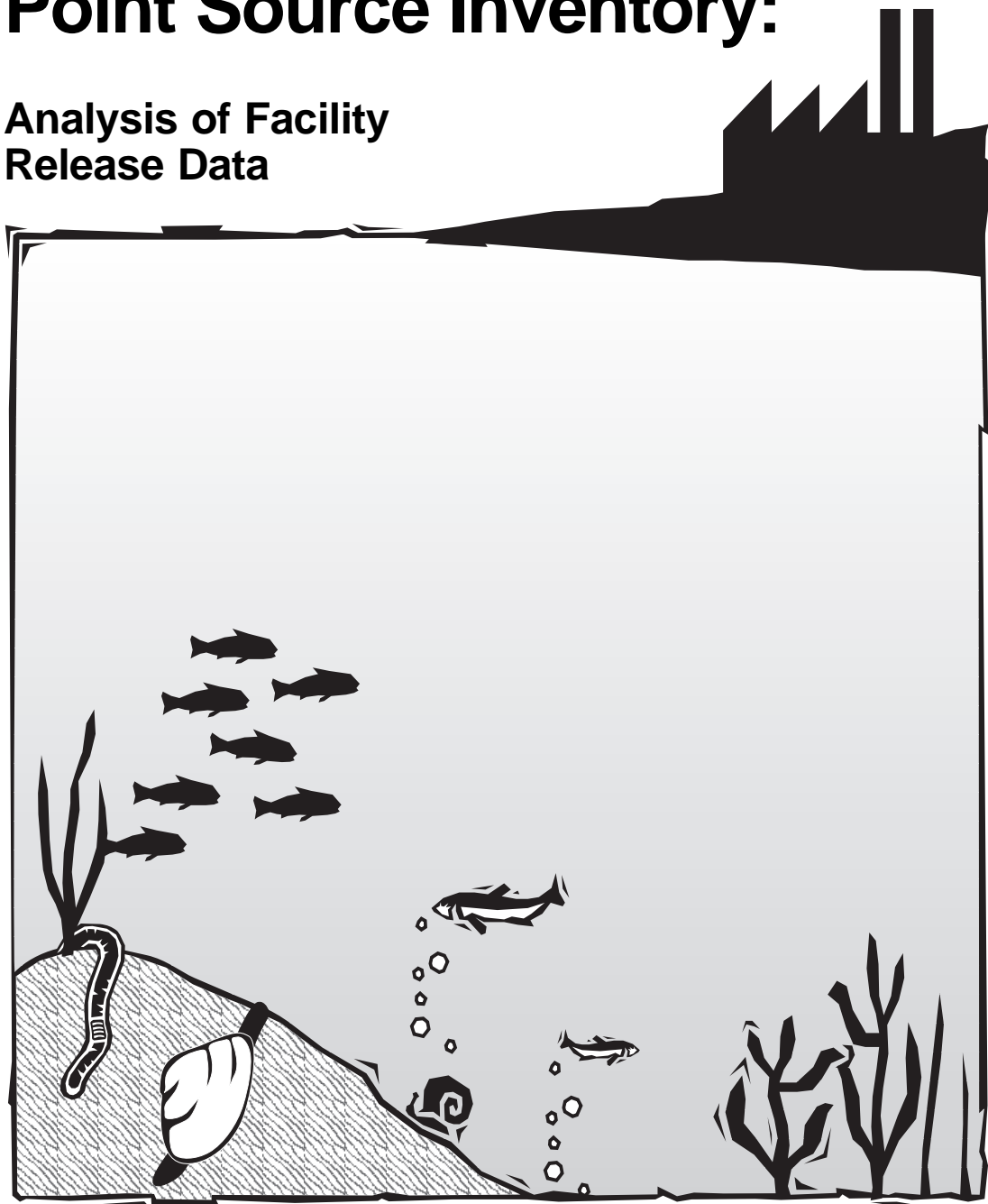




# The National Sediment Contaminant Point Source Inventory:

## Analysis of Facility Release Data



# **The Incidence And Severity Of Sediment Contamination In Surface Waters Of The United States**

## **Volume 3: National Sediment Containment Point Source Inventory**

September 1997

Office of Science and Technology  
United States Environmental Protection Agency  
401 M Street, SW  
Washington, DC 20460

The National Sediment Contaminant Point Source Inventory is a database of point source pollutant discharges that may result in sediment contamination, and a screening-level analysis of chemicals, geographic areas, and industries based on potential to cause sediment contamination. The data and information contained in this document could be used in various EPA regulatory programs for priority setting or other purposes after further evaluation using program-specific criteria. However, this document has no immediate or direct regulatory consequence. It does not in itself establish any legally binding requirements, establish or affect legal rights or obligations, or represent a determination of any party's liability.

# Contents

	<i>Page</i>
Acknowledgments .....	vii
Executive Summary .....	ix
<b>1 Introduction .....</b>	<b>1-1</b>
Objectives of Point Source Inventory and Analysis .....	1-2
Anticipated Uses .....	1-2
<b>2 Development of the Point Source Inventory .....</b>	<b>2-1</b>
Identification of Point Source Releases of Sediment Contaminants .....	2-1
Determination of Chemical Loads .....	2-3
Toxic Release Inventory Data .....	2-3
Permit Compliance System Data .....	2-4
Assignment of Geographic Location and Industrial Category .....	2-5
Inventory Limitations .....	2-5
<b>3 Development of Sediment Hazard Scores .....</b>	<b>3-1</b>
Chemical-Specific Toxicity Score .....	3-3
Aquatic Life Screening Values .....	3-4
Human Health Screening Values .....	3-5
Chemical-Specific Toxicity Scores .....	3-5
Chemical-Specific Fate Score .....	3-6
Air-Water Partitioning Subfactor .....	3-6
Sediment Adsorption Subfactor .....	3-7
Aqueous Biodegradation Subfactor .....	3-8
Functions of Sediment Hazard Score Components .....	3-9
<b>4 Results of Screening-Level Hazard Analyses .....</b>	<b>4-1</b>
Preparation of Data for Hazard Analysis .....	4-1
Analysis by Chemical .....	4-2
Analysis by Watershed .....	4-12
Analysis by Industrial Category .....	4-16
Conclusions .....	4-18
References .....	Ref-1
<b>Appendices</b>	
A. Sediment Hazard Scores and Supporting Data .....	A-1
B. Watershed Priority Groups .....	B-1
C. Detailed Analyses of Industrial Categories .....	C-1

<b>Tables</b>	<i>Page</i>
<b>Table 3-1</b> Assignment of HAZREL Score .....	3-2
<b>Table 4-1</b> Analysis of TRI Data by Chemical (Sorted by Descending HAZREL Score) .....	4-3
<b>Table 4-2</b> Analysis of PCS Data by Chemical (Sorted by Descending HAZREL Score) .....	4-6
<b>Table 4-3</b> Analysis of TRI Data by Chemical Class .....	4-12
<b>Table 4-4</b> Analysis of PCS Data by Chemical Class .....	4-12
<b>Table 4-5</b> Number of Watersheds in Each Priority Group by EPA Region .....	4-15
<b>Table 4-6</b> Analysis of TRI Data by Industrial Category (Sorted by Descending HAZREL Score) .....	4-18
<b>Table 4-7</b> Analysis of PCS Data by Industrial Category (Sorted by Descending HAZREL Score) .....	4-19

## **Tables in Appendices**

<b>Table A-1</b> Sediment Hazard Scores (Sorted by Chemical Name) .....	A-3
<b>Table A-2</b> Sediment Chemistry Screening Values (Sorted by Chemical Name) .....	A-7
<b>Table A-3</b> Physical and Chemical Properties (Sorted by Chemical Name) .....	A-13
<b>Table B-1</b> Priority Group 1 Watersheds (HAZREL score greater than 80) .....	B-3
<b>Table B-2</b> Priority Group 2 Watersheds (HAZREL score range: 61-80) .....	B-5
<b>Table B-3</b> Priority Group 3 Watersheds (HAZREL score range: 41-60) .....	B-7
<b>Table B-4</b> Priority Group 4 Watersheds (HAZREL score range: 21-40) .....	B-9
<b>Table B-5</b> Priority Group 5 Watersheds (HAZREL score range: 1-20) .....	B-15
<b>Table C-1</b> HAZREL Scores from TRI by Industrial Category and Chemical (for HAZREL Scores greater than 0) .....	C-3
<b>Table C-2</b> HAZREL Scores from PCS by Industrial Category and Chemical (for HAZREL Scores greater than 0) .....	C-11

**Figures***Page*

<b>Figure 3-1</b>	Sediment hazard score—Parameter sensitivity .....	3-11
<b>Figure 3-2</b>	Sediment hazard score— $K_{oc}$ sensitivity .....	3-12
<b>Figure 4-1</b>	HAZREL score by watershed .....	4-14
<b>Figure 4-2</b>	Comparison of Survey evaluation to HAZREL score by watershed: percent of stations classified as Tier 1 or 2 as a function of HAZREL score .....	4-16
<b>Figure 4-3</b>	Comparison of Survey evaluation to HAZREL score by watershed: (a) percent of stations classified as Tier 1 or 2 as a function of HAZREL score, (b) percent of watersheds that contain APC by priority group .....	4-17