

Neighbors fear mined hill will slide near Scappoose

Mud slide threatens thoroughfare linking two major highways

By MIKO YIM

of The Oregonian staff

SCAPPOOSE — At a rate of nearly 25 trucks per hour, Columbia Road and Driveway workers frantically scooped dirt and rock Thursday from a surface mining pit gone bad.

"We're just removing the material that is in danger of falling," Scott Parker, the company owner, said during a telephone interview late Thursday.

Parker's company had been mining a hill in Scappoose for rock to be used in the multimillion-dollar Sunset Highway construction project. Parker declined comment on how much material was trucked away to an abandoned rock mine in Scappoose, but he did say he would cease dirt removal Friday.

The Columbia County Board of Commissioners shut down Parker's mining activity on a hillside off Scappoose-Vernonia Road late last week, citing permit discrepancies and potentially hazardous conditions. The county also held the company responsible for abating road hazards on the site, which is on a major thoroughfare between U.S. 30 and Oregon 47. Part of the abatement order requires the company to sweep away debris from near the roadway.

"It looked pretty bad last week," said county roadmaster Jim McBride, who inspected the site last Thursday before the recent heavy rains. Water and mud oozed from the pit area and overflowed the ditches, he said. "It was jumping over the roadway ditches and onto our road."



The Oregonian/STEVE NEHL

Trucks haul dirt away from a muddy hill at a rate of 25 loads an hour Thursday, trying to keep the surface mining pit from collapsing onto

scale or knock it down," he said. "With a 200- or 300-foot wall, you just can't do that."

The federal agency issued an imminent-danger order at the base of the sheer wall, stating that

rains for a week like it's been doing — it's going to slide."

Although homeowners are concerned about everything from the dangerous working conditions to the precariously perched Portland Gen-

Scappoose-Vernonia Road. Area residents fear the excavation operation endangers their lives and property.

turing out the kitchen window at the glistening mud hill. "It was a pretty mountain — we used to see deer and animals," she said. "Look at it now."

"Well, I can understand their concern," said Michael I. Svoboda, chairman of the Scappoose-Vernonia Road

Scappoose-Vernonia Road. Area residents fear the excavation operation endangers their lives and property.

Scappoose-Vernonia Road. Area residents fear the excavation operation endangers their lives and property.



and potentially hazardous conditions. The county also held the company responsible for abating road hazards on the site, which is on a major thoroughfare between U.S. 30 and Oregon 47. Part of the abatement order requires the company to sweep away debris from near the roadway.

"It looked pretty bad last week," said county roadmaster Jim McBride, who inspected the site last Thursday before the recent heavy rains. Water and mud oozed from the pit area and overflowed the ditches, he said. "It was jumping over the roadway ditches and onto our road."

The company's mining operation at the base and the top of the hill created a 300-foot pit face — a vertical wall, a virtual cliff — of mud once the rains began, said John Widows, a supervisor at the federal Mine Safety and Health Administration in Albany.

"Basically, our regulations state that if you have a high wall and you have loose matter, the mine operators must be able to get up there and

Trucks haul dirt away from a muddy hill at a rate of 25 loads an hour Thursday, trying to keep the surface mining pit from collapsing onto

scale or knock it down," he said. "With a 200- or 300-foot wall, you just can't do that."

The federal agency issued an imminent-danger order at the base of the sheer wall, stating that nobody can enter or work at the base of the hill because of hazardous working conditions.

Residents are upset about the excavated hill, about 3.2 miles from U.S. 30.

"It's a real disaster waiting to happen," said Gene Jackson, who has lived across the road from the hill for more than 40 years. "If it rains and quits for a while, it'll run and the ditches will hold it; but if it

rains for a week like it's been doing — it's going to slide."

Although homeowners are concerned about everything from the dangerous working conditions to the precariously perched Portland General Electric Co. transmission line on the hilltop, their real concern is for their property — and their lives.

Allan Kozlosky, another neighbor, said he fears for the safety of his family, as well as the stability of the hill.

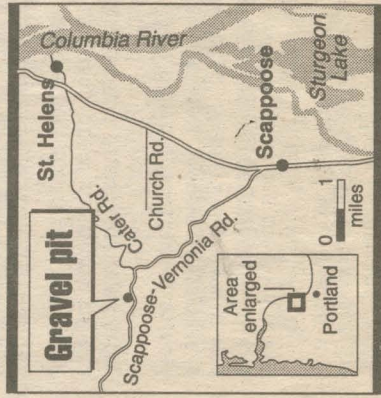
"Our homes are right in the way of the hill," said Helen Jackson, ges-

Scappoose-Vernonia Road. Area residents fear the excavation operation endangers their lives and property.

turing out the kitchen window at the glistening mud hill. "It was a pretty mountain — we used to see deer and animals," she said. "Look at it now."

"Well, I can understand their concern," said Michael J. Sykes, chairman of the county commission. "But the bottom line is that it's been zoned surface mining."

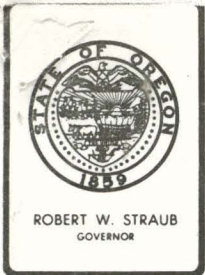
Sykes said he thought Parker was correcting the problem. "In this county, gravel is real big business; we've never had ordinances that affect the costs of that industry," he said.



The Oregonian/STEVE NEHL

The Oregonian

Jerry



Department of Geology and Mineral Industries

1129 S.E. SANTIAM ROAD, ALBANY, OREGON 97321 PHONE (503) ~~928-5399~~ 967-2039

September 11, 1978

Mr. Wayne Grames, Center Chief
Training Center
MSHA, Dept. of Labor
P. O. Box 70
Albany, Oregon 97321

Dear Mr. Grames:

Your questions to us "How many sand and gravel pits and stone quarries does Oregon have?" and "How many active pits and quarries does Oregon have?" can be answered by two different ways.

The Department is conducting county by county inventory studies of sand and gravel and stone to provide a data base for land planning. Of the State's 36 counties, 8 have been surveyed. The field surveying included those pits and quarries that have been or are being mined and have had at least 1000 cubic yards removed. A site was listed as active if it had been worked within 12 months prior to the field surveying. The following table shows the results of the surveying. The source of the data in the table is available as published reports. A list of the reports is attached.

The State of Oregon contains 96,981 square miles. If this figure is divided by the average square-miles-per-site figure (6.7), the State would have 14,475 pits and quarries. A better statistic would be to use the mean of the last column or 7.6 square-miles-per-site, to divide into the State's 96,981 square mile area total. This would give an estimate of 12,761 pits and quarries total for the State. By using the average percent of active to total sites for the 6 counties and applying it to the two total estimates we have 3445 or 3908 as estimates for the number of active sites within the State.

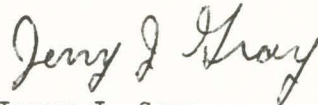
County	Number of Pits and Quarries	Number of Active Pits and Quarries	% of Total Which Are Active	Square Miles	Square Miles/Site
Benton	149	29	20	668	4.5
Clackamas	470	87	19	1893	4.1
Columbia	99	55	56	676	6.8
Curry	212	71	33	1629	7.7
Multnomah	57	22	39	457	8.0
Washington	58	16	28	716	12.4
Subtotal	1045	280	27	6039	5.8
Josephine	310	Unknown	Unknown	1625	5.2
Umatilla	271	Unknown	Unknown	3241	12.0
TOTAL	1626			10,905	6.7

The second way to estimate the total number of active sites within the State would be to start with the Department's Mined Land Reclamation Division's monthly report, a copy of which is attached. On page 2 the report shows that 265 surface mining permits are in effect and that 324 limited exemptions are in effect. This means that fees are being received from 599 mining sites. Each of the 599 sites' production is all over 2500 cubic yards or is over one acre in size, and is not being used for timber production and is not located between the banks of a stream. Of the 577 total exemptions shown on page six, 418 are active. Between the fee sites and the non-fees sites the records of Mined Land Reclamation show that 1017 sites are active within the State of Oregon. To this total the active permits issued under the Division of State Lands for gravel removal within the bed and bank of streams, 600 should be added. The 24 sites under the Beds and Banks-column total under the total exemptions should be subtracted to prevent double counting. The State's total of active sites now adds to 1603. The last major category not accounted for is the timber industry access-road pits and quarries. The Mined Land Division only shows 71 total exemptions for access roads. The Mined Land Reclamation staff feels that there are as many active access-road sites as the rest of the categories. If this is true then the State has a grand total of 3064 active pits and quarries.

Summarizing, the State of Oregon has from 12,000 to 15,000 pits and quarries of which 3,000 to 4,000 are active in any 12-month period.

If you have any further questions, please advise.

Sincerely,



Jerry J. Gray
Economic Geologist

JJG/bjd

ATTACHMENT 1

PUBLISHED REPORTS

Gray, J. J., G. R. Allen, and G. S. Mack, 1978, Rock material resources of Clackamas, Columbia, Multnomah, and Washington County, Oregon, in preparation.

Ramp, L., Schlicker, H. G., and Gray, J. J., 1977, Geology, mineral resources, and rock material of Curry County, Oregon: Oregon Dept. Geol. and Mineral Indus. Bull. 93, 79 p.

Schlicker, H. G., J. J. Gray, and J. L. Bela, 1978, Rock material resources of Benton County, Oregon, Short Paper 27, 49 p.

Schlicker, H. G., Schmuck, R. A., and Gray, J. J., 1976, Rock material resources of Umatilla County, Oregon: Oregon Dept. Geol. and Mineral Indus. Short Paper 26, 57 p.

Schlicker, H. G., Schmuck, R. A. and Pescador, P., 1975, Aggregate resources of Josephine County, Oregon: Oregon Dept. Geol. and Mineral Indus., in cooperation with Josephine County Board of Commissioners, 47 p.

Gray, J. J. and A. H. Throop, 1981 Rock material resources of Marion, Polk, Yamhill, and Linn Counties Oregon: Oregon Dept. Geol. and Mineral Indus. Open File Report O-81-07, 47p.

ATTACHMENT 2

MINED LAND RECLAMATION

GENERAL REPORT

AUGUST 31, 1978

Deposits to First National Bank		\$7,991.25	
OSHD Purchase Orders		1,785.00	
	TOTAL		\$9,776.25

<u>New Applications</u>	<u>11</u>	\$2,915.00	
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11 regular

<u>Renewal Applications</u>	<u>42</u>	\$6,861.25	
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41 regular	\$6,765.00	
1 @ 96.25	96.25	

TOTAL

\$9,776.25

Copies on Saxon	69340
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<u>Circulations to Agencies</u>	<u>5</u>
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<u>Returns from Agencies</u>	<u>17</u>
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OSHD-D	3	OSHD-E	1	Fish & Wildlife	1
Deschutes Co.	2	DEQ	5	Water Resources	2
Tillamook Co.	2	Soil & Water	1		

Stamps for June	\$82.58
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Number of Sites Visited: 55

Visitors to Office	10
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Administrative Time	657
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Vacation Leave	68
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Sick Leave	8
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Holiday Time	0
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Other Projects than MLR*	24
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*includes LANDSAT

PERMIT INFORMATION

Surface Mining Permits in Effect 265 (*) Issued 32

New 4
 Renew 28

Limited Exemptions in Effect 324 Issued 20

New	3	Prior mined	269
Renew	17	Valid contract	58
		both	16
		other	1
			<u>324</u>

Total Exemptions in Effect 580 Issued 19

New 2
 Renew 17

Files Closed 382 Issued 0

Provisional Operating Permits in Effect 10 Issued 6

01-0075, Baker County, indef.	07-0001, Central Ore. Bentonite, 8/28/78
04-0049, Whitecap Rock, 5/14/79	15-0063, E&P Shale Co., 9/14/78
24-0052, M-P Materials, indef.	35-0017, L. V. Anderson & Sons, 9/14/78
20-0096, Cone Lumber, indef.	31-0031, Union Co. Rd. Dept., 9/28/78
15-0050, Wiltec Properties, 9/14/78	36-0041, OSHD, 9/28/78

Closed, reclaimed sites, none

Prepared by: B. DeClue, clerk

SURFACE MINING PERMITS IN EFFECT

	SMP	LE	TE	CLOSED
1. Baker	14	8	41	18
2. Benton	7	9	11	2
3. Clackamas	16	16	42	18
4. Clatsop	7	6	18	9
5. Columbia	—	—	—	—
6. Coos	2	19	10	7
7. Crook	7	7	24	6
8. Curry	3	3	3	3
9. Deschutes	14	19	33	5
10. Douglas	20	12	16	63
11. Gilliam	3	2	4	28
12. Grant	7	1	9	10
13. Harney	8	6	22	5
14. Hood River	—	7	3	5
15. Jackson	13	38	22	15
16. Jefferson	1	6	4	1
17. Josephine	—	7	14	18
18. Klamath	3	11	9	6
19. Lake	11	5	15	3
20. Lane	16	20	16	14
21. Lincoln	7	9	9	11

Permits in Effect

page 4

	SMP	LE	TE	CLOSED
22. Linn	12	23	30	12
23. Malheur	23	8	83	5
24. Marion	7	20	12	9
25. Morrow	12	—	5	2
26. Multnomah	2	18	2	30
27. Polk	6	7	16	8
28. Sherman	1	3	7	1
29. Tillamook	8	10	12	21
30. Umatilla	13	4	14	7
31. Union	7	3	8	10
32. Wallowa	4	—	1	2
33. Wasco	5	5	35	16
34. Washington	13	12	7	4
35. Wheeler	3	—	9	3
36. Yamhill	5	16	12	5
Totals	280	340	577	382

Prepared by: B. DeClue, Clerk

TOTAL EXEMPTIONS IN EFFECT AS OF 8/31/78

	Inactive	Size	Access	B & B	O/Site	Other	Stkple	Total
1. Baker	17	18	1	-	2	3	-	41
2. Benton	1	6	1	3	-	-	-	11
3. Clackamas	5	5	32	-	-	-	-	42
4. Clatsop	4	7	4	-	-	3	-	18
5. Columbia	-	-	-	-	-	-	-	-
6. Coos	1	7	2	-	-	-	-	10
7. Crook	5	17	1	-	-	1	-	24
8. Curry	2	1	-	-	-	-	-	3
9. Deschutes	18	14	7	-	1	-	-	33
10. Douglas	4	10	2	-	-	-	-	16
11. Gilliam	2	1	1	-	-	-	-	4
12. Grant	3	5	-	-	-	1	-	8
13. Harney	8	13	-	-	-	1	-	22
14. Hood River	-	3	-	-	-	-	-	3
15. Jackson	4	13	2	1	1	-	-	21
16. Jefferson	2	2	-	-	-	-	-	4
17. Josephine	5	7	-	2	-	-	-	14
18. Klamath	3	6	-	-	-	-	-	8
19. Lake	4	11	-	-	-	-	-	15
20. Lane	3	9	1	-	1	2	-	16
21. Lincoln	1	2	5	1	-	-	-	9

Total Exemptions

page 6

	Inactive	Size	Access	B & B	O/Site	Other	Stkpl	Total
22. Linn	7	11	4	6	-	1	1	30
23. Malheur	7	75	-	-	-	1	-	83
24. Marion	2	5	4	1	-	-	-	12
25. Morrow	1	-	1	-	-	3	-	5
26. Multnomah	1	1	-	-	-	-	-	2
27. Polk	6	2	3	4	-	1	-	16
28. Sherman	7	-	-	-	-	-	-	7
29. Tillamook	1	5	6	-	-	-	-	12
30. Umatilla	10	2	-	1	1	-	-	14
31. Union	2	6	-	-	-	-	-	8
32. Wallowa	1	-	-	-	-	-	-	1
33. Wasco	12	22	-	-	-	1	-	35
34. Washington	3	2	-	-	-	-	-	7
35. Wheeler	2	2	1	2	-	2	-	9
36. Yamhill	5	4	-	3	-	-	-	12
Totals	159	294	71	24	6	22	1	577

Prepared by: B. DeClue, Clerk

County	Sq miles	# Rock Material Sites	Sq miles/site
Benton	668	149	4.5
Clackamas	1893	470	4.1
Columbia	676	99	6.8
Curry	1629	212	7.7
Josephine	1625	310	5.2
Multnomah	457	57	8.0
Umatilla	3241	271	12.0
Washington	<u>716</u>	<u>58</u>	<u>12.4</u>
Total	10905	1626	6.7

7.6

mean 7.6 sq miles/site

11% range 4.1 sq miles/site to 12.4 sq miles/site

State has 96,981 sq miles

$$\frac{96,981}{6.7} = 14,475 \text{ sites}$$

mean $\frac{96,981}{7.6} = 12,761 \text{ sites}$

range $\left\{ \begin{array}{l} \frac{96,981}{4.1} = 23,654 \text{ sites} \\ \frac{96,981}{12.4} = 7821 \text{ sites} \end{array} \right.$

15,738

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Region 6

P.O. Box 3623, Portland, Oregon 97203

Handwritten signatures and initials at top right.

REPLY TO: 2820 Leases and Permits

March 28, 1975

SUBJECT: Common Mineral Materials, Regional Direction

TO: Forest Supervisors

RECEIVED



APR 11 1975

DEPT OF GEOLOGY
& MINERAL INDUSTRY

On March 10, 1975, Messrs. Keeney and Suchy made a presentation to the Resource Directors concerning Region-wide problems of mineral materials management. As a result, they were asked to prepare the enclosed summation for distribution to all Forest Supervisors.

Regional direction for FY 1976 - '77 (page 13) speaks directly to the basic concerns expressed to the Resource Directors in regard to mineral materials, (rock) source management, and by now you have formulated your planning and budgeting responses to this direction.

The attached summation is sent to you to inform you of some of the ramifications of the subject Regional Direction and the initial steps which need to be taken to implement a viable management of this mineral (rock) resource. I ask that you review the attachment and, in light of your experience with rock and other mineral materials sources and their removal, send us whatever critical elements you believe should be included in a Regional policy.

You may wish to discuss some of the data and the proposal presented in the attachment at the forthcoming planning meeting.

ROBERT H. TORHEIM

ROBERT H. TORHEIM
Deputy Regional Forester
Resources

Enclosure

cc: E (5)

PP&B

See attached list

MSuchy:mla

Handwritten initials 'CML'.

Handwritten signature 'R. Keeney' and initials 'MS'.

RECEIVED-PTLD

APR 7 1975

DEPT OF GEOLOGY

Handwritten initials 'CML' at bottom right.

Copies also sent to:

Rec
Fire Control
Fish & Wildlife
Watershed
Range Mgt.
Timber

Dennis Larson, Deschutes
Pete Patterson, Mt. Hood

James C. Schwarzhoff, E

Region 1, Bob Manchester
Region 2, Gerald Gould
Region 4, Bill Johnson

Claude Rich, Explosives Specialist
MESA
P.O. Box 25367
Denver Federal Building
Denver, Colorado 80225

DRF Torheim

W.O. (H. Banta) 2

State of Oregon
" " Washington.

Bob Welch, B of M, Olympia
Melt Lewis, " " " " Salem

MINERAL MATERIALS

A CRITICAL RESOURCE

IN

REGION 6 MANAGEMENT

by

Milvoy M. Suchy, PE, Group Leader, Unit of Lands and Minerals

C. Robert Keeney, PE, Group Leader, Unit of Engineering

OBJECTIVE

The objective of this summation is to direct the attention of Resource Managers to the magnitude of the mineral materials management problem and to point out the need for immediate action and the adoption of Regional policy for future direction.

INTRODUCTION

Mineral materials are a nonrenewable resource. Current rates of use will exhaust known reserves in areas of greatest Regional need in approximately 30 years. Certain areas have a known reserve of less than 5 years and a few areas are already dependent on commercial sources.

The most efficient conservation and utilization of mineral materials require that all active sites and known reserves be brought under comprehensive management plans as soon as practicable and that a search for new reserves be initiated in critical areas.

PROBLEM STATEMENT

Physical Aspects

In 1973 the Region extracted some 17.7 million tons of rock for use in construction of Forest roads and other facilities. Approximately 530,500 additional tons were purchased from commercial sources for Forest construction. Nearly 1.5 million tons of materials were removed from Forest lands under permit for commercial purposes (pumice, cinder, building stone, etc.). These extractions and uses are tabulated in Tables I and II for calendar year 1973. CY 1974 data will be added when available.

The Region contains approximately 4,000 developed materials sources, with some 500 of these being used in any one year. Approximately 13 square miles of land in the Region are occupied by materials sources and thus are not available for other uses.

Some 3,000 to 3,500 sources are estimated to be of inferior quality or are exhausted and should be closed. Rehabilitation of these sites or those determined unsuitable for continued use represents a liability (in 1973 dollars) which may approach \$20,000,000.

Projected Needs

Region 6 transportation system as currently inventoried, consists of 44,000 miles of all classes of roads. The projected system will total 75,000 miles (in year 2000). Currently 2,000 miles of new road are constructed and 1,500 miles reconstructed each year. As the system matures, rates of construction and reconstruction will decrease but maintenance will increase substantially.

Although the rate will vary from year to year, use of rock materials is expected to stabilize at near the present rate (say 15 million tons per year), unless conservation policies are adopted.

*
7.5 M yds

Activity and Resource Value

The material extracted from Forest lands in CY 1973 had a value of nearly \$10,000,000 prior to extraction and is valued at some \$45,000,000 at pit-side as a manufactured product ready for use. This valuation, based on average adjusted commercial rates, is tabulated by classes in Table III. CY 1974 data will be added when available.

Current Administration

The Mineral Materials Act establishes procedures for disposal of materials on Forest Service lands to individuals, corporations, and governmental bodies. This has directed attention to only the small volume of materials (1.5 to 2.0 million cu. yds.) removed under mineral materials permits.

The Forest Service has inherent authority to extract mineral materials from Forest lands for use in the construction of Forest facilities. Such removal is done under public works or timber sale contracts and thus receives little administrative attention. At present, no specific administrative direction exists for: mineral materials management; allocation of materials for their highest use; and determination of location and volume of potential materials resources.

OUTLOOK

In addition to factors previously discussed, several new impacts have become apparent which must be considered in the minerals management process and which will be significant in determining priorities and allocation of funds.

Depletion - Forest Service Resources.

As mentioned in the introduction, the Region will deplete known reserves in areas of major use in approximately 30 years, based on current use and knowledge of reserves. Reserves are already critical in some areas with known reserves sufficient to last only 5 years.

In 1973 two Forests, the Siuslaw and Wenatchee, each purchased 33% of their needs from commercial sources.

A further complication in depletion is waste of rock through improvident use. High-class paving stone is often used for low-class roads. Materials of low to moderate durability are rejected for use when they could be economically utilized on roads having low traffic volumes or which will be used extensively for short periods and then lie dormant for long periods.

Depletion - Commercial or Off-Forest Services Sources.

Other individuals, agencies, and timber companies have become aware that their reserves of road metaling are limited. This awareness has caused Publishers Paper Company to deny the Siuslaw National Forest access to company sources in the Hebo - Lincoln City area. As owners become aware of the limit of their reserves and their increased value denial of access to other sources can be expected.

X The Oregon State Department of Forestry has some 5,000 sources on State and private lands. Many of these are adjacent to National Forest lands, and restrictions on use of these pits can be expected within the next few years.

USFS
+ 3,000
total
8,000

Competition for Mineral Materials Resources.

As easily available reserves are depleted on non-Forest Service lands, the competition for Forest Service reserves will increase and will further limit the availability of materials for Forest construction. Principal areas of competition are listed below, with the typical uses noted:

1. Roadway construction materials : State and county road departments.
2. Special materials : pumice, cinder, building stone (architectural), jetty stone, and nonlocatable materials having special commercial properties. - public construction use.
3. Commercial aggregates : sands, gravels, and quarry stone. - public construction use.
4. Public surface use: recreational, visual, and cultural - uses benefiting the public which will not allow removal of mineral materials.

Obligations to Other Federal and State Agencies

Several Federal agencies by their enabling laws can require specific actions on Forest Service lands. In some cases, these authorities have been delegated by agreement to the States and are now embodied in a number of memorandums of understanding or cooperative agreements. The following summarizes our involvements:

U. S. Bureau of Mines - gathering and publication annually of production statistics. FS supplies production data.

U. S. Mining Enforcement and Safety Administration (MESA)
(P.L. 89-577) safety in all types of surface and underground excavations. FS advises MESA of status of activities on NF lands.

State of Oregon

Department of Geology and Mineral Industries - enforcement of the Oregon Reclamation of Mining Lands Act, effective July 1, 1973. FS notifies State of surface disturbance activities and rehabilitation accomplishments. *

Department of Environmental Quality - responsible for the maintenance and enforcement of water quality control standards in regard to discharge from any source. FS determines restrictions and monitors operations cooperatively.

State Environmental Quality Commission - responsible for adoption and enforcing regulations relating to air and noise pollution control. FS confers with State to determine critical area and restrictions.

State of Washington

Department of Natural Resources - responsible for the enforcement of the Washington Surface-Mined Land Reclamation Act of February 12, 1970. FS notifies State of surface disturbance activities.)

Washington Environmental Quality Department - has the responsibility to enforce water and air quality and noise pollution standards. FS confers with State to determine critical areas and restrictions.

Public Liability

The Office of the General Counsel has advised that exposure to tort claims, resulting from unsafe pit and quarry excavations and from abandoned entries under the General Mining Laws, is increasing. No National tabulation is available to develop a clear estimate of liability cases relating to pits, quarries, and mines. Tort claims of all classes against the Forest Service are increasing annually at a rate of 58%. Tort claims for 1973 amounted to some \$3,000,000.

Rehabilitation of Mined Lands.

Recent National attention has been directed to the reclamation of mined lands. As a result of this, the States of Oregon and Washington have enacted laws and the Bureau of Land Management has adopted regulations requiring rehabilitation of disturbed areas. The Forest Service has adopted regulations requiring reasonable rehabilitation of lands entered under the General Mining Laws.

Region 6 (Lands and Minerals) is currently drafting regulations for the W.O. under guidelines of Departmental Counsel which will apply to all entries made for the purpose of extracting common mineral materials. This regulation will require rehabilitation at the termination of the current entry or, in the case of managed sources, the deposit of monies where rehabilitation will be deferred.

- How about F.S. on Forest use entry?

THE MANAGEMENT PROBLEM

Present Constraints on Management.

Development of policy and direction for the management and use of mineral materials is constrained by P.L. 88-657, FSM 2822.54, and certain policies governing timber sales. Recent interpretations have clarified Forest Service authorities to some extent, but additional legal and policy clarifications are needed to permit the most efficient management and utilization of mineral materials sources.

The second constraint is lack of funding to obtain the expertise needed to find, explore and evaluate potential sources: and to prepare comprehensive development, management, and rehabilitation plan for existing sources.

The third constraint is the lack of clear National and Regional direction to control selection, development, and closure of mineral materials sources. In several instances, this lack of policy allows imbalance in allocating critical resources.

The Planning Process.

Preparation of management, development, and rehabilitation plans requires the input of numerous skills which are identified in Table IV.

The determination to retain an existing pit, to seek a potential source in a specific area, or to develop alternates outside the area will usually be a rigorous exercise in transportation system planning and resource analysis.

Individual source management and development plans must be reasonable and economical. Each plan must consider size of the deposit, amount of usable material, exploration required, mining and milling methods to be used, areas needed for milling and stockpiles, potential environmental pollution, public safety of the disturbed area, and final cleanup and reclamation.

Valuation.

The various activities included in the mineral materials management process will approach 13 million dollars annually (1973 basis). The monetary aspects of these activities are explained in Table V.

Appropriated funds will be required for rehabilitation of existing sources, unless a portion of the work can be performed under timber sale contracts.

Materials Utilization

As materials decrease in quality, the Forest Service must have economical alternatives to minimize the need for high-grade materials. Alternatives include reduced haul season, allocation of materials based on durability, paving, and use of chemical additives.

The use of paving and chemical additives are recent technological developments which allow the use of materials having less than optimum qualities or reduce the amounts of material needed to provide mechanical support for the roadway surface. To date, only full-depth paving to reduce rock quantities in initial construction and improve long term durability has proven economical.

Classification by grades of material available and allocation of these grades to their highest use are inevitable if sound mineral materials management is to prevail. The most beneficial use to the public must then be made, be it for private or Governmental use. For example, cinders which have been used for road surfacing may have physical characteristics that make them much more valuable as an aggregate for concrete.

SUGGESTED REGIONAL ACTIONS

The following actions are necessary to initiate and carry out a program which will effectively conserve mineral materials.

1. Formally recognize mineral materials as being a nonrenewable National resource by the development of policy, direction, goals, and controls defining an on-going management program. The following elements must be considered:
 - a. A mandatory requirement to collect monies for surface rehabilitation is expected within the year. This is now being written by R-6 L & M for the WO with OGC approval.
 - b. Legal clarification of PL 88-657 is necessary regarding use of material sources.
 - c. Specific guidelines for the consideration of mineral resources in Land Use Planning are needed to assure that long-term effects on Forest Service operations are recognized.
 - d. Delay in developing policy and management plans for opening, operating, and rehabilitating materials sources will increase impacts on NF operations at a future time.
 - ✓ e. Mineral materials must be allocated to their highest and best use.
 - f. Inventory (and accounting) systems must be developed which are compatible with systems used by other agencies (especially USBM).
2. Establish priorities for the allocation of available or anticipated supplemental appropriations for FY 1975, 1976, and 1977, for the purpose of making inventories and resource investigations and management and operational plans at the Forest level. Estimated needs are \$400,000 (14 man years) for the first full year.

- * 3. Forests should immediately prepare, from available data, inventories of existing and anticipated pits and other type developments, together with projections of required material volumes to meet annual needs through 1978.

On many Forests, this will amount to compilation of data now available in various records which can be assembled by clerical or technical personnel. We believe this can be accomplished by the expenditure of approximately 1½ man years.

4. Within 3 months after issuance of Regional policy and direction, the Forests should project finance and manpower needs to attain Regional goals through 1980.

TABLE I
R-6 DATA SHEET
NATIONAL FOREST MINERAL MATERIALS ACTIVITY

PURPOSE	Volume in Tons - Rounded		
	CY 1973	CY 1974	
<u>MATERIALS EXTRACTED FROM NATIONAL FOREST LAND</u>			
Support Forest Construction and Maintenance	<u>Natural Stone</u>		
	Rip Rap or Revetment	278,000	
	Pit Run Base or Surfacing	2,228,000	
	Concrete Aggregate	1,500	
	<u>Manufactured Stones</u>		
	Crushed Surfacing	14,078,000	
	Crushed Bitum Surfacing	1,092,000	
	Misc. Uses	44,000	
	SUB TOTAL		17,721,500
	Pumice, Cinder, etc.		1,500,000
SUB TOTAL		1,500,000	
<u>TOTAL MATERIALS EXTRACTED FROM FOREST LANDS</u>			
19,221,500 TONS			
<u>COMMERCIAL MATERIALS PURCHASED TO SUPPORT FOREST CONSTRUCTION</u>			
Road and Building Construction	<i>BY F.S.</i>		
	Crused Base and Surf.	355,000	
	Bituminous Agg.	160,000	
	Concrete Agg.	2,500	
	Rip Rap or Revetment	6,000	
Misc. Uses		7,000	
TOTAL PURCHASES OF COMMERCIAL MATERIALS		530,500 TONS	

TABLE III

R-6 DATA SHEET

VALUATION OF MINERAL MATERIALS REMOVED FROM FOREST LANDS

Support for Forest Construction & Maintenance

Production by Class	Tons	In-Place Resource Value CY 1973	Manufactured Value at Pit Site CY 1973	In-Place Resource Value CY 1974	Manufactured Value at Pit Site CY 1974
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<u>Natural Stone</u>					
Riprap or Revetment	278,000 @ \$2	\$ 556,000 @ \$4.50	\$1,348,000		
Pit-Run Base or Surfacing	2,228,000 @ \$0.35	779,800 @ \$0.75	1,671,000		
Concrete Aggregate	1,500 @ \$0.45	675 @ \$1.50	2,300		
SUB TOTAL	2,507,500	\$1,336,475	\$3,021,300		

<u>Manufactured Stone</u>					
Crushed Surfacing	14,078,000 @ \$0.50	\$7,039,000 @ \$2.50	\$35,105,000		
Crushed Pitum Surfacing	1,092,000 @ \$0.50	546,000 @ \$2.50	2,740,200		
Miscellaneous Uses	44,000 @ \$0.50	22,000 @ \$2.50	55,000		
SUR TOTAL	15,214,000	\$7,607,000	\$37,900,200		
GRAND TOTAL	17,721,500	\$8,943,475	\$41,011,500		

Commercial Extraction

Pumice and Cinders	1,500,000 @ \$0.50	\$ 750,000 @ \$2.50	\$ 3,750,000		
TOTAL VOLUME AND VALUES	19,221,500 TONS	\$9,693,475	\$44,761,500		

TABLE II
R-6 DATA SHEET

MINERAL MATERIALS USE BY FORESTS
CALENDAR YEAR 1973

(Excludes Mineral Materials Sold Under Permit)

FOREST	FOREST SOURCES	COMMERCIAL SOURCES	TOTAL USE
Colville	No data available		
Deschutes	424,500	-0-	424,500
Fremont	479,500	-0-	479,500
Malheur <u>1/</u>	496,400	-0-	496,400
Gifford Pinchot <u>2/</u>	6,667,400	1,800	6,669,200
Mt. Baker-Snoqualmie	886,700	100	886,800
Mt. Hood	532,800	34,400	567,200
Ochoco	288,000	-0-	288,000
Okanogan	135,100	100	135,200
Olympic	456,100	1,300	457,400
Rogue River	382,600	300	382,900
Siskiyou	745,400	1,400	746,800
Siuslaw	667,700	329,500	997,200
Umatilla <u>2/</u>	1,056,500	-0-	1,056,500
Umpqua <u>2/</u>	1,155,500	16,700	1,172,200
Wallowa-Whitman	125,000	-0-	125,000
Wenatchee	152,100	76,600	228,700
Willamette	2,967,100	68,100	3,035,200
Winema	103,000	200	103,200

TOTAL	17,721,400	530,500	18,251,900
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Oregon Total 8,206,554 or 46% of

1/ Estimated from miles of road constructed FY 1972.

Grand Total

2/ Includes production for Accelerated Access Road Projects.

TABLE IV

SKILLS REQUIRED IN MINERAL MATERIALS SOURCE PLANNING

SKILLS REQUIRED BY ACTIVITY

MANAGEMENT TASK Management Phase	Resource Ngmt. Group	Forester	Landscape Architect	Engineering Geologists	Materials Engineers	Civil Engineers	Mining Engineers	Soil Scientists	Ecologists
<u>Planning and Evaluation</u>									
Resource Survey and Analysis (General)	3	1	2	(1)		1	2	2	2
Preliminary Source Selection	3	1	2	(1)	(1)	1			
Source Evaluation			2	1	1	1	1		
Management Plan	3	1		1		1	2	2	2
Rehabilitation Plan & Budget	3	1	2	(1)		1		(2)	(2)
<u>Development & Operation</u>									
Development Plans	3		2	1	2	1	(1)		
<u>Operational Management Rehabilitation</u>				1		1			
<u>Phase-out of Materials Source</u>	3	(2)	(2)			1			

- 1 = Responsible Functions () Alternate
 2 = Support Functions
 3 = Approval Function

TABLE VACTIVITIES INCLUDED IN THE MINERAL MATERIALS
MANAGEMENT PROCESSValue of Materials Extracted

For Forest road construction (Timber sales and public works)	\$ 9,000,000	
Minerals Materials Permits	<u>750,000</u>	
Sub Total	\$ 9,750,000	Value of Materials Extracted

Estimated Collection for Rehabilitation

Deposits from Timber Sales	\$ 1,350,000	
Deposits from Use Permits	<u>150,000</u>	
Sub Total	\$ 1,500,000	Rehabilitation Collections

Estimated Expenditures of Appropriated Funds

Reclamation - Sources used by Public Works Projects	\$ 500,000	
Reclamation and Closure-Abandon Sources <u>1/</u>	<u>1,000,000</u>	
Sub Total	\$ 1,500,000	Reclamation by Appropriated Funds

TOTAL ANNUAL ACTIVITY	<u><u>\$12,750,000</u></u>
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1/ Base on closure of un-needed or depleted sources by 1995.

State officials want to end commercial gravel mining

The Associated Press

TILLAMOOK — State wildlife managers are trying to halt commercial gravel mining in five coastal rivers to protect salmon spawning grounds, a move that could affect construction statewide.

The wild chum salmon were added to Oregon's sensitive species list this year under the category "critically sensitive."

Jill Zarnowitz of the Oregon Department of Fish and Wildlife has asked the Division of State Lands, which regulates river mining, to stop issuing permits for gravel removal in the Trask, Wilson, Kilchis, Miami and Nestucca rivers in Tillamook County.

Fourteen commercial permits allow removal of 58,000 cubic yards of gravel annually from the rivers.

Earle Johnson, the assistant director of the Division of State Lands, said his agency must decide whether the river gravel should be left for fish or mined for industry, or both.

The decision will have statewide im-

plications because gravel called aggregate is used to build highways, bridges and buildings.

Chum salmon spawn in the gravel beds on the lower river in the fall. During summer, the same gravel beds are mined for aggregate.

Increasingly, the result is that "when chum hit rivers and start spawning, the gravel isn't there," said Rick Klumph, a district fish biologist for the Department of Fish and Wildlife.

In addition, mining operations alter streams by creating shallower, wider channels with fewer of the deep pools that provide rearing habitat for juvenile salmon, Klumph said.

Also, he said, scalping gravel from exposed beds during summer leads to accelerated erosion from adjacent upstream areas during the fall and winter, often resulting in smothered salmon eggs and fry.

In Tillamook County, the competition for gravel between fish and humans has increased because the 355,000-acre Tillamook Burn area has almost fully

recovered from fires in 1933, 1939 and 1945, allowing less gravel to escape.

Aggregate should be mined from upland sites, and gravel in the region's streams should be left for the benefit of fish and all Oregonians, Klumph said.

But Ed Warner, owner of Coastwide Ready-Mix, a Tillamook concrete company, disagreed.

Warner said river mining controlled erosion and was an alternative to digging up valuable dairy lands in Tillamook County.

Warner, whose company has five permits to mine aggregate on the Kilchis and Wilson rivers, said that his business might have to shut down if the state halts gravel removal in area rivers.

"It's our only source of materials," he said.

But Dale Scott, the owner of S-C Paving Co. of Tillamook, which produces asphalt, already has developed upland sites.

Scott says he is convinced that gravel removal from rivers eventually will be stopped.

Fisheries plan to recycle dead salmon

The Associated Press

TACOMA, Wash. — In an effort to restore the cycle of death and ecological rebirth disrupted by decades of human intervention, Washington fisheries managers plan to add a new element to some state waterways: dead salmon.

Bears, eagles, beaver, birds and insects will feast on the dead hatchery fish, just as they did with wild salmon in the past. Remains that aren't eaten will decompose into fertilizer.

"Historically, the fish brought nutrients back from the ocean to the land," said Hal Michael of the state Department of Fisheries. "We're just trying to do the same thing, to recycle those nutrients."

Michael has already discovered one problem: State laws discourage dumping any dead bodies into public waters. The Washington Department of

Ecology, in fact, shut down the Department of Fisheries' first attempt to recycle a few hundred dead salmon two years ago.

Michael spent several months compiling a detailed environmental checklist to cover regulations and ensure the program wouldn't result in piles of rotting fish and putrid creeks.

"There are significant concerns, even still, with the spread of these carcasses," said Bill Moore, an environmental engineer with the Ecology Department. "If you were to take a truckload of fish carcasses up to a river and dump it, you're going to have a major impact on the water quality."

But Michael said the goal was to mimic nature, so the dead fish would be carefully spaced and kept away from populated areas. "The carcasses would be distributed in natural-type densities, not piles," he said.

Yamhill examines landfill application

By Cathy Peterson
The Statesman Journal
MCMXCVIII

When

Citizens Against Pollution. The group interpreted the application to be for a local landfill.

and the county to set standards and regulate the fill. "There is great concern that county gov-

Prohibit trash from other counties.

Man gets 5 years for killing his brother in South Salem