



**OWLIZED**



**\$28 TRILLION  
GLOBALLY\***

**COASTAL INFRASTRUCTURE**



# WHO WILL PAY?



Taxpayers?

Chevron?

Baby Goat?



**WAIT... THIS GUY?**



# AMERICAN APATHY

CLIMATE CHANGE RANKS NEARLY  
LAST ON 'WORRY' LIST

## Americans' Level of Worry About National Problems — 2014 Rank Order

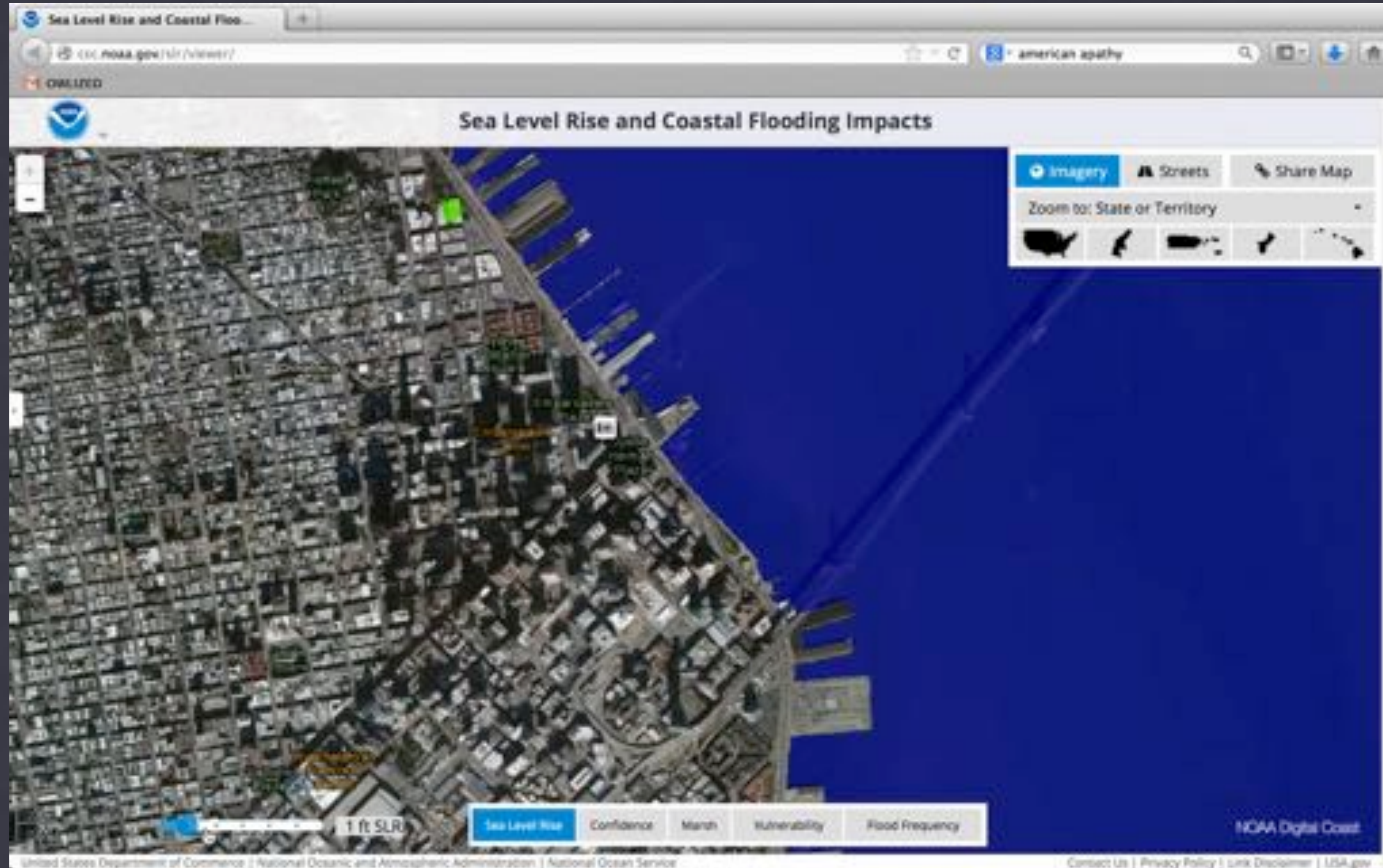
Next, I'm going to read a list of problems facing the country. For each one, please tell me if you personally worry about this problem a great deal, a fair amount, only a little, or not at all? First, how much do you personally worry about ... [RANDOM ORDER]

	Great deal	Fair amount	A little/ not at all
	%	%	%
The economy	59	29	11
Federal spending and the budget deficit	58	22	20
The availability and affordability of healthcare	57	20	23
Unemployment	49	28	23
The size and power of the federal government	48	20	31
The Social Security system	46	29	24
Hunger and homelessness	43	33	23
Crime and violence	39	31	29
The possibility of future terrorist attacks in the U.S.	39	24	37
The availability and affordability of energy	37	30	33
Drug use	34	29	37
Illegal immigration	33	24	42
The quality of the environment	31	35	34
Climate change	24	25	51
Race relations	17	26	56

Question asked of a half sample  
March 6–9, 2014

GALLUP





**90% PROBABILITY <6 FEET SEA LEVEL** ★







# AT&T Park @ 12 Feet SLR

Credit: Nickolay Lamm





# Chrissy Field

**Credit: Nickolay Lamm**





# Chrissy Field

Credit: Nickolay Lamm









PROJECT

# OWL SEA LEVEL RISE VIEWER

RESILIENCY CATALYST



DATE

09-16-2014

[PILOT TEST]





- \* Shows high-probability sea level rise scenarios
- \* Boosts public support for adaptation policies
- \* Drives environmental stewardship actions

## **OWL SEA LEVEL RISE VIEWER**





FEMA



## Climate Impact Visualization to Catalyze Risk Reduction

- \* OWL will be deployed to high foot-traffic Marin County locations vulnerable to climate impacts.
- \* Users will see 360-degree visualizations of recent El Nino and King Tide events, future inundation scenarios according to NOAA/USGS models, and green infrastructure solutions.
- \* Users prompted to take personal stewardship actions and support local adaptation policies.
- \* Dr. Susanne Moser, Ph.D. (Stanford) will conduct social science study into efficacy of tool, track stewardship actions, and write paper for publication.
- \* Results will be packaged into a best practices outreach, education and communications toolkit and distributed through partner organizations.





Madera del Presidio

Almonte Marsh Preserve

ALMONTE

Coyote Creek

44 Duckeye Roadhouse

Sage Island

Strawberry Point

Almonte Harbor



**Palo Alto, CA**



**San Francisco**



**Napa, CA**

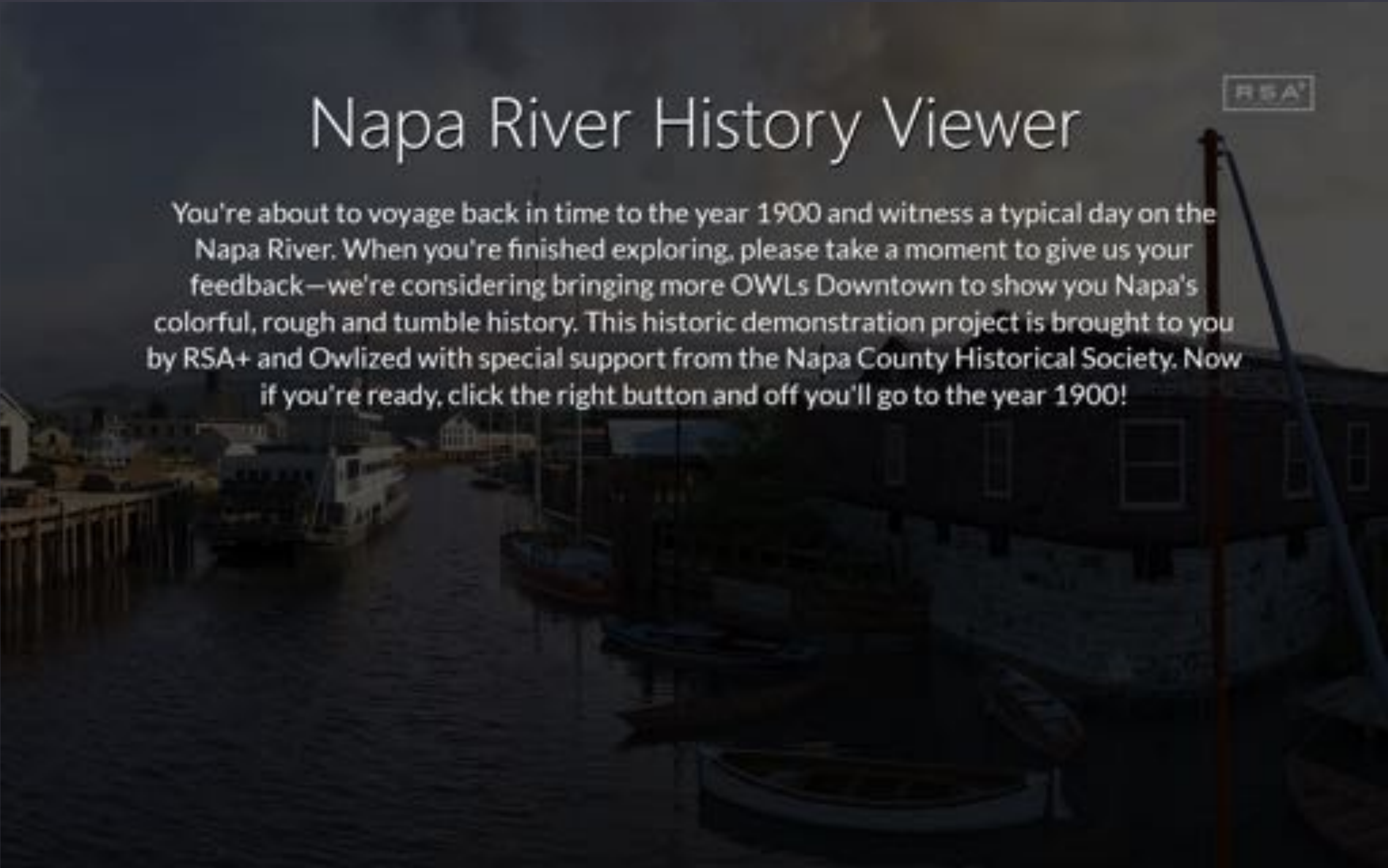


**Fremont, CA**



**Seeing is believing.**





# Napa River History Viewer

RSA+

You're about to voyage back in time to the year 1900 and witness a typical day on the Napa River. When you're finished exploring, please take a moment to give us your feedback—we're considering bringing more OWLs Downtown to show you Napa's colorful, rough and tumble history. This historic demonstration project is brought to you by RSA+ and Owlized with special support from the Napa County Historical Society. Now if you're ready, click the right button and off you'll go to the year 1900!









Question 1 of 3:

Do you support the project you just looked at?

Yes

Not Sure

No







We value your feedback on this project.  
Please record your thoughts

Stop



Next





*Head pans and tilts*

*Audio playback/recording*

*3D stereoscopic display*

*Records survey responses*

*Wireless internet connection*

*Weeklong battery supply or  
hardwired*

*Remote software updates*

*Securely bolts to ground*

*Tough, weatherproof casing*



**FEATURES**



**1. Tap button to toggle through sea level rise scenarios**

**3. OWL promotes adaptation measures**

**2. OWL describes what you're seeing**

**4. Choose stewardship action**

*Here's what 3 feet looks like...*

*Here's what Marin County is doing about it...*

*Would you like to sign up for rooftop solar?*

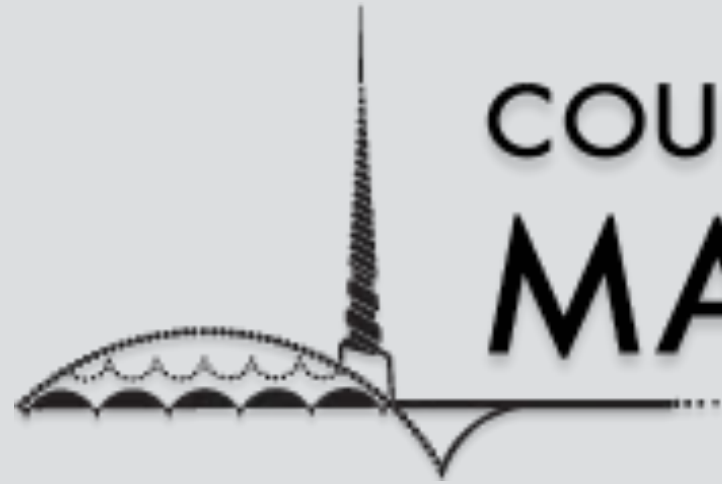


**PROGRAM**





**FEMA**



COUNTY OF  
**MARIN**



**OWLIZED**



**AUTODESK**



WOODS INSTITUTE  
FOR THE ENVIRONMENT  
STANFORD UNIVERSITY



CALIFORNIA  
**COASTAL**  
COMMISSION



*San Francisco Bay*  
National Estuarine Research Reserve

**PARTNERS**





To Whom It May Concern:

I write to express enthusiastic support for and commitment to an upcoming environmental education pilot test being designed and implemented by Climate Access, SF Environment, National Oceanic and Atmospheric Administration, Owlized, Autodesk, San Francisco Bay National Estuarine Research Reserve, and California King Tides Initiative.

In this pilot project, we are looking to research the use of visualization and scenario-based decision-making in understanding climate impacts and engaging citizens in stewardship activities. Starting in June 2014, San Franciscans and tourists will visualize anticipated sea-level rise like never before. Owlized has developed digital sidewalk viewfinders that can be loaded with scenario data, allowing citizens walking by to visualize how the world around them might change.

An OWL digital viewfinder will be loaded with the current, most accurate sea level rise modeling from NOAA and installed at a vulnerable location with high pedestrian foot traffic. The OWL will be carefully programmed with contextual narration to explain to users the science behind the models they are viewing, and after viewing the models will be prompted to begin an engagement path on climate change and increase public support for environmental protection.

The project will be led by Climate Access, in partnership with the California King Tides Initiative, NERR and SF Environment. A sub-grantee partner in the project will be Dr. Heidi Nutters at Stanford University, who is coordinating the outreach, education and communications work.

The outcomes of the pilot project will become part of a best practices outreach, education and communications toolkit, which will be disseminated by Climate Access in partnership with the California King Tides Initiative, NERR and SF Environment. This environmental stewardship model will be replicable across the US for different scenario modeling to provide a catalyst to advance action on climate change and increase public support for environmental protection.

Autodesk pledges to contribute \$20,000 and looks forward to playing a leading role in this effort, providing guidance to the Climate Access team and project partners on the design of the environmental education pilot, introductions to organizations with expertise in developing experiential or imaginative climate education projects in the San Francisco Bay Area, such as the National Parks Service and the Observatory, coordinate relevant scientific assessments, and sharing the findings from the pilot with NOAA and other federal science agency staff and partners.

Sincerely,

*Tristan Randall*  
Tristan Randall  
Special Projects Executive  
Autodesk, Inc.

Autodesk, Inc.  
The Landing @ One Market, Suite 300 San Francisco, CA  
Phone: (415) 353-3300 | Fax: (415) 353-3333 | [www.autodesk.com](http://www.autodesk.com)

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY  
**CALIFORNIA COASTAL COMMISSION**  
41 FERRIS, SUITE 1000  
SAN FRANCISCO, CA 94109-2219  
VOICE (415) 964-3225  
FAX (415) 964-3400  
TELEFAX (415) 964-3400

 **San Francisco Bay National Estuarine Research Reserve**  
3152 Paradise Drive, Tiburon, CA 94920-1205  
Tel (415) 338-3707 Fax (415) 435-7120 Web: [www.sfbaynerr.org](http://www.sfbaynerr.org)

To Whom It May Concern:

I write to express enthusiastic support for and commitment to an upcoming environmental education pilot test being designed and implemented by Climate Access, SF Environment, San Francisco Bay National Estuarine Research Reserve (SF Bay NERR), California King Tides Initiative, Owlized, and Autodesk.

In this pilot project, we are looking to research the use of visualization and scenario-based decision-making in understanding climate impacts and engaging citizens in stewardship activities. Starting in June 2014, San Franciscans and tourists will visualize anticipated sea-level rise like never before. Owlized has developed digital sidewalk viewfinders that can be loaded with scenario data, allowing citizens walking by to visualize how the world around them might change.

An OWL digital viewfinder will be loaded with the current, most accurate sea level rise modeling from NOAA and installed at a vulnerable location with high pedestrian foot traffic. The OWL will be carefully programmed with contextual narration to explain to users the science behind the models they are viewing, and after viewing the models will be prompted to begin an engagement path on climate preparation with SF Environment, NERR and others in the region that offer citizen stewardship programs. The outcomes of the pilot project will become part of a best practices outreach communications toolkit, which will be disseminated by Climate Access in partnership with the California King Tides Initiative, NERR and SF Environment. This environmental stewardship model will be replicable across the US for different scenario modeling to provide a catalyst to advance action on climate change and increase public support for environmental protection.

The San Francisco Bay National Estuarine Research Reserve engages with partners from across the region to translate and inspire action on science for a broad range of audiences. This proposed project supports the work of the Reserve by testing a new communication model on a high-priority topic. The lessons learned from this project will support an expansion of our education and communication endeavors, both from the Reserve and for the California King Tides Initiative, for which the Reserve is a founding member. The Reserve looks forward to the opportunity to develop a scalable environmental education tool that can be utilized to help educate residents and drive stewardship actions in vulnerable coastal communities across the United States.

Sincerely,

*Heidi M. Nutters*  
Heidi Nutters  
Coastal Training Program Coordinator  
San Francisco Bay National Estuarine Research Reserve

 *San Francisco Bay National Estuarine Research Reserve is a partnership among National Oceanic and Atmospheric Administration, San Francisco State University, California State Parks, Solano Land Trust and the Bay Conservation and Development Commission.* 



Edwin M. Lee



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
OFFICE OF OCEANIC AND ATMOSPHERIC EDUCATION  
Climate Program Office  
1215 East-West Highway, Suite 2000, Silver Spring, MD 20910-6002

January 13, 2014

To Whom It May Concern:

As a member of the U.S. Global Change Research Program (USGCRP) Communication and Education Emergency Working Group, the federal lead on the Climate Literacy guide and NOAA's Climate Education Coordinator, I am pleased to offer my enthusiastic support for and commitment to an upcoming environmental education pilot test being designed and implemented by Climate Access in partnership with SF Environment, San Francisco Bay National Estuarine Research Reserve, California King Tides Initiative, Owlized and Autodesk.

In this pilot project, Climate Access is looking to research the use of visualization and scenario-based tools in understanding climate impacts and if this use of experiential education can lead citizens to engage in stewardship activities. Over a 12-week period, starting in June 2014, San Franciscans and tourists will visualize anticipated sea-level rise like never before. Owlized has developed digital sidewalk viewfinders that can be loaded with scenario data, allowing citizens walking by to visualize how the world around them might change. An OWL digital viewfinder will be loaded with the current, most accurate sea level rise modeling from NOAA and installed at a vulnerable location with high pedestrian foot traffic. Users will look around inside the OWL and see a range of scenarios that show how the coastline directly in front will change under best (policy action) and worst (no action) outcomes.

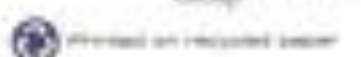
I am impressed that Climate Access will develop the experiential education program and coordinate with project partners with the dissemination of the findings. To date, they have done impressive work. A sub-grantee partner in the project will be Dr. Saul Moser, a fellow at the Woods Institute for the Environment at Stanford University, who will advise and advise on the research that analyzes the outcomes of the 12-week OWL viewfinder pilot project. This makes an excellent team.

The outcomes of the pilot project will become part of a best practices outreach, education and communications toolkit, which will be disseminated by Climate Access in partnership with the California King Tides Initiative, NERR and SF Environment. I can extend the dissemination of this toolkit nationally if it shows promise. If successful, this environmental stewardship model will be replicable not only in coastal regions vulnerable to sea level rise, but in any region where the use of visualization and scenario climate impact modeling has the potential to act a catalyst to advance understanding of climate change and increase public support for environmental protection.

This proposal integrates NOAA's science, service and stewardship mission along with our education goal of environmental literacy. Further, both NOAA Climate goal and USGCRP have a climate literacy objective. As such, I look forward to acting as a project advisor on this effort, providing guidance to the Climate Access team and project partners on the design of the environmental education pilot, introductions to organizations with expertise in developing experiential or imaginative climate education projects in the San Francisco Bay Area, such as the National Parks Service and the Observatory, coordinate relevant scientific assessments, and sharing the findings from the pilot with NOAA and other federal science agency staff and partners.

Sincerely,  
*Frank Nappi*  
Frank Nappi

Climate Education Coordinator  
Climate Program Office  
National Oceanic and Atmospheric Administration (NOAA)  
Co-Chair, U.S. Global Change Research Program Communication and Education Emergency Working Group





# PRESS



# CUSTOMERS



# PARTNERS



# AWARDS













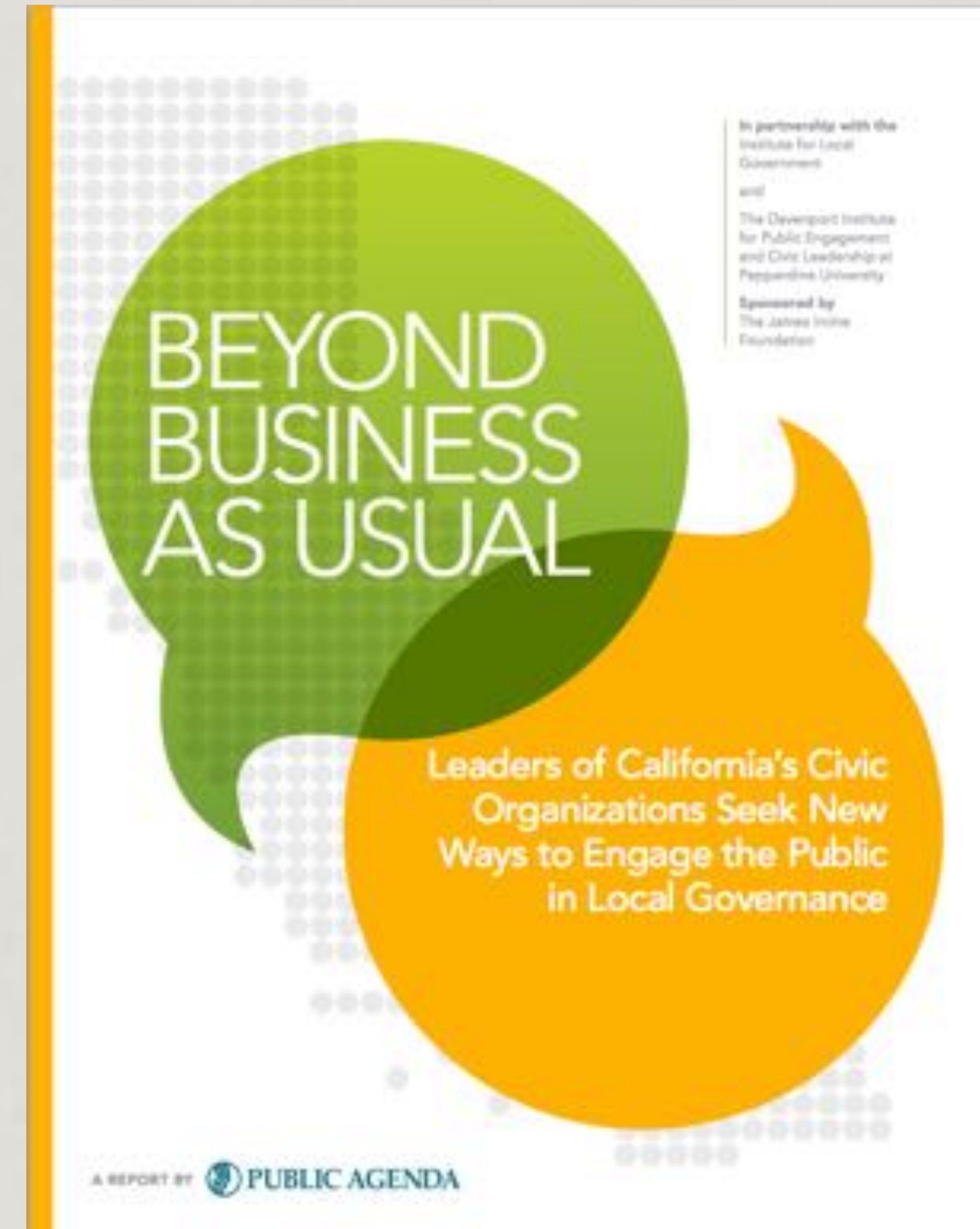




# Beyond Business as Usual

A Report from Public Agenda

- \* Survey of 462 leaders of civic and community-based organizations throughout California
- \* Organizations' missions include improving local decision making by working with residents and/or civic leaders





# PUBLIC ENGAGEMENT in California

Highlights from  
research with  
local officials  
and civic leaders

## OPPORTUNITY FOR CHANGE

Public meetings often **do not** meet the needs of residents or local officials.

Public comment agendas are **dominated by narrow interests and negative remarks**



**Large segments of the public are missing**, especially low-income populations, immigrants and young people

Many **desire** broad-based public participation and stronger collaboration.

## WHAT THEY ARE SAYING





## DIGITAL ARTS DISTRICT CAMPAIGN

2009





# Mid-Market ARTS District

## Summary Findings from Qualitative Research with San Francisco Voters

November 11, 2011





Participants were skeptical of the measure before seeing the signs and wanted to know more about what the signs would look like and who would benefit.

Participants were not opposed to advertising.

If you made it the Marquee district, that's kind of interesting, maybe it will help spruce things up.

But were often skeptical of who was behind the measure and how the signs would look.

I need to know a lot more about the process and how it works. Who's proposing this idea? Who profits by it?

	Yes	No	Net "Yes"
<i>1<sup>st</sup></i>	<i>1</i>	<i>7</i>	<i>-6</i>
<i>2<sup>nd</sup></i>	<i>4</i>	<i>4</i>	<i>0</i>
<i>Total Initial</i>	<i>5</i>	<i>11</i>	<i>-6</i>





Participants moved in favor of the Ballot Initiative, but nearly 1/3 of participants still voted “No” in the Final Ballot.

### Initial Ballot

	Yes	No	Net “Yes”
<i>1<sup>st</sup></i>	1	7	-6
<i>2<sup>nd</sup></i>	4	4	0
<b>Total Initial</b>	<b>5</b>	<b>11</b>	<b>-6</b>

### Final Ballot

	Yes	No	Net “Yes”
<i>1<sup>st</sup></i>	5	3	+2
<i>2<sup>nd</sup></i>	6	2	+4
<b>Total Final</b>	<b>11</b>	<b>5</b>	<b>+6</b>

Overall, there was a Net +12 movement in votes from the initial to the final ballot.







# BETTER MARKET STREET

SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS







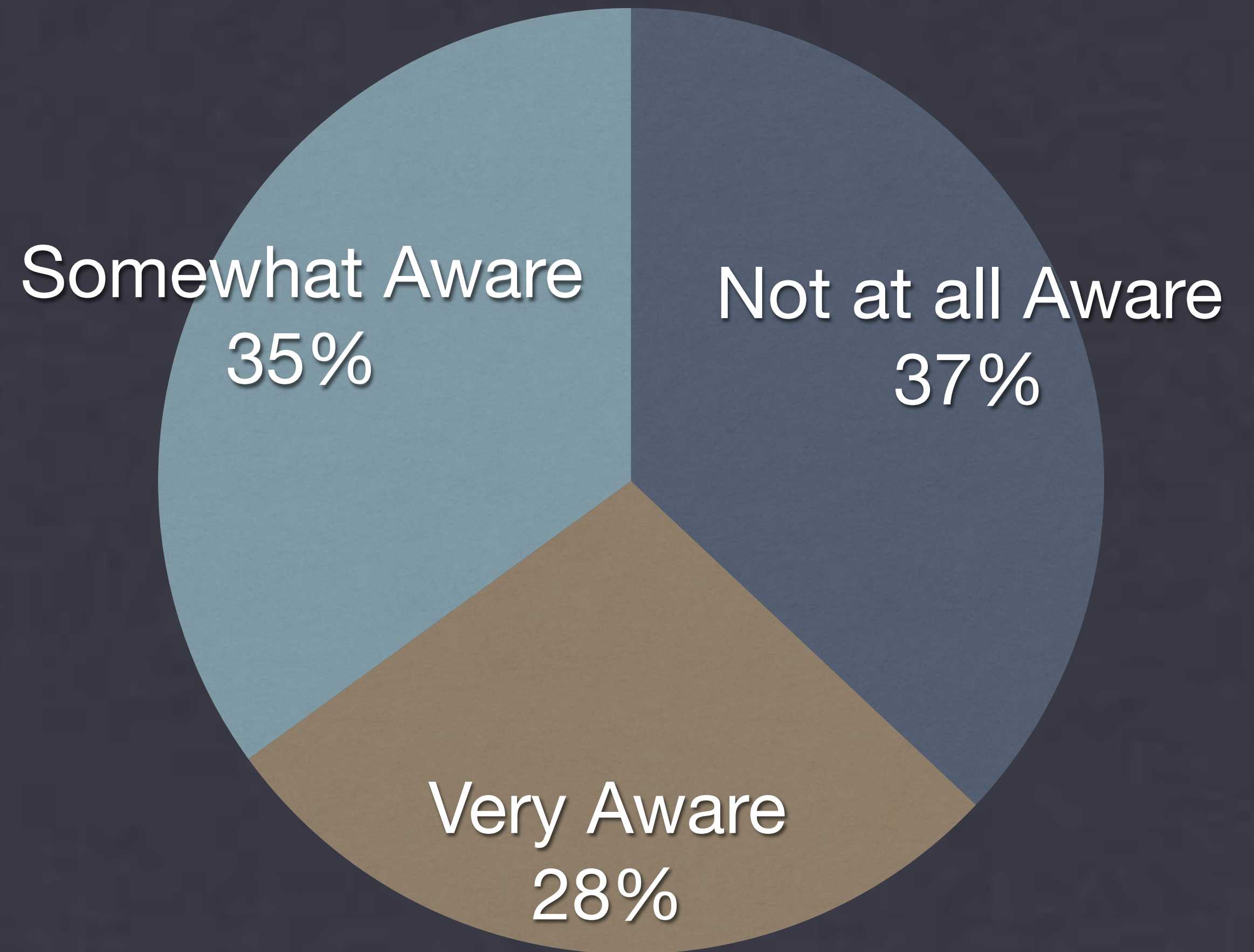
# BETTER MARKET STREET

SAN FRANCISCO DEPARTMENT OF PUBLIC WORKS





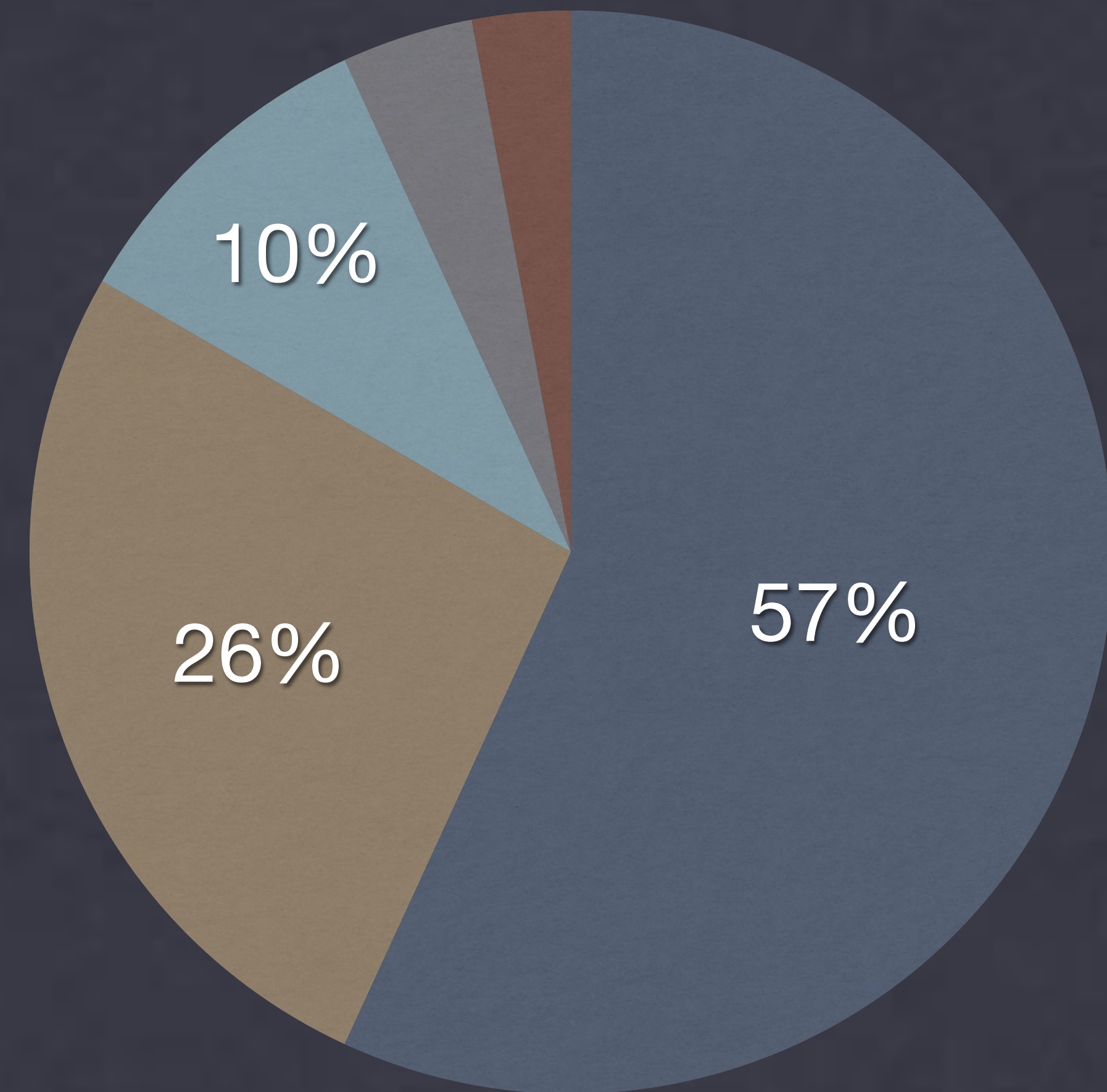
Were you aware of the Better Market Street project before seeing the display today?





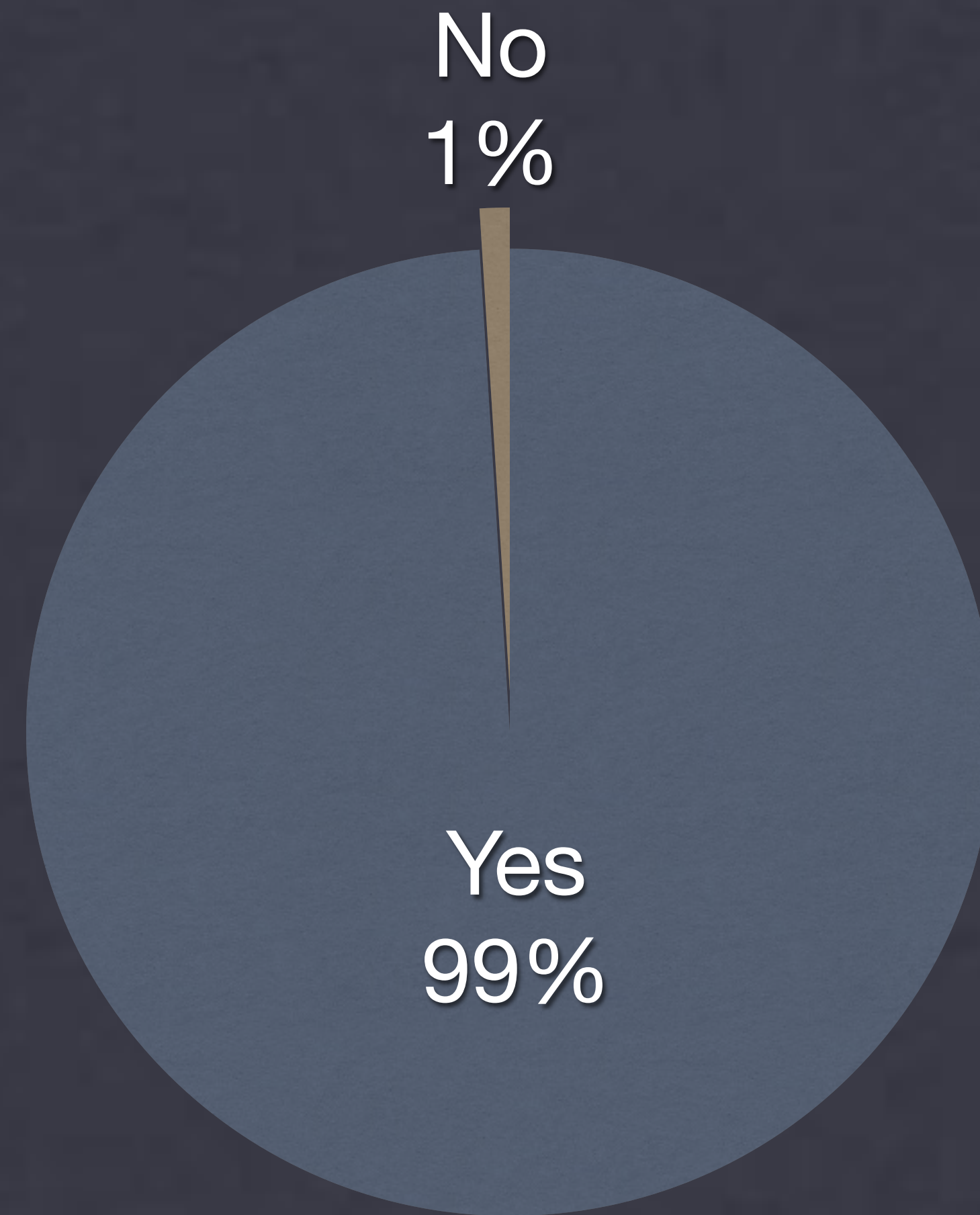
# How helpful was the OWL for understanding proposed design options?

- 5 (Extremely Helpful)
- 4 (Very Helpful)
- 3 (Somewhat Helpful)
- 2 (Not Very Helpful)
- 1 (Useless)





Would you like to use an OWL  
again to look at proposed  
design options for city projects?







# CALIFORNIA AVENUE GROUNDBREAKING

MARCH, 2014 - PALO ALTO, CA







# CALIFORNIA AVENUE GROUNDBREAKING

MARCH, 2014 - PALO ALTO, CA

PALO ALTO MAYOR NANCY SHEPARD







# CALIFORNIA AVENUE GROUNDBREAKING

MARCH, 2014 - PALO ALTO, CA

PALO ALTO MAYOR NANCY SHEPARD







# NAPA HISTORY VIEWER

JULY, 2014 - NAPA, CA





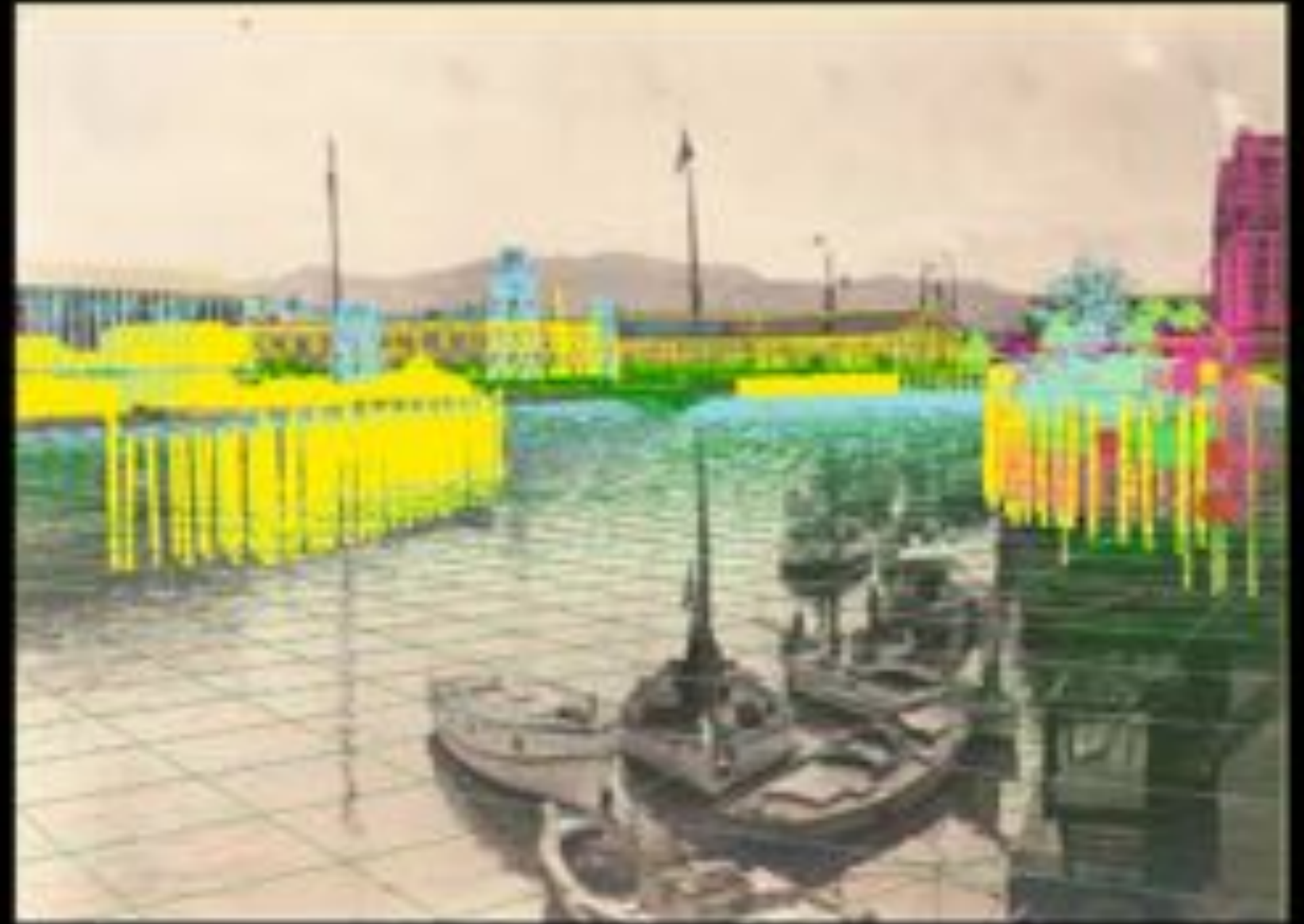
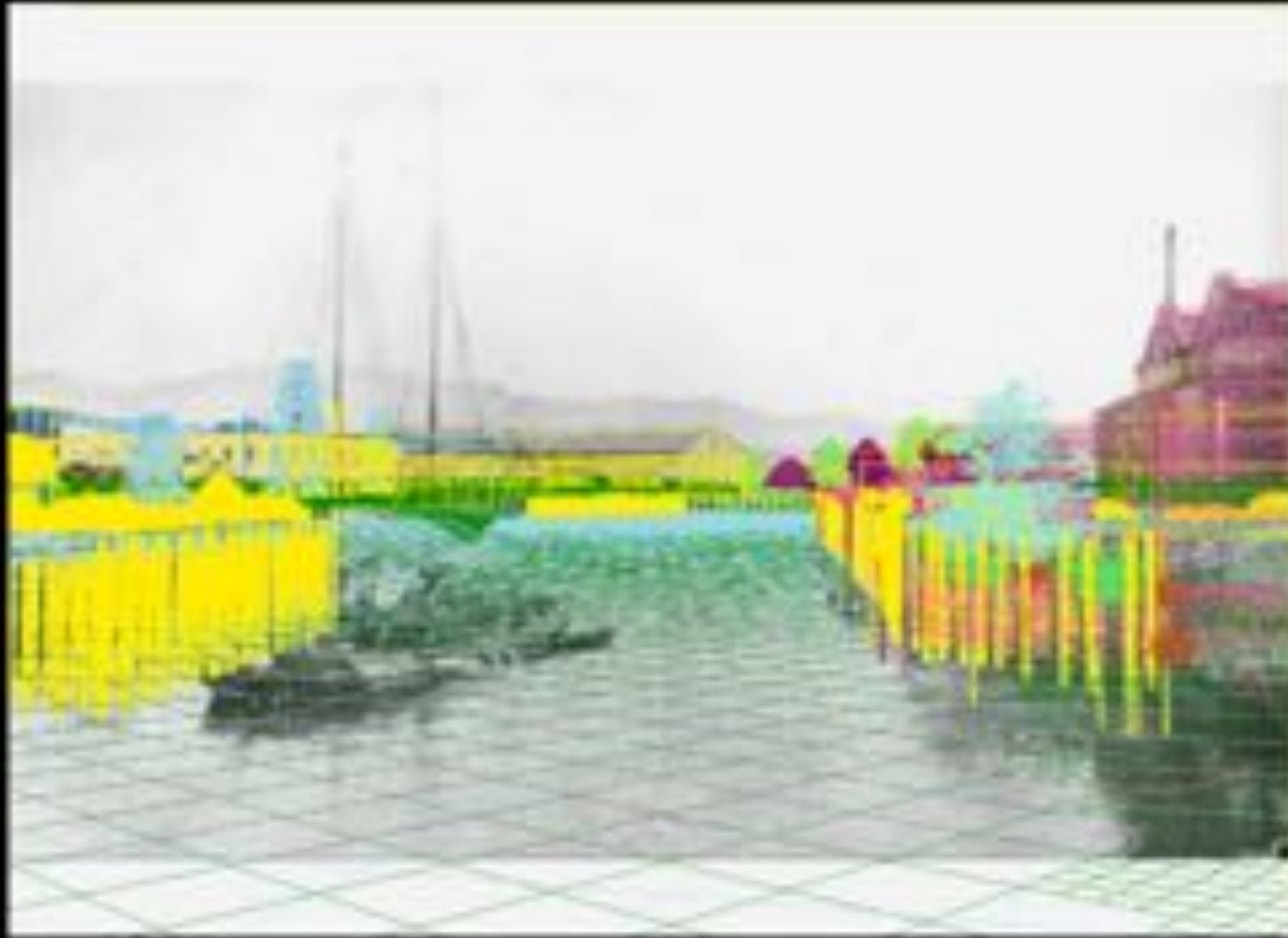


# NAPA HISTORY VIEWER

JULY, 2014 - NAPA, CA







# NAPA HISTORY VIEWER

JULY, 2014 - NAPA, CA







# NAPA HISTORY VIEWER

JULY, 2014 - NAPA, CA







**Thank you.**



**OWLIZED**