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Land Conservation & Engaging in Carbon Markets: Setting the stage

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Agenda



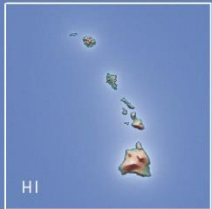
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- Climate Action Reserve introduction
- What do carbon registries do?
- What are carbon offsets?
- Voluntary vs compliance markets
- Carbon projects as a mechanism for achieving conservation benefits
- Role of land trusts

Climate Action Reserve



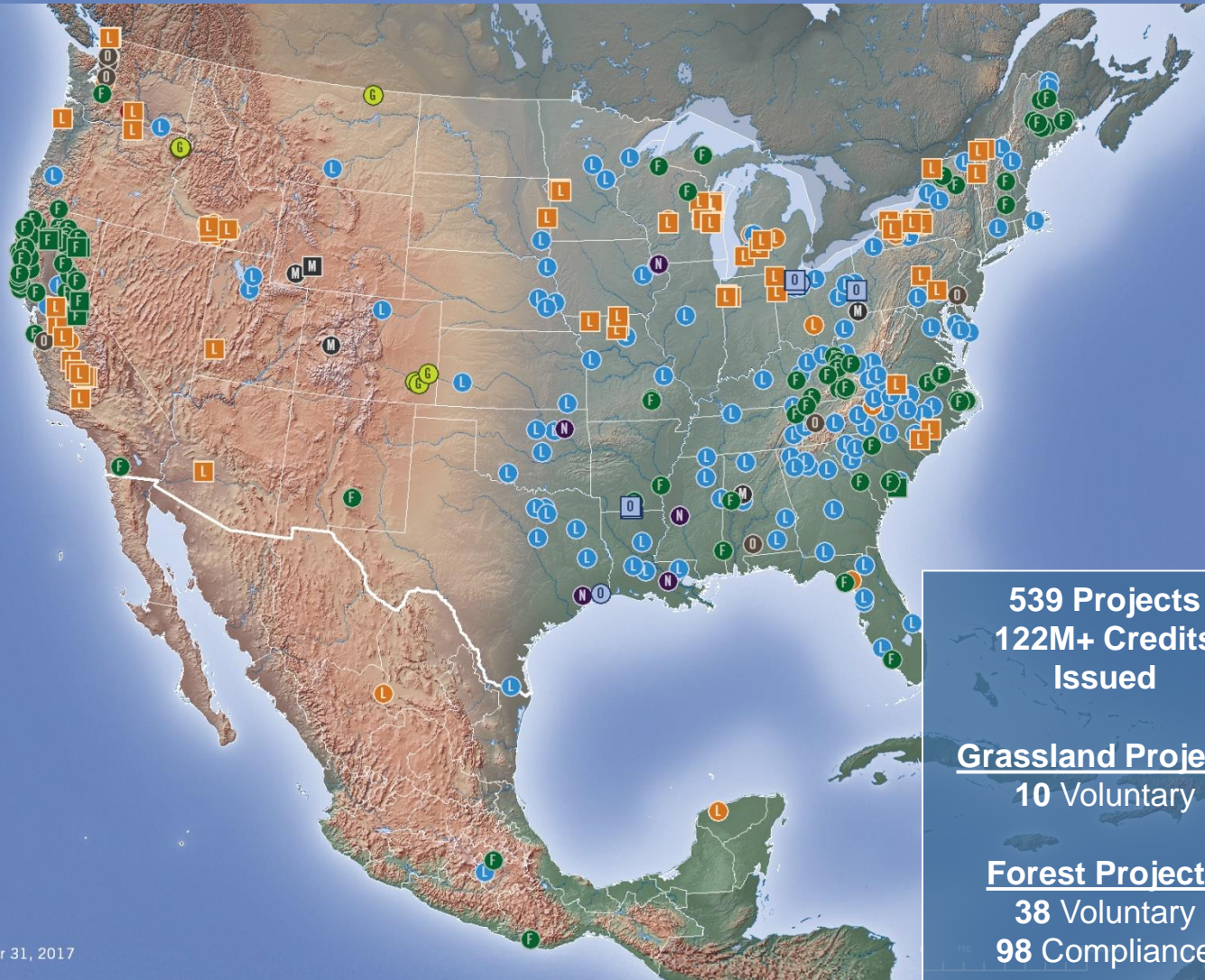
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- F Forest - ARB
- L Livestock - ARB
- M Mine Methane - ARB
- O Ozone Depleting Substances - ARB
- F Forest
- G Grassland
- L Landfill
- L Livestock
- M Mine Methane
- N Nitric Acid Production
- O Organic Waste Composting
- O Organic Waste Digestion
- O Ozone Depleting Substances

Listed, Registered & Completed Projects as of December 31, 2017



539 Projects
122M+ Credits
Issued

Grassland Projects
10 Voluntary

Forest Projects
38 Voluntary
98 Compliance

Carbon registries protect the environmental integrity of offsets



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- **Registries provide structure, rigor, and transparency to build confidence in the carbon market**
- **Policy development for standardized offset project protocols**
 - Provide project eligibility rules, methods for GHG quantification, monitoring and reporting requirements
 - Monitor and apply developments in science, tech, and policy
 - Assess barriers to project implementation
 - Develop tools, trainings, educational offerings
- **Program infrastructure for the issuance and tracking of offsets**
 - Administrative services for project listing and registration
 - Manage online registry of credits
 - Agreement execution, verification oversight
 - Periodic onsite audits



Overarching GHG accounting principles

- GHG accounting is conservative, comprehensive, and scientifically credible

Real



- GHG reductions would not have occurred in the absence of the carbon market

Additional



- GHG reductions or removals persist for at least 100 years

Permanent



- *Ex-post* third-party verification prior to credit issuance

Verifiable



- No other parties may reasonably claim ownership of GHG reductions

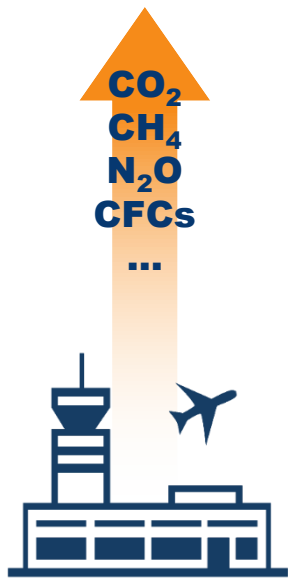
No Double Counting



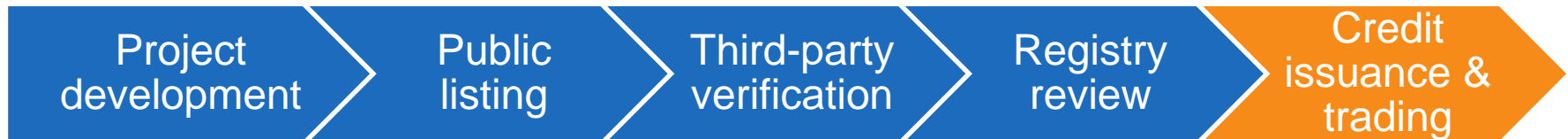
Carbon offsets = 1 metric ton of CO₂e reduced



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- Verified emissions reductions in unregulated sectors with barriers to adoption
- Sellers need incentives to reduce GHGs
- Buyers want/need to offset their own emissions
- 1 offset credit = 1 mtCO₂e
 - 1 CRT = 1 Climate Reserve Tonne (CRT)



Carbon market types



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	Voluntary Market	Compliance Market
End Buyer	Any individual, business, nonprofit, municipality, or utility voluntarily reducing emissions	Large emitters and utilities required to reduce emissions by law (California, Quebec, EU)
Standard	Climate Action Reserve protocols, other carbon registries	CA Air Resources Board approved protocols
Project Types	18 project types	6 project types, only Forest, MMC, ODS, Livestock used to date
Credit Prices	50¢ - \$50*, depending on project type, location, buyer needs, co-benefits, etc.	\$10-\$12, tracking close to allowance prices
Costs	Generally lower than compliance Variable; includes: project feasibility study, installation, on-going monitoring & reporting, verification, business development for credit sales	Variable by project type; includes: project feasibility study, installation, on-going monitoring & reporting, verification, business development for credit sales
Risks	<ul style="list-style-type: none"> Finding buyers Price uncertainty overtime 	<ul style="list-style-type: none"> Policy uncertainty re: Cap and Trade Program implementation ROC to ARBOCs conversion process Invalidation
End Users	   	   

Carbon projects as a mechanism for achieving conservation benefits



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GRASSLAND PROJECTS: Prevention of emissions of GHG due to land conversion for crop cultivation through perpetual conservation.

- Helps to finance easements
- Contributes to healthy riparian ecosystems
- Provides flood prevention services
- Compatible with sustainable working lands activities, such as grazing
- Compatible with recreational use
- Supports healthy soils goals

FOREST PROJECTS: Management activities that maintain and/or increase carbon sequestration in trees (and often wood products) compared with business as usual practices.

- Preserves characteristics of natural forests in managed stands
- Ensures long-term stewardship and the associated economic benefits
- Compatible with recreational services
- Promotes long-term watershed benefits and high scenic values
- Often enhances biodiversity and wildlife habitat conservation goals



Role of land trusts



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- Cooperative developers/aggregators
- Project developers
- Easement holders
- Business development and marketing for credit sales
- Organize and fund trainings
- Educators
- Share resources

Land trusts participating in a carbon program

The Nature Conservancy (National, Oregon, Colorado, Tennessee, Ohio, Vermont, Maine Chapters)	Southern Plains Land Trust
Ducks Unlimited	Colorado Open Lands
Colorado Cattlemen's Agricultural Land Trust	Sempervirens Fund
Pacific Forest Trust	Placer Land Trust
Northeast Wilderness Trust	Downeast Lakes Land Trust
Nisqually Land Trust	Natural Lands Trust
The Conservation Fund	Cooks Branch Conservancy
Lakes Region Conservation Trust	Tennessee River Gorge Trust
Massachusetts Audubon	Western Rivers Forestry



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Thanks! Questions?

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