



# U.S. FOREST CARBON MARKET PRIMER



University of Idaho  
Policy Analysis Group

TOTAL	
Project	192
Acres	5,794,736
Credits	192,754,683

## Carbon Registries

**Compliance** market set by government regulations and highly regulated — ARB

**Voluntary** market with voluntary buyers and sellers, not as strictly regulated as compliance markets— VCS, CAR, ACR

COMPLIANCE	
Project	149
Acres	5,338,811
Credits	180,745,973



## Principles of Offset Projects

### Reliability

**ADDITIONALLY:** Project must demonstrate how it is going to increase carbon stocks in the project area.

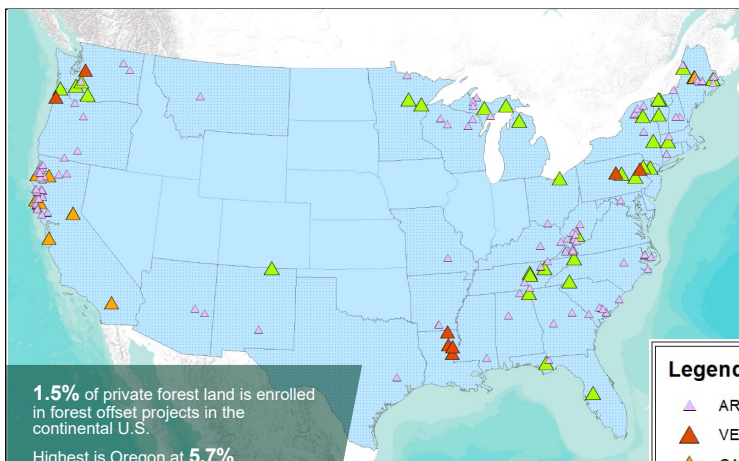
**LEAKAGE:** Occurs when the GHG reductions in one area results in the increase of GHG reductions in another area.

### Durability

**PERMANENCE:** Must show project maintains benefits for a period of time

**INSURANCE:** Projects must contribute to a buffer pool to insure against potential future reversals.

One Carbon Credit is equivalent to one metric ton of CO<sub>2</sub> from the atmosphere.



VOLUNTARY			
	CAR	ACR	VCS
Project	11	23	9
Acres	43,966	320,799	91,160
Credits	3,066,334	8,755,048	187,328

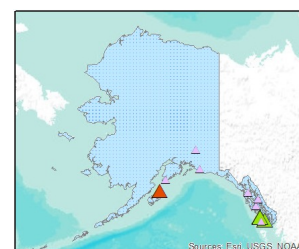


**ARB:** 25 year crediting period with 100 years maintaining those carbon stocks

**ACR:** 20 year crediting period with 20 years maintaining those carbon stocks

**VCS:** Most used voluntary program in the world

**CAR:** Crediting can be valid for 100 years from the start date, then 100 years maintaining those stocks CAR Version 5.0





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## Steps for a Forest Offset Project

1	2	3	4	5	6
<b>LANDOWNER</b>	<b>DEVELOPER</b>	<b>VERIFIER</b>	<b>REGISTRY</b>	<b>VERIFIED AGAIN</b>	<b>CREDITS ISSUED</b>
Provides project area and management of that area	Initial project carbon inventory, quantification and documentation	Verified through an independent third party	Registry (either CAR, ACR, or VCS) provides offset tracking	The registry verifies the offset project internally	If all previous steps were approved then credits are issued to the landowner

### ISSUED CREDITS:

Represents one metric ton of CO<sub>2</sub> from the atmosphere

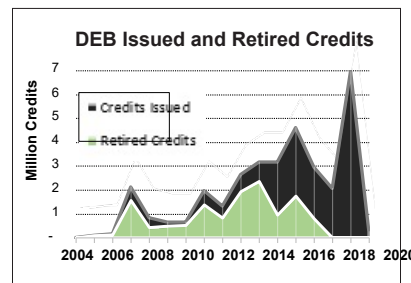
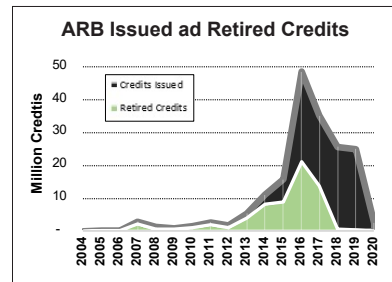
### RETIRED CREDITS:

Purchased credits that are taken off the market, so the purchaser can claim to have reduced emissions

### Direct Environmental Benefits In The State Of California:

requires the reduction or avoidance of any air or water pollutant that could negatively affect the state of California

(AB 398; Chapter 135, Statutes of 2017)  
— Assembly Bill 398



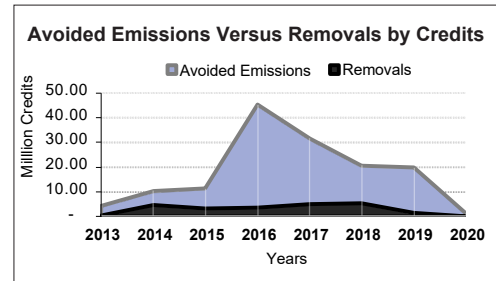
## Carbon Offset Types

### AVOIDED EMISSION OFFSETS:

Initial credits issued, usually larger number because of previously established timber

### REMOVAL OFFSETS:

Credits that are issued yearly due to yearly growth of the project area



## Forest Project Types

### AVOIDED CONVERSION (AC):

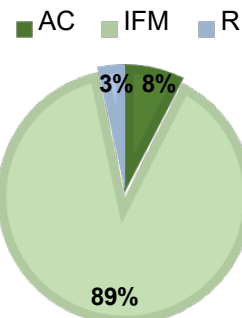
Forests prevented from being converted to non-forested land

### AFFORESTATION/ REFORESTATION (R):

Converting non-forested land into forested land

### IMPROVED FOREST

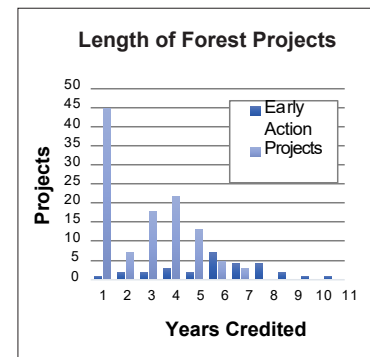
**MANAGEMENT (IFM):** Forest management that increases/ maintains a certain level of carbon stocking



### ARB HARVESTING

37.6% All Projects  
56 projects of 149

IFM - 38.6% AC - 45%  
R - 0%



Data was acquired from the ARB, CAR, and VCS public registries up to the 2020 vintage year. Completed in December 2021.