

# Urban Forest Project Protocol Version 2.0 Public Webinar



CLIMATE  
ACTION  
RESERVE

**August 19<sup>th</sup>, 2014**


*We will begin shortly*

## Agenda




CLIMATE  
ACTION  
RESERVE

- Presentation of major changes from V1.1 to V2.0
- Presentation of Urban Forest Management Project Protocol
- Questions?




## Why Version 2.0?

- Support from CalFIRE and USFS to revise UFPP
- Update protocol to current standards
  - Defining permanence
  - Clarifying eligibility
  - Clarifying quantification guidance
  - Clarifying verification




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## Why Version 2.0?


- Initial versions (1.0, 1.1) of the protocol presented significant financial hurdles to implementation of projects
  - Expanding geographic eligibility
  - Multiple Owners
  - Standardized quantification and verification
- Split into two protocols: Urban Forest Management Project Protocol and Urban Tree Planting Project Protocol



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# URBAN FOREST TREE PLANTING



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## Updated Project Definition (Section 2.2)

- Project Definition clarified now limited to activity of tree planting in urban areas where trees have not been harvested for commercial interest



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## “Urban Forest Owner” and “Project Operator” defined (Sections 2.2 & 2.3)



- Removal of term “Project Developer”
- “Urban Forest Owner”
  - entity that has legal authority to effect changes in urban forest carbon quantities
- “Project Operator”
  - one of the Urban Forest Owners or legal entity created to represent Urban Forest Owners responsible for undertaking carbon project

\*Also applicable to Urban Forest Management

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## Updated Project Location & Project Area (Section 3)



- Updated project location requirement
  - Project activities must occur within “Urban Area” boundaries, as defined by most recent publication of the United States Census Bureau
  - Previous version was limited to boundaries owned/controlled by municipality/educational institution/utility
- Project Area cannot include area where commercial harvesting of timber has occurred in the past 10 years
  - Projects with commercial harvesting must use the Forest Project Protocol

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## Update to Performance Test (Section 3.4.2)



- Must achieve GHG reductions or removals above and beyond performance standard metrics based on entity type, where metrics are based on the following data:
  - Municipalities/counties: trees per capita
  - Educational institutions: trees per acre of maintained landscaping
  - Utilities: trees per ratepayer

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## Social Co-Benefits (Section 3.7)



Social Provisions	Elements to Include in the Project Design Document (PDD)
Equitable distribution of forest resources	Describe how the project will make progress toward achieving relatively equal distribution of tree canopy cover by neighborhood whenever possible.
Public participation	Establish guidelines to ensure adequate notification, opportunities for public participation, and documentation with regards to public activities with urban forest management.

\*Also applicable to Urban Forest Management

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## Environmental Co-Benefits (Section 3.7)



- Environmental Provisions Include:
  - Biodiversity
  - Native/non-native species
  - Air quality
  - Water management
  - Etc.

\*Also applicable to Urban Forest Management

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## Quantification (Section 5)



- Baseline = Performance Standard Statistic
- Inventory
  - Must use appropriate biomass equations to calculate CO<sub>2</sub>e in above-ground (AG) portion of trees
  - Below-ground portion estimated as 26% of AG

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## Quantification (cont)



Project Year	0	1	2	3	4	5	6	7	8	9	10	Notes
Trees Planted in Project Year		350	654	539	-	101	-	-	-	-	-	# trees planted in year-X. Note that no trees were planted in year-4 and that a hiatus occurred in year-6
CO <sub>2</sub> e associated with trees planted in project year		14	26	22	-	4	-	-	-	-	-	CO <sub>2</sub> e determined by analyzing tree data (for trees planted in year-X) with biomass equations.
Total Project Inventory (CO <sub>2</sub> e)	-	14	41	65	69	77	82	87	92	97	103	Sum of CO <sub>2</sub> e associated with all trees planted during project. This is updated annually through inventory updates.
Performance Standard Trees Planted		50	50	50	50	50	-	-	-	-	-	Performance standard, based on entity, size, and region
Baseline Trees as a % of All Trees Planted		14%	10%	10%	13%	15%	15%	15%	15%	15%	15%	The running total of baseline trees compared, as a percentage, to the running total of project trees. Note that baseline trees are arrested when the project entered into hiatus.
Baseline CO <sub>2</sub> e (based on CP trees, initial CO <sub>2</sub> e, and growth rate)	-	2	4	6	9	12	12	13	14	15	16	The percentage above applied to the total inventory of project CO <sub>2</sub> e.
Annual Removals		12	25	22	1	5	4	4	4	5	5	Project(year x) – Baseline(yearx)
Total Removals		12	37	59	60	65	69	73	78	83	87	Sum of Project (all years) - Sum of Baseline (all years)

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## Update to Permanence (Section 6)



- 100 years of monitoring from last credit issuance year
- Buffer Pool (6% contribution) – addresses reversals
  - Avoidable – resulting from Project Operator's negligence or willful intent
    - e.g. harvesting, development, etc.
    - Compensated by PO
  - Unavoidable – not resulting from PO's negligence or willful intent
    - e.g. wildfire, disease, etc.
    - Compensated by Buffer Pool

\*Also applicable to Urban Forest Management

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## Update to Project Monitoring (Section 7)



- Requires submission of Project Design Document
  - thoroughly describes eligibility, summarizes data acquisition and quantification
- Requires annual monitoring

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## Update to Project Verification (Section 8)



- Clarify guidance on field measurements required for on site verifications to verify carbon estimates
  - DBH
  - height
- Incorporates sequential sampling verification methodology

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# URBAN FOREST MANAGEMENT




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## Urban Forest Management

- Project Definition: Undertaking activity that maintains or increases carbon inventories relative to baseline levels
  - Removal and replacement of diseased and suppressed trees and
  - Avoiding tree removals
  - Increased stocking
  - Etc.



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## Inventory



- Standardized methodology detailed in Quantification Guidance document
- Sampling or measurement for determining tree canopy cover to CO<sub>2</sub>e ratios (CO<sub>2</sub>e/ft<sup>2</sup> canopy cover)

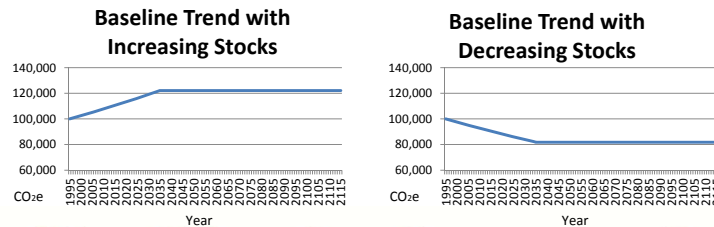
Urban Forest Class	Average Canopy Cover Area from Ground-based Plots	Average CO <sub>2</sub> e from Ground-based plots	Transfer Functions
	(ft <sup>2</sup> /acre)	(per acre)	(CO <sub>2</sub> e/ft <sup>2</sup> of canopy cover)
Commercial/Industrial	3,485	15	0.0043044
Utility	5,227	20	0.0038261
Residential – High Density	15,246	60	0.0039355
Transportation	3,485	12	0.0034435

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## Baseline Quantification



- Develop trend based on historic and current inventory estimates
- Extend slope 20 years, then hold steady for subsequent 80 years



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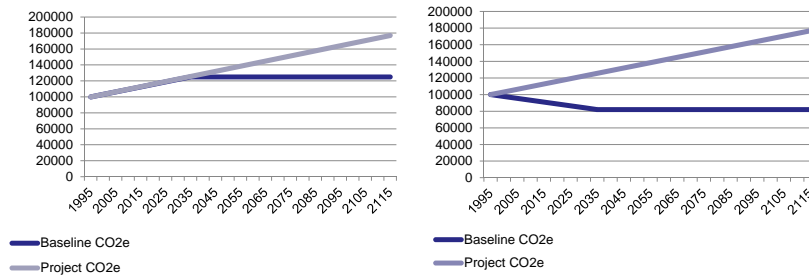
## Project Quantification



- Estimate Current Project Area CO<sub>2</sub>e based on relationship between total tree canopy area and CO<sub>2</sub>e

Urban Forest Class	Transfer Functions	Historic Estimated/Measured Canopy Cover Area	Total CO <sub>2</sub> e
	(CO <sub>2</sub> e/ft <sup>2</sup> of canopy cover)	(ft <sup>2</sup> )	(metric tons)
Commercial/Industrial	0.0043044	201,222.00	866.14
Utility	0.0038261	79,566.00	304.43
Residential – High Density	0.0039355	2,375,898.20	9,350.35
Transportation	0.0034435	168,951.20	581.78
		<b>Total</b>	<b>11,102.70</b>

## Credit Generation



## Update to Project Monitoring (Section 7)



- Requires submission of Project Design Document
  - thoroughly describes eligibility, summarizes data acquisition and quantification
- Requires annual monitoring


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## Update to Project Verification (Section 8)




- Clarify guidance required verification activities
  - Historical & current canopy area
  - Carbon estimates for transfer functions
- Incorporates sequential sampling verification methodology

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## Ongoing Efforts


- Development of Project Design Document Template
- FIA
  - Performance standards for tree planting
  - Consideration of standardized canopy cover to carbon ratios (transfer functions)
- iTree
  - Biomass equations
  - Use of iTree data entry platform for carbon projects



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## Questions?



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