# 2014

## Strategy Outlook

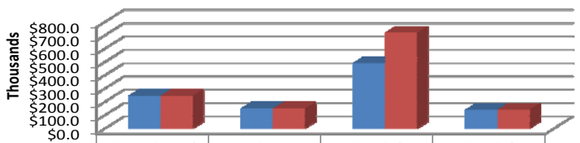
1. The community has recently added additional revenues which has slowed the County road system's deterioration; however resources are insufficient to meet needs.
2. Tillamook County manages an old road system. Approximately one-third of County transportation assets are in poor / very poor condition. This will grow over the next 10 years in spite of recent additional funding.
3. The Road Department is not able to maintain current service levels for the next 10 years. The majority of expenditures are reactive maintenance with most resources allocated to reacting to potholes, failed bridges, culverts & guardrails. The one exception to this is vegetation management (spraying), the only preventative maintenance program currently. Moving forward with more revenue, the focus will be on renewal.
4. Despite this, Tillamook County's Road Department performs at a very high level because of the skills, knowledge of the road system and experience of its people. These people are very effective at managing increasing risks as assets reach the end of useful operating life. Staffing continues to be insufficient.
5. The Department's asset management plan captures current knowledge and experience and has helped guide County road system planning. However this overarching asset management plan is the first stage of asset management improvement. The County needs to further develop asset plans that show varying funding scenarios, what can be done, what can't be done and how the service level consequences and risks will be managed. This plan reflects this move.
6. Even with monies approved by voters in 2013, funding is insufficient. The County will continue to seek opportunities to fund needs outside budget authority by partnering with key stakeholders and applying for grants.
7. The County will continue to communicate levels of service based on best knowledge of the road system and available resources.

## Service / Asset Activities

- ⇒ Culverts
- ⇒ Tide Gates
- ⇒ Catch Basins
- ⇒ Ditches

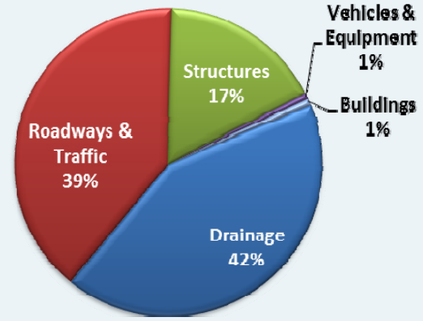
# Assets Supporting Drainage Services

**Drainage - 2014 Budget**

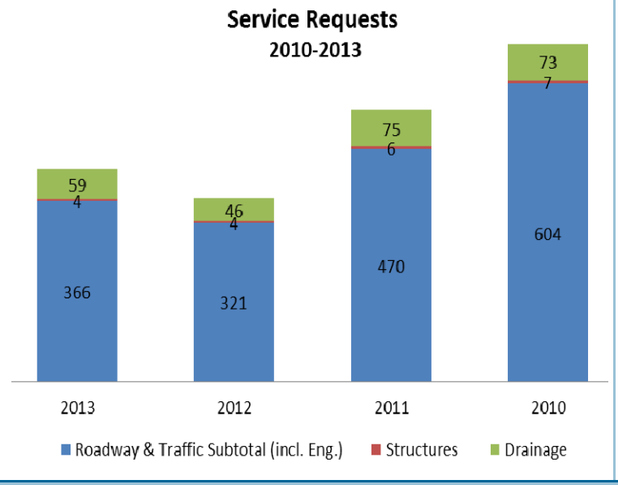



| | Operational Budget | Maintenance Budget | Capital (planned renewal budgetl) | Capital (planned upgrade/new budget) |
|---|---|---|---|---|
| Without Additional Local Revenues | $244,324.4 | $148,215.6 | $488,769.0 | $137,500.0 |
| With Additional Local Revenues (GO Bond for 10 years & Transient Lodging Tax) | $244,324.4 | $148,215.6 | $717,152.0 | $137,500.0 |

**Tillamook County Public Works Department Transportation Assets $686M**




## Comments on Tillamook County's Drainage Network




**Key issues facing drainage:**

- 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 Low 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.

*Source:* PBS Consulting *TCPW Drainage Asset Management Plan 2010 & TC Road Asset Management Strategy 2012.*

## Service Activities

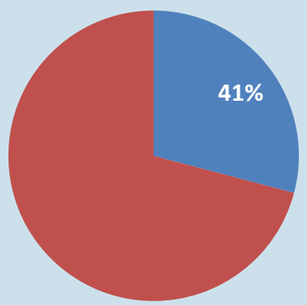
- Culvert and Catch basin cleaning
- Culvert replacement
- Ditching
- Erosion Control using best management practices with regards to steep slopes, drainage ways and permitted activities.

## WHAT SERVICE LEVELS LOOK LIKE (examples)

| GOOD / FAIR QUALITY | POOR QUALITY |
|---|---|

### Culverts

## Assets Supporting Drainage Services




- 3,300 Culverts
- 15 Tide gates
- Catch Basins
- 198 miles Ditches

**$280,977,000**
Total Value of Drainage Assets

*Source: Tillamook County Road Network—Inventory, Condition & Value,. July 2013*

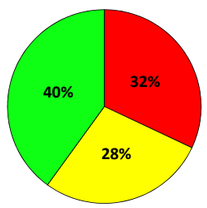
# Tillamook County: Drainage

## Funding Scenario 2A – Current Investment Level Without Additional Local Revenues

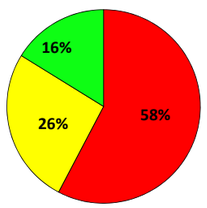
**This Funding Scenario Summary shows the current and projected service levels, budget and expenditure profiles for the current Long Term Financial Plan balanced to the Asset Management**

## Overall Asset Provision - Funding Scenarios

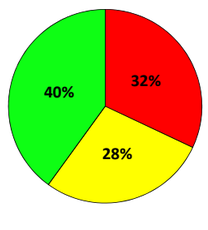
### Current Quality/Condition



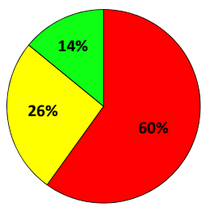

### 10 Year Quality/Condition - Scenario 2A



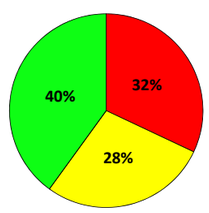

### Current Function



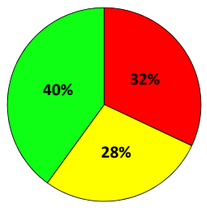

### 10 year Function - Scenario 2A




### Current Capacity




### 10 year Capacity - Scenario 2A




Good Fair Poor

## Funding Description

⇒ **Current condition/function/capacity**
⇒ **Scenario 2A – No additional local revenues**
⇒ **Scenario 2B - With Additional Local Revenues (GO Bond & Transient Lodging Tax)**

County drainage assets are not well documented or the risk well managed. Culverts and the assets that drain the roadways are buried underground assets. These assets are difficult to locate, inspect, maintain, renew and replace. 20% of the culvert inventory has been inspected. The estimated replacement value for culverts is $280,977,000. There are an estimated 3,300 culverts in the county with a combined length of almost 24 miles draining Tillamook County roads and their approaches. Recent culvert failure is leading to costly replacements and upgrades to meet dramatic and changing watershed conditions, and to comply with fish passage environmental requirements. Roads built in the late 1800s which were replaced in the 1950s and 1960s are reaching the end of their design life (between 25 and 60 years). Failure is occurring due to inadequate capacity.

The lifecycle and 10 year costs are what is determined that needs to be spent annually to maintain the current levels of service for the asset class and prevent further decline in service levels. The available funding reflects the budgeted funding allocation for the category. Only 12% of lifecycle needs are being funded.

## Summary of Asset Costs

### Long Term - Lifecycle Costs

*Life Cycle Gap it is estimated that there will be an average annual funding shortfall of* ***$4,473,000*** *each year over the whole of life of the Drainage asset class. This is based on the depreciation value from the Asset Register.*

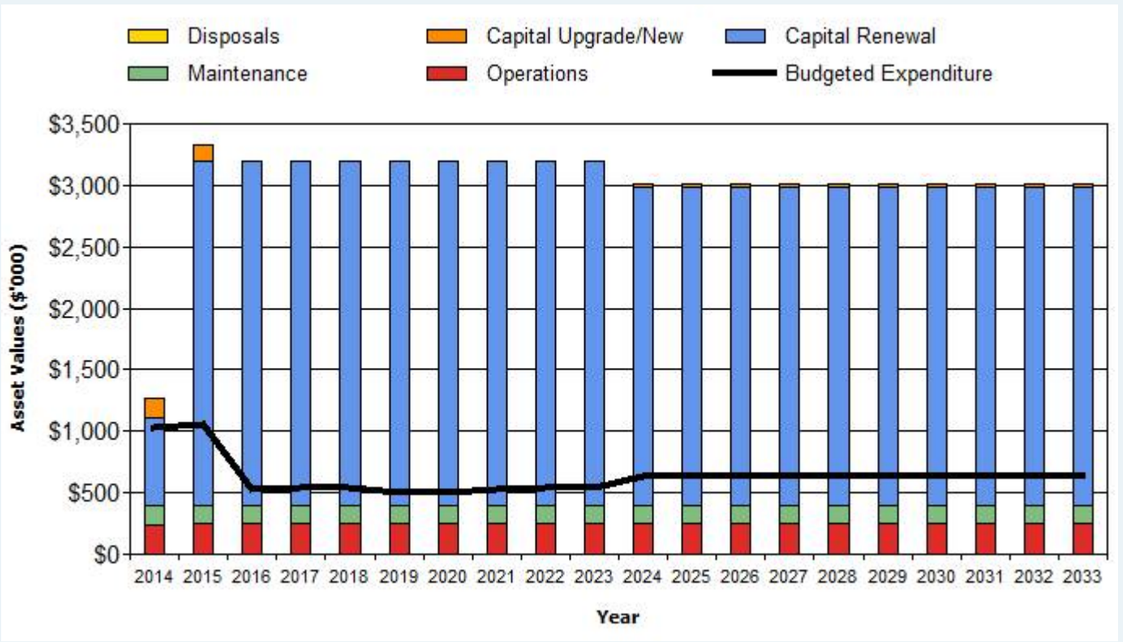
| | |
|---|---|
| **Lifecycle Cost (annually)** | **$5,076,000** |
| **Lifecycle Available Funding (annually)** | **$603,000** |
| **Lifecycle Gap (annually)** | **-$4,473,000** |
| **Lifecycle Financing Indicator** | **12%** |

### Medium Term - 10 Year Financial Planning Period

*It is estimated that there will be an average annual funding shortfall of* ***$2,382,000*** *each year over the next 10 years to maintain the current level of service for the Drainage asset class.*

| | |
|---|---|
| **10 Year Cost (annually)** | **$2,985,000** |
| **10 Year Available Funding (annually)** | **$603,000** |
| **10 Year Gap (annually)** | **-$2,382,000** |
| **10 Year Financing Indicator** | **20%** |

## 20 Year Projected Operating & Capital Expenditure




Source: NAMS PLUS2 Drainage No Add Local Revenue_S2_V1 (Where no bars displayed the projected expenditure for this funding type is $0)

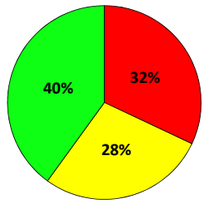
# Tillamook County: Drainage

## Funding Scenario 2B – With Additional Local Revenues (GO Bond for 10 years & Transient Lodging Tax)

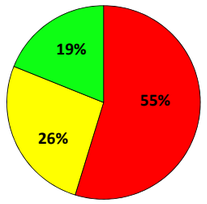
**This Funding Scenario Summary shows the current and projected service levels, budget and expenditure profiles for the current Long Term Financial Plan balanced to the Asset Management**

### Overall Asset Provision - Funding Scenarios

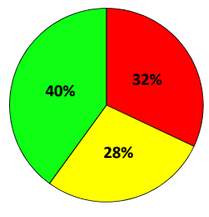
#### Current Quality/Condition



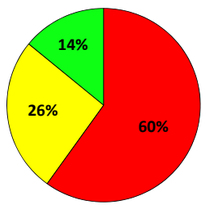

#### 10 Year Quality/Condition - Scenario 2B



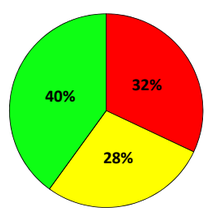

#### Current Function



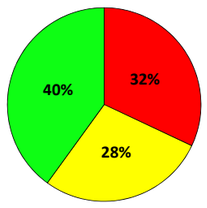

#### 10 year Function - Scenario 2B




#### Current Capacity




#### 10 year Capacity - Scenario 2B




Good Fair Poor

### Funding Description

⇒ **Current condition/function/capacity**
⇒ **Scenario 2A – No additional local revenues**
⇒ **Scenario 2B - With Additional Local Revenues (GO Bond & Transient Lodging Tax)**

County drainage assets are not well documented or the risk well managed. Culverts and the assets that drain the roadways are buried underground assets. These assets are difficult to locate, inspect, maintain, renew and replace. 20% of the culvert inventory has been inspected. Recent culvert failure is leading to costly replacements and upgrades to meet dramatic and changing watershed conditions, and to comply with fish passage environmental requirements. Roads built in the late 1800s which were replaced in the 1950s and 1960s are reaching the end of their design life (between 25 and 60 years). Failure is occurring due to inadequate capacity, changing environmental regulations, failure due to age, salt water, prior construction techniques and heavy vehicle loads. The lifecycle and 10 year costs are what is determined that needs to be spent annually to maintain the current levels of service for the asset class and prevent further decline in service levels. The available funding reflects the budgeted funding allocation for the category. Only 17% of lifecycle needs are being funded.

### Summary of Asset Costs

#### Long Term - Lifecycle Costs

*Life Cycle Gap it is estimated that there will be an average annual funding shortfall of **$4,198,000** each year over the whole of life of the Drainage asset class. This is based on the depreciation value from the Asset Register.*

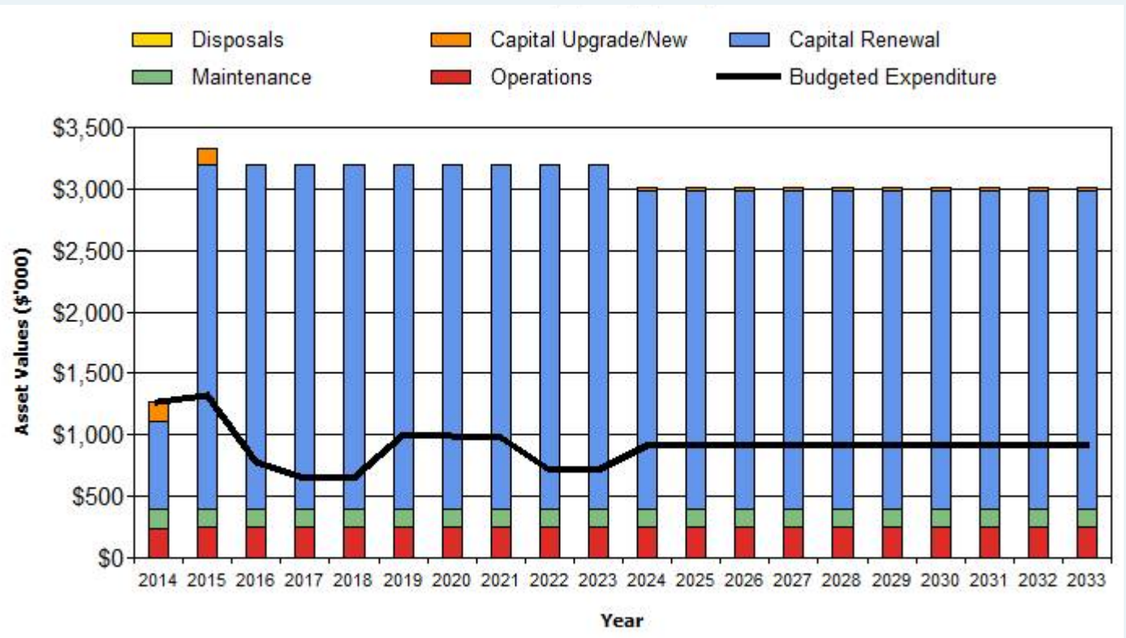
| | |
|---|---|
| **Lifecycle Cost (annually)** | **$5,076,000** |
| **Lifecycle Available Funding (annually)** | **$878,000** |
| **Lifecycle Gap (annually)** | **-$4,198,000** |
| **Lifecycle Financing Indicator** | **17%** |

#### Medium Term - 10 Year Financial Planning Period

*It is estimated that there will be an average annual funding shortfall of **$8,642, 000** each year over the next 10 years to maintain the current level of service for the Drainage asset class.*

| | |
|---|---|
| **10 Year Cost (annually)** | **$2,985,000** |
| **10 Year Available Funding (annually)** | **$878,000** |
| **10 Year Gap (annually)** | **-$2,107,000** |
| **10 Year Financing Indicator** | **29%** |

### 20 Year Projected Operating & Capital Expenditure




Source: NAMS PLUS2 Drainage_2014_With Add Local Revenue_S2_V1Where no bars displayed the projected expenditure for this funding type is $0)

# Tillamook County: Drainage

## Comparison of Funding Scenarios

### Outcomes & Strategic Objectives

An accessible, safe and well maintained county road network clear of surface storm water and flooding.

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.

### Management Activities

Surface storm water and flooding is managed by maintaining vegetated ditches that serve as drainage facilities, maintaining culverts in the condition necessary to handle their design capacity, and where culverts carry streams, in maintaining them in a condition to provide fish passage. Drainage management activities include:

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

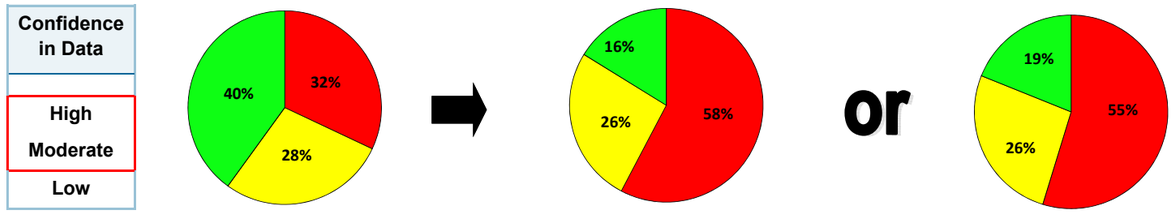
### Risks

- Outdated inventory & condition assessment
- Lack of mapped culverts
- Roads inundated by plugged or deteriorated culverts
- Inappropriately sized outfalls, beavers, undersized culverts, storm-water and salt water
- Inadequate staffing to manage vegetation
- Changing environmental regulations
- Failure due to age
- Poor construction techniques
- Climate change

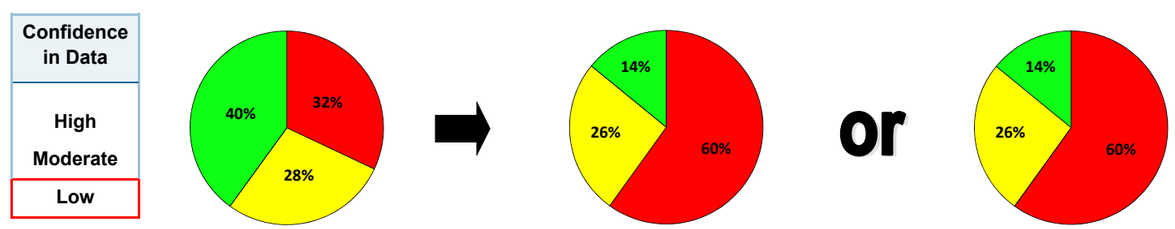
### Risk Management Strategy

- Develop inventory & planned inspection and cleaning program
- Reduce failed culverts as budget allows
- Reactive vegetation mowing and brush cutting
- Target critical culverts that partners will help fund
- Report to Board on program costs & needs
- Continue to develop partnerships to replace culverts to meet fish passage requirements

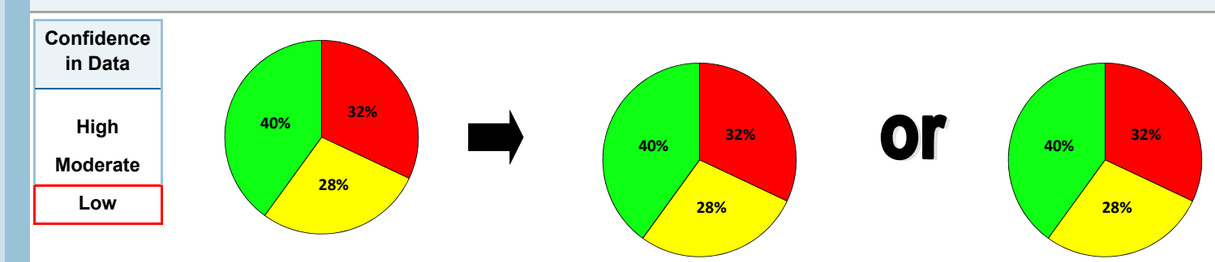
### Current Quality | Quality - Scenario 2A | Quality - Scenario




### Current Function | Function - Scenario | Function - Scenario




### Current Capacity | Capacity - Scenario | Capacity - Scenario




⇒ **Current condition/function/capacity**

⇒ **Scenario 2A – No additional local revenues**

⇒ **Scenario 2B - With Additional Local Revenues (GO Bond & Transient Lodging Tax)**

Good Fair Poor

### Assets in Good / Fair Condition

| 68% | ➡ | 42% | or | 45% |
|---|---|---|---|---|
| Current | | Scenario 2A | | Scenario 2B |

### Assets in Poor Condition

| 32% | ➡ | 58% | or | 55% |
|---|---|---|---|---|
| Current | | Scenario 2A | | Scenario 2B |

PBS & Jeff Roorda and Associates: SAL1 **V6 140313**

# Dashboard Document Control

| Document ID: Tillamook County - Drainage | | | | | |
|---|---|---|---|---|---|
| **Version No.** | **Creation Date** | **Revision Details** | **Author** | **Reviewer** | **Approver** |
| V1 131209 | 28 Jan 2014 | Creation of Dashboard with information provided by PBS and Tillamook County | CL 15 Jan 2014 | JR 28 Jan 2014 | PBS |
| V2 140207 | 29 Jan 2014 | Applied formatting edits only, no data changes made.; (4 Feb 2014) applied edits provided by PBS via email on 1 Feb 2014. Updated risk and responses and review (7 Feb2014) | KA, CL | PBS, JRA | |
| V3 140213 | 12 Feb 2014 | Updates to C/F/C and NAMS outputs. Edits as per comments from PBS (received 11 Feb 2014). Minor edits to funding scenario description as per PBS comments. | CL | PBS | |
| V4 140219 | 17 Feb 2014 | Applied multiple formatting, and data changes per "Review with Client" edit document provided. Updated pie charts and figures to reflect the 2 scenarios | KA, CL | | |
| V5 140307 | 7 Mar 2014 | Update capacity pie chart to reflect no change over 10 years | CL | | |
| V6 140313 | 13 Mar 2014 | Final edits following client review—font size & color | PBS | | |