



**DEVIL'S SWAMP LAKE (DSL)
PUBLIC MEETING**

OCTOBER 17, 2019

BART CAÑELLAS

DSL - BACKGROUND

- THE SOURCE - ROLLINS ENVIRONMENTAL SERVICES OPERATED A HAZARDOUS WASTE DISPOSAL FACILITY SINCE THE LATE 1960S.
- RELEASES OF CONTAMINANTS TO THE SWAMP TOOK PLACE THROUGH A DRAINAGE DITCH IN THE 1970S.
- DEVIL'S SWAMP LAKE (DSL), THE SUPERFUND SITE, IS A SMALL 37 ACRE LAKE WITHIN THE LARGER DEVIL'S SWAMP.

DSL - BACKGROUND

- EPA PROPOSED DEVILS SWAMP LAKE TO THE NPL IN 2004.
- EPA ISSUED AN ORDER TO POTENTIALLY RESPONSIVE PARTIES TO CONDUCT AN INVESTIGATION AND STUDY IN 2009.
- CLEAN HARBORS IS CONDUCTING THIS INVESTIGATION ON BEHALF OF BATON ROUGE DISPOSAL, THE CURRENT OWNERS OF THE FORMER ROLLINS FACILITY.

SITE INVESTIGATION

THE INVESTIGATION FOCUSED ON THE LAKE AND SURROUNDING AREAS (shown on next slide):

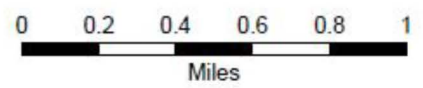
- UPGRAIENT OF THE LAKE (THE SWAMP)
- DRAINAGE DITCHES FEEDING THE LAKE
- THE LAKE ITSELF
- DOWNGRADIENT OF THE LAKE (SWAMP AGAIN)
- STREAM ON THE SWAMP (BAYOU BATON ROUGE)
- BARGE CANAL



Figure 3-1
 AREAS OF INVESTIGATION
 DEVIL'S SWAMP LAKE SITE
 EAST BATON ROUGE PARISH, LA
 Baton Rouge Disposal, LLC, Baton Rouge, Louisiana

- Approximate Area of Investigation (AOI) Boundary
- Former Rollins Facility

Sources: Esri World Imagery; EPA Region 6 Superfund.

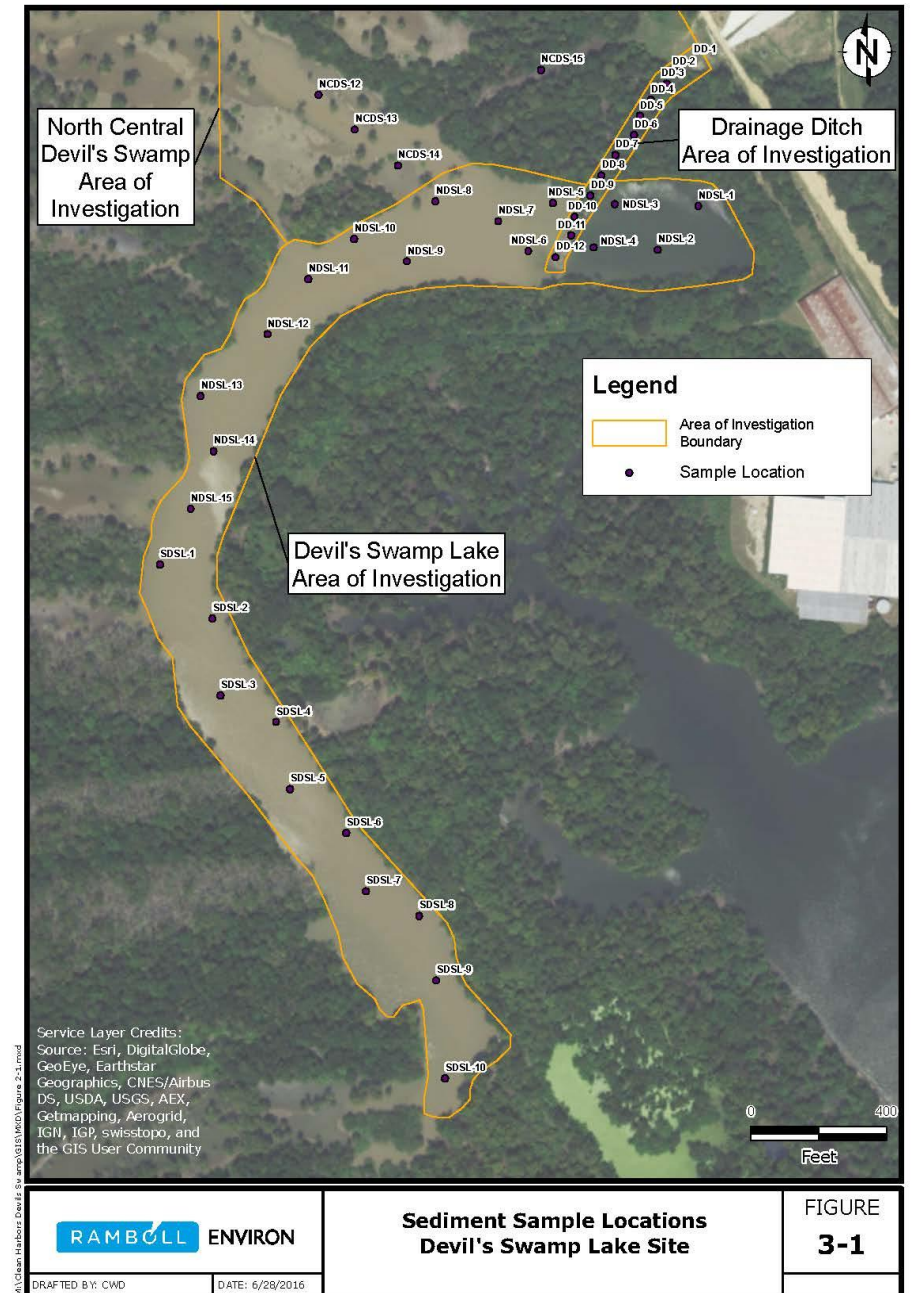


EPA Region 6
 Superfund
 (and CRA)
 07/23/2019
 20190723ML02



SITE INVESTIGATION

- 48 WATER SAMPLES WERE COLLECTED FOR ANALYSIS OF PCBS.
- OVER 189 SEDIMENT SAMPLES WERE COLLECTED FOR PCBS AROCLORS AND PCB CONGENERS.
- 48 FISH AND CRAWFISH SAMPLES COLLECTED FROM THE LAKE.
- 24 CATFISH SAMPLES COLLECTED FROM THE BARGE CANAL.
- OTHER CRAWFISH SAMPLES COLLECTED FROM OTHER AREAS IN THE SWAMP.



SITE INVESTIGATION - RESULTS

THE INVESTIGATION FOUND UNACCEPTABLE RISKS ON PORTIONS OF THE LAKE.

LAND USES IN THE AREA INCLUDE (shown on next slide):

- UNDEVELOPED WETLAND, INDUSTRIAL, COMMERCIAL, RESIDENTIAL, RECREATIONAL.

(NEXT SLIDE FOR A VIEW OF THESE AREAS)



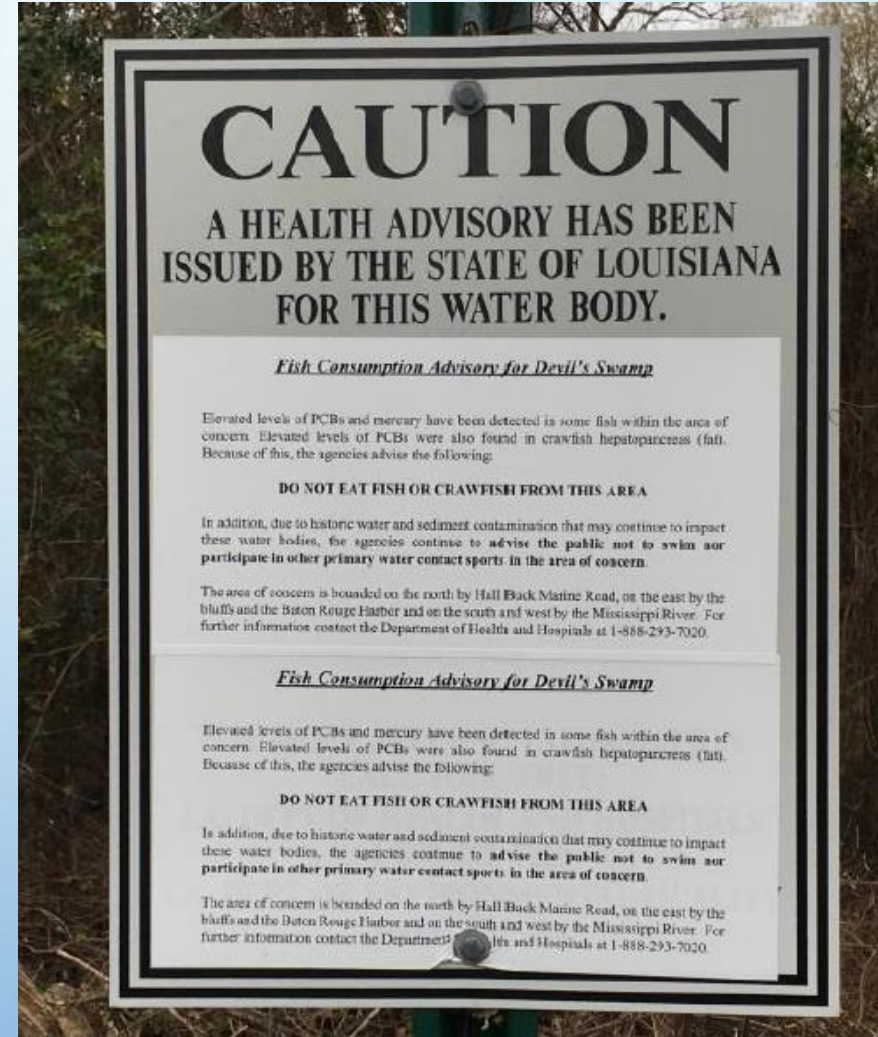
SITE INVESTIGATION - CONTAMINANTS

CONTAMINANT OF CONCERN ARE:

- TOTAL PCBs AND DIOXIN-LIKE PCBs.
- ECOLOGICAL RISKS ARE ACCEPTABLE (FISH, BIRDS, MAMMALS)
- HUMAN HEALTH RISK UNACCEPTABLE (NON-CARCINOGENIC RISK)
 - UNACCEPTABLE TO A RECREATIONAL USER CONSUMING FISH FROM THE LAKE.

SITE INVESTIGATION

- THERE IS A FISH CONSUMPTION ADVISORY ISSUED BY THE STATE.
- THE SITE IS POSTED WITH WARNING SIGNS.



SITE INVESTIGATION – HUMAN HEALTH RISK ASSESSMENT

- IN OUR RISK EVALUATION, EPA COORDINATED WITH THE LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE LOUISIANA DEPARTMENT OF HEALTH AND HOSPITAL. WE AGREED AND CONSIDERED A PERSON CONSUMING A FISH MEAL COMPOSED OF BASS, CATFISH AND CRAWFISH.
- THE RESULTS WERE **UNACCEPTABLE RISKS.**

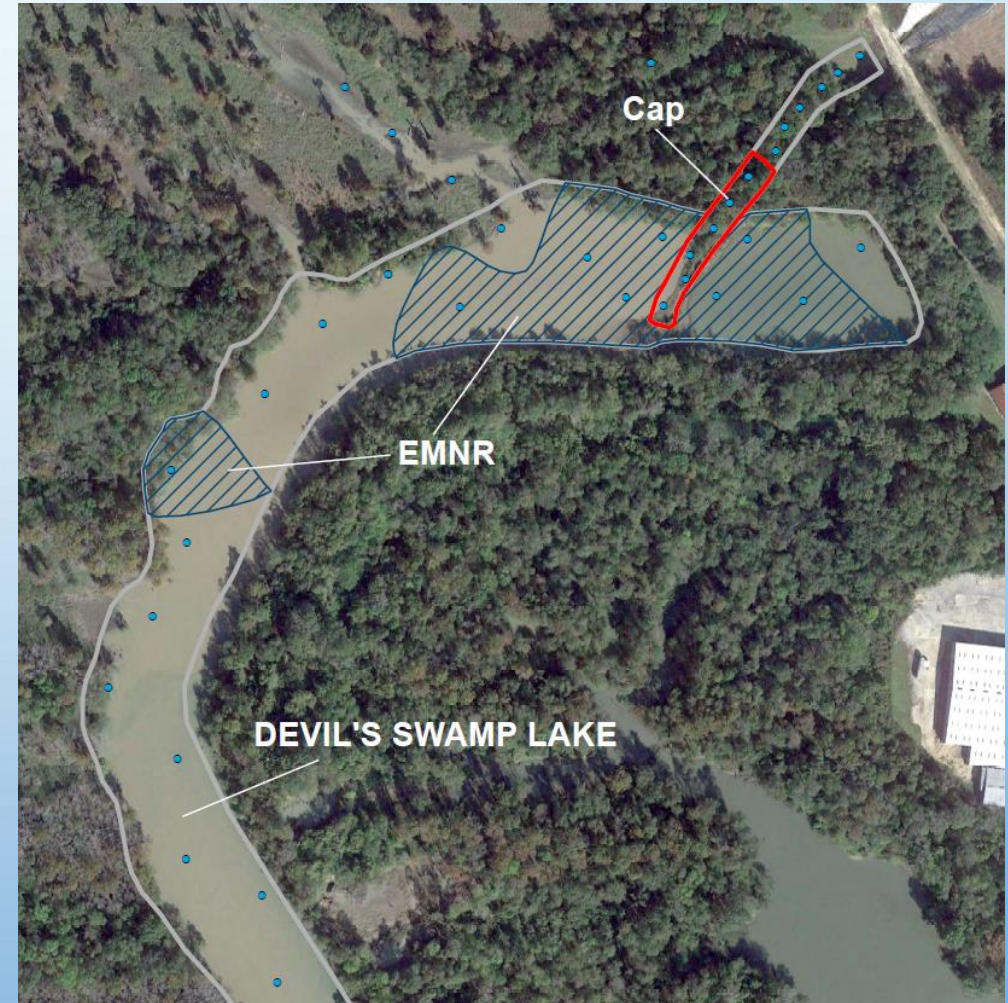
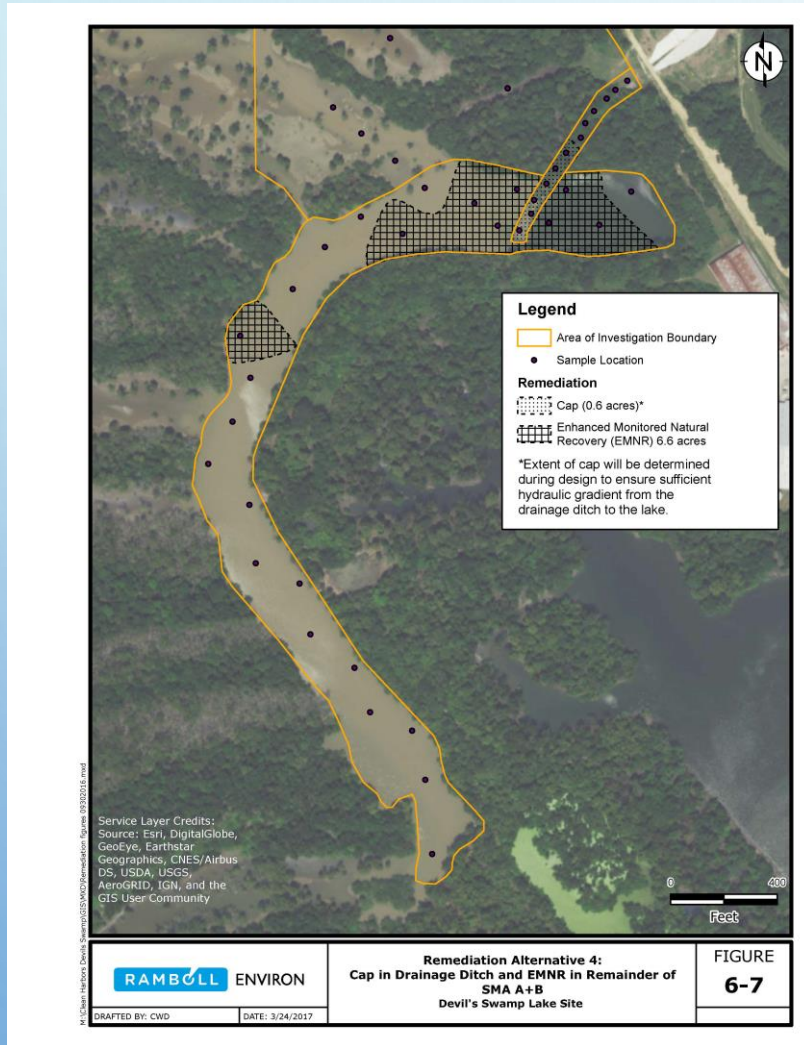
PROPOSED STRATEGY TO CONTROL RISKS

- REDUCE UPTAKE OF PCBs FROM SEDIMENT TO FISH
 - ESTABLISH PROTECTIVE LEVELS FOR FISH USED FOR CONSUMPTION
 - TOTAL PCBs – 0.17 MG/KG IN FISH
 - ESTABLISH SEDIMENT CONCENTRATION THAT RESULT IN PROTECTIVE LEVELS IN FISH TISSUE
 - TOTAL PCBs - 0.2 MG/KG IN SEDIMENT
- TAKE ACTION ON SEDIMENTS ABOVE TARGET CONCENTRATION

REMEDY OBJECTIVES

- REDUCE CONTAMINANT CONCENTRATIONS IN SEDIMENTS IN ORDER TO MEET PROTECTIVE FISH LEVELS.
- REDUCE RISK TO LEVELS THAT WILL ALLOW TO REMOVE OR MODIFY THE FISH ADVISORY.
- MAINTAIN OR REDUCE ECOLOGICAL RISKS.

AREAS THAT REQUIRE REMEDIATION



POTENTIAL REMEDIES

1. MONITORED NATURAL RECOVERY

- SAMPLING TO VERIFY DECLINING VALUES

2. ENHANCED MONITORED NATURAL RECOVERY

- REMEDIATION PRACTICES THAT APPLIES MATERIALS OR AMENDMENTS TO ENHANCE NATURAL RECOVERY PROCESSES

3. COVER SYSTEMS

- PHYSICAL BARRIERS TO ELIMINATE EXPOSURE

ALTERNATIVE 1 NO ACTION

- **INCLUDED IN THE ANALYSIS FOR COMPARISON TO OTHER ALTERNATIVES.**
- **THIS REMEDIATION ALTERNATIVE REFLECTS BASELINE SEDIMENT CONDITIONS AS DESCRIBED IN THE REMEDIAL INVESTIGATION REPORT AND ENTAILS NO FURTHER ACTION FOR REMEDIATION.**
- **DEVIL'S SWAMP LAKE SITE SEDIMENTS ASSUMES THAT THE EXISTING ADVISORY AGAINST CONSUMPTION OFF FISH WILL REMAIN.**

ALTERNATIVE 2

MONITORED NATURAL RECOVERY

- **SURFACE SEDIMENT WITHIN SPECIFIC AREAS WOULD BE MONITORED OVER AN EXTENDED PERIOD OF TIME IN ORDER TO VERIFY CONTINUING REDUCTION OF PCBS THROUGH THE DEPOSITION OF RELATIVELY CLEANER SEDIMENTS.**
- **BIOLOGICAL MONITORING WOULD BE UNDERTAKEN CONCURRENTLY TO VERIFY CONTINUING REDUCTION OF PCB CONCENTRATIONS IN FISH.**
- **EXISTING INSTITUTIONAL CONTROLS WOULD REMAIN IN PLACE.**
- **INSTITUTIONAL CONTROLS INCLUDE THE EXISTING FISH CONSUMPTION ADVISORY, DEED RESTRICTION ON PRIVATELY OWNED LAND TO CONTINUE TO PROHIBIT ACCESS TO DEVIL'S SWAMP LAKE, AND PROHIBITIONS ON CONSTRUCTION OR ANY OTHER ACTIVITY.**

ALTERNATIVE 3

ENHANCED MONITORED NATURAL RECOVERY (EMNR)

- AN APPROXIMATE 6-INCH LAYER OF THIN COVER MATERIALS WOULD BE PLACED IN SELECTED AREAS TO REDUCE SURFACE SEDIMENT CONCENTRATIONS OF PCBS—AND CONSEQUENTLY EXPOSURES TO INVERTEBRATES, FISH, AND THE HUMAN AND ECOLOGICAL RECEPTORS THAT CONSUME THEM.**
- EMNR WOULD PROVIDE A CLEAN SEDIMENT SURFACE FOR HABITAT RECOVERY WHILE MINIMIZING G CONSTRUCTION IMPACTS TO THE WETLAND ENVIRONMENT.**
- LONG-TERM MONITORING OF SEDIMENT AND BIOTA, AS WELL AS CONTINUED IMPLEMENTATION OF INSTITUTIONAL CONTROLS.**

ALTERNATIVE 4 – PREFERRED ALTERNATIVE ENHANCED MONITORED NATURAL RECOVERY & CAP

- **SIMILAR TO ALTERNATIVE 3, WITH THE ADDITION OF:**
- **SEDIMENT CAPPING THAT WOULD BE USED TO ISOLATE UNDERLYING PCBS IN THE DRAINAGE DITCH SEDIMENT AND TO PROVIDE A CLEAN SEDIMENT SURFACE FOR HABITAT RESTORATION.**
- **LONG-TERM MONITORING OF SEDIMENT AND BIOTA, AS WELL AS CONTINUED
IMPLEMENTATION OF INSTITUTIONAL CONTROLS.**

ALTERNATIVE 5 CAPPING OR CAP

- **SEDIMENT CAPPING WOULD BE USED TO ISOLATE UNDERLYING PCBS IN CERTAIN AREAS TO PROVIDE A CLEAN SEDIMENT SURFACE FOR HABITAT RESTORATION.**
- **IT IS ASSUMED THAT THE CAP WOULD COMPRISE A 6-INCH BASE CHEMICAL ISOLATION LAYER WITH UP TO 6 INCHES OF ARMORING TO PROTECT AGAINST CHEMICAL MIGRATION THROUGH THE CAP, AS WELL AS EROSION FORCES RESULTING FROM STORM EVENTS.**
- **CONTINUED IMPLEMENTATION OF INSTITUTIONAL CONTROLS..**

ALTERNATIVE 5

CAPPING OR CAP (SOME FACTORS CONSIDERED)

- **PROVIDES ADDED DEGREE OF PROTECTION FOR HIGH ENERGY EVENTS.**
SIMILAR PROTECTIVENESS AS EMNR.
- **CAPPING COULD DAMAGE LOCAL HABITAT DURING INSTALLATION.**
- **THE EXTENT OF ENVIRONMENTAL DAMAGE CAUSED BY REMEDY IMPLEMENTATION IS EXPECTED TO BE GREATER.**
- **HIGHER COST FOR CONSTRUCTION, LOWER COST FOR MONITORING.**

COMPARISON ALTERNATIVES 4 AND 5

- **ESTIMATED CAPITAL AND FIXED COST:**
\$2,510,000
 - **ESTIMATED TIME FOR FULL RECOVERY: 30 YEARS**
 - **ESTIMATED OPERATION AND MAINTENANCE COST: \$1,337,000**
 - **ESTIMATED CAPITAL AND MAINTENANCE COST: \$3,847,000**
 - **ESTIMATED TOTAL PRESENT WORTH COST: \$3,191,000**
 - **ESTIMATED CONSTRUCTION TIME: 1 TO 2 YEARS**
- **ESTIMATED CAPITAL AND FIXED COST:**
\$3,412,000
 - **ESTIMATED TIME FOR FULL RECOVERY: 20 YEARS**
 - **ESTIMATED OPERATION AND MAINTENANCE COST: \$ 803,000**
 - **ESTIMATED CAPITAL AND MAINTENANCE COST: \$4,215,000**
 - **ESTIMATED TOTAL PRESENT WORTH COST: \$3,885,000**
 - **ESTIMATED CONSTRUCTION TIME: 1 TO 2 YEARS**

NEXT STEPS

- PROPOSED PLAN ISSUED
 - PUBLIC NOTICE PUBLISHED
 - FACT SHEET PUBLISHED/MAILES
 - 30-DAY PUBLIC COMMENT PERIOD ONGOING
 - PUBLIC MEETING (OCTOBER 17, 2019)
- FINAL REMEDY DECISION WITH RESPONSE TO PUBLIC COMMENTS



Highlight 2-3: Sample Pictorial-Style Conceptual Site Model Focusing on Human and Ecological Threats

