



Using Science and Art to Engage Youth in Leading the Way on Climate Action

Nurture Nature Center

Kathryn Semmens (Science Director)

Keri Maxfield (Art Director)

2022

THE NURTURE NATURE CENTER

NURTURE NATURE CENTER

Explore...



• Community



• Science



• Art



• Easton





NURTURE NATURE CENTER

- Exhibits
- Presentations
- Galleries
- Performances
- Activities



Climate Change in PA

Since start of 20th century, temperatures increased by 2°F (mostly in winter and spring)

of warm nights has increased

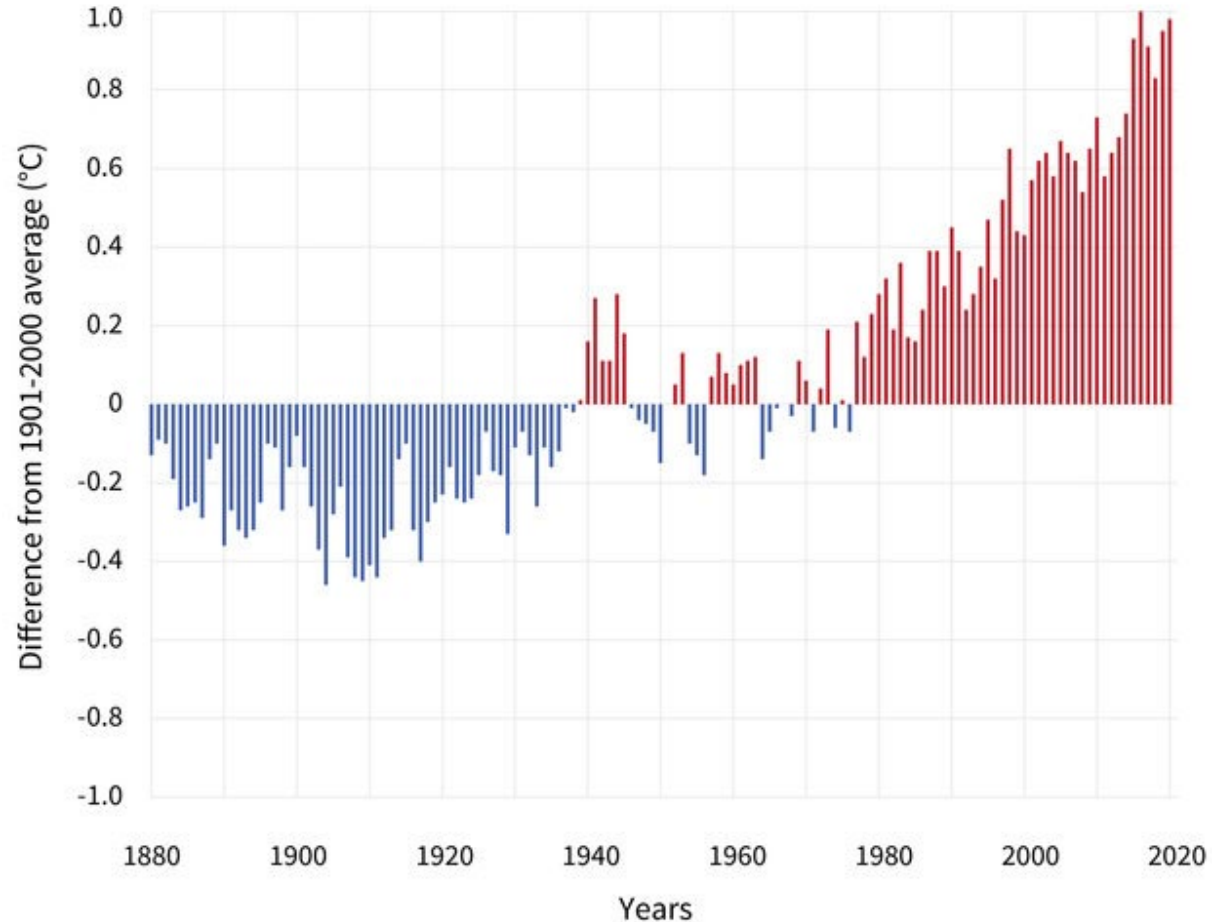
of extreme precipitation events has increased

Heat waves projected to become more intense

Winter and spring precipitation is projected to increase

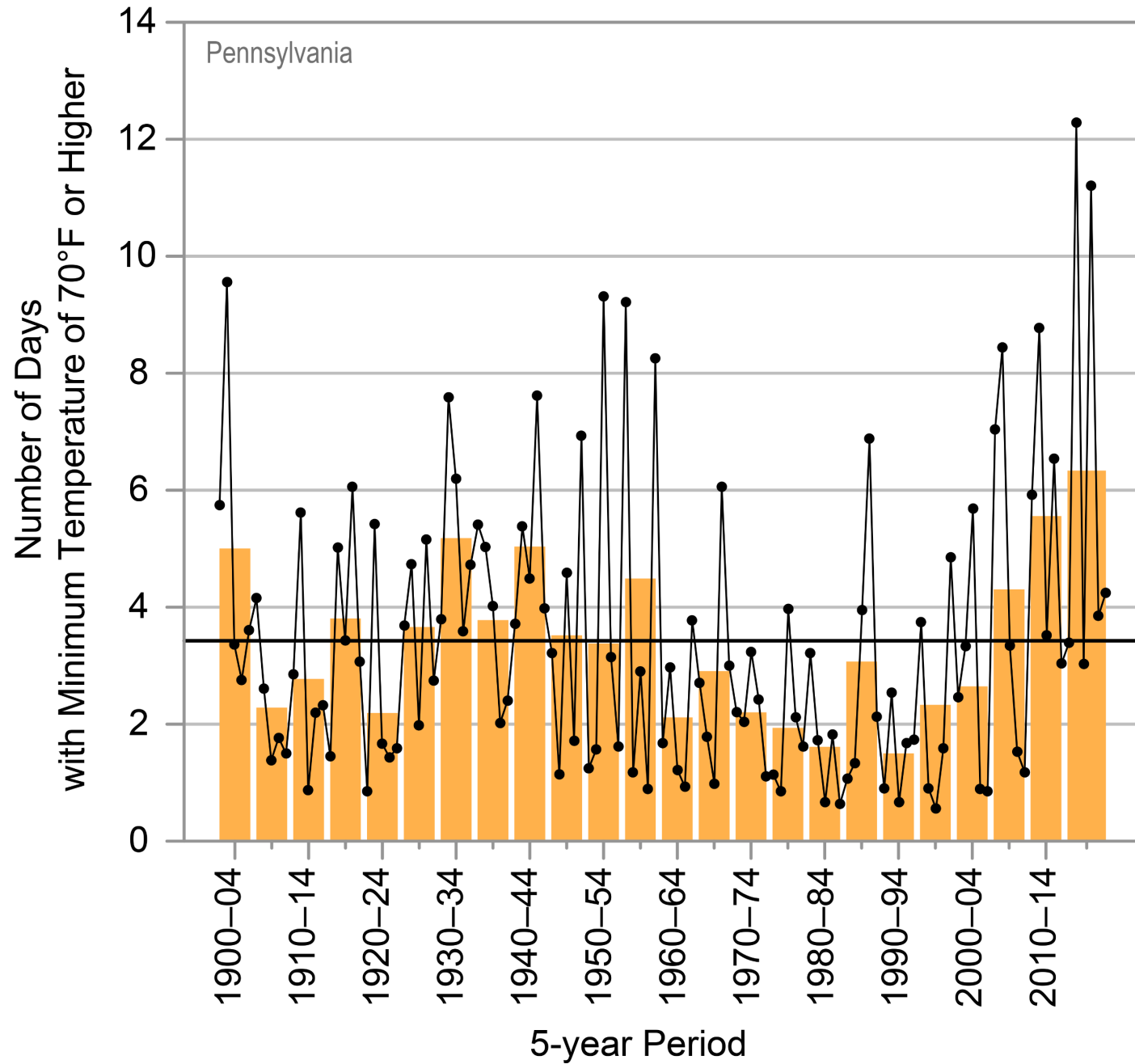
Increased risk of springtime flooding

GLOBAL AVERAGE SURFACE TEMPERATURE

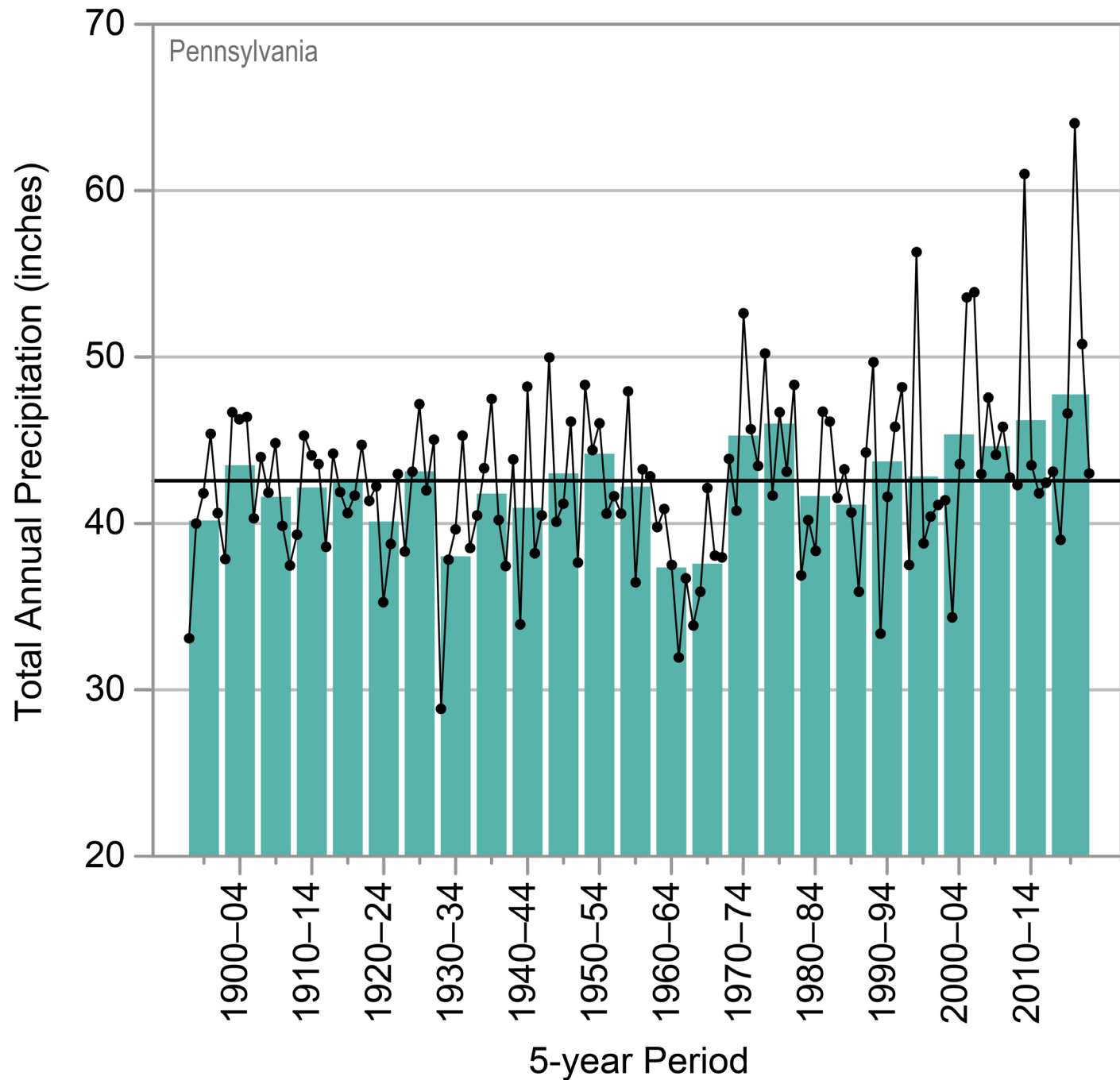


Yearly surface temperature compared to the 20th-century average from 1880–2020. Blue bars indicate cooler-than-average years; red bars show warmer-than-average years. NOAA Climate.gov graph, based on data from the National Centers for Environmental Information. From climate.gov

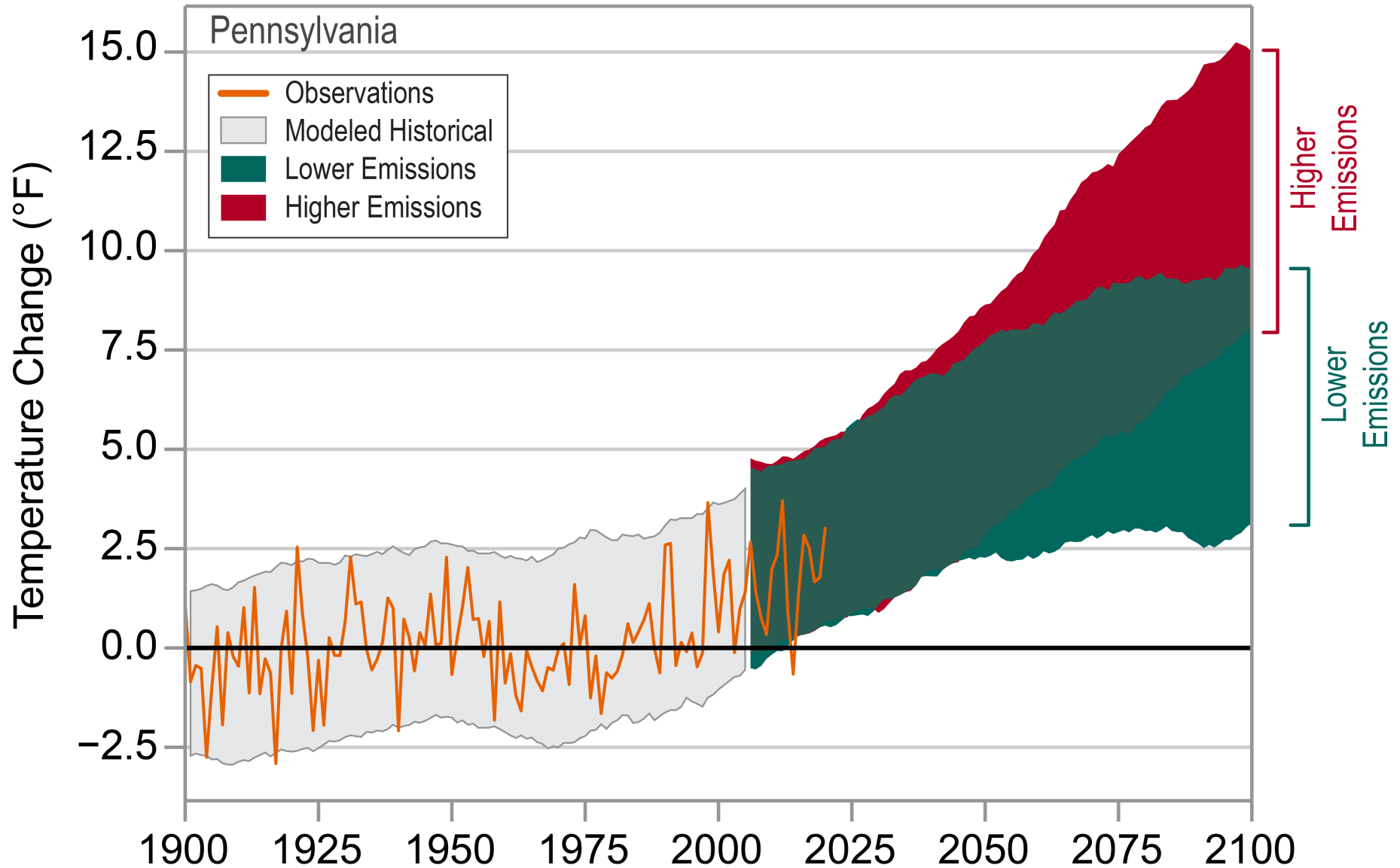
Observed Number of Warm Nights



Observed Annual Precipitation



Observed and Projected Temperature Change

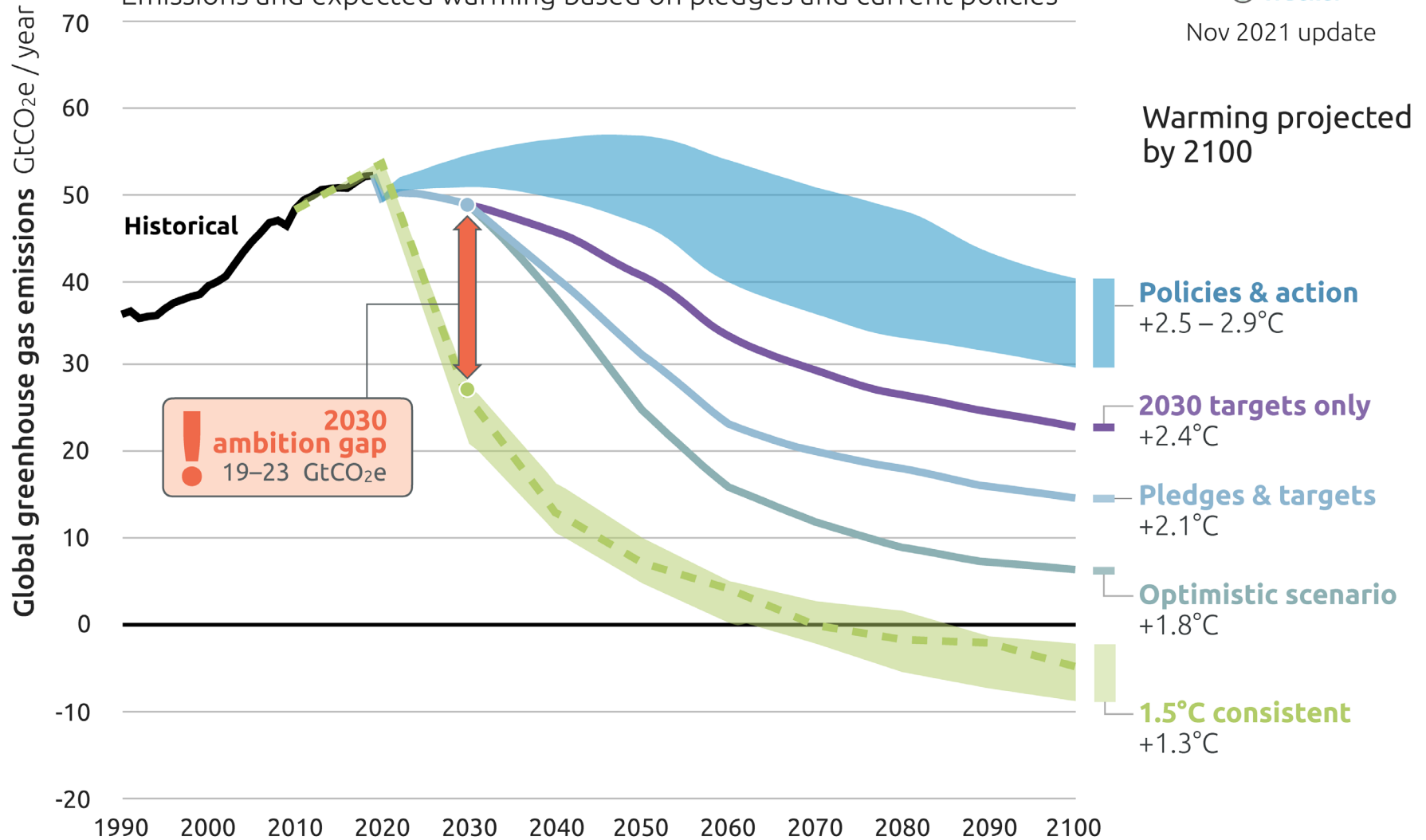


2100 WARMING PROJECTIONS

Emissions and expected warming based on pledges and current policies



Nov 2021 update



City of Easton: Global Covenant of Mayors

NNC has been assisting the City of Easton with its reporting and data requirements for membership in the Global Covenant of Mayors for Climate and Energy



Easton council commits to cutting greenhouse emissions: 7 things you can do

Updated May 25, 2018; Posted May 25, 2018



THE CITY OF EASTON'S CLIMATE ACTION PLAN

UPDATE: The City of Easton adopted the draft Climate Action Plan on October 27th, 2021. Stay tuned for more information as NNC helps kick off implementation of some of the plan's strategies.

Hour-By-Hour Climb To 109 Heat Index in Eastern PA

Today is expected to be the worst of the heat wave, and likely the hottest day of the year.

Delaware River at Easton-Phillipsburg crests just into minor-flood stage (PHOTOS)

As heat wave continues, we wonder: Just how hot can it get in the Lehigh Valley?

Summer's Second Heatwave Hits Easton

The summer's second heat wave arrived today and won't let up at least until Tuesday.

Streets closed, many without power as flooding hits the Lehigh Valley

AP News Aug 4, 2020 (updated May 11, 2021)

Senior citizens struggle to stay cool in their homes during the summer, doctors see more cases of tick and mosquito-borne illness like West Nile Virus or Lyme disease, areas that haven't flooded in recent memory experience costly flood damage – these and many other



GLOBAL COVENANT
of MAYORS for
CLIMATE & ENERGY

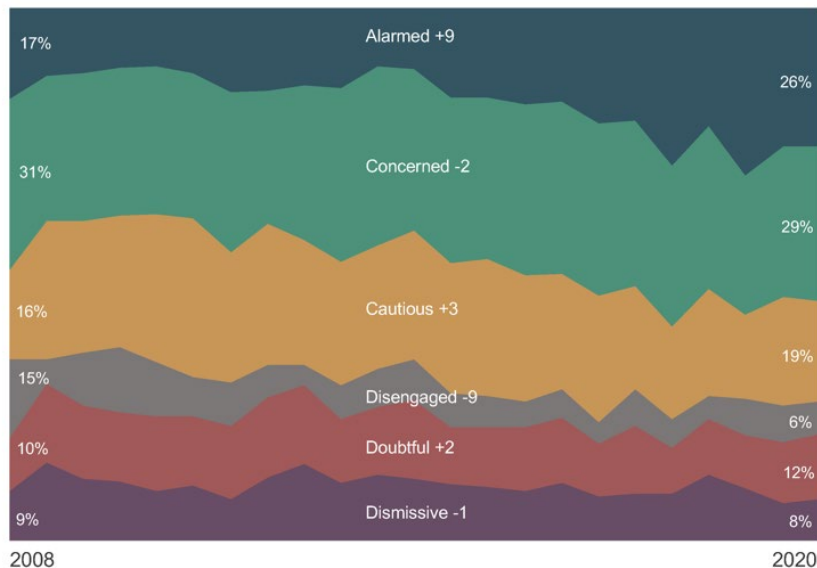
The City of Easton joined the Global Covenant of Mayors for Climate and Energy in 2016, and completed a greenhouse gas inventory in 2016, 2017, and 2018. A climate vulnerability assessment and an emissions reduction target were developed in spring of 2018.

The climate vulnerability assessment was completed by Nurture Nature Center and Lafayette students in a Sustainable Solutions class led by

How do we engage with our community across this spectrum?

Nurture Nature Center Approach: Science, Art, and Community

Global Warming's Six Americas



Data from 23 waves of the *Climate Change in the American Mind* national survey.
November 2008 – December 2020. (n = 27,075).





Calling all middle and high school youth!

**Join Nurture Nature Center to
Explore Science and Art about Climate Change**

2nd Annual Youth Climate Summit of the Lehigh Valley

Tuesday, August 17th, 2021 ▪ 12- 2:30 pm ET ▪ Virtual

Learn about climate change in your area and get inspired to take action. This event will kick off a 10 part Youth Climate Leadership Series*, held monthly focusing on different climate change related topics, and a Youth Climate Art Program, which will culminate with an exhibition at NNC in April 2022.

Diane Burko, a research-based artist who has investigated ice fields of Greenland, Iceland, Svalbard, Alaska, Antarctica, Argentina's Patagonia, and New Zealand, and coral reef ecosystems in Hawaii and the American Samoa will speak about her experiences with art and climate change.

Greg Czarnecki, Director of Applied Climate Science for the Pennsylvania Department of Conservation and Natural Resources, will speak about climate change impacts in Pennsylvania and ways we can adapt and mitigate those impacts.

***Find out more at <https://nurturenaturecenter.org/youth-climate-summit-of-the-lehigh-valley/>**

Register for the Summit here

Please register for 2nd Annual Youth Climate Summit of the Lehigh Valley on Aug 17, 2021 12:00 PM EDT at: <https://attendee.gotowebinar.com/register/1415378644891224848>

Questions - Kathryn Semmens, ksemmens@nurturenature.org, 610-253-4432 ext. 103

Financial and other support for Youth Leading the Way: an education and leadership program in the Lehigh Valley has been provided by the Department of Environmental Protection's 2020 Environmental Education Grants Program.

The Youth Climate Summit is part of CREATE Resilience, a project of the Nurture Nature Center, under award NA18SEC0080005 from the Environmental Literacy Program of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

The Climate Leadership Series will meet on the second Saturday of every month from 1-2:30 pm ET with both virtual and in-person attendance options available.

September 11th, 2021 – Climate Leadership Series 1

Overview of NNC, overview and discussion about environmental justice

October 9th, 2021 – Climate Leadership Series 2 (Recording [here](#))

Presentation on nature based solutions for climate change mitigation and adaptation

November 13th, 2021 – Climate Leadership Series 3 (Recording [here](#).)

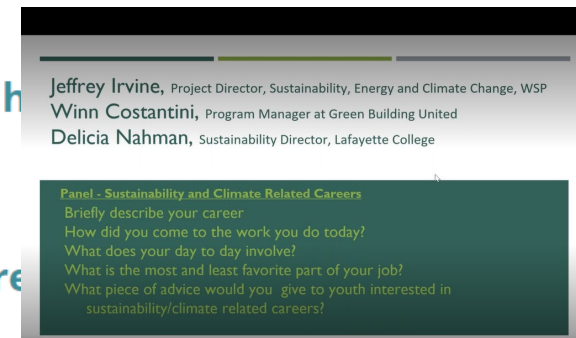
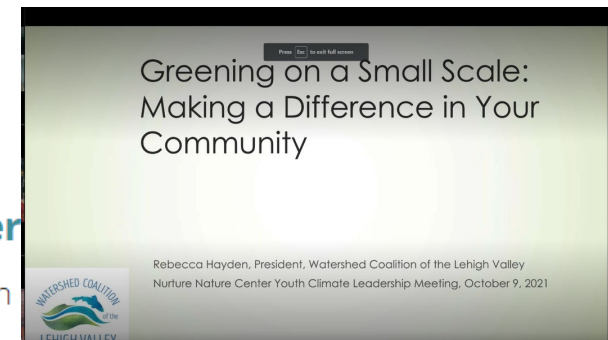
Climate related careers – panel discussion with sustainability professionals

December 11th, 2021 – Climate Leadership Series 4 (Recording [here](#))

Green Schools Program, communicating climate change

January 8th, 2022 – Climate Leadership Series 5 (Recording [here](#))

International, national, state and municipal level initiatives related to climate action



February 12th, 2022 – Climate Leadership Series 6 (Recording [here.](#))

Science on a Sphere presentation about mitigation strategies (renewable energy and green infrastructure)

March 12th, 2022 – Climate Leadership Series 7

Presentation on local climate action efforts (Sierra Club)

April 9th, 2022 – Climate Leadership Series 8

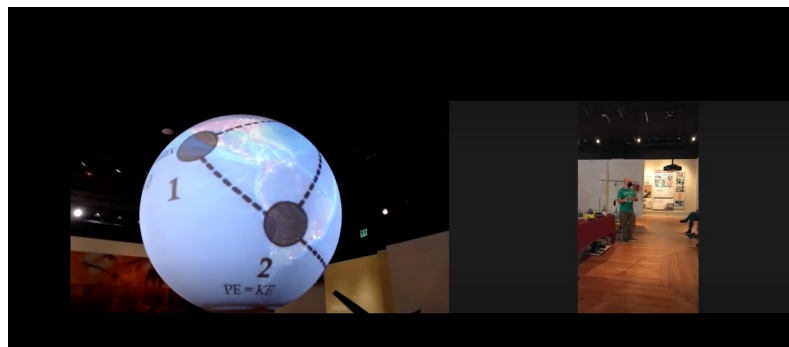
Special climate event – panel discussion related to the “All We Can Save” book and art exhibit at NNC.

April 30th, 2022 – Climate Leadership Series 9

Annual Youth Climate Summit – Lightning talks from inspiring youth and other experts followed by a guided tour of the “All We Can Save” exhibit

May 14th, 2022 – Climate Leadership Series 10

Help clean up Easton! Join us for a trash pick up event along Lehigh Drive at 10 am Details to come.



Seeking college students interested in learning about and rewriting the story of climate change!

Attend a virtual webinar Thursday February 3rd from 4-5:30 pm to learn more about the program and how you can get involved.

Attend a Science on a Sphere program about renewable energy on February 12th 1-2 pm and stay to create a book jacket that highlights a positive local story during open studio 2-4 pm.

Have your book jacket included in an art exhibition at NNC opening April 8th 6-9 pm.

Participation is open to any student and materials will be provided (no art experience necessary)



Questions? Email Kate at ksemmens@nurturenature.org

Interested? Sign up here: <https://www.signupgenius.com/go/8050544ABAE2CA5FA7-nncyouth>

Youth Climate Leadership Program

@ THE NURTURE NATURE CENTER Easton PA

<https://nurturenaturecenter.org/youth-climate-summit-of-the-lehigh-valley/>

"To change the future, we must first imagine it into existence."

- Samuel Alexander



GOAL: to celebrate local efforts towards sustainability and to envision a future where we have come to grips with the changes to come with more prepared and resilient communities.

1. Our BIG idea:



“Rewriting the Story of Climate Change”

A creative and educational community outreach project that tells local stories related to climate change.

Creating/writing/designing book jackets that will be part of an exhibit at the center. These book jackets will also be printed and handed out to friends, family, and classmates for use as notebook and textbook covers. They will spread positive stories of resilience and scientific knowledge in a creative way.



Book jackets offer strong visuals, a title, a summary, information about the author and reviews.

Think of them as being like a movie trailer.



Book Jacket Anatomy

glaciers, volcanic activity, controversial logging, the famous Timberline Lodge, Native Americans, and the early pioneers.

The mountain and its surrounding forests, lakes, and rivers continue to be an inspirational and functional landscape for the region, while at the same time Mount Hood is under pressure to accommodate greater populations and a multitude of uses. Many count on it for water, timber, and other natural resources.

On Mount Hood is a lively, dramatic, and compelling story of a mountain and its impact on the people who live in its shadow every day.



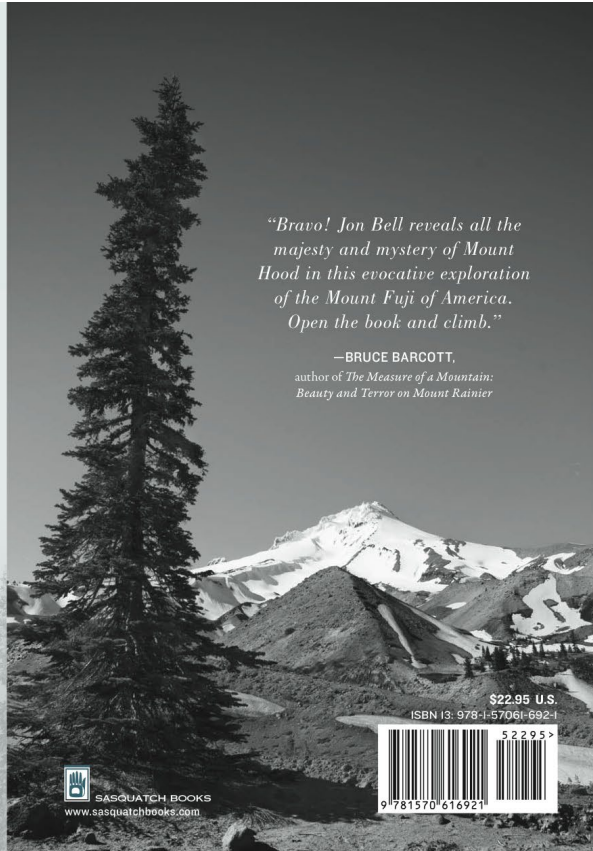
Photo by Andy Bell

JON BELL grew up in Ohio but he has been writing in Oregon since 1997. His work has appeared in numerous publications, including the *Oregonian*, *Backpacker*, and *Oregon Coast*. He lives with his wife, two kids, and a black Lab in Lake Oswego, Oregon.

Cover and book design
by Anna Goldstein



SASQUATCH BOOKS
www.sasquatchbooks.com



"Bravo! Jon Bell reveals all the majesty and mystery of Mount Hood in this evocative exploration of the Mount Fuji of America. Open the book and climb."

—BRUCE BARCOTT,

author of *The Measure of a Mountain: Beauty and Terror on Mount Rainier*

\$22.95 U.S.

ISBN 13: 978-1-57061-692-1



SASQUATCH BOOKS
www.sasquatchbooks.com

BELL

on MOUNT HOOD

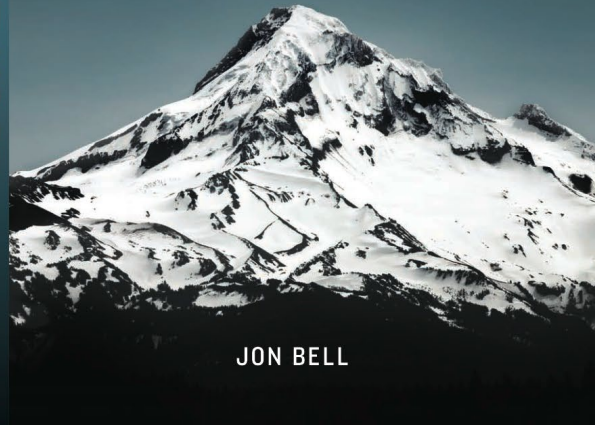
SASQUATCH BOOKS



on MOUNT HOOD

A Biography of Oregon's Perilous Peak

JON BELL



NATURAL HISTORY

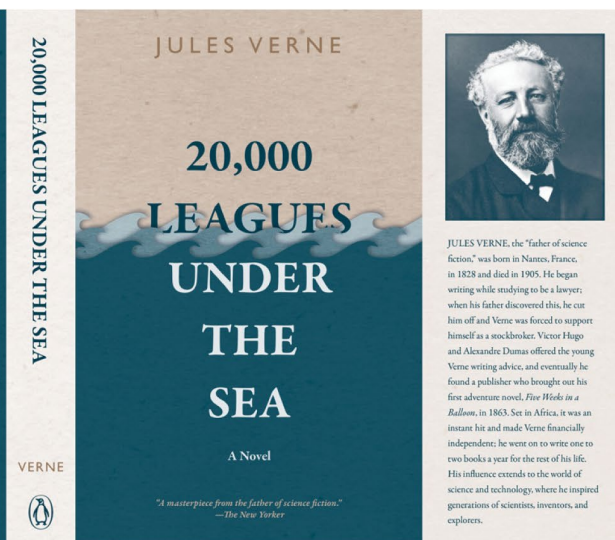
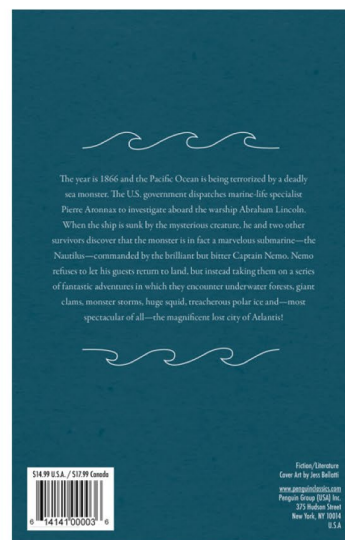
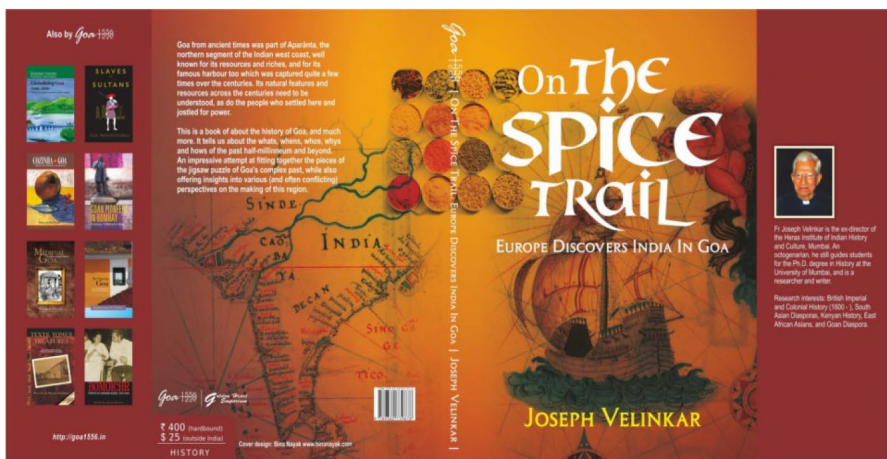
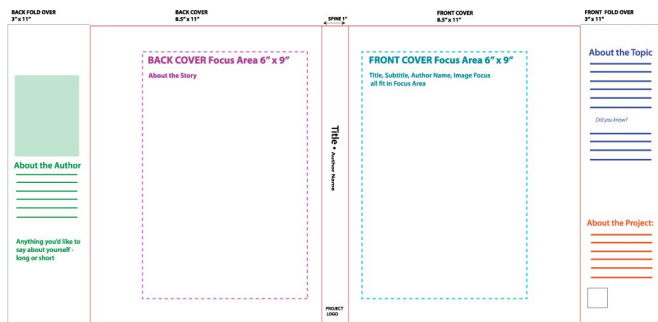
\$22.95 U.S.

ON MOUNT HOOD tells the story of Oregon's legendary iconic peak, a mountain that draws five million visitors to its stunning beauty every year. Hood, as locals call it, is a mecca for skiers and snowboarders, hikers, campers, and climbers, more than 10,000 of whom flock to the mountain annually in an attempt to reach its summit. Writer Jon Bell paints a portrait of Mount Hood through his own engaging personal narrative—including an epic trip around the mountain on the storied Timberline Trail—as well as through the stories of countless climbers, scientists, historians, and many others who live, work, and play within the mountain's reach.

An anchor of the Pacific Northwest, Mount Hood's influence is wide-reaching. It helps create the notorious Oregon rains and deep alpine snows, its forests provide some of the purest drinking water in the world, its slopes paved the way for snowboarding in the mid-'80s, and its snowy peak captures the attention of the nation every time it wreaks fatal havoc upon climbers striving to get to the top. Bell recounts in chilling detail several of the mountain's most dramatic accidents and rescues, including a vicious 2006 storm that claimed the lives of three climbers.

He also writes of the flora and fauna on the mountain, as well as its shifting and unpredictable weather, its retreating

(continued on back flap)



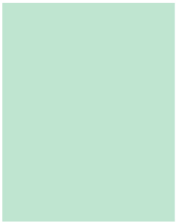
BACK FOLD OVER
3" x 11"

BACK COVER
8.5" x 11"

SPINE 1"

FRONT COVER
8.5" x 11"

FRONT FOLD OVER
3" x 11"



About the Author

Anything you'd like to say
about yourself - long or
short

BACK COVER Focus Area 6" x 9"

About the Story

Title • Author Name

PROJECT
LOGO

FRONT COVER Focus Area 6" x 9"

Title, Subtitle, Author Name, Image Focus
all fit in Focus Area

About the Topic

Did you know?

About the Project:



2. The Rules (Part II)

About the Story -

This is the description of your story.

100-250 words

You can include a quote, poem or review

IF it helps to tell your story

Did you know? -

This explains the science that
supports your story.

How does it link to climate change?

We will be citing the resource.

50-100 words

LOCAL Establish a sense of place: Geography, Landmarks, Climate, Neighborhoods, Products, Brands, Schools, Traditions, Cultural Icons, Events, Architecture, Celebrities, Industry, Language, Sounds, Smells, Foods, Heritage, Art

POSITIVE A solution. Modeling positive change. Doing the “right thing”. Celebrating a project or person. Working towards a common goal of resilience. Change to make our environment more equitable. New, more sustainable technology.

SCIENCE - Climate Change Linking the story to the science. Write down your sources.



climate VISUALS

7 core principles for climate change communication



Show real people



Tell new stories



Show climate change causes at scale



Show emotionally powerful impacts



Understand your audience



Show local (but serious) impacts



Be careful with protest imagery



Madeline Squarcia is a senior at Lafayette College studying Engineering and Environmental Studies. Born and raised in Easton, she is well aware of the community and proud to be working with the Nurture Nature Center. She is passionate about deepening her understanding of the relationship between social and environmental justice. In 2021, she founded the initiative, "Bags to Beds" to repurpose plastic bags in a meaningful way. After college, she aims to use the skills she has developed from her academic career and extracurricular activities to create a more just, resilient, and sustainable world. She believes that education is the foundation for all meaningful change and hopes to empower more young people to become environmental changemakers.

Bags to Beds



www.harcampus.com/school/lafayette/lafayette-bags-to-beds-initiative/

Following the start of the COVID-19 pandemic, the reliance on single-use plastics heavily increased. This was especially true for college campus dining halls. At Lafayette College, many students used upwards of 21 plastic bags a week to transport food. If you multiply this by the number of students (21 bags X 2,500 students), you get close to 53,000 plastic bags a week! That's so much plastic waste! To combat this, I started an initiative to collect, sort, cut, and loop these plastic bags into balls of plarn (plastic yarn). This plarn was then crocheted into sleeping mats that were donated to Safe Harbor (the local homeless shelter). I was accompanied by a group of 72 students that were passionate about preventing plastic waste and enhancing social justice. Together, we saved over 7,000 plastic bags from polluting the environment and donated 7 sleeping mats to Safe Harbor. This initiative is an example of how we can promote environmental and social justice with simple and creative solutions. If you're interested in turning Plastic into Plarn, see the instructions below. You can also learn more about this initiative (called "Bags to Beds") by scanning the QR code below.

How to Make Plarn:

1. Get the plastic bag and scissors.



2. Cut off the handles and the bottom of the bag.



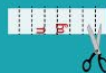
3. Fold the bag in half (uncut sides together).



4. Fold in half again.



5. Turn the folded edge toward you and cut 1" strips across the folded rectangle.



6. Unfold the looped strips.



7. Insert one end of one looped strip into the other looped strip, draw through, and tighten.



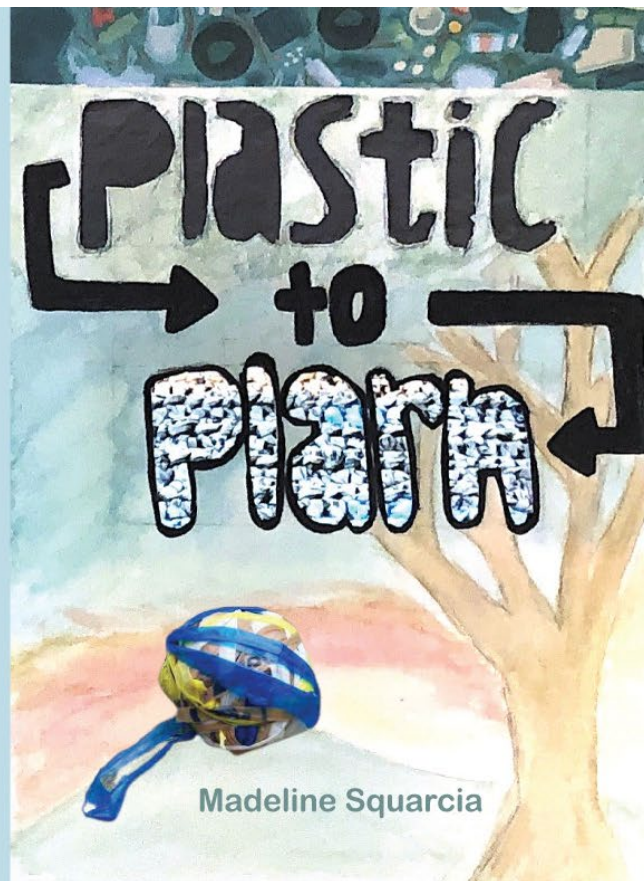
8. You should end up with two looped strips knotted together. Continue inserting strips to create a ball of plarn.



<https://www.sevencrafts.com/Green-Crafting/How-to-Make-Plarn-Video>

Plastic → to → Plarn

Madeline Squarcia



Though convenient, plastic bags are extremely wasteful, require a great deal of energy to produce, and contribute to the problematic single-use mindset we have grown accustomed to. Americans use over 100 billion plastic bags a year and nearly all of them end up polluting our land, waterways, and oceans¹. Thousands of animals die every year from ingesting and getting tangled in these plastic bags. Plants are destroyed and our livelihoods are damaged by the greenhouse gases emitted during the production process. For such short-term use, it can take over 1,000 years for these plastic bags to degrade down to microplastics that continue to pollute the environment in countless ways.

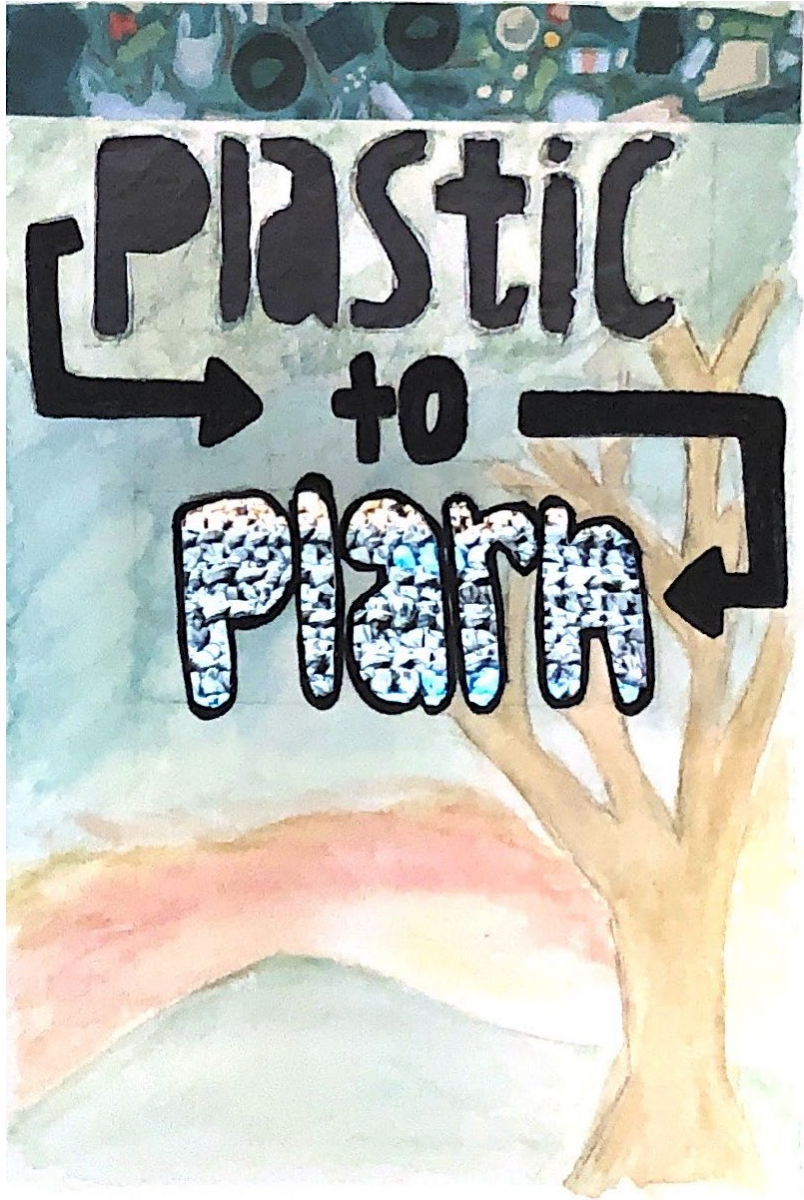
So how can we solve this problem?

Number ONE, we can stop relying on single-use plastics when there are easy and more sustainable substitutes. Next shopping trip, if you only have a few items, challenge yourself to carry them by hand without a bag. If you need a bag, consider using a reusable one made from sustainable materials. Number TWO, we can look at repurposing the plastic we do use in our life. Have a lot of plastic bags hanging around your house? See what fun DIY projects you can use to transform the bags into something more meaningful and long-lasting. A great and easy way to do this is by making PLARN (plastic yarn)!!! You can crochet, knit, or tie the plastic plarn into anything your heart desires. And finally, if the first two options are not possible, consider recycling plastics properly (find plastic bag collection centers). The plants, animals, and world will thank you for doing your part to protect the environment and reduce plastic waste!

¹ https://www.biodiversity.org/programs/population_and_sustainability/sustainability/plastic_bag_facts.html

This book jacket was created through Nurture Nature Center's Youth Climate Leadership Series Arts Program. www.nurturenaturecenter.org/youth-climate-summit-of-the-lehigh-valley/

Financial and other support for Youth Leading the Way, an education and leadership program in the Lehigh Valley has been provided by the Department of Environmental Protection's 2021 Environmental Education Grants Program.



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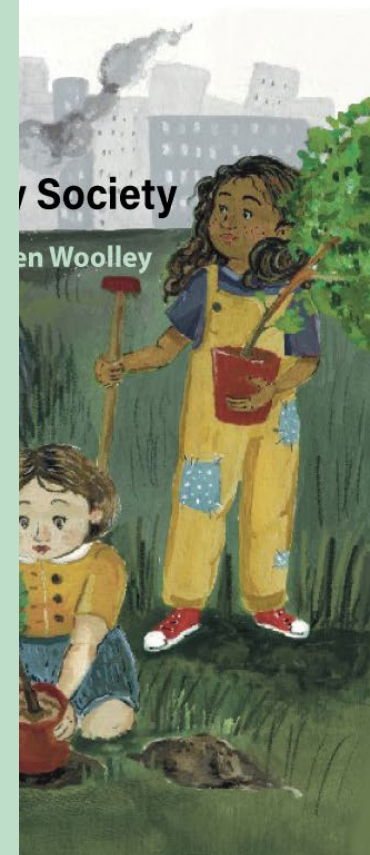
Vivien Woolley is an aspiring artist and illustrator, living in Allentown Pa. She is currently homeschooled and taking a class for Color Theory at the Lehigh Carbon Community College, and hopes to take more classes in the future to improve her art and illustrations. Outside of that, she loves horses, reading, and observing nature. She is very interested in living in a more environmentally friendly way and is especially fascinated by off-grid homesteading as a way to live sustainably.

It is the start of summer vacation and Aster is desperate to save her favorite park which has become run down and polluted after years of neglect. She soon begins to notice the pollution all over her city and is determined to change it. With her friends, Meg and Norris, she organizes the Sustainability Society, bent on educating people and fixing the mess they had created in their city. The Sustainability Society has one problem- they know nothing about sustainability. They set out trying to learn as much as possible about sustainable living, making new friends, and accepting responsibility along the way. Although not all goes to plan (is it really a group of children clean up a pond without adult help?) the Sustainability Society creates a plan for their city that leads to many adventures and the attention of a mysterious benefactor who funds their plans. Leaving odd clues for the children to decipher at each meeting. The children plant trees and build rain gardens, innovative ways to re-use and recycle old items, creating larger and more ambitious plans at each meeting while trying to discover who their mysterious benefactor could be. The final meeting looms ahead, as well as their deadline to have the park fully cleaned up, so Aster and the Sustainability Society work when they stumble upon the true identity of their mysterious benefactor, finishing the project with the great revelation.

The characters in this 'story' are trying to save their favorite park, and along with cleaning up the trash and planting new trees, they also build rain gardens to help protect the park's waterways from further pollution. Although the story is fictional, rain gardens are real and can be very beneficial in real life, as well as look beautiful in your yard or local park.

Rain gardens filter pollutants carried in stormwater runoff, improve drainage and help prevent flooding, as well as provide food and habitats for wildlife like butterflies and birds.

To learn more about rain gardens, there are many resources online, as well as checking your local library for books and information on them.



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Tracey Easthope

The climate prophets and the altarpiece



NURTURE NATURE CENTER

518 Northampton St, Easton, PA • 610-253-4432 • www.nurturenaturecenter.org



Tracey Easthope

*The climate orders
and the climate parade
(above and cover)*



CLIMATE CONVERSATIONS: ALL WE CAN SAVE

Elizabeth Barick Fall
Nancy Cohen
Kate Dodd
Laura Earle
Tracey Easthope
Susan Hoffman Fishman
Gina R Furnari
Leslie Sobel

NURTURE NATURE CENTER

April 8, 2022 - June 29, 2022

Opening Reception: Friday, April 8th, 6-9pm



Kate Dodd

*No Place to Land (above)
Climbing Threat (immediate right)*



Susan Hoffman Fishman
In the Beginning there was only water



Elizabeth Barick Fall
Witness, 2020



Leslie Sobel *Interwoven Ecologies*

Supported in part by Pennsylvania Council on the Arts



Third Annual Youth Climate Summit of the Lehigh Valley

Be inspired, get ideas, connect with others!

Saturday, April 30th, 2022 • 1 - 2:30 pm (in-person and virtual)

1-2 pm Lightning Talks

featuring inspirational young women in the Lehigh Valley:

Madeline Squarcia – Biodiversity and Sustainable Development

Melissa Benzinger McGlynn – Climate, Birds, and Art

Melissa Morales – Climate Change and the Delaware Water Gap

Louisa Durkin – What Success in Climate and Biodiversity Actions Look Like

2-2:30 pm Guided Tour

of the *Climate Conservations: All We Can Save* Art Exhibit at NNC

**If you are interested in the environment, sustainability,
climate change, or biodiversity this event is for you.**

Free to attend. Please register here: <https://tinyurl.com/3rdYCSLV>



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THE NURTURE NATURE CENTER

THANK YOU!

Find out more at

<https://nurturenaturecenter.org/>



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@NNCEaston

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