

"Provide Earth Science Information And Regulation To Make Oregon Safe and Prosperous"

- Acquire, organize and distribute data.
- Evaluate, mitigate and communicate hazard processes.
- Information in right hands at right time.
- Regulate to protect people and environment.
- Continuously improve.



Mount Hood and the Parkdale Lava Flow, Hood River County, Oregon

Slide 1

Who We Serve:

- Clients/partners state agencies, local governances, private sector and non-profits, federal agencies, academia
- Constituents the Governor and you, the Legislators
- Consumers all Oregonians use our information and rely on our environmental protection
- Compliers (Industry) aggregate and metal miners plus geothermal, oil & gas exploration and development

DOGAMI Organizational Chart: 2011-13 LAB + Legislative Authorized



Department of Geology and Mineral Industries,

Ways and Means Natural Resource Subcommittee Presentation

DOGAMI Organizational Chart: 2011-13 LAB + Legislative Authorized



DOGAMI Organizational Chart: Governor's Balanced Budget



DOGAMI Organizational Chart: Governor's Balanced Budget



DREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES Governor's Balanced Budget Organizational Chart 2013-2015

Governor

g Board

GS&S – science and technology for the service of the state

•Safety – mitigate geologic hazards for resilient communities

 Jobs and Innovation – identify resources and economic opportunities

•Healthy Environment – develop earth science information and data

FEMA CTP

POP 102

1.00 FTE

MLRR – regulation to protect environment & enhance economy

•Healthy Environment – manage land resources to support a healthy environment

•Jobs and Innovation – help build communities for growing population

Agency POP FTE: 15

Total Agency Positions: 50 Total Agency FTE: 49.20

effective January 24, 2013

REQUESTED DAR DATABAS BY POLICY POP 101 OPTION PACKAGES GIS ANALYST CARTOGRAPH 1.00 FTE HAZARDS CARTOGRAPHE S SPECIALIS GIS ANALYS

Net Total Positions: 50 Net Total FTE: 49 20 Plus 3 - 10 Temporary

FISCAL ANALYS

1.00 FTE

Continuous Improvement Options Opportunities Abound

Geologic Survey & Services Program

- Lidar Program Building Strong Funding From Many Partners
 - Multiple Applications
 - Very High Data Quality
- Federal Funding
 - Tsunami Inundation & Awareness
 - Flood Mapping
- Other Funds Increasing
 - Landslide assessment
 - Multi-hazard assessments
 - Resource and Energy assessments
- Increasing Demand for Digital Information Distribution
 - Lidar
 - Hazard Awareness HAZVU Website

Mineral Land Reclamation & Regulation

•Increased Geothermal Renewable Energy Exploration & Development Activity

- Geothermal Exploration permits from 0 40 in five years & actual energy production in 2012
- Modest increase in natural gas exploration
- •Metal mining exploration and NOI for operating permit

•First activity in 20+ years

• Potential for More Mined Land Restoration Projects

Special Investment Partnerships

Continuous Improvement Options Performance Metrics

Geologic Survey & Services

- Lidar Program Building Strong (POP) Funding From Many Partners
 - Multiple Applications
 - Very High Data Quality
- Federal Funding
 - Tsunami Inundation & Awareness
 - Flood Mapping
- Other Funds Increasing
 - Landslide Assessment
 - Multi-hazard assessments
- Increasing Demand for Digital Information Distribution
 - Lidar
 - Hazard Awareness HAZVU

Goal and Measures from 10 Year Strategic Plan and DOGAMI Strategic Plan

•Acquire and organize data on geologic resources, materials, landforms, processes and hazards

 Performance Measures 6 and 7
 Reduce risk, damage and loss through comprehensive descriptions of natural hazards

Performance Measures 1, 2 and 8
Help shape decisions on an individual, local, regional and statewide level with earth science information

•Performance Measures 3 and 12

•Continually improve our governance and operations

•Performance Measure 10 and 11

Continuous Improvement Options Performance Metrics

Mineral Land Regulation and Reclamation

- Surface Mining Regulation
 - Operation of mine for beneficial reclamation
- Oil & Gas exploration and development
 - Proper geophysical exploration
 - Drilling conducted safely and with reclamation plan
- Geothermal exploration and development
 - Proper geophysical exploration
 - Drilling conducted safely and with reclamation plan
- Metal Mining Regulation
 - Operation of flotation and chemical process mining and reclamation

Goal and Measures from 10 Year Strategic Plan and DOGAMI Strategic Plan

- •Regulate to protect the environment and the people of Oregon
 - Performance Measure 8

• Proactively pursue restoration and reclamation

• Performance Measure 5

Structure for KPM review

- Key Performance Measure review how we are doing
- Includes discussion of Policy Option Packages 101, 102, 103
- Indicates where we have opportunities, challenges, and changes

Key Performance Measurement - Basis

• Measure KPM Progress Where Oregonians Are:

• Blue Areas Total About 18% of Oregon Area & About 98% Oregonians



Key Performance Measurement - Basis



Radical KPM Scale Change – Now We Map Up Close at 1:2,000 instead of 1:24,000



DOGAMI Key Performance Measures

Ascending Order

PROGRAM 1: Geologic Survey & Services #6: Detailed Geologic Map Completion **#7:** Regional Geologic Map Completion #1: Earthquake & Landslide Map Completion #1: Earthquake & Landslide Map Completion **#9:** Tsunami Inundation Map Completion #2: Tsunami Evacuation Brochure Completion **#3:** Coastal Erosion Map Completion #12: Geologic Hazard Preparedness (New, and is summary statistic) includes Flood, Volcanic, and Channel Migration **PROGRAM 2: Mineral Lands Regulation & Reclamation #8:** Mine Sites Inspected Annually **#5:** Reclamation AGENCY: **#10:** Customer Service #11: Governance

KPM 6 – Detailed Geologic Map Completion





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KPM 6 – Detailed Geological Map - 2010



KPM 7 – Regional Geologic Map Completion

- Have Built GIS Database of Best Maps
 - Compiled 70 years of work; Hundreds of maps; will need to update with more recent information
 - Searchable, Web Friendly



Earthquake Ground Shaking Map derived from Statewide Regional Geologic Map

Department of Geology and Mineral Industries, Ways and Means Natural Resource Subcommittee Presentation **96% Complete**



Landslide Mapping:

•High Quality Landslide Hazard Mapping Is Dependent On Lidar

Oregon City Aerial Photograph

Oregon City Lidar Bare Earth & Landslide Inventory



Mapped at 1:24,000 scale

Actual Landslides from Lidar Mapped at 1:4,000 scale

Landslide Mapping:

•The Perils of "SLIDO" versus Lidar

Hood River County – east of Parkdale

Hood River County



No Landslide in SLIDO

Actual Landslides from Lidar

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Landslide Mapping: Parils of "SLIDO" vorsus Li

•The Perils of "SLIDO" versus Lidar

Hood River County - east of Parkdale

Hood River County



Actual Landslides from Lidar - hazard

Actual Landslides from Lidar on Air Photo -RISK

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•20 full-length M9+ events in 10,000 years
•Average frequency is 500 years
•2 – 5 minutes shaking
•local tsunami

•10-20 additional M8+ at southern end•313 years since 9pm Jan 26, 1700 AD



Active & Near-Active Faults Mapped

Ground Shaking Probability Map Used For Codes

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59% Complete



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KPM 9 – Tsunami Inundation Map Completion



Tsunami approaches Tohoku Event 2011



Tsunami Travel Times

Tsunami damage to Port Orford - 2011



KPM 9 – Tsunami T-Shirts



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KPM 9 – Tsunami Inundation Map Completion



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"38% Complete"

Accelerate Tsunami Mapping

Encompass entire coast

Complete modeling by 2013

•Funding from NOAA in place

KPM 2 – Tsunami Evacuation Map Completion

"40% Complete"

20 community maps released by end of 2012



Astoria

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KPM 3 – Coastal Erosion Map Completion



Netarts Bay, Tillamook County, Orego

Erosion Hazard Mapping:

•24 of 30 Communities Mapped •Coastal Flood Maps For FEMA

80% Complete

Emphasis north to south

- Relative sea level rise
- •Tectonic rise in south



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KPM 3 – Coastal Erosion Map Completion

Oregon Coast Experiencing: • More Frequent Pacific Winter Storms • Bigger Storm Waves With More Energy • Revised 100-year Storm Waves = 50ft height

Lincoln City and Newport incorporated maps into land use ordinances in 2012





Neskowin

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WINTER STORMS = MULTIPLE HAZARDS



Nov 5 2006: Gleneden Beach



10" Rain on Snow = **Debris Flows** 2 Million yd³ Nov 7 2006: Mt Hood







KPM 12: Hazard Preparedness- Flood



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KPM 12: Hazard Preparedness- Flood



First project: 2008-10

- Coos County
- •Lidar in Clatsop-Tillamook-Lincoln

New projects: 2011-15

- Sandy River Watershed
- Clatsop County
- •Tillamook County
- Lincoln County
- Curry County
- •Lane County
- •Lidar in Jackson Co & Burns area
- •Lidar in Grants Pass & Roseburg
- •Proposed lidar in Wasco Co, Umatilla Co

Area of Next Slide

KPM 12: Fixing Flood Maps

Low-Quality Topo Have 40 foot contours

High-Quality Lidar Makes 1 foot contours



Pink is flood area on old maps

Blue is flood area on new maps

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KPM 12: Fixing Flood Map Display



This qualifies for FEMA's Letter of Map Amendment – "Out as Shown"

New KPM 12 – Geologic Hazard Preparedness

Measures Quality of Natural Hazard Mitigation Plans

Hazards: •Earthquake •Tsunami •Landslide •Coastal Erosion •Flood •Channel Migration •Volcanic Lahar

Preparedness: FEMA-approved Plan? Plan online? Plan Uses DOGAMI Hazard Assessment? Oregon's Current Preparedness Level: 46% Weighted by county population


KPM 12: Geologic Hazards Can Also Be Resources



KPM 12: Volcanic Hazard also Geothermal Resource



• MLRR Aggregate Permits (January 2012)

- 901 Permitted Sites
 - Up 30 from July '11
 - 517 unique operators
- 54,719 acres affected
 - 23,847 disturbed
 - 8,998 bonded
- 8,407 acres reclaimed (1,340 voluntary)



Oregon Aggregate Industry: Recession Over? Production Volumes -47% in 2011 from peak in 2005 •Fee Revenues -15% in 2011 from peak in 2005; up 0.2% in 2011 The Fee Re-Structuring in 2005 Adequately Funds Current Service Level



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Mine Site Inspection Targets:

Inspect All 517 Unique Operators With Active Operations Each Biennium •50% Each Year is Target



24% Achieved

56% Achieved

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Inspections Challenges and Solutions

• Challenges:

- Five positions perform across state
- 0 to 40 geothermal permits
- Increase in O&G permits
- Enforcement actions up
 - Requires repeat visits
- Solutions
 - Add GIS Analyst to supplement field staff work load
 - Make Permit Coordinator permanent FTE POP 103
 - Add temporary inspectors to cover eastern OR



KPM 5 – Reclamation

Prompt Reclamation of Acres Disturbed: • July 2012: 894 Active Sites: • 51,616 permit acres • 21,385 acres disturbed • 9,273 acres bonded

•Reclamation in 2012 – <u>474 acres (up from average);</u>

Annual Awards Reinforce Best Practices

•June '12: 6,884 Cumulative Acres Reclaimed •17% Agriculture •20% Open Space and Range •2% Wildlife and Wetlands •13% Housing

KPM result is ahead of target

MLRR Voluntary Reclamation Award 2010: Umpqua Sand & Gravel, Douglas Co





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KPM 5 – Seeking Reclamation

Bowers Rock SP: Potential Reclamation Site



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KPM 10 – Customer Service Satisfaction

Survey Results From Tsunami Outreach workshops, Mt. Hood Risk Users Group and Oregon Geologic Mapping Advisory Committee



KPM 11 – Governance

Governing Board Using Governance KPM during Annual Performance Review:

8/20/2012 **Oregon Department of Geology & Mineral Industries** Governing Board Best Practices Self-Assessment Score Card S. Macnal C. Vars D. MacDougal Adopted May 5, 2007 Givens L. Phipps **Best Practices Criteria** Yes No Yes No Yes No Yes No Yes No 1. Executive Director's performance expectations are current. Х Х Х Х Х Х Х Х Х Х 2. Executive Director's receives annual performance feedback. Х Х Х Х 3. The agency's mission and high-level goals are current and applicable. Х X 4. The board reviews the Annual Performance Progress Report. Х Х Х Х 5. The board is appropriately involved in review of agency's key communications. Х Х Х Х Х Х Х Х Х Х 6. The board is appropriately involved in policy-making activities. Χ X Х Х Х 7. The agency's policy option packages are aligned with their mission and goals. Х X Х Х 8. The board reviews all proposed budgets. Х 9. The board periodically reviews key financial information and audit findings. Х Х Х Х Х Х Х Х Х Х 10. The board is appropriately accounting for resources. Х Х 11. The agency adheres to accounting rules and other relevant financial controls. Х Х Х Χ Х X Х X 12. Board members act in accordance with their roles as public representatives. X Χ 13. The board coordinates with others where responsibilities and interests overlap. Х Х Х 14. The board members identify and attend appropriate training sessions Х Х Х Х Х Х Х Х Х 15. The board reviews its management practices to ensure best practices are utilized. X 15 15 15 15 15 **Totals** 0 0 0 0 0 15 15 15 15 15 15 15 15 15 15 **Total Number** 100% 0% 100% 100% 100% 100% **Percentage of Total** 0% 0% 0% 0%

Additional Notes

DOGAMI Project-Level Expenditures By KPM



Performance measures goals for the next two years include:

•Capture 6,000 square miles of lidar data (Policy Option Package 101) to produce new base maps toward KPMs 1, 2, 3, 6, and 9;

•Complete tsunami inundation maps for the majority of the coast using refined modeling techniques for KPM 2;

•Produce landslide hazard maps for 1500 square miles for KPM 1;

 Introduce new tools to distribute geologic and hazard data and reports via the web for KPM 12;

•Obtain a customer satisfaction rating of 90% or better in year 2013 – 2015 for KPM 10;

•Expand the coastal monitoring network in support of coastal erosion map completion for KPM 3;

•Complete multihazard flood risk maps for Coos County and begin similar work in Tillamook, Clatsop, Lincoln, Lane, Clackamas, and Curry Counties (Policy Option Package 102) for KPM 12;

•Maintain 50%+ mine site inspections by increased use of GIS technology for KPM 8.

Historical Perspective



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Agency Federal Revenues and Federal Revenue Expectations For 2011-13



February 1, 2015

Reduce duplication and streamline

- Very little overlap most work is coordinated to agency missions – e.g.:
 - OEM hazard preparedness and response
 - DLCD land use goals and coordination with local governances
 - ODOT with hazard mitigation in transportation corridors
 - DEQ/DOGAMI IGA for 1200 A Storm water permitting at mine sites
 - DSL with aggregate mining and removal-fill
 - OWRD has hydrogeologists for water adjudication

Cost containment and program delivery improvement – pluses and minuses

- Our entire business plan involves <u>developing partnerships and collaborative efforts</u> with other agencies or governances to leverage expertise, funds, and products
 - From ODOT "...The existing lidar saved us almost 4,400 man-hours of work and put us a year ahead of schedule..."
- Efficiencies in geothermal site permitting by working with ODEQ and OWRD to streamline our respective regulatory responsibilities
- We outsource activities that require job specialization necessary for particular projects – IT consultant, probabilistic hazard modeling, etc.
- We use DAS Enterprise Human Resources client services to reduce support FTE
- Closed and consolidated field offices and outreach efforts to maximize space and staff – this leaves large areas of the state without face-to-face contact

Cost containment and program deliver improvement – pluses and minuses

- Held positions open as staff retired plan to fill the positions on as needed basis
 - Vacancy savings not intended to be a long term plan
- Fund shifted S&S expenses from GF to project indirect cost recovery
- High impact and agency crucial staff fund shifted from GF to indirect cost recovery
- We are without stable core funding to operate the Agency

Legislation HB 2248

- HB 2248 Consolidated Permitting for Metal Mining
 Operation
 - amendments to regulate all metal mining under "consolidated permitting process"
 - Update metal mining statutes to require public review, environmental analysis or mined land reclamation
 - Correct inconsistencies in current statutes and standardize permit application fees and annual permit renewal fees for metal mining
 - When mine permit applications are submitted the amendments allow
 DOGAMI to be reimbursed for expenses related to permit review no affect on the budget at the present



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Lidar Point Cloud



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KPM 12: Hazard Preparedness Case Study

Multi- Hazard Risk and Vulnerability Assessment at Select Drainage around Mount Hood, OR

How This Process Works:

Where Assets Meet Hazards = Risk

Supplemental Material: How We Help Communities Be Prepared

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RE: DOGAMI Reclassifications and New Hires for 2011 - 2013 Biennium

Position #0103001 reclassed from UA CO104 to UA C0118 per Pkg. 810 approved by LFO on 4/15/11									
								NEW	
OLD		OLD	OLD BASE	OLD	NEW	NEW		BASE	NEW
CLASS	OLD CLASS DS	RNG	RATE	STP	RNG	CLASS	NEW CLASS DS	RATE	STP
C0104	OFFICE SPECIALIST 2	15	2814.00	08	17	C0118	EXECUTIVE SUPPORT SPECIALIST 1	3087.00	08

Permanent positions					
	Classification	Salary	Step at	At/Above/	
Classification Title	Number	Range	hire	Below step 2	Justification attached
Information Systems Specialist 4	C1484	25	8	Above	Yes
Limited Duration for 2011-13 biennium					
	Classification	Salary	Step at	At/Above/Bel	
Classification Title	Number	Range	hire	ow step 2	Justification attached
Fiscal Analyst 1	C1243	23	2	At	Not Applicable
Public Affairs Specialist 1	C0864	25	7	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 3	C1483	24	5	Above	Yes
Information Systems Specialist 3	C1483	24	4	Above	Yes
Information Systems Specialist 3	C1483	24	9	Above	Yes
Information Systmes Specialist 3	C1483	24	3	Above	Yes
Information Systems Specialist 3	C1483	24	6	Above	Yes
Geologist 2	C3521	26	4	Above	Yes
Geologist 2	C3521	26	4	Above	Yes

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES Annual Performance Progress Report (APPR) for Fiscal Year 2011-12

2011-13 Budget Form 107BF04c

To obtain this report, visit <u>www.oregongeology.org</u> or <u>http://cms.oregon.gov/DAS/CFO/pages/kpm_reports.aspx</u>

Agency Mission

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

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PART II: USING PERFORMANCE DATA	3
PART III: KEY MEASURE ANALYSIS	4

ABOUT THIS REPORT

Purpose of Report

The purpose of this report is to summarize the agency's performance for the reporting period, to explain how performance data are used, and to analyze agency performance for each key performance measure legislatively approved for the 2011-13 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.

<u>KPM = Key Performance Measure</u>

The acronym "KPM" is used throughout to indicate <u>K</u>ey <u>P</u>erformance <u>M</u>easures. Key performance measures are those highestlevel, 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.

Oregon Department of Geology & Mineral Industries

TABLE OF MEASURES

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

2010-11 KPM#	2011-12 Key Performance Measures (KPMs)	Page #
1	EARTHQUAKE AND LANDSLIDE MAP COMPLETION - Percent of inhabited areas with maps and data.	4
2	TSUNAMI EVACUATION MAP COMPLETION – Percent at-risk communities with new evacuation brochures.	6
3	COASTAL EROSION MAP COMPLETION – Percent target communities with standardized, 4-risk zone erosion hazard maps.	8
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 inhabited areas with detailed geologic data to be used for local problem solving and resource management.	12
7	REGIONAL GEOLOGICAL MAP COMPLETION – Percent of Oregon with statewide geologic data for regional resource and hazard assessment.	14
8	MINESITES INSPECTED ANNUALLY – Percent of unique mine operators with active permitted sites inspected annually.	16
9	TSUNAMI INUNDATION MAP COMPLETION – Percent of coast provided with detailed tsunami inundation maps for local 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 questions.	21
12	GEOLOGIC HAZARD PREPAREDNESS – Percent of Oregon communities with geologic hazard data and prevention activities in place	22

Oregon Department of Geology & Mineral Industries

I. EXECUTIVE SUMMARY

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

Contact: Vicki McConnell, Director	Phone: (971) 673-1550
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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 include 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.
- The Agency's Governing Board performance is measured by KPM 11 (Governance).

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),), Reclamation (KPM 5), Detailed Geologic Map Completion (KPM 6), Regional Geologic Map Completion (KPM 7), Mine Sites Inspected Annually (KPM 8), Tsunami Inundation Map Completion (KPM 9), Customer Service (KPM 10), Best Practices Governance (KPM 11), and Geologic Hazard Preparedness (KPM 12) 	10
KPM NOT MAKING PROGRESS not at or trending toward target achievement	Coastal Erosion Map Completion (KPM 3)	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 of service contracts from federal and state agencies and communities. As compared with 2008-09, during 2011-12 the Geologic Survey & Services Program decreased Other Fund Charges For Services Revenues from \$1,138k to \$754k and increased Federal Funds (as both FF and as OF) from \$1,933k to \$3,708k.

5. RESOURCES USED AND EFFICIENCY

6. The agency utilized \$1,226,110 in General Funds, \$3,915,754 in Other Funds, and \$1,803,097 in Federal Funds during '11-'12.

Oregon Department of Geology & Mineral Industries

II. USING PERFORMANCE DATA

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

Contact: Vicki McConnell, Director

Phone: (971) 673-1550

The following questions indicate how performance measures and data are used for management and accountability purposes.				
1 INCLUSIVITY Describe the involvement of the following groups in the development of the agency's performance measures.	 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, USGS, NOAA and FEMA. Citizens: The five-person Governing Board, selected from different geographic areas of Oregon, reviews and approves proposed and modified KPM. 			
2 MANAGING FOR RESULTS How are performance measures used for management of the agency? What changes have been made in the past year?	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.			
3 STAFF TRAINING What training has staff had in the past year on the practical value and use of performance measures?	Staff have had detailed KPM briefings on content, objectives, targets, measurement criteria, standards, results, benefits and consequences of their assigned KPM. These KPM are a driving influence used to craft Statements of Work for the Agency's numerous contracts for services. Examples include department work on NOAA National Tsunami Hazard Mitigation Program, USGS National Geologic Map Program and FEMA National Flood Insurance Program.			
4 COMMUNICATING RESULTS How does the agency communicate performance results to each of the following audiences and for what purpose?	 Staff: KPM relative and absolute 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. 			

OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

III. KEY MEASURE ANALYSIS

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

KPM #1	EARTHQUAKE AND LANDSLIDE MAP COMPLETIONMeasure since: 2005% of inhabited areas with maps and data2005				
Goal	Reduce the loss of life and property by understanding and mitigating geologic hazards.				
Oregon Cont	OBM 67a: Community Preparedness For Natural Hazards.				
Data source	Department records.				
Owner	Geologic Hazard & Technical Services Sections; contact: Vicki McConnell, Director, 971-673-1550, vicki.mcconnell@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 (see the "blue-colored inhabited areas" on the map on the left side of page 6).

3. HOW WE ARE DOING

Through 2011-12 the department has produced earthquake-induced landslide, ground motion amplification and liquefaction hazard maps for 65,703 square miles of Oregon, including **10,429** square miles of inhabited area (**59%**). Through 2011-12 the department has produced new lidar-based landslide inventory and hazard maps for 4,876 square miles including **3,914** square miles of inhabited area (**22%**). The combined degree of map completion is thereby **41%** and is ahead of target.

4. HOW WE COMPARE

No comparable data for similar jurisdictions available at this time.

5. FACTORS AFFECTING RESULTS

Since 2008 the Department has utilized \$2 million in Measure 66 Lottery Fund seed capital to leverage an additional \$10 million in federal and other funds to acquire 23,864 square miles of high-resolution lidar elevation data (see map on right side of page 9). This area covers 10,671 square miles, or 61%, of the populated target area of Oregon, and is the foundation for our new generation of hazard maps now in production at DOGAMI. The detail and multi-purpose reach of this data is revolutionary towards resource management everywhere and hazard mitigation in the built environment, especially towards earthquake, landslide, tsunami, flooding, channel migration, 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.org/pubs/ims/p-ims-030.htm

7. ABOUT THE DATA

2011-13 Budget Form 107BF04c

% Earthquake and Landslide Map Completion



OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

III. KEY MEASURE ANALYSIS

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

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.

KPM 1 Earthquake Hazard Mapping progress map

KPM 1 Landslide Hazard Mapping progress map


III. KEY MEASURE ANALYSIS

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

KPM #2	TSUNAMI EVACUATION MAP COMPLETIONMeasure since:% target communities with new evacuation brochures.2005					
Goal	Reduce the loss of life and property by understanding and mitigating geologic hazards.					
Oregon Conte	OBM 67a: Community Preparedness For Natural Hazards.					
Data source	Department records.					
Owner	Coastal & Technical Services Sections; contact: Vicki McConnell, Director, 971-673-1550, vicki.mcconnell@state.or.us					

1. OUR STRATEGY

Reduce the loss of life of Oregonians and visitors to the Oregon Coast by educating coastal residents and visitors, local city officials, county emergency managers and other state & federal agencies and provide materials and signs for those exposed and vulnerable to the risk to save themselves.

2. ABOUT THE TARGETS

We now display 45 at-risk communities along the Coast (see map below). In addition there are numerous State Parks and other facilities at risk along the coast. The complimentary performance measure (KPM 9: Tsunami Inundation Map completion) will measure the relative proportion of the total coast mapped going forward, while this measure still refers to specific communities.



3. HOW WE ARE DOING

In 2010 DOGAMI commenced a program to re-map tsunami inundation zones for several different tsunami scenarios, both local and distant in nature, for the **entire Oregon Coast**. This work incorporates the recent technical findings from the Sumatra, Chile and Japan megathrust earthquakes and resultant tsunami. As part of this new initiative, funded by NOAA National Tsunami Hazard Mitigation Program, DOGAMI has developed a new Tsunami Evacuation Brochure that shows both the worst case local (Cascadia Subduction Zone) and worst case distant (new Alaska) tsunami. As of mid-'12 DOGAMI has completed new Tsunami Evacuation Brochures for 20 communities: Cannon Beach-Arch Cape, Brookings, Harbor, Gold Beach, Nesika Beach, Port Orford, Bandon, Nehalem River Valley, Rockaway Beach, Barview, Garibaldi, Bay City, Tillamook, Cape Meares, Netarts, Oceanside, Coos Bay, North Bend and Charleston. During '12-'13 DOGAMI aims to produce new brochures for 15 more communities, with the rest to follow during '13-'14.

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 2013.

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.

III. KEY MEASURE ANALYSIS

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

7. ABOUT THE DATA

The data are for the Oregon fiscal year 2012. Tsunami evacuation brochures are at <u>http://www.oregongeology.org/sub/earthquakes/Coastal/Tsubrochures.htm</u>.

KPM 2: New Tsunami Evacuation Brochure Coverage

DOGAMI 5-Year Plan

• '09-'13 Elements

- New Inundation Maps Whole Coast
 - Credible Earthquake Sources
 - Best Bathymetry & LiDAR
 - Local Tsunamis: 5 "T-Shirt" Sizes
 - <u>Distant tsunamis</u>: <u>2</u> Gulf of Alaska 1964 + hypothetical maximum
- Evacuation Brochures
 - Maximum Local Tsunami
 - Maximum Distant Tsunami
 - Preparedness advice
- Tsunami Outreach Oregon (TOO)
 - Minimum 12 Communities
 - Sustainable, Grass Roots Culture of Preparedness





Example of new Tsunami Evacuation Brochure/Map



III. KEY MEASURE ANALYSIS

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

KPM #3	COASTAL EROSION MAP COMPLETIONMeasure since:% target communities with standardized, 4-risk zone erosion hazard maps.2005		
Goal Reduce the loss of life and property by understanding and mitigating geologic hazards.			
Oregon Cont	ext OBM 67a: Community Preparedness For Natural Hazards.		
Data source	Department records.		
Owner	Coastal Section; contact: Vicki McConnell, Director, 971-673-1550, vicki.mcconnell@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 dunebacked shorelines over the next 60-100 years; for use by land use planners. DLCD 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 ("Active, 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, including ongoing monitoring of beach erosion and collaborative research with OSU to develop new erosion models that account for climate change. See a portion of this work assessing estuaries and shores at http://www.oregongeology.org/sub/nanoos1/index.htm.

Newport and Lincoln City have adopted all or parts of the coastal erosion maps for land use planning purposes in the last year.

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. The overall coastal erosion hazard in Lane, Douglas, Coos, and Curry counties is relatively low. Therefore, funding source priorities have followed areas of higher erosion 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. DOGAMI recommends conducting detailed coastal erosion studies on a case-by-case basis within these counties.

7. ABOUT THE DATA

The eight Open File Reports (OFR 01-03, 01-04, 04-09, 04-11, 04-18, 04-20, 07-03, and 09-06) 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.org/sub/earthquakes/Coastal/CoastalHazardsMain.htm.

III. KEY MEASURE ANALYSIS

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

KPM 3: Coastal Erosion Map Completion

MEASURE 3: COASTAL EROSION MAP COMPLETION Landslide and Erosion Hazards • 4-zone Maps completed for 24 of 30 communities [80%] EXISTING EROSION HAZARD OFR 0-01-STUDIES 2004 > New LIDAR OFR 0-01-03 OFR 0-09-06 Entire Coast Clatsop Co. OFR 0-04-1 now OFR 0-04-09 acquired OFR 0-07-03 S Lincoln Co. > Coos Co • Erosion factored into coastal flooding maps Study area

Where DOGAMI has built funding partnerships to acquire lidar



III. KEY MEASURE ANALYSIS

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

KPM #5	RECLAMATIONMeasure sinceTotal number of mining acres that have been reclaimed and returned to secondary beneficial use.2005						
Goal	Recognize the important and essential contribution that the extraction of minerals makes to the economic well being of the state and the nation and to prevent unacceptable adverse impacts to environmental, scenic, recreational, social, archaeological and historic resources of the state that may result from mining operations.						
Oregon Conte	At Rural Economic Development and Sustainability of State Resources.						
Data source Department records.							
Owner	Mined Land Regulation & Reclamation Program; contact Alyssa Boles, 541-967-2040, alyssa.boles@mlrr.oregongeology.com						

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.org/mlrr/awards.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 the 2011-12 period, 474 acres of disturbed land at 26 closed sites were reclaimed to secondary use. The trend is ahead of target. Of 6,884 acres reclaimed, the leading secondary beneficial use categories are open space and range (20%), agriculture (17%), housing (13%), and wildlife and wetlands (2%).

4. HOW WE COMPARE

Comparison to a simililar 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 of reclaimed land and secondary land use.

7. ABOUT THE DATA

As of June 30, 2012 there are 894 active site permits involving 51,616 total acres permitted with 21,385 disturbed acres and 9,273 acres that are bonded.







III. KEY MEASURE ANALYSIS

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

News release describing one of the 2010 Annual Reclamation Awards (given in 2011)

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Outstanding Voluntary Reclamation 2010- Umpqua Sand & Gravel Umpgua Pit, Douglas County Contact: Kelly Guido, 640 Shady Drive, Roseburg, OR 97470, (541) 673-1088



Umpqua Sand & Gravel, Douglas County, has voluntarily reclaimed over 35 acres of pre-law flood plain mine disturbance by leaving shallow slopes along the mine pond banks, spreading soil, and planting native grasses. Concurrent reclamation of minedout areas to wildlife habitat encourages wildlife to move in even during active mining and protects the adjacent river system.

The Umpqua Pit is located four miles northwest of Roseburg in Douglas County. This is a sand and gravel operation on a terrace above the South Umpqua River. Mining began in 1946 by the landowner, Frank Guido. Early mining was a combination of both in-stream and flood plain sand and gravel extraction. This site was permitted by DOGAMI in 1972 and has been maintained since. In 1972 approximately 70 acres were identified as exempt from the reclamation rules. In 1998 and in 2006 the DOGAMI permit was amended to expand the permit boundary. Both amendments involved property owned by the permittee. The permit boundary now encompasses 377 acres.

Surrounding land use is agriculture. Hay fields and fruit orchards are located to the west and south. The Umpgua River forms the east and northern permit boundary. Residences are located 2,000 feet to the south along Garden Valley Road.

From the earliest DOGAMI inspection reports, the presence of wildlife at this site has always been noted. Numerous species of birds use this site as well as mammals, reptiles, and amphibians. Over 35 acres of pre-law flood plain mine disturbance has been voluntarily reclaimed. As the excavation has expanded, the pre-law exempt areas have DOGAMI 08-08-2011, p. 7 of 11 been reclaimed as open water ponds for wildlife habitat. Concurrent reclamation of



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Mineral Land Regulation and Reclamation Program 229 Broadalbin St. SW Albany, OR 97321 Phone: (541) 967-2039 Fax: (541) 967-2075 info@mlrr.oregongeology.com Gary W. Lynch. Assistant Director

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

mined-out areas to wildlife habitat encourages wildlife to move in even during active mining. This involves leaving shallow slopes along the mine pond banks, spreading soil, and planting native grasses. Willow, ash, alder, and cottonwood trees have volunteered. By law, in-water slopes must be left at 3H : 1V to six feet below ordinary low water to allow people and animals to get out of the pond. By leaving even shallower slopes, up to 10H : 1V in places, riparian vegetation quickly volunteers. A setback between mine operations and the river has protected mature riparian vegetation along the banks. On the northern end of this site, wetland areas have been enhanced between mine operations and the river to promote Western Pond Turtle habitat. Media contact:



Processing of sand and gravel has always been a part of this operation. A DEQ WPCF 1000 water quality permit is maintained with no documented violations. By maintaining internal drainage there is no discharge of stormwater off site.

In 2005 a high-water event caused flood waters to back into the active mine ponds at this site. Because the final slopes had yet to be established in the inundated area, headcutting of the pond edge occurred for about 100 feet toward the river. However, because the setback to the river was 500 feet, no impacts to the river system occurred. Working with DOGAMI and ODFW, Umpqua Sand & Gravel incorporated a low dike in this area to prevent back waters from entering the pit, and constructing a fish access channel to insure any fish stranded in the mine ponds during a future high-water event can migrate back to the river. Umpqua S & G has been recognized for their commitment to perform voluntary and concurrent reclamation to enhance wildlife habitat and to protect the adjacent river system.

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III. KEY MEASURE ANALYSIS

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

KPM #6	DETAILED GEOLOGIC MAP COMPLETIONMeasure since: 2005% of inhabited areas with detailed geologic data to be used for local problem solving and resource management.2005
Goal	Initiate and conduct studies and surveys of the geological and mineral resources of the state and their commercial utility and identify and map geologic hazards and estimation of their potential consequences and likelihood of occurrence.
Oregon Conte	xt Rural Economic Development and Sustainability of State Resources.
Data source	Department records.
Owner	Statewide Mapping & Minerals Section; contact: Vicki McConnell, Director, 971-673-1550

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. Through mid-2012 the Department has built funding partnerships to acquire 25,488 square miles of lidar in Oregon, including 11,670 in the inhabited areas (66%); this total continues to grow. Lidar is essential to the creation of high-quality geologic maps.

3. HOW WE ARE DOING

In 2011-12 the Agency delivered detailed maps to funding clients covering 1166 square miles, adding **1016** qualifying square miles in the Hood River Valley and Portland urban area. This brings the total square miles of inhabited area covered to 9,644, for 55%. The measure continues to be on target.

% Target Area With Detailed Geologic Maps



4. HOW WE COMPARE

Washington State does not currently have this scale of map available online. Nevada has PDF of 1:24,000 scale maps at http://www.nbmg.unr.edu/dox/dox.htm#3. Idaho has 1:24,000 maps at http://www.idahogeology.org/Products/. California has 1:24,000 maps at http://www.idahogeology.org/Products/.

5. FACTORS AFFECTING RESULTS

Several mapping projects are in cooperation with the U.S. Geological and the release of their mapped areas will affect our performance results. During 2011-12 the USGS did not release new maps in Oregon. We anticipate they will release several to the west of Beaverton-Tualatin during 2012-13.

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, rock formation contacts, fault scarps, 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 the Department is in progress to complete new geologic mapping for the southern Oregon coast in Curry County.

III. KEY MEASURE ANALYSIS

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

7. ABOUT THE DATA

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

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



KPM 6 Detailed Geologic Map Completion map



III. KEY MEASURE ANALYSIS

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

KPM #7	REGIONAL GEOLOGIC MAP COMPLETION % of Oregon with statewide geologic data to be used for regional resource and hazard assessment.	Measure since: 2005			
Goal	Goal Initiate and conduct statewide geologic resource and hazard assessment.				
Oregon Cont	ext Rural Economic Development and Sustainability of State Resources.				
Data source	Department records.				
Owner	Statewide Mapping & Minerals & Technical Services Sections; contact Vicki McConnell, Director, 971-673-1550				

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. These data are particularly useful for expediting hazard assessment of energy facility siting and transportation projects.

2. ABOUT THE TARGETS

Complete 100% coverage and on-line delivery by June 30, 2013.

3. HOW WE ARE DOING

The trend is close to the target. We are working on a new digital release of the geologic compilation and a new online platform has been developed for displaying this type of data. An example of the applied derivative information that can be

created from this work is the ground shaking maps produced for a Magnitude 9 subduction zone earthquake to support the Oregon Seismic Safety Policy Advisory Commission in completing its legislatively-mandated earthquake resilience plan.

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 2012-13 in order to add functionality and to link with other Agency hazard data such as the renewable energy geothermal data such as the Geothermal Information layer for Oregon at http://www.oregongeology.org/sub/gtilo/index.htm .

6. WHAT NEEDS TO BE DONE

During 2011-12 the project will move into the data presentation phase by delivering a new web-based map viewer platform during 2012.

7. ABOUT THE DATA

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



III. KEY MEASURE ANALYSIS

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





III. KEY MEASURE ANALYSIS

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

KPM #8	MINESITES INSPECTED ANNUALLYMeasure since:% of unique mine operators with active permitted sites inspected annually.2005
Goal	Recognize the important and essential contribution that the extraction of minerals makes to the economic well being of the state and the nation and to prevent unacceptable adverse impacts to environmental, scenic, recreational, social, archaeological and historic resources of the state that may result from mining operations.
Oregon Conte	Rural Economic Development and Sustainability of State Resources.
Data source	Department records.
Owner	Mined Land Regulation & Reclamation; contact Alyssa Boles, 541-967-2040, alyssa.boles@mlrr.oregongeology.com

1. OUR STRATEGY

Annually inspect 50% of the operators with active sites. As of June 30 2012 there were 560 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 2011-12 the Department performed 699 inspections of 397 sites. There were inspections of sites for *316* unique permit holding operators. The inspection trend has reversed direction and is now above the target.

4. HOW WE COMPARE

No comparable data for neighboring states available.

5. FACTORS AFFECTING RESULTS

MLRR program reclamationists inspected 316 individual sites in person or with

aerial imagery during 2011-12. Of the 563 in-person site inspections, 146 (26%) required repeat visitations including 6 sites that required between 4 and 9 visits each to ensure compliance assurance. Overall, 252 of 699 in-person inspections were performed at multiple-visit sites.

6. WHAT NEEDS TO BE DONE

Continue to emphasize in-person inspections including hiring seasonal staff to assist with inspection volume. Utilize GIS-based analysis of mined sites as is appropriate to streamline inspection activities. Continue to add functionality and clarity of information on the Department's website.

7. ABOUT THE DATA

A list of permit types, forms and related surface mining information is available at http://www.oregongeology.org/mlrr/surfacemining.htm .



III. KEY MEASURE ANALYSIS

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

KPM 8: MLRR Website Has Enhanced Information

KPM 8: Mine Sites Inspected 2011-12





III. KEY MEASURE ANALYSIS

% Tsunami Inundation Maps Completed

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

KPM #9	TSUNAMI INUNDATION MAP COMPLETIONMeasure sin% of coast provided with detailed tsunami inundation maps for local planning.2005	ice:		
Goal Reduce the loss of life and property by understanding and mitigating geologic hazards.				
Oregon Conte	OBM 67a: Community Preparedness For Natural Hazards.			
Data source	Department records.			
Owner	Coastal & Technical Services Sections; contact: Vicki McConnell, Director, 971-673-1550			

100%

80%

60%

40%

20%

0%

Actual

Target

26%

03

29%

37%

04

29%

41%

05

29%

44%

06

29%

63%

07

31%

67%

08

34%

37%

09

34%

40%

10

37%

45%

38%

65%

13%

55%

1. OUR STRATEGY

Provide new tsunami inundation hazard maps for at-risk communities. NOAA, OHSU and OEM are key partners. Coastal communities are invested through our Tsunami Outreach Oregon education campaign. These maps depict five different sizes of tsunamis to be generated by progressively greater amounts of rupture along the Cascadia Subduction Zone (CSZ). The five scenarios are referred to as the "Tsunami T-shirts" (S, M, L, XL, XXL) that span the range of anticipated inundation as has been documented by past events. Although it is uncertain what the magnitude of the next CSZ event will be, the probability of a Magnitude 8-9 earthquake occurring somewhere along the CSZ in the next 30 years is 10%.

2. ABOUT THE TARGETS

The entire Oregon Coast is at risk of varying degrees of inundation, including 44 communities and numerous State Parks (see KPM 2 for more description of the exposure to tsunami inundation hazard along the coast). Instead of focusing solely on the communities at risk, the revised target is to provide detailed tsunami

inundation maps for the five CSZ scenarios at a scale of 1:10,000-12,000 for the entire 363 miles of Oregon Coast by December 31, 2013.

3. HOW WE ARE DOING

The Bandon pilot project was completed and released during 2010-11, and follows on the completion and publication of the northern Oregon project at Cannon Beach in July 2009. In 2011-2012, we completed an additional 93 miles of coastline for a total of 139 or 38%. While still below target, this result is a marked improvement over 2010-2011, reflecting the fact that map production issues have been resolved. We expect to exceed the target in 2012-2013.

4. HOW WE COMPARE

NOAA considers the Department to be a national leader and model for other States in tsunami science, mapping, and outreach.

5. FACTORS AFFECTING RESULTS

Funding and technical factors have been resolved and mass production of new tsunami inundation maps is in progress. The Department aims to complete these maps for Clatsop, Lincoln, Lane, and Douglas counties during 2012-13.

6. WHAT NEEDS TO BE DONE



III. KEY MEASURE ANALYSIS

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

During 2010-2014 the Department shall complete new 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).

- ABOUT THE DATA Tsunami inundation maps were previously published as Interpretative Map Series (IMS) maps 2,3,11,12,13,21,23, GMS-99, and Special Papers 41and 43. The new generation of tsunami inundation maps are released as separate publications within the TIM (tsunami inundation map) series. All of these publications are available at http://www.naturenw.org/geo-tsunamis.htm.
- 8.

KPM 9: Tsunami Inundation and Risk Map



Completed Tsunami Inundation Maps (TIM) on the Oregon Coast



III. KEY MEASURE ANALYSIS

Percent rating service good or excellent

Accuracy

100.0%

95%

Helpfulness

100.0%

95%

Expertise

100.0%

95%

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

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 informationMeasure since 2005						
Goal	Improve collaboration and deliver the highest level of customer service possible.						
Oregon Cont	text Statewide Mission.						
Data source	Department survey results.						
Owner	All Sections; contact: Vicki McConnell, Director, 971-673-1550						

100%

80%

60%

40%

20%

0%

Overall

100.0%

95%

Timeliness

100.0%

95%

1. OUR STRATEGY

Invite customer input; respond positively to constructive criticism.

2. ABOUT THE TARGETS

95% customer satisfaction is the target for 2011-13.

3. HOW WE ARE DOING

Based on a very limited amount of data, we are meeting or exceeding our target.

4. HOW WE COMPARE

Agency results are similar in range and kind to other Oregon Natural Resource Agencies.

5. FACTORS AFFECTING RESULTS

Results of survey may be skewed by small sample.

6. 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.

■2012

2011-13 Target

7. ABOUT OUR CUSTOMER SERVICE SURVEY

We compiled data from Tsunami Outreach and Education Program participants, the Oregon Geologic Mapping Advisory Committee, and the Mt. Hood Risk Assessments Users Group.

20

Availability

of

Information

100.0%

95%

III. KEY MEASURE ANALYSIS

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 practicesMeasure since: 2007
Goal	Ensure discussion of governance best practices.
Oregon Cont	Statewide Mission .
Data source	Governing Board survey results.
Owner	Vicki McConnell, Director, 971-673-1550

8/20/2012

Oregon Department of Geology & Mineral Industries

Governing Board Best Practices Self-Assessment Score Card

Adopted May 5, 2007		L. Givens		S. Macnab C. Vars			L. Phipps		D. MacDougal	
Best Practices Criteria	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 Annual Performance Progress Report.	X		X		X		X		X	
5. The board is appropriately involved in review of agency's key communications.	Χ		X		Χ		Χ		X	
6. The board is appropriately involved in policy-making activities.	Χ		X		Χ		Χ		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.	Χ		X		Χ		Χ		X	
13. The board coordinates with others where responsibilities and interests overlap.	Χ		X		Χ		Χ		X	
14. The board members identify and attend appropriate training sessions.	X		X		X		Χ		X	
15. The board reviews its management practices to ensure best practices are utilized.	Χ		X		Χ		Χ		X	
Totals	15	0	15	0	15	0	15	0	15	0
Total Number			15	15	15	15	15	15	15	15
Percentage of Total	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%

Additional Notes

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 scorecard result at the August 20, 2012 Governing Board meeting.

1. 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."

2. 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.

3. HOW WE ARE DOING 16 counties rated at the 75% mark of prevention activities in place; as of 2012, Multhomah County has the highest hazard data rating at 68%.

4. 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 is 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 of 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).

KPM #12	Geologic Hazard PreparednessMeasure since:% of Oregon communities with geologic hazard data and prevention activities in place2010	
Goal	Reduce the loss of life and property by understanding and mitigating geologic hazards.	
Oregon Cont	ext OBM 67a: Community Preparedness For Natural Hazards.	
Data source	Department records.	
Owner	All Sections; contact: Vicki McConnell, Director, 971-673-1550	



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

5. FACTORS AFFECTING RESULTS

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.

6. 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.

7. ABOUT THE DATA

Map of the State depicting the status of natural hazard preparedness (data and prevention activities in place) for Oregon in 2012.



<< Map showing county-by-county geologic hazard preparedness. Hazard prevention index is based on the status of county hazard mitigation plans and the quality of hazard data used to develop those plans. Hazard Data index is based on the availability and quality of earthquake, Indslide, flooding, volcano and river and coastal erosion data.

III. KEY MEASURE ANALYSIS

OR Department of Geology and & Mineral Industries:

Geologic Survey & Services Program



Executive Summary

The Geologic Survey and Services Program (GS&S) creates, collects, compiles, interprets and publishes information about geologic hazards like coastal erosion, earthquakes, tsunamis, landslides, floods, and volcanic eruptions. The Program works with local, state, and federal agencies to reduce the risk posed by these hazards and to keep all Oregonians safe where they live, work, and play. It also educates Oregonians and visitors to Oregon to proactively reduce the loss of life and property.

Program Description

The GS&S Program consists of geologists, geomorphologists, engineers, and GIS analysts who provide Oregon geologic hazard and resource information for a wide range of users. The Program includes administrative staff who support both the GS&S and the Mineral Land Regulation & Reclamation (MLRR) Program.

GS&S projects combine field data with published data and aerial photos and lidar in order to model, interpret, and map the geography of geologic hazards and risk. Most of the geologic hazards common in Oregon, whether beach erosion in Neskowin or flooding and channel migration on the Sandy River, occur in predictable locations, making it possible to identify where future hazardous events will strike and estimate their severity. When we combine hazard mapping with information about the human population and existing or planned infrastructure, we can produce an accurate assessment of the risk to Oregon communities from future natural disasters. This information is essential for designing effective and affordable measures that reduce risk, and for education and outreach efforts that help to build a culture of preparedness and more resilient populations and communities.

While these geologic hazard analyses are the predominant activities of the Program, collecting basic geologic information about mineral and energy resources is also an important component. We prepare geologic maps that are the essential foundation for hazard studies, mineral resource evaluation, and management of water resources. Increasingly these maps are highly detailed digital databases that use new technologies to improve accuracy and reveal underground resources.

One critical component of all of these efforts is lidar data. Lidar is an airborne laser scanning technology that produces highly detailed and accurate three-dimensional maps of the land surface, vegetation, and structures. The precision of lidar is essential for producing reliable data for landslide inventory, tsunami inundation, and flood zone maps, as well as geologic mapping and coastal erosion studies. Since 2007, the GS&S Program has administered a cooperative lidar collection program (Oregon Lidar Consortium) that has covered over 90% of the state's population with the highest quality lidar data found anywhere in the country.

Hazard and risk information are only useful if made available to everyone in a clear, authoritative, and easily accessible form. One of the Program's most significant contributions to Oregon is the delivery of digital, paper, and web-based hazards information to a wide range of users, including unbiased scientific information available for policy decisions. These products range from maps of potential tsunami inundation for local communities; to digital databases of information for researchers in government agencies and for scientists within academic communities; and to web maps that clearly show the flood risk for individual homes and businesses. We also disseminate this vital information through hands-on public outreach programs for many of the geologic hazards, including an aggressive public education program for tsunami awareness that employs local outreach coordinators in coastal communities.

GS&S Program clients include state and federal agencies, city and county governments, school districts, watershed councils, utility companies, academia, the private sector, and the general public. Our clients obtain our products via the Nature of the Northwest (our information store which sold over 5,000 maps and reports in the last year), download or view our products via the internet (~640,000 web site views in the last year), or participate in education or outreach activities. These clients also request and pay for technical, professional services and products delivered under contract.

We take an entrepreneurial approach to identifying strategic initiatives and projects to pursue based on emerging mission-area issues facing Oregonians. Government agencies fund nearly all

of our projects on a contract basis. These partnerships are absolutely essential to the success and continued existence of the Program. Recent projects have included a multi-hazard vulnerability study at Mt. Hood for the U.S. Geological Survey (USGS), beach erosion monitoring for the Oregon Department of Transportation (ODOT) and the Oregon Department of Land Conservation and Development (DLCD), and landslide hazard mapping for the Cities of Oregon City, Astoria, and Silverton. We are also partners with the Federal Emergency Management Agency (FEMA) and are currently contracted to perform flood zone modeling and delineation for the Cities of Burns, Hines, and Seneca, and Coos, Clatsop, Tillamook, Lincoln, and Curry Counties. We have several nationally funded projects to investigate earthquake hazards in the state. We coordinate closely with Oregon Emergency Management (OEM) and DLCD to assist Oregonians in preparing for disasters and building resilient communities.

The Oregon Lidar Consortium (OLC) is funded largely, and since 2011 entirely, by contributions from partner agencies and organizations. We collaborate with multiple agencies to pool resources to enhance the overall value of the product for all of our partners. The OLC not only guarantees a high quality data product, but it saves thousands of dollars for our partners and millions of dollars for the State of Oregon.

The work we perform requires highly specialized and technically proficient staff. The major expenditure for the GS&S Program is staff salaries. We have offset much of the direct cost of personnel to the state General Fund by shifting to a project-oriented business plan. Presently the State invests only 18% into the operating costs of the agency and only 22% into the operating costs of the Program, thus the Program must generate the remaining revenue.

Program Justification and Link to 10-Year Outcome

The GS&S Program contributes directly and materially to the 10-year Safety Outcome: *that Oregonians will be safe where they work, live and play* and is an integral part of the Safety Outcome vision: *to fund and support emergency planning and preparedness and responses so that Oregon is ready to handle any natural or human-caused disasters.* Reducing the vulnerability to all natural hazards begins with an accurate inventory of the hazards, and reliable forecasting of the location, severity, and likely reoccurrence of the hazards.

Cost-efficient and effective risk reduction and community resiliency, whether by education, land use planning, or engineering, must start from a thorough understanding of hazard and risk. This Program addresses these needs with projects that define hazards, inventory assets, determine risk, and educate and inform. These efforts directly support two key 10-Year Outcomes for Strategy 3:

- Foster a culture of disaster preparedness and resiliency to actively support Oregon's diverse citizens.
- All schools and critical public safety response facilities meet seismic standards for safety.

Our program performs these key strategy outcomes on a daily basis. The information we create and provide to the citizens, local governments and communities, and other state and federal agencies allows these entities to work toward a common goal of preparedness and resiliency. We contribute as a lead agency in the development and update of the FEMA-approved State Hazard Mitigation Plan (SHMP) by providing expert information on the many geologic hazards that affect the state. The SHMP demonstrates Oregon's commitment to reduce risks posed by natural hazards in our state and provides a clear vision for hazard mitigation and disaster preparedness while outlining a set of goals and actions to achieve that vision. Without the Program, citizens, communities, and agencies will not have the scientific information that they need to make quality decisions that will inevitably save lives and make Oregon more prosperous through sound investments.

The GS&S Program also has strong links to the Healthy Environment Outcome vision and goals by providing crucial information for sustainable environment and communities.

Program Performance

One measure of the relevance of the GS&S Program is to track where our clients are investing their funds over time. The chart below shows where the funds have been invested, by geologic activity, since 2008. Note that *Lidar - all funds* includes expenditures paid to the OLC data acquisition vendor and that multi-hazards includes flood hazard investments.



DOGAMI Expenditures by Safety Activity 2008-10

The <u>GS&S Key Performance Measure 12</u> *Community Preparedness for Geologic Hazards* provides a measure of the program's performance that reflects the 10-Year Outcomes for Safety for Strategy 3: *Ensure the safety of people in their community*. This measure rolls up into Oregon Benchmark 67 (OBM 67a): *Community Preparedness for Natural Hazards*. This Benchmark is shared between Oregon Office of Emergency Management (OEM) and DOGAMI.



<< Map showing countyby-county geologic hazard preparedness. Hazard prevention index is based on the status of county hazard mitigation plans and the quality of hazard data used to develop those plans. Hazard Data index is based on the availability and quality of earthquake, landslide, flooding, volcano and river and coastal erosion data.

Enabling Legislation/Program Authorization

The Program is mandated under ORS Chapter 516, Department of Geology and Mineral Industries.

516.030 Duties of department. The State Department of Geology and Mineral Industries shall:

(3) Initiate, carry out or administer studies and programs that will, in cooperation with universities, federal, state and local government agencies, **reduce the loss of life and property by understanding and mitigating geologic hazards.** These studies and programs may include but need not be limited to:

(a) **Statewide hazard assessment**, including identification and mapping of geologic hazards, estimation of their potential consequences and likelihood of occurrence and monitoring and assessment of potentially hazardous geologic activity;

(b) Studies of paleoseismicity including but not limited to providing evidence of whether prehistoric subduction zone and crustal earthquakes have occurred in Oregon;

(c) Operation of a state seismic network in cooperation with universities or federal agencies or both through the strategic placement of instrumentation to monitor earthquake activity as it occurs; and

(d) Operation of a state geodetic network through the monitoring and periodic survey of markers in order to detect modern deformation of the earth's crust and the subsequent buildup of stress.

Funding Streams

In the present biennial budget, the state invests 18% in General Fund appropriations to the Program that is used for matching funds for federal projects when required and for administrative costs and overhead. The majority of the funding that supports the GS&S Program's geologic hazard safety projects comes from federal, state and local government agencies. The primary funding agencies are the USGS, FEMA, NOAA, ODOT, DLCD and Oregon counties. The funding streams are directly related to projects and will vary over time.

Significant Proposed Program Changes from 2011-13

Policy Option Package 632/101 – Lidar Data Acquisition Program

The GS&S Program uses lidar to build new-generation topographic maps as a base for geological maps, and especially for natural hazard assessment. During the past three biennia the agency has been successful in building several dozen funding partnerships totaling about \$12 million to acquire data covering approximately 25% of Oregon (about 24,000 sq. miles) to address the hazards of where 85% of the population of Oregon lives. The request for 2013-15 is to acquire lidar data for an <u>additional 6,000 sq. miles of priority areas</u>. The appropriation request assumes that DOGAMI will be successful in building \$3.66 million in Other Funds and Federal Funds partnerships.

Fiscal Impact -

Other Fund expenditure limitation of \$484,700 for 3 full time, limited duration positions (3.4 FTE) and for \$3,028,000 Services and Supplies including vendor payments for data acquisition. Sum Other Funds Limitation Request: \$3,512,700.

Policy Option Package 632/102 – Flooding Hazards Assessment Program

Purpose – Systematically inventory, map exposure, and perform risk analyses of:

- river flooding and coastal winter storm flooding, for FEMA in collaboration with DLCD and Oregon Emergency Management;
- river channel migration during flood events, for FEMA, USGS and local communities;
- coastal winter storm flood-induced hot spot erosion, for DLCD, OPRD, and NOAA;
- western Oregon winter-storm-induced rapidly moving landslides, for USGS, EPA, western Oregon counties and cities, OEM,, and in collaboration with ODOT and ODF;
- tsunami inundation flooding, for NOAA and coastal communities;

Fiscal Impact -

Other Fund and Federal Fund expenditure limitation of \$1,462,765 for 11 full time, limited duration positions (10.6 FTE) and for \$36,500 Services and Supplies. Sum Other Funds and Federal Funds Limitation Request: \$1,499,265.

OR Department of Geology & Mineral Industries:

Mineral Land Regulation and Reclamation Program



Executive Summary

The Mineral Land Regulation and Reclamation Program (MLRR) administers the Mined Land Regulation Act (1972) for the state and regulates mineral, aggregate, oil and gas, and geothermal exploration, extraction, and development. The goals of the permitting program are to eliminate or minimize to the greatest extent possible the environmental impacts of mineral development onsite and off-site during the life of the project using conditioned operating permits and guarantee through security bonding and reclamation plans that the disturbed area will be reclaimed to an approved secondary beneficial use at the end of mining.

Program Description

MLRR is a field-oriented regulatory program, working with the industry and the public to minimize impacts of natural resource development (mining, oil and gas, and geothermal) and to

optimize opportunities for reclamation. The Program is presently staffed by 6.5 technical positions, 3 administrative positions, and 1 management position.

The program is statewide (except tribal lands) and fee-based, with authority to regulate:

- All upland and underground mining these are primarily sand, gravel and aggregate with a few industrial mineral mines. This is the bulk of the Program's regulated sites with approximately 890 sites across the state. We are in the early process of permitting one underground gold mine in Malheur County. This will be a multi-year and multi-agency process facilitated though MLRR.
- The drilling of wells for oil or gas most activity is in Columbia County in the Mist Gas Field but there are exploratory wells being drilled across the state.
- The drilling of geothermal wells geothermal exploration is occurring in central and eastern Oregon with one site expected to become a commercial energy producer by late summer 2012 (Neal Hot Springs, Malheur County).

In addition, DOGAMI has an agreement with the Oregon Department of Environmental Quality to implement the federal Clean Water Act General Stormwater Permit and the State Water Pollution Control Facility Permit at aggregate mine sites.

Our field and aerial photo inspection activities are critical to maintaining site compliance and maintaining a positive working relationship with the regulated community and to communicate our compliance activities to the public. We coordinate and condition operating permits based on input from other natural resource permitting and advisory programs. We utilize two important non-regulatory tools as well: the Oregon Mining Best Management Practices Manual and the annual Reclamation Awards Program. The first provides operators with a blueprint of how to be compliant with Oregon mining statutes and DOGAMI administrative rules. The latter provides an incentive to excel at operation and reclamation through recognition by the state and industry.

We use a field-oriented compliance method in order to identify and mitigate potential violations and environmental impacts before we have to resort to costly enforcement actions and mine site downtimes. This means that some sites will need multiple visits from the technical staff and likely involvement of management.

The result of this hands-on work is increased staff time and expenditures that frequently cannot be directly reimbursed and this affects our ability to inspect as many operations as possible on an annual basis (one of our performance metrics). The Program is fee based thus we have an absolute limit on expenditures and it is difficult to increase fees without industry support.

Program Justification and Link to 10-Year Outcome

Mined materials form the basis of most human activity from construction materials for livable communities to lithium batteries for high tech economic sector to energy for all our needs. The objective of the MLRR Program is to prudently regulate mineral, oil and gas, and geothermal energy development to protect the environment and people of Oregon. This objective directly links to the Healthy Environment Outcome of *managing Oregon's air, water, land and wildlife*

resources to support a healthy environment that sustains Oregon communities. Specifically, reducing the impact of mining activities on land, groundwater and surface water, and air will:

- improve air and water quality by reducing the risk of exposure to contaminated lands and air (10 Year Outcome for Strategy 1),
- protect key watersheds and fish and wildlife species by strategies to incentivize the industries to go beyond the state regulatory requirements for reclamation or restoration of mined sites (10 Year Outcome for Strategy 2),
- help build communities for a growing population including incentivizing through regulation geothermal exploration and development to encourage community-level renewable energy production (10 Year Outcome for Strategy 4),
- and improve the effectiveness and efficiency of natural resource management through outcome strategies such as: identify and implement where cross-agency regulatory streamlining can be implemented through intergovernmental agreements or other means and link the MLRR Best Management Plan to other resource management plans (10 Year Outcomes for Strategy 5).

MLRR Program also touches on Economy and Jobs Outcome primarily in Strategy 2.2, *Create a Fertile Environment in Oregon for all Businesses*. We want a proactive regulatory program that protects the environment but does not impede economic growth and jobs either directly or indirectly.



Program Performance

MLRR program reclamationists inspected

316 individual sites in person or with aerial imagery during 2011-12. Of the 563 in-person site inspections, 146 (26%) required repeat visitations including 6 sites that required between 4 and 9 visits each to ensure compliance assurance. Overall, 252 of 699 in-person inspections were performed at multiple-visit sites. We reversed the decreasing trend in number of inspections per year by investing in GIS Analyst staff, Permit Coordinator, and temporary field inspection staff.

Enabling Legislation/Program Authorization

This is a State mandated Program under ORS Chapter 517, Mining and Mining Claims; ORS Chapter 520, Conservation of Oil and Gas; and ORS Chapter 522, Geothermal Resources.

Funding Streams

The Program is 100% fee based Other Funds. Fees are levied on the regulated industry and require statutory amendments to change.

Significant Proposed Program Changes from 2011-13

There are no significant changes to the program proposed to date.



Department of Geology and Mineral Industries Administrative Office 800 NE Oregon St., #28, Suite 965 Portland, OR 97232-2162 (971) 673-1555 Fax: (971) 673-1562 www.oregongeology.org

RE: DOGAMI Reclassifications and New Hires for 2011 – 2013 Biennium

Position #0103001 reclassed from UA CO104 to UA C0118 per Pkg. 810 approved by LFO on 4/15/11									
								NEW	
OLD	O OLD OLD BASE OLD NEW NEW								NEW
CLASS	OLD CLASS DS	RNG	RATE	STP	RNG	CLASS	NEW CLASS DS	RATE	STP
C0104	OFFICE SPECIALIST 2	15	2814.00	08	17	C0118	EXECUTIVE SUPPORT SPECIALIST 1	3087.00	08

Permanent positions					
	Classification	Salary	Step at	At/Above/	
Classification Title	Number	Range	hire	Below step 2	Justification attached
Information Systems Specialist 4	C1484	25	8	Above	Yes
Limited Duration for 2011-13 biennium					
	Classification	Salary	Step at	At/Above/Bel	
Classification Title	Number	Range	hire	ow step 2	Justification attached
Fiscal Analyst 1	C1243	23	2	At	Not Applicable
Public Affairs Specialist 1	C0864	25	7	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 2	C1482	21	4	Above	Yes
Information Systems Specialist 3	C1483	24	5	Above	Yes
Information Systems Specialist 3	C1483	24	4	Above	Yes
Information Systems Specialist 3	C1483	24	9	Above	Yes
Information Systmes Specialist 3	C1483	24	3	Above	Yes
Information Systems Specialist 3	C1483	24	6	Above	Yes
Geologist 2	C3521	26	4	Above	Yes
Geologist 2	C3521	26	4	Above	Yes

#1 Ranking Taylore Womble

BS in Geography/GIS, Arizona, 2009

Taylore has worked for us since December 2010 on FEMA flood and NOAA tsunami mapping projects and other assignments including the Highway 30 Landslide Project. She also interned with the UA Office of Economic Development unit for a year and a half. Taylore performs her work at a much higher skill level than her years of experience would indicate, and reveals an ability for high quality cartography that we aim to further develop. She impressed me with her ability to answer interview questions in a direct, concise and correct fashion. I hope we have found another "Rachel Lyles-type" talent at the commencement of a career.

We have employed Taylore for a significant portion of the past 1.33 years. We make this commitment based upon our direct knowledge of her work ethic, GIS and cartographic skills, ability to get the job done on time and suitability for working in a team setting.

I recommend that we offer Taylore employment at the ISS 2 rate step 4 salary amount, which is \$3,167 per month or \$38,004 per year. Her PD100 is attached.

Respectfully,

Don Lewis Assistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager

#1 Ranking Dan Coe

BS in Geography & Russian Language, PSU, 2010 AA in Visual Communications, Art Institute of Pittsburg, 1998 Two years working for us creating the myriad of maps, images and data that we know him well for. Plus, significant stints as a Cartographer/GIS Analyst for center for Spatial Analysis and Research, Maul Foster and Alongi, The Wild Salmon Center, and the Portland Water Bureau. Dan did by far the best job with his presentation amongst this group. We are fortunate that others, who are circling, have not snapped him up. Dan is a special class of cartographer.

Although Dan has been our employee and we did not require an external reference check, we sought one anyway. Here is the feedback I received from David Banis, at Portland State:

I have known Dan for 5 years or so, and I would highly recommend him for this job at DOGAMI. While he was a student at Portland State (and after his graduation), Dan and I worked together on several tree maps, one for Couch Park, published by Portland Parks and Recreation, and another for Lone Fir Cemetery. Both of these projects were worked on a volunteer basis, simply because Dan really enjoys cartography. Unlike most of my volunteer mapmakers, Dan completed the work on both projects in a timely fashion and it was excellent work at that. He is a highly skilled and creative cartographer, and capable of working and thinking on his own as well as taking direction as needed. Dan was never a student of mine in the classroom so I cannot speak of his GIS analysis skills, but he certainly has a high level of GIS knowledge and skills.

Dan and I (along with several other former students) are currently collaborating on a project to create a cultural atlas of Portland. I wanted to have Dan work on this project because he has 1) excellent cartographic skills, 2) the ability to think outside of the learned cartographic norms, 3) a strong work ethic, 4) the wherewithal to produce the expected output when needed, even when the work is on a strictly volunteer basis, and 5) the people skills needed to not just work well with others but to enjoy the project teamwork.

David Banis Center for Spatial Analysis and Research Geography Department Portland State University

I recommend that we offer Dan the rate step 3, which is \$3,464 per month or \$41,568 per year. I do not recommend that we exceed this rate of pay. This rate step matches well with his only having a Bachelor's degree in Geography, without a full minor in GIS, and about 3-4 years of related experience. (Ironically, I will be recommending higher rates of pay for some of the other candidates since they have greater education and experience.) His PD100 is attached.

Respectfully,

Don LewisAssistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager





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dustries tive Office Suite 965 97232-2162) 673-1555) 673-1562 eology.org

April 3, 2012

Vicki McConnell Director and State Geologist

Re: ISS 3 GIS Specialist Results & Recommendation to Hire: Sean Pickner

Rachel Lyles and I have completed our evaluations of the 12 finalists that we interviewed for the GIS Specialists positions. As you recall we stated that we had two vacancies to fill, which we do, and have since gained three additional vacant LD positions for a total of 5 vacancies.

We anticipate immediately assigning these people to the backlog of work we have on the NOAA tsunami mapping and FEMA flood mapping projects, as well as the stack of cartographic jobs that have awaited this outcome.

This letter is our recommendation for you to offer employment to *Sean Pickner* and place him in the new LD <u>3111323 position</u>.

Sean Pickner

Grad Certificate in GIS, PSU, 2010 BS Geography/Land Use, SOU, 2005

In addition to the year-plus with us over the past 2 years, Sean has an impressive array of employers since 2005 including KLS Surveying in Vernonia, Mobiletreks, SWCA Consultants (for USFWS), Watershed Sciences, Sky Research (overlapped with John English), and the City of Medford. Sean's naturally modest manner somehow masks his strong analytical skills and quite

We have employed Sean for a significant portion of the past 2 years. We make this commitment based upon our direct knowledge of his work ethic, GIS and cartographic skills, ability to get the job done on time and suitability for working in a team setting.

I recommend that you offer employment to Sean at step 5 of the ISS 3 payscale: \$3,795 per month (\$45,540 per year). I have attached his PD100 to the hard copy of this letter.

Respectfully, **Don Lewis**

Assistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager

intense love of all things data and where they come from.





Department of Geology and Mineral Industries Administrative Office 800 NE Oregon St., #28, Suite 965 Portland, OR 97232-2162 (971) 673-1555 Fax: (971) 673-1562 www.oregongeology.org

Date: April 16, 2012

To: Vicki Jorgensen, DAS HRSD

From: Vicki S. McConnell, Director

Subject: Justification for Authorizing Step 9 Salary offer for ISS-3 (GIS Specialist) position

Mr. Warren Roe has been recommended by the interview team the top candidate for position 3061001, ISS3/GIS Specialist. Upon offering Mr. Roe the position he indicated that he would accept if we could approximate his present salary. Upon review of his qualifications, the evaluation of the interview team, and discussion with Mr. Roe I authorize offering the addition salary funds.

- Mr. Roe has a degree in geology.
- Mr. Roe has a very strong analytical and overall relevant training for the specific project he will be assigned to thus reducing training time significantly.

Cc:

Don Lewis, Assistant Director Mr. Roe's file, upon hire

Attachments:

Lewis Recommendation Memo Roe Recent Pay Stub - Shows #4438 for a Zweek period Vichi Jorgensen HR



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www.oregongeology.org

Date: May 11, 2012

To: Vicki Jorgensen, DAS HRSD

John A. Kitzhaber, MD, Governor

From: Vicki S. McConnell, Director

Subject: Justification for Authorizing Step 6 Salary offer for ISS-3 (GIS Specialist) position

Mr. Matt Williams has been recommended by the interview team as the top candidate for position 3111317, ISS3/GIS Specialist. Upon review of his qualifications, the evaluation of the interview team, and discussion with Mr. Williams I authorize offering the addition salary funds.

- Mr. Williams has a Certified Floodplain Manager certification.
- Mr. Williams come to us fully trained in GIS work for FEMA National Flood Insurance Program ModMap and RiskMap programs, which will be his assigned work with DOGAMI.

Cc:

Rachel Lyles Smith, Program Operations Manager Mr. Williams' file, upon hire

Attachments:

Smith Recommendation Memo Williams Recent Pay Stub

John A. Kitzhaber, MD, Governor

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April 5, 2012

Vicki McConnell Director and State Geologist

Re: ISS 2 GIS Technician Results & Recommendation to Hire: Fletcher O'Brien

Rachel Lyles and I determined that 10 applicants were suitable for advancing to the interview stage. During the scheduling of interviews 2 candidates withdrew. As you recall we stated that we had one vacancy to fill, which we do, and have since gained two additional vacant LD positions for a total of 3 vacancies. We anticipate immediately assigning these people to the backlog of work we have on the NOAA tsunami mapping and FEMA flood mapping projects, as well as the stack of cartographic jobs that have awaited this outcome.

This note is a recommendation to hire *FletcherO'Brien* as an ISS 2 "GIS Technician" and place him in new LD position **3111318.**

Fletcher O"Brien

BS in Geography and Planning, Cal State University Chico, 2010

Fletcher walked in to the interview yesterday as by far the best prepared, most calm, serenely collected and comfortable, and perhaps most naturally capable candidate amongst any of the recent ISS 2 or 3 candidates. He has spent the past 1.5 years working at the Sequoia and Kings Canyon National Parks as a Cartographic Technician, first as an unpaid intern and currently as a temporary employee. His references from his current supervisors are as we anticipated after the interview:

Paul Hardwick, GIS Coordinator, SKCNP

Fletcher has a tremendous work ethic. He volunteered here at the National Parks for a year before becoming a paid employee last November. His purpose for volunteering was to get real life experience in the field of GIS that would go towards the year of experience required for most GIS positions. During that volunteer time he tackled large projects and worked 40hr weeks.

While a volunteer he produced two projects that really show his cartographic skills. The first was the development of the Esri Community Base Map for the parks. In producing this base map he really had to put thought into how label placement and dynamic labeling affected the look and use of the map. He also figured out ways to add and depict features like glaciers and trails with multiple names that are not common on the Community Base Map. The other project was a map atlas that depicted the 7.5 minute quadrangles for the parks in a 8.5x11 format book. He used the data driven pages scripts provided by Esri to produce this book.

Our biggest "problem" with Fletcher was continually finding work for him. He would finish projects faster than we were able to put new ones together. We got to the point where we would just outline a project or a problem we did not have time to resolve immediately and tell him to go research it and figure out the solution. He excelled at this and even taught us a few new tricks. If we had the funding for a permanent position I would want to move Fletcher Into that position.

Peter Lindstrom, GIS Specialist, SKCNP

I'm happy to give you some insight into Fletcher. His GIS and cartographic skills were really top-notch - I could outline what I wanted done in a relatively general way and he could work out the details himself. He almost always finished things well before I thought he would, and the few exceptions were due to unforeseen things out of his control. Regarding his work ethic, he continued to work 40-hour weeks on a volunteer basis after some of the project funding for him ran out - bottom line is that he's been really eager to build up his experience and was willing to put in his time.

Overall, he was a great addition to our team, freeing up a lot of our time to work on other things. I'd definitely hire him again if I got the chance. He's really sharp and did great things for us at Sequoia.

I recommend that we offer Fletcher employment at the ISS 2 rate step 4 salary amount, which is \$3,167 per month or \$38,004 per year. His PD100 is attached. + MOUNG Expenses. $(up to 5000.^{\circ\circ})$

Respectfully

Don LewisAssistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager
Oregon Department of Geology & Mineral Industries INTRA-OFFICE CORRESPONDENCE

To: Vicki McConnell

From: Don Lewis

Date: September 30, 2011

Re: LD Landslide Geologist 2's – Recommendations to Hire: **Kate Mickelson** and **Serin Duplantis**; Possible Third Position and Identified Candidate - More to Follow

I recommend that DOGAMI immediately extend job offers to the top two candidates:

- 1. Kate Mickelson to fill vacant LD position 3111306
- 2. Serin Duplantis to fill vacant position 3064002; I note that this position has an LAB-adopted FTE of 0.71 or 17 months; we will deal with this matter separately, as is necessary.

I also recommend that we offer each the step 4 rate of \$3,904 per month, or \$46,848 per year.

Don Lewis Assistant Director, DOGAMI





Department of Geology & Mineral Industries Administrative Office 800 NE Oregon Street #28, Suite 965 Portland, OR 97232 PHONE 971-673-1555 FAX 971-673-1562

Date: October 4, 2011

To: Vicki Jorgensen, DAS HRSD

From: Vicki S. McConnell, Director

Subject: Justification for Authorizing Step 8 Salary offer for ISS-4 (GIS Analyst) position

Mr. Ed Buchner has been recommended by the interview team as the top candidate for position 3821003, ISS4/GIS Analyst. Upon offering Mr. Buchner the position he indicated that he would accept if we could approximate his present salary. Upon review of his qualifications, the evaluation of the interview team, and discussion with Mr. Buchner I authorize offering the addition salary funds.

• Mr. Buchner has background in lidar data processing, something we assumed we would have to train the successful candidate.

Cc:

Gary Lynch, Assistant Director Mr. Buchner's file, upon hire

Attachments:

Interview scoring Lynch Recommendation Memo



Department of Geology and Mineral Industries Administrative Office 800 NE Oregon St., #28, Suite 965 Portland, OR 97232-2162 (971) 673-1555 Fax: (971) 673-1562 www.oregongeology.org

April 5, 2012

Vicki McConnell Director and State Geologist

Re: ISS 2 GIS Technician Results & Recommendation to Hire: Lyzi Diamond

Rachel Lyles and I determined that 10 applicants were suitable for advancing to the interview stage. During the scheduling of interviews 2 candidates withdrew. As you recall we stated that we had one vacancy to fill, which we do, and have since gained two additional vacant LD positions for a total of 3 vacancies. We anticipate immediately assigning these people to the backlog of work we have on the NOAA tsunami mapping and FEMA flood mapping projects, as well as the stack of cartographic jobs that have awaited this outcome.

This note is a recommendation to hire *Lyzi Diamond* as an ISS 2 "GIS Technician" and place her in new LD position **3111322.**

Lyzi Diamond

BA in Geography/GIS/Planning, Public Policy and Management, Oregon, 2011 Lyzi Diamond may be running our GIS unit in a half dozen years, an agency in 12 and be elected governor by 2030. We need to hire her so she can get on with such, or similar, path to great success. Please read her PD100, and then realize that she left off just as much or more relating to a wide variety of student group activities and responsibilities, all of which speaks to her unnaturally well-developed leadership and communication capabilities.

She received strong initial references from Ken Kato, Associate Director of the UO InfoGraphics Lab (where John English also hails from), and this is a written reference from Blake Andrew, the GIS Specialist at the same facility:

I'm glad to say a few words about Lyzi! I've worked here at the UO InfoGraphics Lab for more than four years now. I've hired many students in that time. I can say with the utmost confidence that Lyzi was my strongest student. I hated letting her go when she graduated!

Lyzi learned the job incredibly quickly. Within no time at all I was handing off complicated tasks to her with great confidence that they would be completed on time and accurate to our high standards. She soon became my most trusted employee – someone I could give any job to, knowing that she would take care of it in a timely manner. That piece of mind is invaluable to me.

I also had great confidence in her cartographic skills and GIS abilities. We're a teaching lab in a addition to a research lab. So I spend a great deal of my time showing students proper cartographic techniques and teaching them new ways to solve spatial problems with GIS. Lyzi was always open to input and absorbed new techniques well. She showed me this regularly with stronger output as she worked more in the lab. We turned to her many times to tackle the toughest GIS research in addition to coming up with cartographic solutions for otherwise tough GIS visual output.

Lyzi is a great communicator. She always checked in with me on her own, knowing that it was an important facet of our work here in the lab. She also had no issues giving her two cents on cartographic design or more complicated GIS tasks. But she did it respectfully and constructively in our team environment. Often, when teamed up with other students, Lyzi was quick to take the reins – which showed me her strong leadership abilities and passion for her work.

One of the skills that stands out to me the most when I think of Lyzi is her incredible attention to detail. I handed her many projects that didn't necessarily require her to dig deep based on the initial scope, but she did on her own and every project benefitted from her extra attention. And she was still able to get the projects done on time.

In short, Lyzi is an incredible employee and would be a huge asset to your group. She is one student I wish I could have hired on as a regular employee because she left a large void when she graduated.

I recommend that we offer Lyzi employment at the ISS 2 rate step 4 salary amount, which is \$3,167 per month or \$38,004 per year. Her PD100 is attached.

Respectfully,

Don LewisAssistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager







and Mineral Industries

Administrative Office NE Oregon St., #28, Suite 965 Portland, OR 97232-2162 (971) 673-1555 Fax: (971) 673-1562 www.oregongeology.org

April 3, 2012

Vicki McConnell Director and State Geologist

Re: ISS 3 GIS Specialist Results & Recommendation to Hire: Lowell Anthony

Rachel Lyles and I have completed our evaluations of the 12 finalists that we interviewed for the GIS Specialists positions. As you recall we stated that we had two vacancies to fill, which we do, and have since gained three additional vacant LD positions for a total of 5 vacancies.

This letter is our recommendation for you to offer employment to *Lowell Anthony* and place him in the new LD **3111324 position**.

Lowell Anthony

BS Geography/GIS and geology, PSU, 2008

In addition to the half year-plus with us over the past year, Lowell has worked as a GIS intern and project lead for Mercy Corps, PSU/City of Portland, and Engineering Support Unit.

We make this commitment based upon our direct knowledge of his work ethic, GIS and cartographic skills, ability to get the job done on time and suitability for working in a team setting, plus on this reference from Margrete Merrick at PSU:

Lowell was a student in my Empowering Communities with Asset Mapping and GIS Senior Capstone course some years ago. He also worked with a colleague of my, Dick Lycan, on the recently published Lakes Atlas of Oregon. Lowell did outstanding work in my course. He is intelligent, conscientious, and hard-working. He takes direction well and asks questions when he needs clarification. The success of my courses depends on the students to be self-directed, good problem-solvers, and to work in teams. Lowell excelled in all of these. I highly recommend Lowell.

I recommend that you offer employment to Lowell at step 3 of the ISS 3 payscale: \$3,464 per month (\$41,568 per year). I have attached his PD100 to th hard copy of this letter.

Respectfully,

Don Lewis Assistant Director, Geologic Survey & Services cc: Rachel Lyles, Project Operations Manager

Vicki McConnell

From: Sent: To: Subject: Vicki McConnell Monday, June 04, 2012 8:30 AM 'JORGENSEN Vicki * HRSD HRMC' PAS 1 job offer

Vicki J.,

Please draft an offer letter and LD agreement for Mr. Peter Ovington for the PAS 1 position # 3111313 Limited Duration. The starting salary will be at Step 7, \$4352/month and the starting date is tomorrow, June 5. I hope you are planning to be up here so you can orient him right away.

I will have the salary memo for you then.

Carol will send you the hire memo and other materials presently, I am off to a meeting.

Vicki

Vicki S. McConnell, PhD, RG

Oregon State Geologist and Director OR Dept. of Geology & Mineral Industries 800 NE Oregon St., Suite 965 Portland, OR 97232 971.673.1550 (Office) 503.709.8529 (Cell) www.oregongeology.org

Peter provided a paychoch stub indicating a salary of #4960/month. Nichi Jorgenson HR manager