

The Mineral Industry of Rhode Island

This chapter has been prepared under a Memorandum of Understanding between the Bureau of Mines, U.S. Department of the Interior, and the Rhode Island Department of Natural Resources, for collecting information on all nonfuel minerals.

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The value of nonfuel mineral production in Rhode Island in 1978 and 1979 added \$7.5 million and \$7.9 million, respectively, to the economy of the State. In terms of value, over 90% of the State's mineral production was sand and gravel, which was used primarily by the construction industry.

Trends and Developments.—Except for some construction materials, the nonfuel mineral requirements of Rhode Island's industry were imported. This included all metals and most chemical and industrial materials. Of approximately 300,000 industrial workers in the State, only 300-400 were directly engaged in mineral extraction. However, approximately 11,000 were employed in the mineral-dependent construc-

tion industry, and 25,000 were employed in processes or manufacturing that involved stone, clay, glass, primary metals, and fabricated metal products. An additional 32,000 workers were associated with industries that relied upon mineral-derived materials.

From 1970 through 1979, value of the State's mineral production increased more than 40%. Gains were recorded for all years except 1971-1972 and 1977. The decrease in value of mineral production in 1971 and 1972 reflected reductions in the mineral industries of five other New England States, which were caused by recessionary pressures on the region's economy. The slight drop in value in 1977 was due to a decrease in sand and gravel sales in Kent County.

Table 1.—Value of nonfuel mineral production in Rhode Island, by county¹

(Thousands)			
County	1977	1978	Minerals produced in 1978 in order of value
Kent	\$1,576	\$1,761	Sand and gravel.
Newport	W	W	Stone, sand and gravel.
Providence	W	W	Sand and gravel, stone.
Washington	1,804	2,666	Sand and gravel.
Undistributed ²	2,919	3,065	
Total³	6,299	7,493	

W Withheld to avoid disclosing company proprietary data; included in "Undistributed."

¹Bristol County is not shown because no nonfuel mineral production was reported.

²Includes gem stones and values indicated by symbol W.

³Data may not add to totals shown because of independent rounding.

Table 2.—Indicators of Rhode Island business activity

	1977	1978	1979 ^P	1978-79 percent change
Employment and labor force, annual average:				
Total civilian labor force ----- thousands ..	441.0	432.0	450.0	+4.2
Unemployment ----- do.	38.0	29.0	30.0	+3.4
Employment (nonagricultural):				
Mining ----- do.	(¹)	(¹)	(¹)	--
Manufacturing ----- do.	128.8	134.4	132.3	-1.6
Contract construction ----- do.	12.6	13.5	13.6	+7
Transportation and public utilities ----- do.	13.3	13.3	13.5	+1.5
Wholesale and retail trade ----- do.	77.4	79.4	81.1	+2.1
Finance, insurance, real estate ----- do.	19.1	20.0	20.9	+4.5
Services ----- do.	² 72.3	² 75.4	² 79.0	+4.8
Government ----- do.	58.2	59.8	59.8	--
Total nonagricultural employment ----- do.	381.7	395.8	³ 400.0	+1.1
Personal income:				
Total ----- millions ..	\$6,310	\$6,960	\$7,679	+10.3
Per capita ----- do.	\$6,731	\$7,447	\$8,266	+11.0
Construction activity:				
Number of private and public residential units authorized ----- do.	5,301	⁴ 5,446	5,327	-2.2
Value of nonresidential construction ----- millions ..	\$56.3	\$59.0	\$64.2	+8.8
Value of State road contract awards ----- do.	\$16.0	NA	NA	--
Shipments of portland and masonry cement to and within the State ----- thousand short tons ..	144	165	165	--
Nonfuel mineral production value:				
Total crude mineral value ----- millions ..	\$6.3	\$7.5	\$7.9	+5.3
Value per capita, resident population ----- do.	\$7	\$8	\$8	--
Value per square mile ----- do.	\$5,189	\$6,172	\$6,496	+5.2

^PPreliminary. NA Not available.

¹Included with "Services."

²Includes mining.

³Data do not add to total shown because of independent rounding.

⁴Series revised in 1978; data not comparable with those of prior years.

Sources: U.S. Department of Commerce, U.S. Department of Labor, Highway and Heavy Construction Magazine, and U.S. Bureau of Mines.

Legislation and Government Programs.—The 1979 Rhode Island Legislature passed a Uniform Blasting Law giving control over explosives and blasting to the State Fire Marshall. The bill's standards for distance and size of explosive charges were those recommended by the Federal Bureau of Mines. The bill was opposed in Cumberland Hill where residents, concerned with blasting operations at a local quarry, wanted local control over blasting activity.

Rhode Island's coastal zone management program was approved by the Office of Coastal Zone Management. The Federal Coastal Zone Management Act, passed in 1972, provides States along the coast with the opportunity and financial means to establish comprehensive management programs for their shorelines. Mineral development in the coastal zone would be regulated by this program.

REVIEW BY NONFUEL MINERAL COMMODITIES

NONMETALS

Cement.—Since Rhode Island has no cement-producing plants, cement is imported from other northeastern States. Shipments into the State during the biennium totaled 318,000 tons of portland-type and 11,000 tons of masonry-type cement, which was used mostly in construction.

Sand and Gravel.—During 1978 and 1979, Rhode Island's sand and gravel industry comprised 25 companies operating 25 pits in 4 counties. In 1978, Washington County was

the leading producer, accounting for approximately 36% of the tonnage; however, in 1979, Providence County led with 49% of the State's production. Principal uses were asphalt and concrete aggregate, concrete products, roadbase, and fill.

The State purchased 13,000 acres along the Big River and Wood River to construct a water storage reservoir. Design studies for the reservoir were financed, in part, by \$500,000 from the sale of sand and gravel produced from the acquired land.

Block Island, off the southwestern coast of Rhode Island, was the site of a 13-mile road paving and an airport runway resurfacing project during 1978. Sand and gravel

for 45,000 tons of bituminous concrete used in the project was barged to the island from suppliers located along the southeastern New England coast.

Table 3.—Rhode Island: Construction sand and gravel sold or used, by major use category

Use	1977			1978			1979		
	Quantity (thousand short tons)	Value (thousands)	Value per ton	Quantity (thousand short tons)	Value (thousands)	Value per ton	Quantity (thousand short tons)	Value (thousands)	Value per ton
Concrete aggregate --	615	\$1,294	\$2.10	773	\$1,852	\$2.39	709	\$1,620	\$2.29
Plaster and gunite sands -----	NA	NA	NA	W	W	W	25	100	4.00
Concrete products ---	363	726	2.00	W	W	W	W	W	W
Asphaltic concrete --	588	1,240	2.11	667	1,930	2.60	619	1,702	2.75
Roadbase and coverings -----	630	1,074	1.71	724	1,276	1.76	606	1,135	1.87
Fill -----	676	726	1.07	407	456	1.12	1,180	1,338	1.13
Snow and ice control -	NA	NA	NA	W	W	W	W	W	W
Total ¹ or average -----	2,872	5,059	1.76	2,978	6,176	2.07	3,537	6,737	1.90

NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Data may not add to totals shown because of independent rounding.

Table 4.—Rhode Island: Construction sand and gravel sold or used by producers

	1977			1978			1979		
	Quantity (thousand short tons)	Value (thousands)	Value per ton	Quantity (thousand short tons)	Value (thousands)	Value per ton	Quantity (thousand short tons)	Value (thousands)	Value per ton
Sand -----	1,200	\$2,232	\$1.86	1,419	\$2,947	\$2.08	1,287	\$2,232	\$1.73
Gravel -----	1,673	2,828	1.69	1,559	3,229	2.07	2,250	4,505	2.00
Total ¹ or average -----	2,872	5,059	1.76	2,978	6,176	2.07	3,537	6,737	1.90

¹Data may not add to totals shown because of independent rounding.

Stone.—The State's stone industry was composed of four companies producing marble, limestone, granite, and quartzitic graywacke. Marble mined and crushed by The Conklin Limestone Co., Inc., Ashton, was sold for rubble, agricultural limestone, terrazzo, roofing granules, filler, and flux. M.A. Gammino Construction Co., Cranston, produced crushed granite, which was used for bituminous and concrete aggregate,

roadbase, riprap, railroad ballast, and filter stone. Graywacke was crushed by Peckham Brothers Co., Inc., from a quarry near Middletown for asphalt aggregate and roadbase use. Granite riprap was produced by Gerald T. Kidd, Inc., from a quarry near Tiverton.

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Table 5.—Rhode Island: Crushed stone¹ sold or used by producers, by use

(Thousand short tons and thousand dollars)

Use	1977		1978		1979	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate -----	23	W	27	W	33	W
Bituminous aggregate -----	108	W	110	W	34	W
Macadam aggregate -----	6	22	---	---	---	---
Dense-graded roadbase stone -----	21	W	W	W	W	W
Riprap and jetty stone -----	W	W	29	W	14	47
Railroad ballast -----	---	---	1	W	---	---
Filter stone -----	10	W	54	W	41	W
Other uses ² -----	46	1,217	41	1,316	104	1,101
Total ³ -----	274	1,238	300	1,316	249	1,148

¹Revised. W Withheld to avoid disclosing company proprietary data; included with "Other uses."²Includes limestone, granite, and other stone.³Includes stone used in agricultural limestone, surface treatment aggregate (1978), other construction aggregate and roadstone (1979), flux stone, other fillers or extenders, roofing granules, fill (1977), and data indicated by symbol W.⁴Data may not add to totals shown because of independent rounding.

Table 6.—Principal producers

Commodity and company	Address	Type of activity	County
Sand and gravel:			
A. Cardi Construction Co., Inc.---	451 Arnold Rd. Coventry, RI 02816	Pit -----	Kent.
J. H. Lynch & Sons, Inc.-----	Box 325 Ashton, RI 02816	Pit -----	Providence.
Material Services, Inc -----	Greenville Rd. North Smithfield, RI 02895	Pit -----	Do.
V. J. Paolino Construction Co.---	Box 383 Slatersville, RI 02876	Pit -----	Do.
Rhode Island Sand & Gravel Co., Inc.-----	Kilvert St. Warwick, RI 02886	Pit -----	Kent.
River Sand & Gravel Co -----	221 Benedict St. Pawtucket, RI 02864	Pit -----	Washington.
South County Sand & Gravel Co., Inc.-----	North Rd. Peace Dale, RI 02878	Pit -----	Do.
Tasca Sand & Gravel Co -----	Box 113, RFD 4 Esmond, RI 02917	Pit -----	Providence.
Stone:			
Granite and other stone:			
M. A. Gammino Construc- tion Co.-----	875 Phenix Ave. Cranston, RI 02840	Quarry -----	Do.
Gerald T. Kidd, Inc -----	67 Riverside Dr. Tiverton, RI 02878	----do-----	Newport.
Peckham Bros. Co., Inc ---	Box 193 Newport, RI 02840	----do-----	Do.
Limestone, crushed:			
The Conklin Limestone Co., Inc.-----	RFD 1 Lincoln, RI 02860	----do-----	Providence.