



Road Map for the Future - County-Owned Roads

**The Future of Coconino County's
Transportation Services**

**Board of Supervisors
December 4, 2012**

Today's Excursion

- Review Framework
- Review Trip Planner
- Focus Today:
 - County-Owned Roads
- Maintenance
- Financial
- Conclusions

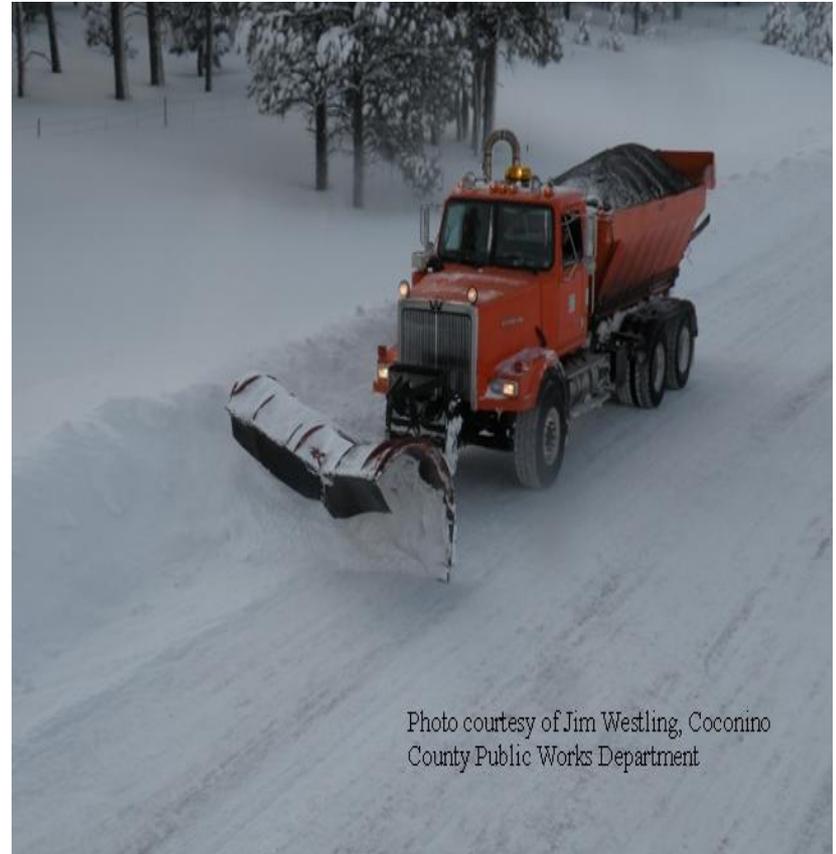


Photo courtesy of Jim Westling, Coconino County Public Works Department

Framework for the Journey



Framework for the Journey

- **Our Largest Financial Asset – The County-Owned Roads, which are Valued at About \$100 Million. (Today’s discussion does NOT include BIA or Forest Service Roads.)**
- **Road Assets are Deteriorating Rapidly and Need Major Sustainable Investment – About 25% - 35% of Major Paved Roads are in Severe or Poor Condition**
- **Major Revenue Sources Down Dramatically**
 - **Highway User Revenue Fund - Down 25%; at 1998 Level Largely Resulting from State Shifts**
 - **Vehicle License Tax (VLT) – Down 27%**
 - **Secure Rural Schools Funding Expired Sept. 30**

Framework for the Journey

- **Serious Structural Deficit is Eliminating Transportation Fund Balance**
 - **Cost Reductions, Lack of Investment & Grants Provided Short-Term Ability to Maintain Fund Balance**
- **County Resident Survey Shows Residents Highly Value Road Services & Emergency Services**
- **Roads Crucial for Economic Vitality, Citizen Safety & Quality of Life**
- **County at Crossroads – Direction Must be Set Now to Achieve Sustainable, Long-Term Transportation Services**

Framework for the Journey

- **What is Our Destination?**
- **Continue Applying Three-Prong Financial Approach:**
 - **Identify Further Efficiencies in Operations to Reduce Costs & Align Service Levels with Revenues**
 - **Establish Prudent Reserves**
 - **Consider Revenue Options**
- **Create Processes & Valid Data that Fuel Good Investment Decisions**
- **Educate Our Constituents About the State of the County's Transportation System**
- **Make Difficult Decisions Regarding Transportation "Equation" – Level of Investment, Service Levels, Revenues**

Framework for the Journey

- **Why Now?** *County at Critical Juncture*
- **Structural Deficit in Operations Averages \$4.4M/Year over the Next 10 Years (does not include capital expenditures)**
- **Transportation Fund Balance Expected to be Exhausted within the Next Five Years**
- **Funding Landscape Transformed**
 - **HURF Funding Reduced and Susceptible to Market Forces & State Legislative Reductions**
 - **Secure Rural Schools Funding Expired**

Trip Planner

Series of Board Work Sessions:

- **October Work Session:**
 - Discussed Framework & Process for Achieving Our Destination
 - Setting the Foundation for the Rest of the Journey
- **Today's Work Session – December 4:**
 - The County Roads “Equation:” Services, Costs & Revenues

Trip Planner

- **3rd Work Session – January 8:**
 - Forest Service & BIA Roads “Equations:” Services, Costs & Revenues
- **4th Work Session - January 22:**
 - Financial Road Map
 - Funding Sources
 - Map 21
 - Grants and Funding Processes (FMPO & NACOG)
 - Revenue Options
 - Efficiency Improvements/Cost Reductions

Trip Planner

- **5th Work Session – February 19:**
 - **Financial Road Map:**
 - **10 - 20 Year Financial Planning Scenarios – Discuss Potential Financial Plans for Balancing Service Levels & Revenues For Creating Sustainable, Long-Term Transportation Services**
- **6th Work Session – March 5:**

Finalizing the Road Map for Sustainable, Long-Term County Transportation Services

County-Owned Roads



Recap of Key Facts: County-Owned Roads

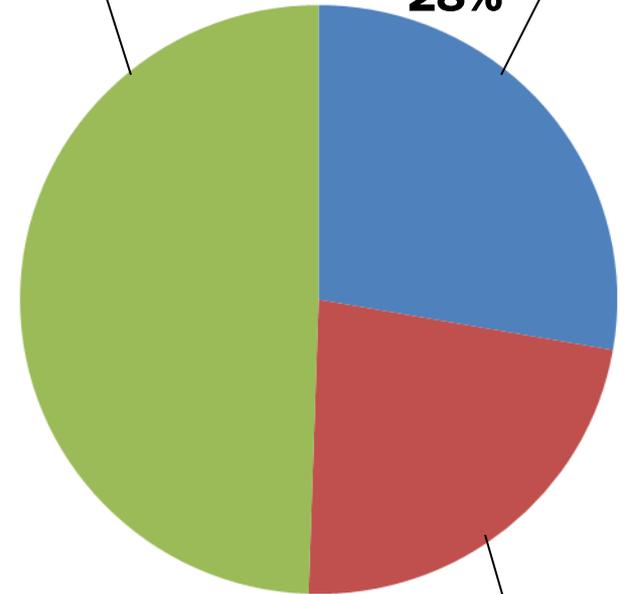


Road Ownership

- 930 Total Miles Maintained:
- 460 Miles Statutorily Owned & Maintained by the County
- 258 Miles of Forest Service Roads Maintained through Schedule A Agreement (Not Mandated)
- 212 Miles of Navajo Nation Roads Maintained Through IGA with BIA (Not Mandated)

County -Owned,
460 Miles, 49%

USFS,
258 Miles,
28%



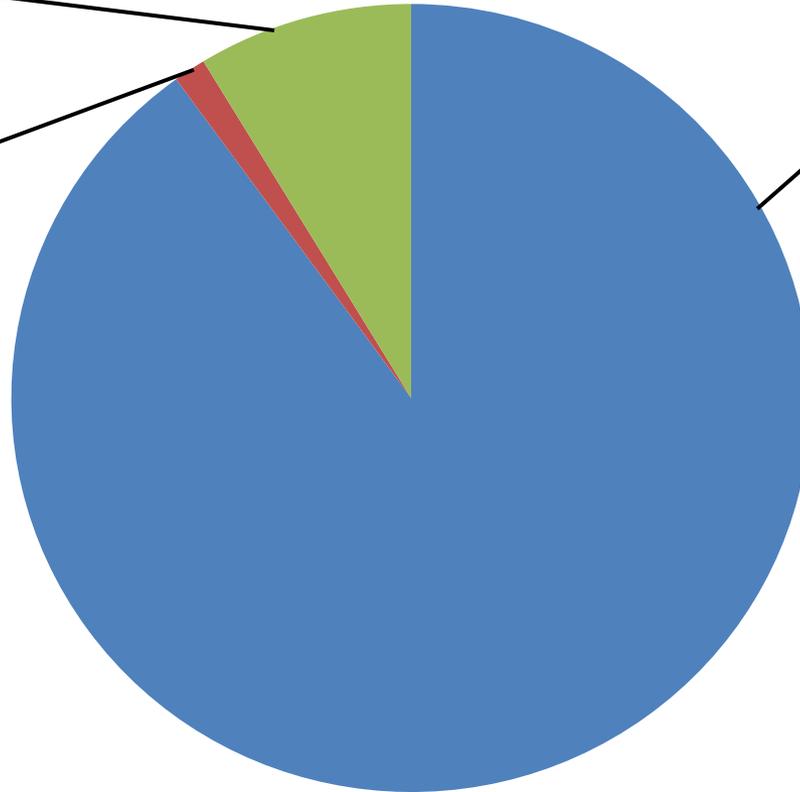
BIA,
212 Miles, 23%

County-Owned Roads Classification

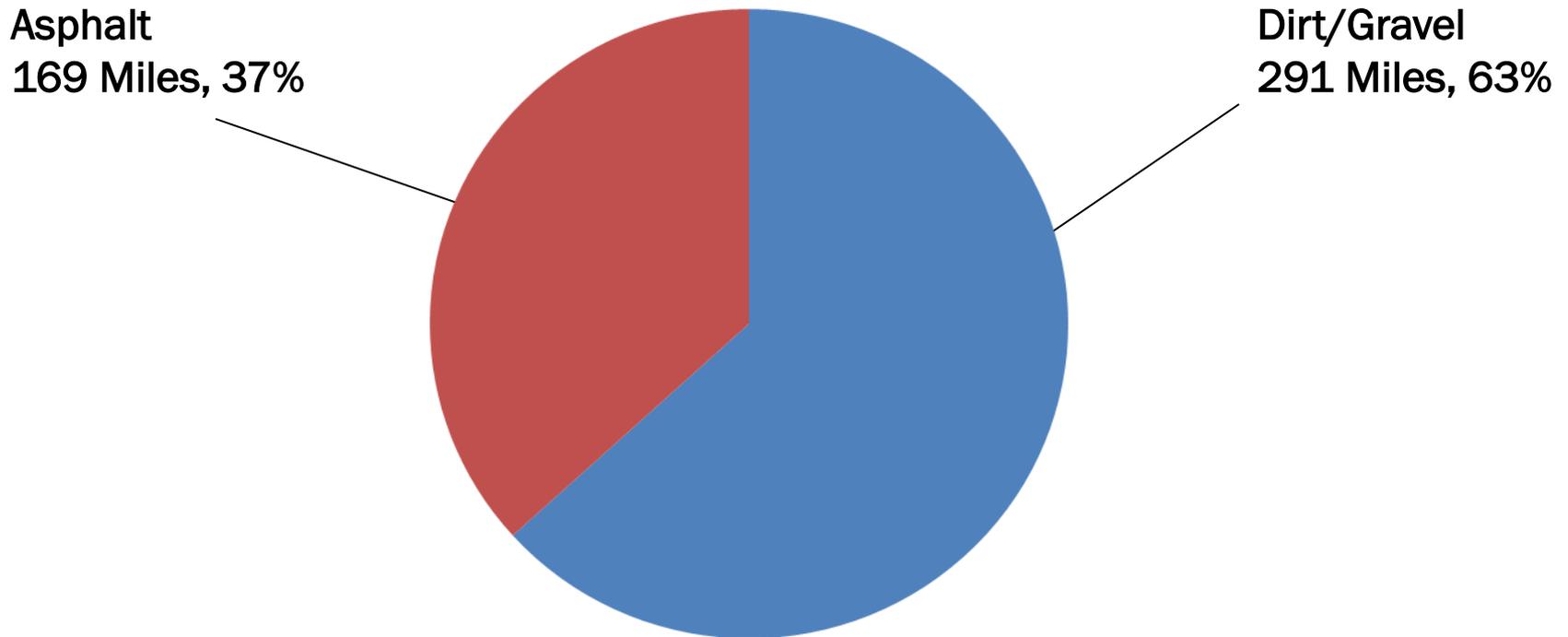
Minor Collector
40 Miles, 9%

Major Collector
6 Miles, 1%

Local
414 Miles, 90%



County-Owned Roads Road Surface



***Where Does the County Derive the
Authority to Maintain County-
Owned Roads?***

Arizona Statutory Authority to Maintain County Roads

- **Arizona Revised Statutes Title 28-6705 states “The board of supervisors may spend public monies for the maintenance of public roads and streets other than legally designated state and county highways located without the limits of an incorporated city or town. Before spending public monies under this section, the roads or streets shall be both:**
 - **Laid out, opened or constructed without cost to the county**
 - **Completed pursuant to a plat approved pursuant to sections 11-802 and 11-822 and in accordance with standard road engineering specifications adopted by the board of supervisors to ensure uniform compliance**

Arizona Statutory Authority to Maintain County Roads

- **It also states: ...the board of supervisors may spend moneys to add rock products, gravel and processed materials to the base of the roads and streets. Petroleum based or nonpetroleum based products may be used in the maintenance and repair of unpaved roads, alleys and shoulders identified pursuant to section 9-500.04 or 49-474.01 or unpaved roads, alleys and shoulders in any county...**

Maintaining County-Owned Roads



Maintaining County-Owned Roads

- **Dirt/Gravel Road Maintenance Practices**
 - **Dirt/Gravel Road Material Acquisition**
- **Paved Road Maintenance Practices**
- **Winter Road Maintenance Service**
- **Roadway Amenities**
- **Financial Aspects of County-Owned Road Maintenance Services**

County Dirt/Gravel Road Maintenance

- Blading
- Frequency (Service Level)
- Adding Road Material
- Drainage - Ditch & Culvert Cleaning



Current Strategy: Place More Material on Dirt/Gravel Roads = Improves Road Surface & Reduces Frequency of Blading = Reduced Cost per Mile & Improved Driving Experience

Dirt/Gravel Road Material Acquisition



Dirt/Gravel Road Material Acquisition

- **Two Options – Produce and/or Purchase**
- **Produce - Material Pits**
 - **Map of Existing Pits**
 - **Governed by Mine Safety**
 - **Inspected by State and Federal Governments**
 - **Frequent Training Required**
 - ***Most Current Pits Owned by the Forest Service***
- **Purchase Material**

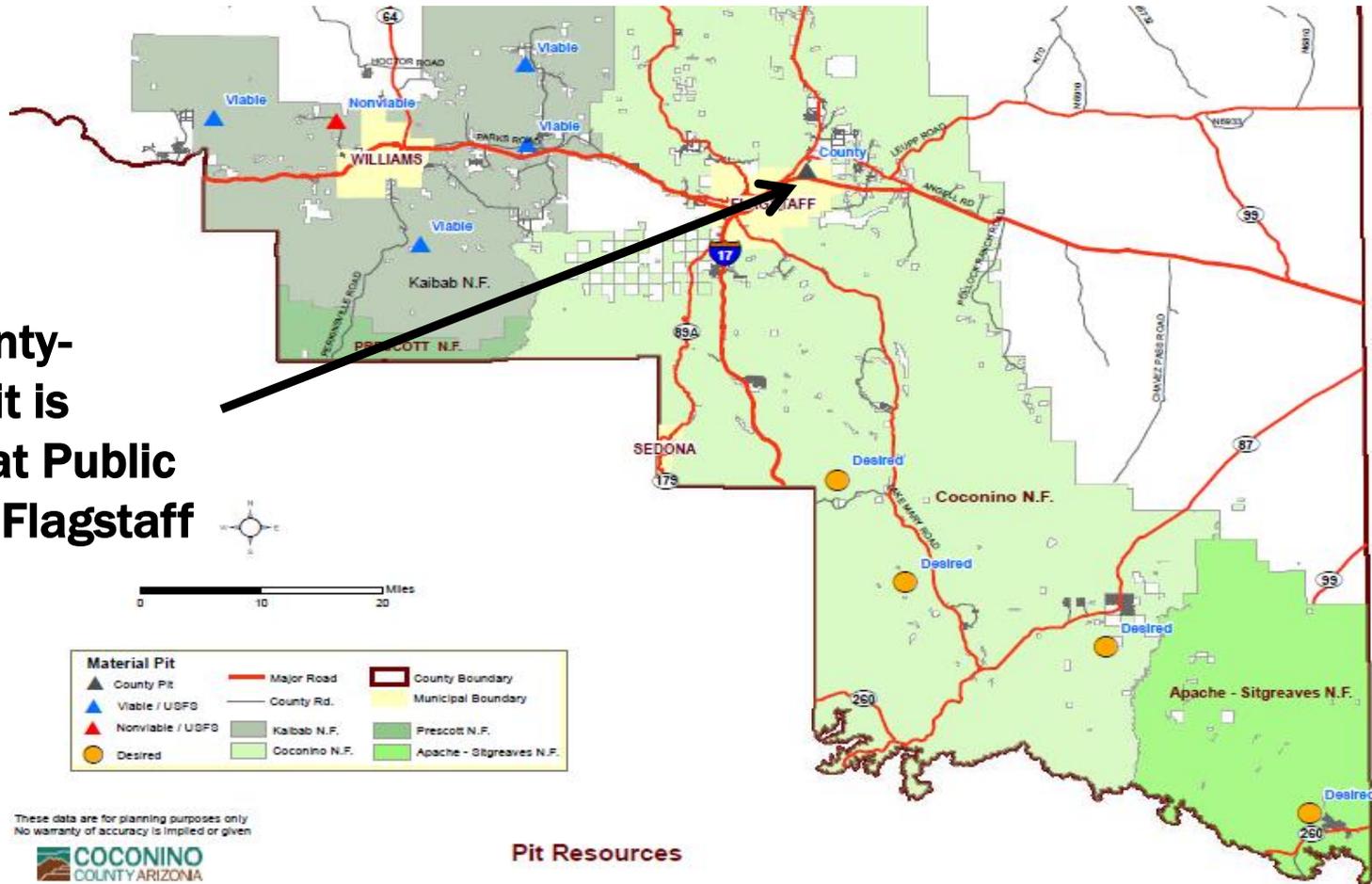
Dirt/Gravel Road Material Acquisition

Key Issue for Dirt/Gravel Roads:

- **Need Additional Sources of Materials at Specific Locations to Improve Service and Reduce Transportation Cost (Labor and Fuel Costs)**
- **Need to Perform a Cost/Benefit Analysis of Material Production vs. Purchase for Each Location**

Dirt/Gravel Road Material Acquisition

**Only County-
Owned Pit is
Located at Public
Works in Flagstaff**



COCONINO
COUNTY ARIZONA

Pit Resources

COCONINO
COUNTY ARIZONA

County Paved Road Maintenance



County Paved Road Maintenance

Practices:

- Fog Sealing
- Crack Sealing
- Chip Sealing
- Overlaying
- Pothole Patching
- Drainage/Ditch Cleaning
- Signage
- Striping
- Shoulder Maintenance

Frequency:

None in 7 years
Done Prior to Chip Seal
Ten Year Plan
<1 % of Roads per Year
Done as Needed
Done as Needed
Done as Needed
Annually
Done as Needed

County Paved Road Maintenance

- **County Paved Road Maintenance Focus is Chip Sealing**
- **Ten Year Plan Updated Annually**
- **Spend County's Limited Budget on Chip Sealing to Cover the Most Roads with Limited Funds**
- **FY2011 \$27,000 per Mile for 21 miles**
- **FY2012 \$28,000 per Mile for 32 miles**
- **\$500,000 to \$900,000 Investment Annually**

County Paved Road Maintenance

Chip Sealing:

- **Currently Chip Sealing About 10% of County Roadways per Year**
- **Chip Sealing Performed by Outsourced Contractors and In-House Resources**



County Paved Road Maintenance

Fog Sealing:

- **No Fog Sealing in the Last 7 Years and Historically County Completed 10 Miles per Year**
- **Most Effective on Newly Paved Roads**
- **Fog Sealing Performed by Outside Contractors**

County Paved Road Maintenance

Overlays of Paved Roads:

- **Overlays Have Been Infrequent and Most Recently Funded by Grants**
- **Historically Overlaid about 1% of Paved Roads**
- **Example: Route 66 – ARRA Funded**

Pavement Preservation Treatments

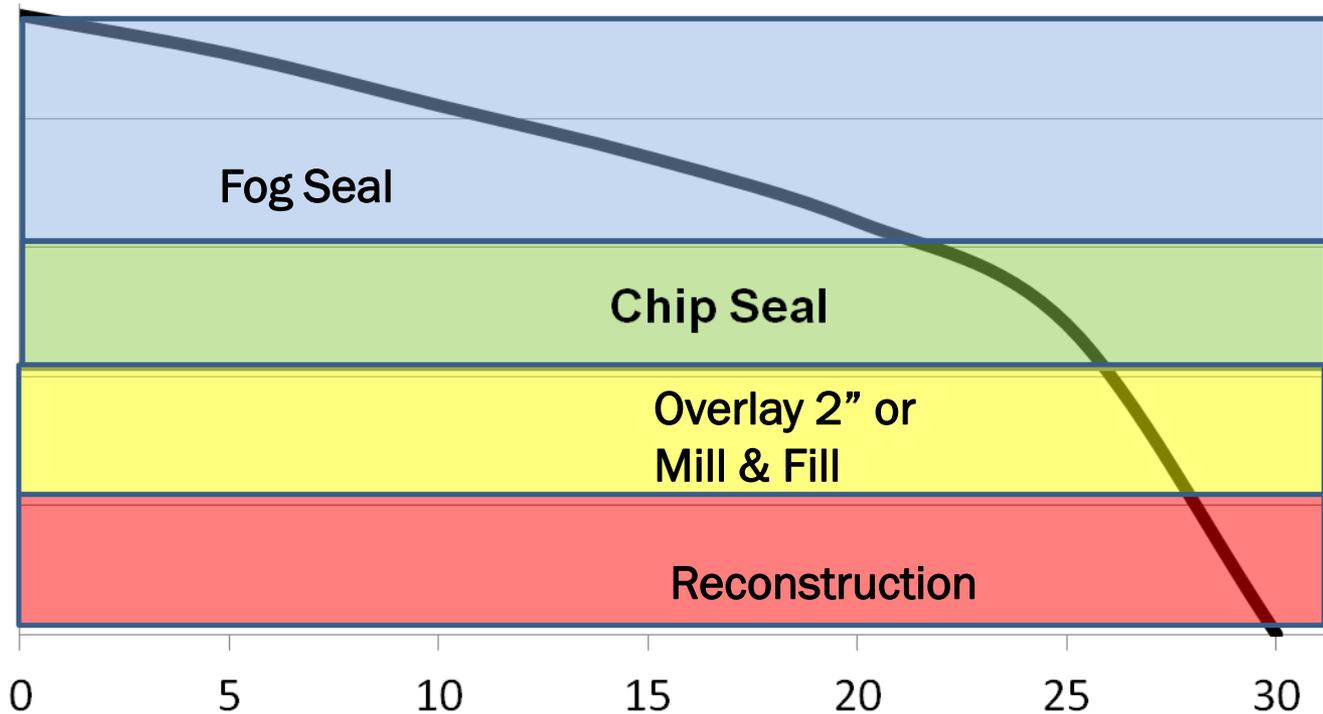
Road
Condition:

Good

Fair

Poor

Severe



Service Life in Years

Pavement Maintenance Strategies & Costs

	Fog Seal	Chip Seal	Overlay (2")	Mill & Fill	Reconstruction/ Public Safety/ Growth
Cost Per Mile	\$ 3K - \$ 5K	\$ 30K- \$ 35K	\$ 300K- \$ 500K	\$ 600K- \$ 800K	\$1 million – \$5 million
Pavement Life Extension (years)	0-2	3-7	10-20	10-20	15-30
Examples of Strategies:	I-40 near Buffalo Range	Kachina Village	Fourth Street in Flagstaff	South Half of Lake Mary Road (FH3)	Campbell Avenue and Pinewood Boulevard

County Paved Road Maintenance

Recommend Greater Investment in County Paved Roads:

- **Recommend: Increase Chip Sealing to 15% of Paved Roads per Year**
- **Recommend: Ramp-Up Fog Sealing to 10 - 20 Miles of Road per Year as Overlays Increase**
- **Increase Crack Fill (not just prior to chip sealing)**
- **Increase Pavement Mill and Fill and Overlays from Less than 1% to Closer to 4% per Year**
- **Increase Road Shoulder Maintenance**

County Paved Road Maintenance ***(Some Identified Needs)***

<u>ROAD</u>	<u>LENGTH</u>	<u>ADT</u>	<u>COST</u>
■ Flag Meadows Unit 1	2 miles	500	\$350K
■ Pinewood Blvd	1 mile	4,800	\$600K
■ Kachina Trail	1 mile	7,000	\$800K
■ Double A Ranch Rd	5 miles	200*	\$2.5M
■ Leupp Rd	5 miles	3,000	\$2.6M
■ Koch Field Road	1 mile	2,300	\$500K

* High Level of Commercial Loads

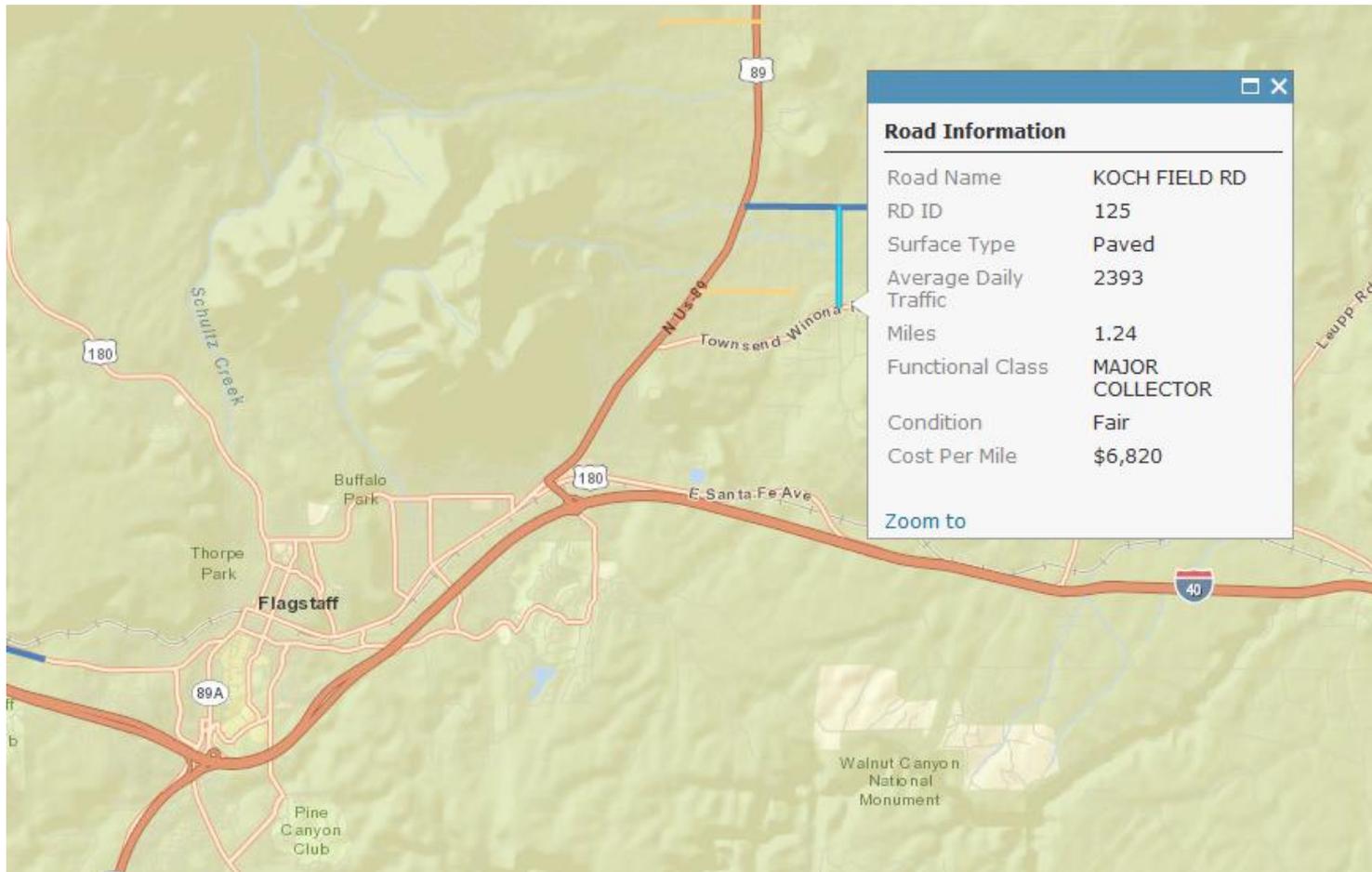
See Handout for Greater Detail

Overall County Road Maintenance

Other Road Maintenance Recommendations:

- Increase Material Production to Reduce Blading Frequency (lowers cost & improves road surface)
- Evaluate Converting Some Roads from Asphalt to Dirt/Gravel
- Evaluate Returning Some Roads to Private Maintenance Through Districts or Other Mechanisms

INTERACTIVE MAP



Winter Road Maintenance



Winter Road Maintenance

- **Important & Highly Valued Service**
- **County's Goal is to Keep Roads Safe and Passable**
- **Snow Removal Priority is "Greatest Impact" First**
- **After Each Storm, Crews Perform Snow Cleanup Activities Pushing Snow Back and Cindering for Traction**

Winter Road Maintenance

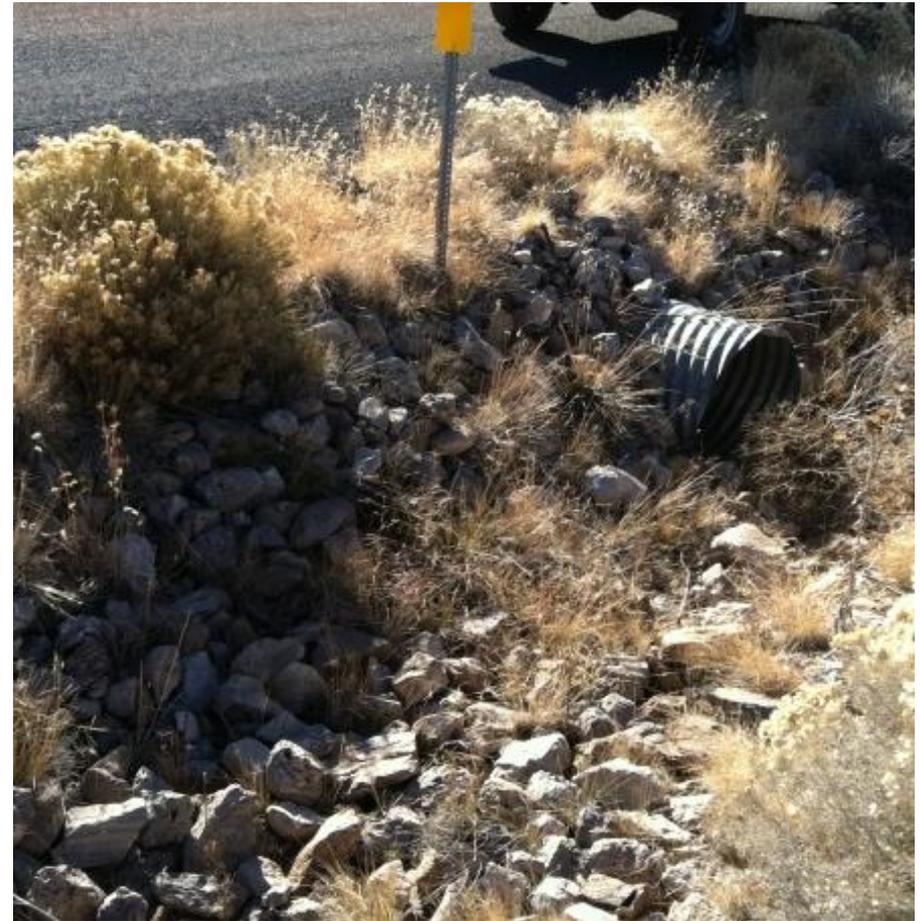
- **Costs are Sorted by Snow Plow Route not Road – Routes are Comprised of Several Roads**
- **Winter Maintenance is 17% of Total Road Maintenance Costs – This Includes USFS Roads**
- **\$1.5 - \$2 Million – Typical Cost to Plow and Cinder during a Winter Season**
- **A Rough Calculation for County Only Winter Road Maintenance is \$1.3 Million**
- **Total Cost Depends on Severity of Winter**
- **Cost per Mile Varies by Location, Elevation, and Housing Density of the Route**

Other Road Maintenance Related Activities



Ditches & Culverts

- **Roadside Ditches
Convey Water and
Preserve the Roads**
- **Cross Road Culverts
Pass Water Under the
Road and Preserve the
Road**
- **Cross Culverts are the
Responsibility of the
County**



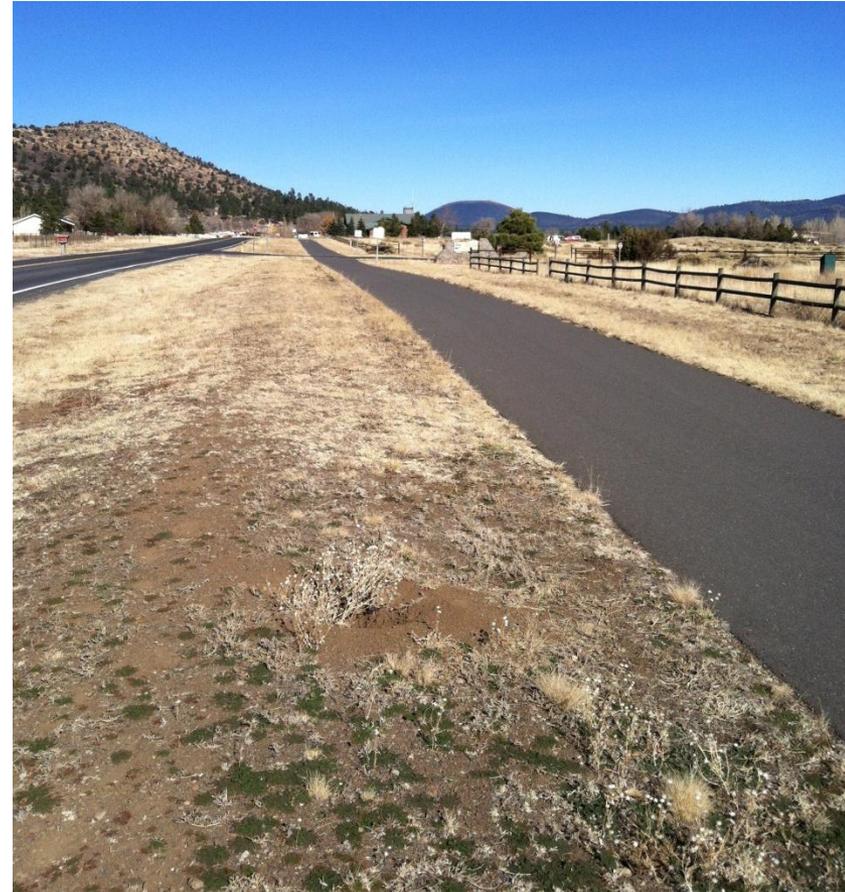
Ditches & Culverts

- **Driveway Culverts**
Ensure County
Roadway Ditches are
Not Obstructed
- **Driveway Culverts**
Allow Access and Are
the Responsibility of
the Property Owner



Transportation Amenities

- Sidewalks
- Multi-Use Paths
- Pedestrian Bridges
- Currently No Resources in the Budget or Standards for Constructing/Maintaining Amenities
- Need Policies to Transfer Ownership to Appropriate Parties



County-Owned Roads: Financial Information



Major Revenue Sources that Fund County-Owned Roads

Highway User Revenue Fund (HURF) & Vehicle License Taxes (VLT):

- These are THE Major Sources of Funding to Maintain the 460 Miles of County-Owned Roads
- The County Received \$9.6 million in Recurring Revenue from HURF/VLT in FY12
- The County Subsidizes Forest Service Roads with \$1 Million of HURF/VLT Funding per Year
- Leaving \$8.6 Million Available for County Roads

County-Owned Roads: Financial Information

■ HURF Revenue Available	\$8.6 Million
■ Engineering/Const. Mgt.	-\$1.1 Million
■ Chip Sealing	-\$467,000
■ Administration	-\$1.0 Million
■ County Indirects and Fund Transfers	-\$1.2 Million
	<hr/>
■ HURF Revenue Remaining	\$4.8 Million

County-Owned Roads: Financial Information

- HURF/VLT Revenue for Road Maintenance Functions **\$4.8 Million**
- County Road Maintenance Actual FY 12 Expenditures **-\$5.7 Million**
- **FY12 Operating Deficit** **\$900,000**
- Deficit is Managed by Not Filling Vacancies & Deferring Equipment Replacement

County-Owned Roads: Financial Information

Breakdown of Maintenance Expenses on County Roads Only in FY 12:

■ Road Maintenance Operations	\$3.5 Million
■ Road Maintenance Equipment	+\$1.9 Million
■ Maintenance & Fuel	
■ Sign/Striping	+\$300,000
	<hr/>
■ Total	\$5.7 Million

Road Maintenance Costs

- **Road Maintenance Approved FTE's:**
 - 63.0 Road Maintenance Staff (10% Vacancy)
 - 15.5 Fleet Maintenance Staff (6% Vacancy)
 - 4.0 Sign/Striping Staff (0% Vacancy)

- **Equipment Inventory:**

■ Trucks	34
■ Heavy Equipment	37
■ Pickups	64

Investment & Efficiency Strategies

Employees are Most Valuable Asset

- **Address Compensation & Retention Issues Consistent with County Initiatives**
- **Hold 10% to 15% Operator Positions Vacant While**
 - **Determine Compensation Requirements for Market Competitiveness**
 - **Evaluate Workload Efficiencies**
 - **Determine Level of Investment in Roads & Level of Services**

Investment & Efficiency Strategies

Equipment Investments:

- **Already Extended Equipment Replacement Life Cycle**
- **Balance Equipment Utilization Periodically**
- **Evaluate Fleet Size**

Recommended Road Investments (Annual Approximate Figures)

- Increase Chip Seal \$500,000
- Increase Crack Fill \$25,000
- Resume Fog Sealing \$30,000
- Increase Pavement \$2 Million
- Mill and Fill and Overlays
- Perform Road Reconstruction \$TBD

**Approximate Total Additional Capital Investment
= \$2 - \$3 Million per Year**

Conclusions



Conclusions

- **Focused Today on County-Owned Roads**
- **In General, Current Funding Supports Adequate Maintenance of County-Owned Dirt/Gravel Roads**
- **Current Funding Does *NOT* Support Adequate Maintenance of County-Owned Paved Roads**
- **Other Key Issues Must be Evaluated and Addressed Like Compensation & Most Efficient Labor & Equipment Utilization**

Conclusions

- **Address Operational Deficit & Increased Capital Needs**
- **Continue Applying Three-Prong Financial Approach:**
 - **Identify Further Efficiencies in Operations to Reduce Costs & Align Service Levels with Revenues**
 - **Establish Prudent Reserves**
 - **Consider Revenue Options**

Discussion Topics of Future Work Sessions



QUESTIONS & COMMENTS