





THE SAN JACINTO RIVER WASTE PITS SUPERFUND SITE

By: Jackie Young
Executive Director
Texas Health and Environment Alliance

Our Mission: To protect water resources, public health, and Galveston Bay from the harmful effects of toxic waste.

We ARE:

- ❖ 501.c.3 Non-Profit

We use:

- ❖ Education
- ❖ Science
- ❖ Media Exposure

We work with:

- ❖ Drinking Water Quality
- ❖ Toxic Waste

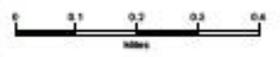




San Jacinto River Waste Pits Location Map



- Legend**
-  Preliminary Perimeter
 -  Northern Impoundment Perimeter
 -  Southern Impoundment Perimeter



Sources:
 Aerial Photo: Digital Globe, 12/01/2007
 Northern Impoundment: EPA R6 GIS digitized from Univ of Houston Power Plant Presentation
 Southern Impoundment: EPA R6 GIS digitized from 1964 aerial photograph.

EPA makes no claims as to the accuracy of the data or its suitability for any particular use.

Map created: June 11, 2009



EPA Region 6
 GIS Support Team
 Dallas, Texas
 20090611MLE2





! DANGER



**Danger
PCBs**
(Polychlorinated
biphenyls)

Hg **80**
200.59



Mercury

LETS GO BACK IN TIME



The Waste Pits During Creation in 1965



1966



1978



1995



2010



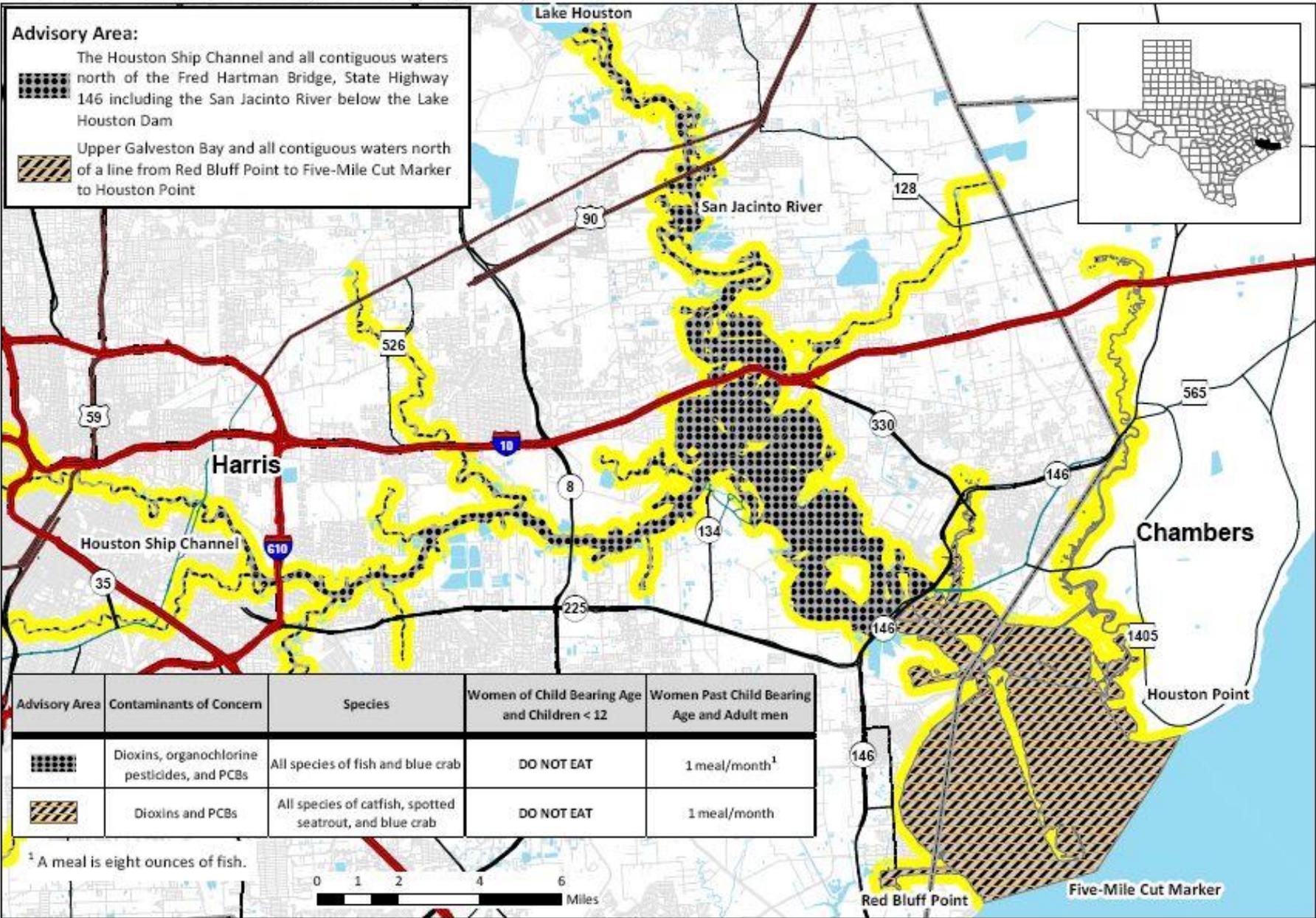
WASTE PITS IN 2005



Galveston Bay Estuary (Map 1) – Houston Ship Channel, San Jacinto River, and Upper Galveston Bay

Chambers and Harris Counties

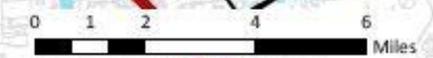
ADV-49 and ADV-50 Issued June 26, 2013 Rescinding ADV-3, ADV-20, and ADV-35



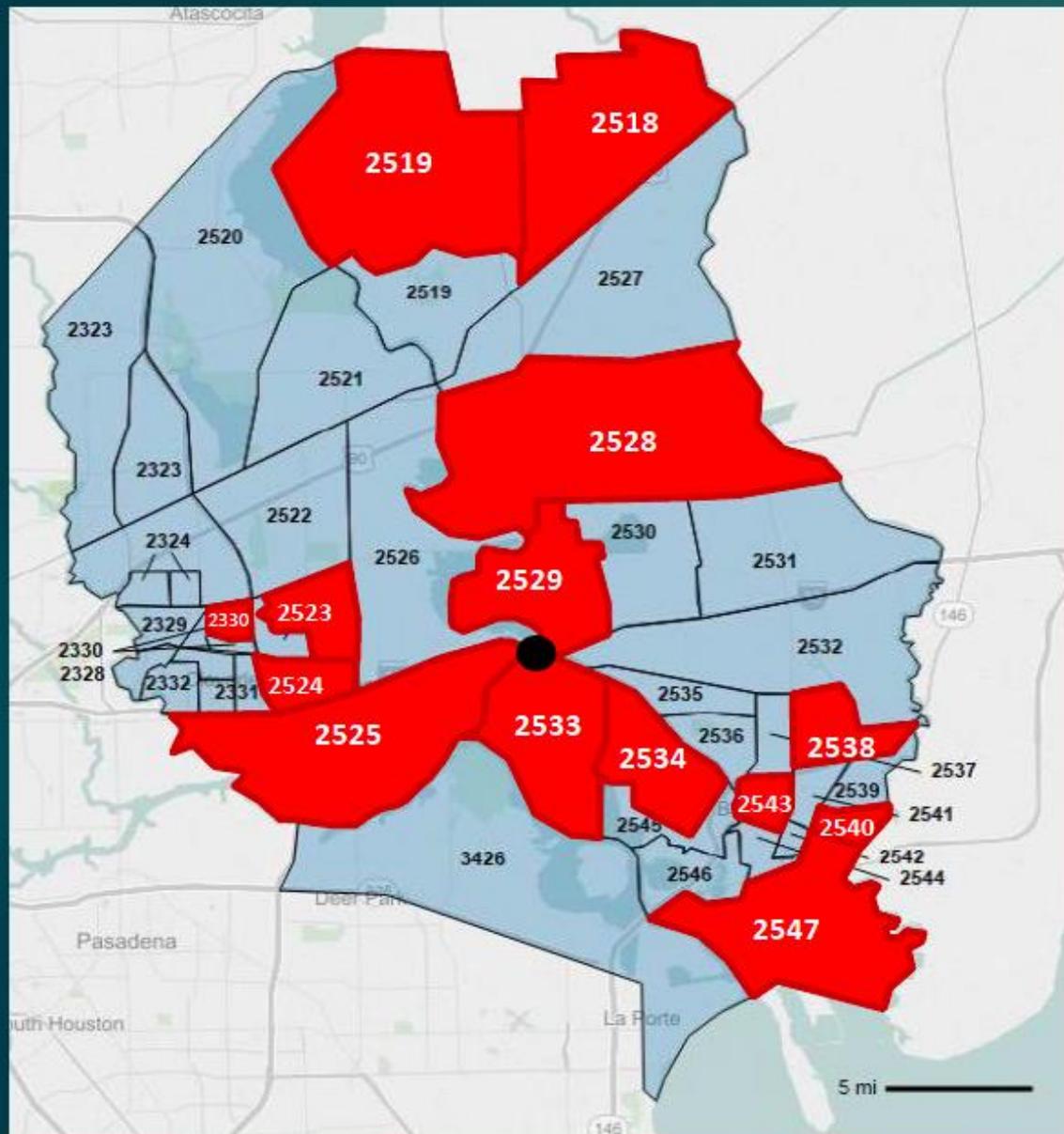
Advisory Area:
 The Houston Ship Channel and all contiguous waters north of the Fred Hartman Bridge, State Highway 146 including the San Jacinto River below the Lake Houston Dam
 Upper Galveston Bay and all contiguous waters north of a line from Red Bluff Point to Five-Mile Cut Marker to Houston Point

Advisory Area	Contaminants of Concern	Species	Women of Child Bearing Age and Children < 12	Women Past Child Bearing Age and Adult men
	Dioxins, organochlorine pesticides, and PCBs	All species of fish and blue crab	DO NOT EAT	1 meal/month ¹
	Dioxins and PCBs	All species of catfish, spotted seatrout, and blue crab	DO NOT EAT	1 meal/month

¹ A meal is eight ounces of fish.



Selected Census Tracts (2000) For East Harris County



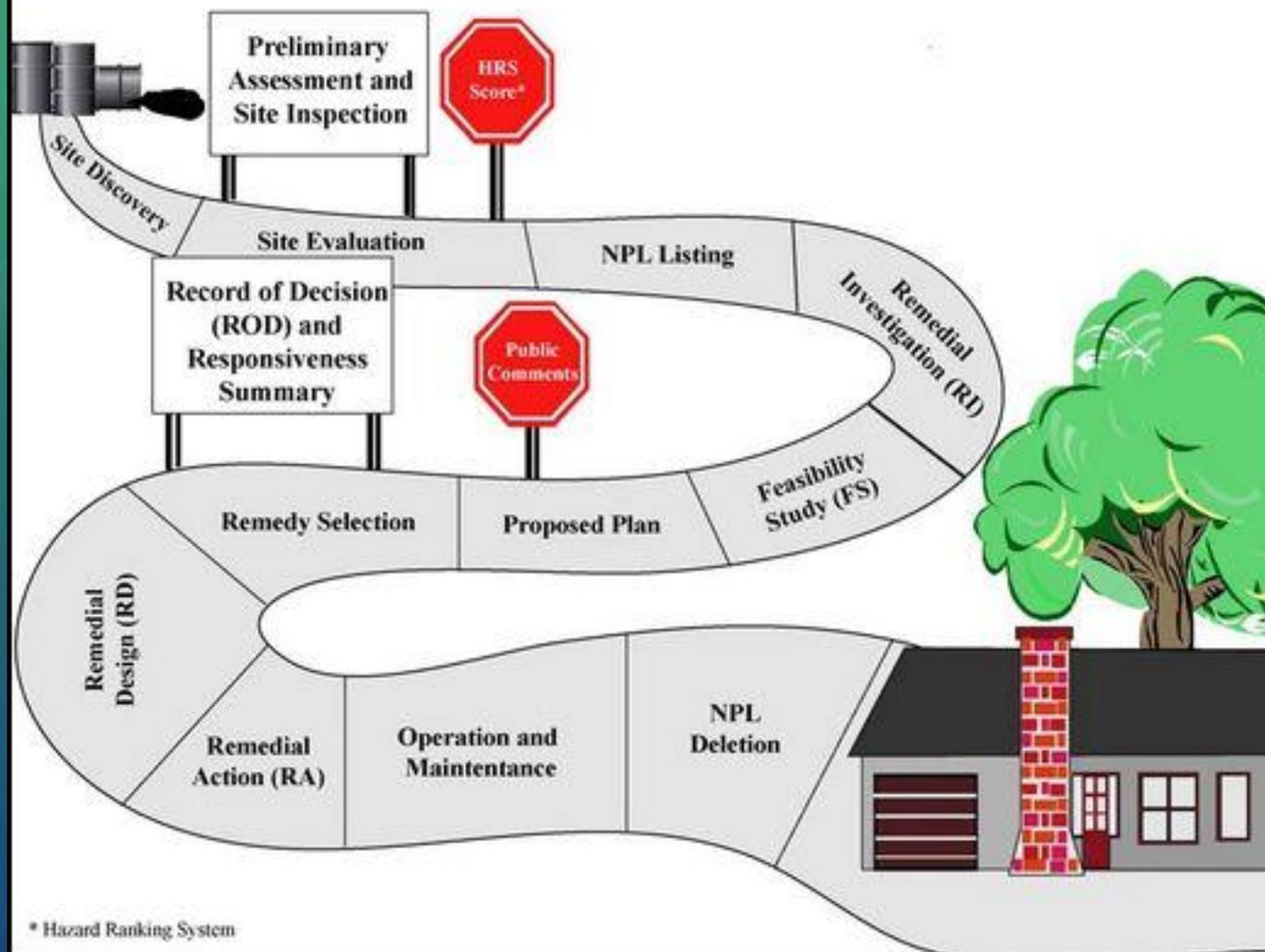
All Ages

Cancer Type	Census Tract	Observed	Expected	SIR	95% CI
Brain	2330	18	9.3	1.94	(1.15, 3.07)*
	2519	23	13.5	1.71	(1.08, 2.57)*
	2533	10	4.8	2.10	(1.01, 3.86)*
Female Breast	2528	77	60.1	1.28	(1.01, 1.60)*
	2538	78	60.5	1.29	(1.02, 1.61)*
	2547	33	22.0	1.50	(1.03, 2.11)*
Male Breast	2523	<5	<1	5.08	(1.05, 14.85)*
Cervix	2330	19	9.2	2.06	(1.24, 3.22)*
	2518	7	1.5	4.81	(1.93, 9.91)*
	2525	8	3.3	2.43	(1.05, 4.80)*
	2529	13	6.4	2.02	(1.07, 3.45)*
	2534	<5	<1	3.91	(1.27, 9.13)*
Kidney	2529	33	21.2	1.55	(1.07, 2.18)*
Leukemia	2528	21	11.7	1.80	(1.11, 2.75)*
	2543	13	6.8	1.91	(1.02, 3.27)*
Liver	2543	13	5.7	2.29	(1.22, 3.91)*
	2540	9	4.1	2.2	(1.00, 4.17)*
Lymphoma	2543	28	17.7	1.58	(1.05, 2.29)*
Myeloma	2540	9	4.1	2.2	(1.00, 4.17)*

Original Map Source: TX DSHS "Assessment of the Occurrence of Cancer. East Harris County Overlay: Jackie Young June 19th, 2015

* Indicated Observed Number of Cancer Cases is Statistically Significantly **Higher** than expected

The Superfund Process



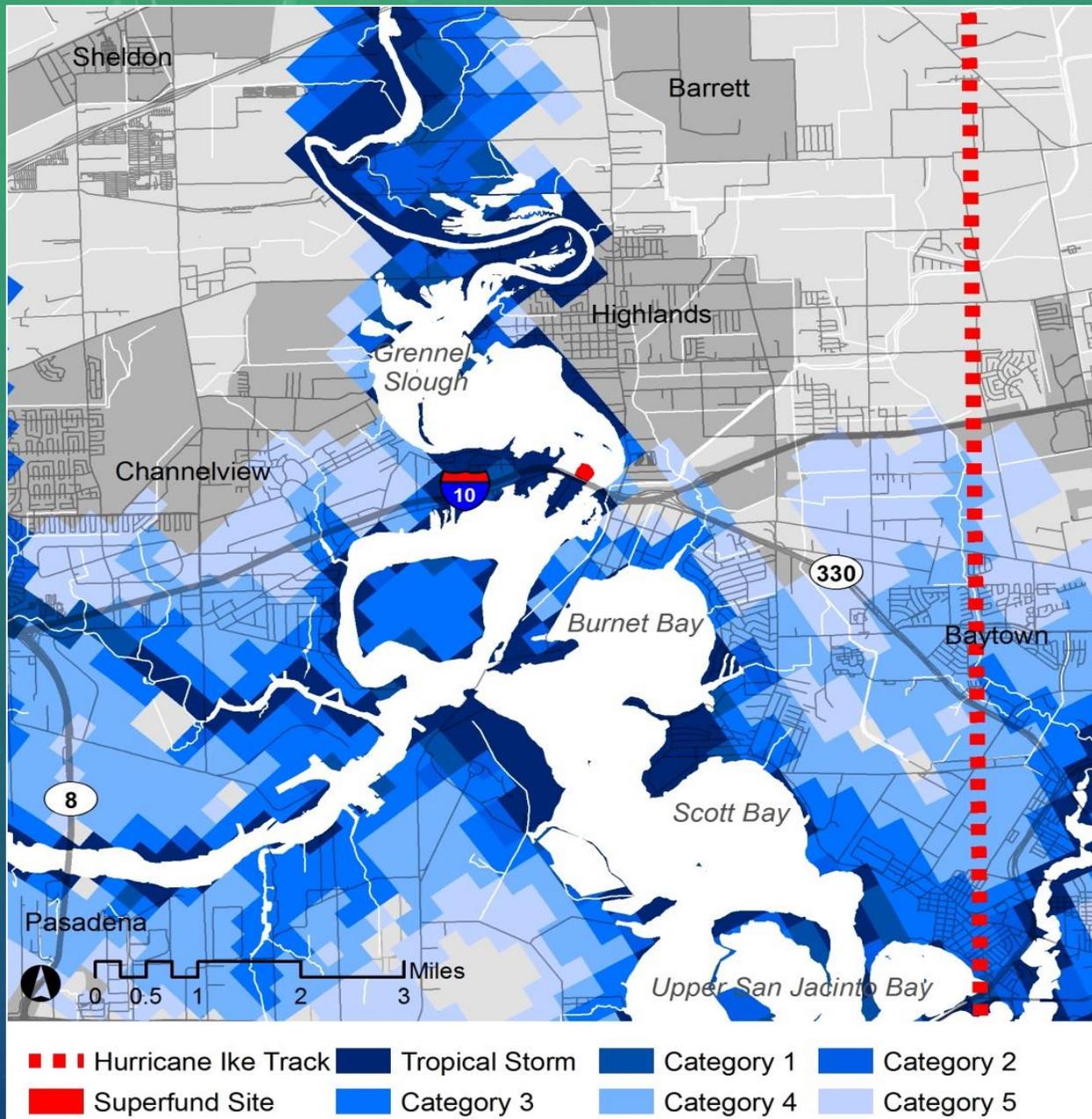


Notable Damage to cap:
December 2015
Hurricane Harvey
June 2018

EPA & Others Estimate the
Waste Would Not Degrade
in Toxicity for 750+years



Shallow sample from damaged cap.



A Flood Risk Assessment by Dr. Sam Brody

7 Similar Superfund Sites Across the Nation

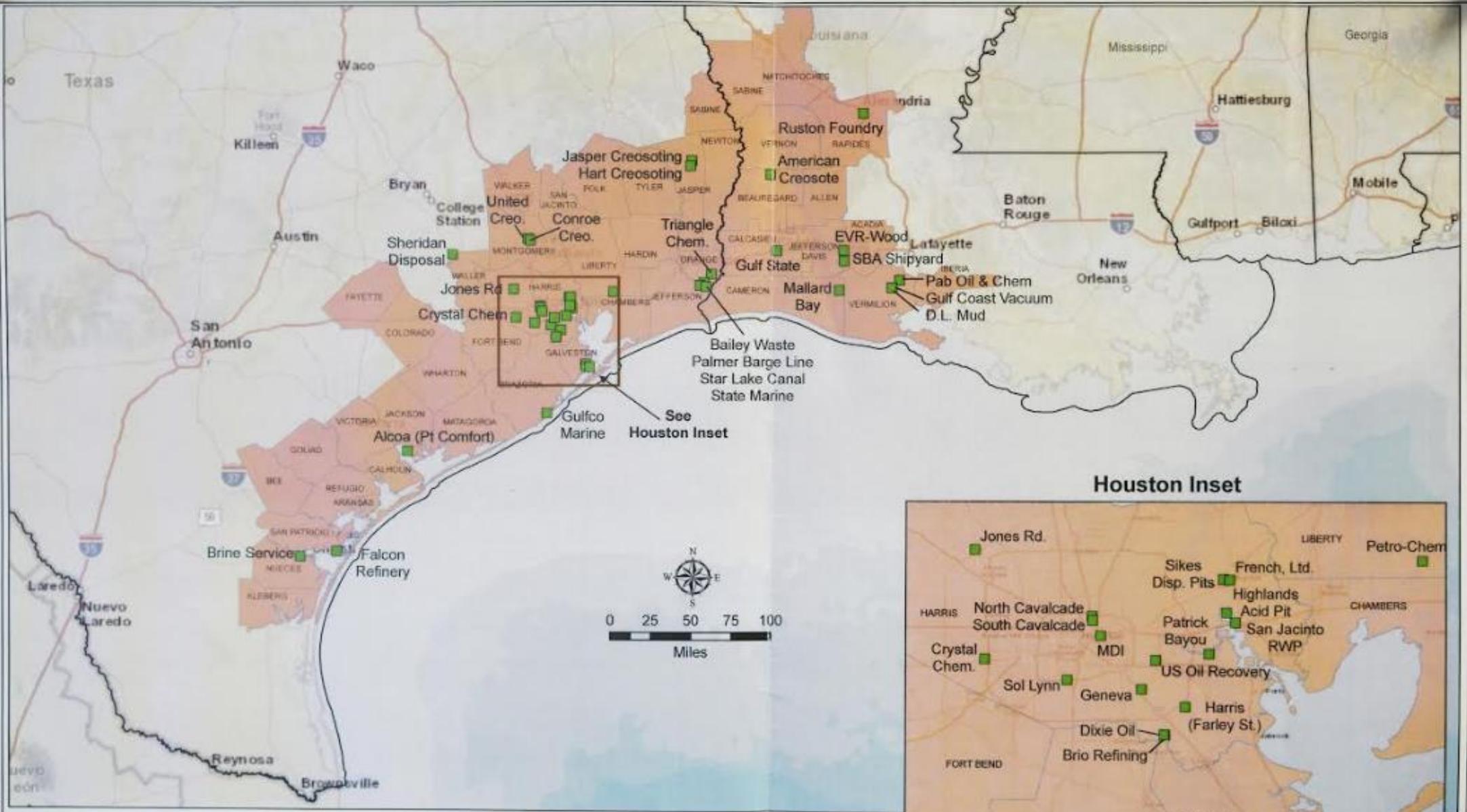
Located in tidally influenced waterway
Dioxin and PCB contamination
Fish Consumption Advisory

EPA REQUIRED REMOVAL OF ALL 7 SITES

HURRICANE HARVEY







- NPL Site within Federally Declared County/Parish
- Federally Declared County/Parish

Declared Areas of Category A and B, 1600 9/1/2017
 EPA 106 National Priorities List current as of 8/3/2017.

NPL Sites in Federally Declared Counties/Parishes Post Hurricane Harvey

EPA Region 6 SF, GIS Support, 9/1/2017.



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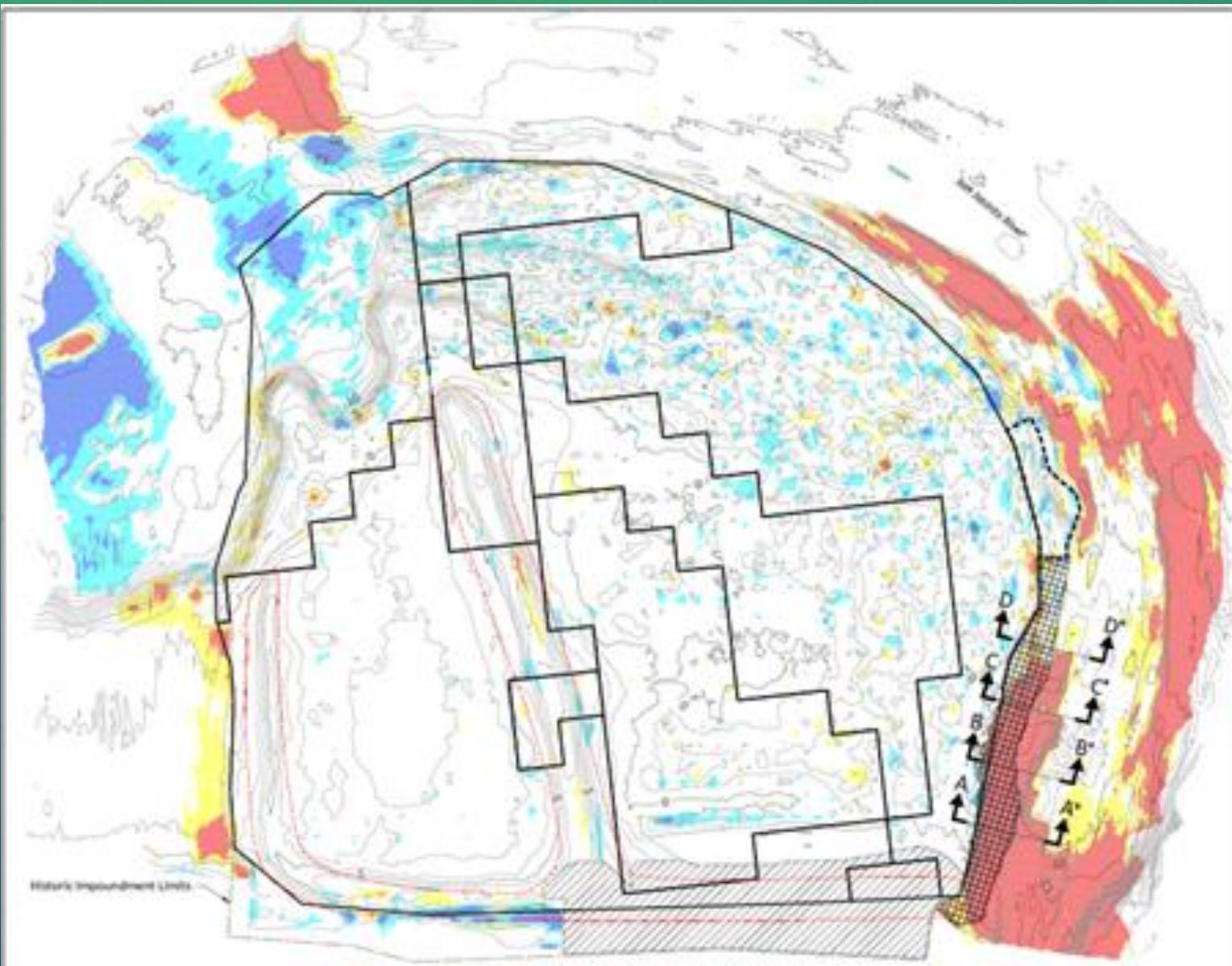
ADMINISTRATOR PRUITT VISITS THE PITS



OCTOBER 2017 EPA VISITS WITH STAKEHOLDERS

- 70,000 ppt dioxin found in samples taken from EPA dive team following Hurricane Harvey
- Over 6,500 ft² of the cap eroded
- Over 20,000 ft² of surrounding riverbed eroded
- Stability of site undermined





LEGEND

-  September 2017 Post-Hurricane Harvey Inspection Bathymetric and Topographic Contours (1 Foot Interval)
-  Armor Rock Placement Area Footprint
-  Area Not Included in September 2017 Post-Harvey Inspection Survey Due to Ongoing Maintenance
-  Armored Cap Type and Boundary
-  Historic Impoundment Limits
-  Limits of November 2016 Work Plan
-  > 1.0 Foot Increase
-  0.5 Foot Increase to 1.0 Foot Increase
-  0.5 Foot Increase to 0.5 Foot Decrease
-  0.5 Foot Decrease to 1.0 Foot Decrease
-  > 1.0 Foot Decrease
-  Approximate location of Western, Southern, and Central Berms

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2017 and September 2017.
 HORIZONTAL DATUM: Texas State Plane South-Central, NAD83, U.S. Feet.
 VERTICAL DATUM: NAVD 88.



Administrator Pruitt Signed the Record of Decision on October 11, 2017



Record of Decision (ROD) – What's the Plan?

- Removal of 212,000 cubic yards of contaminated material
- Isolating the Pits with a cofferdam
- Dewater the Site
- Excavate the contaminated material
- Dispose of material at a permitted, permanent, & stable facility
- Estimated price: \$115 million

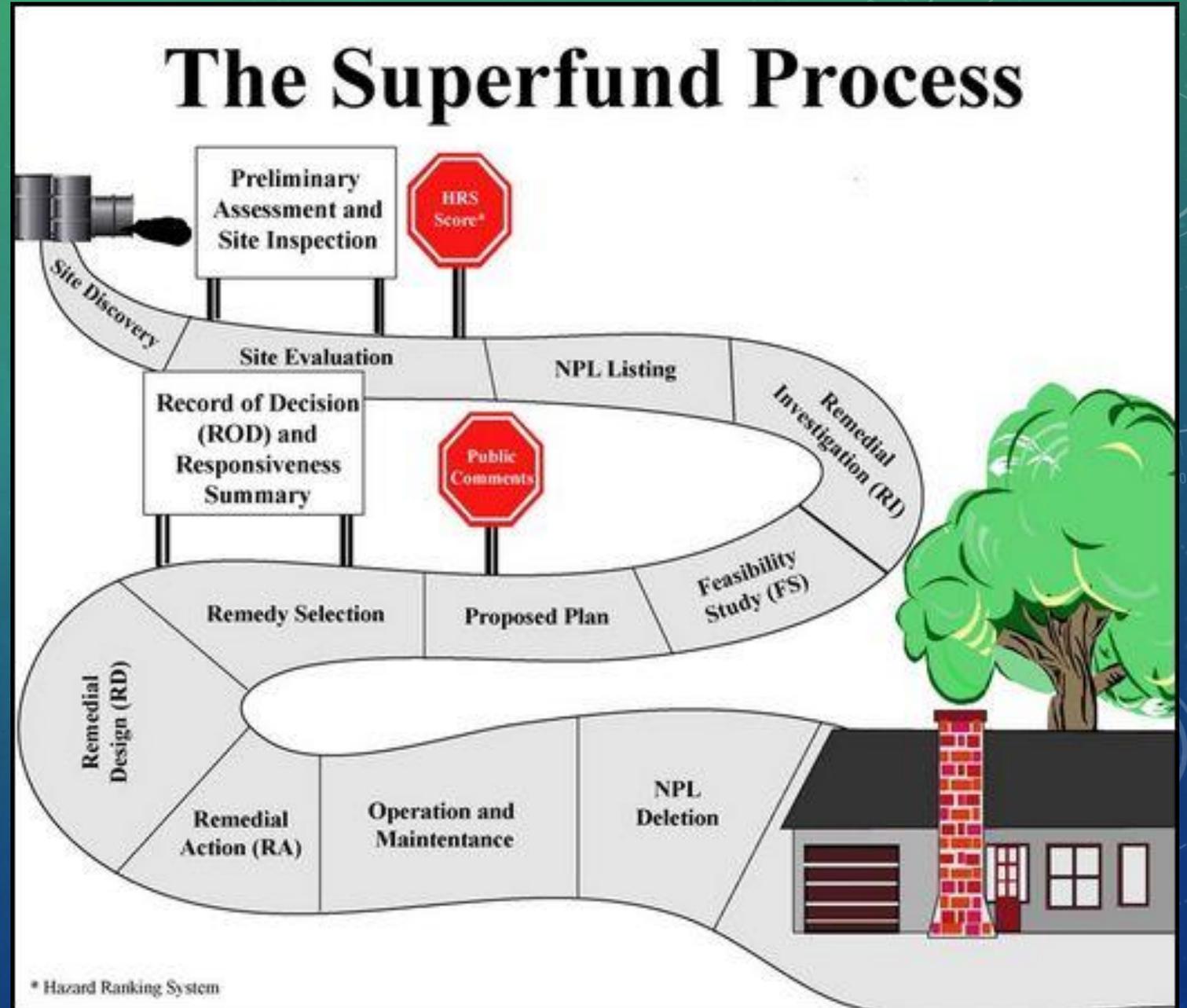


Best Management Practices (BMP)



DESIGN PHASE

EPA COORDINATING WITH
ARMY CORPS FROM
DIFFERENT REGIONS
EPA CLEAN WATER
DIVISION
EPA CONTRACTORS
RP CONTRACTORS



ID	Task Name	Duration	Start	Finish
1	San Jacinto River Waste Pits RD	876 days	Wed 4/11/18	Wed 9/2/20
2	Settlement Effective Date	0 days	Wed 4/11/18	Wed 4/11/18
3	Authorization to Proceed	15 days	Thu 4/12/18	Thu 4/26/18
4	First Phase Pre-Design Investigation (PDI)	182 days	Fri 6/8/18	Fri 12/7/18
5	Draft First Phase PDI Work Plan Submitted	0 days	Fri 6/8/18	Fri 6/8/18
6	Agency Review Work Plan	47 days	Sat 6/9/18	Wed 7/25/18
7	Final Work Plan Subitted	0 days	Fri 8/24/18	Fri 8/24/18
8	Agency Approval of Work Plan	15 days	Sat 8/25/18	Sat 9/8/18
9	Conduct Field Work for First Phase PDI	90 days	Sun 9/9/18	Fri 12/7/18
10	Remedial Design Work Plan (RDWP)	135 days	Sat 9/8/18	Mon 1/21/19

What's Next?

If good faith offer accepted, it will be embodied in a Consent Decree for Remedial Design/Remedial Action (Consent Decree)

Consent Decree needs approval from both the EPA and Department of Justice (DOJ)

Lodged in Federal Court

Meanwhile---Upon completion of the final engineering design, the lead agency must issue a fact sheet and provide a public briefing, as appropriate, prior to beginning remedial action.

NCP 40 CFR 300.435(c)(3)



Donald J. Trump ✓

@realDonaldTrump

Follow



I have accepted the resignation of Scott Pruitt as the Administrator of the Environmental Protection Agency. Within the Agency Scott has done an outstanding job, and I will always be thankful to him for this. The Senate confirmed Deputy at EPA, Andrew Wheeler, will...

12:37 PM - 5 Jul 2018

15,175 Retweets 65,217 Likes



23K 15K 65K



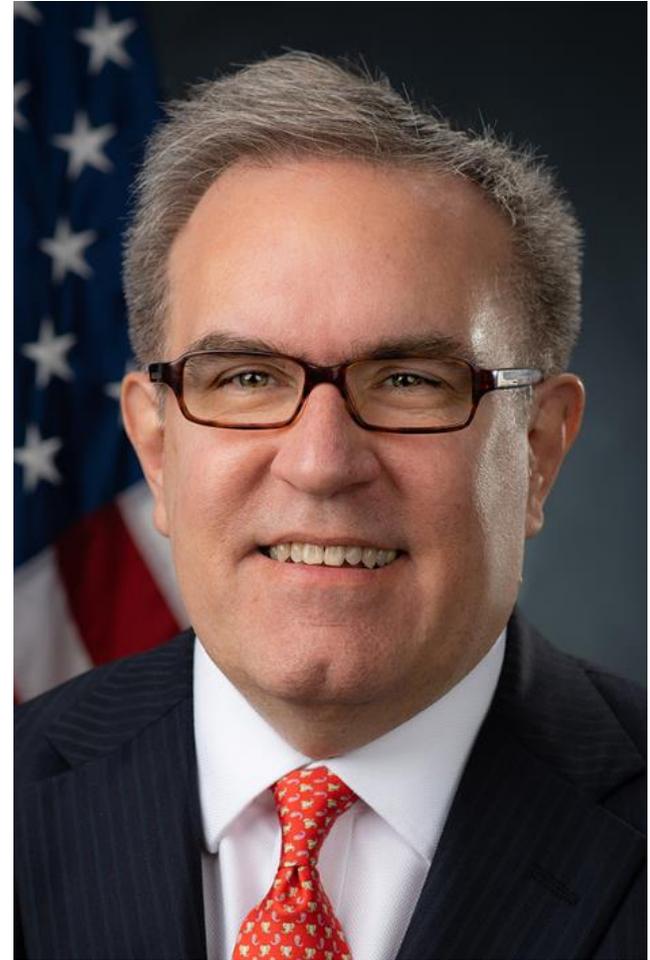
Donald J. Trump ✓ @realDonaldTrump · Jul 5

...on Monday assume duties as the acting Administrator of the EPA. I have no doubt that Andy will continue on with our great and lasting EPA agenda. We have made tremendous progress and the future of the EPA is very bright!

11K 9.5K 46K



EPA ACTING
ADMINISTRATOR
ANDREW (ANDY)
WHEELER



Questions?

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