Avoided Wildfire Emissions Forecast Methodology

Kick-Off Webinar

October 2021
Housekeeping

• All attendees are in listen-only mode

• Please submit your questions in the GoToWebinar question box and we’ll try to answer them at the end, time permitting

• We will follow up via email to answer any questions not addressed during the meeting

• The slides and a recording of the presentation will be posted online
Agenda

• Introduction to Climate Action Reserve and Climate Forward
• Why a methodology to address wildfire emissions?
• Methodology development process and timeline
  • REMINDER: Statements of Interest for joining workgroup due Friday, November 5, 2021
• Key considerations and general approach of the methodology
• Next steps
Climate Action Reserve

GHG Accounting Experts

• Originally created by California legislature in 2001
• Pioneered standardized GHG accounting, for compliance and voluntary carbon markets
• 78% of North American offset credits used in 2017 in the voluntary market* were issued by the Reserve
• 5+ of the 6 offset protocols used by ARB were developed by the Reserve, including the Forestry Protocol

Beyond Carbon Offsets

• **Climate Forward**
• Climate Impact Score
• GHG policy consulting
  o Mexico
  o Ontario
  o Quebec
  o World Bank, USDA, USAID
  o California agencies, and more

*Ecosystem Marketplace 2018 data*
Climate Forward: a carbon project registry

Issues Forecasted Mitigation Units (FMUs) to projects that follow Reserve-approved methodologies

- Follows ISO 14064-2 and GHG Protocol for Project Accounting Standards
- Credits issued about one year after project commencement, for the forecasted climate benefit over the project’s lifetime

Expands the scope and scale of carbon project types

- Enormous potential for diverse, creative climate solutions

Tracks FMUs ownership and project activities in a publicly accessible database

- A registry of forward-looking GHG reductions to balance against forward-looking GHG impacts
Accelerating Climate Mitigation: CLIMATE FORWARD

Offsets
Climate Reserve
Tonnes
1 CRT = 1 tCO₂e of achieved reductions

Issued for achieved GHG removals
Used to mitigate any emissions
Protocols available for projects in North America
Reserve develops protocols for the offsets it issues

FMUs
Forecasted Mitigation Units
1 FMU = 1 tCO₂e of anticipated reductions

Issued for forecasted GHG removals
Used to mitigate anticipated emissions
Projects may be located anywhere in the world
External parties may submit forecast methodologies

tCO₂e = tonne of carbon dioxide equivalent
<table>
<thead>
<tr>
<th>Companies and organizations mitigating future emissions</th>
<th>Examples of future mitigation needs</th>
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<tbody>
<tr>
<td>Any new operational or project investment creating GHGs</td>
<td>New manufacturing facility</td>
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<td>• e.g., anticipated emissions identified via CEQA analysis process or future emissions from business operations</td>
<td>New data center</td>
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<td>New retail complex</td>
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*Not appropriate for addressing current emissions in a compliance program*

• e.g., cap-and-trade

*Not appropriate for mitigating historical Scope 1 and 2 emissions to claim carbon neutrality*

New residential/commercial developments

New transportation projects

Facility expansions

Operational expansions
Climate Forward: A mission driven program

- Accelerate greenhouse gas mitigation project development
- Enable project types that have not been feasible under offset financing
Why Address Wildfire Emissions?
Why address wildfire emissions?

Why address wildfire emissions?

- 3.3 million acres
- 6.4 million acres
- 6.8 million acres

CLIMATE FORWARD

11
Why address wildfire emissions?

- 1991-2000: 3.3 million acres
- 2001-2010: 6.4 million acres
- 2011-2019: 6.8 million acres
- 2020: 4.2 million acres
Why address wildfire emissions?

Smoke from North Complex Fire over San Francisco, September 2020

By Christopher Michel: CC BY 2.0
Methodology Development
Process & Timeline
Methodology Development Timeline

1. Methodology drafting (ongoing)
2. Kick-off meeting
3. Work-group formation
4. Work-group process
5. Public comment (30-day)
6. Methodology approval

~6-9 months
Workgroup Formation

Stakeholder participation & feedback is critical to development of this methodology.

The Reserve assembles a multi-stakeholder workgroup to advise methodology development and to produce a rigorous, well-vetted, and credible methodology.

- Strive for balanced representation from industry, project developers, farmers, environmental NGOs, verification bodies, independent consultants, academia, and government bodies.

- Interested stakeholders invited to submit Statement of Interest (SOI) forms:
  - Deadline for submitting SOI is Nov 5th.
  - SOIs can be downloaded from the methodology webpage: [https://climateforward.org/program/methodologies/avoided-wildfire-emissions/](https://climateforward.org/program/methodologies/avoided-wildfire-emissions/)

Requires commitment to 1-2 workgroup meetings; methodology reviews; familiarity with forest management/fuel treatments, wildfires, and their impacts on forest carbon; and a solid understanding of project-based GHG accounting.
Workgroup Process and Expectations for Workgroup Members

**Process**

• Methodology developers produce draft methodology for review
• Methodology developers identify and solicit feedback draft methodology, including specific methodology components
• Reserve staff schedule and hold workgroup meetings (1-2)
• Methodology developers revise methodology based on feedback

**Expectations**

• Review, comment on and provide recommendations on draft methodology and specific methodology components, as requested by methodology developers
• Participate in workgroup meetings via webinar
• Provide any additional written comments on public comment draft of methodology
Key Considerations and Approach of Methodology
Forest treatments to reduce the risk of catastrophic wildfires and their associated GHG emissions, for example:

- **Mechanical Treatment**
- **Prescribed Fire**
Why Climate Forward?

- Project activities typically result in a net decrease in C stocks initially
- GHG benefits are realized over time as forest grows and future wildfires either prevented from igniting/spreading and/or are less severe
- Fuel treatments have a limited effectiveness period following implementation (i.e., we can estimate the efficacy of the treatments for some period of time into the future)
- Climate benefits credited are based on a projection of probabilistic future emissions from wildfires and likelihood of post-fire delayed reforestation

Source methodology was developed over past decade with a variety of expert stakeholders.
System Overview
Accounting Steps

1) Project area delineation, selection, and characterization
2) Weather data
3) **Management scenario development and fuel reduction treatment design**
4) Forest carbon (forest growth and sequestration) calculation
5) Forest removals life cycle assessment (biofuels, bioenergy, wood products) calculation
6) Wildfire emissions calculation
7) **Delayed regeneration calculation**
8) **Fire ignition probability (fire return interval) assessment**
9) Aggregated emissions accounting
Critical issues

• Adapting a methodology based on highly project-specific modeling and standardize/simplify it so it’s more accessible?
  • Standardized approach to delineating the project area
  • Limiting and/or standardizing data sources

• Developing a conservative quantification approach that is transparent and defensible

• Recognizing impacts of non-project activities over time and space (e.g., harvests, other fuel treatments, natural disturbances)

• Reflecting how treatments are actually implemented (as opposed to what was planned)

• Allowing various project configurations (multiple landowners, project size, spatial layout)

• Creating incentive for return treatments
Next Steps
# Process and timeline

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<th>2021</th>
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<tr>
<td>Announcement of methodology development</td>
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<td>Methodology drafting</td>
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<td>Workgroup review of draft methodology and workgroup</td>
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<td>Public comment period</td>
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<td>Preparation of final draft for consideration of</td>
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<td>approval by Reserve</td>
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Next steps

• **For interested stakeholders:**
  – Submit a Statement of Interest to become a workgroup member (by Friday, Nov 5th)
  – Email interest to sign up for updates as an observer
  – Email us feedback anytime

• **For Reserve and methodology partners:**
  – Form workgroup
  – Continue drafting!!
  – Workgroup meeting November/December (via webinar)
Key contacts

• **Climate Action Reserve:**
  – Email: Policy@climateactionreserve.org
  – Methodology development lead:
    • Jon Remucal, Associate Director of Nature-Based Solutions
    • Email: jremucal@climateactionreserve.org
Questions?