

OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

Annual Performance Progress Report (APPR) for Fiscal Year 2009-10

2011-13 Budget Form 107BF04c

To obtain additional copies of this report, contact Oregon Department of Geology & Mineral Industries at (971)-673-1555, Suite 965, 800 NE Oregon Street, Portland, OR 97232, or at www.oregongeology.org, or visit http://www.oregon.gov/DAS/OPB/GOVresults.shtml#Annual_Performance_Reports.

Agency Mission

Provide earth science information and regulation to make Oregon safe and prosperous.

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ABOUT THIS REPORT

Purpose of Report

The purpose of this report is to summarize the agency's performance for the reporting period, how performance data are used and to analyze agency performance for each key performance measure legislatively approved for the 2007-09 biennium. The intended audience includes agency managers, legislators, fiscal and budget analysts and interested citizens.

1. PART I: EXECUTIVE SUMMARY defines the scope of work addressed by this report and summarizes agency progress, challenges and resources used.
2. PART II: USING PERFORMANCE DATA identifies who was included in the agency's performance measure development process and how the agency is managing for results, training staff and communicating performance data.
3. PART III: KEY MEASURE ANALYSIS analyzes agency progress in achieving each performance measure target and any corrective action that will be taken. This section, the bulk of the report, shows performance data in table and chart form.

KPM = Key Performance Measure

The acronym "KPM" is used throughout to indicate **Key Performance Measures. Key performance measures are those highest-level, most outcome-oriented performance measures that are used to report externally to the legislature and interested citizens. Key performance measures communicate in quantitative terms how well the agency is achieving its mission and goals. Agencies may have additional, more detailed measures for internal management.**

Consistency of Measures and Methods

Unless noted otherwise, performance measures and their method of measurement are consistent for all time periods reported.

| 2009-10 KPM# | 2009-10 Key Performance Measures (KPMs) | Page # |
|-----------------|--|--------|
| 1 | EARTHQUAKE AND LANDSLIDE MAP COMPLETION - Percent of communities and other stakeholders with hazard maps and risk studies for earthquake and landslide hazards. | 4 |
| 2 | TSUNAMI EVACUATION MAP COMPLETION – Percent target communities with official, reviewed evacuation map brochures produced by DOGAMI. | 6 |
| 3 | COASTAL EROSION MAP COMPLETION – Percent target communities with standardized, 4-risk zone erosion hazard maps. | 8 |
| 4 | HAZARD AWARENESS – LEGISLATIVE DELETE; replaced by KPM 12 | 10 |
| 5 | RECLAMATION – Total number of mining acres that have been reclaimed and returned to secondary beneficial use. | 11 |
| 6 | DETAILED GEOLOGICAL MAP COMPLETION – Percent of targeted areas of Oregon where geologic data in the form of high resolution maps have been completed to be used for local problem solving. | 12 |
| 7 | REGIONAL GEOLOGICAL MAP COMPLETION – Percent of Oregon where geologic data in the form of medium resolution maps have been completed to be used for regional problem solving. | 14 |
| 8 | MINESITES INSPECTED ANNUALLY – Percent of mine operators with active sites inspected annually. | 16 |
| 9 | TSUNAMI INUNDATION MAP COMPLETION – Percent of coastal communities provided with detailed tsunami inundation maps for local emergency planning. | 18 |
| 10 | CUSTOMER SERVICE – Percent of customers rating their satisfaction with the agency’s customer service as “good” or “excellent”: overall customer service, timeliness, accuracy, helpfulness, expertise and availability of information. | 20 |
| 11 | GOVERNANCE – Percent of yes responses by Governing Board members to the set of best practices. | 21 |
| 12 | GEOLOGIC HAZARD PREPAREDNESS – Percent of Oregon communities with geologic hazard data and prevention activities in place | 22 |

| | |
|---|-----------------------|
| Contact: Don Lewis, Assistant Director, Program 1: Geological Survey & Services | Phone: (971) 673-1555 |
|---|-----------------------|

1. SCOPE OF REPORT

- Program 1, Geological Survey & Services, progress is measured by KPM 1, 2, 3, 6, 7, 9, 10 and 12. Certain activities not readily captured by the KPM, such as naturally occurring hazardous materials for ODOT, geothermal resource database development and assessment for DOE, digital flood insurance rate map re-delineation for FEMA, volcanic hazard assessment and risk analysis for USGS, state-owned facilities hazard mapping and risk/exposure analysis for OEM, energy assurance vulnerability analysis for DOE, natural resource valuation studies for DSL, renewable energy mapping for DAS, winter storm wave and erosion pattern mapping for OSU and OWET, energy facility hazard assessment for EFSC and LIDAR data acquisition and quality control for three dozen federal, state, local and tribal partners. However, new KPM 12 summarizes most activity in one comprehensive measure.
- Program 2, Mined Land Regulation & Reclamation, activity and progress is partially measured by KPM 5, 8 and 10.

2. THE OREGON CONTEXT

The Agency provides natural hazard and natural resource assessment and risk analysis services extensively for federal agencies, state agencies, counties and cities. KPM 1, 2, 3, 8 and 9 link to Benchmark 67a (Emergency Preparedness – Geologic Hazards). KPM 12 is a “next generation BM 67a”.

3. PERFORMANCE SUMMARY

| KPM Progress Summary | Key Performance Measures (KPMs) with Page References | # of KPMs |
|---|---|-----------|
| KPM MAKING PROGRESS at or trending toward target achievement | Earthquake and Landslide Map Completion (KPM 1), Tsunami Evacuation Brochure Completion (KPM 2), Coastal Erosion Map Completion (KPM 3), Reclamation (KPM 5), Detailed Geologic Map Completion (KPM 6), Regional Geologic Map Completion (KPM 7), Tsunami Inundation Map Completion (KPM 9), Customer Service (KPM 11), Best Practices Governance (KPM 11), and Geologic Hazard Preparedness (KPM 12) | 10 |
| KPM NOT MAKING PROGRESS not at or trending toward target achievement | Mine Sites Inspected Annually (KPM 8) | 1 |
| KPM - PROGRESS UNCLEAR target not yet set | | 0 |
| Total Number of Key Performance Measures (KPM) | | 11 |

4. CHALLENGES

Due to increased demand for services, the Department has increased the scope and scale service contracts from federal and state agencies and communities. As compared with 2007-08, during 2009-10 the Geologic Survey & Services Program increased Other Fund Charges For Services Revenues from \$350k to \$750k and Federal Funds (as both FF and as OF) from \$1,225k to \$2,819k.

5. RESOURCES USED AND EFFICIENCY

The agency utilized \$1,419,571 in General Funds, \$252,859 in Lottery Funds, \$3,763,885 in Other Funds, and \$1,277,909 in Federal Funds during ‘09-‘10.

| | |
|---|-----------------------|
| Contact: Don Lewis, Assistant Director, Program 1: Geological Survey & Services | Phone: (971) 673-1555 |
|---|-----------------------|

The following questions indicate how performance measures and data are used for management and accountability purposes.

| | |
|--|--|
| <p>1 INCLUSIVITY Describe the involvement of the following groups in the development of the agency's performance measures.</p> | <ul style="list-style-type: none"> • Staff: Semi-annual to quarterly discussions with section leaders & project staff. • Elected Officials: The Joint Natural Resources Sub-Committee reviewed, discussed and approved the KPM in 2005; targets were modified by the Legislature in 2007 and again in 2009. • Stakeholders: Input has been sought and received from coastal communities, OSSPAC, OCAPA and key federal and state natural resource and emergency management agencies such as DLCD, OEM and FEMA. • Citizens: The five-person Governing Board, selected from different geographic areas of Oregon, reviews and approves proposed and modified KPM. |
| <p>2 MANAGING FOR RESULTS How are performance measures used for management of the agency? What changes have been made in the past year?</p> | <p>The KPM are directly used to measure program and project progress. Results and Measure targets impact project selection and focus fund solicitation efforts. KPM are a frequent discussion item at monthly management meetings. Nine of the ten KPM have been revised in recent biennia.</p> |
| <p>3 STAFF TRAINING What training has staff had in the past year on the practical value and use of performance measures?</p> | <p>The Statewide Mapping & Minerals, GeoHazards, Technical Services and Coastal sections have had KPM briefings on content, objectives, targets, measurement criteria, standards and results of their assigned KPM. These KPM are a driving influence used to craft Statements of Work for the Agency's numerous contracts for services.</p> |
| <p>4 COMMUNICATING RESULTS How does the agency communicate performance results to each of the following audiences and for what purpose?</p> | <ul style="list-style-type: none"> • Staff: KPM relative progress is a component of performance expectations and appraisal. • Elected Officials: The annual report is available online at the Agency and Progress Board websites. • Stakeholders: KPM objectives and targets manifest themselves within contract Statements of Work. • Citizens: The general public is briefed during Governing Board meetings when KPM are on the agenda; KPM are described and results reported on at numerous public presentations that Agency staff present regarding geologic hazards in order to increase awareness and facilitate personal accountability towards mitigation. |

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| KPM #1 | EARTHQUAKE AND LANDSLIDE MAP COMPLETION % of communities and other stakeholders with hazard maps and risk studies for earthquake & landslide hazards. | Measure since: 2005 |
|-----------------------|--|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #1 Reduce risk to Oregonians from naturally occurring hazardous events. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Geologic Hazard & Technical Services Sections; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. OUR STRATEGY

Provide earthquake-related & landslide hazard maps for populated areas and key infrastructure areas of Oregon; reduce risk to loss of life and property. We partner with USGS, FEMA, OEM, and numerous Oregon counties & cities.

2. ABOUT THE TARGETS

The targeted area of Oregon constitutes 17,610 square miles.

3. HOW WE ARE DOING

Through 2009-10 the department has produced earthquake-induced landslide, ground motion amplification and liquefaction hazard maps for 63,846 square miles of Oregon, including **10,439** square miles of inhabited area (**59%**). Through 2009-10 the department has produced new LIDAR-based detailed landslide inventory and hazard maps for 576 square miles including **504** square miles of inhabited area (**2.9%**). The combined degree of map completion is thereby **31%** and on target.

4. HOW WE COMPARE

No comparable data for similar jurisdictions available at this time.

5. FACTORS AFFECTING RESULTS

During 2008-2010 the Department has utilized \$2 million in Measure 66 Lottery Fund seed capital to leverage an additional \$7 million in federal and other funds to acquire 17,159 square miles of high-resolution lidar elevation data. This area covers 8,828 square miles, or 50%, of the populated target area of Oregon, and is the key data foundation for the next generation of geologic hazard maps now in production at DOGAMI. The detail and multi-purpose reach of this data is revolutionary towards resource management and hazard mitigation in the built environment and for infrastructure development, especially towards earthquake, landslide, tsunami, flooding, coastal erosion and volcanic hazard assessment, risk analysis and at-risk communities outreach.

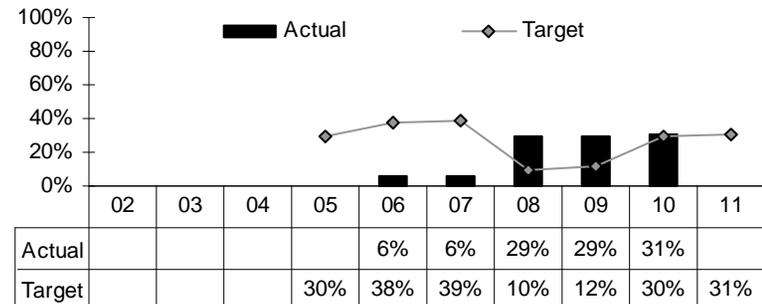
6. WHAT NEEDS TO BE DONE

The Agency is initiating landslide hazard assessment funding partnerships with federal and state agencies and with various Cities and Counties in northwest and southwest Oregon. New lidar-derived landslide inventory maps can be previewed at <http://www.oregongeology.com/pubs/ims/p-ims-030.htm>

7. ABOUT THE DATA

The target area matches the methodology utilized and more fully described in KPM 6. The actual score reported for KPM 1 is the simple average of the two sub-measures.

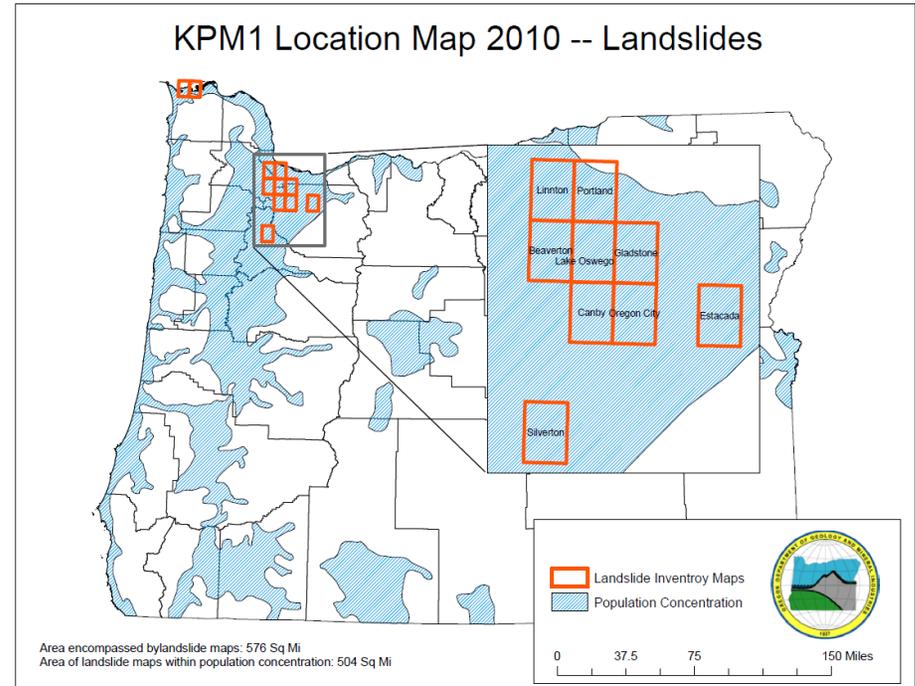
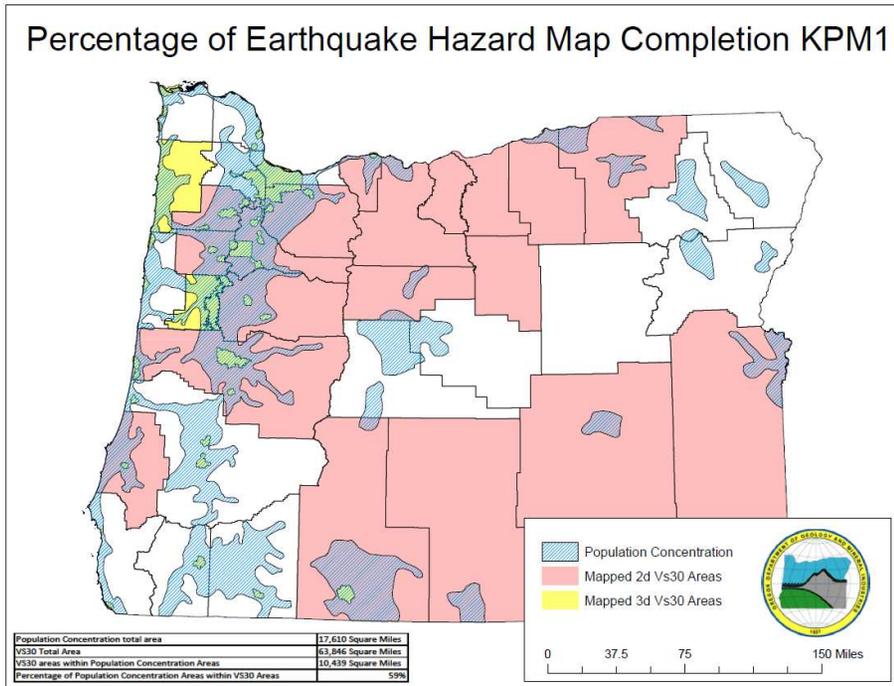
% Earthquake and Landslide Map Completion



III. KEY MEASURE ANALYSIS

KPM 1 Earthquake Hazard Mapping progress map

KPM 1 Landslide Hazard Mapping progress map



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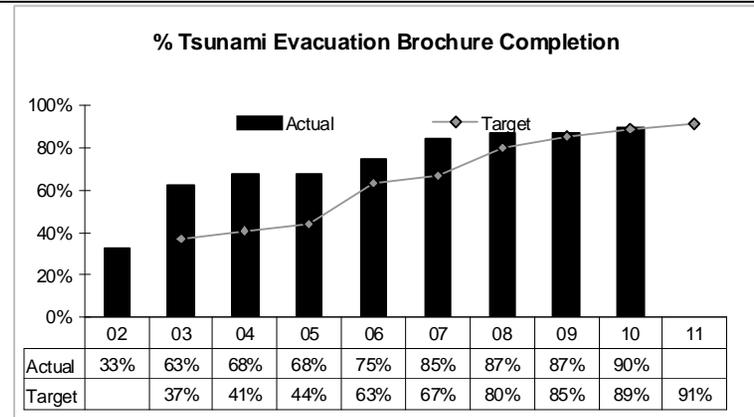
| KPM #2 | TSUNAMI EVACUATION MAP COMPLETION % target communities with official, reviewed evacuation map brochures produced by DOGAMI. | Measure since: 2005 |
|-----------------------|--|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #1 Reduce risk to Oregonians from naturally occurring geologic hazardous events. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Coastal Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. OUR STRATEGY

Eliminate the future loss of life of Oregonians and visitors to the Oregon Coast by working with coastal residents and visitors, local city officials, county emergency managers and other state & federal agencies.

2. ABOUT THE TARGETS

There are 39 at-risk communities along the Coast, including 26 incorporated cities. The Oregon tsunami-inundation zone contains 22,201 residents, 14,857 employees at 1,829 businesses, 14 schools, 7 day-care, 10 adult residential-care, and 9 outpatient-care facilities, 34 religious facilities, 8 libraries, and 171 overnight tourist facilities (representing 25% of all such facilities in the seven coastal counties). In addition the average number of day-use visitors to the 66 Oregon State Parks in the zone is 53,714. The zone also contains some 1,829 businesses that generate \$1.9 billion in annual sales and tax parcels with a total value of \$8.2 billion. ODOT indicates that 5 bridges along Highway 101 will suffer complete collapse, 35 shall have extensive damage, and another 21 shall have slight to moderate damage.



3. HOW WE ARE DOING

Tsunami evacuation brochures have been completed for 35 of the 39 target communities. However, the majority of these have utilized now outdated tsunami inundation model results. DOGAMI set out on a six-year effort to update both the inundation maps and these evacuation brochures in 2007.

4. HOW WE COMPARE

There are 30 Washington communities at risk, most clustered at the southern end of the state along a length of coast about 1/3 as long of that at risk in Oregon. Washington has produced similar evacuation brochures for 27 communities, however these do not provide recommended evacuation routes.

5. FACTORS AFFECTING RESULTS

The Department has secured funding from NOAA’s National Tsunami Hazard Mitigation Program and the program shall accelerate during 2009-13.

6. WHAT NEEDS TO BE DONE

The Agency has initiated a plan to re-assess tsunami inundation along the entire Oregon coast using new LIDAR-derived detailed topography to significantly improve true elevation accuracy. This plan has a schedule for inundation modeling in 2009-11 and new inundation brochures in 2010-2013.

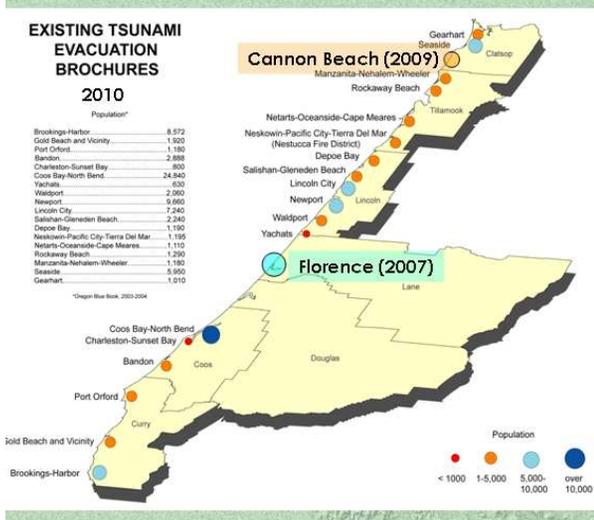
7. ABOUT THE DATA

The data are for the Oregon fiscal year. Tsunami evacuation brochures are at <http://www.oregongeology.com/sub/earthquakes/Coastal/Tsubrochures.htm> .

III. KEY MEASURE ANALYSIS

Example of new Tsunami Evacuation Brochure/Map

MEASURE 2: TSUNAMI EVACUATION MAP COMPLETION

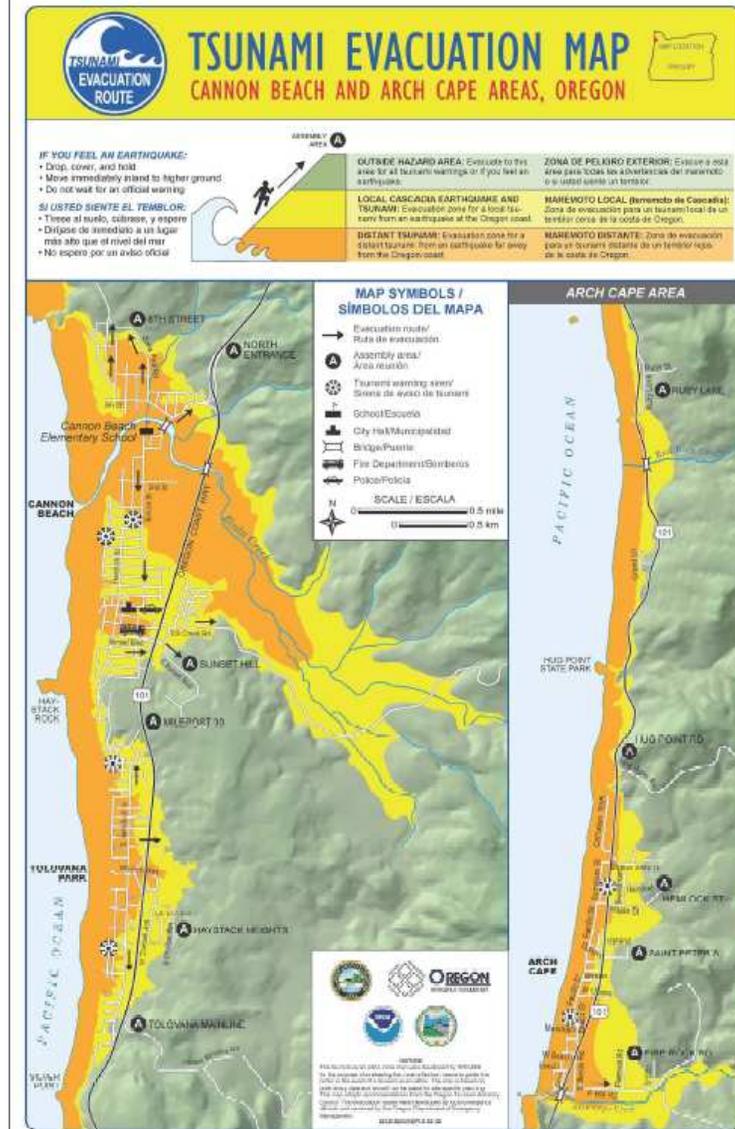


➤ Earthquake and Tsunami Hazard

- 35 of 39 at-risk communities have tsunami evacuation brochures [90%]

➤ Agency Action:

- Recruited "T.A.C."
- Developed New Tsunami Map Standards



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| KPM #3 | COASTAL EROSION MAP COMPLETION % target communities with standardized, 4-risk zone erosion hazard maps. | Measure since: 2005 |
|-----------------------|--|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #1 Reduce risk to Oregonians from naturally occurring geologic hazardous events. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Coastal Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. OUR STRATEGY

Reduce the risk of losses to property and infrastructure by identifying minimum and maximum potential coastal change erosion distances for bluff- and dune-backed shorelines over the next 60-100 years; for use by land use planners. DLCDD and coastal counties and communities are active partners.

2. ABOUT THE TARGETS

30 selected communities represent the coastline of interest and at risk.

3. HOW WE ARE DOING

These four-zone erosion maps (“Imminent, High, Moderate, and Low Hazard Zones”) have been completed for 24 of 30 communities. Extensive supportive work is in progress focused on coastal change on the northern Oregon coast. See a portion of this work assessing estuaries and shores at <http://www.oregongeology.com/sub/Nanoos1/index.htm> .

4. HOW WE COMPARE

A direct comparable has not been located. Various jurisdictions, including the State of Hawaii, have active coastal erosion studies incorporated as part of their coastal zone management programs.

5. FACTORS AFFECTING RESULTS

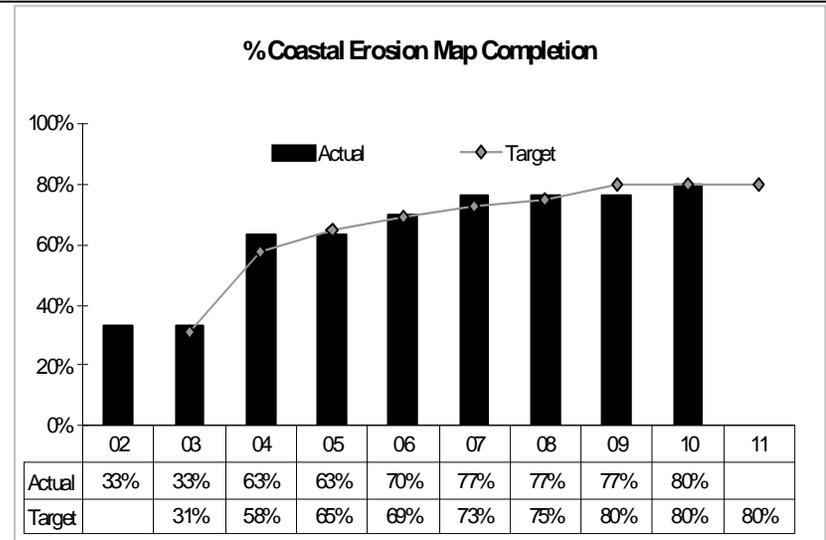
Hazard assessment efforts have focused on the northern half of Oregon where beaches are more prevalent, exposed, populated and there is greater risk due to rising sea levels exceeding plate tectonic uplift; the reverse is generally true for southern Oregon. Funding source priorities have followed this perceived risk.

6. WHAT NEEDS TO BE DONE

Partnerships with state and local authorities are necessary to advance this work for the communities located in Curry, Coos, Douglas and Lane counties.

7. ABOUT THE DATA

The seven Open File Reports (OFR 01-03, 01-04, 04-09, 04-11, 04-18, 04-20, and 07-03) documenting these studies are available from the Nature of the Northwest Information Center at <http://www.naturenw.org/> . Information concerning ongoing hazard mitigation activities along the coast can be found at <http://www.oregongeology.com/sub/earthquakes/Coastal/CoastalHazardsMain.htm> .



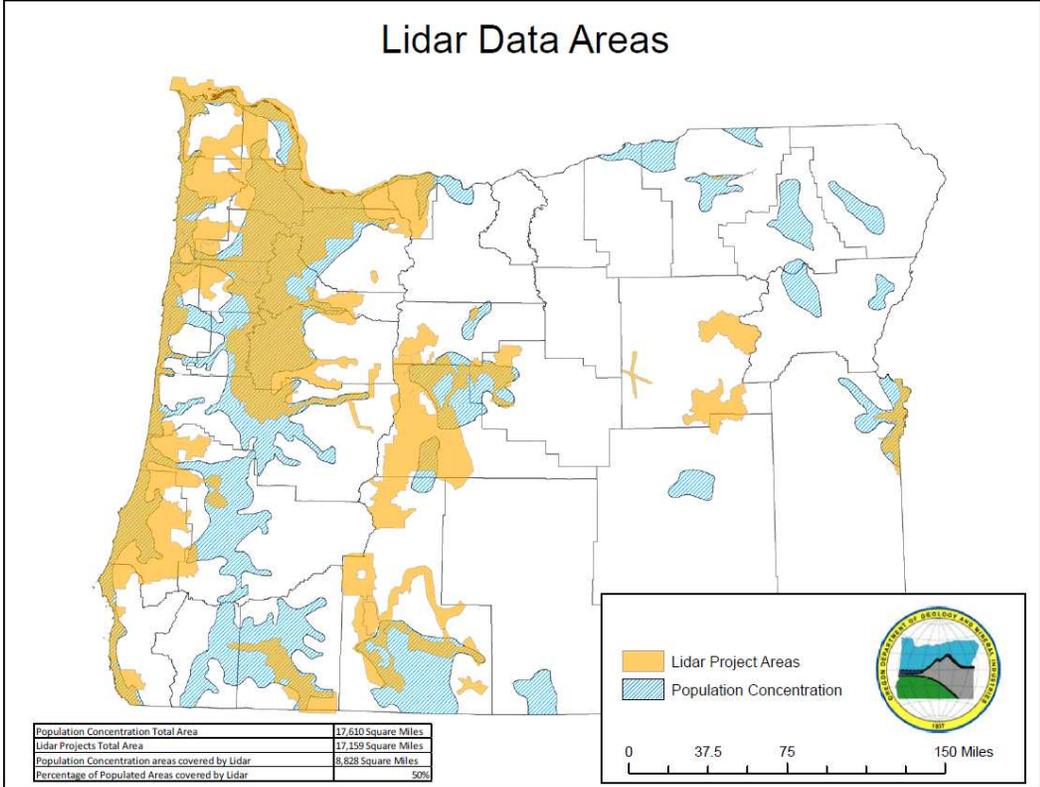
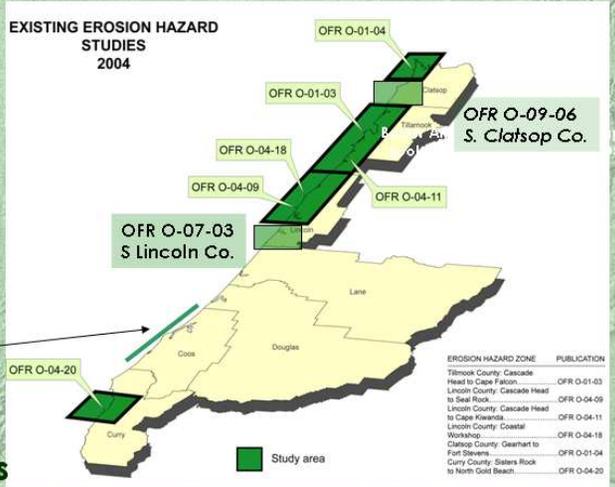
III. KEY MEASURE ANALYSIS

KPM 3: Coastal Erosion Map Completion:

Where DOGAMI has built funding partnerships to acquire LIDAR

MEASURE 3: COASTAL EROSION MAP COMPLETION

- **Landslide and Erosion Hazards**
 - 4-zone Maps completed for 24 of 30 communities [80%]
- **New LIDAR**
 - Entire Coast now acquired
- **Coos Co**
 - Erosion factored into coastal flooding maps

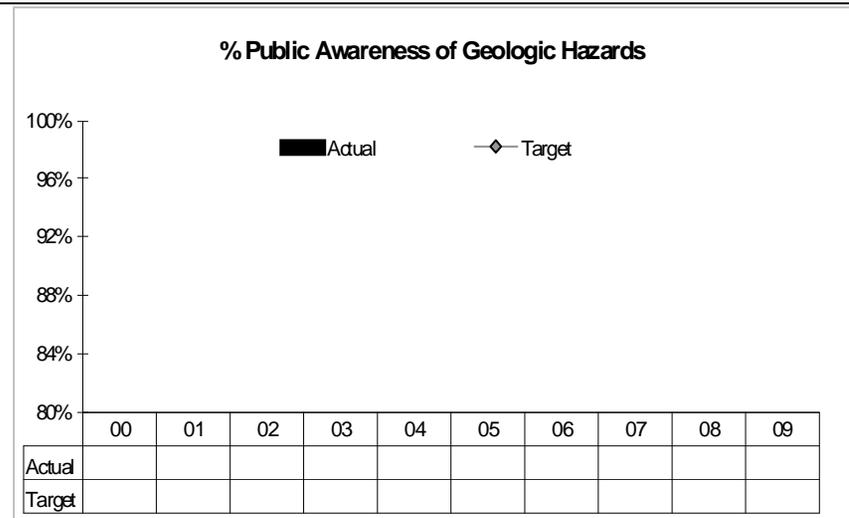


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| KPM #4 | HAZARD AWARENESS Public awareness of geologic hazards and mitigation efforts. | Measure since: 2003 |
|-----------------------|---|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #2 Improve public awareness of geologic hazards and educate communities on mitigation. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Both programs & All Sections; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. **OUR STRATEGY**
2. **ABOUT THE TARGETS**
3. **HOW WE ARE DOING**
4. **HOW WE COMPARE**
5. **FACTORS AFFECTING RESULTS**
6. **WHAT NEEDS TO BE DONE**
7. **ABOUT THE DATA**

The Legislature approved deletion of this KPM and it shall be replaced by KPM 12: Percent of Oregon Communities with Geologic Hazard Data and Prevention Activities in Place. New KPM 12 has targets for 2010 and 2011 of 33% and 36%, respectively.



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| PM #5 | RECLAMATION Total number of mining acres that have been reclaimed and returned to secondary beneficial use. | Measure since: 2005 |
|----------------|--|------------------------|
| Goal | SUSTAINABLE NATURAL RESOURCE MANAGEMENT: Agency Goal #3: Resource management via prompt reclamation of acres disturbed during exploration or mining or fluid mineral drilling of mining sites. | |
| Oregon Context | Rural Economic Development and Sustainability of State Resources. | |
| Data source | Department records. | |
| Owner | Mined Land Regulation & Reclamation Program; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. **OUR STRATEGY**

Administer reclamation plans of operating permit holders to minimize disturbance and efficiently return the land of **closed** sites to secondary beneficial use. The MLRR Awards program is found at: <http://www.oregongeology.com/sub/mlr/2005MLRR Awards4.htm> .

2. **ABOUT THE TARGETS**

A review of legacy data resulted in these modified targets. The actual performance in any one year is not within agency control since the operator makes the decision when to close a site.

3. **HOW WE ARE DOING**

During 2009-10 **361** acres of disturbed land at **21** closed sites were reclaimed to secondary use. The trend is ahead of target. Of 5,890 acres reclaimed, the leading secondary beneficial use categories are agriculture (18.7%), open space and range (18.0%), wildlife and wetlands (11.5%) and housing (8.8%).

4. **HOW WE COMPARE**

Comparison to a similar jurisdiction is not available.

5. **FACTORS AFFECTING RESULTS**

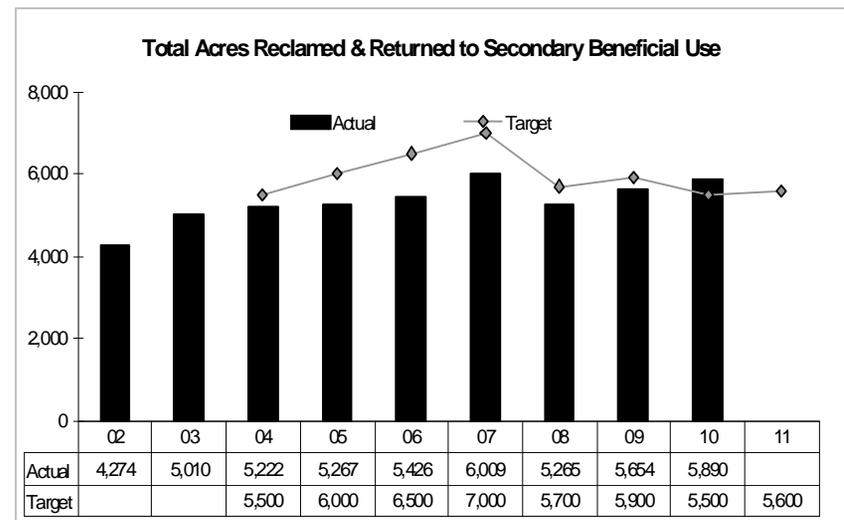
The timing, pace and location of site closure, and subsequent reclamation, is independent of agency activity.

6. **WHAT NEEDS TO BE DONE**

Continuously improve the program, including development of a geospatial database.

7. **ABOUT THE DATA**

As of June 30, 2010 there are 876 active site permits involving 57,408 total acres permitted with 23,030 of disturbed acres and 9,375 acres that are bonded.



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| KPM #6 | DETAILED GEOLOGIC MAP COMPLETION % of targeted areas in Oregon where geologic data in the form of high resolution maps have been completed to be used for local problem solving. | Measure since: 2005 |
|-----------------------|---|---------------------|
| Goal | SUSTAINABLE NATURAL RESOURCE MANAGEMENT: Agency Goal #4: Create and compile geologic data needed in natural resource and land use problem solving. | |
| Oregon Context | Rural Economic Development and Sustainability of State Resources. | |
| Data source | Department records. | |
| Owner | Statewide Mapping & Minerals Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. **OUR STRATEGY**

Collect geologic data at a map scale of 1:24,000 in targeted high priority areas in Oregon to support resource and hazard assessment. USGS is a key funding client.

2. **ABOUT THE TARGETS**

Target areas are defined by population concentration. The total targeted inhabited area is **17,610** square miles, or 18% of Oregon.

3. **HOW WE ARE DOING**

In 2009-10 the Agency delivered detailed maps to funding client covering 1,708 square miles, adding **1,579** qualifying square miles in the Lebanon-Albany-Corvallis-Eugene southern Willamette Valley area. The trend has caught up with target. Maps at: <http://www.oregongeology.com/sub/publications/gms/gms.htm> .

4. **HOW WE COMPARE**

Washington State does not currently have this scale of map available online. Nevada has PDF of 77 1:24,000 scale maps available at <http://www.nbmgs.unr.edu/dox/dox.htm#3> . Idaho has 61 1:24,000 scale maps available at <http://www.idahogeology.org/Products/> . California has 42 1:24,000 scale maps available at http://www.consrv.ca.gov/cgs/rghm/rgm/preliminary_geologic_maps.htm .

5. **FACTORS AFFECTING RESULTS**

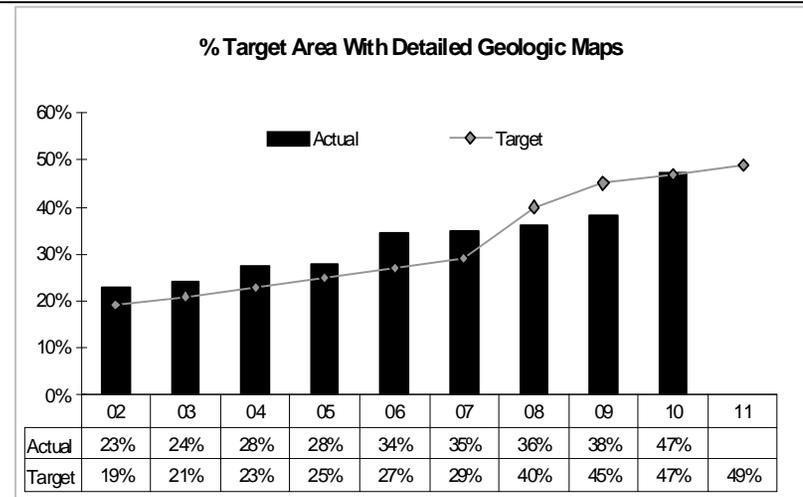
During 2009-10 the USGS did not release new maps in Oregon. We anticipate they will release several to the west of Beaverton-Tualatin during 2010-11.

6. **WHAT NEEDS TO BE DONE**

The Agency is collecting LIDAR topographic data in targeted areas. This data will significantly improve the positioning of rock formation outcrops, contacts, fault lines, landslides and other key morphologic features, and thereby will improve the natural resource and hazard assessments drawn from the data. The Agency prioritizes new geologic mapping in areas with LIDAR data coverage. New work by DOGAMI is in progress in the Medford area.

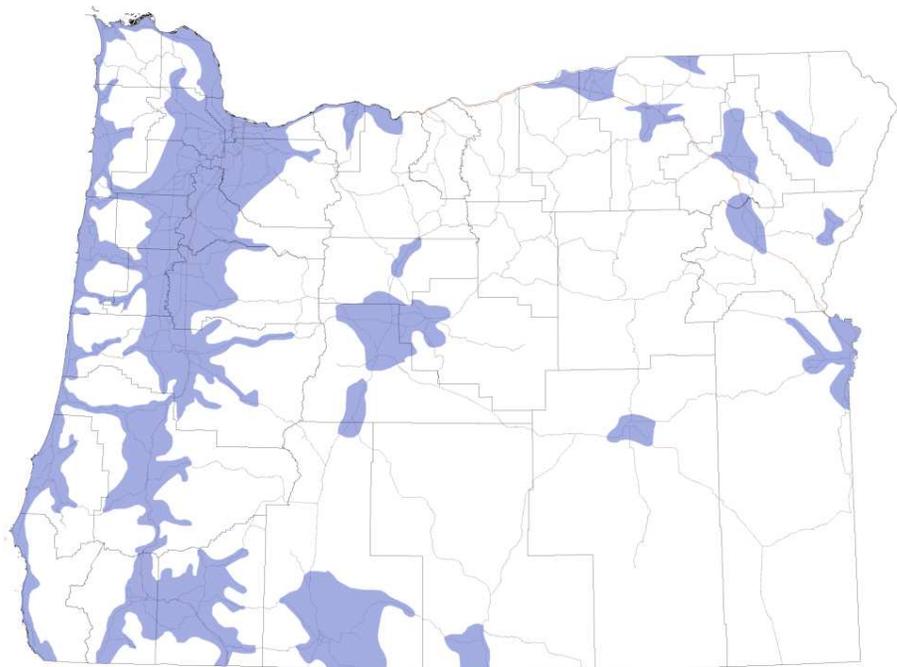
7. **ABOUT THE DATA**

Map areas comply with the national 7.5minute quadrangle grid system.

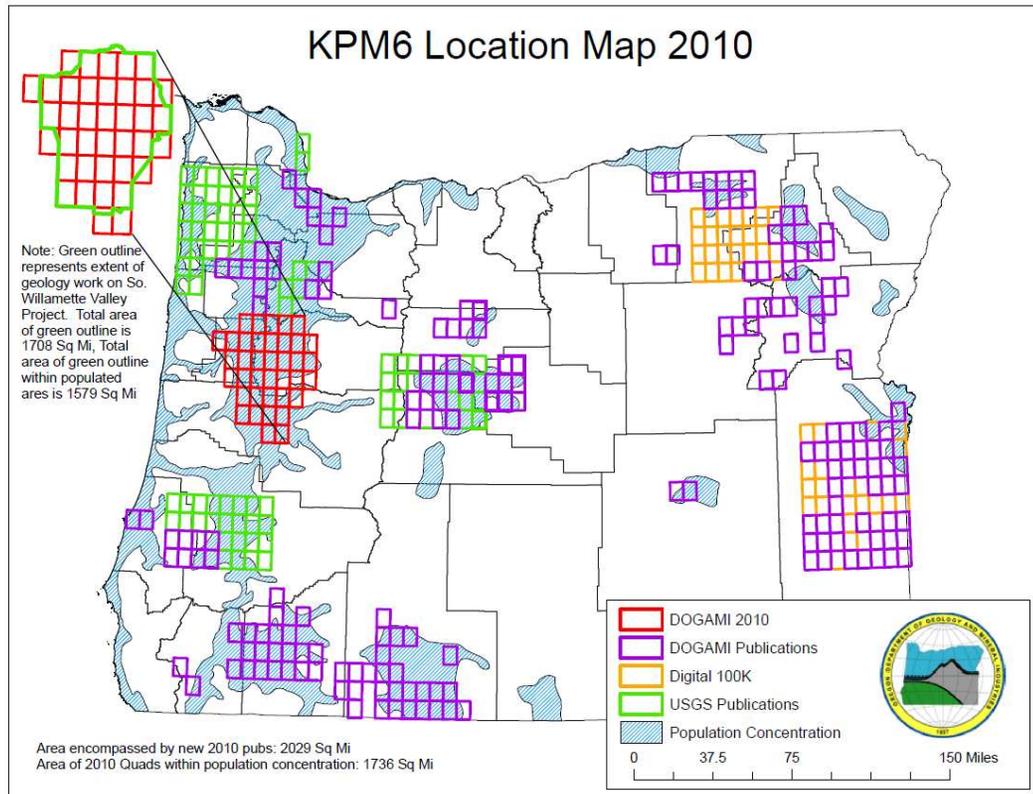


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KPM Target Areas: "Inhabited Areas", based on water well density



KPM 6 Detailed Geologic Map Completion map



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| KPM #7 | REGIONAL GEOLOGIC MAP COMPLETION % of Oregon where geologic data in the form of medium resolution maps have been completed to be used for regional problem solving. | Measure since: 2005 |
|-----------------------|--|---------------------|
| Goal | SUSTAINABLE NATURAL RESOURCE MANAGEMENT: Agency Goal #4: Create and compile geologic data needed in natural resource and land use problem solving. | |
| Oregon Context | Rural Economic Development and Sustainability of State Resources. | |
| Data source | Department records. | |
| Owner | Statewide Mapping & Minerals Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. OUR STRATEGY

Compile and deliver on-line a digital geologic map database and map interface for resource, land use and hazard planning in Oregon; utilize best available legacy data derived from the >1,000 geologic maps in Oregon. Key partners include USGS, USFS, BOR, ODOT and DAS EISPD GEO. This data is particularly useful for expediting initial hazard assessment of energy facility and transportation projects and corridors.

2. ABOUT THE TARGETS

Complete 100% coverage and on-line delivery by December 31, 2012.

3. HOW WE ARE DOING

The “Northwest” portion was released during '09-'10. The trend is ahead of target. The data are online at <http://www.oregongeology.com/sub/ogdc/index.htm>. In 2009 the Department utilized this digital compilation data to produce and release a new geologic map of Oregon depicting 150 million years of geologic history in the State; <http://www.oregongeology.com/sub/publications/IMS/ims-028/index.htm>

4. HOW WE COMPARE

No nearest state neighbor, nor the USGS, has a similar product online.

5. FACTORS AFFECTING RESULTS

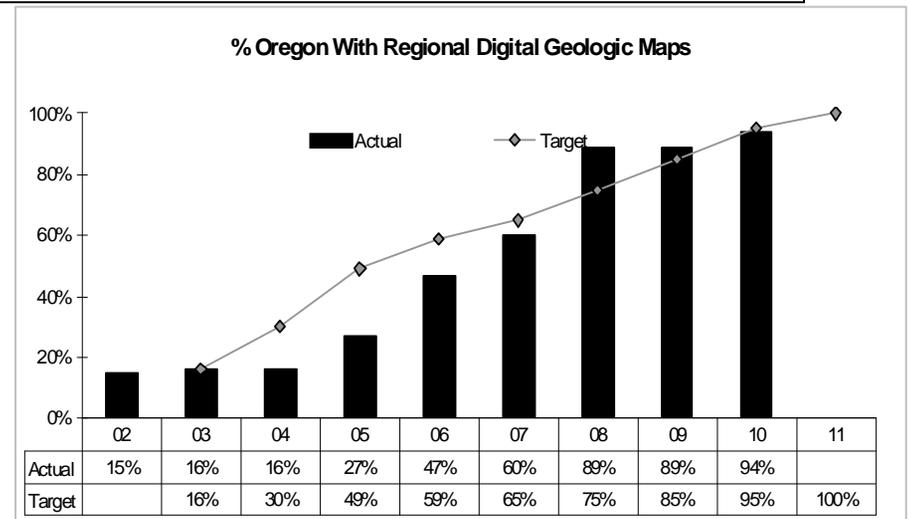
The project page will migrate to the Agency website during 2010-11 in order to add functionality and to link with other Agency hazard data such as the h renewable energy geothermal data such as the Geothermal Information layer for Oregon at <http://www.oregongeology.com/sub/gtilo/index.htm>.

6. WHAT NEEDS TO BE DONE

During 2010-11 the project will move into geodatabase finalization, data synthesis and presentation phase to populate presentation on the web during 2012.

7. ABOUT THE DATA

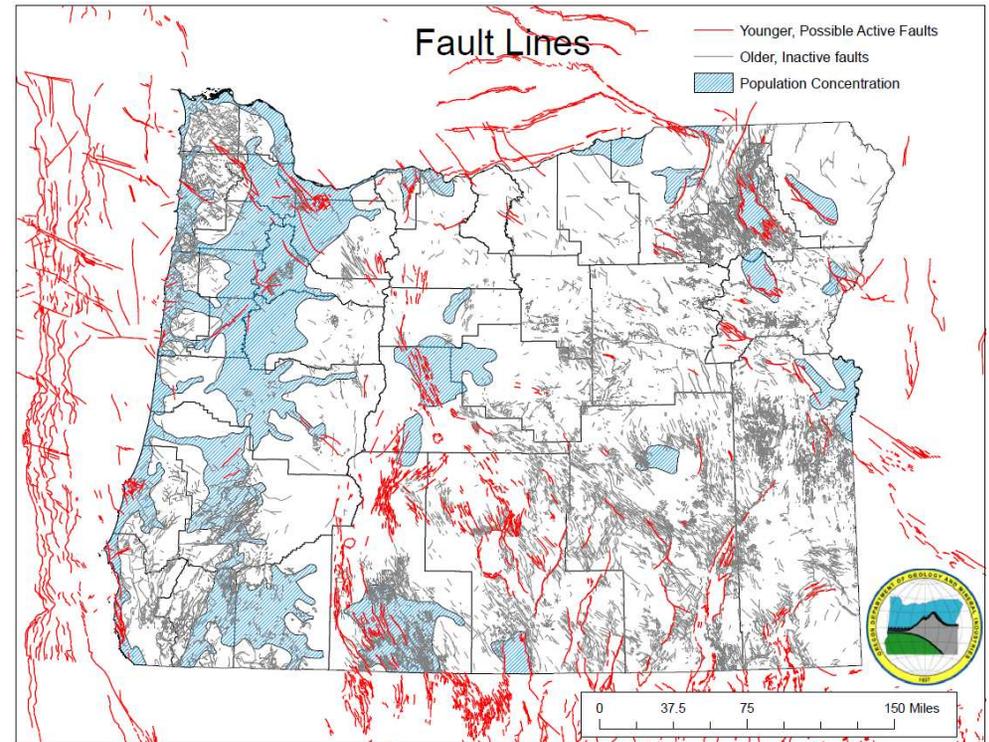
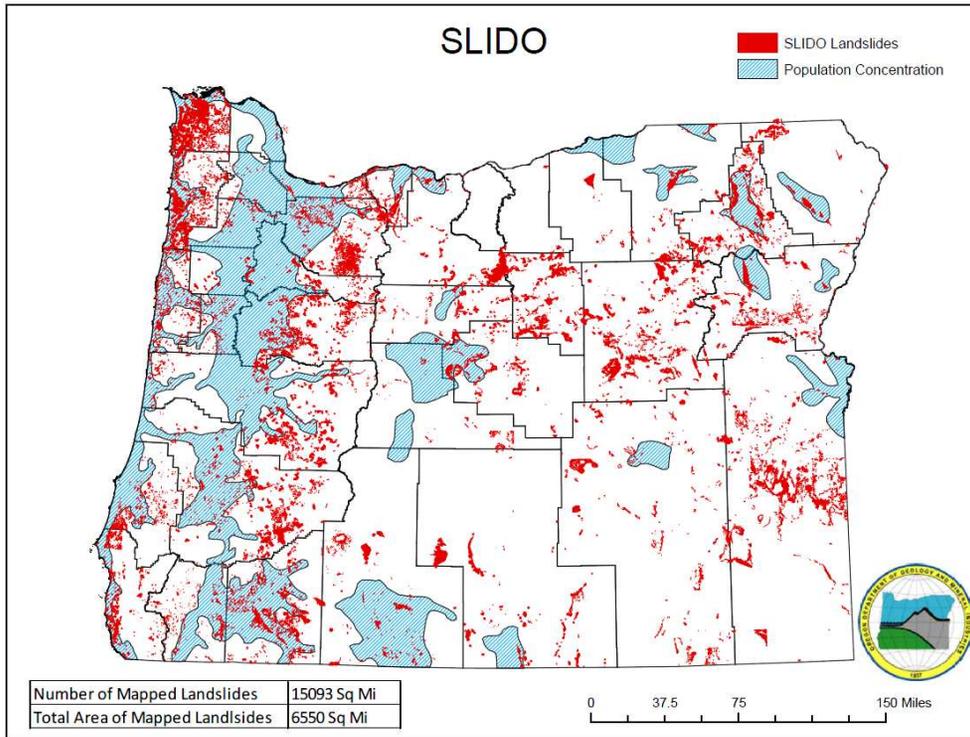
The geographic information system (GIS) layers of the data are available on CD at <http://www.oregongeology.com/sub/ogdc/background.htm#purchase>.



III. KEY MEASURE ANALYSIS

KPM 7: Regional Geologic Map Completion; landslides mapped

KPM 7: Regional Geologic Map Completion; fault displacement mapped



Agency Mission: Provide Earth Science Information and Regulation to Make Oregon Safe and Prosperous.

| KPM #8 | MINESITES INSPECTED ANNUALLY % of mine operators with active sites inspected annually by MLRR staff. | Measure since: 2005 |
|----------------|--|------------------------|
| Goal | SUSTAINABLE NATURAL RESOURCE MANAGEMENT: Agency Goal #3: Resource management via prompt reclamation of acres disturbed during exploration or mining or fluid mineral drilling of mining sites. | |
| Oregon Context | Rural Economic Development and Sustainability of State Resources. | |
| Data source | Department records. | |
| Owner | Mined Land Regulation & Reclamation; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. **OUR STRATEGY**

Annually inspect 50% of the operators with active sites. As of June 2010 there were 580 unique permit holders with active, amended, and new permits.

2. **ABOUT THE TARGETS**

The objective is to perform site inspections of at least one operation of all mine operators with active permitted sites each biennium.

3. **HOW WE ARE DOING**

During 2009-10 **236** sites were inspected one or more times of **137** unique operators. The reported trend is downward.

4. **HOW WE COMPARE**

No comparable data for neighboring states available.

5. **FACTORS AFFECTING RESULTS**

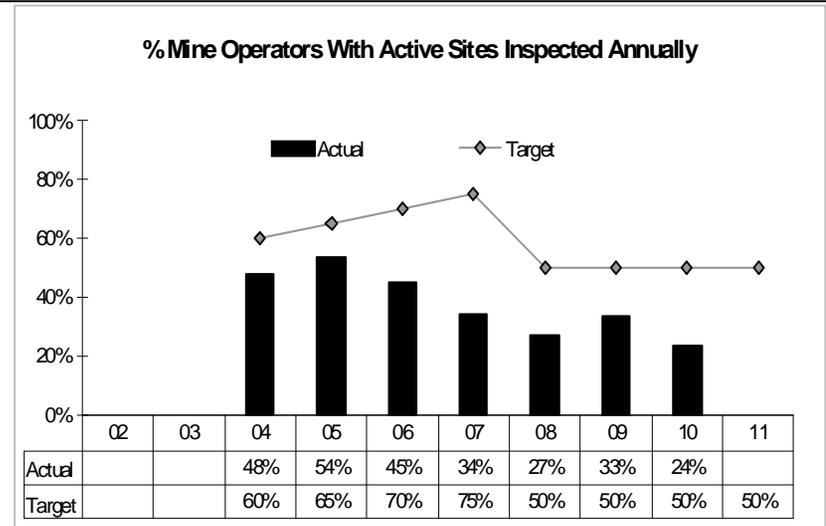
The MLRR program inspected fewer sites due to a greater number of enforcement actions required, the one-time integration of Columbia County into the State reclamation system during 2009-11, and unanticipated staff turnover.

6. **WHAT NEEDS TO BE DONE**

The Agency is recruiting to replace 2 of 6 reclamation inspection staff. The MLRR program is examining means to re-balance workload of permit and renewals processing, reclamation plan review, active permitted site inspections, aerial photography analysis, closed and exempt site involvement, enforcement action, rules development and implementation, stream capture and slope instability hazard mitigation, habitat restoration, Clean Water Act General Stormwater permitting at aggregate mine sites, mining industry and awards program outreach, and other matters across the 10-person program.

7. **ABOUT THE DATA**

A list of permit sites, MLRR Reclamation Awards, and related information is available at <http://www.oregongeology.com/sub/mlr/mlrhome.htm> .



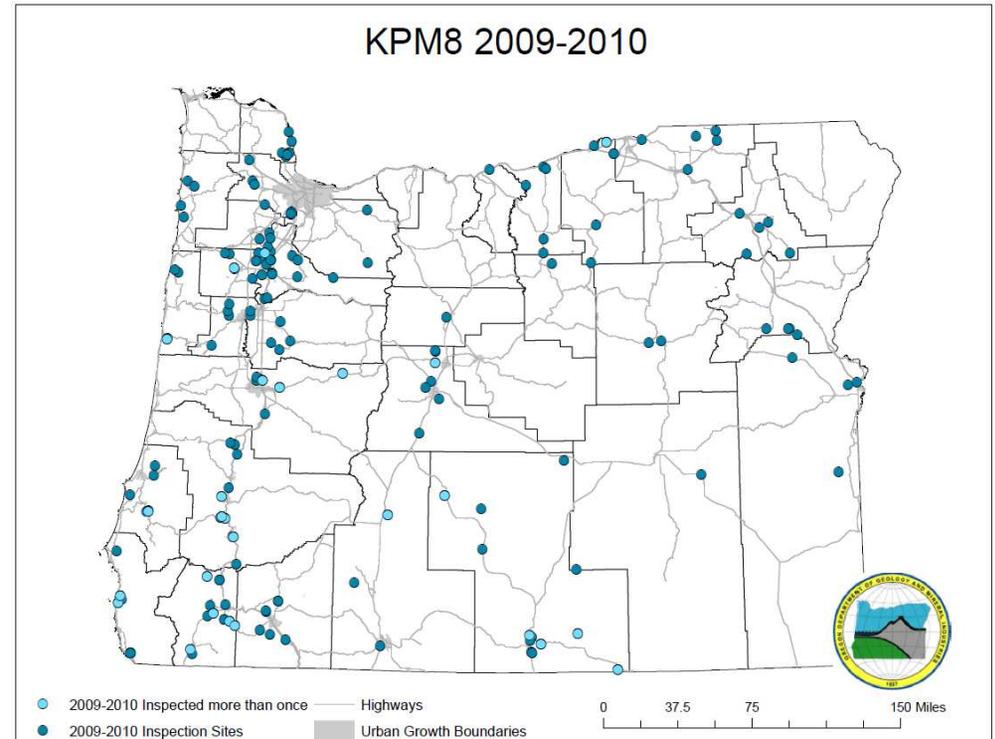
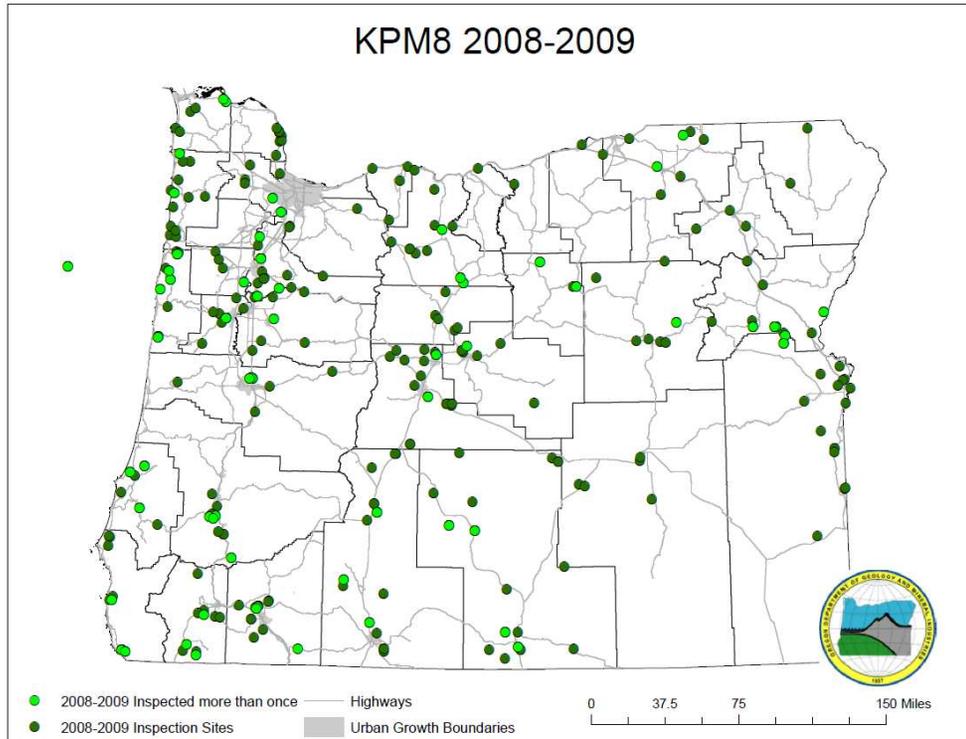
OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

Agency Mission: Provide Earth Science Information and Regulation to Make Oregon Safe and Prosperous.

III. KEY MEASURE ANALYSIS

KPM 8: Mine Sites Inspected Annually map for 2008-09

KPM 8: Mine Sites Inspected Annually map for **2009-10**



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| KPM #9 | TSUNAMI INUNDATION MAP COMPLETION % of coastal communities provided with detailed tsunami inundation maps for local emergency planning. | Measure since: 2005 |
|-----------------------|--|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #1 Reduce risk to Oregonians from naturally occurring geologic hazardous events. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Coastal Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

1. OUR STRATEGY

Provide computer simulation-based tsunami inundation hazard maps for at-risk communities. NOAA, OHSU and OEM are key partners. Coastal communities are invested through a “Technical Advisory Committee”.

2. ABOUT THE TARGETS

35 at-risk communities have been identified, although this excludes unincorporated county residents and all visitors to State Parks (see KPM 2 for more description of the exposure to tsunami inundation hazard along the coast).

3. HOW WE ARE DOING

Progress on the southern Oregon pilot project area at Bandon was completed during 2009-10, and follows on the completion of the northern Oregon project at Cannon Beach during 2007-08. The trend is below target, but the agency has successfully sourced federal funding to facilitate re-mapping of every target community and of the entire coast by July 2013; five years ahead of schedule.

4. HOW WE COMPARE

The Department is chair of the NOAA national tsunami mapping sub-committee.

5. FACTORS AFFECTING RESULTS

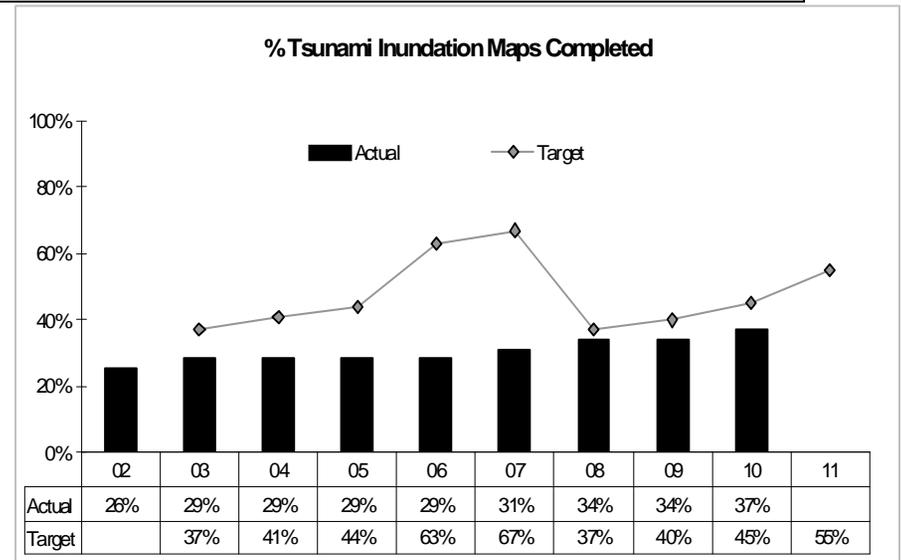
Funding and technical factors have been resolved and mass production of “Generation 3” tsunami mapping is in progress. The Department aims to complete southern Oregon (Brookings to North Bend) and be underway with northern Oregon (Astoria to Wheeler) during 2010-11.

6. WHAT NEEDS TO BE DONE

During 2010-2013 the Department shall complete Generation 3 tsunami inundation maps for the entire coastline, including all mapped communities and State Parks, illustrate and measure the risk/exposure of assets and infrastructure, and present these findings with mitigation strategies to at-risk communities. These data will be the basis for new Evacuation Brochures (KPM 2).

7. ABOUT THE DATA

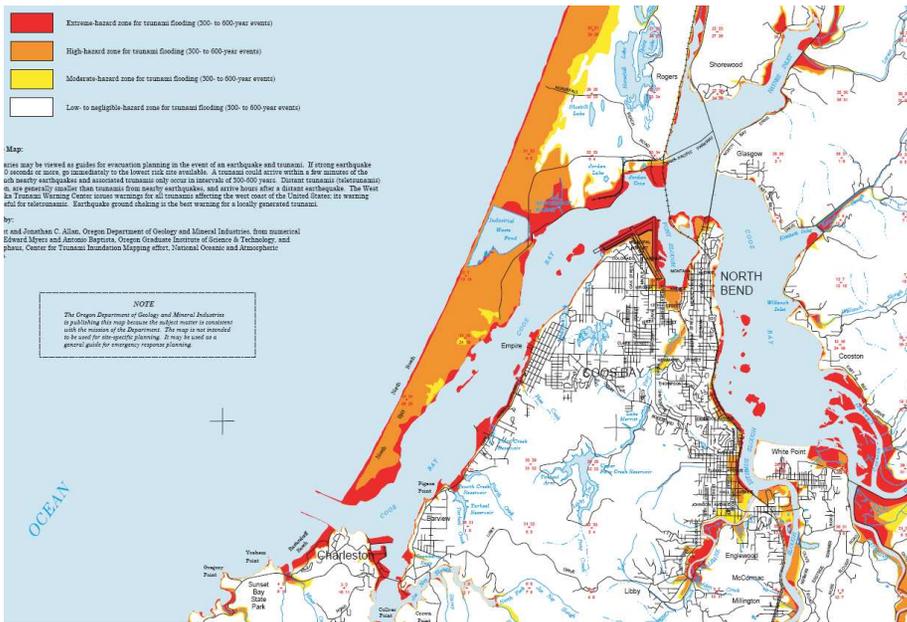
Tsunami inundation maps are published as Interpretative Map Series (IMS) maps 2,3,11,12,13,21,23, GMS-99, and Special Paper 41 and are available at <http://www.naturenw.org/geo-tsunamis.htm>.



OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

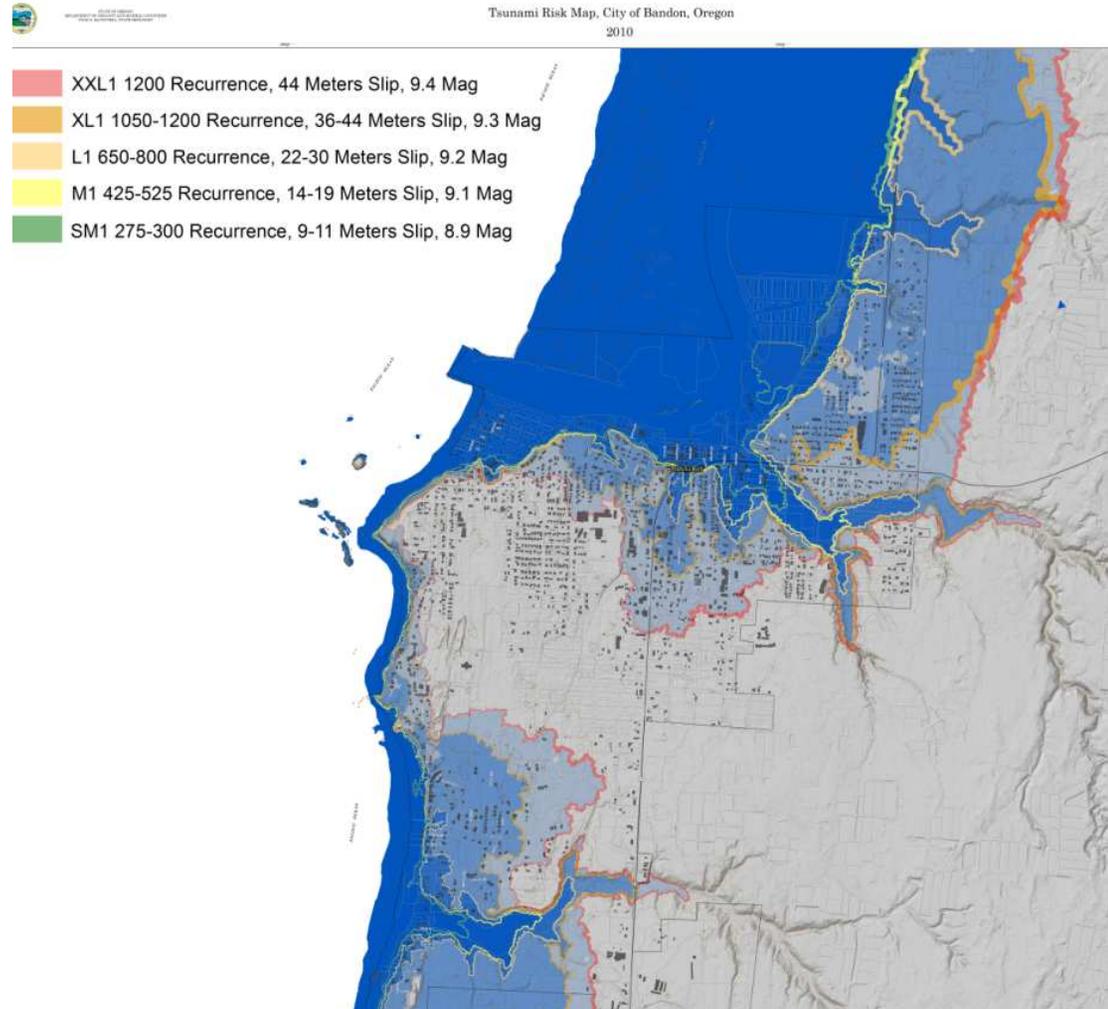
Agency Mission: Provide Earth Science Information and Regulation to Make Oregon Safe and Prosperous.

KPM 9: “old style” Tsunami Inundation Map (IMS 21, 2002)



III. KEY MEASURE ANALYSIS

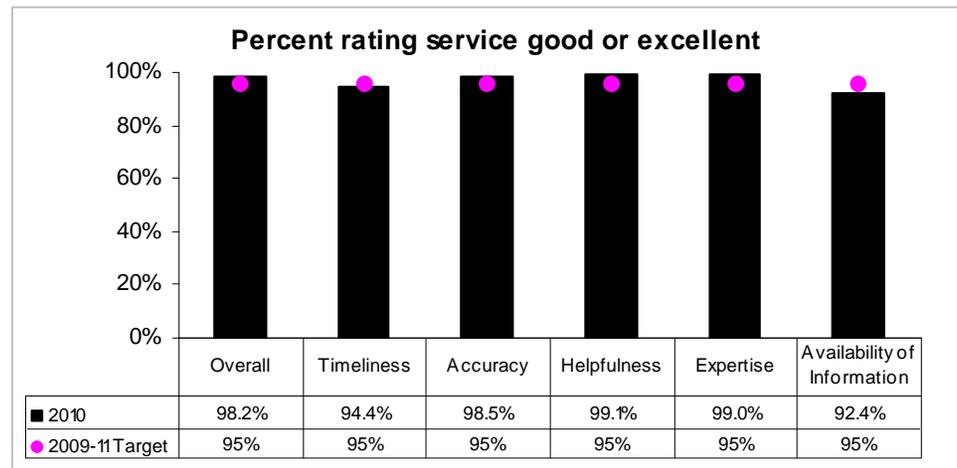
KPM 9: prototype Tsunami Inundation & Risk Map



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| | | |
|-----------------------|--|----------------------------|
| KPM #10 | CUSTOMER SERVICE : Percent of customers rating their satisfaction with the agency’s customer service as “good” or “excellent”: overall, timeliness, accuracy, helpfulness, expertise, availability of information | Measure since: 2005 |
| Goal | Improve collaboration and deliver the highest level of customer service possible. | |
| Oregon Context | Statewide Mission. | |
| Data source | Department survey results. | |
| Owner | Don Lewis, 971-673-1541, don.lewis@dogami.state.or.us | |

- OUR STRATEGY**
Invite customer input; respond positively to constructive criticism.
- ABOUT THE TARGETS**
95% customer satisfaction is the target for 2009-11.
- HOW WE ARE DOING**
Survey data collected during 2009-10 illustrates that the Agency is on track in every category, although there is a clear need to increase customer satisfaction regarding the Availability of Earth Science Information.
- HOW WE COMPARE**
Agency results are similar in range and kind to other Oregon Natural Resource Agencies.
- FACTORS AFFECTING RESULTS**
- WHAT NEEDS TO BE DONE**
The Agency shall strive for continuous improvement in each category; will improve satisfaction by increasing the scope of information content and ease in locating earth science and regulatory information via the internet.
- ABOUT OUR CUSTOMER SERVICE SURVEY**
The 2009-10 surveys utilized the approved customer satisfaction question format and sampled varying customers at various forums. Program 2 performed a census of its 138 Stormwater discharge permit-holders (compliers). Program 1 collected two census of advisory committee constituents, and a random sample of consumers at the Nature of the Northwest Information Center. A total of 297 customers had the opportunity to respond, and 111 did (37% response rate).



Agency Mission: Provide Earth Science Information and Regulation to Make Oregon Safe and Prosperous.

| | | |
|-----------------------|---|----------------------------|
| KPM #11 | GOVERNANCE : Percent of yes responses by Governing Board to the set of best practices | Measure since: 2007 |
| Goal | Ensure discussion of governance best practices. | |
| Oregon Context | Statewide Mission. | |
| Data source | Governing Board survey results. | |
| Owner | Don Lewis, 971-673-1541, don.lewis@dogami.state.or.us | |

6/15/2010

Oregon Department of Geology & Mineral Industries
 Governing Board Best Practices Self-Assessment Score Card
 Adopted May 5, 2007

| Best Practices Criteria | L. Givens | | S. Macnab | | C. Vars | | L. Phipps | | D. MacDougal | |
|---|-----------|----|-----------|----|---------|----|-----------|----|--------------|----|
| | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| 1. Executive Director's performance expectations are current. | X | | X | | X | | X | | X | |
| 2. Executive Director's receives annual performance feedback. | X | | X | | X | | X | | X | |
| 3. The agency's mission and high-level goals are current and applicable. | X | | X | | X | | X | | X | |
| 4. The board reviews the <i>Annual Performance Progress Report</i> . | X | | X | | X | | X | | X | |
| 5. The board is appropriately involved in review of agency's key communications. | X | | X | | X | | X | | X | |
| 6. The board is appropriately involved in policy-making activities. | X | | X | | X | | X | | X | |
| 7. The agency's policy option packages are aligned with their mission and goals. | X | | X | | X | | X | | X | |
| 8. The board reviews all proposed budgets. | X | | X | | X | | X | | X | |
| 9. The board periodically reviews key financial information and audit findings. | X | | X | | X | | X | | X | |
| 10. The board is appropriately accounting for resources. | X | | X | | X | | X | | X | |
| 11. The agency adheres to accounting rules and other relevant financial controls. | X | | X | | X | | X | | X | |
| 12. Board members act in accordance with their roles as public representatives. | X | | X | | X | | X | | X | |
| 13. The board coordinates with others where responsibilities and interests overlap. | X | | X | | X | | X | | X | |
| 14. The board members identify and attend appropriate training sessions. | X | | X | | X | | X | | X | |
| 15. The board reviews its management practices to ensure best practices are utilized. | X | | X | | X | | X | | X | |
| <i>Totals</i> | 15 | 0 | 15 | 0 | 15 | 0 | 15 | 0 | 15 | 0 |
| Total Number | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| Percentage of Total | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |

The Governing Board takes an active role in providing written comment and Board Meeting discussion of the Best Practices Criteria and work done towards compliance. Most recently the Board reviewed the status of this measure and delivered this score card result at the June 15, 2010, Governing Board meeting.

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| KPM #12 | Geologic Hazard Preparedness % of Oregon communities with geologic hazard data and prevention activities in place | Measure since: 2010 |
|----------------|--|------------------------|
| Goal | LIFE & PROPERTY SAFETY: Agency Goal #1 Reduce risk to Oregonians from naturally occurring geologic hazardous events. | |
| Oregon Context | OBM 67a: Community Preparedness For Natural Hazards. | |
| Data source | Department records. | |
| Owner | Coastal Section; contact Don Lewis, 971-673-1555, don.lewis@dogami.state.or.us | |

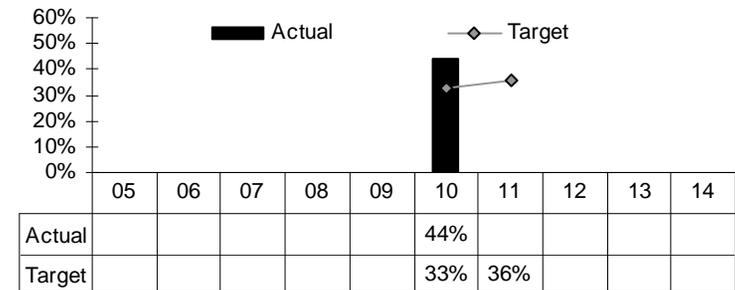
OUR STRATEGY

Geologic hazards are defined in ORS 516.010: *“Geologic hazard means a geologic condition that is a potential danger to life and property which includes but is not limited to earthquake, landslide, flooding, erosion, expansive soil, fault displacement, volcanic eruption and subsidence.”*

ABOUT THE TARGETS

The geologic hazard data targets are a matrix of progressive, data quality-related, standards for six sets of geologic hazards: a) earthquake and earthquake induced liquefaction, slope instability, and ground motion amplification; b) tsunami inundation for the entire coast including lidar-based community exposure risk maps; c) landslide inventory and susceptibility maps including rapidly moving debris flows; d) coastal erosion 4-zone maps and channel migration maps; e) riverine and coastal flood maps and lidar-derived community exposure risk maps; f) volcanic lahar inundation maps. The prevention activity standards relate to the completion, status of FEMA-approval, web availability, and sources of hazard data content of Natural Hazard Mitigation Plans.

% Communities with Hazard Data & Prevention Activities in Place



HOW WE ARE DOING

17 counties rated at the 75% mark of prevention activities in place; as of 2010, Clackamas County has the highest hazard data rating at 61%.

HOW WE COMPARE

No comparable data set available, however it is notable that the Department is widely recognized as a national leader in geologic hazards assessment and risk analysis in several subject areas: FEMA recruited the Department to develop flood and multi-hazard risk map products as a pilot for the nation, the Department if the technical lead on mapping and modelling tsunami inundation for NOAA; the USGS volcano hazards program selected the Department to develop multi-hazard risk and vulnerability assessments using methodologies that would be applicable to volcanic areas; the DOE arranged for the Department to assess the exposure of energy infrastructure to seismic hazards towards energy assurance; the USGS landslide hazards program is highlighting the applied research in Oregon by the Department with focus on major hazardous landslide processes affecting western Oregon, particularly debris flow and reactivation of large, deep landslides to establish new landslide mapping protocols and tools; and the Department has developed OBSMAP, the “Oregon Beach and Shoreline Mapping and Analysis program” for NOAA to document the spatial variability of beach change at various time-scales (i.e. seasonal, multi-year and long-term changes).

FACTORS AFFECTING RESULTS

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The acquisition of high-resolution lidar data is a “game-changer” in terms of the quality and measurable validity of hazard data in Oregon. This shall facilitate large scale accurate inventories of existing hazards and provide the means for reliable hazard susceptibility mapping. Lidar-based maps have the very powerful added benefit of being visually appealing to the public and are readily understandable by decision makers.

WHAT NEEDS TO BE DONE

Accelerate hazard data mapping and delivery in tandem with renewed outreach and prevention activities with DLCD, OEM (via Partners for Disaster Resilience) and local communities. Federal funding by FEMA, NOAA, and USGS shall provide most of the means.

ABOUT THE DATA

Map of the State depicting the status of natural hazard preparedness (data and prevention activities in place) for Oregon in 2010

