

on Air and Water Pollution and author of the bulk of the existing body of pollution control law, doubts it. He puts a \$25 billion price tag on cleaning up water pollution in the next five years.

**"I look forward** to reviewing the President's environmental message and his budget to learn the extent of his commitment," said the Senator, but added, "expressions of concern and urgency will not restore the quality of the environment; action and money will."

In fact, Muskie regards the Nixon plan as doing less than the present 1966 Clean Water Restoration Act, by which Congress authorized \$3.5 billion in grants over a 4-year period. Assuming a \$4 billion Federal outlay in the Nixon plan, the Administration would thus be spending on an average over nine years under \$400 million a year. (Although the program would be for five years, the Government's payments would be made over nine years, which strengthens the bond redemption suspicions.) This compares with an average of slightly less than \$900 million under the 1966 Clean Water Restoration Act, which expires in 1971.

Although Mr. Nixon did promise "to put modern municipal waste treatment

plants in every place in America where they are needed to make our waters clean again . . .," critics question his sincerity. They point out that he only asked for \$214 million to construct waste treatment facilities this year, and it was Congress that upped the figure another \$586 million (SN: 11/15, p. 448). The President gave no indication in his address that he would spend this additional money, however, and because of this, there is a real worry about its fate. Says one Senate source, "From what we've heard, they're not anxious to give it up."

**In a related development** last week, the National Academy of Sciences and the National Academy of Engineering proposed a broad national program to manage the environment. Nine proposals were suggested, calling for the establishment of a Board of Environmental Affairs within the office of the President, a comprehensive Federal program for monitoring the environment, a national research laboratory for the environmental sciences, an environmental education program in secondary schools and environmental study and work programs at the university level. □

Wheaton H.S., Wheaton.

■ Massachusetts: Steven Richard Eastaugh, Newton South H.S., Newton Centre.

■ New York: Paula Traktman, Midwood H.S., Brooklyn; Joseph Jonathan Buff, Far Rockaway H.S., Far Rockaway; Karen Hopenwasser, Far Rockaway H.S., Far Rockaway; Manoug Ansour, Forest Hills H.S., Forest Hills; Eliot Marc Gelwan, Forest Hills H.S., Forest Hills; Tsutomu Inagaki, Jamaica H.S., Jamaica; Mitchell Craig Begelman, Bronx H.S. of Science, New York; Michael Alan Fifer, Bronx H.S. of Science, New York; Esther Ming Hu, Bronx H.S. of Science, New York; Jeffrey Ng, Bronx H.S. of Science, New York; Jonathan David Victor, Horace Man H.S., New York; Robert A. Levine, Ramaz School, New York; Alan Jay Dubin, Yeshiva University H.S., New York; Lee Robbins, Martin Van Buren H.S., Queens Village.

■ Ohio: Joyce Helen Montwieler, Magnificat H.S., Rocky River.

■ Oklahoma: Kent William Randall, Memorial H.S., Tulsa.

■ Pennsylvania: Ronald Lee Amey, William Allen H.S., Allentown; Peter Elliot Friedland, William Allen H.S., Allentown; Kirk Alfred Shinsky, Louis E. Dieruff H.S., Allentown; Betsy Harris, Philadelphia H.S. for Girls, Philadelphia.

■ Texas: Sharon Lee Reed, Stephen Austin H.S., Austin; Charles Howard Bowden, Highlands H.S., San Antonio.

■ Vermont: William Peter Parker, Harwood Union H.S., Moretown. □

## TALENT SEARCH

### Forty Winners

Forty students, judged the nation's most scientifically talented seniors, were named winners in the 29th annual Science Talent Search. The winners, representing approximately 1.9 percent of those who completed entries in the competition, will receive a total of \$67,500 of Westinghouse Science Scholarships and Awards.

The Science Talent Search is designed to discover and develop scientific ability among high school seniors. It is conducted annually for Westinghouse Educational Foundation by Science Clubs of America, a function of Science Service, Inc.

**Eleven girls and 29 boys** will receive an all-expense trip to Washington, D.C., Feb. 25 through March 2, at which time they will attend the Science Talent Institute. There the board of judges will select 10 top winners to receive Westinghouse scholarships, which include one award of \$10,000, two of \$8,000, three of \$6,000, and four of \$4,000. Awards of \$250 each will be granted to the remaining 30 students.

The winners, ranging in age from 15 to 18 years, represent 28 cities in 15 states and the District of Columbia. Of 19,952 contestants, 2,075 completed their entries by taking an aptitude examination, obtaining recommendations and writing a report on their science

project. Completed entries were received from 50 states and the District of Columbia.

By state, the winners are:

■ California: Cindy Blifeld, Hollywood H.S., Hollywood; John William Winslow, Oceanside H.S., Oceanside.

■ Connecticut: Thaddeus Paul Kochanski, F. U. Conard H.S., West Hartford.

■ District of Columbia: Judith Sharn Rubin, Woodrow Wilson H.S., Washington.

■ Florida: Larry Joe Morell, Nova H.S., Fort Lauderdale.

■ Georgia: Sue Ann Billingsley, Briarcliff H.S., Atlanta.

■ Illinois: Charles Andrew Czeisler, Thornridge H.S., Dolton; Rhonda Lauren Ellman, Highland Park H.S., Highland Park; Bradford Blair Walters, Highland Park H.S., Highland Park; James Robert Litton Jr., Oak Lawn Community H.S., Oak Lawn; Dennis James McLeod, Niles Twp. H.S. West, Skokie; Robert Kenneth Zeman, Niles Twp. H.S. West, Skokie; William Robert Dolson, Loyola Academy, Wilmette.

■ Iowa: Christine Anne Padesky, Marshalltown Community H.S., Marshalltown.

■ Kentucky: Douglas Charles Rees, Tates Creek H.S., Lexington.

■ Maryland: Lawrence Charles Fritz,

## AERONOMY

### A new national facility

The ionosphere is the portion of the earth's thin upper atmosphere that begins about 50 kilometers up and is composed in large part of free electrons and their accompanying positive ions. It is crucial to life on earth because it screens out ultraviolet and X-radiation from the sun.

The most powerful new technique for studying the ionosphere from the ground is known as incoherent-scatter radar. In this method radar waves are reflected by irregularities in the density of the electrons in the ionosphere. The returned signals contain a rich variety of information about the composition and dynamics of the upper atmosphere.

**The practicality** of the technique was verified in 1958, and the first major facilities were established beginning in 1963. Six are now in operation, including the Arecibo Ionospheric Observatory in Puerto Rico. The others are the Millstone Hill Ionospheric Radar in Massachusetts, the Stanford Research Institute unit in California, and in-