FREC
2021 ANNUAL
REPORT

Industrial Centers
Forest Productivity Cooperative (FPC)
Forest Modeling Research Cooperative (FMRC)
Center for Environmental Applications in Remote Sensing (CEARS)

Studies Abroad
Costa Rica
UNFCCC Conference of Parties
Panama
Brazil (under development)

Extension and Outreach

Virginia Forest Landowner Education
Approximately 28 programs were held; 2,556 forest landowners, professionals, and others attended VFLEP programs, with more than 43,228 acres represented.

Virginia Forest Landowner Update
4 issues sent to 8,243 landowners; 12 e-newsletters sent to 5,861 subscribers.

Virginia Master Naturalist Program
Approximately 2,100 active volunteers contributed 177,000 hours of service to benefit Virginia’s natural resources.

Urban Forestry
62 indirect contacts (emails, phone calls, letters); 10 events (workshops, webinars, etc.); 489 direct contacts (people reached at events); 2,157 users and 3,713 pageviews of VT Urban Forestry website; 27,779 users and 115,803 pageviews of Va. Big Tree Program website; 7,504 profile visits and 322,900 Tweet impressions of Eric Wiseman’s Twitter @vtarborist.

Virginia SHARP Logger Program
1066 active participants; 800 completed training to receive credit.

Geospatial Education Program
200 program participants with 13,600+ hours of online video tutorials watched and 60,000+ ebook tutorial pages accessed to date.

Agroforestry/Forest Farming
Leader of multistate coalition of 2000 landowners, companies, technical service providers, and conservationists. Programs reach hundreds of producers each year through intensive multiday training and online initiatives.

National Advanced Silviculture Program
Annual multiweek advanced silviculture module for agency silviculturists from across the country. Participants are responsible for managing hundreds of thousands of acres of federal forestlands.
Research

External research grant awards of $4.252 million (calendar year 2021 - OSP Awards database) $3.5 million in research expenditures (calendar year 2021-MicroStrategy)

Research Grants

Average of $4.3 million/year for past 5 years

Granting agencies include the following and others:
- American Chestnut Foundation
- USDA-NIFA
- USDA Forest Service
- Virginia Department of Forestry
- USDA Agricultural Research Service
- NASA
- NSF
- US Dept of Energy
- National Park Service
- NCASI

Research Areas

- Agroforestry/Forest Farming
- Ecosystem Science Management, Climate/Carbon
- Environmental Education and Communication
- Forest Biology, Silviculture, Soils, Fire
- Forest Biometrics and Geomatics
- Forest and Resource Economics, Policy, Management
- Forest Genetics and Biotechnology
- Forest Operations and Business
- Human Dimensions of Natural Resources
- Natural Resources Recreation
- Urban Forest Ecology and Management
- Water Resources

Undergraduate and Graduate Programs

Graduate Enrollment:

<table>
<thead>
<tr>
<th>Level</th>
<th>% persons of color</th>
<th>% female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's</td>
<td>11%</td>
<td>46%</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>11%</td>
<td>45%</td>
</tr>
<tr>
<td>Overall</td>
<td>11%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Undergraduate Enrollment:

<table>
<thead>
<tr>
<th>Major</th>
<th>% persons of color</th>
<th>% female</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI</td>
<td>12%</td>
<td>58%</td>
</tr>
<tr>
<td>ERM</td>
<td>32%</td>
<td>35%</td>
</tr>
<tr>
<td>FORS</td>
<td>9%</td>
<td>34%</td>
</tr>
<tr>
<td>WRPM</td>
<td>16%</td>
<td>43%</td>
</tr>
<tr>
<td>NRC/ECS</td>
<td>16%</td>
<td>43%</td>
</tr>
<tr>
<td>NRR</td>
<td>16%</td>
<td>43%</td>
</tr>
<tr>
<td>Overall</td>
<td>15%</td>
<td>39%</td>
</tr>
</tbody>
</table>

FREC Diversity

Undergraduate

<table>
<thead>
<tr>
<th>Major</th>
<th>% persons of color</th>
<th>% female</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS</td>
<td>12%</td>
<td>58%</td>
</tr>
<tr>
<td>EI</td>
<td>32%</td>
<td>35%</td>
</tr>
<tr>
<td>ERM</td>
<td>9%</td>
<td>34%</td>
</tr>
<tr>
<td>FORS</td>
<td>16%</td>
<td>43%</td>
</tr>
<tr>
<td>WRPM</td>
<td>16%</td>
<td>43%</td>
</tr>
<tr>
<td>Overall</td>
<td>15%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Graduate

<table>
<thead>
<tr>
<th>Level</th>
<th>% persons of color</th>
<th>% female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's</td>
<td>11%</td>
<td>46%</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>11%</td>
<td>45%</td>
</tr>
<tr>
<td>Overall</td>
<td>11%</td>
<td>45%</td>
</tr>
</tbody>
</table>
Department Head Comments:

Needless to say, our students are coming through school and preparing to launch their careers in unprecedented times as we emerge from an era-defining pandemic, as they come to grips with issues of justice and fierce civil discourse, as they seek to establish lives and careers under inflation rates unseen for more than 40 years, and as they (like all of us) wonder how war might play out in Europe with far-reaching consequences, as if the usual stresses of getting through school aren’t enough. Many are entering the workforce facing uncertainty over their future and how best to prepare. Of course, employers, too, may be wondering what to expect of recent graduates, and whether their organization will be able to maintain a workforce sufficient to meet the demand for their products and services. In FREC, we stand in the middle of much of this uncertainty surrounding the future workforce in our field. I want to assure you that through these times, as always, our faculty and staff are committed to a continuing tradition of providing the best critical thinking, problem solving, hands-on education possible for preparing our students for critically vital careers in forestry and environmental resources, including an increased emphasis on professional skills. Above all, though, we are all in this together, and sticking together and working together is the most important thing we can do.

Jay

facebook.com/vtfrec
twitter.com/VTFREC

Forest Resources and Environmental Conservation
Cheatham Hall Room 313,
Virginia Tech, 310 West Campus Drive
Blacksburg, VA 24061
(540)231-5483 frec@vt.edu