CLIMATE ACTION RESERVE

Urban Forest Management Project Protocol v1.1

Summary of Changes

June 2019

Agenda

- **Urban Forest protocol background**
- **Protocol overview of major concepts and changes**
  - Project Definition overview
  - Updates to eligibility
  - Updates to quantification
    - Overview of quantification
  - Changes to reporting and verification
  - Supplemental documents
- **Q&A**

Protocol development background

Scoping and developing UFPP v1.0 with workgroup (82 participants)

2007-2008

UFPP v1.0

2008

UFPP v1.1

2010

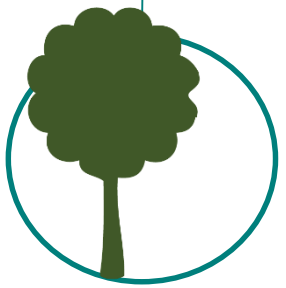
2013-2014

Scoping protocol overhaul to 2.0 (16 participants)

UFT 2.0

2014

UFM v1.0



2017-2018

Scoping changes to quantification to address lower cost of project development

2019

UFM v1.1

Project definition

- A UFM Project focuses on activities that maintain or increase carbon inventories relative to baseline levels, as defined in this protocol, of carbon within the project boundary. Eligible management activities may include, but are not limited to:
  - Increasing the urban forest productivity by removing diseased and suppressed trees
  - Reducing emissions by avoiding tree removals
  - Planting additional trees on available and appropriate sites
  - Monitoring, protecting, and treating trees to avoid premature mortality from stressors such as drought, pests, storm damage, and abiotic agents
  - Reducing the vulnerability of trees to impacts of climate change by increasing resilience
- This protocol is distinct from both the Reserve's Urban Tree Planting Protocol, and ARB's Urban Forest Compliance Offset Protocol

Project location parameters

- Projects must be located within Urban Areas, Urban Clusters, Census Designated Places, or Incorporated Places as defined by the US Census Bureau
  - Previously: Projects must be located within Urban Areas as defined by the US Census Bureau
- New language added to clarify how to reconcile differences between assessor's parcel (AP) acres and other GIS data sources when establishing the project area

Eligibility

- Recordation of a conservation easement may constitute the start date
- New language stating Enhancement Payments may be pursued to support project activities
  - California Climate Investments (CCI), formerly, GGRF
  - USFS grants and agreements

Project Sources, Sinks, and Reservoirs (SSRs)

- New SSR: UF-14 - Biological emissions/removals from changes in urban tree planting and management outside the Project Area
  - Clarification that leakage is excluded from project considerations. Emissions due to leakage are unlikely to be significantly different from baseline levels and are considered to be de minimis. Therefore, this SSR is not included in the GHG Assessment Boundary.

Overview of Project Quantification

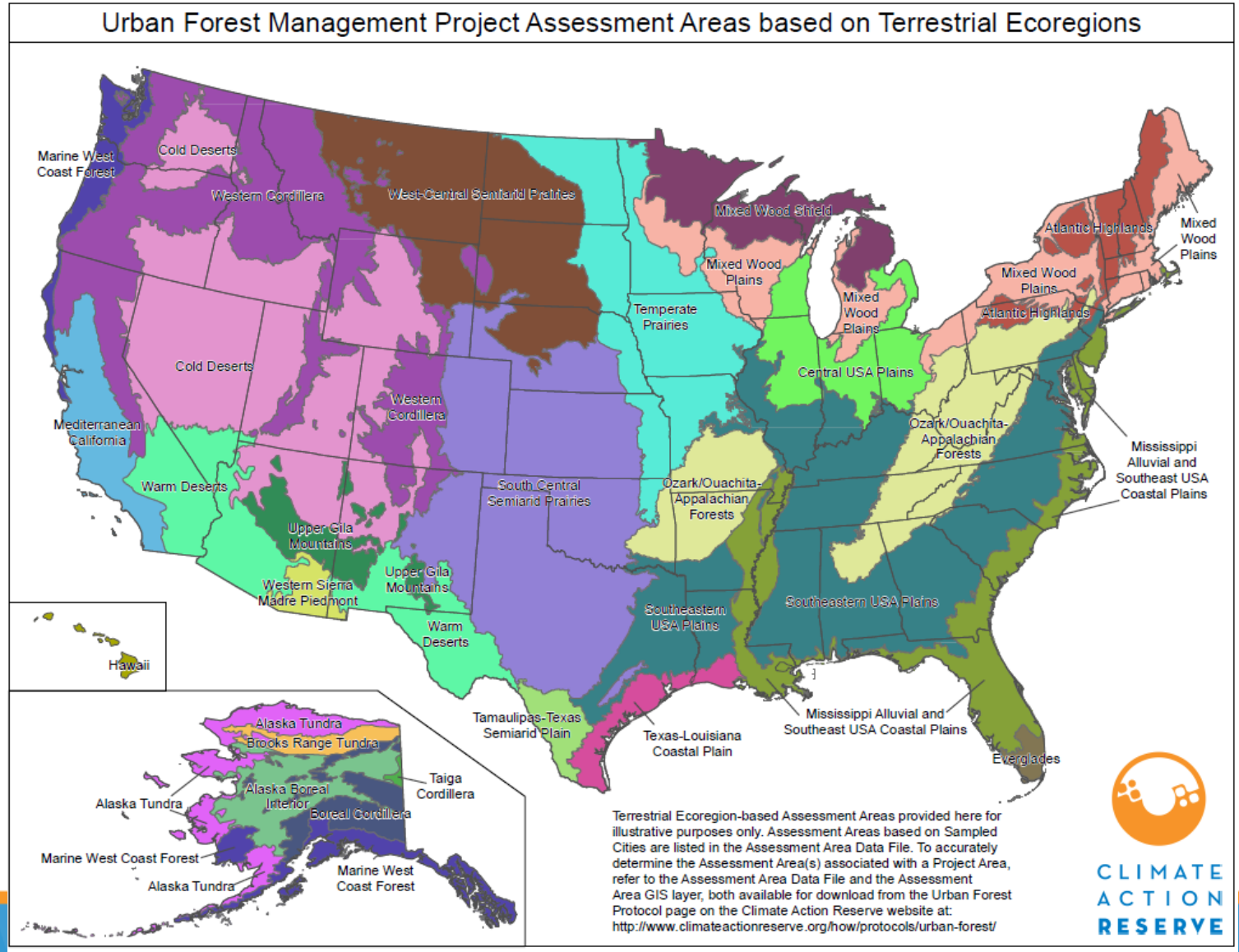
1. **Establish baseline trend line**
   - Trend line developed based on two historical images from which canopy cover can be derived; trend line projected 25 years into the future (to crediting period end date)
   - Estimates must be at least 10 years apart and no earlier than 1990
2. **Estimate canopy cover in baseline**
   - Sampled using randomized points
   - Systematic sample can be conducted with a grid of points in GIS
   - Estimates can be conducted using remotely sensed data
3. **Estimate canopy cover for end of RP**
   - Using same method as the baseline; i-Tree Canopy may also be an option (if using i-Tree Canopy, import points for consistency)
4. **Apply ratio estimators to convert from canopy estimate to carbon estimate**

Quantification options using ratio estimators

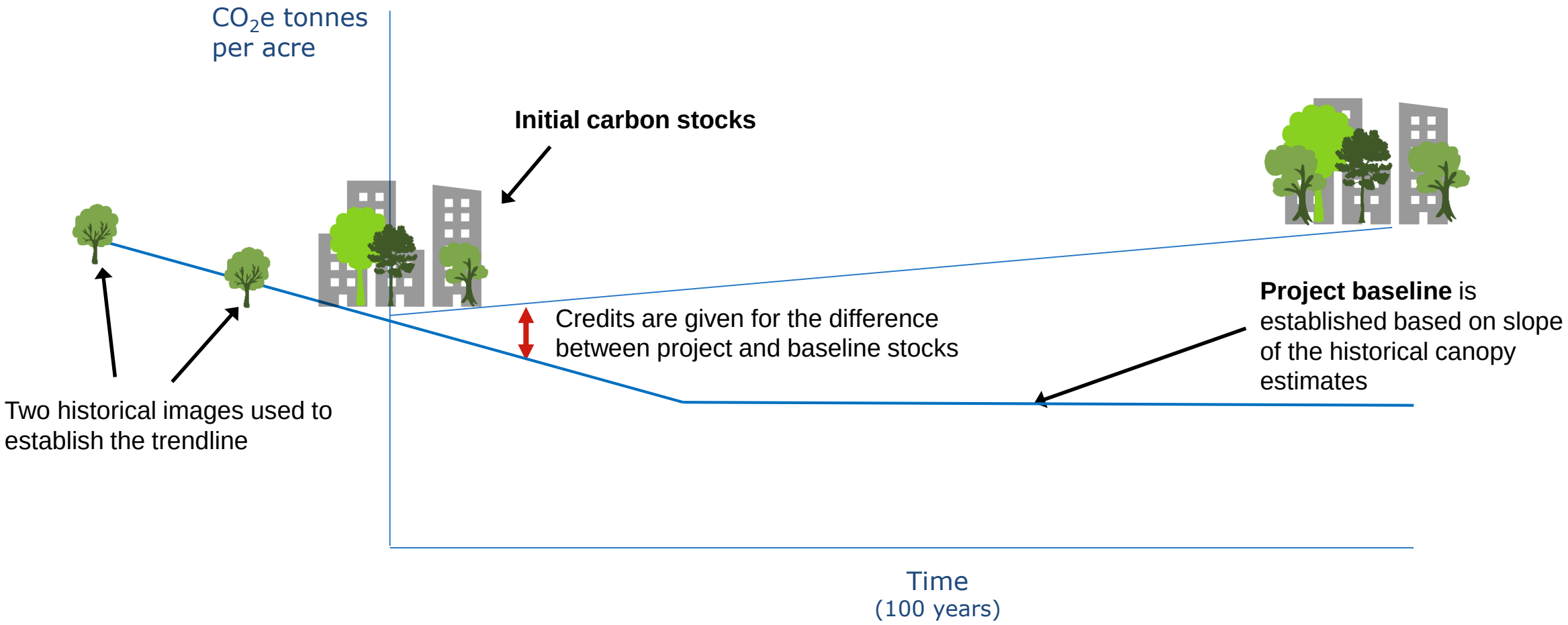
- UFM quantification based on ratio estimators (RE)
  - Represents a ratio of CO_2e per unit area of canopy cover
- Project developers have always had the option to develop project-specific ratio estimators
  - Must maintain ground based inventory
- Update: we now have pre-approved REs nationwide from peer-reviewed papers
  - Organized into “Assessment Areas” with a map and lookup table, similar to the Forest Project Protocol
  - This eliminates the expense of needing to maintain a carbon inventory

Assessment Areas

- **Defined geographic areas with corresponding default Ratio Estimators**
  - CEC's Terrestrial Ecoregions
  - Sampled cities from Nowak et al 2013 study



Urban Forest Management Project crediting



Reporting and Verification

- Project reports only need to be developed under the oversight of a Professional Forester, Certified Arborist, or Certified Forester if the project is developing its own ratio estimators; this requirement does not apply to projects using default ratio estimators
- Verifications do not need to include site visits if the project is using default ratio estimators
  - If a project is developing its own ratio estimators, site visits are still required so that the verification team may replicate the project's measurements
- Clarified that full verifications are required every 5 reporting periods
  - After RP1: RP6, RP11, RP16, etc.
- Updated verification guidance throughout to incorporate default ratio estimator option

Timing of Compensation for Reversals

- Following an avoidable reversal, the Project Operator must provide a verified estimate within one reporting period of when the reversal took place
  - E.g. the next reporting period must undergo verification
- Following an unavoidable reversal, the Project Operator must provide a verified estimate within two reporting periods of when the reversal took place
- Previously, the protocol required verified estimates within one year of the reversal
  - This didn't align well with verification schedules and deadlines

Supplemental Documents

- In support of the default ratio estimators:
  - Assessment Area Map and Shapefiles
  - Assessment Area Data File
    - includes default ratio estimators used to calculate carbon estimates based on the project location
  - Assessment Area Development Description
    - an explanation of how the assessment areas and default ratio estimators were developed for the UFM protocol
- Updated Quantification Guidance
- Updated Project Design Document (PDD) template

Thanks! Questions?

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