

Agriculture-Forestry-Land Use

Patrick Hilt, Jody Booze-Daniels, Greg Evanylo,
John Randolph, John Seiler, Peter Sforza,
Nick Copeland, David Haak, Jamie King,
Nathan King, Adam Taylor, Jack Rosenberger,
Tessa Hawley, Kathlynn Lewis

VT 2020 CLIMATE ACTION COMMITMENT
UPDATE PROCESS – SPRING 2020



14 member subcommittee:
faculty, staff & students
from CALS, CNRE, CAUS,
CLAHS, Campus Arborist,
Catawba Sustainability
Center

Agriculture-Forestry-Land Use Subcommittee

Purpose:

- Assess net GHG emissions from agriculture and VT lands not included in original GHG inventory
- Facilitate development of composting/methane digestion facility at Kentland Farm to serve animal waste management and campus composting needs
- Explore use of VT agriculture and open lands on campus, local off-campus properties for large scale solar, including agrivoltaic multiple use



Preliminary Findings

- Agriculture operations including animal GHG emissions and fuel use amount to 12,185 MT or about **5% of total Virginia Tech emissions**
- VT woodlands on campus and environs and cropland conservation tillage sequester about 3,250 tons/year of CO₂e or **-1.3% of total VT emissions**
- **University Compost Facility at Kentland** can provide needed solution for campus dining hall organic waste and animal waste management
- Vacant land on campus and farm/forestland at Kentland, Price Mountain, Catawba provide sites for **solar arrays using agrivoltaics** methods for co-use of solar, crops, and animal grazing

Preliminary Goals, Pathways

PRELIMINARY GOAL

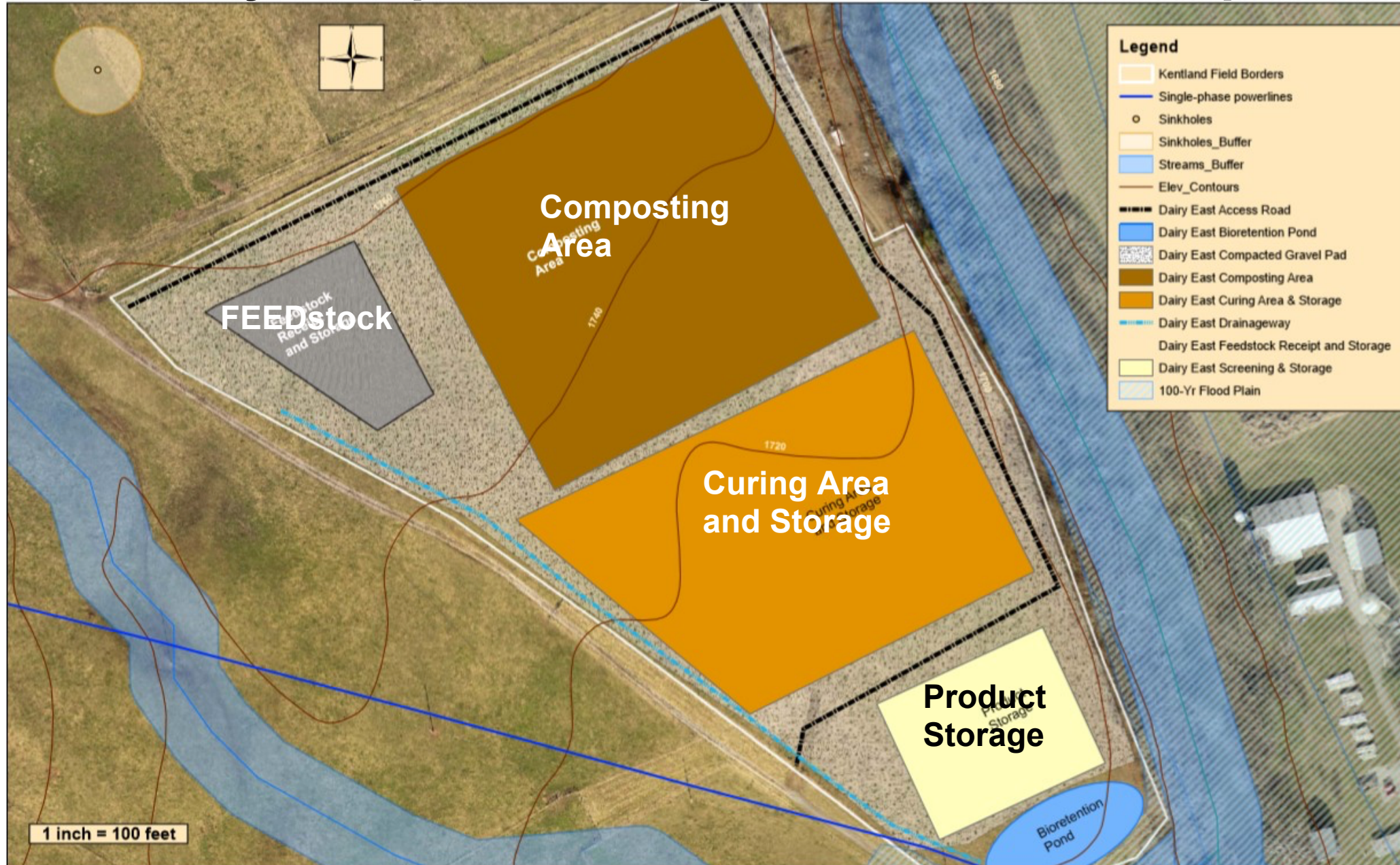
Carbon neutral agricultural, forestry, and land use operations by 2030

POTENTIAL PATHWAYS TO GOAL

- **Track net GHG emissions** annually from animals and wastes, equipment fuel, electricity
- Develop and operate the **University Compost Facility at Kentland** to process campus food and other organic waste and agriculture animal wastes
- Adopt a **Campus Tree Policy** to increase canopy cover from 16% to 20-30% with multiple benefits
- **Reduce GHG emissions** from agricultural and forestry operations by improved efficiency, methane digestion, and other means
- **Offset remaining 2030 GHG Ag/For/LU emissions** with agrivoltaic solar production, carbon sequestration, and/or carbon offsets



University Compost Facility at Kentland Concept Plan





Straddle turned Windrow composting operation

Agrivoltaics: Co-use/Co-benefit Solar and Agriculture



CLIMATE ACTION COMMITMENT UPDATE

Thank you for your attention. We invite you to engage. Please visit the CAC website (link below) to:

- Watch the other committee videos
- Read the CAC Interim Report
- Complete the climate action survey
- Register for a Zoom forum
- Engage through an online bulletin board
- Contact us

TIME FOR SIDE:
15 seconds

<https://svpoa.vt.edu/index/VTCACRevision.html>

PLEASE FIND LINKS IN THE DESCRIPTION BELOW