, conducted a community health assessment in Fifth Ward to assess the overall health status of the residents of Fifth Ward area of Houston and specifically related to the UPRR contamination. The area targeted for this assessment were informed by the UPRR proposed groundwater contamination plume management zone beneath 110 properties. A census sample method was used to enumerate each house in the target areas. The area was divided into 10 units for survey administration and logistical purpose. A total of 38 personnel (23 HHD staff and 15 community volunteers) were deployed into 10 teams. Teams visited each home in the target area and interviewed adults (18 year +). When there was no one at home, and the homes looked habitable, the survey teams left a "We missed you letter" and went back twice at different times of the day, to conduct the survey. The letter provided a phone number as that residents could call to provide information.

Questionnaire

To collect the information needed, a 28-item questionnaire was developed. The questionnaire was designed to collect information regarding household demographics, cancer history for

cancers associated with the chemicals of concern from the UPRR site as defined by TCEQ, general health, and environmental concerns. The questions were adopted from a variety of sources including the Behavioral Risk Factors Surveillance System, the Health of Houston Survey, and previous surveys developed internally for other HHD community initiatives. The IMPACT Fifth Ward reviewed the survey questionnaire multiple times and provided feedback for edits. Please see Appendix 2 for the survey questionnaire.

Just-in-Time Training

To ensure field teams were adequately prepared for the overall assessment, a 1.5 hour Just-In-Time training was provided the morning of the assessment. The training entailed an overview of the mission and problem, roles of staff and volunteers, a review of the consent form, questionnaire, and tracking form, interviewing techniques, safety, and logistics. Trainees were provided with a copy of the PowerPoint to reference, as needed. This time was also utilized to explain how the GroupMe app works, which was the mode of communication for field teams to provide updates, report any safety concerns, and ask any questions that may have come up in the field.

Interview Teams

There were a total of 10 interview teams comprised of two interviewers per team; an HHD employee and community volunteer. Each team was assigned to one of six Team Leads, who also served as Drivers. Each Driver, or Team Lead was responsible for transporting two teams to their respective survey cluster within the target area, except for one Team Lead who was solely responsible for one team only. Field teams were intentionally composed to include at least one HHD employee and a Spanish-speaker in case translation was requested/ required.

ICS Structure

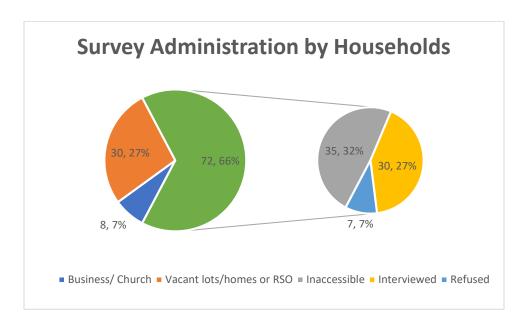
This community assessment was a planned effort that required a well thought-out and structured plan of action. Thus, we utilized the National Incident Management System's Incident Command Structure (ICS) as a basis for organizing, planning, and executing project activities. The ICS team conducted a series of meetings throughout the preparation and planning phases to ensure a successful outcome. Preparation for the community assessment was performed by the following core sections with assigned responsibilities:

- ➤ Incident Command Responsible for the overall effective and safe execution of the assessment. This includes the administration of all human and material resources as well as overseeing public affairs/communication efforts with the public and public officials.
- ➤ Planning Responsible for coordination and oversight of the following planning functions: data collection and analysis, community engagement, resource assessment and management.
- > Operations Responsible for coordination and oversight of planning and implementation of the following activities: field team composition and flow.
- ➤ Logistics Responsible for providing logistical support including facilities, supplies, food, ground transportation, communication, and for managing the employee care unit.

- Finance & Administration Responsible for documenting project costs, maintaining project timesheets, procurement of supplies, producing cost analyses and reports.
- > External Partners Responsible for securing external resources and engaging partners to participate.
- ➤ Volunteer Team Responsible for recruiting and placing volunteers.
- > Training Responsible for developing and implementing training presentations.
- > Internal Communications and Public Information Responsible for developing and releasing information about the project to the public, media, etc.; developing materials for project promotion and keeping employees informed.
- ➤ Safety Officer Plans for and monitors safety and security of staff.

FINDINGS

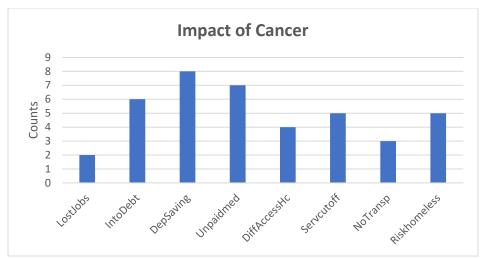
Households



- Of the 110 properties, there were only 72 properties that could be potentially surveyed (30 properties included either vacant lots, vacant homes, or homes associated with registered sex offenders, and 8 properties were businesses or churches).
- Interview teams successfully conducted 30 interviews (27 interviews on 01/04/2020 and 3 other interviews after that until 1/15), yielding a completion rate of 41.6% (30/72).
- Of the households where, successful contact was made (n=37), 81.0% (30/37) completed an interview. Seven households refused to be surveyed.

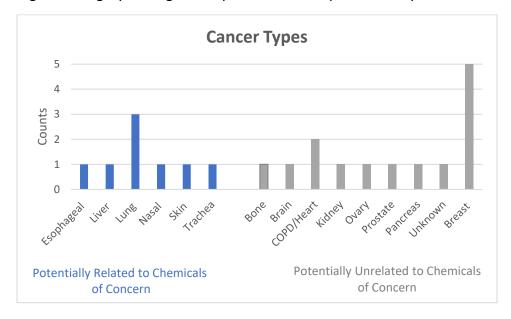
Cancer History and Impact

- Of the 30 households, 13 (43.3%) households reported at least one cancer diagnosis; six households reported cancers that are related to chemicals of concern, and seven households reported cancers that are unrelated to chemicals of concern.
- Of the 13 households (HHs) with a cancer diagnosis, 7 HHs reported depleted savings, 5
 HHs reported gone into debt, 6 HHs reported unpaid medical bills, 5 HHs reported
 services cut off for not paying bills.



Note: These numbers may not add up to 30 because of multiple response selection option and non-response.

- Of the 13 HHs with a cancer diagnosis, a total of 22 individuals were diagnosed with cancer.
- Of cancers known to be associated with the chemicals of concern, lung cancer was the highest category among the respondents and reported family members.

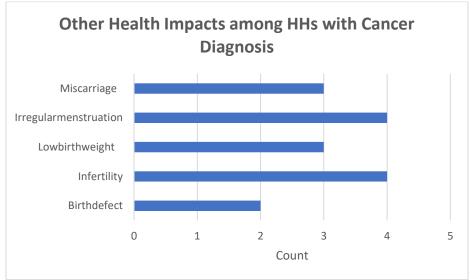


- All but one were diagnosed at the age of 50 or later.
- All but one were diagnosed after 2003.
- Average number of years lived in the neighborhood by those with cancer diagnosis (regardless of age at diagnosis) was 44.2 with a range of 6-87 years and median years was 45. This information was available for only 19 individuals. The median number of years lived in the neighborhood before and after the cancer diagnosis was 45 years (n=10) and 1 year (n=15). The average numbers of years lived in the neighborhood before the cancer diagnosis was 45.2 years (n=10).

- Nine were males and 12 were females, there is no information about one.
- Of the reported 22 people diagnosed with cancer, 15 are deceased.

Other Health Impacts

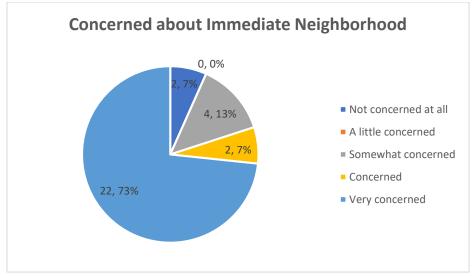
• Of the 13 HHs with a cancer diagnosis, nearly one third reported irregular menstruation and infertility, slightly over a one-fifths reported low birth weight and miscarriage.



Note: These numbers may not add up to 30 because of multiple response selection option and non-response.

Environmental Concerns

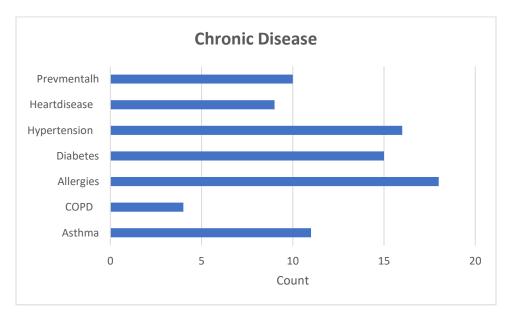
• Of the 30 HHs surveyed, 28 (93%) were very concerned, concerned, or somewhat concerned about the environmental contamination in and around their neighborhood.



• Of the 30 respondents, 22 (73%) and 21 (70%) respondents respectively reported smelling an oily smell and noticing oily / rainbow water in their neighborhood.

• Of the 30 respondents, 15 (50%) reported that their house has been damaged by a storm or natural disaster and slightly more than half (57%) feel their home is safe to live.

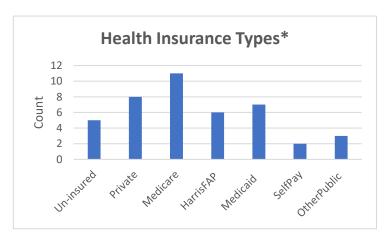
General Health



Note: These numbers may not add up to 30 because of multiple response selection option and non-response.

Allergies (60%), high blood pressure (53%), and diabetes (50%) were the highest reported chronic diseases.

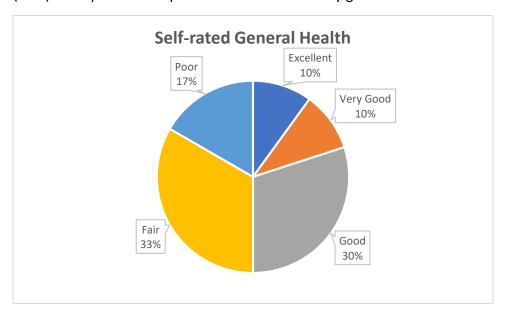
Survey results indicate the source of health care coverage for most of the residents is Medicare, Medicaid, private and Harris Health Financial Assistance Program (FAP), while about 18% households reported being un-insured. The Houston average of uninsured in Houston was 26.9% in 2018 (Health of Houston Survey, 2018). It is also noteworthy here that 19 out of 30 (63%) of



households use some form of public insurance (Medicare or Medicaid or Harris FAP). Three households reported being on dual eligibility (both Medicare and Medicaid) and out of 8 households who reported private insurance as their source of health coverage, only 4 households use just private insurance, another 4 households use a combination of private and public insurance.

*These numbers may not add up to 30 because of multiple response selection option and non-response.

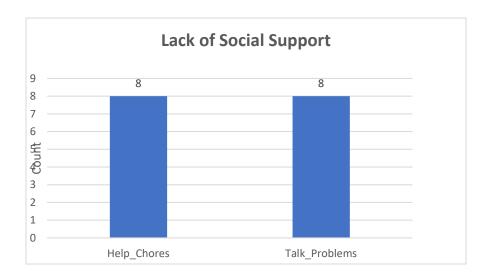
Half of the respondents (50%) reported their self-rated general health as fair or poor as compared to 20.2 % in entire Houston area, as per Health of Houston Survey (2018). One-fifth (20%) of respondents reported their health as very good or excellent.



The percentage of respondents who reported poor mental health for 14 or more of the last 30 days was 33.3. The percentage of respondents who reported poor physical health for 14 or more of the last 30 days was 40. The Houston average for poor mental health and poor physical health for 14 or more of the last 30 days were 14.9% and 12.6 (Health of Houston Survey, 2018).

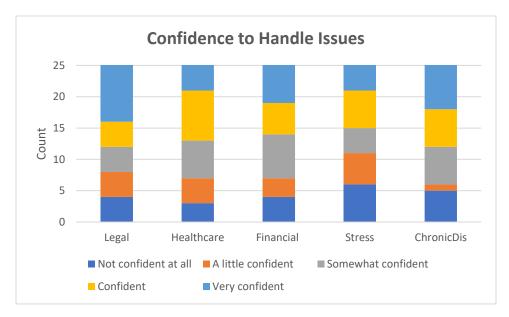
Social Support

As a measure of social support available to the residents, we asked if there was anyone available to help with daily chores when sick and if there was anyone to talk about problems. Slightly more than a quarter (26%) of households reported having no one available to help with daily chores if they are sick and having no one to talk about problems. The Houston average for these responses were 12.4% and 6.1%, respectively (Health of Houston Survey, 2018).



Capacity

Residents reported being very confident to handle issues related to legal and chronic disease but reported lower level of confidence to handle issues related to healthcare, finance and stress.



Demographics

- Sixty-seven percent of respondents reported that they own their home, 20% reported they rent, and 13 % reported "other".
- Nineteen respondents (63.8%) reported being employed.

- Duration of living in the neighborhood ranged from 1 year to 55 years, with an average number of years being 26.1 and median being 25 years.
- 5 HHs reported having children less than 2 years of age, 13 HHs reported having children 2-17 years, 6 HHs reported having seniors in their homes.
- Sixteen respondents (53%) identified themselves as Hispanic.
- Nearly half (n=14) identified themselves as Black.

Greatest Needs

- **Home related (11)** (Central A/C missing insulation, House Repairs, need work on my house, roof damage, repair for home, mold and lead, water leaks, water heater no hot water, wiring and mold, water, drinking/showering in brown water, home repairs, bedding, making rent and lead testing, getting my ceiling fans up and running right, painting, and ramp for power chair).
- Financial (Income) (1)
- Food (1)
- Health education and glasses (1)
- Legal assistance with mother's deed and lead (1)
- Union Pacific to tell her why after she submitted her medical records in 2004 why she never heard back (1)
- Transportation (1)
- Work (1)
- None (8)

Pre-Feasibility

- Twenty-eight respondents (93%) reported they would be fine to be contacted later for additional information and services.
- Twenty-nine respondents (97%) reported they would be willing to speak to someone
 about their experiences in detail. Majority (83%) said that phone would be preferred
 method for future contact. There were three respondents who want to be contacted by
 appointment only.

^{*}The numbers in the parenthesis indicate the frequency.

APPENDICES

Appendix 1. Survey Introduction and Consent Script

I. INTRODUCTION:

Hello, my name is	_ and this is	. We are with Houston Health Department
and IMPACT community group.		

We are going door to door to talk with people in this area to better understand the basic health and human service needs for residents potentially impacted by environmental hazards in this community. We want to collect health data for this specific neighborhood to understand how creosote may have impacted our community and how the health department may potentially support the community moving forward.

We would like to ask you to participate in a brief 20-minute survey. The information you provide in this survey will remain confidential. The information may be used by Texas Housers, Lone Star Legal Aid, Impact and the Houston Health Department to serve and advocate on behalf of the community.

[Surveyor: Wait for respondent to clearly answer YES or NO after each question below]

- 1. Would you be willing to participate in this survey?
 - a. Yes (Continue to Question 2)
 - b. No (READ "Refusal Script" below)
- 2. Do you live in this home?
 - a. Yes (Continue to Question 3)
 - b. If "No": Is there someone else who lives in this home that we can speak to?
 - i. Yes
 - ii. No (READ "Ineligibility Script" below)
- 3. Are you at least 18 years or older?
 - a. Yes (Continue to survey)
 - b. If "No": Is there someone else 18 years or older who lives in this home that we can speak to?
 - i. Yes
 - ii. No (READ "Ineligibility Script" below)

If you do not know all the information, perhaps someone else in the family would be able to help you. If this is not possible please do not worry, just provide the information that you can.

[Surveyor: if the respondent answered "don't know" for any of the above questions, ASK for some additional information, like the phone number to get in contact with the person whose information they are sharing or a closer relative or an obituary.]

Refusal Script: No problem at all. If you change your mind or wish to complete the survey at a later date, please do not hesitate to call Houston Health Department at 832-393-4634. If you would like to learn more about IMPACT, please come to the next meeting on January 13. Thank you for your time and have a nice day.

Ineligibility Script: Thank you for your interest in completing the survey. Unfortunately, the survey must be completed by someone who lives in this home and is over the age of 18. If there is someone living in

this home over age 18 who would be interested in completing the survey, they are welcome to call Houston Health Department at 832-393-4634. If you're interested in learning more about what IMPACT is doing to try to get Union Pacific to clean up the environment, please come to the next meeting on January 13. Thank you for your time and have a nice day.

[Surveyor: If, at any point, the survey is cut short or when the survey concludes, please read the following]

If you have any questions about this survey, you may call the Houston Health Department at 832-393-4634. If you are concerned about the impact of environmental contamination on your health, please come to the next IMPACT meeting on January 13 and follow us on Facebook. If you want to hear a report on the findings of this survey, please come to IMPACT's meeting on February 10.

Appendix 2: Survey Questionnaire

GENERAL INFORMATION

Ad	me: dress: st Phone #:		Survey Date: Zip: Email:	
[S	urveyor: READ ALOUD	Now we will ask you a few qu	estions about your hou	usehold's cancer history.
		CANCER HI	STORY	
1.	•	who has lived at this address b I No <mark>(Go to Q5)</mark>	een diagnosed with c	ancer? □DK(Go to Q5) □ Ref
2.	What other issues ha	ve arisen as a result of this car	ncer(s)? (READ & CHECK	(ALL that apply)
	☐ Lost jobs medical bills	☐ Gone into debt	☐ Depleted Sa	vings
	☐ Other	☐ Difficulty accessing hea☐ No Transportation		off for not paying bills oming homeless □ N/A
	□DK □ Ref			
3.	Have you or anyone i ☐ Birth defects ☐ Irregular menstruatio ☐ DK ☐ Ref	in your HH ever experienced a Infertility Miscarriage	-	w fetal birth weight
4.	_	who has lived at this address o	ever diagnosed with (/	Provide Appendix A, READ &
Liv	er cancer?			□Yes □No □ DK
Le	ukemia?	Blood related		□Yes □No □ DK
Ad	renal cancer?	Adrenal gland related		□Yes □No □ DK
Ski	in cancer?			□Yes □No □ DK
Lu	ng cancer?			□Yes □No □ DK
Ga	strointestinal Cancer?	Intestine related		□Yes □No □ DK
Esc	ophageal cancer?	Esophagus related		□Yes □No □ DK
Or	al cancer?	Mouth related		□Yes □No □ DK
Laı	ryngeal cancer?	Larynx, which is a part of throa	at, related	□Yes □No □ DK
Br	east cancer?			□Yes □No □ DK
Ph	aryngeal cancer?	Pharynx, which is also a part of	of throat, related	□Yes □No □ DK
Tra	acheal cancer?	Wind pipe related		□Yes □No □ DK
Na	sal cancer?	Nose related		□Yes □No □ DK

An	giosarcoma?	Blood vesse	el related		□Yes	s 🗆 No 🗆	l DK
Ad	enoma?	Glands rela	ted		□Yes	s 🗆 No 🗖	l DK
	her cancer types Ref	(not listed)?	Yes; If Yes, Types:			□No	□dk
Ļ	On a scale of 1	to Fbono 1 mag	ENVIRONI		maana "Varu C	a 10 a a 11 a a d	l" how
э.		to 5, where 1 mea you about environ			-		
	☐ 1 (Not	2 (A little	3 (Somewhat	☐ 4 (Concerned)	☐ 5 (Very	□DK [
со	ncerned at all)	concerned)	concerned)		concerned)		
6.	☐ Yes	y members of you No Ref	r HH ever smell	ed an oily smell i	in or around yo	ur home?	?
7.	Have you or and in or around you Yes	y members of you ur home? \(\sum_\text{No}\)	r HH ever notice	ed water that is s	shiny, oily or "ra	ainbow"	colored
	□DK □	〕 Ref					
8.	Since 2015, has ☐ Yes	your home been on No (Go to Q		torm or natural o	disaster? □DK	☐ R	ef
		t was the name, m I Ref	onth or year of	the storm(s)			
	7b. If Yes, how (READ)	close is your home	e to the condition	on it was in BEFO	RE the storm o	r natural	disaster?
	□DK □	1 Ref	Somewhat repair		paired at all		
9.	Do you feel you Yes	Ir home is current	l y safe to live in hy?				
		Ref					
			GENERAL	HEALTH			
10.	. Do you or anyo	one in your HH ha	ve any of the f	ollowing chronic	diseases? (REA	AD & Chec	k ALL that
	apply):		□ Allereiee	□ Diobetee	□ llvo antar -'-		□ Usart
Dis	☐ Asthma ease	☐ COPD	☐ Allergies	☐ Diabetes	☐ Hypertension	וזנ	☐ Heart
		tal health condition Ref	☐ Other		☐ None		
11.	•	rimary source of h		•			
for	☐ Un-insured merly Gold Card)	☐ Private	☐ Medicare	☐ Harris FAP (F	Financial Assistan	ce Prograr	m,
101	☐ Medicaid	☐ Military	☐ Self-Pay	☐ State Childre	en Health Insuran	ice Prograi	m (S-CHIP)

	ther Publio □DK	Insuranc	e:						
☐ E	uld you sa xcellent □DK		general you Very Good	r health is?	(READ)	☐ Po	or		
13. Now days	thinking	; about y he past 3		our physic	ich includes ph al health not g	-	and injury, for h	ow many	
emo		how ma		ng the past			on, and problem nealth not good?		
☐ Ye		-	ivailable to h No	elp with da	aily chores who	en you are si	ck?		
☐ Ye		-	o talk to abo No						
				AID &	CAPACITY				
rate	your con				fident at all" a kecute and ma		"Very Confident"	", please	
b) Healtl	issues: ot confider hcare issu ot confider	ıes:	☐ 2 (A little☐ 2		☐ 3 (Somewh	·	4 (Confident)		y confident) y confident)
-	cial issues ot confider s:		☐ 2 (A little	confident)	☐ 3 (Somewh	at confident)	☐ 4 (Confident)	□ 5 (Ver	y confident)
1 (No	ot confider	•	2 (A little as hypertens	•	☐ 3 (Somewhabetes):	at confident)	4 (Confident)	☐ 5 (Ver	y confident)
☐ 1 (No	ot confider	nt at all)	2 (A little	confident)	☐ 3 (Somewh	at confident)	4 (Confident)	☐ 5 (Ver	y confident)
orga □ Ye	Inizations es □DK	6 ? □ Ref	No (Go to Q1	9)	any services on		y community		
Į	□dk	☐ Ref		-					
	. If YES, w □DK		of aid was p	rovided?					

19.	Would your HH be interes	_	y of the follow	ving services	from the Houston Health			
	Department? (READ & Chec							
	,	•			Health education			
		☐ Harris County A			☐ Tuberculosis			
	Other (specify):		□N	0	□N/A			
	□DK □Ref							
20.	0. What is your household's greatest need at this time?							
	□DK □ Ref							
	DEMO	GRAPHIC INFORM	ATION & RESI	DENTIAL HIST	ORY			
21.	Do you own or rent this re	esidence?	Own	Rent	Other			
22.	How long have you lived i ☐DK ☐ Ref	n this neighborhoo	d?					
23.	Are you currently employed DK Ref	ed?	□ No	☐ Not in lab	or force			
24.	Including yourself, are the	ere any people livin	g in your HH t	that are:				
	Less than 2 years old?				7 years?			
	Many No							
	18-64 years?	Yes: How Many	□ No	65+	years? ☐ Yes; How			
	Many No	. res, rion many		<u></u>	<u>yearsr</u> = 165, 11611			
	<u> </u>							
25.	Which race do you identif	v with? <i>(Check ALL</i>	that apply)					
	☐ Black or African American	•	⊒ White	☐ Asian	American Indian or			
	Alaska Native							
	☐ Native Hawaiian or other	Pacific Islander	Other					
	□DK □ Ref							
26	Do vou idontifu on Hispani	io ou lotino?		-				
20.	Do you identify as Hispani	ic or Latinor – L	Yes 🔲 N	0				
	□DK □ Ref							
			FEASIBILITY					
27.	May we contact you to pro	ovide additional in	formation and	d services fro	m the Houston Health			
	Department?							
	☐ Yes ☐ No							
	□DK □ Ref							
28.	Would you be willing to sp	peak to someone a	bout your exp	erience in m	ore detail?			
	☐ Yes ☐ No							
	□DK □ Ref							
	28a. If YES, what is the be	st way to contact y	ou? 🔲 Pho	ne 🖵 E	mail			
	☐Other							

Appendix 3— Cancer Types List

Question: Were you or anyone who has <u>lived at this address</u> diagnosed with:

Liver cancer Yes or No?

Leukemia (blood related) Yes or No?

Adrenal cancer (Adrenal gland related) Yes or No?

Skin cancer Yes or No?

Lung cancer Yes or No?

Gastrointestinal Cancer (intestine related) Yes or No?

Esophageal cancer (throat related) Yes or No?

Oral cancer (mouth related) Yes or No?

Laryngeal cancer (Larynx related) Yes or No?

Breast cancer Yes or No?

Pharyngeal cancer (Pharynx, a part of throat, related) Yes or No?

Tracheal cancer (wind pipe related) Yes or No?

Nasal cancer (nose related) Yes or No?

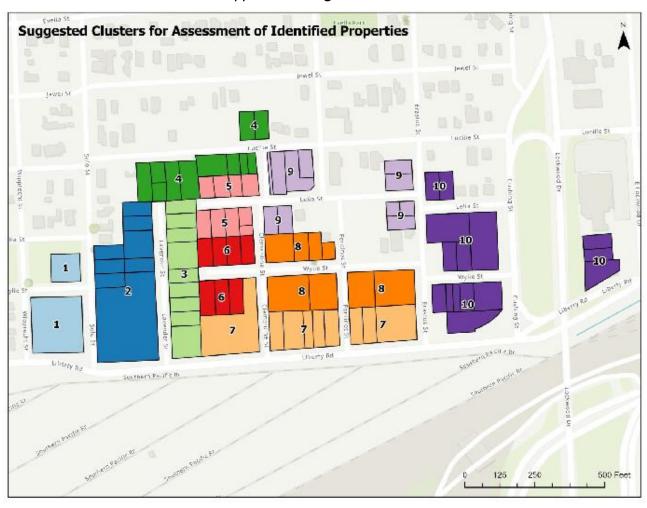
Angiosarcoma (blood vessel related) Yes or No?

Adenoma (glands related) Yes or No?

Any other cancer types (not listed)? Yes or No?

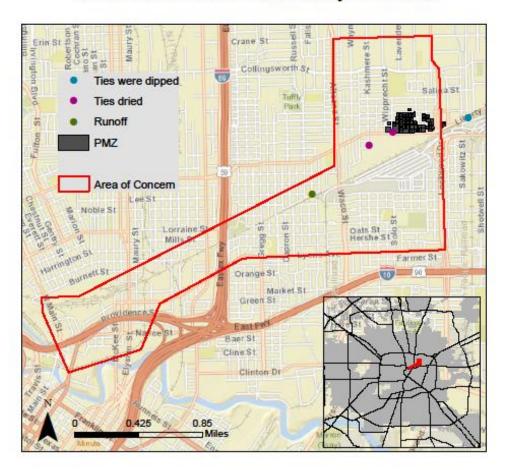
A. Name of Cancer	B. What is your relationship to the person diagnosed with cancer? (Such as self, spouse, child, parent, grandparent, cousin, or friend)	C. What <u>year</u> was this person diagnosed?	D. What <u>age</u> was this person when diagnosed?	E. Does this person currently live at this address?	F. How long has this person lived at this address?	G. What is this person's <u>race</u> ?	H. Is this person Hispanic or Non- Hispanic?	I. What is this person's gender?	J. If deceased, what year did this person pass away?
				☐ Yes		☐ Black ☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	☐ Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	☐ Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	☐ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		□ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK
				☐ Yes		☐ Black☐ White	☐ Hispanic	☐ Male	Yes; Year:
		☐ DK	☐ DK	□ No	☐ DK	Other:	☐ Non- Hispanic	☐ Female	□ No □ DK

Appendix 4: Target Area



Appendix 5: Area of Community Concern

Creosote Area of Community Concern



24 May 2019

Sources: City of Houston, Google Earth, ESRI Data, TCEQ, Union Pacific, H-GAC, Impact and Houston community members

