

# 1992 Administrative Mineral Materials Survey

## Summary of Results

Mining and Minerals Branch  
December 1993

### Introduction

The administrative mineral material survey questionnaires were distributed in the fall of 1992 through the Regional Chiefs of Maintenance to all park units by the Associate Director for Operations.<sup>1</sup>

The purpose of the survey was to gain a servicewide perspective of the state of mineral material extraction activity within National Park Service (NPS) boundaries. The objective was to ascertain whether parks were predominantly extracting mineral materials internally or externally, whether they were reclaiming abandoned extraction sites, how many acres are disturbed from past or present extraction in the System, and whether mineral material extraction varies between regions or park unit types.

The survey is the first step in a two-year study by MMB of administrative use of mineral materials in the NPS. Interviews with staff that deal with mineral materials from a number of park units and offices were conducted in the summer of 1993 as a second step. The third step will be to compile an issue paper for NPS management and, if necessary, revise NPS guidelines to address mineral material extraction.

Eighty-nine percent of the surveyed parks responded. The responses varied from an informal phone call during which a ranger recited sites from memory to strategies, and cost estimates. Some parks are in the

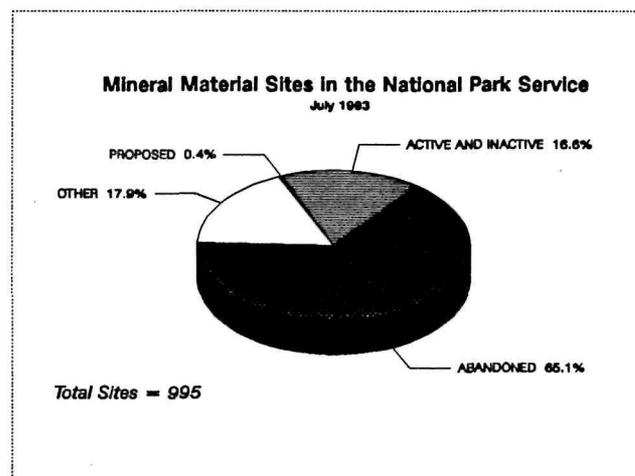
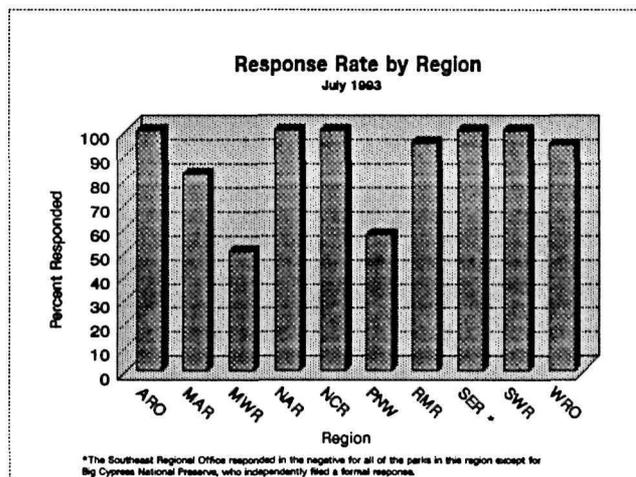
computer printouts describing the site, reclamation process of or have completed writing transportation studies; these parks have devoted attention to the issue and were more prone to respond to the survey.

Based on our knowledge of some park units, we suspect that the responses are 10-15% low and that there are probably more on the order of 1100 mineral material sites in National Park Service units.

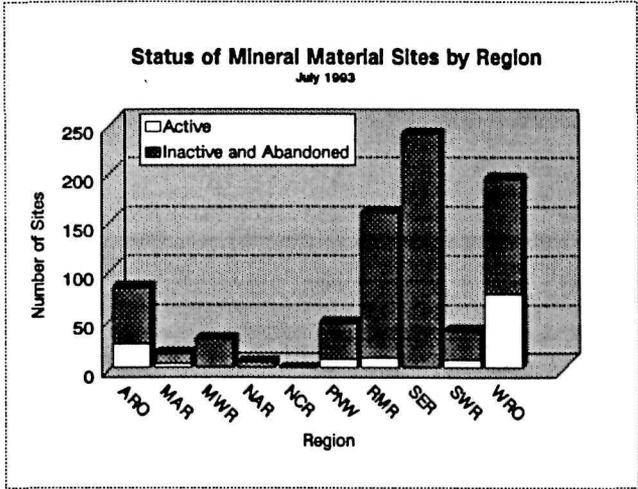
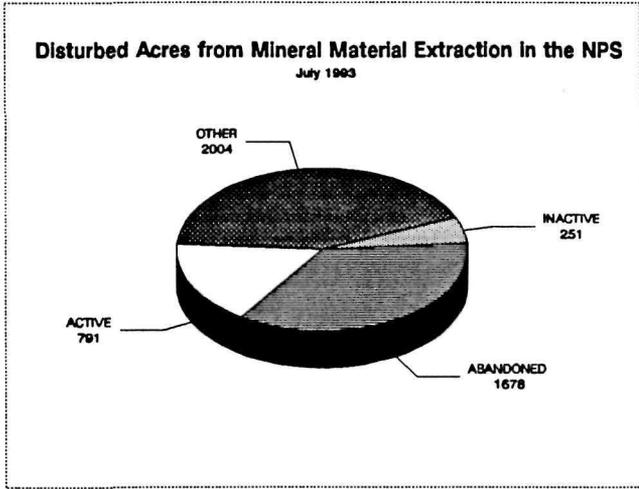
### Data Summation

Parks reported 995 mineral material sites. Total acres disturbed due to mineral material extraction or storage is 4,724. Seventeen percent of these sites were categorized as active or temporarily closed, 65% as abandoned, and <1% as potential; the remaining 18% had an unidentified status. 562 sites (53% of the disturbed acreage) were listed as needing reclamation and 136 sites (15% of the disturbed acreage) have been completely or partially reclaimed.

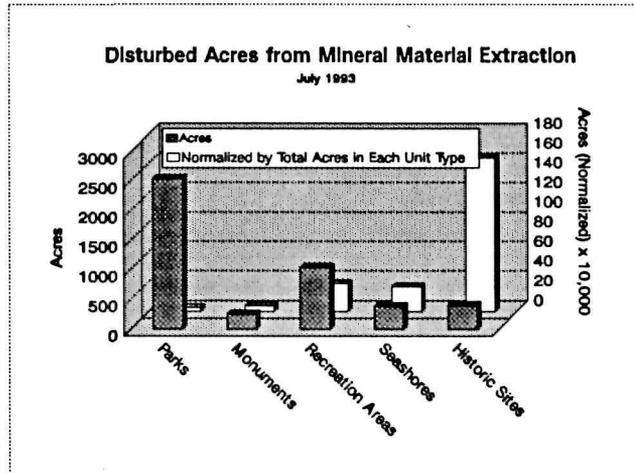
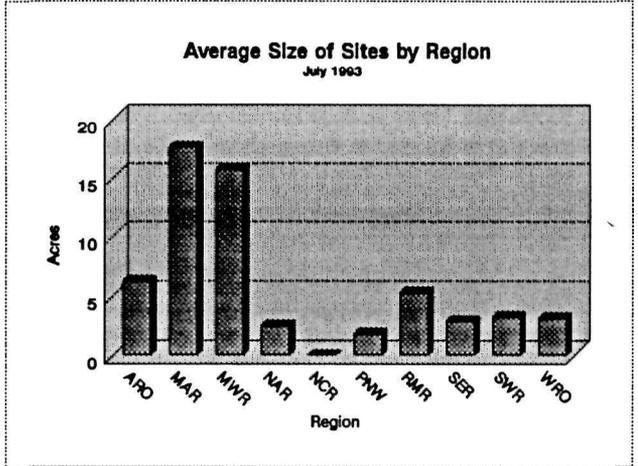
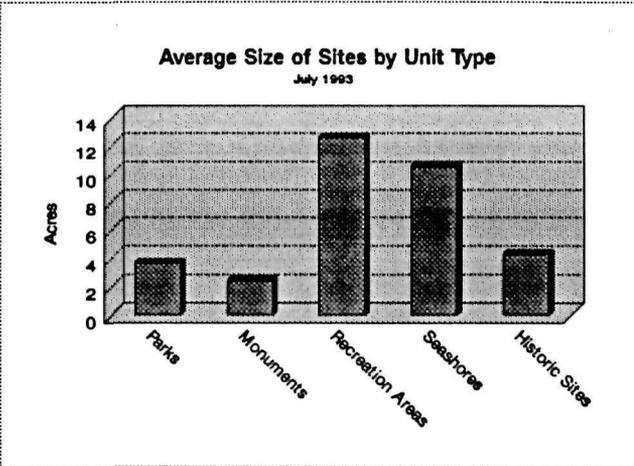
One hundred and sixty-four sites in 39 park units were not listed as active but are used administratively. This illustrates that some parks are using previously disturbed areas for maintenance, visitor, or ranger activities.



1. Mineral Materials, as defined in 43 CFR 3600, include, but are not limited to, "common varieties" of sand, stone, gravel, pumice, pumicite, cinders, clay, and other mineral materials.



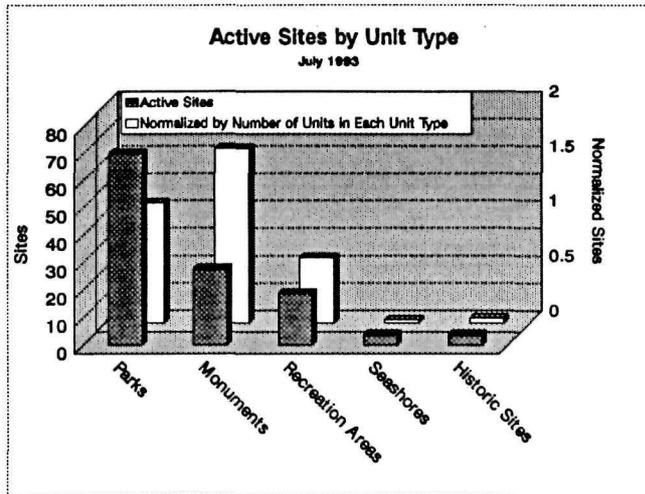
The average size of a mineral material site in the National Park Service is 4.8 acres. Twenty-one sites are 50 acres or larger and 123 sites are 10 acres or larger. Viewing the System by region, Mid-Atlantic Region has the largest average site size (17.6 acres); viewing the System by unit type shows that National Parks have the largest average site size but the smallest amount of acreage disturbed by sand and gravel extraction compared to the total acres that comprise National Parks.<sup>2</sup> Historic sites, as expected, have the largest amount of relative disturbed acreage.



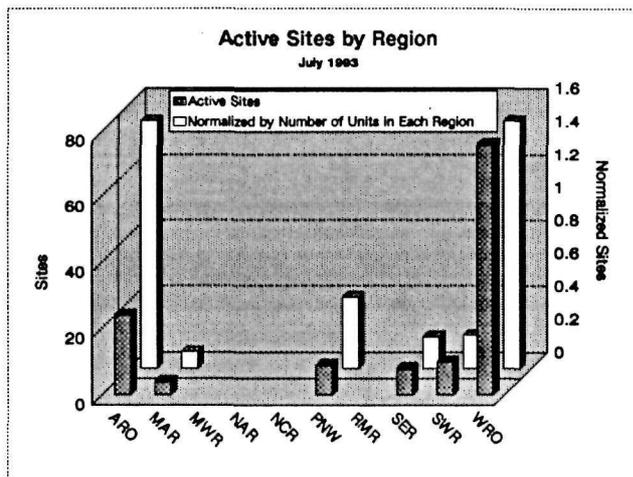
2. Unit types are defined as follows:

- Parks
  - Monuments
  - Recreation Areas
  - Seashores
  - Historic Sites
- National Parks
  - National Monuments
  - National Recreation Areas
  - National Seashores, National Scenic Rivers, National Lakeshores, National Rivers, and National Parkways
  - National Military Parks, National Historic Sites, and National Historic Parks

There are 131 active extraction sites in the National Park Service. Thirty-four active sites are greater or equal in size than 5 acres. Thirteen of the 34 sites that were categorized as inactive or temporarily closed are greater or equal in size to 5 acres. The figure below shows that monuments have the highest percentage of active sites, and seashores and historic sites have the lowest percentage. Viewing the System by region, Alaska and Western Regions have the highest percentage of sites with approximately 1.2 sites per unit.



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Overall, parks reported that 14% of all the sites have been completely or partially reclaimed and 56% need reclamation. The remaining 30% either are naturally reclaiming or being used for another park function entirely. Of the 647 abandoned sites, parks have reclaimed completely or partially 13% while 65% still require reclamation. Historic park areas have been most active in reclamation, having reclaimed slightly over 20% of all existing sites. By region, North

Atlantic Region and Rocky Mountain Region are the most active in reclamation with 38% and 25% reclaimed, respectively. This data should be viewed in concurrence with the number of sites in each region and in each park unit type.

### Additional Questions

Having reviewed the survey responses, we concluded that the following questions would have added insight to our analysis:

Do the active or temporarily closed extraction sites have current mining and/or reclamation plans?

Is mineral material extraction addressed in park planning documents? If so, which documents?

### Data Limitations

Despite our efforts to make the questionnaire simple and comprehensible, we still found that park staffs interpreted questions differently. The following is a list of inconsistencies in the survey responses:

1) Parks reported administrative mineral material sites, non-administrative mineral material sites within the park boundary, and even in a few cases, hardrock mines within the park boundary. By cross-referencing this information with our data bases on active operations and abandoned mineral lands, we have tried to minimize the effect of this error.

2) Status was often not listed. Again, with our knowledge of some park areas, we attempted to assign a status wherever possible. However, as illustrated in the previous pie chart (Mineral Material Sites in the National Park Service), 17.9% of the sites had an unidentified status.

3) Reclaimed or Needs Reclamation was often not listed. This is illustrated in the graphs above entitled: Reclamation Status by Region, and Reclamation Status by Unit Type.

4) Some parks listed sites that are not operated by the NPS but are located within the official park boundary.

5) Some parks listed boneyards, stockpiles, material dump sites, eroding road cuts, etc. as administrative mineral material sites.

6) The majority of parks did not attempt to identify potential extraction sites.

## Supplementary Tables

<b>Servicewide Summary of Administrative Mineral Material Sites</b>			
State	Number of Sites	Number of Administrative Areas	Number of Administrative Areas
		(Administrative Areas)	(Administrative Areas)
Active	131 (791)	1 (7)	41 (406)
Abandoned/Inactive	680 (1929)	85 (404)	445 (1269)
Potential	4 (197)		
Unidentified	178 (2004)	50 (294)	76 (828)
<b>Total</b>	<b>993 (4921)</b>	<b>136 (705)</b>	<b>562 (2503)</b>

<b>The 21 Largest Administrative Mineral Material Sites in the National Park System</b>			
State	Region	Acres	Status
Hot Springs NP	SWR	151.2	Potential
Big Cypress NPr	SER	143	Unidentified
Big Cypress NPr	SER	80	Unidentified
Wrangell-St. Elias NP&Pr	ARO	77	Unidentified
Wrangell-St. Elias NP&Pr	ARO	75	Unidentified
Big Cypress NPr	SER	70	Unidentified
Richmond NBP	MAR	70	Unidentified
John D. Rockefeller, Jr. Memorial Pkwy	RMR	66	Active
Big Cypress NPr	SER	65	Unidentified
Cuyahoga Valley NRA	MWR	63	Abandoned
Cuyahoga Valley NRA	MWR	60	Unidentified
Sleeping Bear Dunes NL	MWR	60	Abandoned
Wrangell-St. Elias NP&Pr	ARO	60	Active
Big Cypress NPr	SER	59	Unidentified
Wrangell-St. Elias NP&Pr	ARO	55	Active
Big Cypress NPr	SER	54	Unidentified
Big Cypress NPr	SER	50	Unidentified
Cuyahoga Valley NRA	MWR	50	Inactive
Grand Canyon NP	WRO	50	Active
Wupatki NM	SWR	50	Active
Glen Canyon NRA	RMR	50	Active