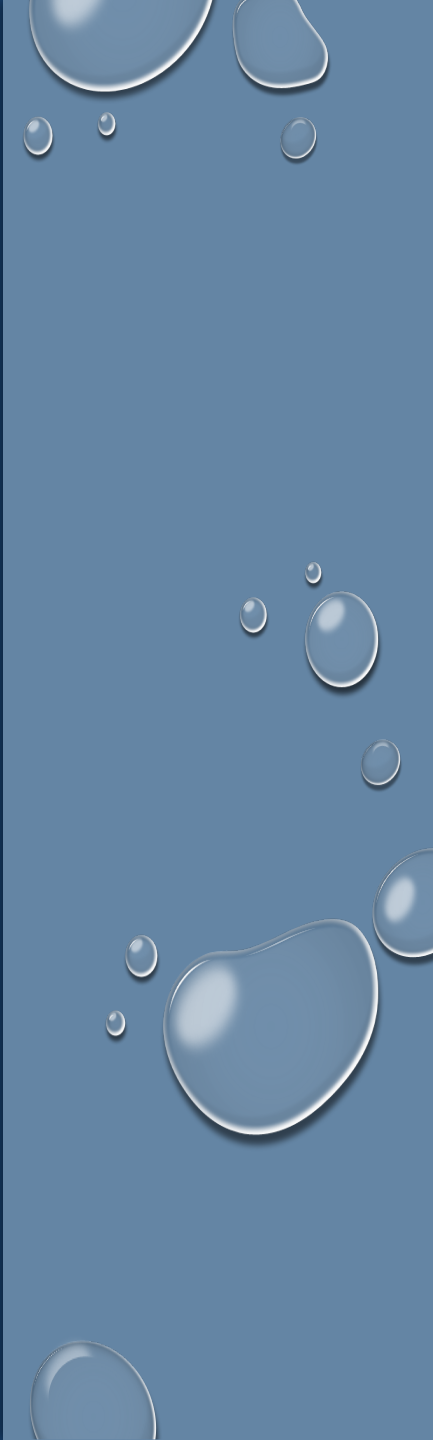


RRT2
SURFACE WASHING AGENT
TESTING & EVALUATION
PROTOCOL

NY/NJ RRT MEETING

MARCH 9-10, 2020



BACKGROUND:

- FOLLOWS PROTOCOLS ESTABLISHED BY RRT4 AND THE CARIBBEAN RRT
- DRAFT PRESENTED AT THE JUNE RRT2 MTG
- REQUEST FOR REVIEW & COMMENTS INCLUDED IN MEETING ACTION ITEMS, SENT OUT ON JUNE 20TH
- RECEIVED 2 SETS OF COMMENTS
- COMMENTS HAVE BEEN INCORPORATED IN THE FINAL DOCUMENT
- ADDED TO THE REGIONAL CONTINGENCY PLAN AS APPENDIX 9

AUTHORIZATION OF USE:

- SECTION 300.910: “RRTS SHALL ADDRESS...THE DESIRABILITY OF USING APPROPRIATE DISPERSANTS, **SURFACE WASHING AGENTS**, SURFACE COLLECTING AGENTS, BIOREMEDIATION AGENTS, OR MISCELLANEOUS OIL SPILL CONTROL AGENTS LISTED ON THE NCP PRODUCT SCHEDULE.”

NOT
PREAUTHORIZATION

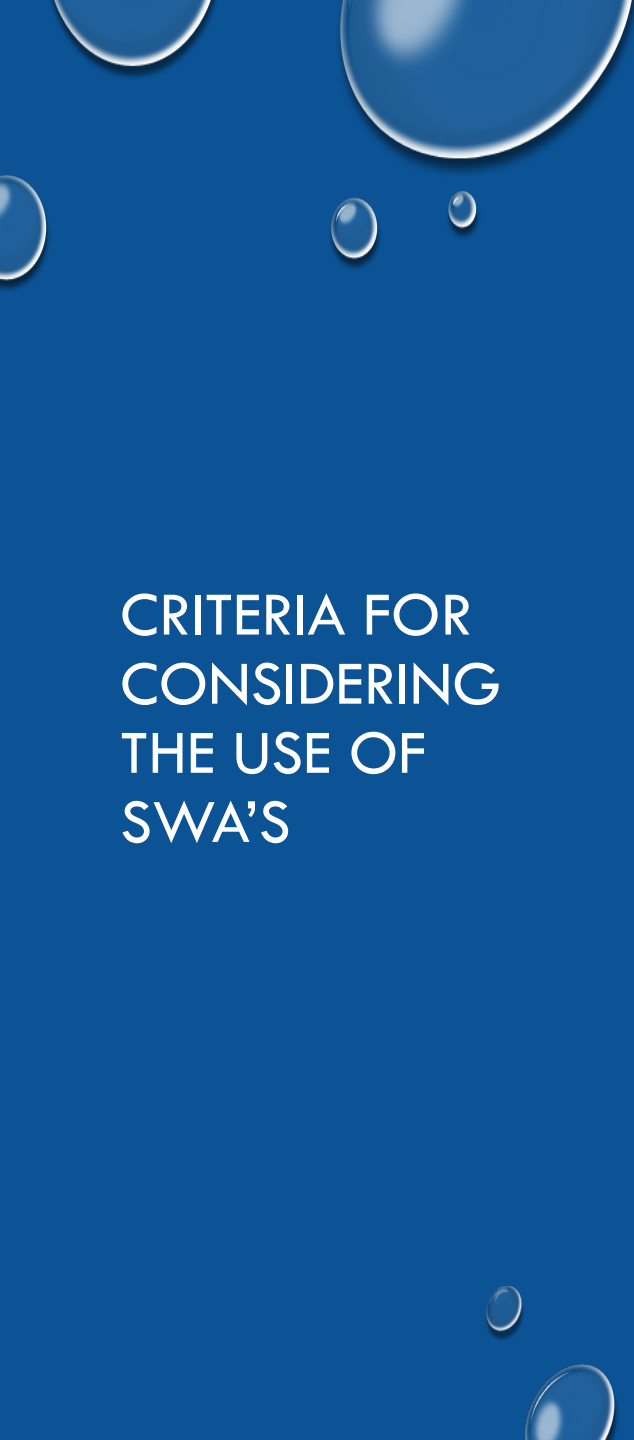
- NO NEED TO DEVELOP PRE-AUTHORIZATION FOR THE USE OF SWA'S.
- THE EFFECTIVE USE OF SWA'S IS NOT SUBJECT TO A TIME-CRITICAL WINDOW OF OPPORTUNITY, AS IS THE CASE WITH DISPERSANTS, IN-SITU BURNING, OR SOLIDIFIERS.
- USE OF SWA'S WILL BE ON A CASE-BY-CASE BASIS AND REVIEWED BY THE INCIDENT-SPECIFIC RRT PRIOR TO AUTHORIZING ANY APPLICATION.

WHY ESTABLISH PROTOCOLS?

- ADDRESSES THE TESTING AND EVALUATION OF SWA'S LISTED ON THE NCP PRODUCT SCHEDULE.
- IDENTIFIES SPECIFIC PRACTICES TO BE FOLLOWED FOR EVALUATING THE EFFECTIVENESS AND BIOLOGICAL IMPACTS OF TEST APPLICATIONS
- ANY POST-TEST DECISION TO OPERATIONALLY USE SURFACE WASHING AGENTS MUST RECEIVE CONCURRENCE FROM EPA AND THE AFFECTED STATE(S), IN CONSULTATION WITH THE DOI AND NOAA NATURAL RESOURCE TRUSTEES.

CONTENTS:

- INTRODUCTION
- CRITERIA FOR CONSIDERING THE USE OF SWA'S
- CONSTRAINTS GOVERNING TEST USE OF SWA'S
- TEST PREPARATION PROCESS
- TEST APPLICATION PROCEDURES
- REPORTING



CRITERIA FOR CONSIDERING THE USE OF SWA'S

- THE RRT RECOGNIZES THAT IN CERTAIN CIRCUMSTANCES, THE COMPLETE PHYSICAL CONTAINMENT, COLLECTION, AND REMOVAL OF OIL DISCHARGES MAY NOT BE POSSIBLE.
- WHILE PHYSICAL CONTROL AND RECOVERY TECHNIQUES ARE THE TRADITIONAL RESPONSE MEASURES, OTHER COUNTERMEASURES ALSO NEED TO BE CONSIDERED.
- THE USE OF SWA'S MAY BE CONSIDERED TO PREVENT A SUBSTANTIAL THREAT TO THE PUBLIC HEALTH OR WELFARE, OR TO MINIMIZE SERIOUS ENVIRONMENTAL DAMAGE.



CRITERIA FOR CONSIDERING THE USE OF SWA'S

- “LIFT AND FLOAT” - OIL IS LIFTED FROM THE SURFACE OF THE OILED SUBSTRATE OR MATERIAL AND FLOATS ON THE SURFACE OF THE WATER.
- “LIFT AND DISPERSE” - MAKES EFFECTIVE CONTAINMENT AND RECOVERY OF RELEASED OIL MORE LIMITED OR IMPOSSIBLE, DEPENDING ON THE DEGREE OF DISPERSING ACTION.
- GENERALLY, THE RRT PREFERS “LIFT AND FLOAT” TYPE SWA'S, IN ORDER TO ENHANCE RECOVERY.
- HOWEVER, CIRCUMSTANCES MAY WARRANT CONSIDERATION OF SWA'S THAT LIFT AND DISPERSE OR LIFT AND PARTIALLY DISPERSE.

CRITERIA FOR CONSIDERING THE USE OF SWA'S

- INITIAL EVALUATION OF OIL TYPE AND IMPACTED SHORELINE IS REQUIRED PRIOR TO TESTING SWA ON A SPILL.
- INITIAL DRAFT LANGUAGE:
 - SURFACE WASHING AGENTS WORK BEST WITH TYPE IV HEAVY CRUDE OIL. HOWEVER, LIGHT AND MEDIUM CRUDE OIL CAN WEATHER TO HEAVIER CRUDE OVER TIME AS CONSTITUENTS OF THE OIL VOLATILIZE.
- **FINAL LANGUAGE:**
 - SURFACE WASHING AGENTS ARE USUALLY NEEDED TO ENHANCE THE REMOVAL OF GROUP IV OILS (HEAVY CRUDE OILS AND HEAVY REFINED PRODUCTS). HOWEVER, LIGHTER OILS CAN WEATHER TO THE POINT WHERE USE OF SURFACE WASHING AGENTS MAY BE APPLICABLE.

CRITERIA FOR CONSIDERING THE USE OF SWA'S (CONTINUED)

- **INITIAL DRAFT LANGUAGE:**
 - A BUCKET TEST SHOULD BE CONDUCTED TO DETERMINE IF THE REMOVED OIL WOULD LIKELY FLOAT. IF THE REMOVED OIL SINKS, IT MAY BE MORE DIFFICULT TO COLLECT AND COULD ADVERSELY IMPACT BENTHIC COMMUNITIES.
- **FINAL LANGUAGE:**
 - CONDUCT A BUCKET TEST TO DETERMINE IF REMOVED OIL WILL FLOAT OR REMAIN SUSPENDED IN THE WATER COLUMN (SEE SECTION IV: TEST PREPARATION PROCEDURES). IF THE OIL IS SUSPENDED IN THE WATER COLUMN, NOTE THE TIME IT TAKES FOR THE WATER COLUMN TO BECOME CLEAR (ALL OIL PARTICLES FLOAT TO THE SURFACE). IF THE OIL DOES NOT FLOAT TO THE SURFACE WITHIN 5 MINUTES, THEN THE USE OF THAT SPECIFIC SURFACE WASHING AGENT IS NOT APPROPRIATE.
- SHORELINE TYPES BEST SUITED FOR SWA USE INCLUDE MAN-MADE STRUCTURES, RIP-RAP, BOULDERS, COBBLE, BEDROCK, ETC., THAT CAN BE CLEANED WITHOUT TRAPPING REMOVED OIL IN INACCESSIBLE SPACES.

CONSTRAINTS GOVERNING TEST USE OF SWA'S

- PHYSICAL CONDITIONS PLAY A VITAL ROLE IN OVERALL EFFECTIVENESS OF SWA'S, AS WELL AS THE SUCCESS IN RECOVERING REFLOATED OIL. AS SUCH, THE FOLLOWING CONSTRAINTS SHALL BE OBSERVED:
 - WATER VELOCITY
 - WAVE ACTION
 - WATER DEPTH
 - ACCESSIBILITY
 - PRECIPITATION
 - TEMPERATURE
 - WIND



CONSTRAINTS GOVERNING TEST USE OF SWA'S

- SPECIAL CONSIDERATION AREAS: IF TESTING IS PROPOSED IN THE FOLLOWING AREAS, ADDITIONAL CONSULTATION WITH THE APPROPRIATE MANAGER OR OWNER SHALL BE UNDERTAKEN PRIOR TO TEST APPLICATION:
 - VITAL RESOURCES
 - THREATENED & ENDANGERED SPECIES
 - FEDERAL, STATE OR LOCAL AREAS OF SIGNIFICANCE
 - HISTORIC/ARCHAEOLOGICAL RESOURCES
 - PRIVATE LANDOWNERS

TEST PREPARATION PROCESS:

- IDENTIFY, NOTIFY AND COORDINATE WITH STAKEHOLDERS TO INCLUDE INCIDENT SPECIFIC RRT NOTIFICATION OF THE INTENT TO INITIATE TEST PREPARATION.
- SELECT ONE OR MORE OF THE NCP LISTED SURFACE WASHING AGENTS BASED ON ENVIRONMENTAL CONDITIONS.
- CONDUCT A BUCKET TEST TO DETERMINE IF REMOVED OIL WILL FLOAT OR REMAIN SUSPENDED IN THE WATER COLUMN. IF IT FLOATS, NOTE THE TIME IT TAKES FOR THE WATER COLUMN TO BECOME CLEAR (ALL PARTICLES FLOAT TO THE SURFACE). IF THE OIL DOES NOT FLOAT TO THE SURFACE IN 5 MINUTES, THEN THE USE OF THAT SPECIFIC SURFACE WASHING AGENT IS NOT APPROPRIATE.
- CONTACT SURFACE WASHING AGENT SUPPLIER TO:
 - A. IDENTIFY COST
 - B. DETERMINE AVAILABILITY
 - C. CONSIDER TRANSPORTATION
 - D. INVITE SURFACE WASHING AGENT REPRESENTATIVE TO PARTICIPATE

TEST APPLICATION PROCEDURES

1. IDENTIFY TEST AREAS AND CONTROL AREA BOUNDARIES:
2. EFFECTIVENESS CRITERIA AND MONITORING PROCEDURES:
3. WATER & SEDIMENT SAMPLING IN CONTROL AND TEST AREAS FOR TOTAL PETROLEUM HYDROCARBON (TPH) ANALYSIS:
4. TOXICITY PROCEDURES TO EVALUATE SWA IMPACTS TO AQUATIC LIFE:
5. BOOMING & RECOVERY PROCEDURES:
6. SITE-SPECIFIC PRODUCT APPLICATION PROCEDURES ARE TO BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED APPLICATION PROCEDURES:



REPORTING

- THE RRT REQUIRES DOCUMENTATION AND AN AFTER-ACTION/LESSONS LEARNED REPORT FOLLOWING SWA USE.
- THE RRT MAY SPECIFY DOCUMENTATION TO PROVIDE, AND MAY CONDITION USE AS APPROPRIATE FOR THE INCIDENT.
- GENERALLY, THE RRT WILL REQUIRE PHOTOS, ESTIMATES OF EFFECTIVENESS, RECOVERY ESTIMATES, AMOUNT OF PRODUCT USED, AND AMOUNT OF OIL/AREA TREATED.
- TEST APPLICATIONS MAY BE REQUIRED PRIOR TO GRANTING FULL OPERATIONAL USE APPROVAL.

REPORTING – RECOMMENDED OUTLINE

Cover/Introduction/Test Procedures

Results

- Effectiveness of bucket test
- Effectiveness of field test & recovery
- TPH
- Toxicity

Test Conclusions

- Oil recovered/not recovered
- Oil dispersed/not dispersed
- Oil-cleaner mix toxic/nontoxic

Recommendations

- Proceed no further
- Coordinate/consult for operational use
- Conditions

FOLLOWING USE OF THE PROTOCOL:

The OSC will provide observations, lessons learned and suggested changes to the RRT2 Co-Chairs.

Changes to the protocol will be made as appropriate.

Lessons learned from each application will be submitted for inclusion in the Selection Guide for Oil Spill Applied Technologies.

QUESTIONS?

The protocols are posted as
Appendix 9 of the RCP under
the “Documents” link at:



www.nrt.org/RRT2plans