



Insect and Disease Risk Map

What's new, how are we doing?



Let's address the what's new

	2002	2006	2012
Modeling Construct	Not consistent, by broad forest cover and pest, AVHRR Base, random pixels,	Consistent, repeatable, based upon individual host species and FIA	Consistent, repeatable, based upon individual host species and FIA
Methodology	Various	MCM	MCM
Assemblage	Only one man really knows	GIS specialists /Model builder/AML to composite	Custom GIS application with integrated standard data/AML to composite



Let's address the what's new

	2002	2006	2012
Definition of risk	25 % or more tree mortality over 15 years	25% of the standing live BA Dead over 1" in diameter	25% of the standing live BA Dead over 1" in diameter
Individual risk models components exposable?	No	Yes	Yes
Limitations	<ul style="list-style-type: none"> •Methods •Mechanism •Published Models •Data •Not a map but a federation of maps 	<ul style="list-style-type: none"> •Methods •Mechanism •Published Models •Data 	<ul style="list-style-type: none"> •Methods •Mechanism •Published Models •Data
Effect on Sapio	Almost made me commit murder,	Almost made me commit Suicide	Too early to tell...



Modeling Application

Risk Map
Risk Model Tools Help

Save
 Run
 Refresh
 Home
 Zoom In
 Zoom Out
 Full Screen
 Print
 Help

ADI/Agent/Host | **Susceptibility** | Vulnerability | Risk Map

General Area:

Model Name:

Input Data Resolution:

Common Evaluation Scale:

Area of Interest:

USGS Zone:

EcoRegion:

Risk Agent Category:

Risk Agent:

Host Genus:

Host:

Max Percent Mortality:



Forest Health Technology
Enterprise Team

RISK MAP APPLICATION

Start Risk Modeling with:

The risk model browser...

A new risk model:

A recent risk model:

An existing risk model:

Risk Model	Risk Agent	Host
IW_Ponderosa_lps	bark beetles	Pon...
IW_Z10_WPBR_WWP	stem rust	Wes...
IW_Z15_Aspen/Conifer	decline complexes/dieback	Qual...
IW_Z15_DFB_Douglas_fir	Douglas-fir beetle	Dou...
IW_Z28_MPB_Lodgepole	bark beetles	Lodg...
IW_Z28_WSBW_Douglas_fir	western spruce budworm	Dou...
MW_JeffPine_JPB_Test	bark beetles	Jeff...
IW_Z28_Aspen_Douglas_fir



Modeling Application

Stand Alone - ArcGIS Application

ALL Risk Models

Risk Model	Risk Agent
AK model #1	spruce beetle
Frank's model #1	mountain pine beetle
Frank's model #2	mountain pine beetle
Frank's model #3	mountain pine beetle
MPB Ponderosa Pine #2	mountain pine beetle

Risk Model Risk Model Help

ADI/Agent/Host Susceptibility Vulnerability Metadata

Rank: Most Important - 1

Criteria:

Criterion Dataset	Rank	Weight	View Scaled	Visible In Map
Ponderosa Pine SDI	1/2	33%	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total QMD	1	67%	<input type="checkbox"/>	<input type="checkbox"/>
Ponderosa Pine BA	N/A	0%	<input type="checkbox"/>	<input type="checkbox"/>

Ponderosa Pine SDI Fuzzy Membership Function:

10		#10 In Trees
8		
6		
4		
2		
0	0 323 646	

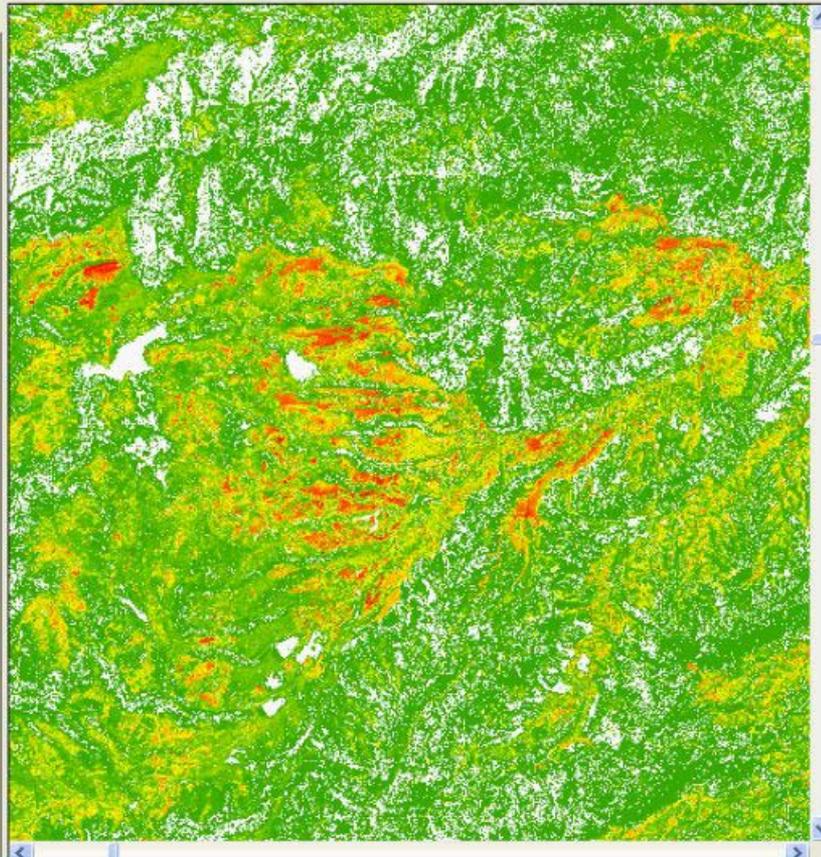
#10 In Trees	Scale Value

Constraints only

Factor Value From: 0 To: 646

Curve Type: Linear

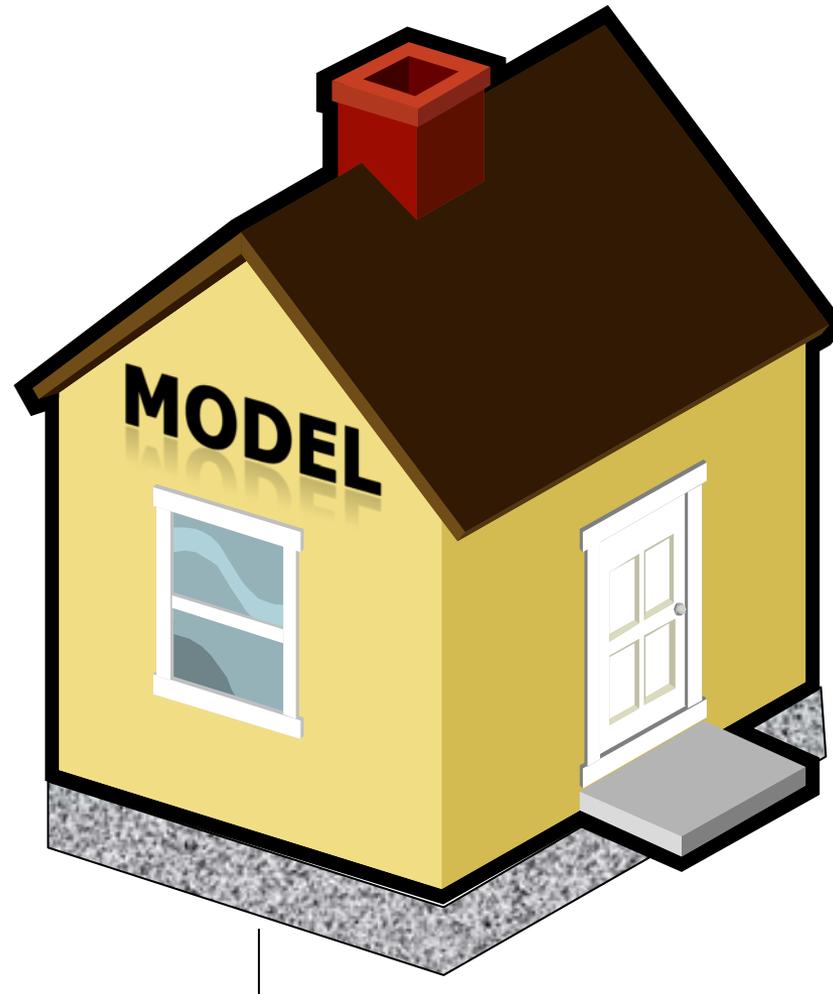
Direction: Level 10



-2100723.72, 2072562.93 UnknownUnits

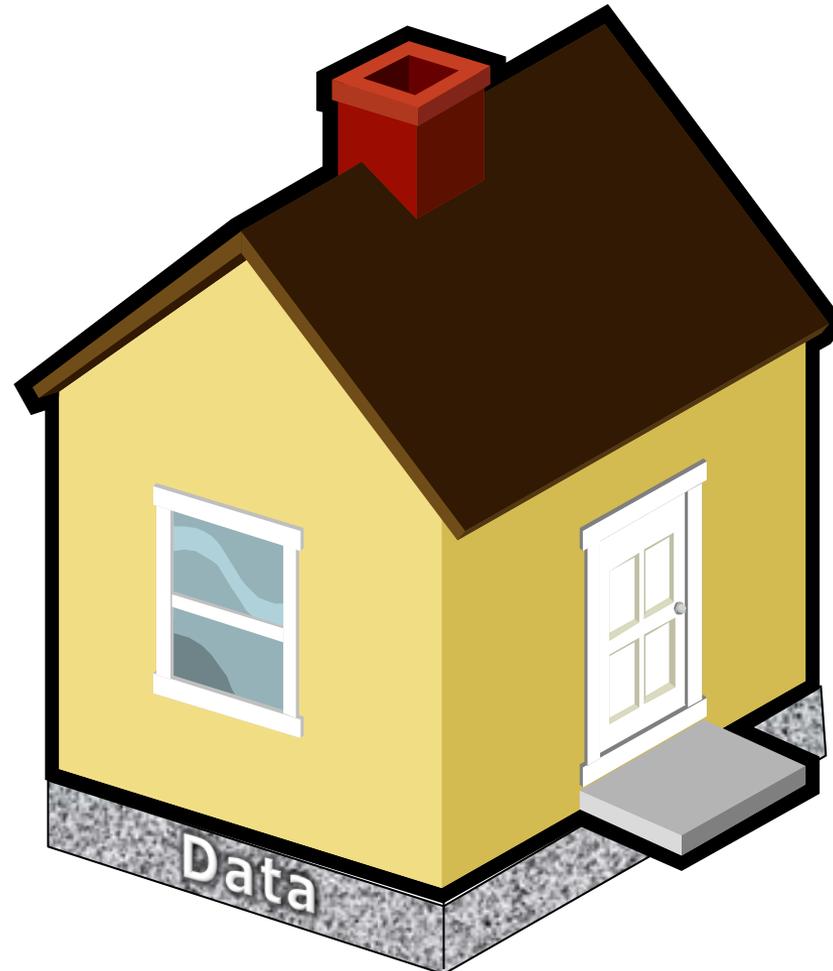


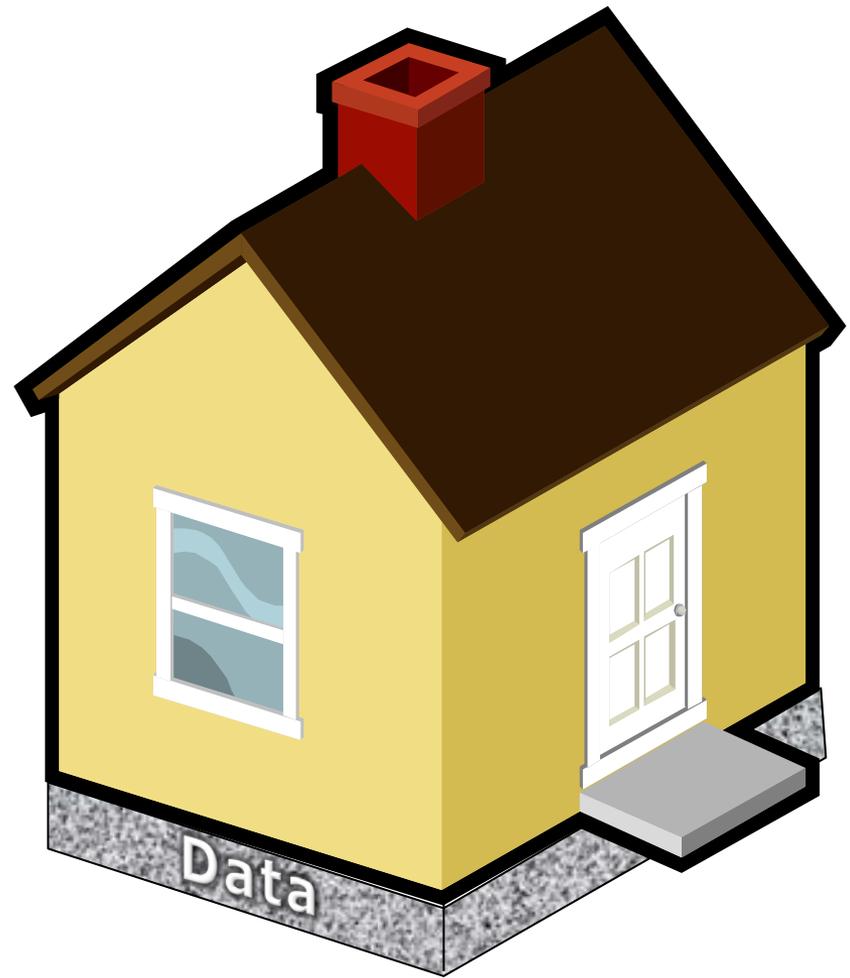
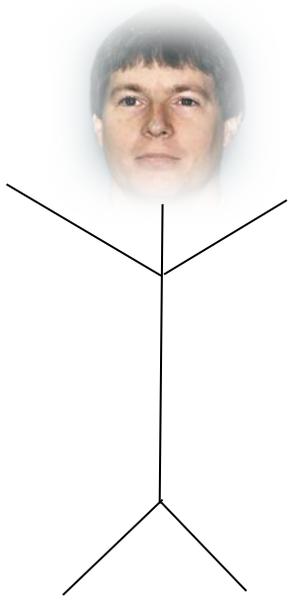
If the house is the model

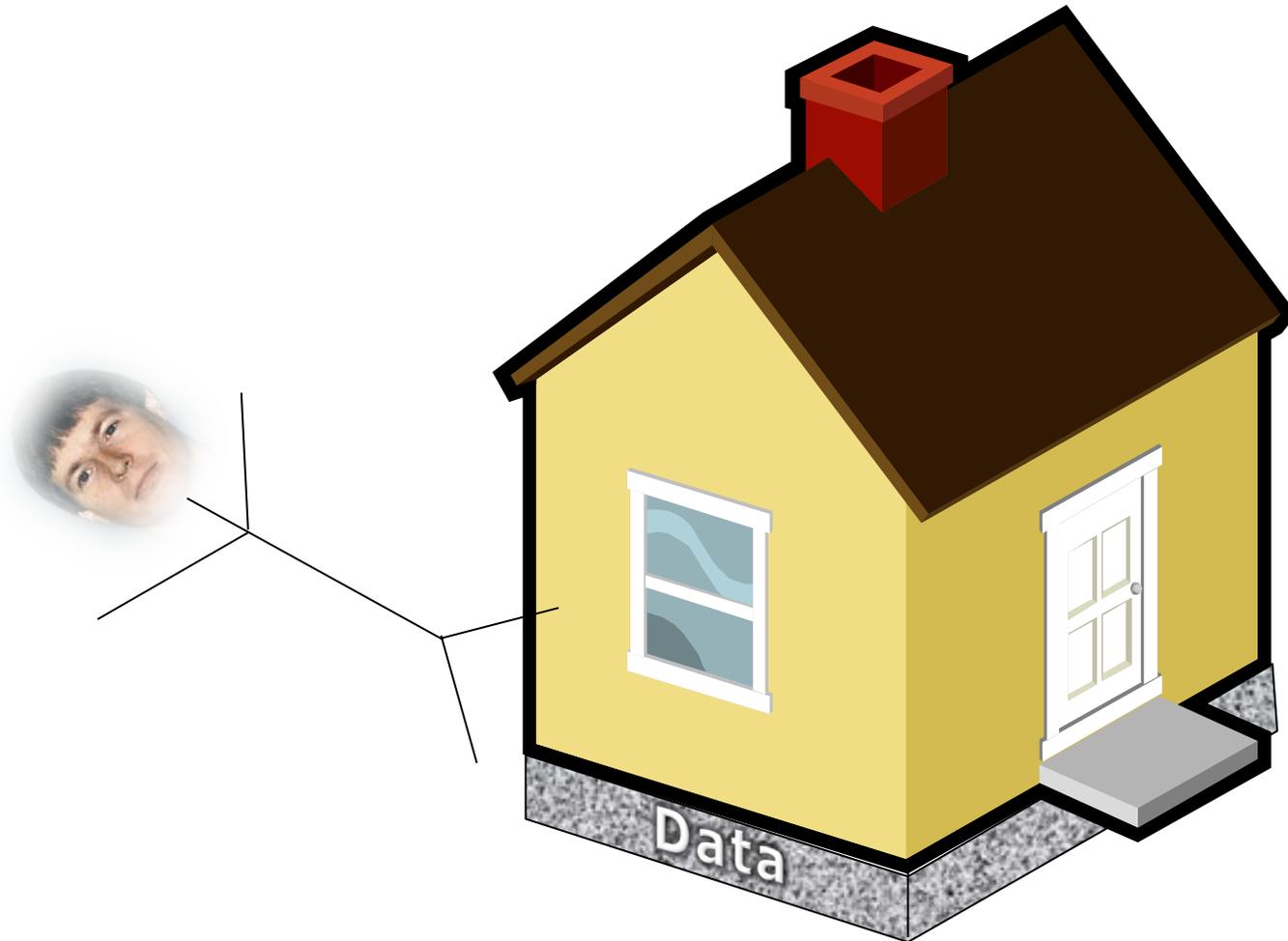




Then it's foundation is the data

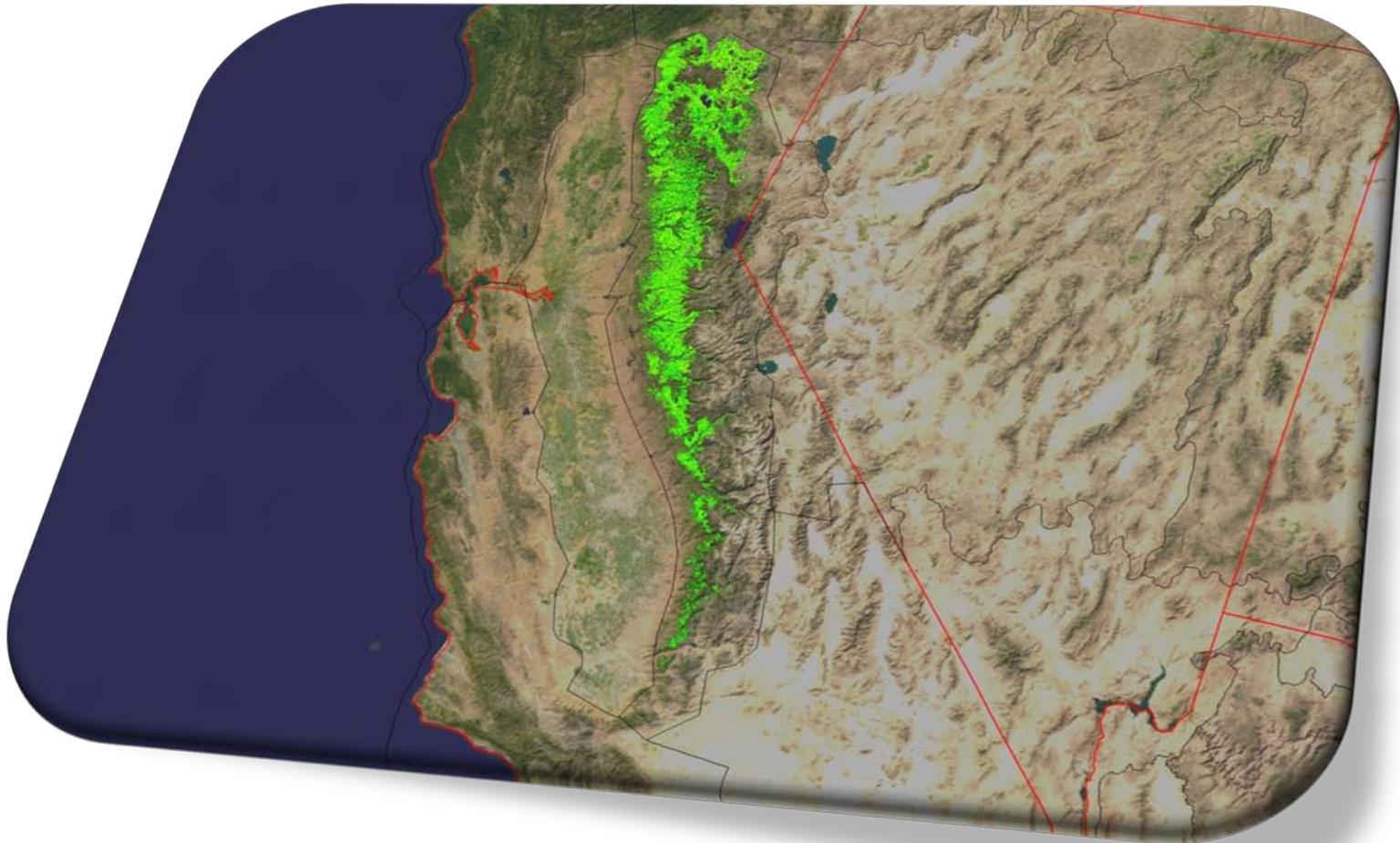






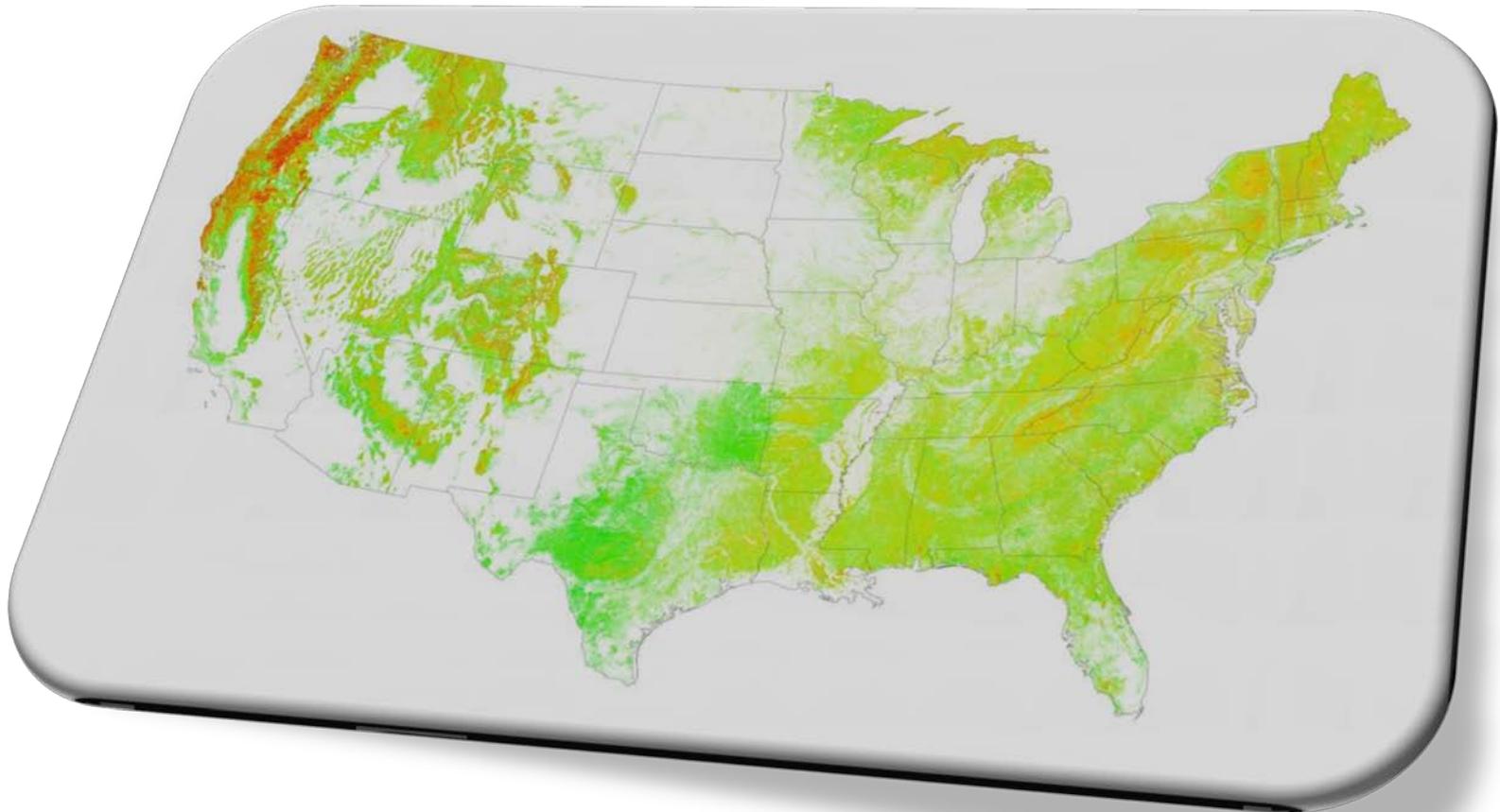


Some Layers look very good



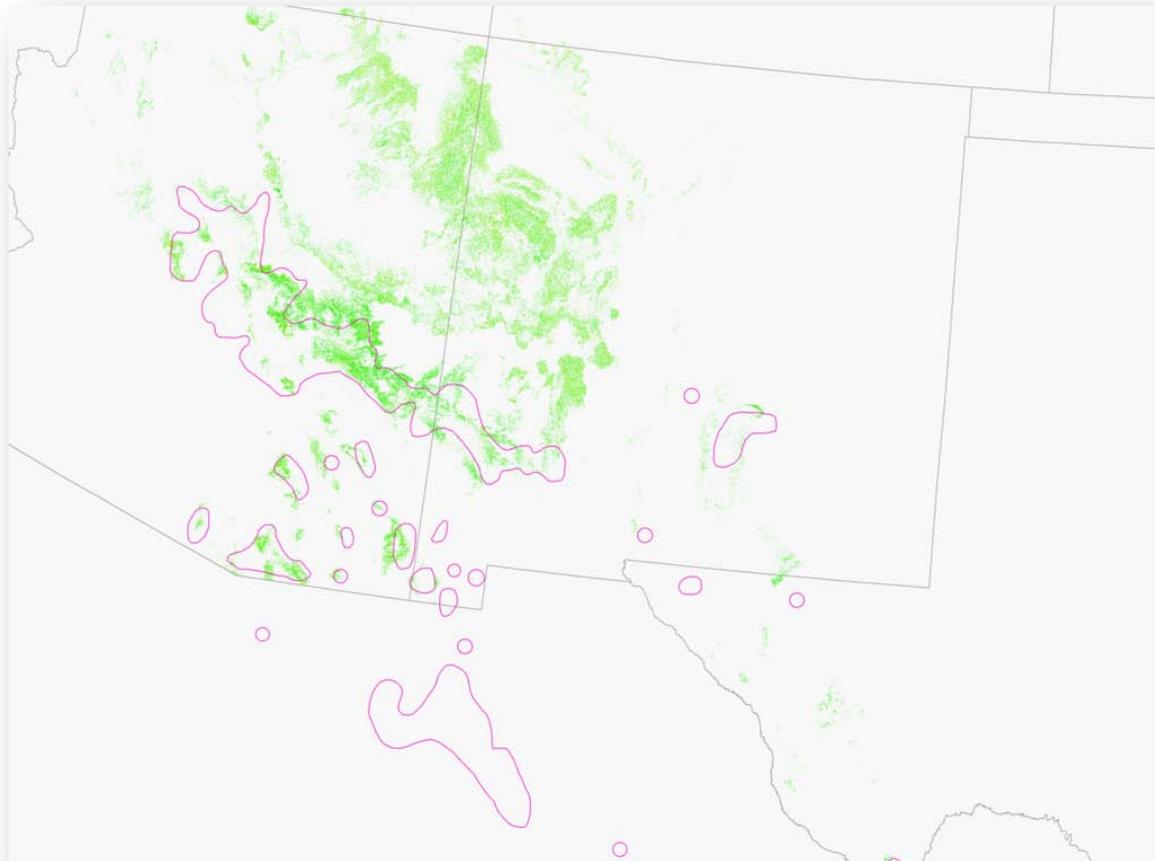


Some Layers look very good





Others not so...



Arizona White Oak



Long story short...

2012

