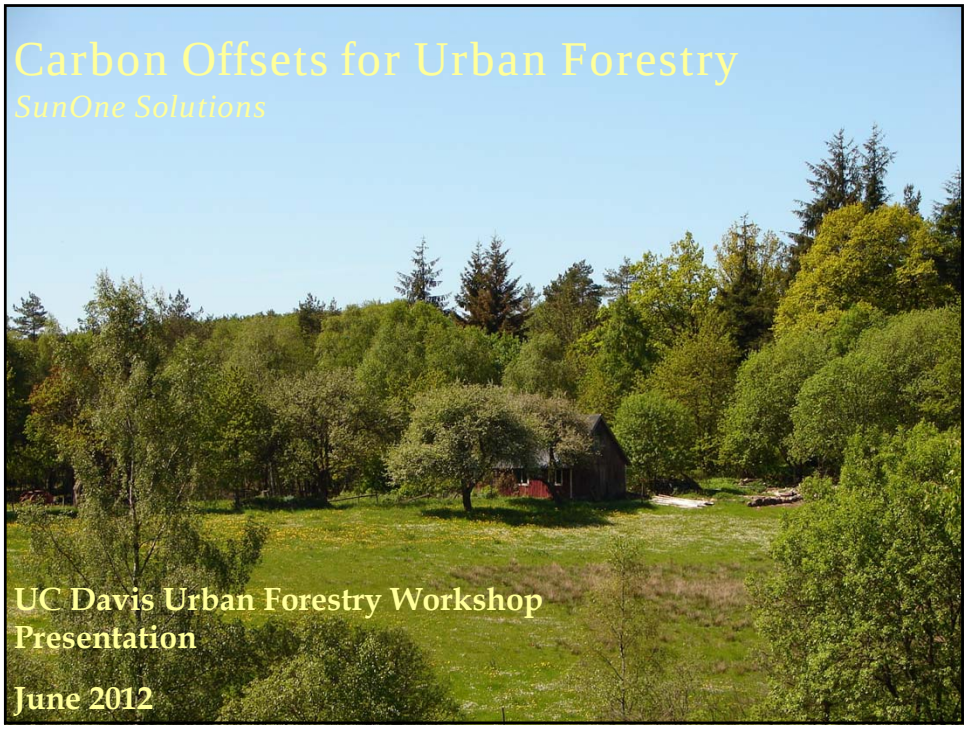

AGENDA

- Introduction to SunOne Solutions
- The CA Cap & Trade System in One Slide
- Overview of Offset Projects
- Focus on Urban Forestry

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SUNONE SOLUTIONS OVERVIEW

- **Leading ecosystems services provider**
  - 150 projects, 2.2 million acres, across 11 U.S. states
  - Named #1 Aggregator in North America in 2010
- **Team made up of recognized experts in carbon credit industry**
- **Nationwide presence**
- **Our Focus: Ag & Forestr**
- **Slow start for Urban Forestry**
  - ***But should be a key part of the solution***

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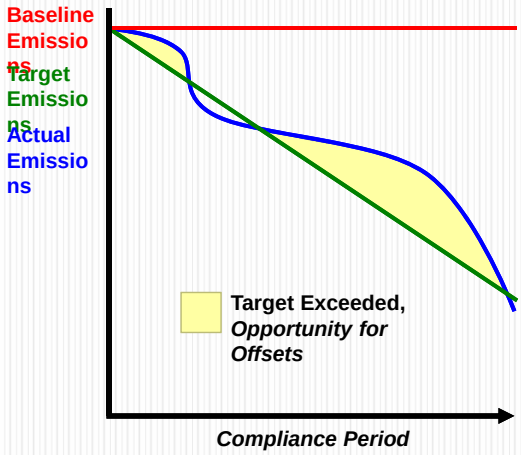
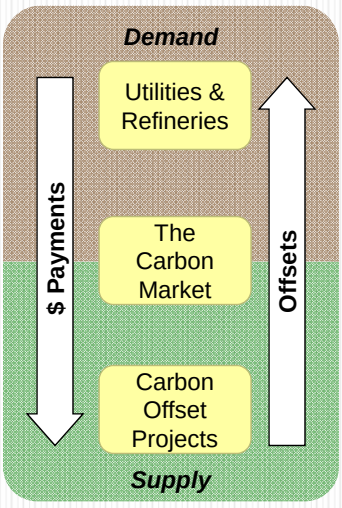
CALIFORNIA'S CAP AND TRADE SYSTEM





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OFFSET PROJECTS

- *An **offset** is a verified emission reduction, registered with the State*
- Credits are earned *ex post*: after project is implemented and after sequestration has been measured and verified

Design > Measure > Verify > Register > Monitor

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
What is the project concept? Who are the stakeholders? Determine project feasibility.	*Gather known project details. Submit for initial review and public listing.*	*Design and implement the project. Quantify and account for carbon sequestration.*	*Record all final project design details. Produce final drafts of project documents.*	*Hire a 3rd party verifier/auditor to review the project documents and perform a site visit.*	*Register the project with the State of CA. Finalize contract with buyer and deliver offsets.*

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URBAN FORESTRY PROJECT OVERVIEW

- **Wide-scale tree planting will deliver several environmental services, including the sequestration of CO_2**
- **What kind of tree planting projects are eligible?**
  - In **municipalities**, on **educational campuses**, by **utilities**
  - Large (>100ac) urban forest tracts are not eligible
  - Planting must be above and beyond legal requirements
  - 25 year initial term (able to renew successive 25 year terms)
  - Planting requirements must be met (eg avg 5 meters of spacing)
  - Project owner is responsible for planting, care, &

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URBAN FORESTRY: SAMPLE ECONOMICS

- **Key drivers**
  - **Carbon sequestered (#, type, age of trees planted)**
    - ***Planting older/larger trees is better***
  - **Project Emissions (fuel used by vehicles & equipment to plant & maintain)**
    - ***Limit use of trucks & powered equipment***
  - **Project Costs (carbon inventory analysis & verification)**

Project Assumptions	
Number of Trees	90,000
Predominant Tree Type	White Pine
Avg DBH of tree planted	4.2"

Project Estimates	**Year 1-5**	**Year 6-10**	**Year 11-15**	**Year 15-20**	**Year 21-25**	**Total**
Total Offsets Generated	6,054	8,300	13,087	16,167	20,983	64,591
Est Avg Price / tCO_2	*$16.81*	*$25.96*	*$33.58*	*$42.86*	*$54.70*	*$40.41*
Carbon Revenue	$ 99,249	$ 218,340	$ 442,882	$ 696,769	$ 1,153,161	$ 2,610,400
Carbon Project Expenses	$ 44,780	$ 61,160	$ 97,442	$ 134,734	$ 205,800	$ 543,916
Cash Flow	**$ 54,469**	**$ 157,180**	**$ 345,439**	**$ 562,035**	**$ 947,361**	**$ 2,066,484**

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A NOTE ON CARBON SALES

- **Supply Agreement**
  - Lock in a buyer for the supply at fixed prices
  - *Most common, less risky—lock in a buyer, but upside could be limited*
- **Spot Market Transaction**
  - Sell credits every year at market price
  - *Highest risk, but preserves price appreciation upside*
- **Forward Sale:**
  - Pre-sell future supply today, receive cash up front
  - *Least common, buyer takes on significant risk, and so the price is heavily discounted*

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KEY TAKEAWAYS

- **Eligibility**
  - A project needs to be designed with the carbon market design
- **Data Collection Systems are <u>Critical</u>**
  - Species, height, dbh, date of measurement, and GPS coordinates
  - Vehicle mileage, equipment hours or fuel consumption
- **Barriers & Considerations**
  - Long-term point of view is **required**
  - Manage Expectations: carbon revenue will support, but not supplant traditional funding sources
  - ***Carbon is only ONE of the environmental services***

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QUESTIONS & CONTACT INFORMATION

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APPENDIX: DETAILED PROJECT OVERVIEW

- **Project Requirements**
  - "Net tree gain": muni & educational campuses must plant more trees than they remove
    - All dead trees must be replaced within 1 year to ensure permanence
  - Detailed data on each tree planted is required (see below)
  - Funding for maintenance of non-project trees must remain within 10% of historic levels
  - Eligibility Requirements must be met (see slide 7)
  - Reporting Requirements must be met (next slides)
- **Carbon Quantification Details**
  - All individual trees must be measured in Year 1
    - Species, height, dbh, date of measurement, and GPS coordinates
  - Volumetric biomass equations will determine carbon stocks
  - Estimate "Secondary Effects" and subtract from sequestration
    - For example: actual fuel used or standard factors to determine emissions from planting activities, care, and monitoring/as mater

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APPENDIX: DETAILED PROJECT OVERVIEW

- **Reporting Requirement: Tree Maintenance Plan**
  - Tree planting: # trees planted (new & replacement), species/size/location, relocations, annual tree planting expenditure (for both the project & muni/campus/utility)
  - Young tree care (<5 yrs): # young trees inspected/pruned, inspection/pruning cycle, annual young tree care expenditure (for both the project & muni/campus/utility)
  - Mature tree care: # mature trees inspected/pruned, inspection/pruning cycle, annual mature tree care expenditure (for both the project & muni/campus/utility)
  - Tree removal: # trees removed, species/size/location, removal cycle, annual removeal expenditure on (for both the project & muni/campus/utility)
  - Administration: avg $/tree site expenditure, and total admin expenditure (both the project & muni/campus/utility)

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APPENDIX: DETAILED PROJECT OVERVIEW

- **Reporting Requirement: Tree Monitoring Plan**
  - Choice of quantification methods (sampling vs rolling census)
  - Quantification steps & process
  - Methods used to measure & record tree size
  - Methods used & info collected on tree survival & health
  - Statistical methods used to extrapolate sample data, and calculation of sampling error
- **Reporting Requirement: Emissions & Sequestration Activity Data**
  - Data on the species, height, dbh, date of measurement, and location
  - Equations used to calculate tree volume, biomass and carbon stock
  - Make/model/year, annual amount & type of fuel for care vehicles (or vehicle miles traveled and average fuel economy)
  - Equipment type, horsepower rating, annual amount & type of fuel for maintenance equipment
- **Annual Offset Project Data Report** (must be reviewed by a Professional Urban

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