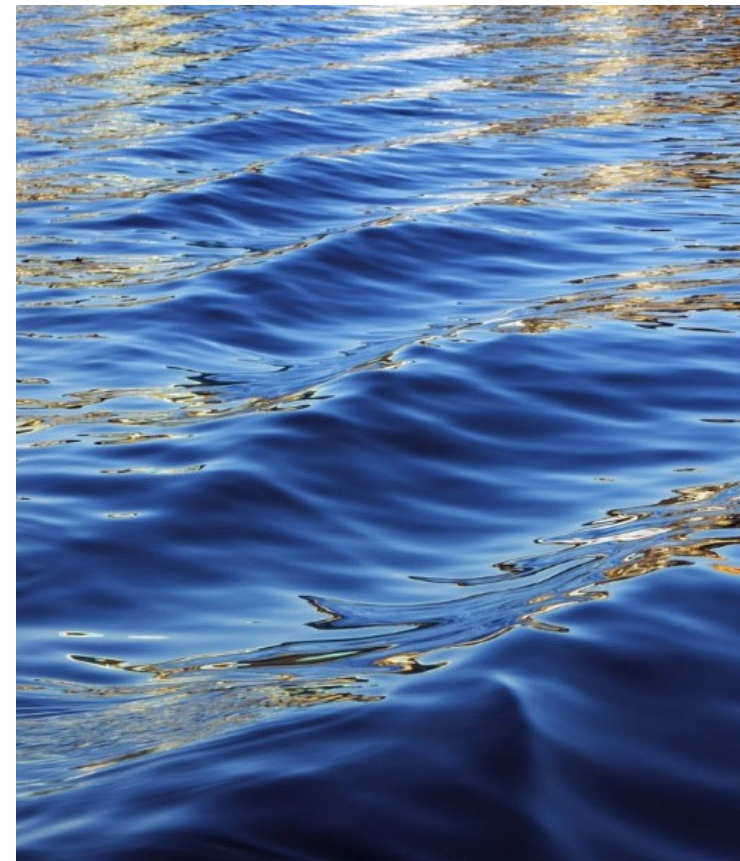


Districtwide Sustainability & Environmental Responsibility Planning

Board of Trustees
Resources Committee

December 01, 2020

RCCD
RIVERSIDE
COMMUNITY
COLLEGE
DISTRICT





Agenda

- ✓ **Background**
- ✓ **Environmental Planning**
- ✓ **Sustainability Stewardship**
- ✓ **Principles and Guidelines**
- ✓ **Sustainability at RCCD**
- ✓ **Climate Hazard Awareness**
- ✓ **CCCC'O BOG Goals**
- ✓ **Sustainability Concepts**
- ✓ **Holistic Approach to Sustainability**
- ✓ **Road Map & Next Steps**



Environmental Sustainability Planning

Sustainability

Is defined as using, developing, and protecting resources at a rate and manner that provides for the ability to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

RCCD Board Policy 5775

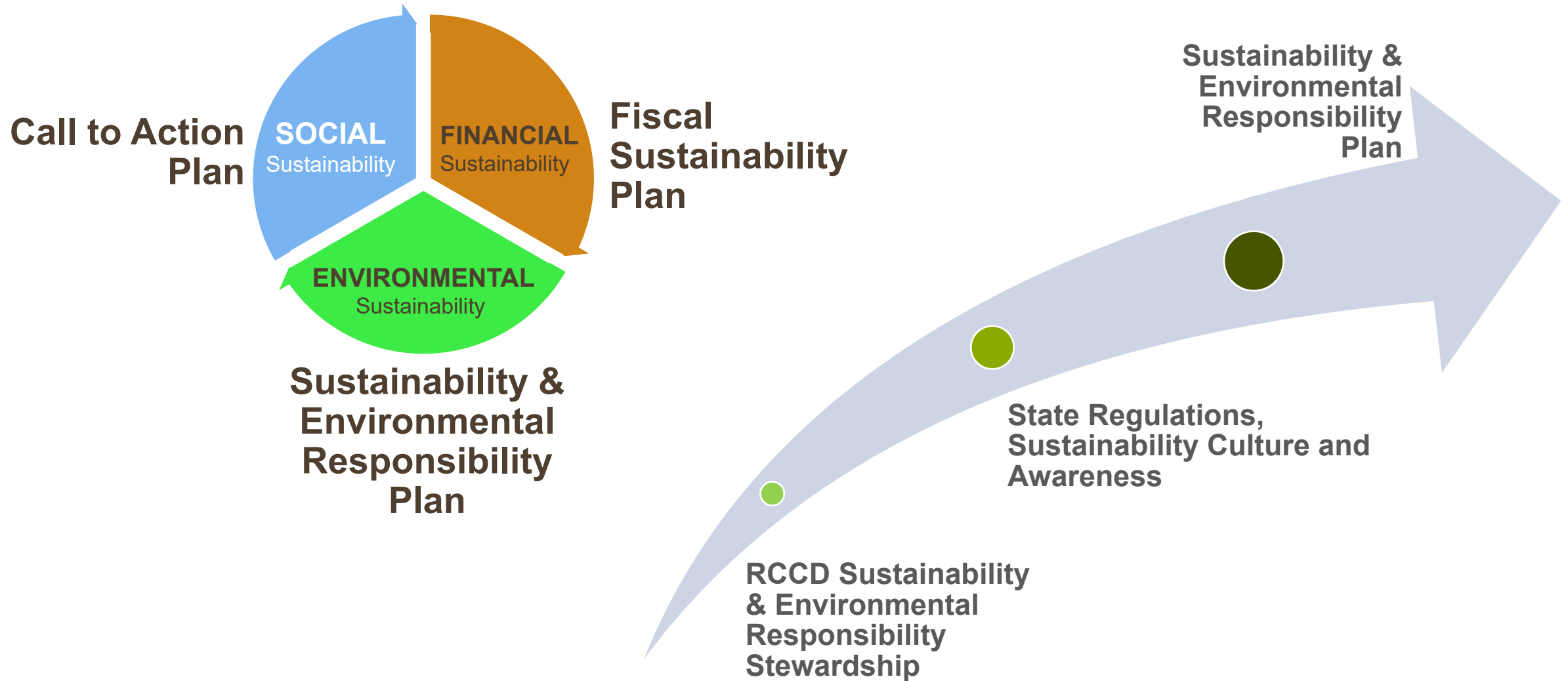
Sustainability and Environmental Responsibility (adopted in 2011)

Sustainability Planning

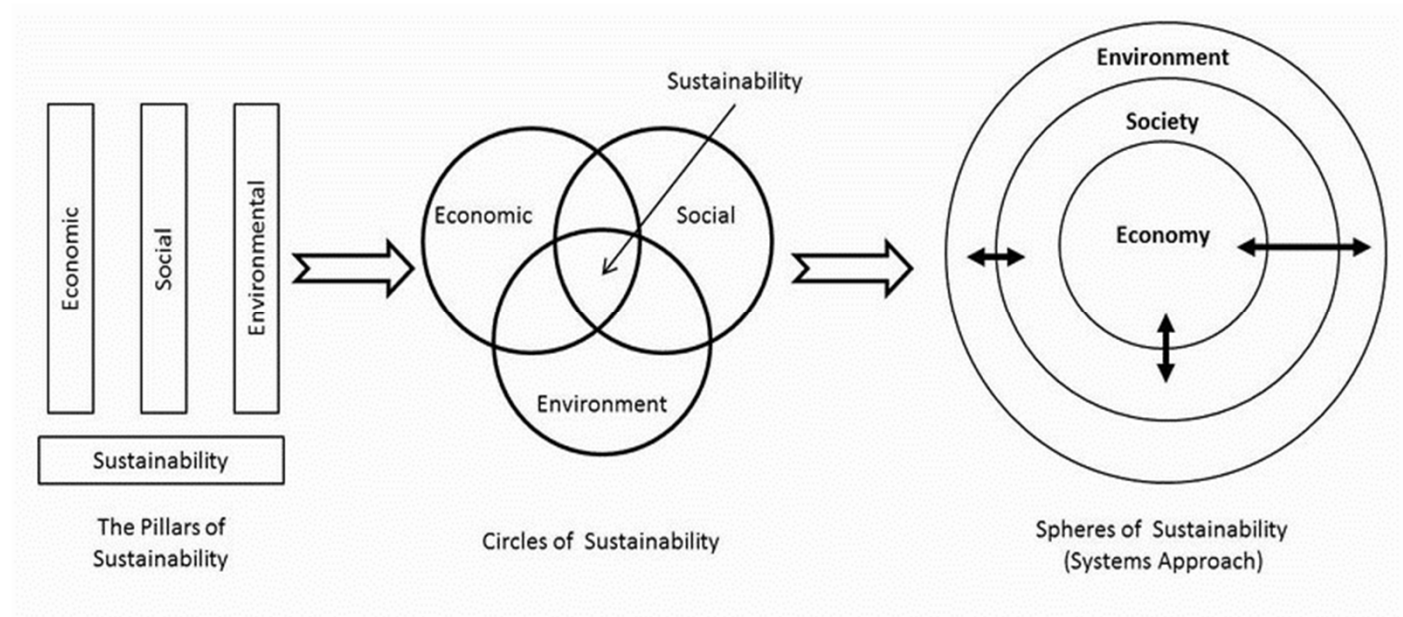
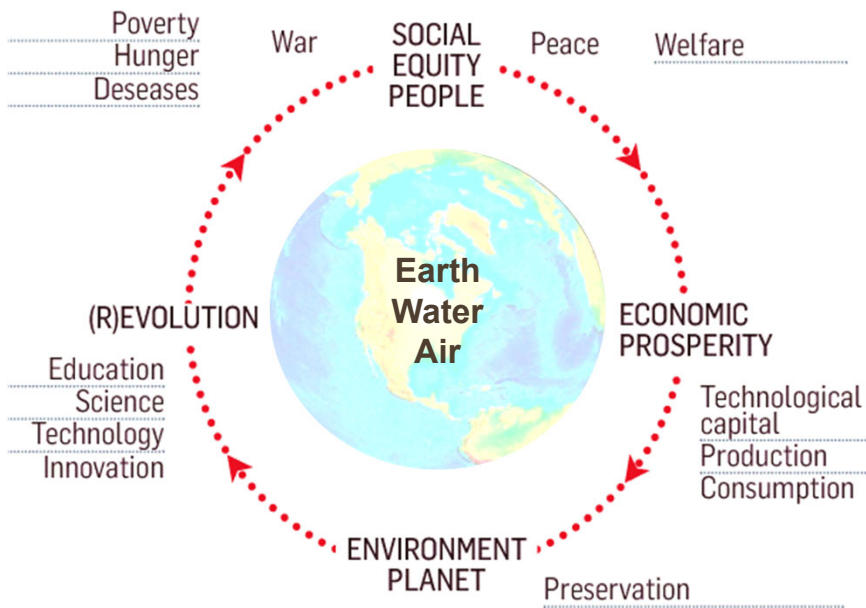
In order to live the sustainability and take an active and leadership role as a higher education institution, it is imperative that we respond to the evolving environmental and climate change issues happening around us, and address social and fiscal matters impacting communities we serve.



Environmental Sustainability Planning



Cultural Evolution of Sustainability



The American Association for Sustainability in Higher Education (AASHE) defines sustainability in an inclusive way, “encompassing human and ecological health, social justice, secure livelihoods and a better world for all generations”, and further models three elements of sustainability: **economic sustainability**, **social sustainability**, and **environmental sustainability**.



RCCD Sustainability Stewardship

- ❑ **Board Policy 5775 Sustainability & Environmental Responsibility adopted January 2011**
 - ✓ RCCD recognizes its responsibility to exercise environmental stewardship and to economically manage the use of buildings, land and natural resources

- ❑ **District Strategic Plan 2019-2024**
 - ✓ Objective 5.1 – Efficiently manage existing resources to support the ongoing academic and student support programs
 - ✓ Objective 5.7 – Provide a healthy and safe environment for students, faculty, & staff
 - ✓ Objective 5.9 – Streamline planning and design of facilities to comply with principles of total cost of ownership
 - ✓ Objective 6.1 – Establish and expand relationships with regional educational institutions



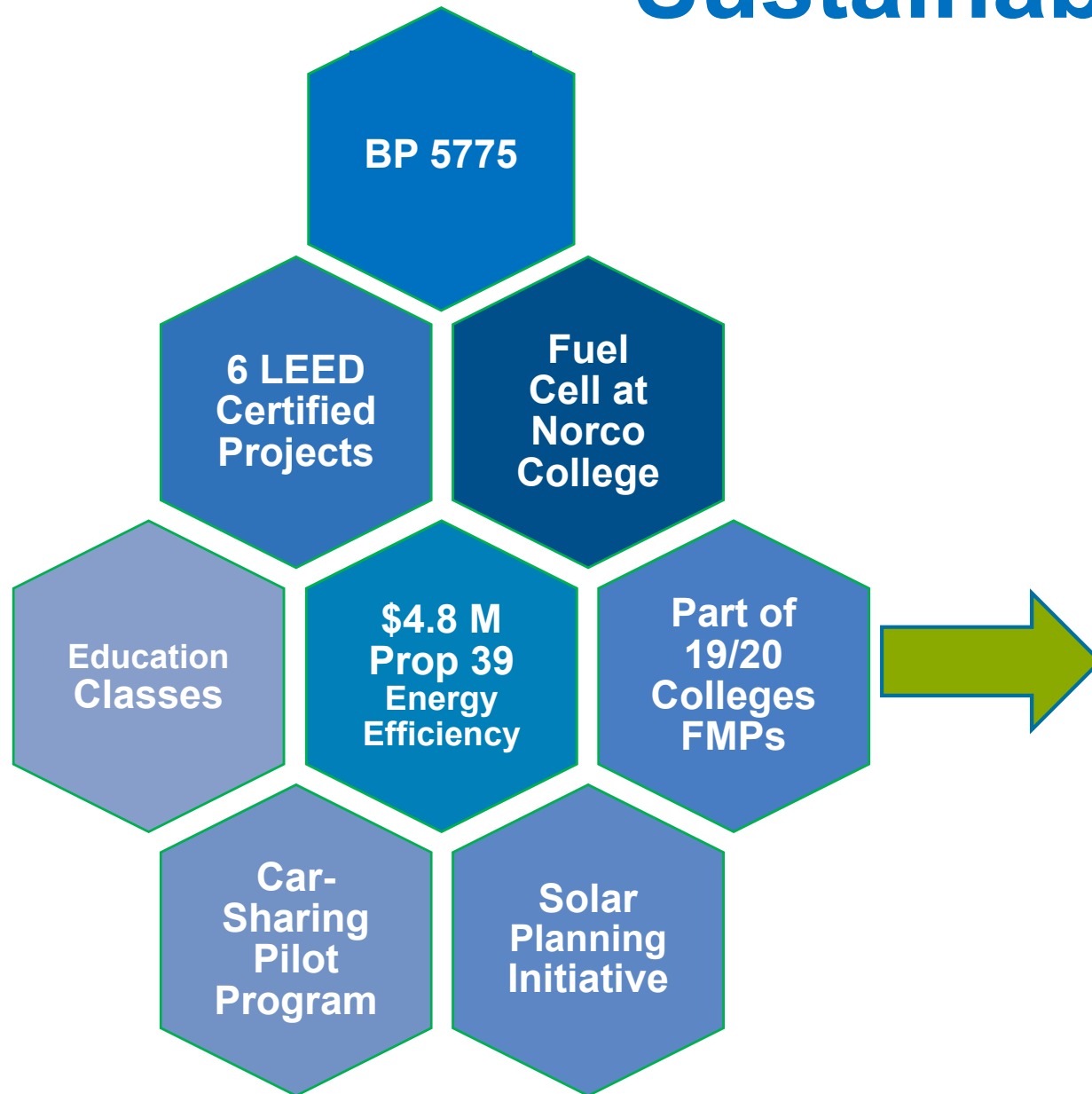
Board Policy 5775

Principles & Guidelines

- 1. Thoughtful utilization of land under the District control**
- 2. Strive to make District facilities as energy efficient as economically practical**
- 3. All new facilities of the District will be planned, designed and constructed to meet LEED (Leadership in Energy and Environmental Design)**
- 4. Promote initiatives that advance a sustainable environment by partnerships with public and private entities**
- 5. Sustainable management and operations practices**
- 6. Encouragement of curriculum in environmental sustainability**



Sustainability at RCCCD



- California Climate Change Scoping Plan
- CA Global Warming Solution Act
- Building Energy Savings by 2030
- CEQA guidelines for land use planning and greenhouse gas (GHG) emissions
- California Environmental, Public Health, and Workers Defense Act
- Governor's Executive Orders on climate change, California renewable energy sources, low carbon fuel standard, low-emission vehicles
- Climate Change and Sustainability Policy by the California Community Colleges Board of Governors

Climate Hazard and Risk

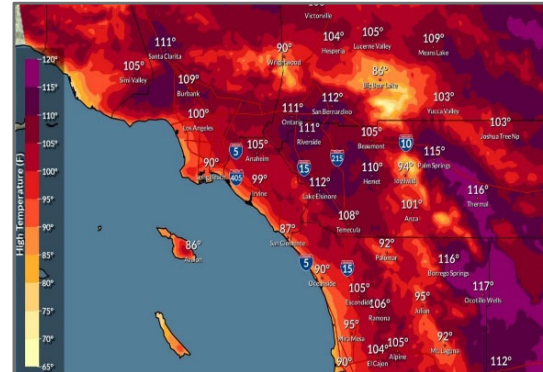
CLIMATE HAZARD and ENVIRONMENTAL RISK around us requires EDUCATION, AWARENESS & ACTION

Earthquakes & Age



- Failed distribution infrastructure
- Damage to power generation facilities

Warming Weather



- More A/C and so more energy
- Wind storms
- Additional water use = more energy

Drought



- Excessive energy usage / strained infrastructure
- Moving water / additional water use = more energy

Fires & Mudslides



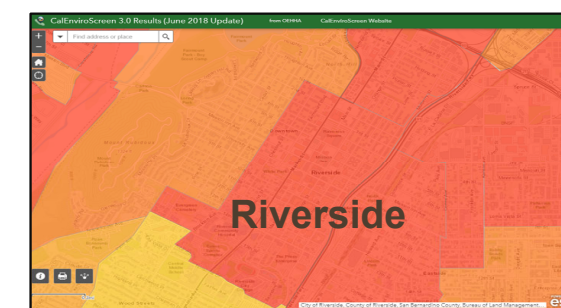
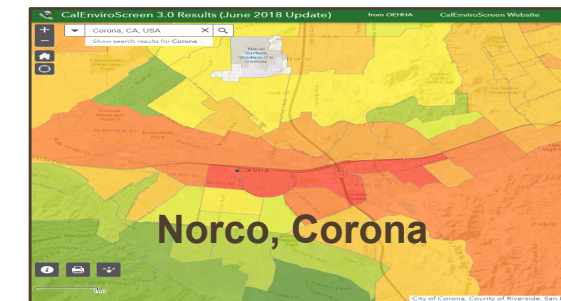
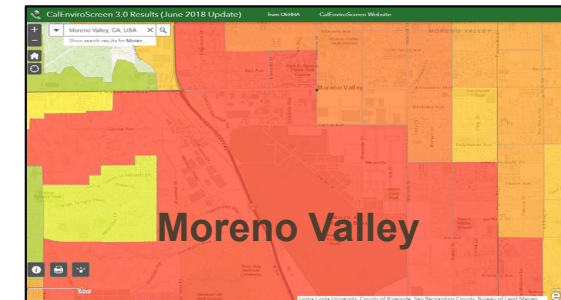
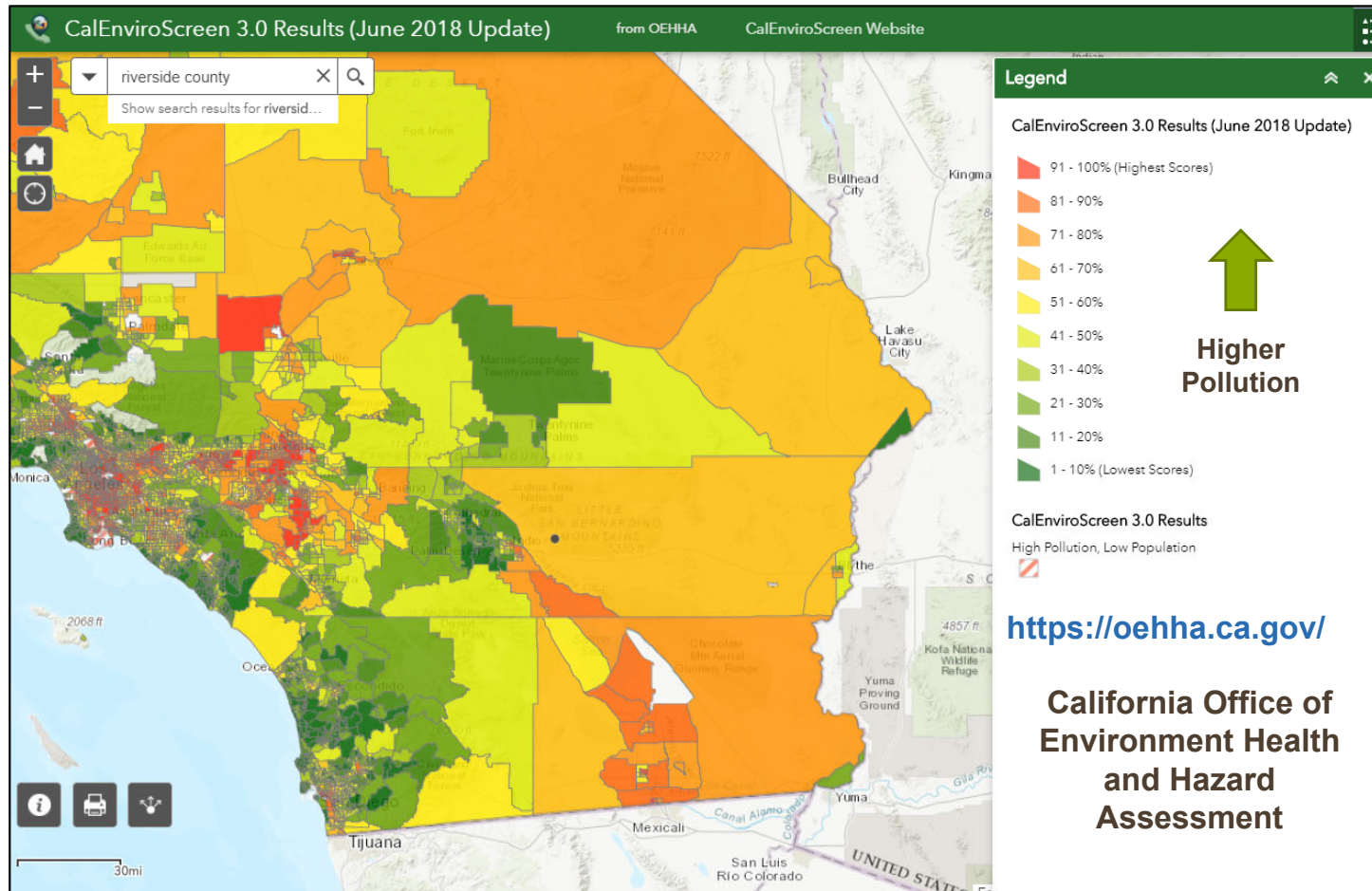
- Dry weather
- Wind storm
- More CO2
- Wildfire smoke alert



Aging Infrastructure, Recourses and Climate Change



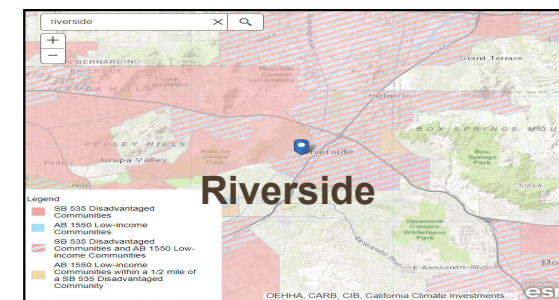
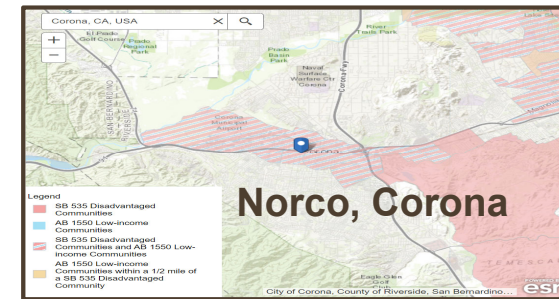
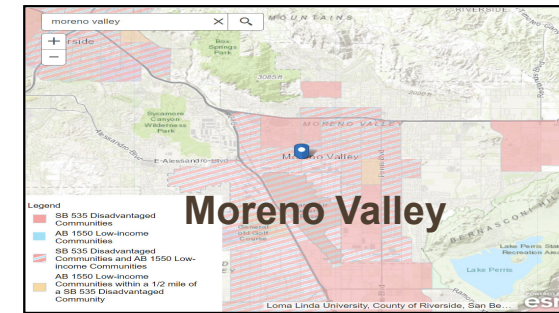
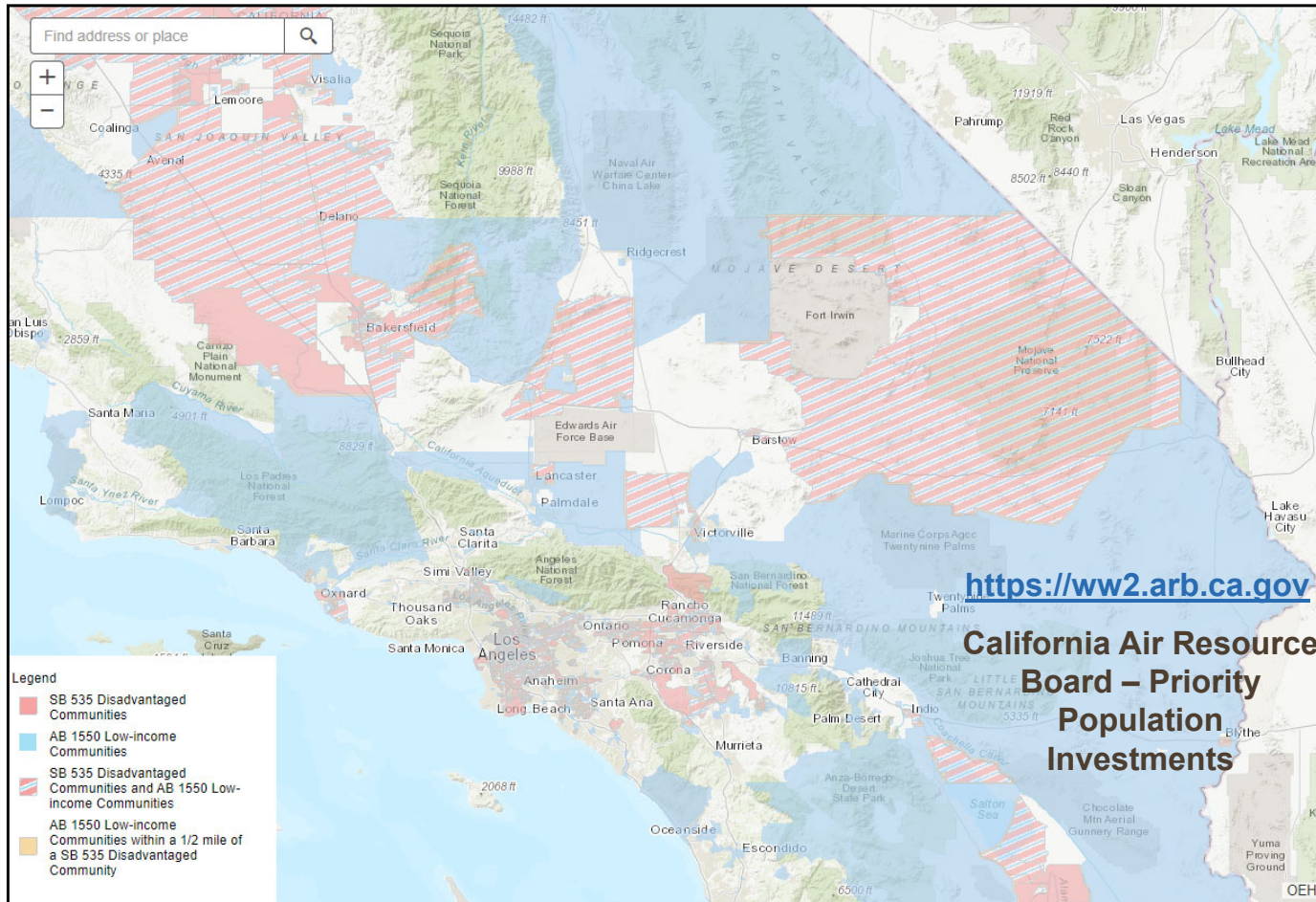
RCCD in CalEnviroScreen 3.0 (June 2018)



SB 535 Disadvantaged Communities that are identified by the California Environmental Protection Agency (CalEPA) as the top 25% most impacted census tracts in CalEnviroScreen. CalEnviroScreen uses **environmental, health, socioeconomic** information to produce scores for every census tract in the state.



RCCD in California Air Resources Board



Legend

- SB 535 Disadvantaged Communities
- AB 1550 Low-income Communities
- SB 535 Disadvantaged Communities and AB 1550 Low-income Communities
- AB 1550 Low-income Communities within a 1/2 mile of a SB 535 Disadvantaged Community

AB 1550 Low-income Communities. Low-income communities and households are defined as the census tracts and households, respectively, that are either at or below 80 percent of the statewide median income, or at or below the threshold designated as low-income by the California Department of Housing and Community Development's (HCD) [2016 State Income Limits](#).**



CCCC'O BOG

Sustainability & Climate Action Policy

- Adopted by BOG in May 2019
- Specified key Climate Change Strategy Pillars

Strategy	2025	2030
Reduce greenhouse gas emission below 1990 level	30%	40%
Increase renewable energy consumption (RCCD Solar Planning Initiatives is underway)	25%	50%
Fleet vehicles are zero-emission vehicles (RCCD Carsharing Assessment is underway)	25%	50%
New buildings & major renovations will be constructed as Zero Net Energy (Assessing opportunities for MVC BCTC Phase I)	50%	100%
New Buildings & Major Renovation facilities delivered with Leadership in Energy & Environmental Design (RCCD delivered 6 LEED Silver facilities)	50%	100%
Reduce municipal solid waste	25%	50%
Increase procurement of sustainable products and services	20%	40%

State offers Incentives: 2% for new construction (exceed 10% of code) and 3% for major renovation (exceed 15% of code)



Sustainable Framework Total Cost of Ownership

• Open Building Concept

- Design for Disassembly
- Recycle Demounting Assemblies
 - Material Reclamation
 - Gain Asset Value

7
Reuse

6
Demolition

1
Inception

- Data Analysis
- Assessment
- Programming
- Funding

**Project
Life-Cost
Cycle (LCC)**

5
**Performance
Improvement**

2
**Planning &
Design**

- Integrated Design Process
- Data Analytics Modeling

- Repair
- Adjustment

4
**Use and
Operation**

3
Construction

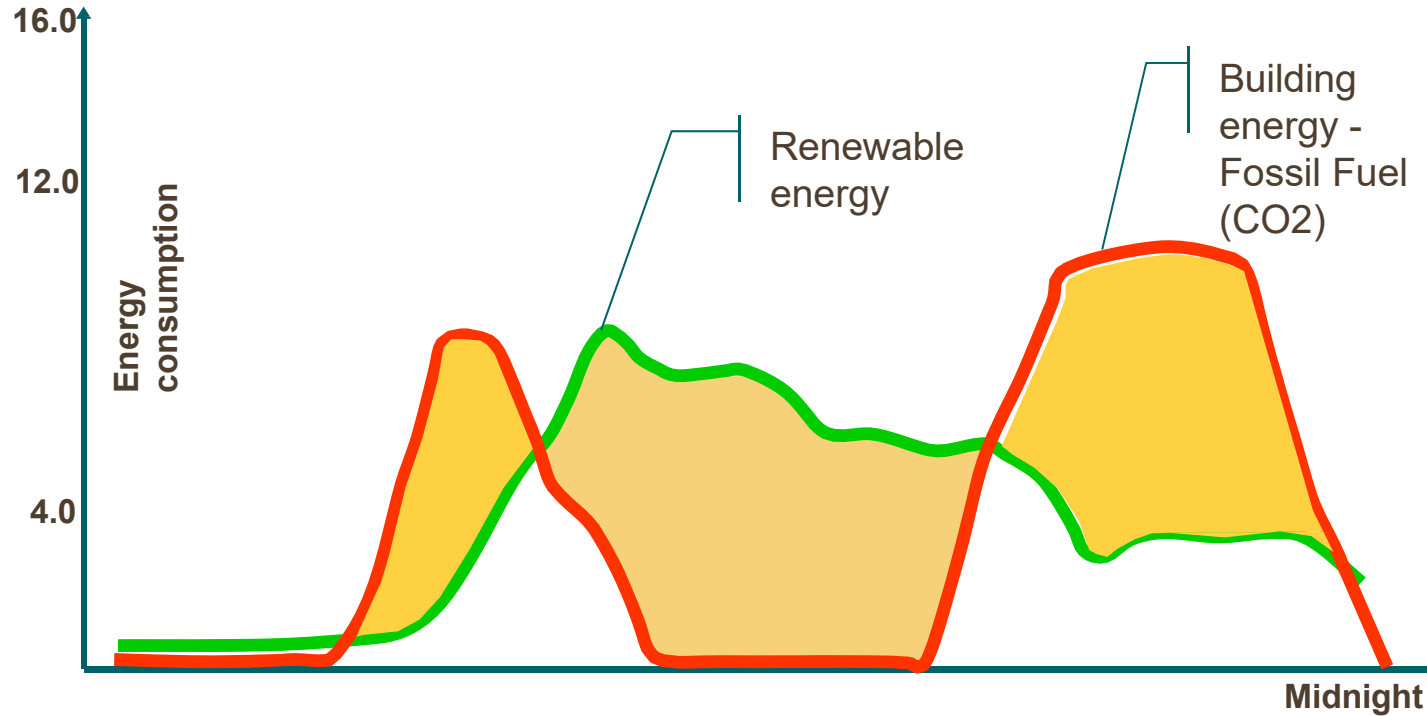
**Sustainable
Facilities**

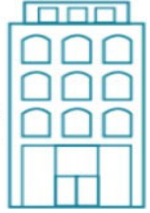
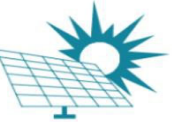



**Lower Operation Costs,
Higher Comfort Level,
Better Environment,
Higher Efficiency**



Zero Net Energy & Zero Net Carbon



- Step 1 Maximize Energy Efficiency 
- Step 2 Onsite renewable energy 
- Step 3 Offsite renewable energy 

ZNE: A building, or a group of buildings or a campus achieve Zero Net Energy when the energy produced through renewable energy technologies is equal to or greater than the fossil-fuel based energy consumed over the course of a year..”

ZNC “a highly energy efficient building that produces on-site, or procures, enough carbon- free renewable energy to meet building operations energy consumption annually.”

Carbon Neutrality having a net zero carbon footprint, refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset, or buying enough carbon credits to make up the difference



Holistic Approach to Environmental Sustainability

Integrated Planning Process:

- Board Policies
- Administrative Policies
- Strategic Planning Objectives
- Sustainability Goals
- Educational Master Plan
- Facilities Master Plan
- Integrated Energy Plan
- Infrastructural Plan
- Building Standards
- Standard Operation Procedures
- Behavioral Changes





Environmental Sustainability Road Map

- 1 • **Establish Sustainability & Environmental Responsibility Committee** (Subgroup of Facilities Planning Development Council)
- 2 • **Define Charge, Goals, Objectives, Criteria, and Timeline**
- 3 • **Select and Prioritize Implementation Programs**
- 4 • **Develop and articulate Sustainability & Environmental Responsibility Plan**
- 5 • **Implement Sustainability & Environmental Responsibility Plan**
- 6 • **Regularly Monitoring and Reporting Progress**



Environmental Sustainability Committee Structure

Proposed Timeline:

- **Form a Sustainability & Environmental Responsibility Committee**
 - January 2021
- **Procure a Sustainability Consultant**
 - February 2021
- **Sustainability & Environmental Responsibility Plan Development**
 - March – December 2021
- **DRAFT Sustainability & Environmental Responsibility Plan**
 - September 2021
- **FINAL Sustainability & Environmental Responsibility Plan**
 - December 2021

Board of Trustees

District Strategic Planning Council

Facilities Planning and Development Council

Sustainability and Environmental Responsibility Committee

Sustainability Consultant

Districtwide Sustainability & Environmental Responsibility Planning

THANK YOU

RCCD
RIVERSIDE
COMMUNITY
COLLEGE
DISTRICT

