

Watershed Model Issues

***Presentation to
Water Resources Technical Committee***

May 13, 2010

Watershed Model Timeline

- November 2009 – Phase 5.2 output available
- January 2010 – Original deadline for producing 5.3 output
- March 2010 – Preliminary 5.3 output available
- March – May 2010 – Major issues identified; debate over whether to use corrected version
- June 2010 – Version “5.4” calibration to start; call for state data needed for calibration inputs
- ??? – 5.4 output available (in time for Phase II WIPs)

Phase 5.3 Issues Identified to Date

- Urban Issues – to be addressed in Version “5.4” and used in Phase II WIPs
 - Undercounts urban acreage (particularly pervious urban)
- Ag Issues – to be addressed in Version “5.4” and used in Phase II WIPs
 - Nutrient management
 - Manure transport
 - Excess manure

Phase 5.3 Issues - continued

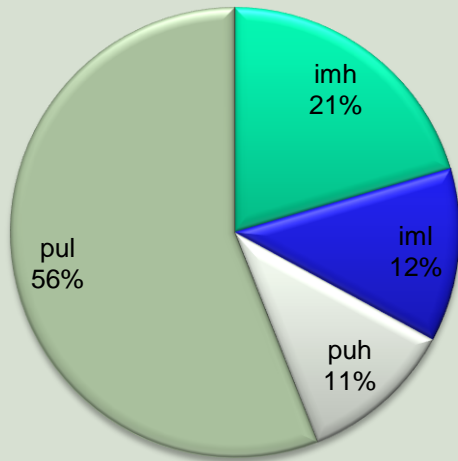
- Issues that may or may not be dealt with in Version “5.4”
 - E3 definitions for urban, ag, nonsignificant industrial dischargers, and CSOs
 - Ag - Pasture management
 - Forestry BMP definitions

Comparing WSM 5.3 to WSM 5.2 Output Urban Impact in COG Region

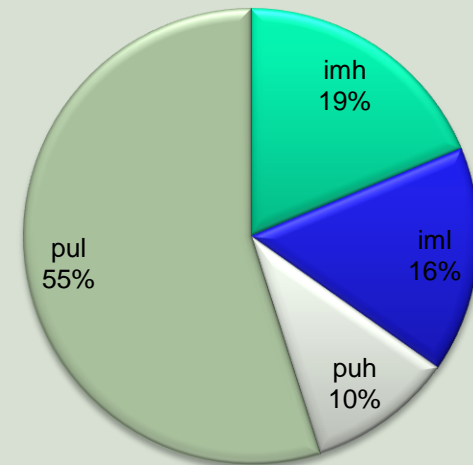
- 5.3 TN

- 5.2 TN

P5.3 2009 Progress_AA –
COG Urban Delivered TN Loads



P5.2 2008 Progress –
COG Urban Delivered TN Loads



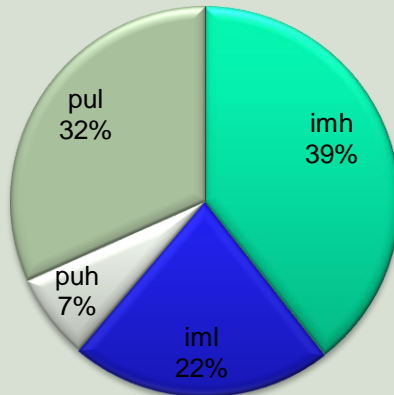
	P5.3 2009 Progress_AA	P5.2 2008 Progress
Urban	del_TOTN(lbs/year)	del_TOTN(lbs/year)
imh	838,060	1,138,815
iml	509,189	975,608
puh	456,267	628,253
pul	2,294,802	3,337,698
Total	4,098,318	6,080,374

Comparing WSM 5.3 to WSM 5.2 Output Urban Impact in COG Region

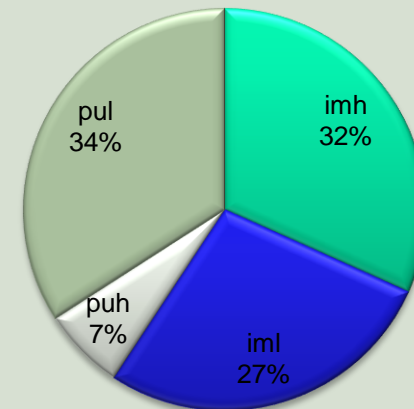
- 5.3 TP

- 5.2 TP

**P5.3 2009 Progress_AA –
COG Urban Delivered TP Loads**



**P5.2 2008 Progress –
COG Urban Delivered TP Loads**



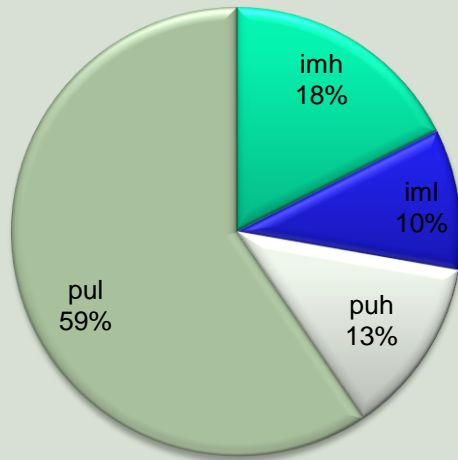
	P5.3 2009 Progress_AA	P5.2 2008 Progress
Urban	del_TOTP(lbs/year)	del_TOTP(lbs/year)
imh	137,266	156,528
iml	75,622	136,126
puh	24,991	32,741
pul	110,282	168,209
Total	348,161	493,604

Comparing WSM 5.3 to WSM 5.2 Output Urban Impact in COG Region

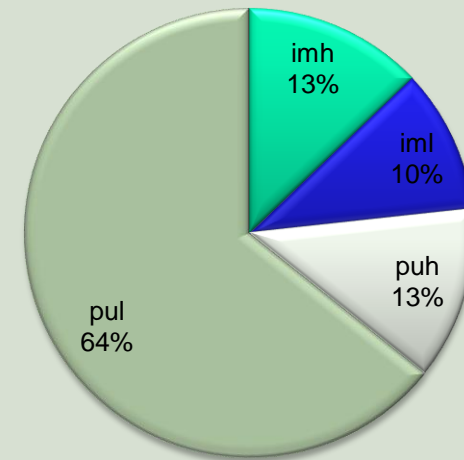
- 5.3 acreage

- 5.2 acreage

P5.3 2009 Progress_AA - COG Urban Acreage



P5.3 2008 Progress - COG Urban Load Acreage

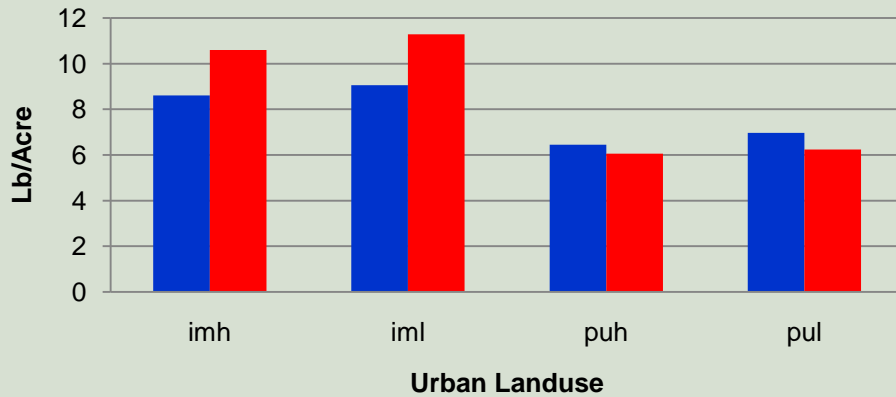


	P5.3 2009 Progress_AA	P5.2 2008 Progress
Urban	del_acres	del_acres
imh	97,410	107,363
iml	56,220	86,436
puh	70,730	103,678
pul	329,320	534,906
Total	553,680	832,383

Comparing WSM 5.3 to WSM 5.2 Output

Urban Impact in COG Region

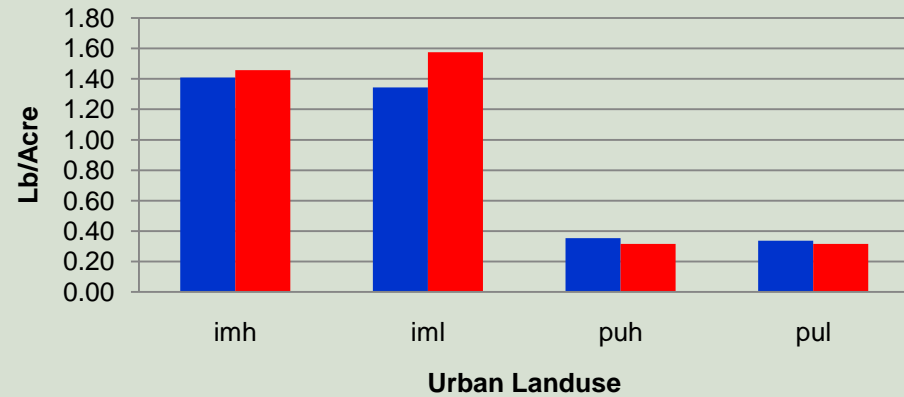
TN Loads Lb/Acre



■ P5.3 2009 Progress_AA

■ P5.2 2008 Progress

TPLoads Lb/Acre



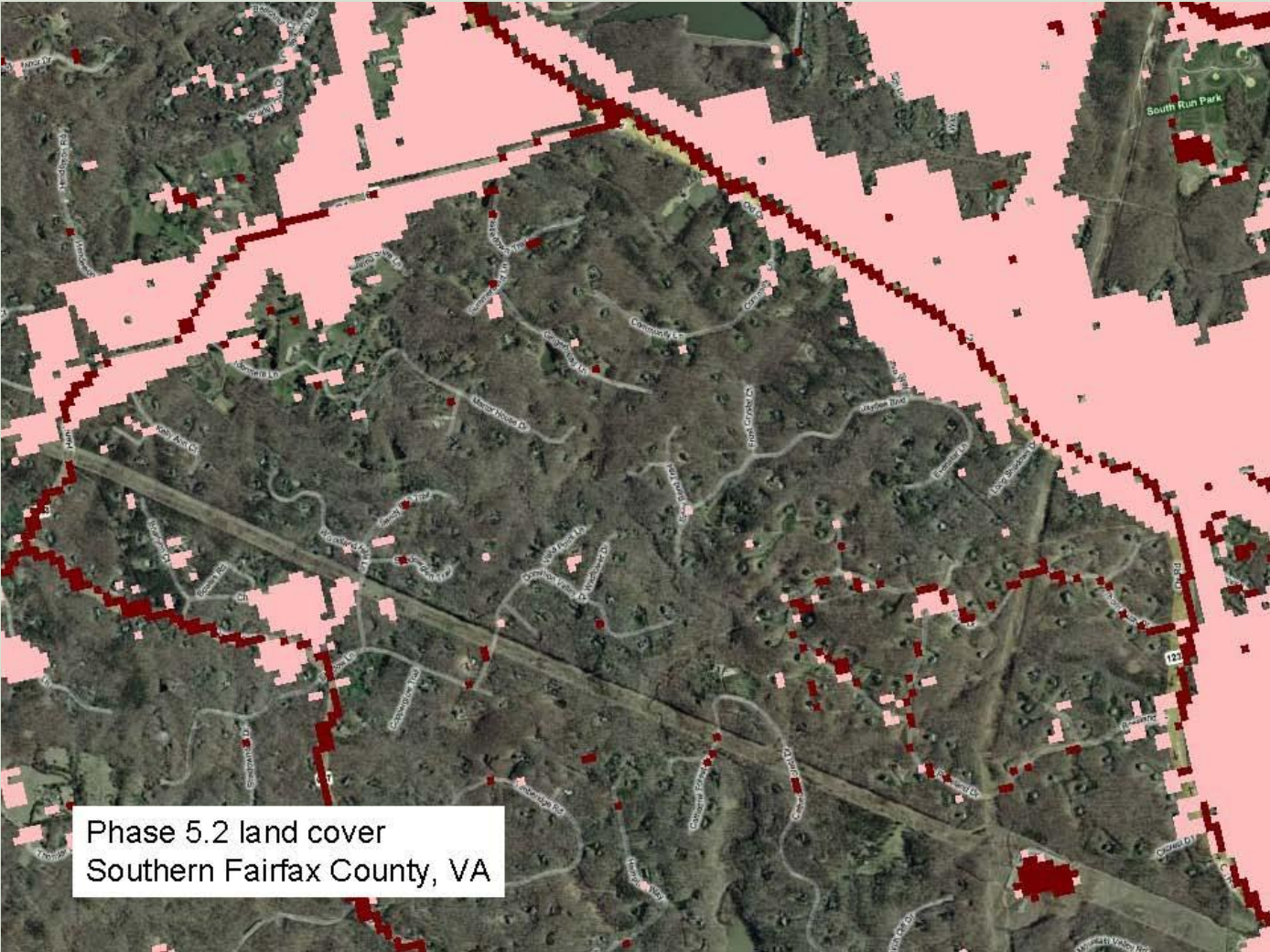
■ P5.3 2009 Progress_AA

■ P5.2 2008 Progress

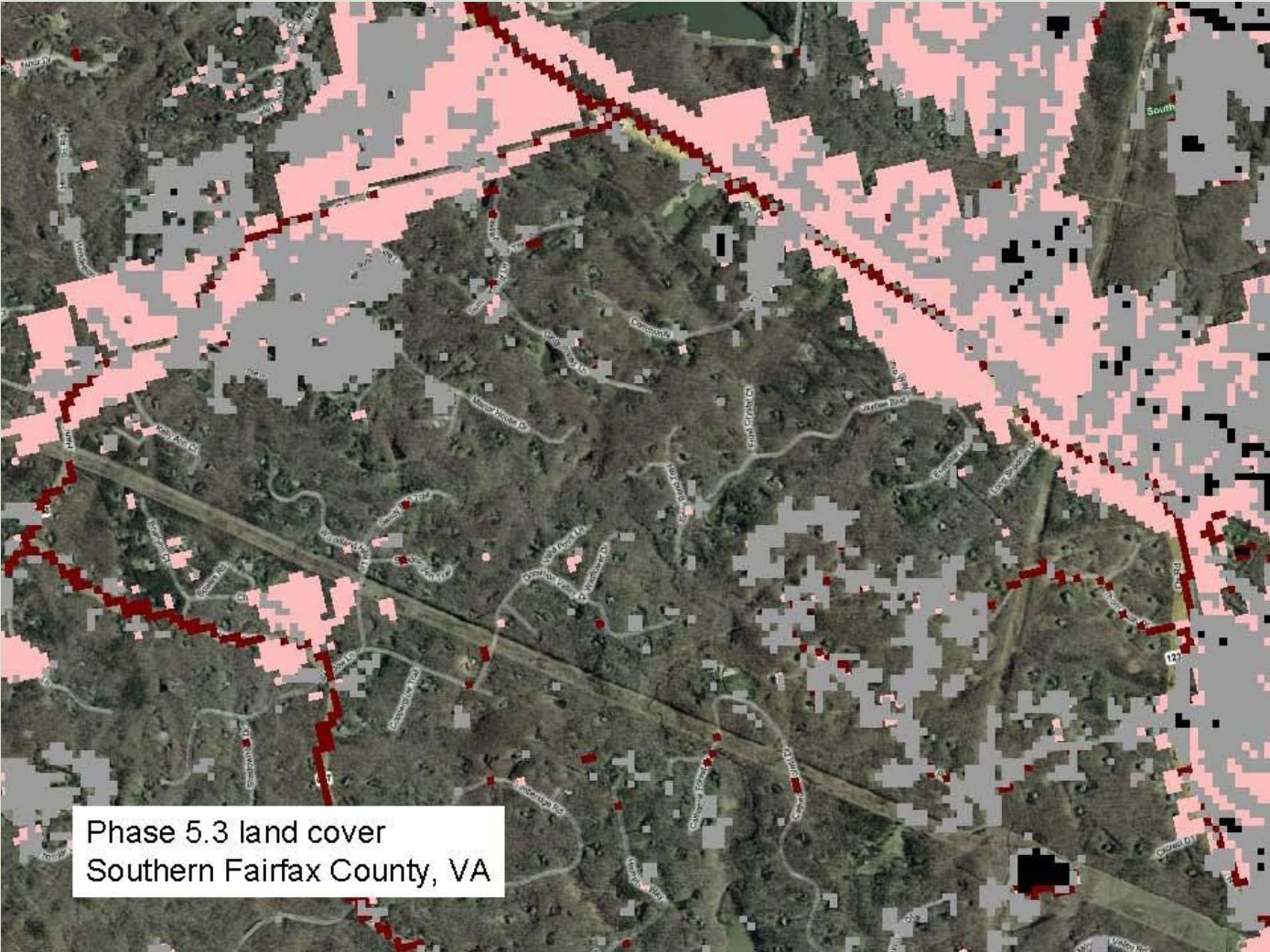
	P5.3 2009 Progress_AA	P5.2 2008 Progress
Urban	TN LB/ACRE	TN LB/ACRE
imh	9	11
iml	9	11
puh	6	6
pul	7	6

	P5.3 2009 Progress_AA	P5.2 2008 Progress
Urban	TP LB/ACRE	TP Lb/Acre
imh	1.41	1.46
iml	1.35	1.57
puh	0.35	0.32
pul	0.33	0.31

Watershed Model Land Use Adjustments



Watershed Model Land Use Adjustments



Watershed Model Land Use Adjustments

