

# USM - University of Maryland Center for Environmental Science

## MISSION

The University of Maryland Center for Environmental Science (UMCES) is a research institution that advances knowledge in environmental and natural sciences through scientific discovery, integration, application and teaching. UMCES is the only institution of the University System of Maryland (USM) whose statutory mission is the development of a comprehensive program of environmental research, education and service. Through these functions, UMCES will maintain its national and international reputation for the excellence and multidisciplinary nature of its research, its success in applying scientific knowledge to the management of the Chesapeake Bay and its watershed, and its multifaceted collaborations in education. UMCES can grant joint graduate degrees in environmental sciences and advise, teach, and serve as mentors to many graduate students in USM institutions.

## VISION

UMCES will continue to evolve as a globally eminent yet locally relevant institution dedicated to discovery, integration, application and teaching concerning the environment and natural resources.

## KEY GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

### Goal 1. Strengthen the predictive ecology for Maryland through highly relevant research programs.

**Obj. 1.1** Increase to 240 the number of Chesapeake Bay restoration research projects from 214 in 2015.

| Performance Measures                          | 2016 Act. | 2017 Act. | 2018 Act. | 2019 Act. | 2020 Act. | 2021 Est. | 2022 Est. |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Number of Chesapeake Bay restoration projects | 212       | 194       | 184       | 183       | 202       | 215       | 220       |

### Goal 2. Strengthen the K-12 education and teacher training in environmental education programs.

**Obj. 2.1** Maintain the number of K-12 students participating in UMCES' environmental education programs at 11,000.

**Obj. 2.2** Increase science, technology, engineering and math (STEM) teacher training to 910 teachers from 888 teachers in 2015 in UMCES' environmental education programs.

| Performance Measures   | 2016 Act. | 2017 Act. | 2018 Act. | 2019 Act. | 2020 Act. | 2021 Est. | 2022 Est. |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| K-12 students participating in environmental education program | 11,000    | 11,000    | 11,000    | 11,000    | 3,000     | 1,000     | 5,000     |
| K-12 teachers trained in environmental education program       | 1,309     | 1,753     | 305       | 341       | 105       | 100       | 250       |

### Goal 3. Increase extramural support from government and private sources.

**Obj. 3.1** Improve private support to \$4 million from \$2.8 million in 2015.

**Obj. 3.2** Increase the two-year running average of total extramural research funding received to \$25.5 million.

**Obj. 3.3** Increase research expenditures from all sources to \$60.0 million from \$52.2 million in 2015.

| Performance Measures  | 2016 Act. | 2017 Act. | 2018 Act. | 2019 Act. | 2020 Act. | 2021 Est. | 2022 Est. |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Private support (\$ millions)   | \$7.1     | \$5.3     | \$5.0     | \$3.2     | \$3.9     | \$5.9     | \$5.9     |
| Two-year running average of total extramural research funding (\$ millions)                           | \$25.0    | \$25.0    | \$25.1    | \$22.7    | \$22.6    | \$25.3    | \$25.3    |
| <sup>1</sup> Research expenditures (\$ millions) as calculated for National Science Foundation report | \$55.0    | \$58.4    | \$59.0    | \$56.0    | \$60.0    | \$61.0    | \$61.0    |

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## Goal 4. Provide quality research and graduate education.

**Obj. 4.1** Increase to at least 225 annual peer-reviewed publications produced by UMCES faculty from 164 in 2015.

**Obj. 4.2** Increase the mean number of citations in peer-review publications attributed to UMCES faculty members to 48.0 from 40.5 in 2015.

**Obj. 4.3** Increase the average Graduate Record Examination (GRE) Verbal and Quantitative scores for incoming students under the direction of UMCES faculty to 318.

**Obj. 4.4** Increase the number of new large competitive extramural research awards in excess of \$300,000 to 29 from 23 in 2015.

**Obj. 4.5** Improve faculty salaries to the 42nd percentile for Carnegie Research I universities in order to attract and retain outstanding faculty from the 35th percentile in 2015.

**Obj. 4.6** Continue through 2017 to maintain research expenditures per faculty member at or above the 85th percentile for Carnegie Research I Universities.

| Performance Measures  | 2016 Act. | 2017 Act. | 2018 Act. | 2019 Act. | 2020 Act. | 2021 Est. | 2022 Est. |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <sup>1</sup> Number of peer-reviewed publications produced by faculty   | 159       | 180       | 180       | 203       | 205       | 205       | 210       |
| <sup>1</sup> Mean number of citations per peer-reviewed publications attributed to UMCES faculty                    | 43.9      | 46.3      | 47.0      | 47.1      | 48.1      | 48.5      | 49.0      |
| <sup>2</sup> Average GRE scores (verbal and quantitative) of incoming students under the direction of UMCES faculty | 1,250     | 312       | 313       | 306       | N/A       | N/A       | N/A       |
| Number of grants awarded in excess of \$300,000   | 17        | 17        | 22        | 24        | 17        | 26        | 26        |
| Percentile rank of UMCES faculty salaries, on average, compared to those at Carnegie Research I universities        | 30%       | 48%       | 33%       | 27%       | 33%       | 30%       | 35%       |
| Percentile rank of UMCES expenditures per faculty member as compared to Carnegie Research I universities            | >85%      | >85%      | >85%      | >85%      | >85%      | >85%      | >85%      |

## NOTES

<sup>1</sup> 2020 data is estimated.

<sup>2</sup> GRE scores are no longer required to apply.