

December 2015 Storm Event

Oceanside Community
Club Potluck
April 4, 2016





Issues from the Storm

- Road Closures
- Landslides
- Culvert & Drainage/Ditching
- Community Isolation
- Damage Assessment
- Staffing concerns
- Cost

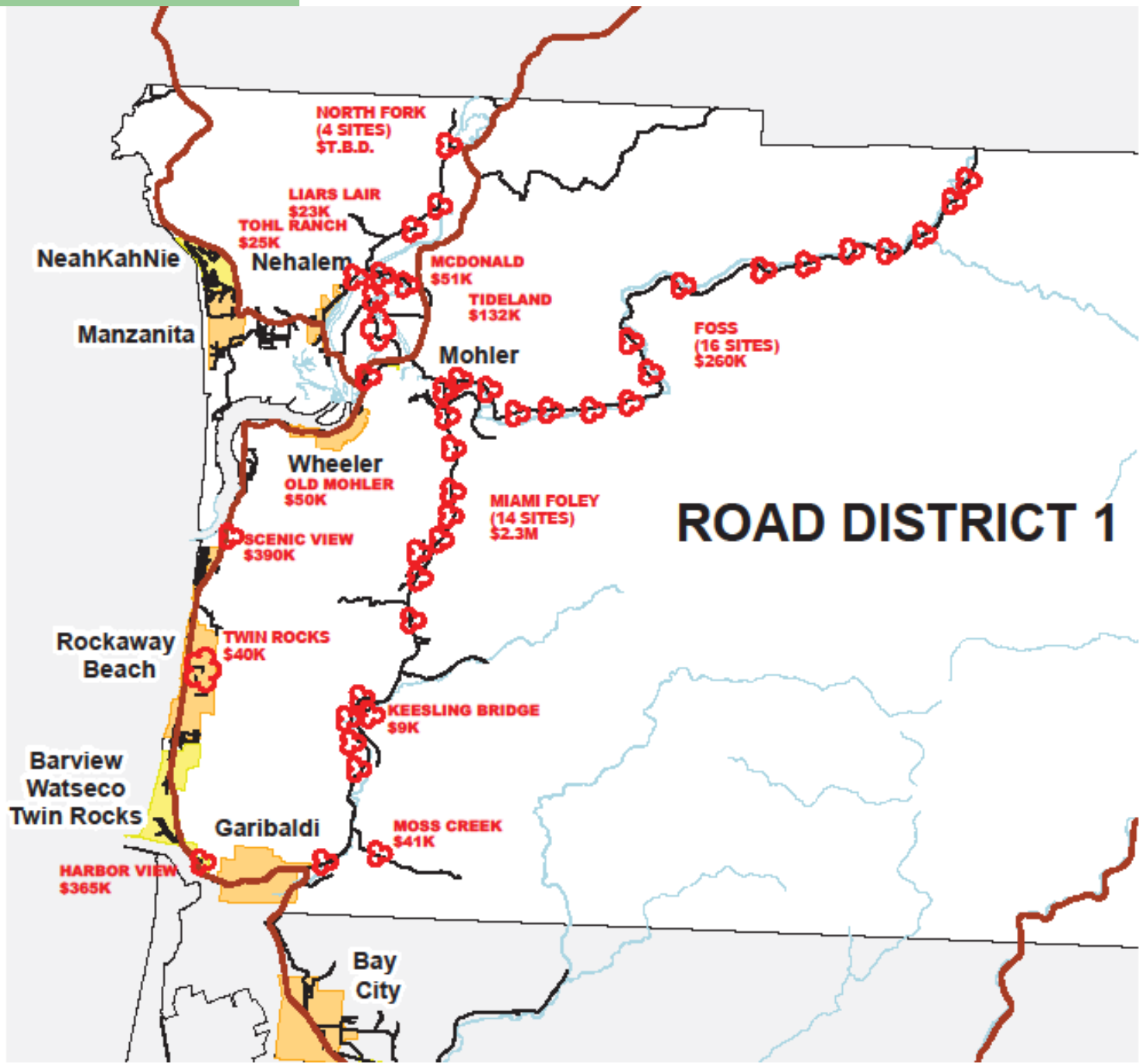


Public Safety is our highest priority

- ✓ Storm response
- ✓ Response to landslides and 911 callouts
- ✓ Emergency preparedness
- ✓ Egress design to prevent community isolation



Wilson River Loop road (N-S) High Water
December 2015





Miami Foley Road

Road Closures





Miami Foley Road

Landslide





Miami Foley Road

Culvert & Drainage/Ditching





Keesling Bridge (Miami)





Lommen Bridge (Miami)





Frank Crane Road (Pvt)

Culvert & Drainage/Ditching





Foss Road

Culvert & Drainage/Ditching



MP 5.5



Foss Road

Culvert & Drainage/Ditching





Harbor View Drive

Culvert & Drainage/Ditching





Scenic View Court (Pvt)

Culvert & Drainage/Ditching





South Island Street

Culvert & Drainage/Ditching



AM 9:49 DEC/14/2015



Barview
Watseco
Twin Rocks

Garibaldi

Bay
City

PIKE
\$15K

KILCHIS
\$14K

ALDERBROOK
\$46K

Idaville

Siskeyville

BAYOCEAN
\$578K

BAYOCEAN
\$30K

Oceanside

SOLLIE SMITH
\$1.2M

Tillamook

HAPPY CAMP
\$35K

Netarts

WHISKEY CREEK
\$320K

ROAD DISTRICT 2



Pike Road

Culvert & Drainage/Ditching





Kilchis River Road

Culvert & Drainage/Ditching





Bayocean Road

Culvert & Temporary Bridge





Bayocean Road Community Toasts Public Works





Whiskey Creek Road

Landslide





Portland Avenue, Oceanside





Wilson River Loop Road (N-S)

Road Closures

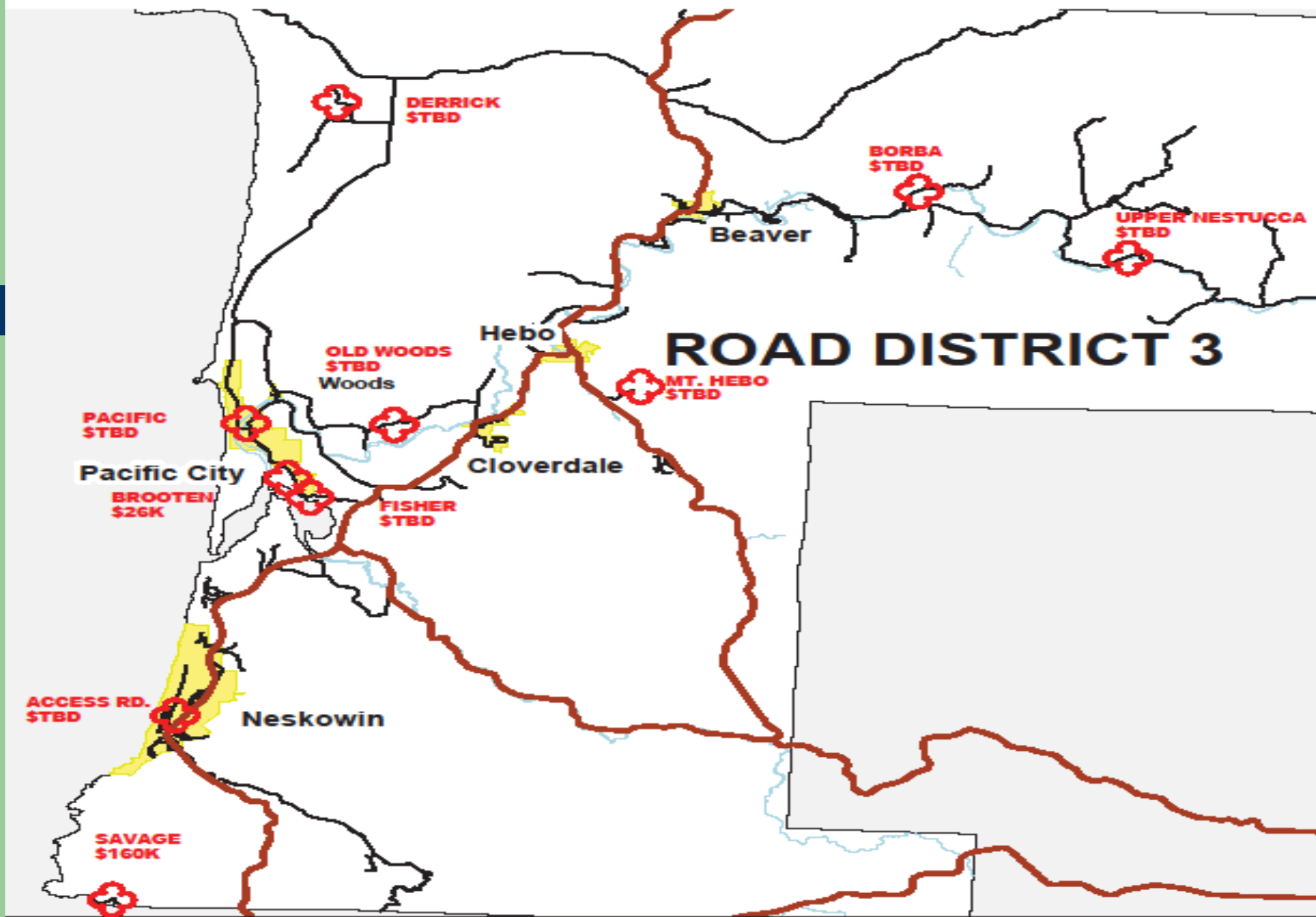




Sollie Smith Road

Culvert Blocked & Temporary Bridge to Avoid Community Isolation







Savage Road

Landslide





Borba Road

Landslide





Borba Road

Landslide





East Creek Road





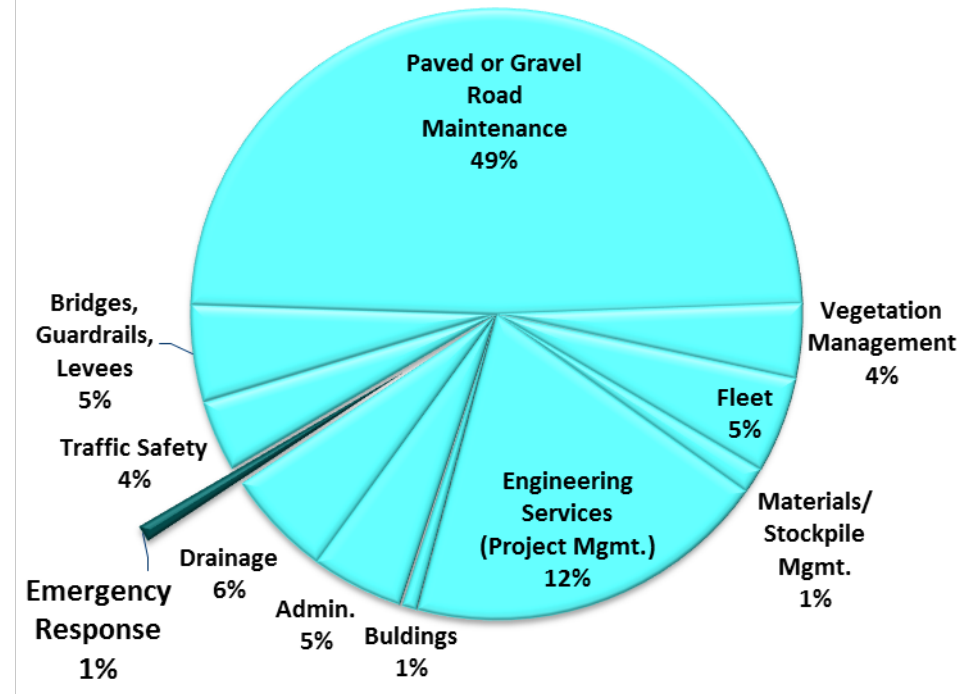
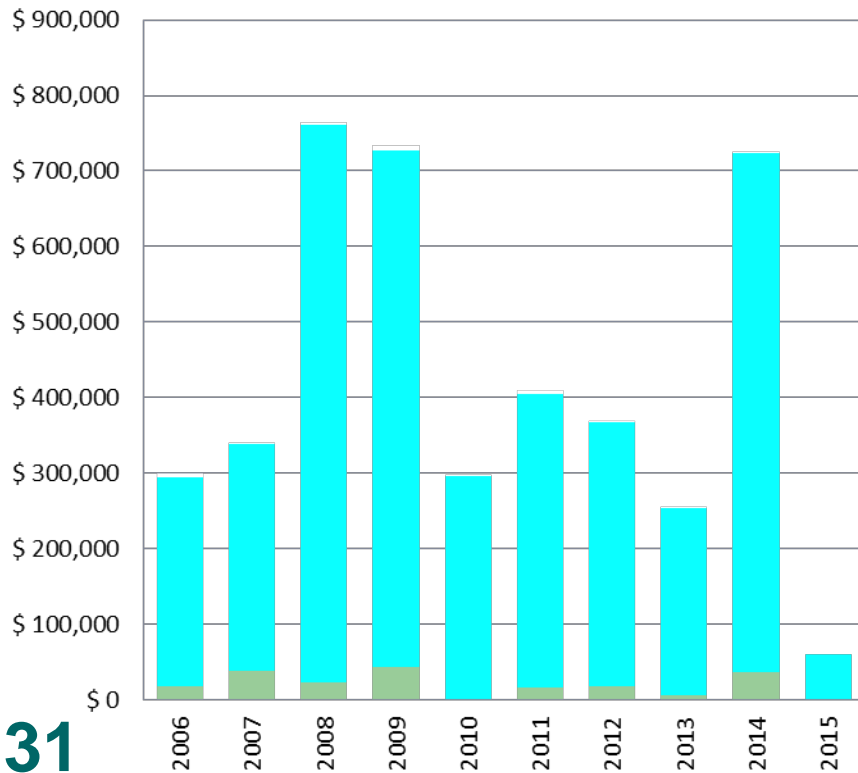
December 2015 Storm Costs - \$8M

Preliminary Cost Estimates

Site #	Brief Description of Damage or Cost	Location	Comments (Impacts)	On-system or off-system	Emergency Cost	Permanent Cost	Estimated Cost
1	Culvert and 15' of roadway damage. 12/12/15:	3460 Bayocean Road	Community of Cape	On	\$101,000	\$477,000	\$578,000.00
2	Culvert blocked and east bound lane destroyed,	8400 Sollie Smith Road	Potentially isolated	Off	\$279,000	\$939,000	\$1,218,000.00
3	Culvert destroyed, 35' of roadway destroyed.	14705 Harbor View Drive	Seven homes	Off	\$157,000	\$208,000	\$365,000.00
4	Culvert destroyed and 30' of embankment.	29000 Miami-Foley Road (MP	Main North-South	On	\$55,000	\$1,758,000	\$1,813,000.00
5	Culvert destroyed along with 40' embankment and	Miami Forest Road	At least one home	Off	\$0	\$1,825,000	\$1,825,000.00
6	Drift lodged on upstream side of bridge. County	New Miami River Road,	Potential to	Off	\$9,000	\$0	\$9,000.00
7	Landslide removal. County crew removed 800 Cuyd	Miami-Foley Road MP 8	Main North-South	On	\$32,000	\$428,000	\$460,000.00
8	Landslide removal, Contractor (Billstine) to remove,	Whiskey Creek Road MP 4.1	Whiskey Creek road	On	\$309,000	\$0	\$309,000.00
9	Damaged Culverts, 95 CUYD's of material	Kilchis River Road	no impacts at this	On	\$0	\$14,000	\$14,000.00
10	Landslide removal, approximately 100 cuyd's.	Whiskey Creek Road MP 5	road narrowed to	On	\$8,000	\$0	\$8,000.00
11	Landslide destroyed two twin 36" culverts and	Scenic View Court	Isolating one	Off	\$168,000	\$220,000	\$388,000.00
12	Multiple Landslides and Debris Flows. County	Foss Road MP 0 to 16	one lane restriction	On	\$261,000	\$0	\$261,000.00
13	Damaged 7' diameter Culvert with outfall section	Miami-Foly Road MP 7.5	Could close Main	On	\$0	\$53,000	\$53,000.00
14	Landslide on downhill side of road, potential to	Savage Road	serves 42	Off	\$0	\$160,000	\$160,000.00
15	36" pipe, road undermined and creek bypassing	Pike Road MP 0.1	7-10 residences	Off	\$0	\$15,000	\$15,000.00
16	Landslide, 600 Cuyd's. County Forces cleaning up.	Bayocean, MP 2	closed for a short	On	\$30,000	\$0	\$30,000.00
17	2 landslide boat launch. 12/17/15 occurrence. No	Brooten Road, Pacific City	Unknown at this	On	\$26,000	\$0	\$26,000.00
18	System wide drainage damage, culvert	washington street/island road.	Access does not	Off	\$40,000	\$0	\$40,000.00
19	Moss Creek Road,culvert blocked, pavement and	Moss Creek Road MP 1.3	Temp access	Off	\$0	\$41,000	\$41,000.00
20	60-80 cuyd's of slide material to remove, culvert may	Shiffman Road	Unknown at this	Off	\$0	\$7,000	\$7,000.00
21	Road flooded out with 350 Cuyd's of sediment, plus	McDonald Dike Road	Travel way open, but	Off	\$0	\$51,000	\$51,000.00
22	440 cuyd's of sediment removal, possible shoulder	Liars lair	Travel way open, but	Off	\$0	\$23,000	\$23,000.00
23	1,400' shoulder rock, 150 Cuyd's of shoulder repair	AlderBrook Road	Travel way open, but	On	\$0	\$46,000	\$46,000.00
24	125' of road replacement, shoulder repairs,	Tideland Road	Travel way open, but	Off	\$0	\$132,000	\$132,000.00
25	0.9 mile inundated with sediment and woody debris,	Tohi Ranch Road	Travel way open, but	Off	\$0	\$25,000	\$25,000.00
26	slow moving slide progressing	Old Wheeler Mohler road	Travel way open, but	Off	\$0	\$50,000	\$50,000.00
27	Shoulder and road surface	Gods Valley Road	Travel way open, but	Off	\$0	\$20,000	\$20,000.00
28	Contractor cleaned out culvert, need to restore	Happy Camp Road	None at this time	Off	\$10,000	\$25,000	\$35,000.00
Total					\$1,485,000	\$6,517,000	\$8,002,000



Storm response is hard to predict, impacts the budget and wreaks havoc on an already fragile drainage system



- 1202 - Debris Removal
- 1161 - Flood/Wind/Slide
- 1160 - Snow Plow/Sanding



Questions

Contact Info: Liane Welch, P.E.
Director
Tillamook County Public Works
503 Marolf Loop Road
Tillamook, OR 97141

Tel: 503-842-3419
Fax: 503-842-6473
Email: lwelch@co.tillamook.or.us



Mud Man