

Unreinforced Masonry (URM) Outreach and Education Columbia City Pilot



Policy Development

- 2008-2009 Proposed Technical Seismic Retrofit Standard created
- 2012 URM Retrofit Policy Committee
- 2013 Outreach To Community Groups and BCA analysis
- 2014 Policy Group reconvened – recommended validation of URM inventory
- Currently hiring a structural engineer to inventory and validate the URM list prior to final recommendations



Need for Outreach and Education

- Public is not aware of the earthquake hazards of falling bricks and collapsed buildings
- URM retrofits are expensive and can have technical challenges
- URM retrofit policy is a difficult message to deliver and is complicated by Seattle's diverse cultural communities and multiple languages



Why a Pilot?

- Opportunity to explore ideas and methods for most effective outreach
- Opportunity to develop toolkit for future outreach and education
- Recognition that DPD and the City needs guidance in delivering the message
- Availability of FEMA 5% Hazard Mitigation Grant funding and partnership with OEM



Emergency Management Division

Washington State Military Department

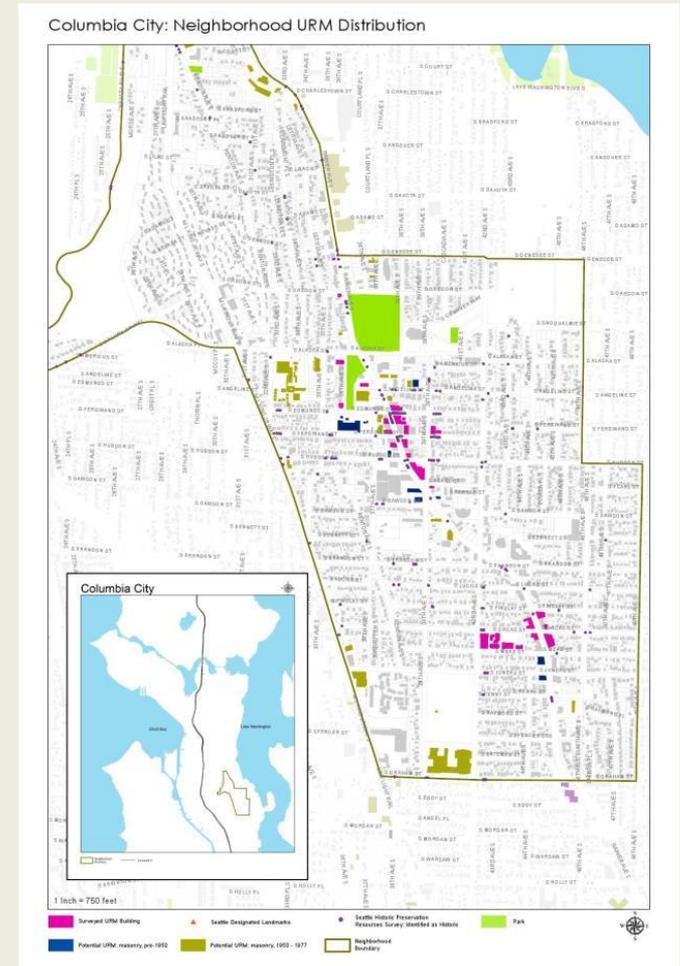
HAZARD MITIGATION GRANT PROGRAM (HMGP)

Columbia City Pilot - Goals

- To develop a URM communication plan and toolkit with techniques, messaging, and communication strategies for Seattle's diverse community
- To pilot outreach and education in an urban village with a concentration of URM
- To raise awareness of life safety benefits in retrofitted URM
- To encourage mitigation action – retrofit URM

Columbia City Pilot - Tasks

- Research and Analysis of Target Audiences
- Develop Targeted Messaging
- Develop Communication Methods and Toolkit
- Columbia City Outreach
- Pilot Evaluation



Columbia City Pilot Communication Methods

- URM Outreach Survey
- Messaging Matrix
- Communication Plan
- Toolkit:
 - Presentation Slides
 - URM Handout (translated)
 - Columbia City's URM's: Case Studies
 - Fliers (translated)
 - Event Press Release

Unreinforced Masonry Building (URM) Survey Report

The City of Seattle – Department
of Planning and Development

Prepared by:
T.D. Wang Advertising Group
July 9, 2013

400 Report Avenue South, Suite 208
Seattle, WA 98148-1106
p +1 (206) 453-8888
f +1 (206) 453-9889

t. d. wang
advertising group, inc

Forced Masonry Retrofits [URM]
[Study 2]
-Story Mixed-Use Unreinforced Masonry Building with Wood-Framed Floors & Roof



Unreinforced Masonry (URM) Buildings, commonly red brick buildings, are often thought to be strong and durable. Well-constructed brick buildings can bear a lot of weight and are durable against day to day use, but they do not perform well when they are moving around in an earthquake.

There is no reinforcement added to interconnect the many small pieces, the movement the walls undergo in a quake can loosen the joints between the individual pieces and cause the walls to fall. It is also common in old construction that there is very little or no connection of the floor and roof framing to the brick walls. At these connections, when these walls are moving during an earthquake, they can move in a different direction from the floor and roof causing the floor or roof to fall. If there are no connections between the framing in the floor and roof, this same situation can arise. The pieces move in different directions and sections can separate and fall.

Red Brick Plus Retrofit Standard

This is a standard of design often used to determine what parts of a URM building should be repaired to improve their performance in the event of an earthquake. The elements that require retrofit are determined based on what has been seen to fail in past earthquakes.

This standard would likely apply to many of the multi-story URM structure. This standard is not intended to preserve the building which may be substantially damaged during an earthquake. It is intended to improve the performance of the building during an earthquake to increase the likelihood that occupants and nearby pedestrians will be able to exit the area safely. It may not apply if the buildings are not simple rectangular shapes, if the walls do not align between floors, or if there are large openings in the floors or roof such as large skylights or arched or similar protrusions in the facade.



Unreinforced Masonry Retrofits [URMs]

[What is a URM?]
A brick building constructed without steel reinforcements, ties and connections in their load bearing walls. Typical Example:

- Red brick buildings from early to mid 1900's
- Brick structure carrying the loads
- No steel grid in wall or between walls and floors/roof
- Some are built in the 1940's-60's

[Why is retrofit important?]

- The Cascade Region is in a high earthquake zone
- Improves public safety
- Protect building investments
- Retain and attract tenants
- Maintain neighborhood character
- Keep services in operation
- Support the economic vitality of the neighborhood

[What does a retrofit include?]

1. Building walls that extend above the roof are braced
2. Floors and roofs are structurally connected to URM walls
3. Add connections inside framed walls, floors and roofs for added strength
4. Weak interior and exterior bearing walls are strengthened

City of Seattle URM Contact:
Sandy Roward
(206) 233-7134 sandy.roward@seattle.gov
Visit the URM website for more information:
<http://www.seattle.gov/util/conservation/changes/brickcode/urms/>
<https://www.seattle.gov/util/conservation/changes/brickcode/urms/>

Seattle
Economic Development

Improving Safety for Community & Business Resilience in Columbia City & Hillman City

Albañilería No Reforzada Modernizada [URMs]
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Research

Methods

- Groundtruthing – walking tour
- Survey
- Demographic analysis



Results

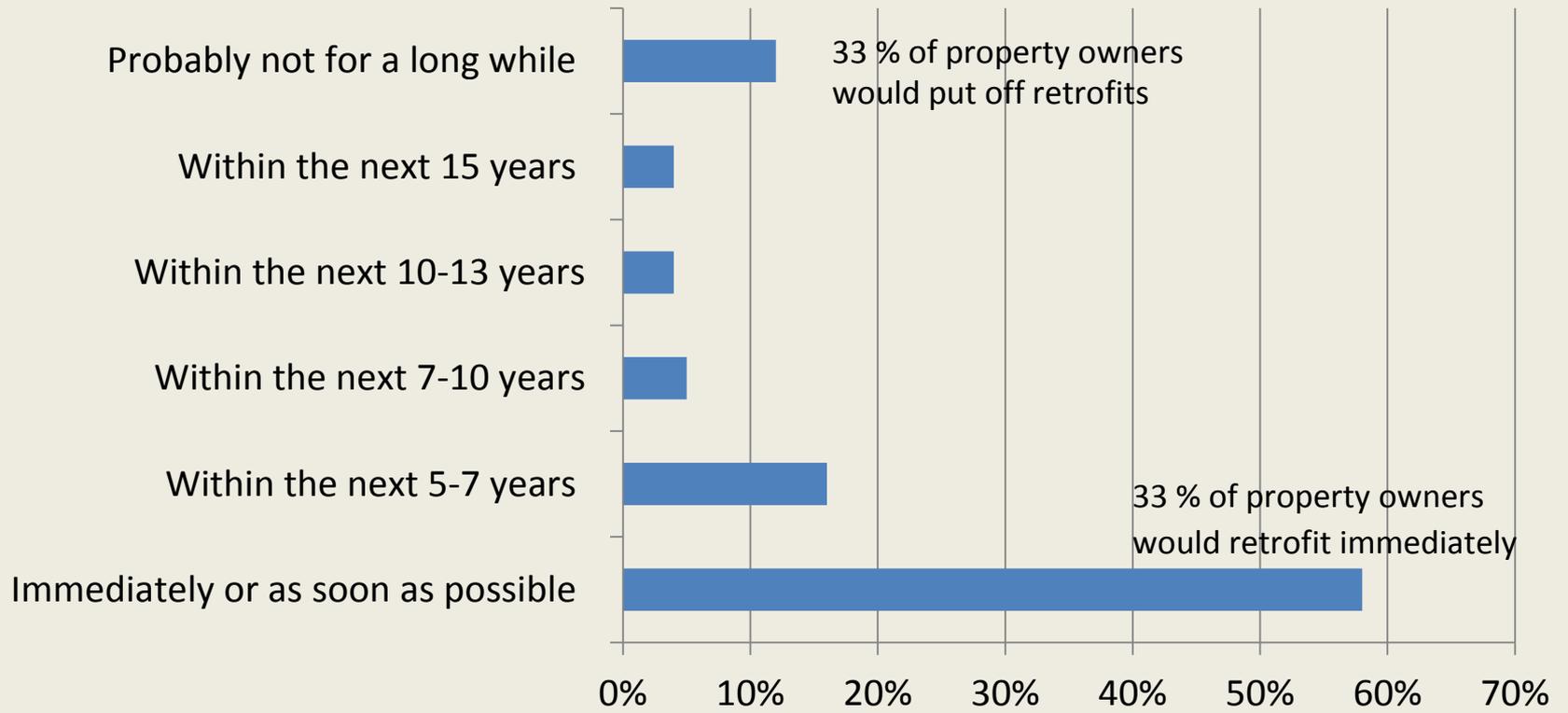
- Three general types of URM were most common
- Six languages other than English,
- Preferred communication methods and message varied depending on the target audiences.

“Over half of the property owners and business owners were aware of URM, though URM awareness remained low among the general public.”

How safe do you feel in a URM?



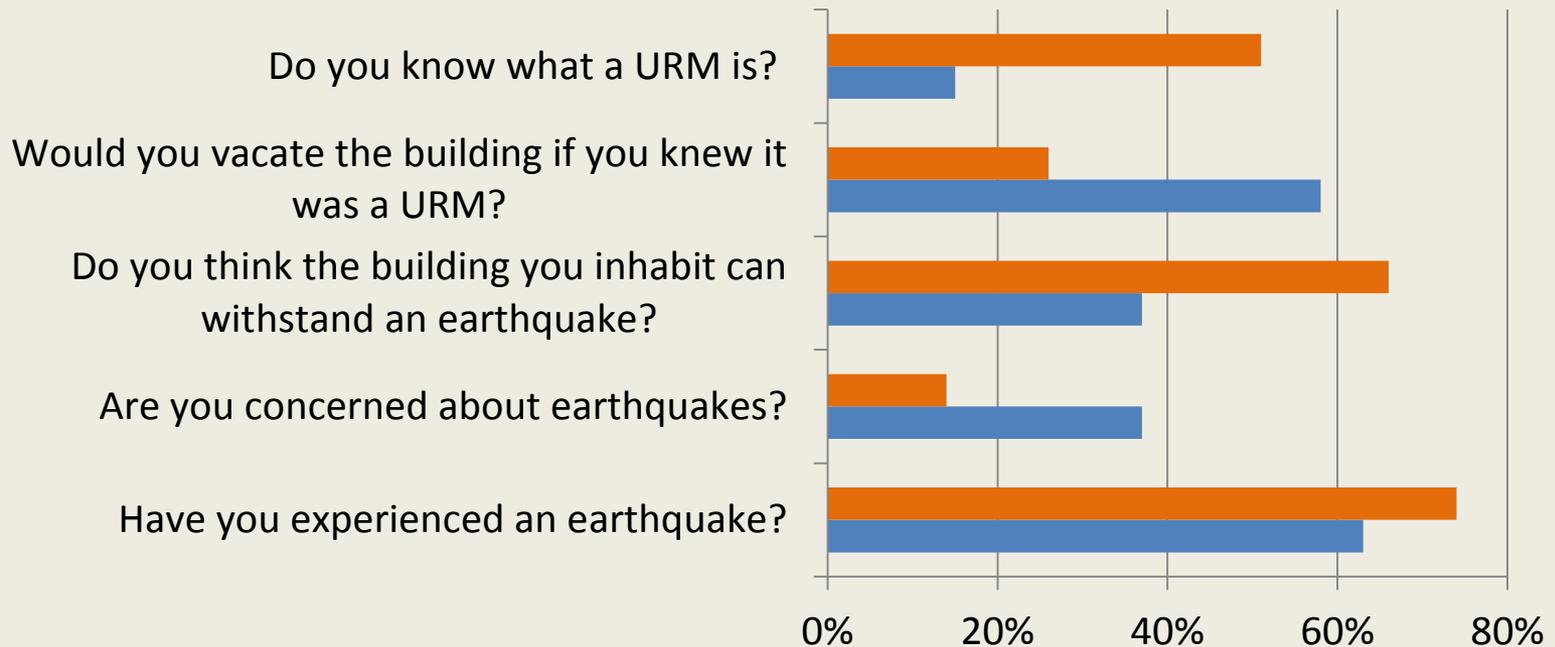
How soon should a URM be retrofitted?



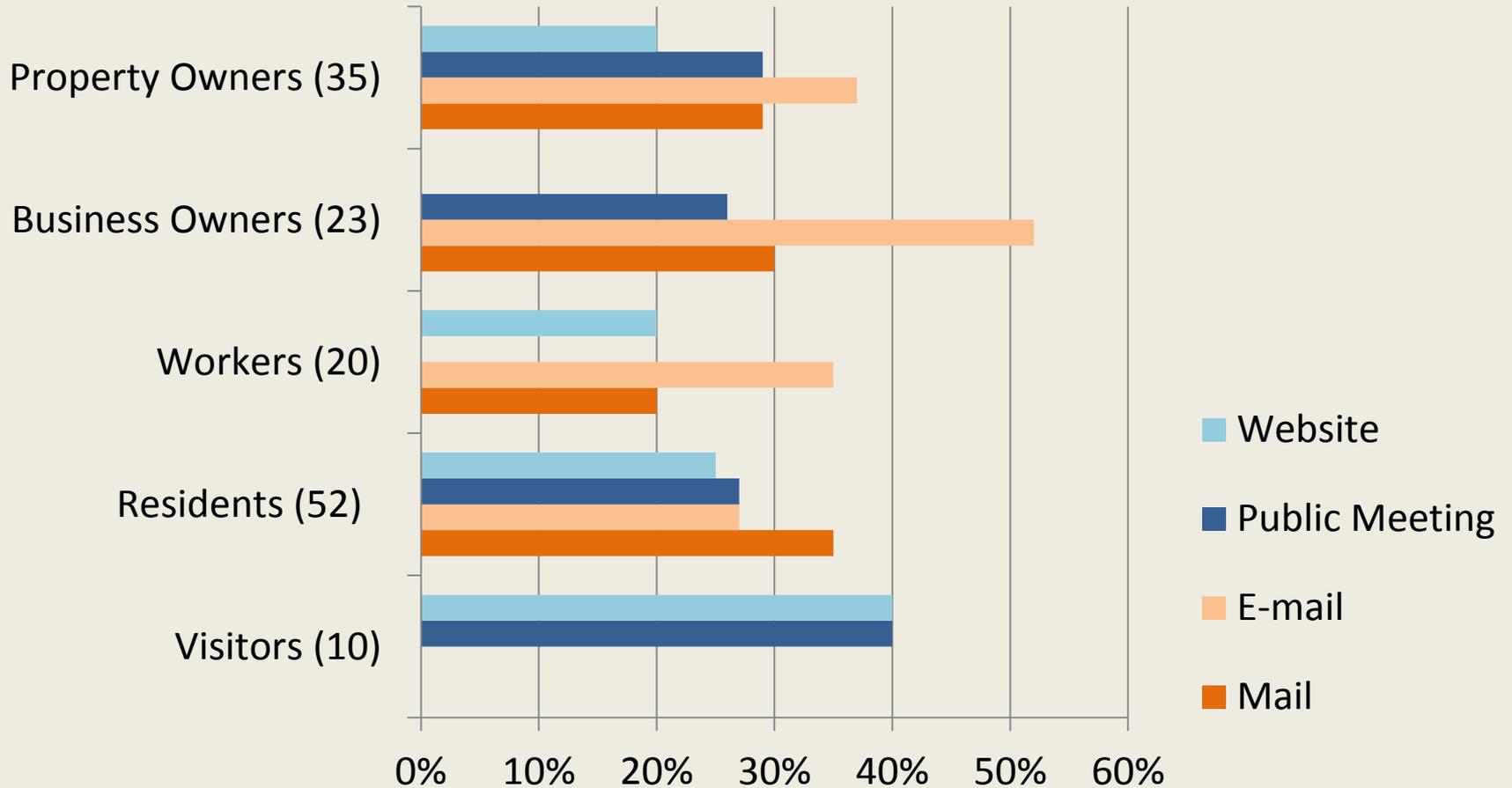
Property Owners vs. Non-owners

Property Owners (35)

Non-property Owners (67)



Preferred Communication Method



Targeted Messaging

- Messaging tables are based on the URM survey data
- Tables can be utilized to develop additional materials for target groups.

Potential Messaging Taglines

	Building Owners / Business Managers / Property Owners	Residents / Commercial Tenants / Workers	Visitors / General Public	Non-English Speakers
Overall theme	<ul style="list-style-type: none"> • “Keeping our community resilient and safe is everyone’s responsibility.” • “What if earthquake hits your building tomorrow?” 			
Customized messaging to each group	<ul style="list-style-type: none"> • “Retrofitting your URM building? The City is here for you” • “Ensure the resilience and safety of your investment. Retrofit your building today.” 	<ul style="list-style-type: none"> • “You are the voice of your community when it comes to safety” • “Do you know if you live, work, or socialize in a URM?” 	“What if an earthquake hits your neighborhood tomorrow?”	To be translated and trans-created in-language and/or in-culture depending on cultural groups

Columbia City Pilot - Outreach

Community Workshop

- Larger community workshop was advertised and targeted to a broad spectrum of the public
- 2-hour session with presentation and interactive Q and A
- Office of Emergency Management preparedness literature in 6 languages

Small Group Meetings led by the City's Public Outreach and Engagement Liaisons (POELs)

Business Meeting: Rainier Valley Chamber short presentation with Q and A session after meeting



GET AHEAD OF THE NEXT EARTHQUAKE

Ensure the resilience and safety of your investment. Retrofit your building today.

The City of Seattle is developing new policies and standards for Unreinforced Masonry Buildings (URM) that may affect your property. Retrofitting your URM protects tenants and personal safety during an earthquake. Investing in retrofitting your building now will add to the long-term value of your property and helps maintain community character.

Come join us for an informative workshop on retrofit options, benefits, and updates on City of Seattle's policy development.

KEEPING OUR COMMUNITY RESILIENT AND SAFE IS EVERYONE'S RESPONSIBILITY.



November 13, 2013

5:30-7:30 pm

Filipino Community Center
5740 Martin Luther King Jr
Way S, Seattle, WA

For more information:
www.seattle.gov/dpd/codesrules/changestocode/unreinforcedmasonrybuildings/whatwhy/default.htm

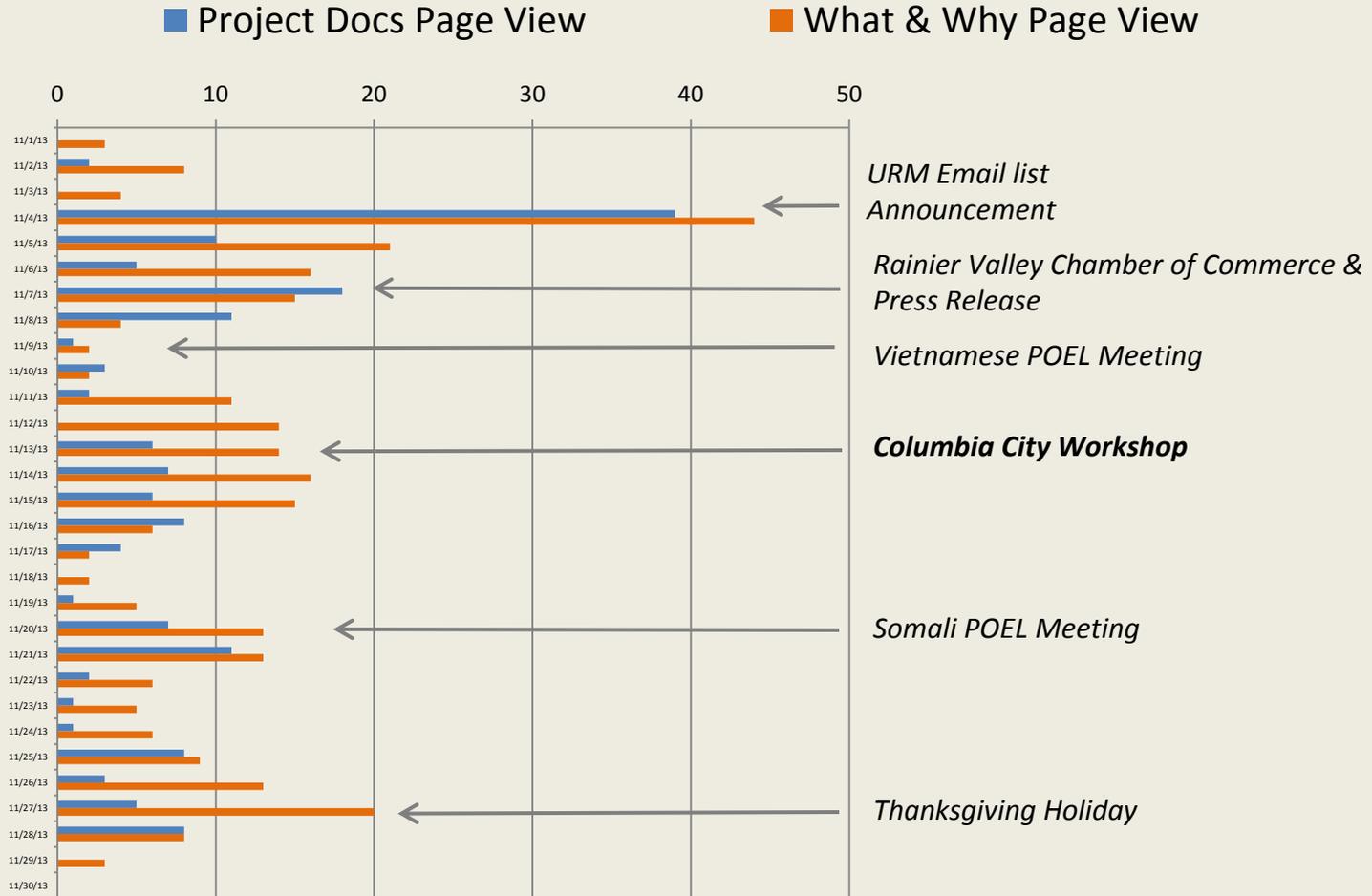
URM Contact:
Sandy Howard at
Sandy.Howard@seattle.gov

Brought to you by:
City of Seattle
Department of
Planning &
Development, and the
Office of Emergency
Management

Pilot Evaluation Criteria and Methods

Evaluation Criteria	Evaluation Method	Data Collected
1. How well did the research target the desired audience?	<ul style="list-style-type: none"> Survey data counts for each audience Other outreach data counts for each audience 	<ul style="list-style-type: none"> Number of owners, tenants, general public
2. Does the outreach item/method support the Pilot Project Goal of building awareness by reaching the targeted audiences?*	<ul style="list-style-type: none"> Data on audiences reached throughout the Pilot Mailing list increase after Pilot (by Seattle) Web analytics (by Seattle) 	<ul style="list-style-type: none"> Number and audience type of attendees at each event Number of new email members after each event Feedback during events
3. How effective was the Toolkit in distributing the message? (Workshop flier, presentation, and info sheet are primary components of the Toolkit that will be evaluated.)	<ul style="list-style-type: none"> POEL orientation feedback Community group meeting feedback (via POELs) Workshop feedback sheet 	<ul style="list-style-type: none"> Number of attendees that read the flier, saw the presentation Workshop evaluation sheet
4. How effective was each outreach method in distributing the messaging?	<ul style="list-style-type: none"> POEL orientation feedback Community group meeting feedback (via POELs) Workshop feedback sheet Data on audience numbers, where available 	<ul style="list-style-type: none"> Number of attendees in each meeting type Feedback from meetings
5. How well did the outreach do in reaching diverse audience of the neighborhood?	Data count from inclusion form from POEL meetings and the workshop	Ethnic diversity info from inclusion form at workshop sign in and POEL group numbers
6. Was the budget adequate?	Reporting by consultant team by Task; staff, hours, etc.	Project budget results
7. What aspects of the Pilot provided best return?	Based on overall evaluation and lessons learned.	Subjective analysis at end of Pilot based on above items

URM Webpage Visits: *November 2013*



Attendance at Meetings

Summary:

Outreach Method	Groups	Audience Types	
Small Group Meetings	Vietnamese:	15	Public/business owners
	Somali:	16	Public/business owners
	Ethiopian (Oromo)	5	Business owners
	Rainier Valley Chamber of Commerce:	<u>43</u>	Business owners
	Sub Total:	74	
Community Workshop	English/non-identified	29	Public/business owners/property owners
	Filipino	<u>10</u>	Public
	Sub Total (including 3 POELS):	39	
	Total:	113	

Detail from Workshop sign-in:

TOTAL NUMBER	Cultural Group	Language	Male	Female	Age Range	Median Age	Own	Rent
1	SOMALI	SOMALI				37	1	0
1	AFRICAN AMERICAN	ENGLISH	0	1		60	1	0
1	ASIAN AMERICAN	ENGLISH	0	1		17	0	0
1	CHINESE	CANTONESE	1			37	1	0
1	SAMOAN	SAMOAN/ENGLISH		1		51	1	0
2	ASAIN	ILOCANO	1	1	32-56	33	0	2
5	FILIPINO	TAGALOG	3	2	17-67	39	2	3
6	BLACK	AMAHARIC	3	3	29-38	39	2	4
13	WHITE	ENGLISH	10	2	18-73	38	10	3

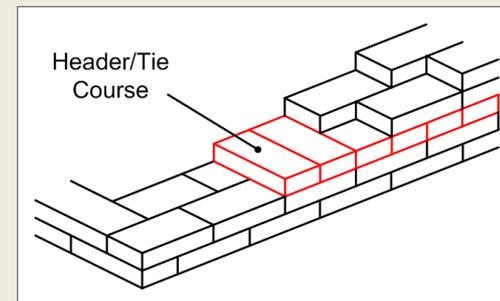
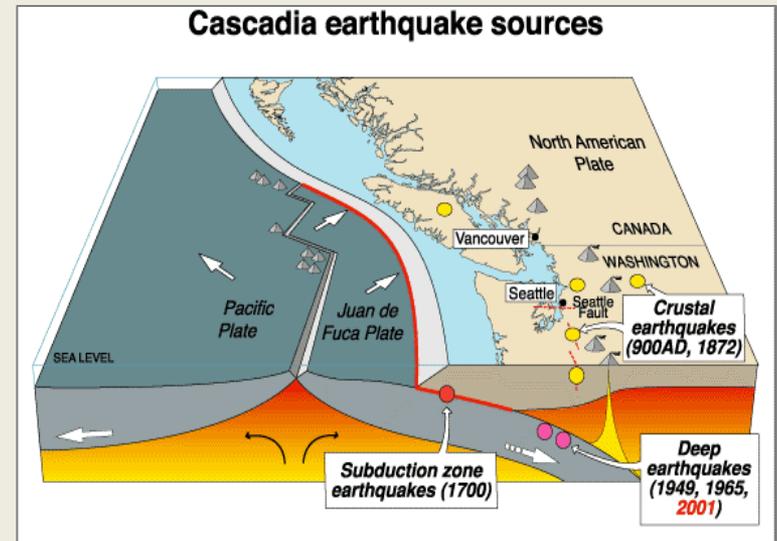
Pilot Recommendations

- ✓ Adjust event planning and outreach for specific cultural groups. For example, include information on childcare, refreshments and translators (or POELs)
- ✓ Distribute media releases multiple times before events; suggest, six weeks, four weeks and 10 days in advance of large public meetings or workshops
- ✓ Identify Owners as a “cultural group” ; their concerns and impacts vary significantly from other audience types. Include information on incentives.
- ✓ Add commercial tenants as a separate audience. Small businesses can be very hard hit by relocation.
- ✓ Additional tenant informational resources are needed, particularly for non-residential tenants



Pilot Recommendations

- ✓ Find a way to remind audiences about the earthquake frequency – that we are overdue for an event
- ✓ Include more data from URM programs in other regions of the country
- ✓ The URM policy so far focuses on owners; recommend that the program have solutions for everyone affected, not just owners
- ✓ Eliminate technical terms to extent possible on the URM handout and other media for the general public



Pilot Recommendations

- ✓ A streamlined web address and/or banner for URM and policy information may help increase web traffic.
- ✓ Communicate a clear path for staying informed on policy development
- ✓ Partner outreach with other events such as Farmer's markets, Historic Preservation Month (May) activities, neighborhood events. Possibly reaching out to adjacent neighborhoods with same event.
- ✓ Investigate development of an info-graphic as a tool to aid in multilingual and general public understanding of complex and technical issues

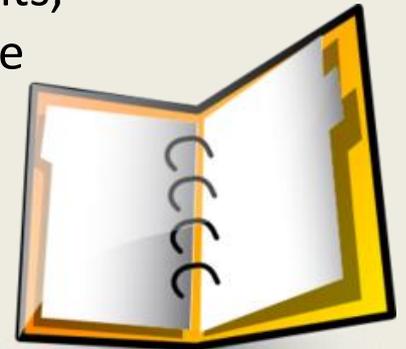
The infographic is divided into several sections:

- WHAT URM TENANTS CAN DO**: TAKE ACTION. BE PREPARED. SAFETY IS EVERYONE'S RESPONSIBILITY.
- DO YOU LIVE OR WORK IN A URM?**: A URM is a brick building where the floors and roofs are not structurally connected to the walls. SIGNS INCLUDE: CLASSIC RED BRICK, ARCHED WINDOWS, ROW OF BRICK ENDS.
- SAFETY TIPS**:
 - Know multiple ways out of the building in case primary exits are blocked with debris.
 - Talk with your landlord – know their coverage and emergency planning for tenants.
 - Purchase tenant earthquake insurance if you can afford it.
 - Organize with your neighbors to better be able to help each other.
 - Know how, when, and where to shut off gas.
 - Know how to be safe (Drop, cover, and hold).
 - Have a plan that identifies who you can stay with if your building is damaged.
- Drop, Cover, Hold**: A vertical graphic showing the correct earthquake safety posture.
- There are 1000 URM's in Seattle**: A bar chart showing the distribution of URM buildings across the city.

Footer: FIND HELP HERE FOR DISASTER PLANNING AND RECOVERY. WWW.SEATTLE.GOV/EMERGENCY

Lessons Learned

- Small group meetings were most effective for reaching all audiences
- POELs were most effective for reaching cultural groups
- Outreach based on a technical terminology created challenges for multi-language messaging
- Owners prefer more detailed information on statistics, cost-benefit analysis, and incentives; their desire for detail exceeded that of the general public
- Contracting with POELs is an added expense but very effective
- Whether the outreach is done by city staff or consultants, coordination time with the cultural leaders will increase budget over more traditional outreach.



Lessons Learned

- Our communication has not had the urgency necessary to provoke action:
 - Community feels like we have infrequent mild earthquakes
 - Owners think their un-retrofitted URM, “undamaged” in past earthquakes, will survive the next one
- The neighborhood survey – walkthrough – was a very effective education and outreach tool; a non-threatening approach
- A missed opportunity: adjust survey questions to retrieve more information for policy development, such as “...what motivated you to retrofit your building?”
- POELs have a good sense of their cultural communities and may be an avenue for future research instead of or in addition to street surveys

Lessons Learned

- Working with cultural groups is more time consuming than more traditional outreach. For example,
 - Presentations take longer if there is a translator
 - Accommodating cultural norms, such as sharing a meal, extends meeting times
 - Adjust meeting times; avoid right after work (family meals) or after dark



- Technical subjects are difficult for POELs to understand and explain to their cultural groups; it is best if DPD technical staff attend meetings with POELs to address the more complex issues.

Next Steps

- Complete Infographics
- Partner with OEM on educational outreach
- Continue building partnerships with community, for example, SCIDpda for outreach
- Complete validation of DPD potential URM list
- Reconvene Policy committee to finalize recommendations
- Base URM retrofit program outreach and education on Pilot recommendations
- Engage elected officials in program development

Key Players

DPD staff

- Sandy Howard- *URM Retrofit Policy Project Manager*
- Jon Siu-*Principal Engineer/Building Official*
- Maureen Traxler-*Technical Codes Manager*
- Andrew Badgett - *Public Relations Specialist*

Office of Emergency Management

- Erika Lund - *Recovery and Mitigation Planner*
- JoAnn Jordan - *Public Education Coordinator*

Department of Neighborhoods

- Cherry Cayabyab – *Outreach and Engagement Strategic Advisor*

Site Story

- Ellen Southard - *Principal*
- Teresa Burrelsman Stern - *Senior Sustainable Strategist*

DPD URM Website:

<http://www.seattle.gov/dpd/codesrules/changestocode/unreinforcedmasonrybuildings/whatwhy/default.htm>