

Contents

1 Executive Summary 1

- Native Villages of Rural Alaska: Their Setting and Sanitation Problems 1
- Mission and Accomplishments of Agencies Responsible for Sanitation 3
- Capital Construction for Sanitation Facilities 6
- Factors Contributing to Inadequate Operation and Maintenance of Existing Sanitation Facilities 7
- Congressional Oversight Considerations or Options 11
- Conclusion 21

2 Alaskan Native Villages and Their Sanitation Problems 23

- Geographic Setting 23
- Modern Alaska and Emergence of Native Corporations 28
- Sanitation in Native Communities of Rural Alaska 31
- Water Availability and Sanitation in Rural Alaska 36
- Conclusion 38

3 Roles and Responsibilities of Alaska Natives 39

- Operation and Maintenance of Existing Piped Sanitation Technologies 39
- Economic Health and Culture of Native Villages 40
- Role of Native Communities in Operation and Maintenance of Sanitation Projects 45
- Factors That Hamper Successful Operation and Maintenance in Native Communities 48
- Funding of Operation and Maintenance Activities 49
- Conclusion 50



4 Roles and Responsibilities of Federal and State Agencies 51

- Introduction 51
- Institutional and Regulatory Framework Relevant to Alaskan Village Sanitation 52
- Capital Construction Funding 55
- Project Planning, Design, and Construction 61
- Training and Certification of Sanitation Facility Operators 63
- Technical Assistance 64
- External Subsidies for Operation and Maintenance Activities 68
- Conclusion 69

5 Alternative Sanitation Technologies 71

- Introduction 71
- Description of New Advanced Systems Currently Proposed for Alaskan Villages 72
- Summary of Technology Issues and Needs 91
- Conclusion 93

References 95

APPENDICES

- A The Land Claims and Tribal Movements of Alaska Natives 111**
- B Hepatitis A Outbreaks in Alaskan Native Villages, 1988 116**
- C Current Distribution of Sanitation Technologies Among Rural Alaskan Villages and Native Population Served 118**