

Livestock Estimates and Sources	Cattle				Chickens			Turkeys			Horses	Ewes	Goats					
	M	D	H		Layers	Broilers	Broiler Breeders	Toms	Hens	Breeders				Area	Acres ('1Ha = 2.47105 acres)	Irrigated portion (acres)	Urban	
Subwatershed	Dairy				Beef - USFS counts and AB counts						Ag census - less than 2 horses per 100 acre of all land in farms	Ag census - less than 2 sheep/lamb per 100 acre of all land in farms	Ag census - less than 2 goats per 100 acre of all land in farms				USDA ag census says Taos county has less than 10% of land in farms as percent of land area	
RF-1 (upper)	0	0	0	0	93	25	0	0	0	0	0	3	3	3	4630.7	11442.691	282	1%
RF-2 (middle)	0	0	0	0	50	50	0	0	0	0	0	26	26	26	11,869.70	29330.622	2639.756	
RF-3 (lower)	0	0	0	0	50	25	0	0	0	0	0	30	30	30	1393.18	3442.6174	1268.5	11.8% of area is paved

Wildlife Estimates and Sources	Source of most wildlife and livestock values are the Bacteria Source Load Calculator Users Manual unless otherwise specified				Source: BSLC Manual	Source: BSLC Manual	Source: BSLC Manual	Source: BSLC Manual	Source: BSLC Manual	Source: BSLC Manual	Source: BSLC Manual	
	Deer (1.2 per square kilometer)	Elk (need to add) 0.12 per hectare?	Raccoons (low density 0.040; high density 0.12)	Muskrats	Beavers (0.037)	Geese (0.19 - off season 0.27 - peak season)	Ducks (0.15 - off season 0.23 - peak season)	Wild Turkeys				
Habitat	high density on forest within 183 m of a permanent water source or 0.8km of cropland				13/km of ditch or medium sized stream intersecting pasture; 16/km of pond or lake edge; 81/km of slow-moving river edge	91-m buffer around main streams and impoundments	91-m buffer around main streams and impoundments	91-m buffer around main streams and impoundments	Entire Watershed except urban and farmstead			
Subwatershed						Peak	Season 2	Season 3	Peak	Season 2	Season 3	0.025 turkeys per hectare
RF-1	56		185.228	107.9	6.2996089	45.970119	32.34934		39.159731	25.538955		115.7675
RF-2	143		474.788	208.65	19.2494979	140.469309	98.84877		119.659041	78.038505		296.7425
RF-3	17		55.7272	124.28	5.721791	41.75361	29.38217		35.56789	23.19645		0

Final Rounded Livestock and Wildlife Values for Spreadsheet	Cattle				Chickens			Turkeys			Horses	Ewes	Goats	
	M	D	H	Beef	Layers	Broilers	Broiler Breeders	Toms	Hens	Breeders				
Subwatershed	Dairy													
RF-1	0	0	0	0	93	25	0	0	0	0	0	3	3	3
RF-2	0	0	0	0	50	50	0	0	0	0	0	26	26	26
RF-3	0	0	0	0	50	25	0	0	0	0	0	30	30	30
Subwatershed	Deer	Elk	Raccoons	Muskrats	Beavers	Geese	Ducks	Wild Turkeys						
Subwatershed	0.0109 elk/ha- USFS		.040 (low estimate from above) used for new estimates			Peak	Season 2	Season 3	Peak	Season 2	Season 3			
RF-1	56	50	185	108	6	46	32	0	39	26	0	116		
RF-2	143	129	475	209	19	141	99	0	120	78	0	297		
RF-3	17	15	56	124	10	42	29	0	36	23	0	28		

Deer Calculation Based on USFS Correspondence:	Acres ('1Ha = 2.47105 acres)	square kilometers	1.2 rounded
RF-1	11442.6912	46.3	55.56
RF-2	29330.6222	119	142.8
RF-3	3442.61744	14	16.8

Chicken Estimates	households	# of chickens - estimate with 1 in 25 households	Visual estimates 1 in 25 is too low based on experience
upper:	95	3.8	25
middle	140	5.6	50
lower	625	25	25

Final Numbers Used

Subwatershed	Total Forest Acreage	Total Residential 1 Acreage	Total Residential 2 Acreage	Total Residential 3 Acreage	Total Cropland Acreage	Total Pasture Acreage	Total Loafing Lot Acreage	Loafing Lot Time Dairy	Loafing Lot Time Beef	Pasture 1 Fraction of Total	Pasture 2 Fraction of Total	Pasture 3 Fraction of Total	Stream Access Pasture 1	Stream Access Pasture 2	Stream Access Pasture 3	Straight Pipes	Total acres
RF-1 (upper)	1413.876135	104.8151			282	9642				0	1		0	1200		0	11442.69
RF-2 (middle)	17,820.76	249.16			952.7	10308				0	1		0	0		0	29,330.62
RF-3 (lower)	480.4	999.717439			1268.5	694				0	1					0	3,442.62

Source Notes: Numbers from the below table were used for the final numbers above. Forest known to be **Yellow** Residential Acreage was estimated last and subtracted from the total acreage

Sources for above numbers	Area	Acres (1Ha = 2.47105 acres)	Irrigated portion (acres)	Acres of Farmland	Acres of Farmland	Acres of Farmland	Forested land	Forest land acres	Pasture(crop scape)	Flechado-upper	stream acres accessed by cattle	
RF-1-upper	4630.7 hectares	11442.69124	282	1029.84221	686.5614741	6% estimate	91.60%	10481.51	6206 for now--asking about Capulin	Capulin	13744	0
RF-2-middle	11,869.70 hectares	29330.62219	2639.756	2639.756	952.7	from cropscape	85%	24,916	764 (5%)	Capulin upper:	3436	
RF-3-lower	1393.18 hectares	3442.617439	1268.5	309.83557	1268.5	9% estimate	2.498593	8601.7	694 (cropscape)	Capulin middle:	10308	
Total		44215.93086				is well below the irrigated land acreage--used that			Pasture in Upper = 6206+3436	Pasture in Middle = 10308		

Subwaters	Persons/	Persons/	Number	Number	Septic Systems			Straight Pipe	
	Unsewre	Sewered	Unsewre	Sewered	oldest	mid-age	newest	oldest	mid-age
RF-1	3	3	95	0	21	30	32	10	2
RF-2	3	3	140	0	32	44	47	14	3
RF-3	3	3	100	525	19	30	34	14	3

Sources:

US Census average household size

Town of Taos Public Works Statement on number of sewered houses

Mapping estimation of houses in RF-2 and RF-3

BSLC User Manual recommendations for straightpipe estimates

Se
oldest
21
32
19

is
newest
0
0
0

Optic Systems		Straight Pipes			Total
mid-age	newest	oldest	mid-age	newest	
30	32	10	2	0	95
44	47	14	3	0	140
30	34	14	3	0	100

Report Summary

These are values used in writing the TMDL report and/or

	acres	Liquid gal	cfu	acres	Poultry lbs
Cropland	0	0	0	0.54352679	3261.16071
Pasture 1	0	0	0	0	0
Pasture 2	0	0	0	0	0
Pasture 3	0	0	0	0	0

Manure produced per year			gal or lb/year		
Animal	Confinement	Loafing Lot	Pasture 1	Pasture 2	Pasture 3
Milk		0	0	0	0
Dry		0		0	0
Heifer		0		0	0
Beef	499734.9	0	5207881	0	0
Sheep		0	224409.625	0	0

	FC Load	cfu/year	Load Breakdown	Percent Contribution	
Streams	Milkers	0	Streams	1.52E+14	3.11%
	Dry	0	Crops	2.98E+13	0.61%
	Heifer	0	Pasture	4.08E+15	83.53%
	Beef	3.8329E+12	Residential	2.65E+14	5.44%
	Horses	0	Forest	9.11E+13	1.87%
	Sheep	0	LoafingLots	0.00E+00	0.00%
	Wildlife	4.7164E+13	Die-off	2.65E+14	5.44%
	Straight Pipes	1.0081E+14	Total	4.88E+15	100.00%
Land	Crops	1.5288E+13			
	Pasture 1	4.0762E+15			
	Pasture 2	0			
	Pasture 3	0			
	Residential	2.6549E+14			
	Forest	9.1136E+13			
	Loafing Lots	0			
CropApp	1.4486E+13				
P1App	0				
P2App	0				
P3App	0				

	FCProd	cfu/year		Production Breakdown	Percent Contribution
Milkers	0		Agriculture	4.28E+15	87.69%
Dry	0		Wildlife	2.42E+14	4.97%
Heifer	0		Humans	2.17E+14	4.45%
Beef	3.143E+15		Pets	1.41E+14	2.90%
Layers	5.1135E+12		Total	4.88E+15	1.00E+02
Broilers	0				
Turkeys	0				
Horses	9.0509E+12				
Sheep	1.122E+15				
Deer	2.7613E+13				
Raccoons	1.3076E+13				
Muskrats	4.0269E+12				
Beavers	2556750000				
Geese	4.4981E+13				
Wild Turkeys	1.498E+13				
Ducks	1.1287E+14				
Humans	2.1696E+14				
Pets	1.4135E+14				
Elk	2.48E+13				

	Sewered	Unsewered
Watershed Population	1,575	1,005



presentation.

		Solid		
cfu	acres	lbs	cfu	
3.6638E+11	20.8222875	499734.9	1.412E+13	
0	0	0	0	
0	0	0	0	
0	0	0	0	

Streams

0
0
0
6968.88477
0

Load Breakdown per day

4.16E+11
8.16E+10
1.12E+13
7.27E+11
2.50E+11
0.00E+00
7.27E+11
1.34E+13

Per Day

1.17E+13

6.64E+11

5.94E+11

3.87E+11

1.34E+13

Load Reduction Appendix

Please Fill in the Following Information to Complete the Tables:

Source	Allocation Scenario Reduction
Cattle in Stream	
Other Livestock in Stream	
Wildlife in Stream	
Straight Pipes	

[Export Tables to Word](#)

sub-watershed
RF-1

	Land Use	Current conditions load (x 10 ⁸ cfu/year)	Percent of total load from nonpoint sources	TMDL nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction
7.8992E+12	Cropland	78,992	0.5%	78,992	0%
1.47E+15	Pasture	14,699,973	96%	14,699,973	0%
4.877E+13	Residential	487,698	3%	487,698	0%
0	Wetlands	0	0%	0	0%
0	LL	0	0%	0	0%
8.0734E+12	Forest	80,734	0.5%	80,734	0%
1.5347E+15	Total	15,347,397	100%	15,347,397	0%

Source	Current Conditions load (x 10 ⁸ cfu/year)	Percent of total load to stream from direct nonpoint sources	TMDL direct nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction

3.8329E+12	Cattle in Streams	38,329	10%	38,329	0%
0	Other Livestock in Streams	0	0%	0	0%
9.9067E+12	Wildlife in Streams	99,067	25%	99,067	0%
2.6298E+13	Straight Pipes	262,980	66%	262,980	0%
4.0038E+13	Total	400,376	100%	400,376	0%

sub-watershed
RF-2

	Land Use	Current conditions load (x 10 ⁸ cfu/year)	Percent of total load from nonpoint sources	TMDL nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction
7.6021E+12	Cropland	76,021	0.5%	76,021	0%
1.283E+15	Pasture	12,830,084	89%	12,830,084	0%
7.4188E+13	Residential	741,880	5%	741,880	0%
0	Wetlands	0	0%	0	0%
0	LL	0	0%	0	0%
7.8157E+13	Forest	781,572	5%	781,572	0%
1.443E+15	Total	14,429,556	100%	14,429,556	0%

	Source	Current Conditions load (x 10 ⁸ cfu/year)	Percent of total load to stream from direct nonpoint sources	TMDL direct nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction
0	Cattle in Streams	0	0%	0	0%
0	Other Livestock in Streams	0	0%	0	0%
2.9216E+13	Wildlife in Streams	292,156	44%	292,156	0%
3.7256E+13	Straight Pipes	372,555	56%	372,555	0%

6.6471E+13	Total	664,711	100%	664,711	0%
------------	-------	---------	------	---------	----

sub-
watershed
RF-3

	Land Use	Current conditions load (x 10 ⁸ cfu/year)	Percent of total load from nonpoint sources	TMDL nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction
	Cropland	142,727	1.0%	142,727	0%
1.4273E+13	Pasture	13,231,982	89%	13,231,982	0%
1.3232E+15	Residential	1,425,318	10%	1,425,318	0%
1.4253E+14	Wetlands	0	0%	0	0%
0	LL	0	0%	0	0%
0	Forest	49,059	0%	49,059	0%
4.9059E+12	Total	14,849,087	100%	14,849,087	0%
1.4849E+15					

	Source	Current Conditions load (x 10 ⁸ cfu/year)	Percent of total load to stream from direct nonpoint sources	TMDL direct nonpoint source allocation load (x 10 ⁸ cfu/year)	Percent Reduction
0	Cattle in Streams	0	0%	0	0%
0	Other Livestock in Streams	0	0%	0	0%
8.0412E+12	Wildlife in Streams	80,412	18%	80,412	0%
3.7256E+13	Straight Pipes	372,555	82%	372,555	0%
4.5297E+13	Total	452,967	100%	452,967	0%

Tables for
the WBP-
made by
Shannon

Source	Upper Rio Fernando de Taos <i>E. coli</i> Loading (CFU/year) , (x 10 ⁸ cfu/year)	% of Total	Middle <i>E. coli</i> Loading (CFU/year)	% of Total	Lower <i>E. coli</i> Loading (CFU/year)
Cropland	7.90E+12	0.51%	7.6021E+12	0.53%	1.4273E+13
Pasture	1.47E+15	95.78%	1.283E+15	88.92%	1.3232E+15
Residential	4.88E+13	3.18%	7.4188E+13	5.14%	1.4253E+14
Forest	8.07E+12	0.53%	7.8157E+13	5.42%	4.9059E+12
Total	1.53E+15	100.00%	1.443E+15	100.00%	1.4849E+15

Source	RF-1 <i>E. coli</i> Loading (CFU/year)	% of Total	RF-2 <i>E. coli</i> Loading (CFU/year)	% of Total	RF-3 <i>E. coli</i> Loading (CFU/year)
Cattle in streams	3.83E+12	10%	0	0.00%	0.00E+00

Wildlife in streams	9.91E+12	25.00%	2.92E+13	44.00%	8.04E+12
Straight pipes	2.63E+13	66.00%	3.73E+13	6.00%	3.73E+13
Total	4.00E+13	100.00%	6.65E+13	100.00%	4.53E+13

% of Total

0.96%

89.11%

9.60%

0.00%

100.00%

% Total

0.00%

18.00%
82.00%
100.00%