



**Newtown Creek Superfund Site
Queens and Brooklyn, New York
CAG Meeting
April 15th, 2020**

**OPERABLE UNIT 3
POTENTIAL INTERIM EARLY ACTION
CREEK MILE 0-2
REVIEW AND STATUS UPDATE**

Overall Site Status Update

- **Operable Unit One**: Includes the Remedial Investigation/Feasibility Study of the entire Study Area. Work is being conducted as per the terms of a 2011 Administrative Order on Consent.
- **Operable Unit Two**: Evaluates current and reasonably anticipated future releases of Superfund site-related chemicals of potential concern from combined sewer overflow discharges to the Creek. Work is being conducted pursuant to a 2018 Administrative Order on Consent with the City of New York.
- **Operable Unit Three**: Relates to evaluation of a potential Interim Early Action to be taken on the lower 2 miles of Newtown Creek. Work is being conducted pursuant to a 2019 Administrative Order on Consent with the Newtown Creek Group (NCG).

BRIEF REVIEW OF PREVIOUS PRESENTATIONS REGARDING OPERABLE UNIT 3

What is an early action?

- **Early Actions**
 - **Early interim action.** Any interim action taken before the completion of the Remedial Investigation/Feasibility Study for a site or operable unit would constitute an early action that would be re-evaluated for possible further action.
 - **Early final action.** An early action that does not require follow up actions. For example, to prevent exposure and/or the spread of contamination, drums are removed from a site along with the surrounding contaminated soil, while the remedial investigation is still ongoing.
- EPA's 2002 "11 Principles" sediment guidance¹ also discusses early and interim actions as follows:
 - EPA encourages the use of an iterative approach, especially at complex contaminated sediment sites, where an iterative approach is defined broadly to include approaches which incorporate testing of hypotheses and conclusions and which foster re-evaluation of site assumptions as new information is gathered.
 - An iterative approach may also incorporate the use of phased, early, or interim actions.

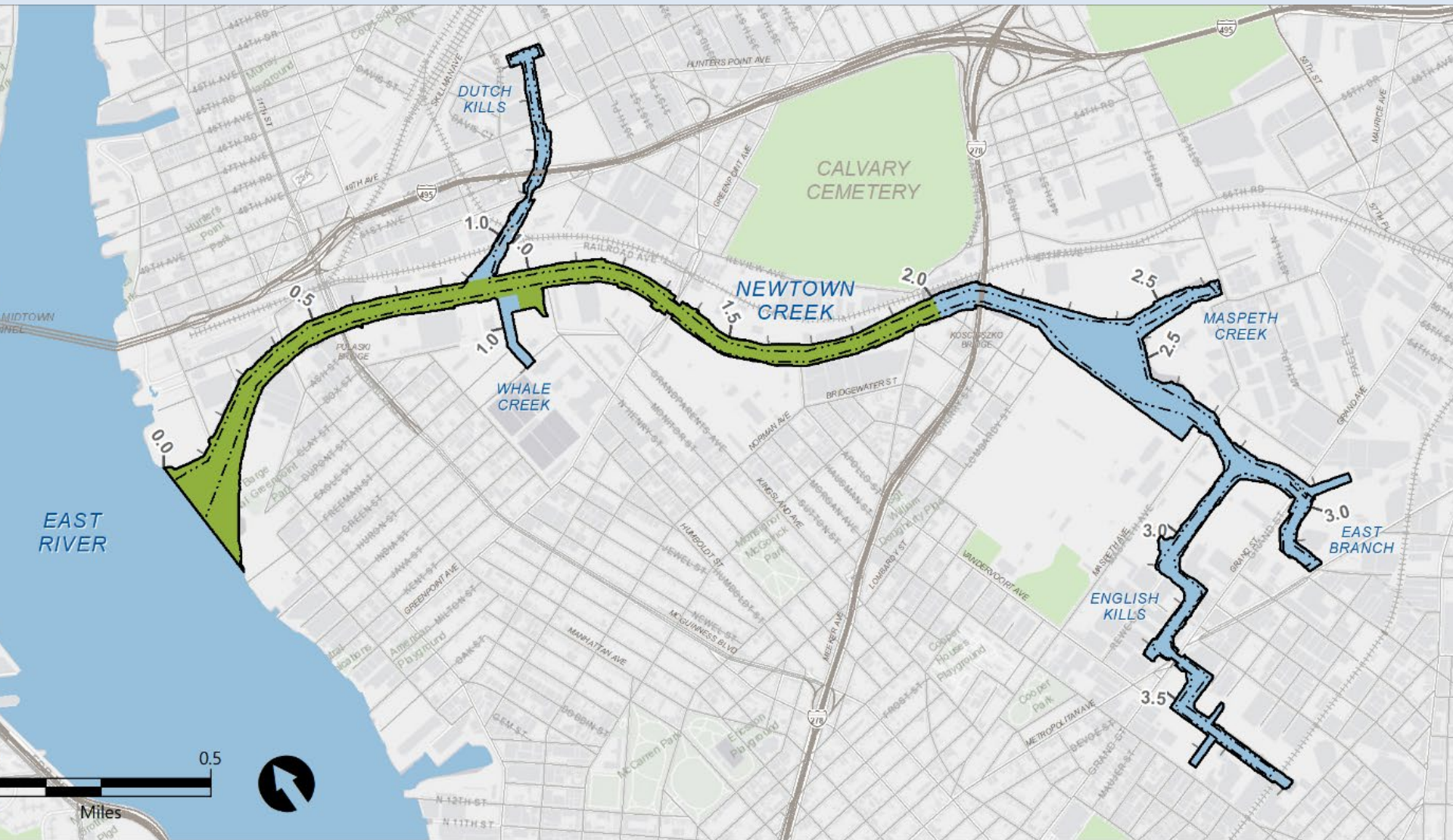
¹<https://semspub.epa.gov/work/HQ/174512.pdf>

Summary and Takeaways for Potential Newtown Creek Early Action

(as presented by EPA at 10/30/2019 CAG meeting)

- The use of early actions, including interim and removal actions, is supported by EPA guidance and dates back to the early days of Superfund.
- Taking early actions at sites is not unusual, particularly at large, complex sites such as Newtown Creek.
- Early, interim actions are reviewed and monitored – they are opportunities to learn.
- They can expedite the overall timeline for completing work at a site.
- Every site is unique – there is no exact parallel to the Newtown Creek site.

Newtown Creek with CM 0-2 shown in green



Why Creek Mile 0-2?

- The current Conceptual Site Model being developed for the entire Study Area suggests that CM 0-2 is less complicated from an environmental perspective than the upper portions of the creek and the tributaries.
- The bases for the early action, as presented by the Newtown Creek Group, can be summarized as:
 - **Position 1**: Tidal flow from the East River is currently the dominant source of solids to the surface water and sediment in CM 0–2.
 - **Position 2**: The lower 2 miles of Newtown Creek are net depositional, and natural recovery is expected to continue over time.
 - **Position 3**: The creek bed is physically stable.
 - **Position 4**: Ongoing sources of hazardous substances will not negatively impact remedy success.

General Approach for Operable Unit 3

- **Develop a Focused Feasibility Study to evaluate if the positions are supported, and the overall efficacy of conducting an Early Action**
- If supported, select a cleanup plan for the Early Action area as an interim remedy.
- Implement the selected remedy and conduct a robust action-specific performance monitoring plan
- Use the results to help inform the site-wide remedy development process

Contaminated Sediment Technical Advisory Group/National Remedy Review Board

Process Overview

CSTAG/NRRRB Meeting April 29, 2020

NRRRB

- NRRRB is a peer review group that reviews proposed Superfund cleanup decisions that meet cost-based review criteria to make sure they are consistent with Superfund law, regulations and guidance.
- Reviews remedial actions that cost more than \$50 million.

CSTAG

- CSTAG is a group of scientists, engineers and site managers with expertise in sediment site management and evaluation that helps assure sediment sites are managed in accordance with risk management principles, and encourages national consistency by providing a forum for exchanging technical and policy information.

Recommended CSTAG Meetings

- 1) Site characterization, near completion of the remedial investigation;
- (2) Preliminary remediation goal and remedial action objective development near completion of risk assessments;
- **(3) Development of the site's overall cleanup strategy and evaluation of remedial alternatives at or near completion of the draft feasibility study;**
- (4) Prior to the proposed plan

CSTAG Meeting # 3

- Development of the site's overall cleanup strategy and evaluation of remedial alternatives
- Description of:
 - The incorporation or consideration of early actions, removals, or iterative or phased approaches;
 - The development and screening of alternatives
 - Alternative evaluations and comparisons and underlying assumptions; and
- Development and implementation of predictive approaches for evaluating sediment stability, remedy effectiveness, or natural recovery.

CSTAG/NRRRB Meeting

- ◆ Stakeholders are invited to provide written materials and give a short oral presentation
- ◆ Stakeholders should be sent invitations at least six weeks before the meeting
- ◆ The presentation should identify any issues important to the stakeholder, should be no more than 20 minutes and allow 10 minutes for CSTAG questions
- ◆ All written submittals, including a summary of each oral presentation, should be sent to the EPA RPM at least one week before the meeting and should not exceed 30 pages

Operable Unit 3 – Short Term Schedule

Date	Topic
3/19/2020	EPA sent invitations to stakeholders to participate in April 29 , 2020 CSTAG/NRRB meeting
3/20/2020	Draft Focused Feasibility Study for OU3 received by EPA
4/9/2020	Draft Focused Feasibility Study for OU3 sent to CAG for use in developing CSTAG/NRRB materials
No later than 4/22/2020	Any written materials stakeholders want to present due to CSTAG/NRRB
4/29/2020	Optional stakeholder presentations for CSTAG/NRRB meeting
4/30/2020	CSTAG/NRRB meeting ends
No later than 6/30/2020	CSTAG/NRRB recommendations due to EPA

Operable Unit 3

Longer Term Schedule

- Recommendations from CSTAG to EPA
- EPA Region 2 comments on draft FFS to NCG
- Revised FFS
- Proposed Plan – Public Comment Period
- ROD

OVERVIEW OF OPERABLE UNIT 3 DRAFT FOCUSED FEASIBILITY STUDY REPORT

NOTE: The OU3 Focused Feasibility Study Report is a draft document prepared by a group of potentially responsible parties for the Site. EPA will be submitting comments on this draft document, and it will be revised from its current form, perhaps significantly.

Executive Summary and Section 1: Introduction

- Executive Summary provides an overview of the entire report
 - If you have limited time, this is a good place to start
 - Does not include all of the details provided in the rest of the report
- Section 1 describes the site overall and where Operable Unit 3 fits in

Section 2: OU3 Conceptual Site Model

- Describes in detail the four NCG positions that, if supported, would form the bases for conducting an interim early action for the lower 2 miles of the Creek
- Provides the technical backup for these positions
- Keep in mind:
 - CSM is still under development as part of Operable Unit 1 site-wide study
 - A robust performance monitoring plan will be used to test the accuracy of these positions, particularly Position 4, related to the impact of external sources of contamination on early action success

Section 3: Development of Remedial Action Objectives and Action-Specific Interim Performance Metrics

- Discusses the contaminants of concern for Operable Unit 3
- Describes the range of remedial action levels evaluated for this action
- Describes the goals/objectives of conducting the interim early action.
- Describes how the OU3 action is expected to fit in with the goals of the eventual Operable Unit 1 site-wide action
- Describes how the performance of the early action will be determined over time through the use of interim performance metrics

Section 3 (continued)

- Describes potentially applicable or relevant and appropriate requirements that may need to be complied with for the remedial action
- Keep in mind:
 - Remedial Action Levels (RALs) are not the same as Preliminary Remediation Goals (PRGs). PRGs for the Study Area will be determined as part of the OU1 RI/FS process, and remediation goals for the entire Study Area will be selected in a ROD for OU1
 - Any remedy conducted for OU3 will ultimately need to be consistent with the OU1 Record of Decision
 - The interim performance metrics proposed are not final

Contaminants of Concern and RALs Evaluated in Draft OU3 FFS

Contaminant of Concern ¹	Remedial Action Level
Total Polycyclic Aromatic Hydrocarbons (TPAH)	65 to 85 milligrams per kilogram (mg/kg)
Total Polychlorinated Biphenyls (TPCBs)	1.2 to 1.4 mg/kg
Copper	400 to 500 mg/kg
Dioxins/Furans (D/Fs)	200 nanograms per kg (ng/kg) toxic equivalence quotient ²
Lead	Not a risk driver for the proposed Early Action ²

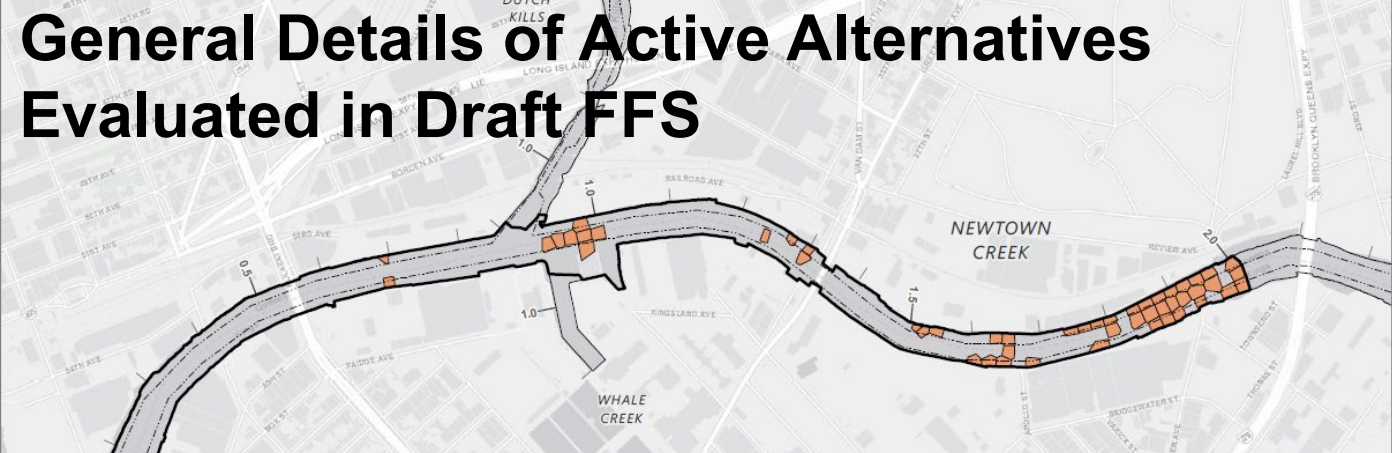
¹Contaminants of Concern based on findings of Operable Unit 1 human health and ecological risk assessments.

²The values for D/Fs and lead have not been previously discussed with EPA; they were proposed in the draft OU3 FFS.

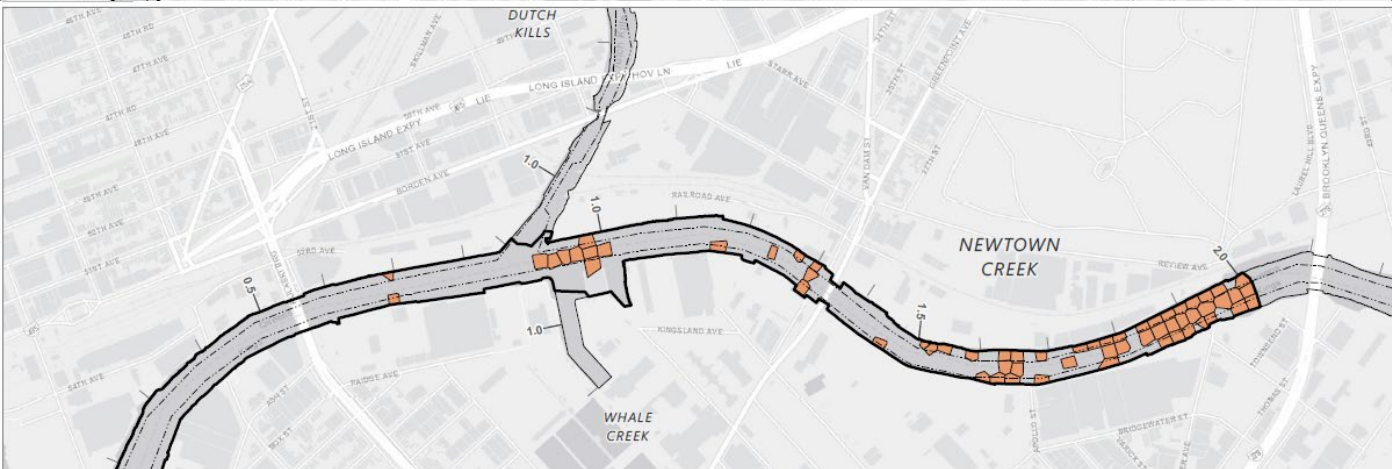
Section 4 and Section 5

- Section 4 -- Identification of General Response Actions, Remedial Technologies, and Process Options
- Section 5 -- Development of Remedial Alternatives for Early Action
 - Four remedial alternatives evaluated
 - Common elements include
 - Institutional Controls
 - Monitored Natural Recovery
 - Dredging
 - Backfill/Capping
 - Dredged Material Management and Disposal
 - Performance Monitoring

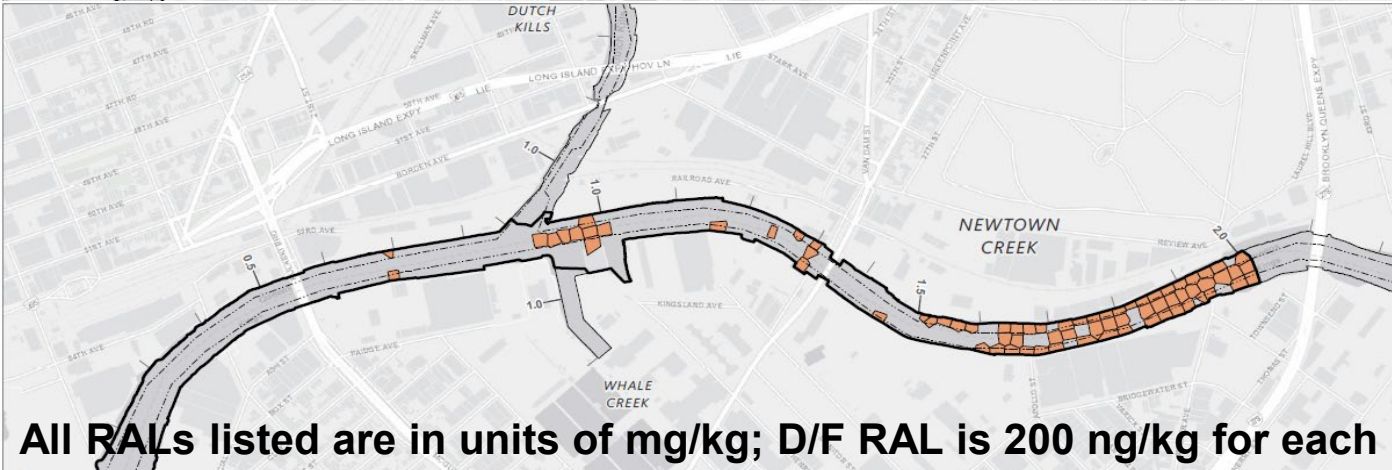
General Details of Active Alternatives Evaluated in Draft FFS



Alternative 2
 TPAH RAL – 85
 TPCB RAL – 1.4
 Copper RAL – 500
 Acres – 9.6
 Volume – 46,000 cubic yards (CY)



Alternative 3
 TPAH RAL – 85
 TPCB RAL – 1.2
 Copper RAL – 500
 Acres – 11.7
 Volume – 57,000 CY



Alternative 4
 TPAH RAL – 65
 TPCB RAL – 1.2
 Copper RAL – 400
 Acres – 13.9
 Volume – 67,000 CY

All RALs listed are in units of mg/kg; D/F RAL is 200 ng/kg for each alternative. Orange indicates areas to be dredged for each alternative.

Section 6 and Section 7

- Section 6: Detailed Analysis of Early Action Remedial Alternatives
- Section 7: Comparative Analysis of Early Action Alternatives for OU3
- These section discuss each of the alternatives individually (Section 6) and compares them to each other (Section 7) using the 9 criteria specified in the National Contingency Plan

The Nine Criteria

Threshold Criteria

- *Overall Protection of Human Health and the Environment* – assesses if a remedy provides adequate protection of human health and the environment (short-term and long-term) from unacceptable risks
- *Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)* – assesses if a remedy is compliant with pertinent regulations and standards

Balancing Criteria

- *Long-Term Effectiveness and Permanence* – addresses the magnitude of risk remaining after a remedial action and the adequacy and reliability of the controls to manage that risk
- *Reduction of Toxicity, Mobility, or Volume through Treatment* – addresses the statutory preference for treating waste to reduce its toxicity, mobility, or volume
- *Short-term Effectiveness* – addresses the effects of a remedy during construction
- *Implementability* – addresses the technical and administrative feasibility of an alternative and the availability of services, materials, and equipment to implement the remedy
- *Cost* – provides the estimated cost of a remedy, consisting of capital costs and O&M costs

Modifying Criteria

- *State Acceptance* – Considered by EPA during remedy selection and ROD preparation
- *Community Acceptance* - Considered by EPA during remedy selection and ROD preparation

Some additional thoughts....

- The OU3 FFS is a draft document prepared by a group of potentially responsible parties for the Site. EPA will be submitting comments on this draft document, and it will be revised from its current form, perhaps significantly.
- EPA Region 2 will not submit its final comments on the draft OU3 FFS until after the CSTAG/NRRRB meeting is held and we receive feedback from them.
- Our purpose in sharing the draft OU3 FFS with the CAG is so that it may prepare for the upcoming meeting. There will be opportunity in the future to review the FFS document more fully, in particular during the public comment period associated with release of the Proposed Plan for OU3, if a Proposed Plan is issued (e.g., if it is determined that the FFS supports moving forward with an interim early action).

QUESTIONS?