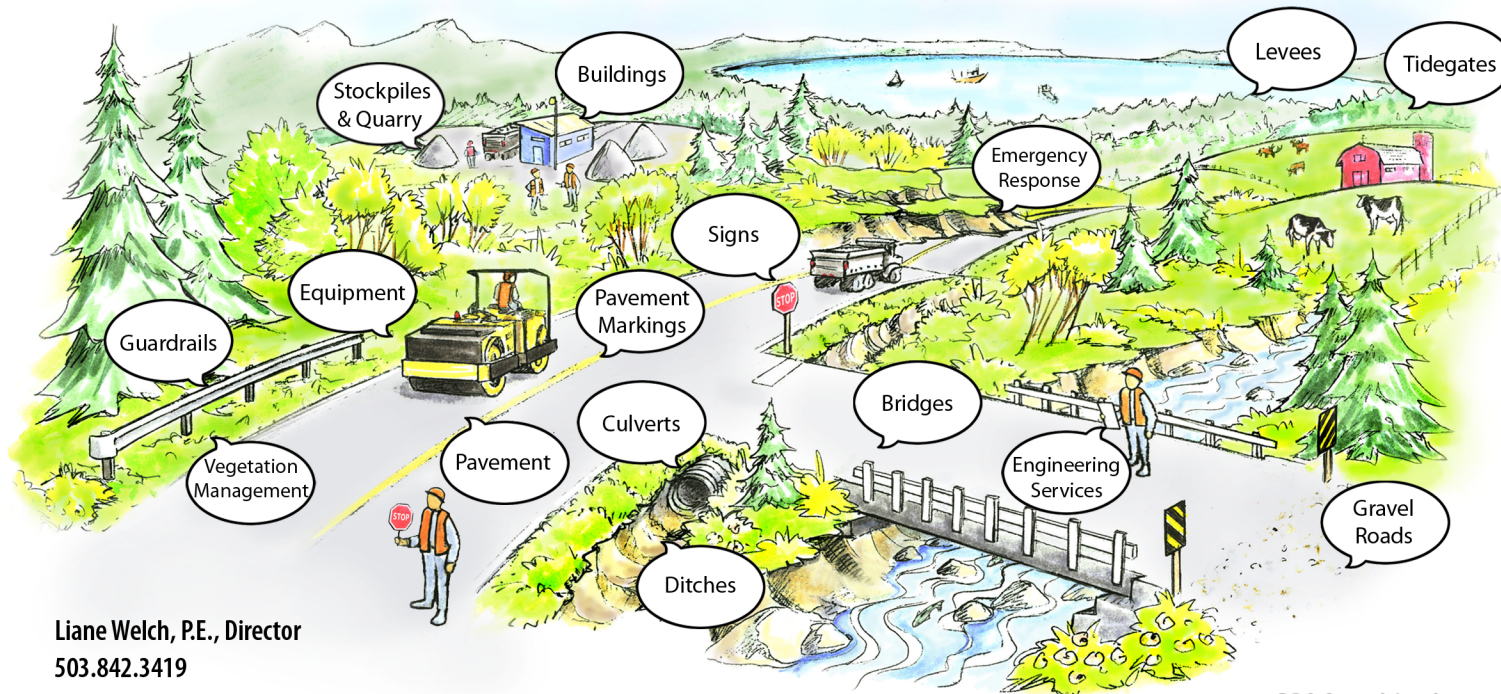


Tillamook County Road Department Performance Report FY 2014



Your Tillamook County Road Dollars At Work \$844 Million Road System Value in 2014



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PBS Consulting Inc.

Version	Change	Changed by	Reviewed by	Approved by and date
V.1	Initial Draft	PBS	LW	12/6/2014
V.2	Change cover, Director's transmittal message; edit pavement, drainage, equipment text; add Appendix A: List of Pavement Sections Paved in FY 2014	PBS	JS, LW	12/18/2014
V.3	Draft Final Version	PBS	LW, JS	12/22/2014
V.3.1	Draft Final Version – paging corrected	PBS		12/23/2014
V.4	Final Report – Add text and table showing federal and Oregon DOT contribution to County transportation infrastructure	PBS	LW	LW 1/17/2015



Public Works Road Department

Report of the Director

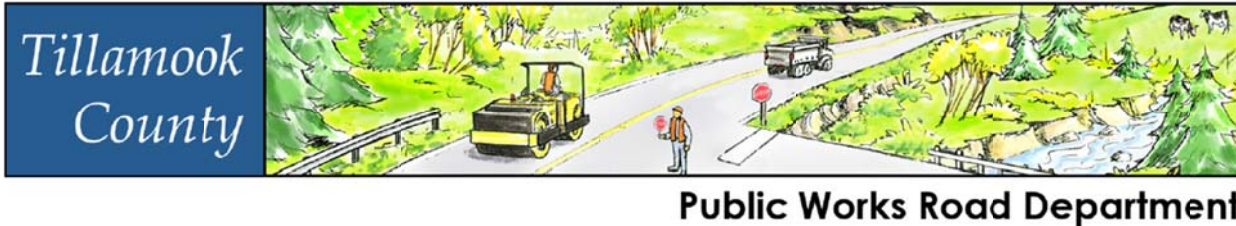
The Tillamook County Road Department appreciates the voter's passage of the General Obligation Bond May 2013 and the Transient Lodging Tax in November 2013. Thanks to this funding, road improvements and bridge maintenance projects across the County took place during the summer of 2014. Additional funding allowed the Road Department to get projects done, including

- Paving portions of Wilson River Loop East West
- Start of rehabilitation of Brooten Road: State Hwy 101 to Fisher Road
- Paving 6.8 miles of County roads
- Design of culvert replacement on Foss Road, MP 6.5
- Brickyard Road fish passage and road improvement project. This project is funded by a partnership with grants from the Oregon Watershed Enhancement Board, the USFWS, Whole Watershed Restoration Initiative, the Tillamook Bay Watershed Council, the Tillamook Estuaries Partnership, and the Road Department.

The overall strategy for expending the General Obligation Bond was to “hold the system together” in FY 2014 with small paving patches all over the County. Appendix A presents a list of roads where sections were paved.

As the Board of County Commissioners stated last February, this has been a year of significant change in Tillamook County. We have stabilized County roads with the voter approved bond levy. The Transient Lodging Tax dedicated 30 percent to road maintenance after paying administrative costs. This tax on tourists helps fund road and bridge maintenance and repairs.

The Road Department participated in addressing Neskowin coastal hazards and earthquake and Tsunami preparedness including developing an emergency egress road in the community of Neskowin, finishing the engineering work on Cape Meares Loop Road slide, actively pursuing grants to relocate the Cape Meares Loop Road and working with the Citizens Road Advisory Committee to prioritize road improvements. Implementation of the State's resilience plan to address Earthquake/Tsunami preparedness meant participating in “Filling the Void of Leadership,” a public works statewide effort to continue to prepare Tillamook County's management for the Cascadia Earthquake. The Road Department is honored to serve Tillamook County. There are still many challenges but our partnering with other agencies and commitment to communicate with the Board and community helps position the County for economic growth and livability.



Asset Management Strategy & Financial Summary

Asset Management Strategy

The Tillamook County Road Department manages the County road system. We become more knowledgeable about our transportation network each year. This year with development of the *Bridge Strategic Plan* we have more accurate bridge replacement values with the overall transportation system now valued at \$844 million. Tillamook County manages an old road system. Approximately one-third of County transportation assets are in poor / very poor condition. In the fall of 2013 local revenues were approved by voters dedicated to County road services which slowed the County road system's deterioration. In spring of 2014 available funding and road service needs were compared which shows that funding is insufficient to meet road services over the next 10 years. Service risks were identified for Roadway and Traffic, Structures, Drainage, and support services of Equipment and Buildings, as well as how these risks will be responded to given available funding.

Since 2009, this asset management strategy and supporting road activity cost and performance information is updated annually. This informs the community and decisions of the Board. Best available information on historic costs and performance as well as projecting 10 year service needs and resources integrate Department asset management with long term community and Board plans, resource strategy and a multi-year delivery program. The Road Department will continue to seek opportunities to partner with key stakeholders and apply for grants as improvements are made to current Department practices.

Risk Management Strategy – Mix of Fixes

- *Do preventative pavement maintenance*
- *Increase bridge maintenance*
- *Increase drainage maintenance*
- *Increase culvert inventory, levee assessment and building maintenance programs*
- *Continue to do reactive maintenance with focus on safety*
- *Slow system deterioration; stabilize the rate of failure*
- * Identify additional funding through partnership & grants*
- *Continue to communicate critical failures with the Board and community*

What did we accomplish this year?

The Road Department is committed to **continuously improve** the skills, tools and business processes that support County road services.

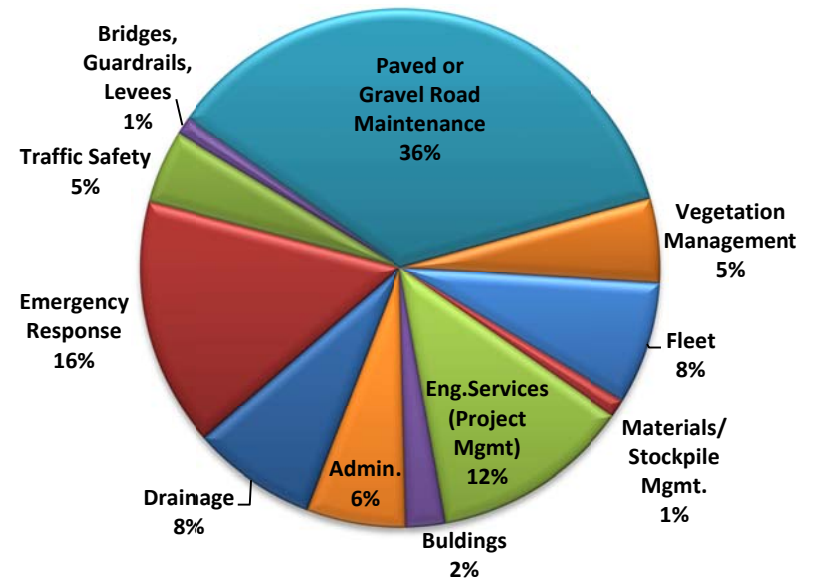
Specific 2014 **improvements** include:

- The March 2014 Asset Plan addresses 10-year service level requirements for the County’s \$844 million transportation assets. Long term scenarios identify future transportation services performance, cost and risk impacts as part of the annual budget discussions. This December 2014 Plan updates this information for Fiscal Year 2014.
- Development of the 2014 Strategic Bridge Program Plan. This will guide County decisions to maintain, rehabilitate, and replace the 101 County's bridges. This program targets critical bridge maintenance and prioritizes bridge replacements. Recommendations guide cyclic maintenance, preservation maintenance, rehabilitation and replacement for each County bridge.
- A geotechnical analysis of Latimer, Brooten and Long Prairie Roads, which will be rehabilitated in FY 2015 and FY 2016.
- The visual inspection of paved County roads was updated in 2014. This identifies pavement condition by road functional classification. Five-year funding scenarios identify pavement investment needs and performance outcomes.
- Planning expenditures of the new GO Bond and TLT revenues were analyzed to ensure good long term decisions are made that support the safety and economic vitality of the community.

Specific **achievements** include:

- Pave 6.8 miles throughout the County in addition to spring paving program
- Replace culvert s
 - Provide local revenues to match Federal and State Grants for Foss Road, MP 6.5 culvert replacement
 - Design and partnering for Meda Loop culvert replacements
 - Culverts on Brooten, and Latimer Roads in preparation for road rehabilitation projects
 - On East Beaver Creek, Idaville Road, PC Heights, Alder Street, James Road, Netarts Bay Drive
- Grading, shoulder work, and cattle crossing maintenance

FY 2014 Tillamook County Road Expenditures
\$4.7 Million
(w/Admin. Allocated)



- Emergency Management
 - Storm response
 - Response to landslides and 911 callouts
 - Emergency preparedness for managing Cascadia Earthquake “Filling the Void of Leadership”
 - Neskowin Emergency Egress design
- Respond to service requests
- Engineering Department permit support
 - Hawk Street Emergency Egress – Neskowin
 - Road approach and utility permit review and issuance
 - Department of Community Development permit reviews
- Equipment purchases
 - 2003 paving machine
 - Used pavement roller
 - Two used backhoes
 - One used pickup
 - One used shoulder widener

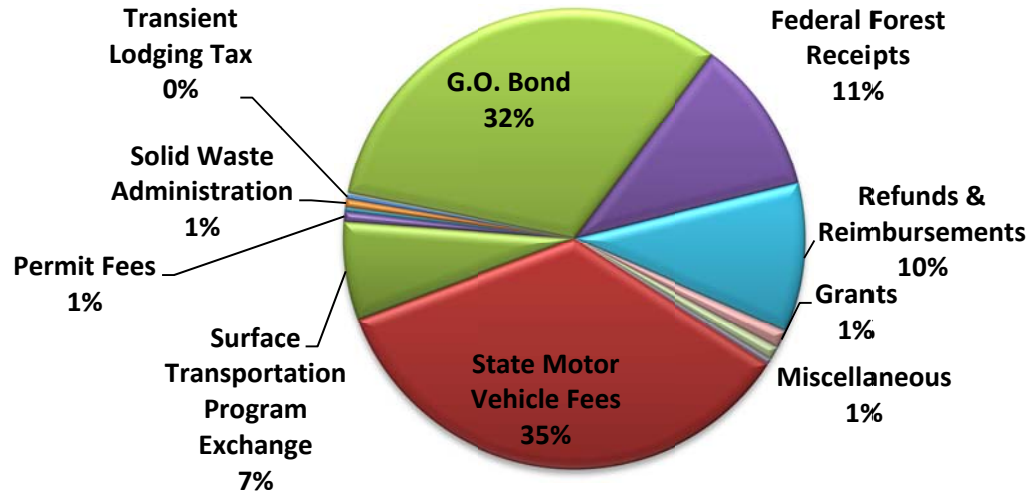
The County continues to apply for federal and state grants. The federal and state governments have invested \$1.3 million in FY 2014.

Cape Mears Loop Geotechnical Study	\$202,000
Foss Road MP 6.5 Culvert Replacement	\$357,000
Lommen Bridge Bridge Design	\$514,000
Resort MP 1 Slope Failure Design	\$135,000
Resort MP 2.1 Slope Failure Design	\$33,000
Wyss Bridge Bridge Design	<u>\$105,000</u>
	\$1,346,000



Financial Summary

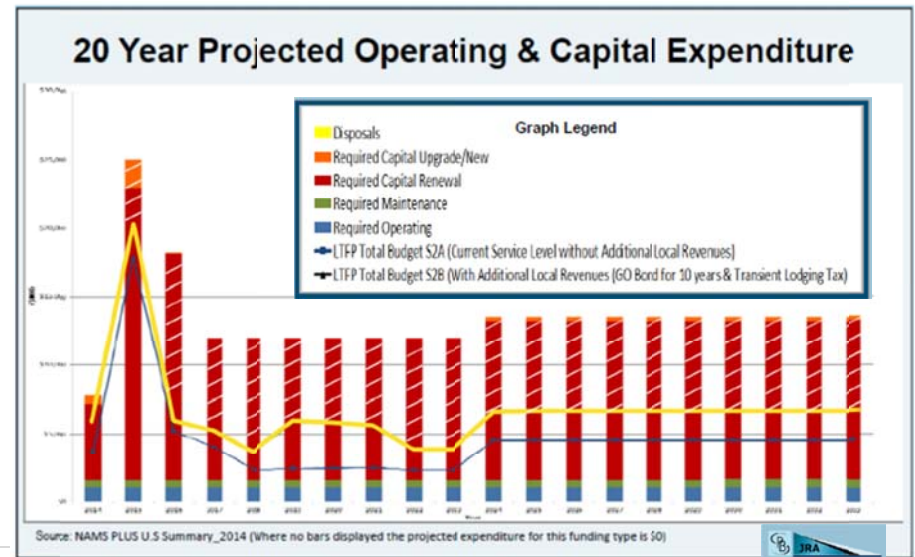
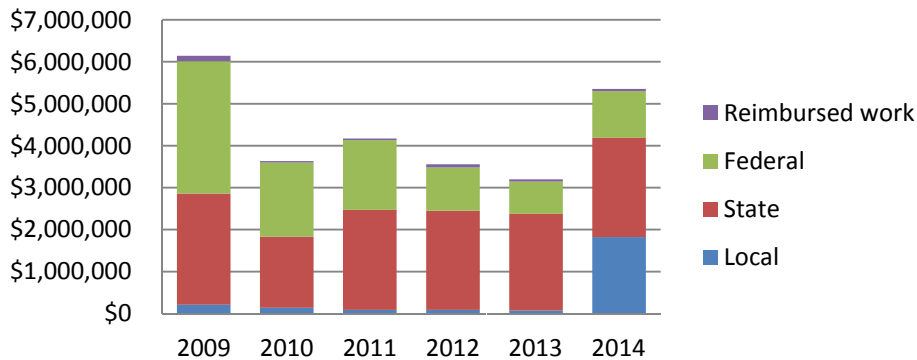
Road Department Revenues FY 2014 \$5.4 Million



*Without Beginning Fund Bond Balance of \$8.5 Million (including \$6.3 Million bond)

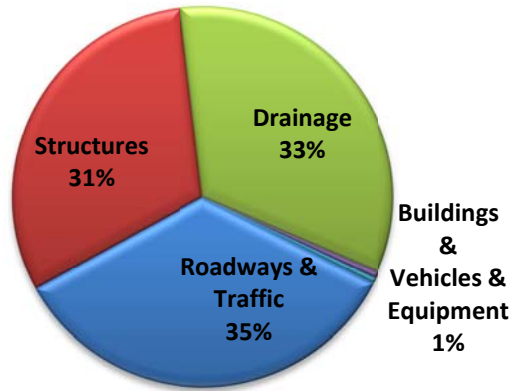
Local revenues - GO Bond and Transient Lodging Tax – approved by voters in 2013 to address road services—are making a difference in slowing system deterioration and addressing critical needs. However funding (yellow line) isn't enough to manage all lifecycle costs (red striped bars above the yellow line) even with these new local revenues.

Local revenues were approved by voters in FY 2014



What does the County Road Department manage?

Tillamook County Road Network \$844 Million

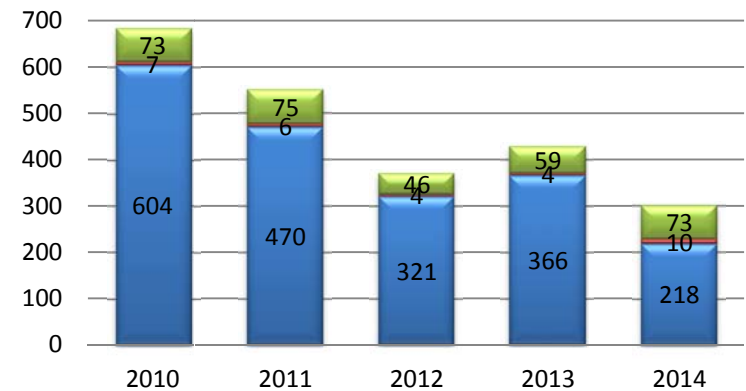


County Road Services

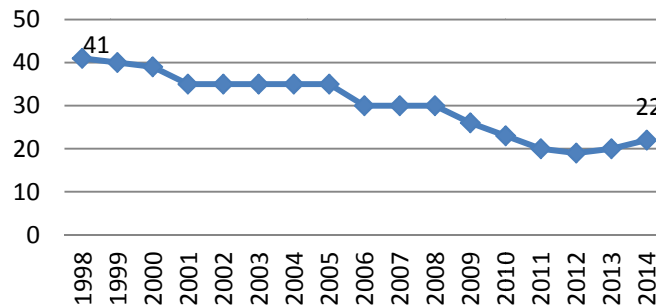
Assets	Services
263 paved miles	Vegetation Management
65 miles gravel roads	Traffic Safety
101 bridges	Materials/Stock Piles
3300 culverts	Service Request management
7 levees	Emergency Response
5,400 signs	Engineering Services (permits & capital projects)
363 miles pavement markings	Fleet Management
10 miles guardrails	
15 buildings	

Service Requests 2010-2014

■ Roadway & Traffic (incl. Eng.) ■ Structures ■ Drainage



Employees










Public Works Road Department

Road Department
FY 2014 Performance

Goal/Key Performance Measure (KPI)	Last reporting cycle	Current reporting cycle	Draft Target	Trend	Comments
Goal: Maintain and preserve a safe and efficient county road network.					
Roadway and Traffic					
Pavement condition index	50 PCI (2012)	54 PCI (2014)	TBD	↑	Pavement condition improved with use of local revenues approved in 2013. However, over the next 5 years, pavement condition is expected to decline; funds are insufficient to meet need or achieve the performance target.
Percent of paved road miles in Good or Fair condition	50%	57%	78% (ODOT)	↑	A majority of County roads are in Good or Fair condition (PCI >50), an improvement since 2012.
Structures					
Percent of bridges in Good or Fair Condition	83% (2011)	83% (2013)	78% (ODOT)	↔	A Bridge Maintenance and Preservation Program developed in 2014 aims to maintain bridges in good condition through cyclic maintenance and preservation. A significant amount of bridge rehabilitation is scheduled for 2014.
Number of bridges weight limited	16	17	TBD	↔	Six bridges are scheduled for replacement over the next 4 years. To maintain bridges in good condition, a major bridge rehabilitation project is needed every three years and 20 bridges replaced over the next 15 years.

Goal/Key Performance Measure (KPI)	Last reporting cycle	Current reporting cycle	Draft Target	Trend	Comments
Drainage					
Percent of Culverts in Poor Condition (est. based on 2012 visual condition assessment of 20% of the inventory)	32%	32%	0% (<i>Drainage Asset Plan, 2012</i>)		Culvert inventory information has not been maintained, however a partial (20%) inventory and condition assessment in 2011-12 indicates that there are more culverts, the replacement cost is significantly greater, and culvert condition is worse than earlier estimates. There is a Low confidence in culvert information.
Number of Culverts Replaced	2 (Slab & Roy Creek)	836 lineal feet Countywide	1,056 culverts, as funding is found		Drainage on county roads was rated an Extreme risk in 2010 given the wet environment and increasing frequency and severity of weather events. A good drainage system is the key to good roads.
Emergency Response					
Service Request Response	100%	100%	100%		Emergency & health and safety response; Provide Emergency preparedness for managing Cascadia Earthquake "Filling the Void of Leadership; Neskowin Emergency Egress design; Added maintenance crew employees
Staffing Levels	20	22	N/A		
Vehicles & Equipment					
Useful life of vehicles	75% exceed their useful life	75% exceed their useful life	50% remaining useful life		A 2003 paving machine, a used pavement roller, two used backhoes, one used pickup, and one used shoulder widener were purchased in 2014.
Buildings					
Buildings in Poor Condition	2	2	0		The County needs to invest in its buildings. Health and safety code inspections occur quarterly; only critical building maintenance is performed.

Roadways & Traffic – Pavement Condition



Performance Measure:
Percent of pavement in Fair & Good condition

Pavement Management Strategy

Continue to improve the County road system's average Pavement Condition Index (PCI). Currently 43.2% of the roads are in Poor or Very Poor condition. We have been rehabilitating the roads so that we can do more preventive maintenance. This will then extend the life and reduce the lifecycle cost of paved roads. It is less expensive to maintain roads in Fair and Good condition. The first year of the bond is small patches Countywide to hold the system together. Year Two of the bond expenditures will be focused on high speed, high volume roads and those that provide economic value to the community. The third year we will move into the neighborhoods Countywide for safety and emergency response. Together these actions ensure roads are safe to travel on throughout the County. This slows deterioration long term. We inspect all roads every other year and respond to service requests, as resources allow. Where it makes sense, we are reducing the road inventory through jurisdictional transfer. We are improving pavement workmanship and pavement equipment. We also partner with other Counties for traffic marking services and share equipment when practicable.

Service Level Target

Working with the Board of County Commissioners and the Road Advisory Committee, service level targets will be set that are appropriate for our community. Once targets are set, we will come back to our pavement management strategy and look at how our strategies match up with our service level targets.

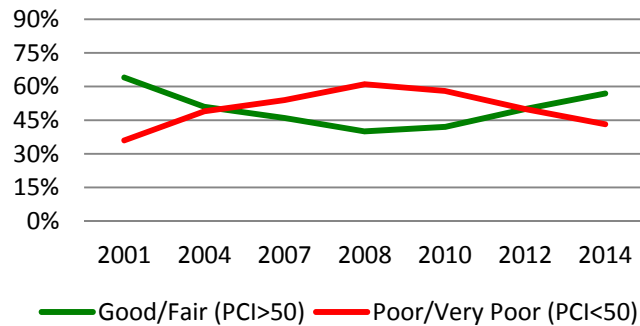
Current Service Level

The County's current budget for the transportation system is \$5.4 million for Fiscal Year 2014. The cashflow from the General Obligation bond varies widely year to year with compliance to federal regulations. This will impact the availability of funds over the next 10 years for road, culvert and bridge maintenance and improvements. Pavement condition has improved with use of local revenues approved in 2013 from a PCI of 50 in 2012 to a PCI of 54 in the summer of 2014.

Current State

Roadways are the County’s most valuable asset with a replacement value of \$291M. The majority of the 263 miles of County roads are in fair or good condition. The General Obligation bond passed by County voters in 2013 is being used to stabilize and improve paved roads; the average condition has improved to 54 or Fair, up from 50 in 2012. Arterial and collector roads have an estimated 20 year life span while paved local roads have an estimated life span of 40 years.

**Pavement Condition is Improving
2001-2014**



Local Revenues Improve Pavement Services

The County Road Department paved portions of roads countywide to improve overall network condition, the most significant increase since the 1990s.

The County increased pavement services to using local revenues approved in 2013. The summer 2013 asphalt program used 8,036 tons of asphalt on 6.8 miles throughout the County.

6.8 Miles Paved in Summer 2013

Tideland Road	Yellow Fir Road
McKimmens Road	South Prairie Road
Miami-Foley Road	Kilches River Road
Beulah Reed Road	Ekloff intersection
Sollie Smith Road	Clements Corner
Bilyeu Road	Brickyard Road
Bewley Creek Road	Hillsdale Road
Tideland Road	Whiskey Creek Road
Nielson Road	Cape Lookout Road
Jenck Road	Meda Loop
Woods-Cloverdale Road	McPhillips
Sandlake Road	Mill Road
Blaine Road	

Risks for Roadways & Traffic

- 1 Insufficient funding for resurfacing will allow water to enter the pavement resulting in pavement failures and avoidable and expensive reconstruction.
- 2 Poor construction standards for many pavements mean that when they fail, reconstruction becomes very expensive. This problem is compounded by increasing heavy vehicle loads.
- 3 A substantial proportion of roads have poor design. This can have safety impacts
- 4 Lack of timely maintenance
- 5 Wet climate/storm damage reduces asset life, increases life cycle costs and diverts planned maintenance and renewal funds to reactive storm damage repairs.
- 6 Poor drainage
- 7 Insufficient construction inspection
- 8 Increased traffic loads
- 9 Vegetation impact

Risk Response

- 1 Rehabilitate roads so that preventive maintenance can be performed on roads in Fair and Good condition
- 2 Focus on high volume roads
- 3 Rate condition every other year and respond to service requests
- 4 Reduce the road inventory through jurisdictional transfer where possible
- 5 Improve road drainage
- 6 Improve workmanship and equipment
- 7 Partner with other Counties for traffic marking services and share equipment if possible.

Structures - Bridge Condition

Performance Measure:
Percent of bridges in Fair & Good condition



Structures Management Strategy

A Mix of Fixes. Maintain bridges in good condition by performing preservation and cyclic maintenance; seek funding partners to replace bridges with Sufficiency Rating less than 50%. Inspect bridges every other year, inspect levees annually and repair and replace guardrails as a part of ongoing road projects.

Service Level Target (to be reviewed and adopted by the County Road Advisory Committee in FY 2015)

Replace 20 bridges by 2029 (two per year for 15 years or \$610,000 annually), then replace 4 bridges every 3 years. Perform one major bridge rehabilitation project every year (\$250,000). Perform cyclic bridge maintenance (joint replacement) on five bridges/\$25,000 annually following initial investment of \$35,000 to address backlog; and resurface 4 bridges/\$48,000 annually following initial backlog catch up of \$300,000 . Conduct annual bridge maintenance (\$25,000) following initial investment (\$49,000) to address signage, clean debris, remove drift & vegetation, repair damage or missing hardware on railings.¹

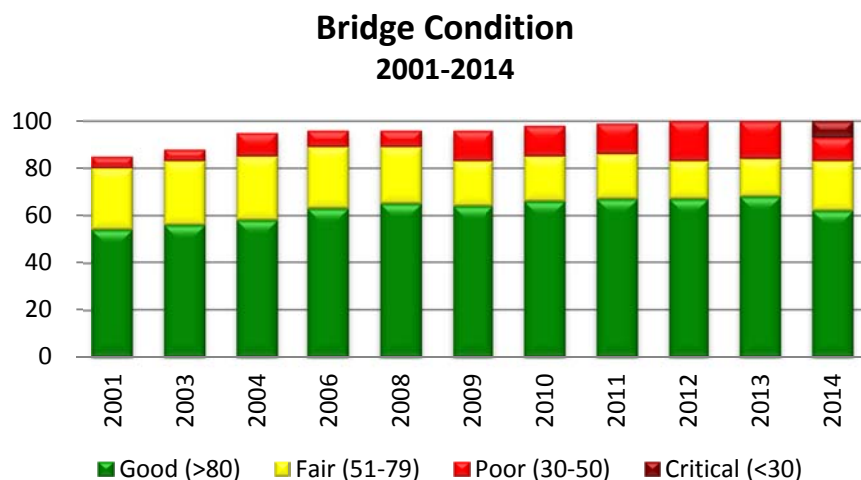
Current Service Level

Continue to meet the target of 20 bridge replacements by 2029 by completing six bridge replacements, which are either in the design phase or in the process of replacement. Implement the Bridge Maintenance and Preservation Program developed in 2014 so that bridges are maintained in good condition through cyclic maintenance and preservation. Replace bridges with a sufficiency rating below 50 percent as funding partners are identified.

¹ Tillamook County Strategic Bridge Program Plan, OBEC, May 2014.

Current State

Bridges have a replacement value of \$261M. The majority of the 101 County bridges are in fair or better condition. Bridges have been replaced at a rate of eight every five years. There are 18 bridges over 50 years of age. Bridges built before 1970 have an estimated 50 year life span.



Six bridges are scheduled to be replaced

The County is currently planning replacement of six bridges in the next few years.

The County has seventeen bridges with low sufficiency ratings of less than 50 percent.

Six Bridge Scheduled for Replacement

Lommen Bridge
Wyss Bridge
Cedar Creek Bridge
Trask River Bridge (MP 13)
Holgate Bridge
Whalen Island Bridge
East Beaver Creek*

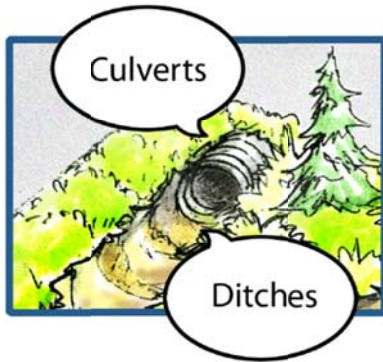
*Bridge currently closed due to landslide; plan to remove from inventory and salvage material.

Risks

- Four fracture critical bridges including three railroad car bridges (Cedar Creek, Three Rivers, and Dougherty Slough) and one twin-girder bridge (South Fork of the Trask). Two are on low volume roads (Three Rivers and Dougherty Slough).
- Three bridges are susceptible to scour /settlement following flood events.
- 27% of bridges are timber and 8% steel. Both materials wear more quickly in maritime environment. These bridges tend to be older and have the lowest Sufficiency Rating.
- Guardrail and levee failure due to poor design, crash impacts, weather events leading to flooding and embankment failure.
- Funding and the number of staff are insufficient to address maintenance and repair needs.

Risk Response

- Replace two critical bridges (South Fork Trask and Cedar Creek).
- Inspect all bridges every other year
- Monitor susceptible bridges & levees following flood event.
- Prioritize maintenance, rehabilitation and replacement based on risk.
- Implement Strategic Bridge Program based on available funds.
- Seek funding partners to replace high priority bridges.
- Inspect and improve levee inventory & condition information in FY 2015.
- Initiate guardrail improvement program.



Drainage - Culverts

Performance Measure:
Percent of culverts in Poor or Critical condition

Drainage Management Strategy

As paving lists are developed, inspect and replace culverts prior to paving. Continue to seek funding partners to replace culverts with fish passage facilities in all watersheds of the County. Replace culverts that are a high risk to the safety of the community.

Service Level Target (to be reviewed and adopted by the County Road Advisory Committee in FY 2015)

Drainage management strategic objectives are to:

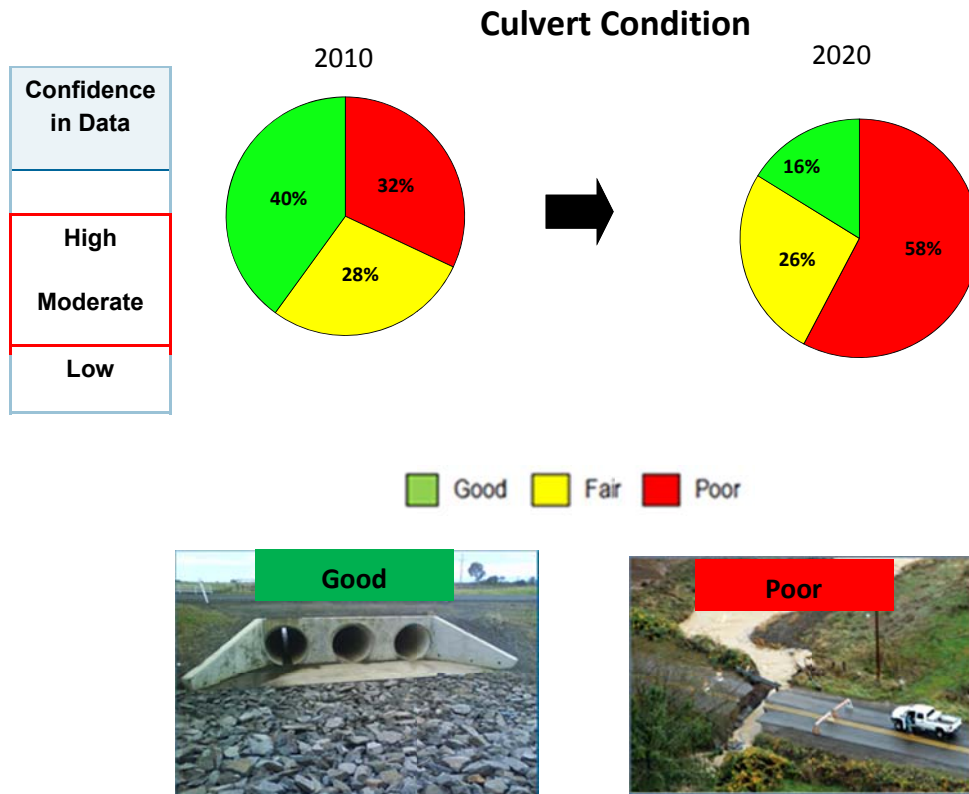
- provide and maintain adequate road drainage in order to prevent water damage to the roadway structure,
- protect the rights of adjoining property, and
- provide fish passage where mandated and as funding partners are identified.

Manage surface storm water and flooding by maintaining vegetated ditches that serve as drainage facilities, maintain culverts in the condition necessary to handle their design capacity, and where culverts carry streams, maintain them in a condition to provide fish passage by performing

- culvert and catch basin cleaning
- culvert replacement as funding partners are identified
- ditching
- erosion control using best management practices with regards to steep slopes, drainage ways and permitted activities.

Current Service Level: One-third of the estimated 3300 culverts are in Poor condition and 30% of ditches are in Poor condition. We are not meeting a defined service level target. We are funding 17% of the needed lifecycle costs of the 3300 culverts and 198 miles of ditches. This continues to be one of the biggest risks to the County transportation system.

The County replaced 863 lineal feet of culverts in Poor condition and performed 2,023 hours of ditching in FY 2014. Drainage on county roads was rated an Extreme risk in 2010 given the wet environment and increasing frequency and severity of weather events. Culvert inventory information has not been maintained and culvert condition is not known. A partial (20%) inventory and condition assessment in 2011-12 indicates that there are more culverts, the replacement cost is significantly greater, and culvert condition is worse than earlier estimates. There is a Moderate confidence in culvert information. A 2008 ditch inventory and condition assessment identified that 93% require some maintenance, and 30% are in Poor or Very Poor condition. The decline of TCPW employees has resulted in the elimination of a comprehensive ditching program for county roads. Currently, ditching occurs on a reactive basis only.



Risks

- 1 Outdated inventory & condition assessment
- 2 Lack of mapped culverts
- 3 Roads inundated by plugged or deteriorated culverts
- 4 Inappropriately sized outfalls, beavers, undersized culverts, stormwater and salt water
- 5 Inadequate staffing to manage vegetation
- 6 Changing environmental regulations
- 7 Ecological impacts
- 8 Failure due to age
- 9 Poor construction techniques
- 10 Heavy vehicle loads
- 11 Inadequate funding to address critical culvert replacement

Risk Response

- 1 Inspect additional portion of culvert inventory in FY 2015.
- 2 Develop inventory & planned inspection and cleaning program
- 3 Reduce failed culverts as budget allows and funding partners are found
- 4 Report to board on program costs & needs
- 5 Reactive vegetation mowing and brush cutting
- 6 Seek additional funding and partner with other agencies on high priority fish passage culvert replacements



Emergency Response

Emergency Response Performance Measure:
Service Requests response.

Emergency Response Management Strategy

Prepare for and respond to weather events and hazards to ensure a safe county road network. Work in partnership with federal, state and county emergency responders.

Service Level Target (to be reviewed and adopted by the County Road Advisory Committee in FY 2015)

Investigate and quickly respond to weather events and hazards. Eliminate critical bridges, culverts and levees before and after weather events.

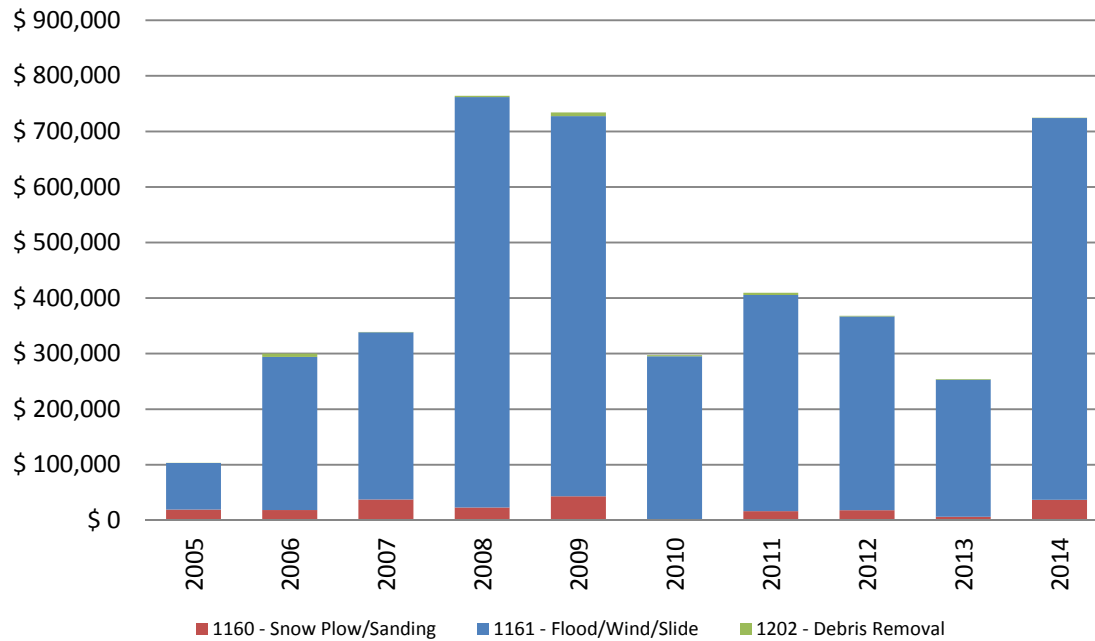
Current Service Level

Investigate 100% of emergency service requests. Reduce hazards as a high priority. Inspect critical bridges, culverts and levees before and after weather events.



The Tillamook County Road crews snow plow and sand County roads during February 2014 snow emergency.

Emergency Response expenditures are up significantly from 2013 due to about \$500,000 spent on repairs on Kilches River Road from the January 2011 storm.

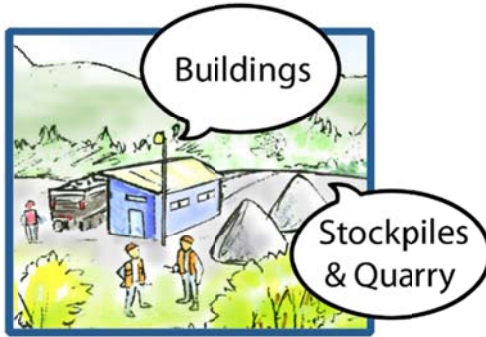


Risks

- 1 Wet climate/storm damage reduces asset life, increases life cycle costs and diverts planned maintenance and renewal funds to reactive storm damage repairs
- 2 Insufficient funding for road resurfacing will allow water to enter the pavement resulting in pavement failures and avoidable and expensive reconstruction.
- 3 Roads inundated by plugged or deteriorated culverts

Risk Response

- 1 Develop and regularly review appropriate emergency response capability.
- 2 Target key vehicle replacement based on cost & risk management (e.g., snow plows).



Buildings

Building Performance Measure:
Percent of buildings in Poor or Critical condition

Building Management Strategy

Address the number, quality and location of TCPW buildings that influence the efficient and effective management of resources (labor, materials and equipment) used to deliver county road services.

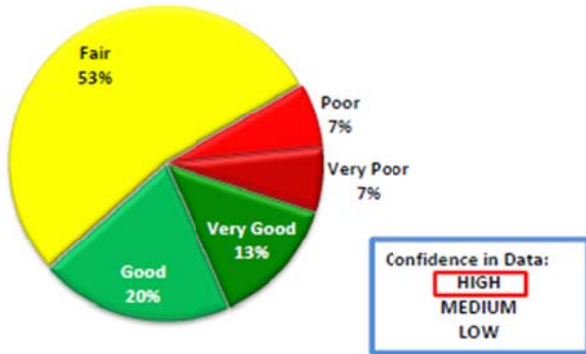
Target Service Level

To be developed with the County Road Advisory Committee in FY 2015

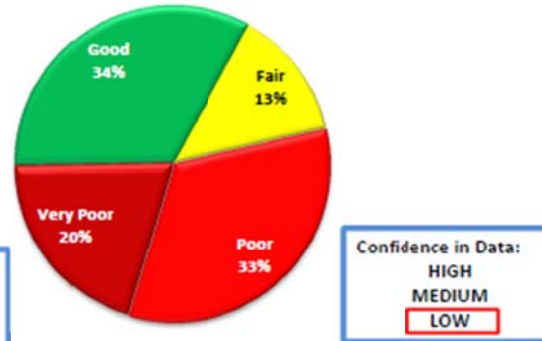
Current Service Level

There are 15 buildings with 2 (13%) in Poor condition based on a 2012 inspection. Buildings are inspected annually for safety code violations. Only critical building repairs are performed.

**Buildings
Current Condition**



**Buildings
Condition in 10 Years**

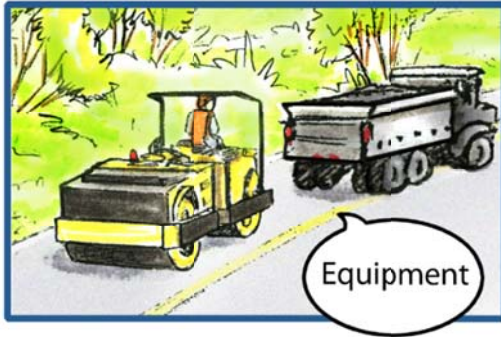


Risks

- 1 There is no building asset plan with an inventory and condition assessment of major building elements that assure worker safety and building code compliance
- 2 Buildings not to code
- 3 Buildings functionally is inadequate
- 4 Buildings are in poor condition

Risk Response

- 1 Buildings are inspected quarterly for safety code violations.
- 2 The 2012 inspection identified critical repair needs which are being addressed.
- 3 A Space Facility Committee is recommending improved use of existing office space.
- 4 Perform additional critical maintenance identified in 2012 inspection on Main Office & repair fence.
- 5 Annually conduct Inspect buildings for OSHA health and safety code compliance.
- 6 Communicate the need for additional resources to address overall Road Department facility needs.



Vehicles & Equipment

Performance Measure:

Percent of vehicles with less than 50% useful life remaining

Vehicles and Equipment Management Strategy

Ensure availability and reliability of vehicles and equipment for road crews by providing timely maintenance and repairs. Replace critical equipment and vehicles to manage fleet at lowest lifecycle cost as funds are available.

Target Service Level (to be reviewed and adopted by the County Road Advisory Committee in FY 2015)

Vehicles have 50% or greater remaining useful life. Perform preventive maintenance (Level A & B) on 100% of the fleet.

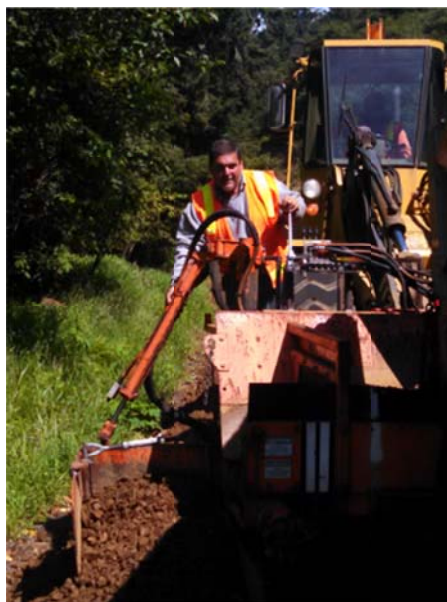
Current Service Level

Only twenty percent (20%) of the County fleet received Level A preventive maintenance. The level of staffing is inadequate; the Shop Foreman and crew are primarily assigned to field work. Nearly 75% exceed the County's adopted useful life for vehicles

Thirteen underutilized and high maintenance vehicles will be auctioned in FY 2015. A used 2003 paver was purchased in FY 2014 that replaces a high maintenance 1968 paver. A shoulder rock spreader was purchased through the intergovernmental cooperative program. This increased productivity 10 times. Two used backhoes and a used pickup were also purchased.



Purchase of a used paver allows the Road Department to repave road sections across the County in FY 2014.



A shoulder widener spreads rock which dramatically increased road work efficiency. There is less damage to the surface of the road, striping is not impacted, and rock is spread faster.

Risks

- 1 Only 20% of the County fleet received Level A preventive maintenance. There is an inadequate staffing level; the Shop Foreman and crew are primarily assigned to field work in the summer.
- 2 Nearly 75% exceed the County's adopted useful life for vehicles.
- 3 Some vehicle parts are not available and must be made in house.
- 4 Equipment reliability and safety is an increasing concern.
- 5 Equipment may not be appropriate for all job requirements.

Risk Response

- 1 Continue tracking time and hours of performance & maintenance cost per vehicle.
- 2 Report on need.
- 3 Auction vehicles not in use or with high maintenance costs.
- 4 Procure used vehicles and equipment that increases work efficiency and effectiveness.

Appendix A List of County Road Sections Paved in FY 2014

ROAD NAME	ROAD #	START MP	END MP	LENGTH MILES	LENGTH FT	WIDTH FT	SQUARE YARDS	DEPTH INCHES	Estimated Tons	Calculated Tons	Total Calculated Tonnage	NET TONS ON JOB	\$ of Asphalt/ tons	Comments
NORTH AREA														
Tideland Road	A505	0.487	0.620	0.133	702.24	20	1560.53	2	260	173	345	398.78	\$ 24,724.36	Completed 10/17/2013
		1.508	1.634	0.126	665.28	20	1478.40	2		164				
		1.786	1.797	0.011	58.08	10	64.53	2		7				
McKimmens Road	A584	0.036	0.367	0.331	1747.68	16	3106.99	1.5	100	259	308	335.54	\$ 20,803.48	Completed 10/24/2013
		0.407	0.470	0.063	332.64	16	591.36	1.5		49				
Miami Foley Road	A563	8.776	8.783	0.007	36.96	11	45.17	2	300	5	514	522.25	\$ 32,379.50	Completed 10/23/2013
		8.967	8.995	0.028	147.84	24	394.24	2		44				
		9.326	9.603	0.277	1462.56	23	3737.65	2		415				
		10.169	10.213	0.044	232.32	22	567.89	2		63				
		10.213	10.224	0.011	58.08	10	64.53	2		7				
Beulah Reed Road	A502	0.000	0.222	0.222	1172.16	24	3125.76	2	260	347	451	414.20	\$ 25,580.40	Completed 10/15/2013
		0.557	0.621	0.064	337.92	18	675.84	2		75		44.73	\$ 2,569.74	
BRR(James Road)	A512	0.000	0.014	0.014	73.92	11	90.35	2		10				
BRR(Neahkahnie Road)	A500	0.000	0.012	0.012	63.36	24	158.96	2		19				
CENTRAL AREA														
Dollie Smith	B704	1.231	1.761	0.530	2798.40	22	6940.53	2	260	760	760	789.29	\$ 48,935.98	Completed 10/3/2013
Blyeu	B685	0.048	0.298	0.250	1320.00	20	2933.33	2	130	326	326	164.45	\$ 10,195.90	Completed 08/20/2013
Bewley Creek Road	B753	0.661	0.916	0.255	1346.40	20	2992.00	2	130	332	336	316.95	\$ 19,660.90	Completed 09/17/2013
		0.919	0.927	0.008	42.24	7	32.85	2		4				
Mill Creek	B769	0.139	0.352	0.213	1124.64	16	1999.36	2	130	222	222	252.95	\$ 15,645.70	Completed 09/12/2013
Yellow Fir	B773	0.030	0.280	0.250	1320.00	20	2933.33	2	130	326	326	252.46	\$ 15,962.52	Completed 09/18/2013
South Prairie	B765	0.411	0.619	0.208	1098.24	22	2684.59	2	280	298	387	271.73	\$ 16,847.26	Completed 09/11/2013
		0.619	0.628	0.009	47.52	11	58.08	2		6				
		1.660	1.723	0.063	332.64	20	739.20	2		82				
Klichis River	B656	1.317	1.328	0.011	58.08	6	38.72	1.5	260	3	572	552.27	\$ 34,240.74	Completed 10/29/2013
		2.162	2.657	0.495	2613.60	20	5908.00	1.5		484				
		2.657	2.676	0.019	100.32	10	111.47	1.5		9				
		3.148	3.225	0.077	406.56	20	903.47	1.5		75				
Klichis Logging Br Inters	B656	1.290	0.008	0.008	42.24	24	112.64	3	28	19	19	80.53	\$ 4,992.86	Completed 10/30/2013
Ekioff (intersection)	B749	0.000	0.015	0.017	89.76	33	329.12	2	42	37	37	65.67	\$ 4,071.54	Completed 09/4/2013
Clements Corner	B766	0.000	0.179	0.179	845.12	20	2100.27	2	70	233	#REF!	273.98	\$ 16,986.76	Completed 09/11/2013
Brickyard	B767	0.462	0.477	0.015	79.20	10	88.00	2	28	10	32	16.17	\$ 1,002.54	Completed 09/12/2013
		0.491	0.510	0.019	100.32	10	111.47	2		12				
		2.615	2.621	0.006	31.68	25	88.00	2		10				
Hillsdale (From Hwy131)	B794	0.000	0.109	0.109	575.52	20	1278.93	2	130	142	142	149.34	\$ 9,259.08	Completed 08/21/2013
Whiskey Creek	B665	3.855	3.906	0.051	269.28	20	598.40	2	260	66	718	689.56	\$ 42,752.72	Completed 08/19/2013
		4.167	4.632	0.465	2455.20	20	5455.00	2		605				
		4.632	4.639	0.007	36.96	10	41.07	2		5				
		4.673	4.681	0.008	42.24	6	28.16	1		2				
		4.825	4.849	0.024	126.72	6	84.48	2		9				
		4.857	4.902	0.045	237.60	10	264.00	2		29				
Nelson	B740	0.005	0.131	0.126	665.28	20	1478.40	2	260	164	447	467.30	\$ 28,972.60	Completed 09/4/2013
		0.431	0.517	0.086	454.08	20	1009.07	2		112				
		0.846	0.973	0.127	670.56	20	1490.13	2		166				
		0.973	0.980	0.007	36.96	10	41.07	2		5				
SOUTH AREA														
Jenck	C886	0.004	0.131	0.127	670.56	20	1490.13	1.5	260	124	334	314.75	\$ 19,514.50	Completed 07/30/2013
		0.332	0.495	0.164	865.92	18	1731.84	2		192				
		0.694	0.723	0.029	153.12	11	187.15	1.5		16				
		0.799	0.803	0.004	21.12	9	21.12	1.5		2				
Woods-Cloverdale	C855	0.244	0.266	0.022	116.16	6	77.44	1	130	4	207	187.61	\$ 11,631.82	Completed 07/16/2013

ROAD NAME	ROAD #	START MP	END MP	LENGTH MILES	LENGTH FT	WIDTH FT	SQUARE YARDS	DEPTH INCHES	Estimated Tons	Calculated Tons	Total Calculated Tonnage	NET TONS ON JOB	\$ of Asphalt/ tons	Comments
		0.266	0.414	0.148	781.44	21	1823.36	2		203				
Cloverdale Bridge	C885-0261	0.006	0.012	0.006	31.68	32	112.64	1	28	6	39	26.30	\$ 1,630.60	Completed 07/16/2013
		0.067	0.092	0.015	79.20	33	290.40	2		32				
Gandlake	C871	6.355	6.387	0.032	168.96	10	187.73	1	280	10	659	304.36	\$ 18,870.32	Completed, 1 lane 07/23/2013
		6.687	6.689	0.002	10.56	11	12.91	1		1				
		6.689	6.733	0.044	232.32	22	567.89	2		63				
		6.733	7.100	0.367	1937.76	11	2368.37	2		263				
		7.100	7.109	0.009	47.52	22	116.16	2		13				
		7.109	7.198	0.089	469.92	10	522.13	1		29				
		7.376	7.382	0.006	31.68	10	35.20	1		2				
		7.382	7.451	0.069	364.32	22	890.56	2		99				
		7.451	7.645	0.194	1024.32	10	1138.13	2		126				
		7.663	7.696	0.033	174.24	10	193.60	2		22				
		8.240	8.298	0.058	306.24	6	204.16	2		23				
		8.354	8.376	0.022	116.16	6	77.44	2		9				
Blaine	C858	1.421	1.554	0.133	702.24	22	1716.59	2	220	191	373	30.41	\$ 1,885.42	Completed 07/25/2013
		1.554	1.558	0.004	21.12	11	25.81	1		1				
		3.550	3.557	0.007	36.96	11	45.17	1		3				
		3.557	3.691	0.124	654.72	22	1600.43	2		178				
Blaine (Upper Nestucca)	C858	8.495	8.535	0.040	211.20	20	469.33	2	40	52	52	39.93	\$ 2,475.66	FHWA Completed 07/23/2013
Cape Lookout	C855	3.567	3.691	0.124	654.72	20	1454.93	2	280	162	326	278.26	\$ 17,252.12	Completed 08/12/2013
		3.700	3.721	0.021	110.88	6	73.92	1		4				
		3.806	3.819	0.013	68.64	10	76.27	1		4				
		3.819	3.939	0.120	633.60	20	1408.00	2		156				
Meda Loop Road	C889	0.253	0.458	0.205	1082.40	20	2405.33	2	260	267	383	378.39	\$ 23,460.18	Completed 08/6/2013
	C889	1.938	2.032	0.094	496.32	16	882.35	1.5		74				
		1.994	2.032	0.028	147.84	16	262.83	1.5		22				
		2.006	2.032	0.026	137.28	16	244.05	1.5		20				
Intersections in Neskowin	Prep								28	-	61	53.03	\$ 3,287.86	Completed 08/7/2013
Breakers Boulevard	C950	0.409	0.478	0.069	364.32	18	728.64	1.5		61				
McPhillips	C915	0.714	0.733	0.009	47.52	10	52.80	3	130	9	221	199.01	\$ 12,338.62	Completed 07/17/2013
		0.772	0.935	0.163	860.64	20	1912.53	2		213				
Mill Road	C878	0.199	0.211	0.012	63.36	8	56.32	1		3	190	211.66	\$ 13,122.92	Completed 08/8/2013
		0.211	0.293	0.072	380.16	19	802.56	1		45				
		0.306	0.548	0.242	1277.76	18	2555.52	1		142				
Resort Road	C887	1.270	1.301	0.031	163.68	11	200.05	1.5		17	#REF!	15.98	\$ 990.76	Completed 08/12/2013
	TOTAL			2.977	0.00		87388.18	TOTAL	1,868		#REF!	2023.71	\$128,480.78	
CONSTANT (22" EQ. MI.)					5280.00	22.00	12906.87	TOTAL	6.77					