

	PROJECT REFERENCE NO.	SHEET NO.		
	SR-1515 AVERY	I		
→				

PAVEMENT SCHEDULE

ASPHALT SURFACE TREATMENT COURSE (TRIPLE SEAL)

SHOULDER CONSTRUCTION

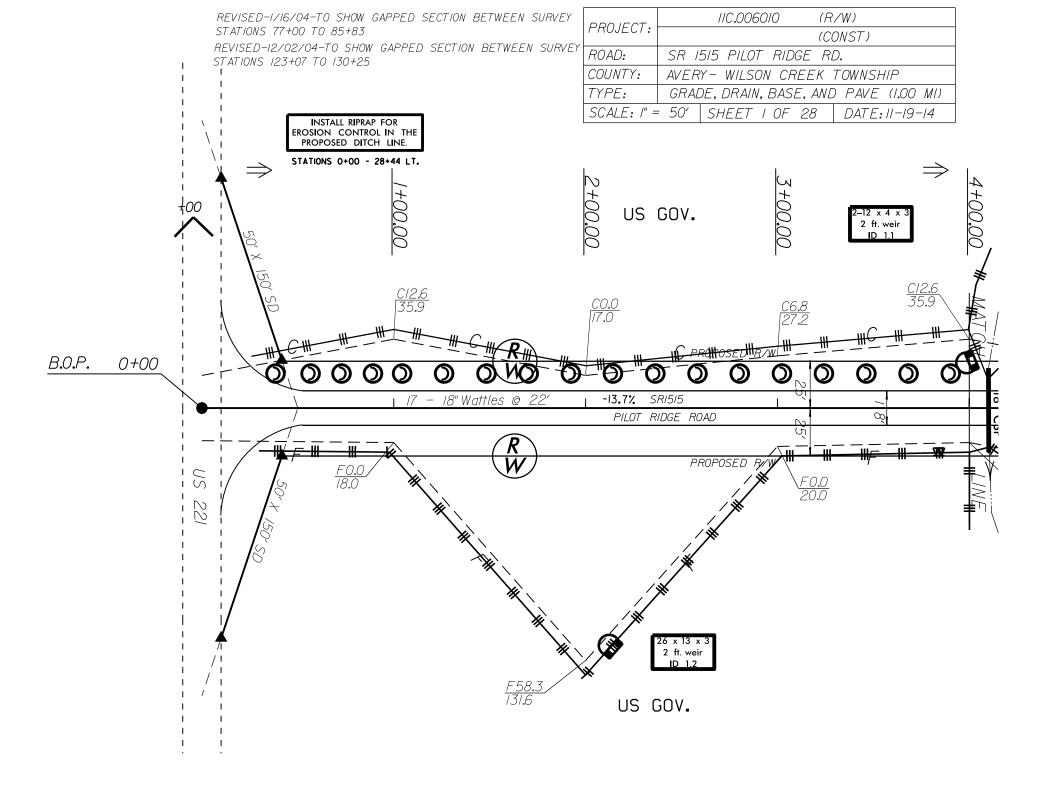
3 INCH ACIC TYPE I19.0B

6 INCH AGGREGATE BASE COURSE (COMPLETED)

AVERY COUNTY SR 1515 PILOT RIDGE ROAD

STATION	NEW PIPE SIZE	EXISTING WET PIPE	WET PIPE	CREEK SIZE
4+12	40' x 18"	30' x 18"	YES	1'
5+91	50' x 18"	40' x 18"	NO	
8+15	50' x 18"	40' x 18"	NO	
11+10	50' x 18"	40' x 18"	NO	
14+29	50' x 18"	40' x 18"	NO	
17+30	50' x 18"	40' x 18"	NO	
25+00	50' x 18"	Addition	NO	
30+35	50' x 18"	40' x 18"	NO	
33+50	50' x 18"	Addition	NO	
37+00	50' x 18"	40' x 24"	NO	
41+00	50' x 18"	Addition	NO	
4 3+60	50' x 18"	Addition	NO	
4 9+85	50' x 24"	40' x 18"	NO	
53+00	50' x 18"	Addition	NO	
54+75	50' x 18"	40' x 18"	NO	
57+00	50' x 36"	40' x 24"	YES	2'
57+85	50' x 18"	40' x 18"	YES	1'
62+52	DO NOT DISTURB	50' x 60"	YES	5'
64+24	50' x 72"	40' x 60"	YES	<u>4'</u>
70+10	50' x 18"	40' x 18"	YES	1'
77+00	50' x 18"	Addition	NO	
80+50	50' x 18"	Addition	NO	
83+50	50' x 18"	40' x 18"	NO	
85+65	50' x 24"	40' x 24"	No	
88+00	50' x 36"	40' x 24"	NO	
92+65	50' x 24"	40' x 24"	NO	
94+45	50' x 48"	30' x 36"	YES	3'
99+00	50' x 18"	Addition	NO	
101+45	50' x 48"	40' x 36"	YES	3'
106+00	50' x 18"	Addition	NO	
110+00	50' x 18"	Addition	NO	
114+00	50' x 18"	Addition	NO	
118+00	50' x 18"	Addition	NO	
122+90	50' x 18"	40' x 18"	NO	
128+25	80' x 24"	25' x 24"	YES	2'
132+20	50' x 18"	40' x 18"	NO	
137+00	50' x 18"		NO	
	· ·		-	

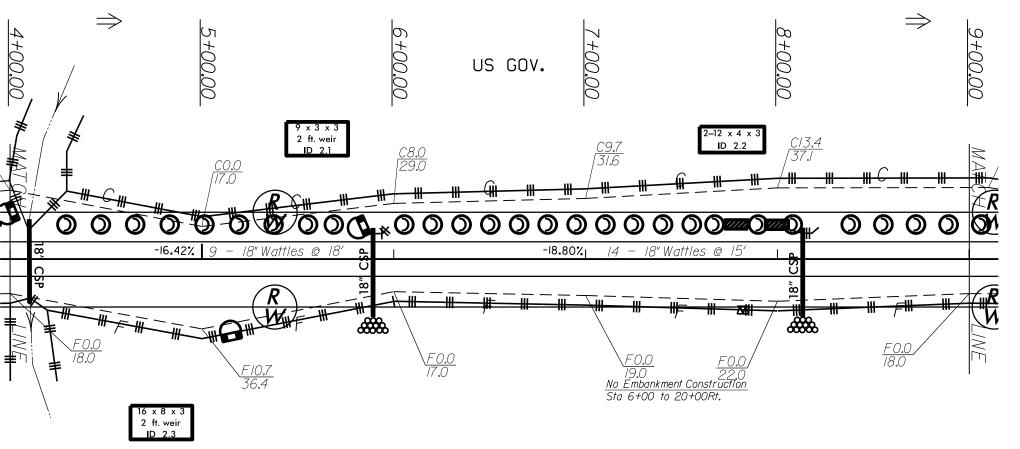
*DOES NOT INCLUDE DRIVEWAY PIPE



SHEET 2 OF 28

INSTALL RIPRAP FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

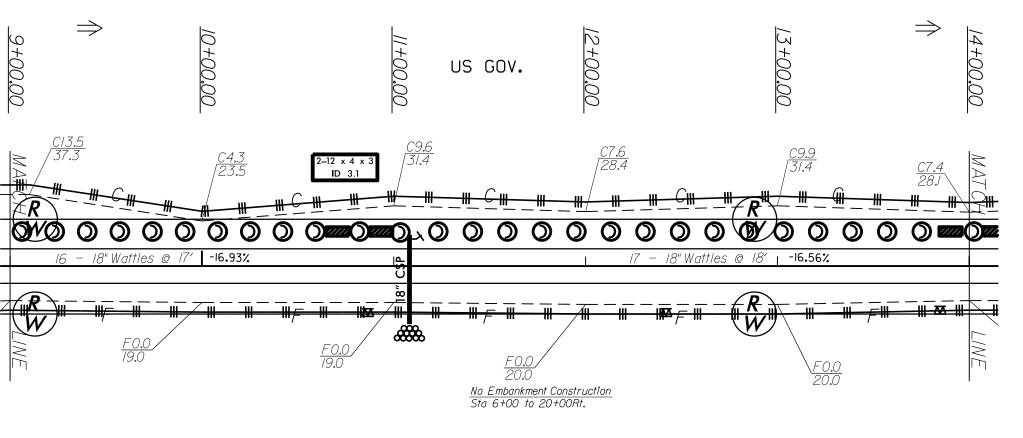
STATIONS 0+00 - 28+44 LT.



US GOV.



STATIONS 0+00 - 28+44 LT.

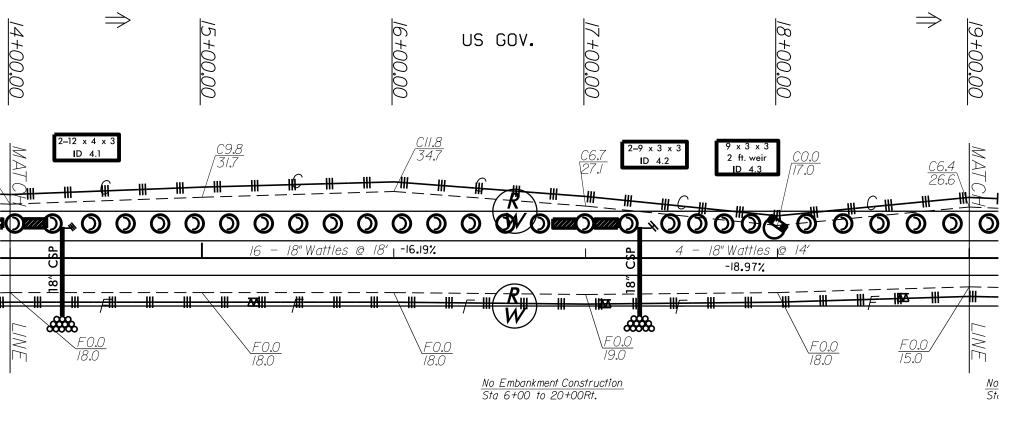


US GOV.

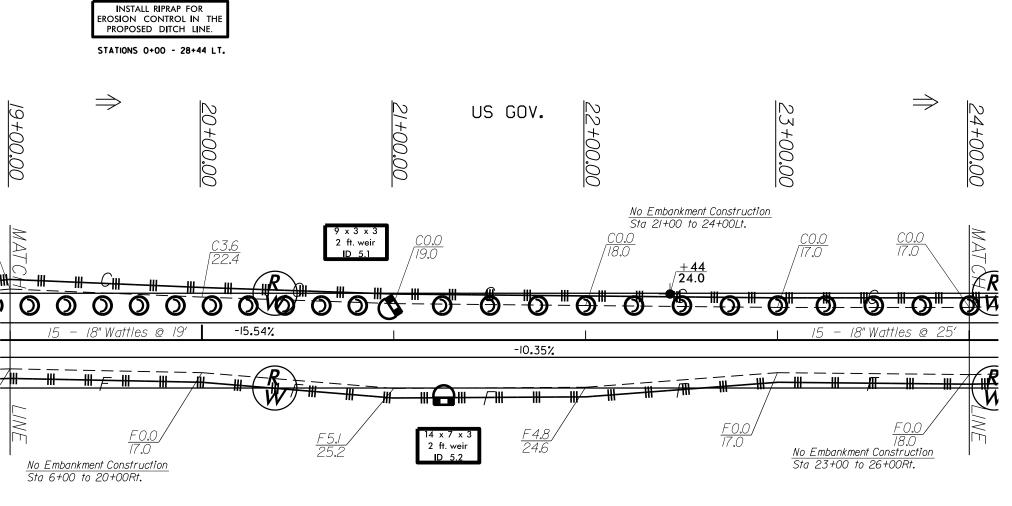
SHEET 4 OF 28



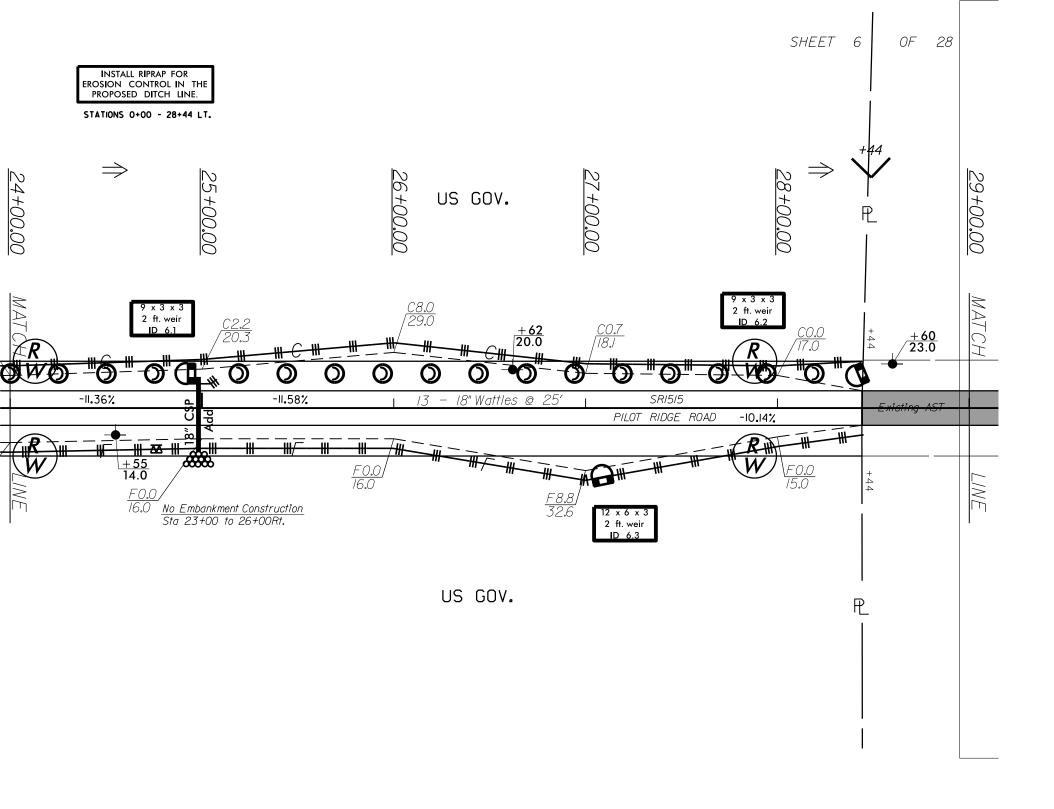
STATIONS 0+00 - 28+44 LT.

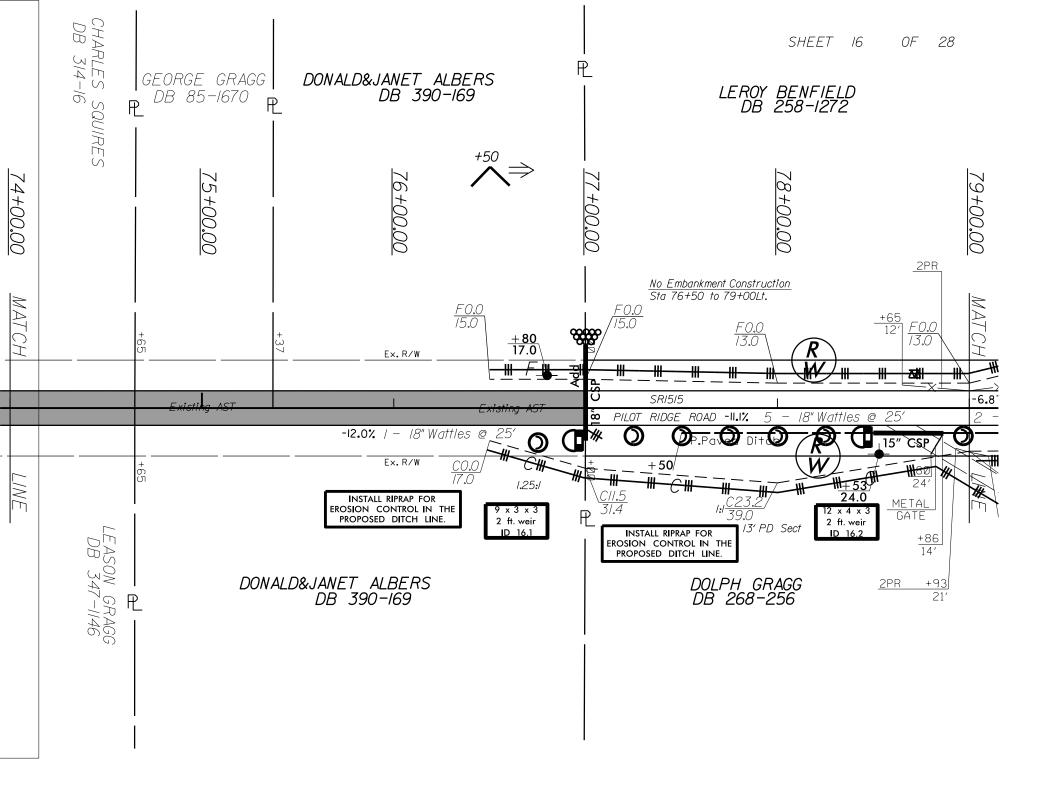


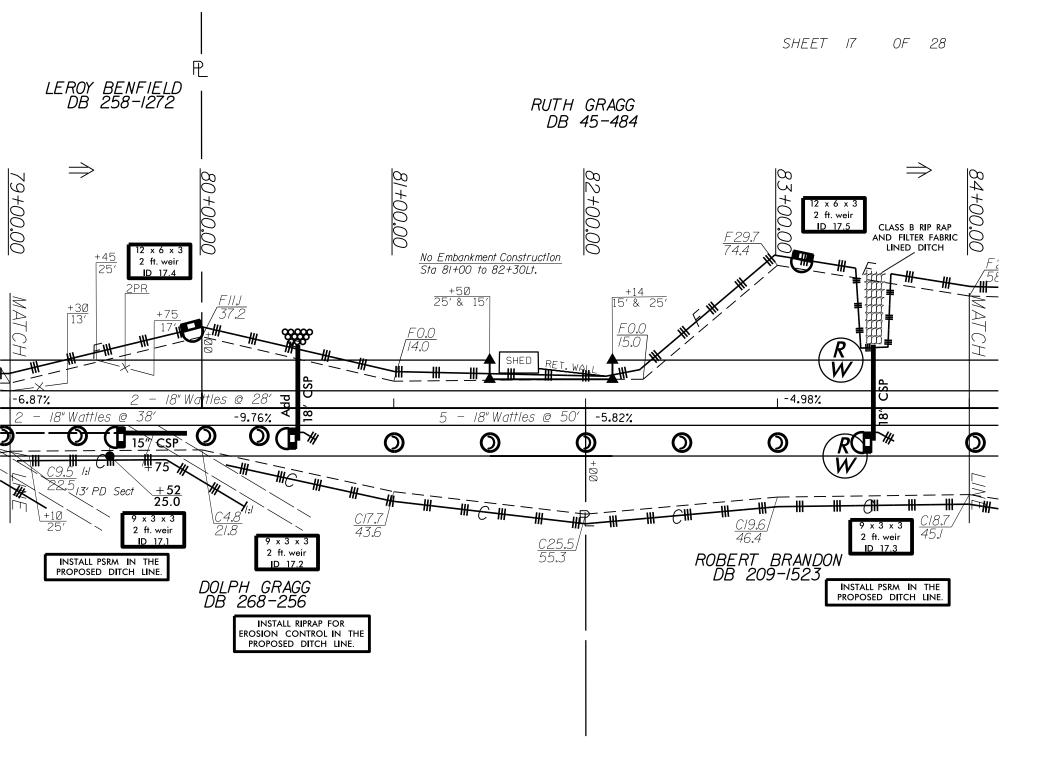
US GOV.

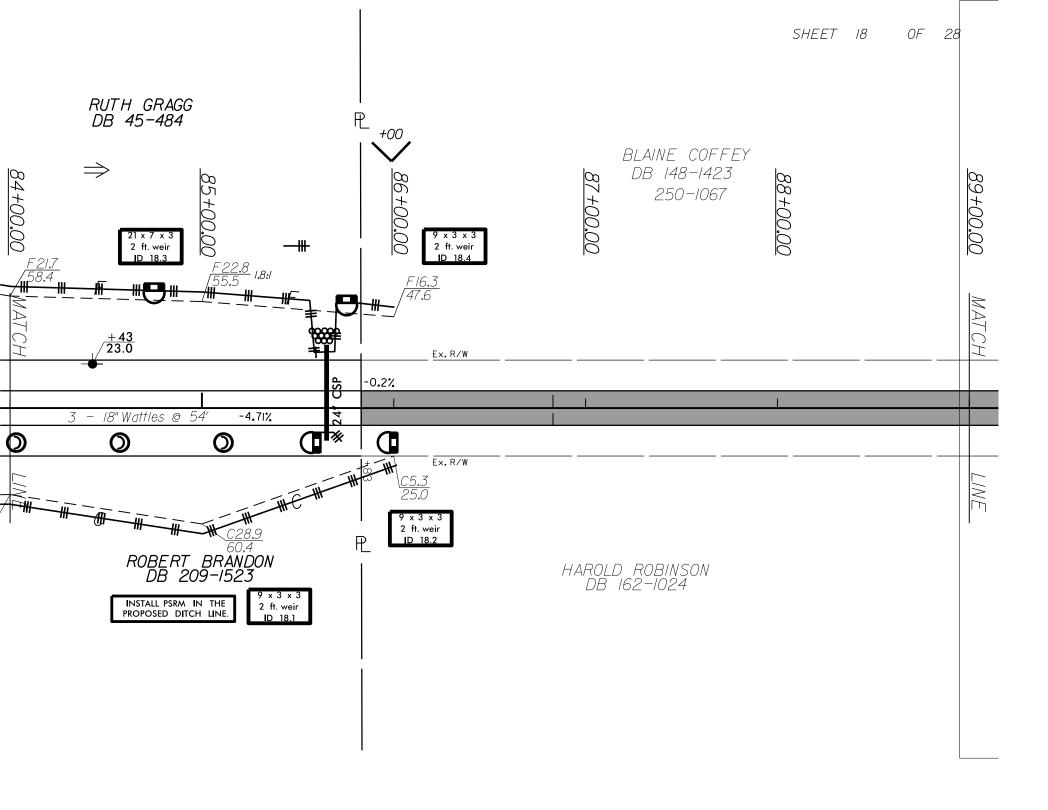


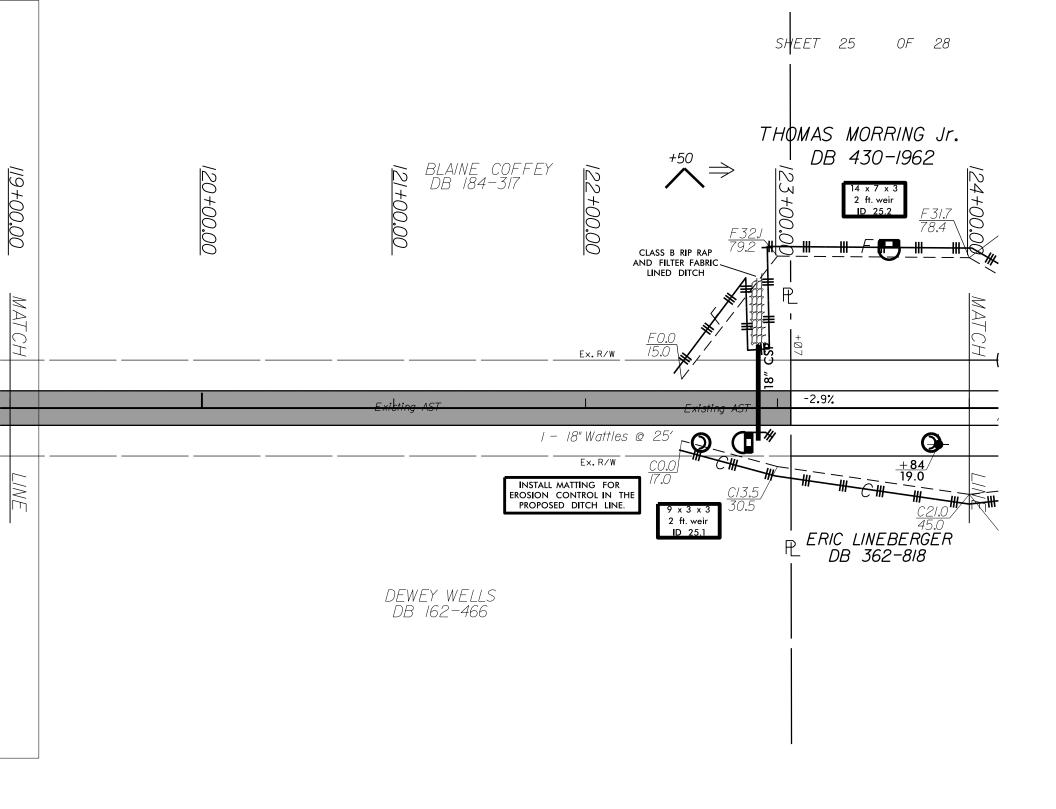
US GOV.

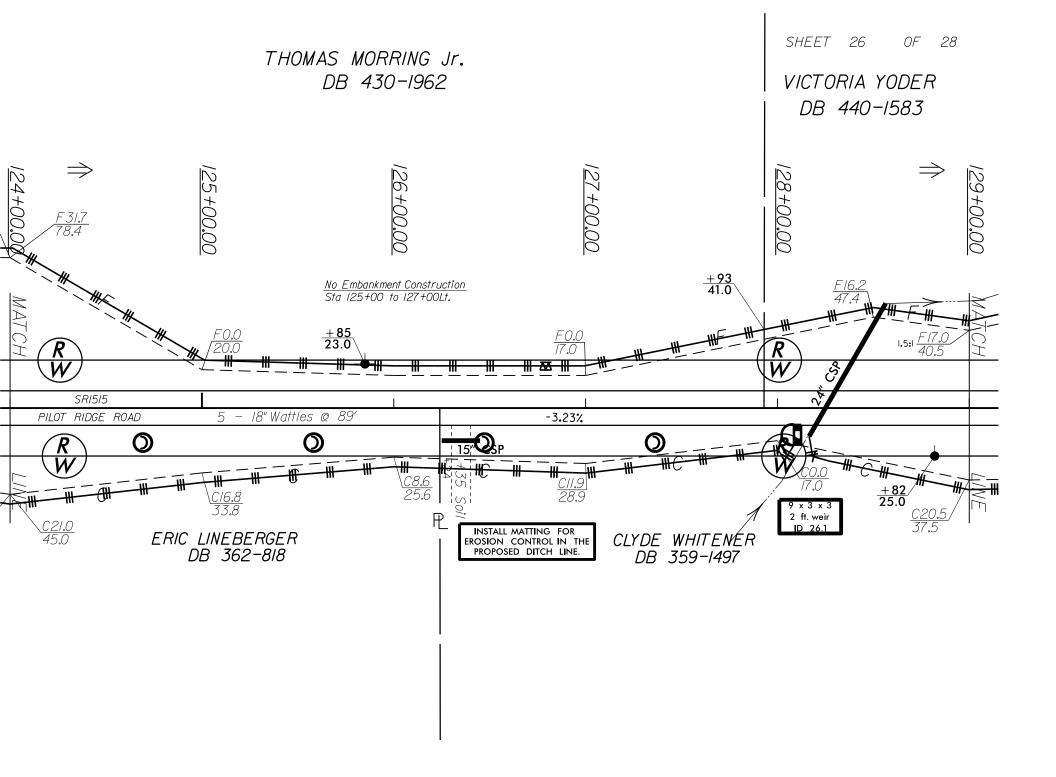


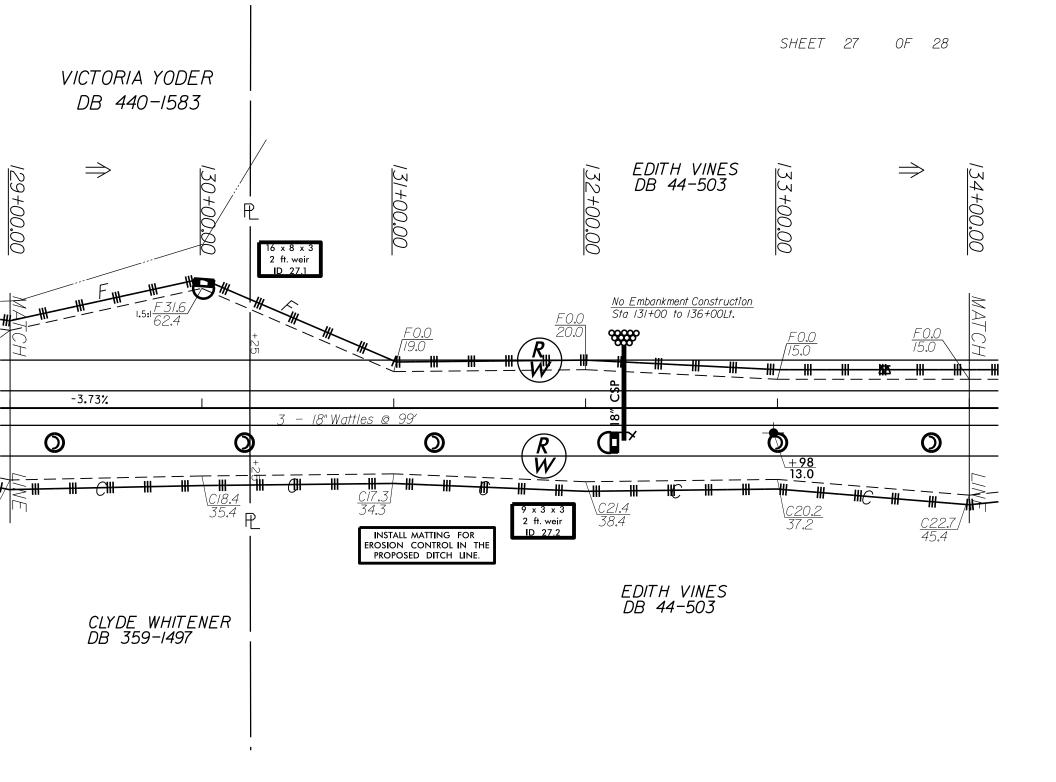


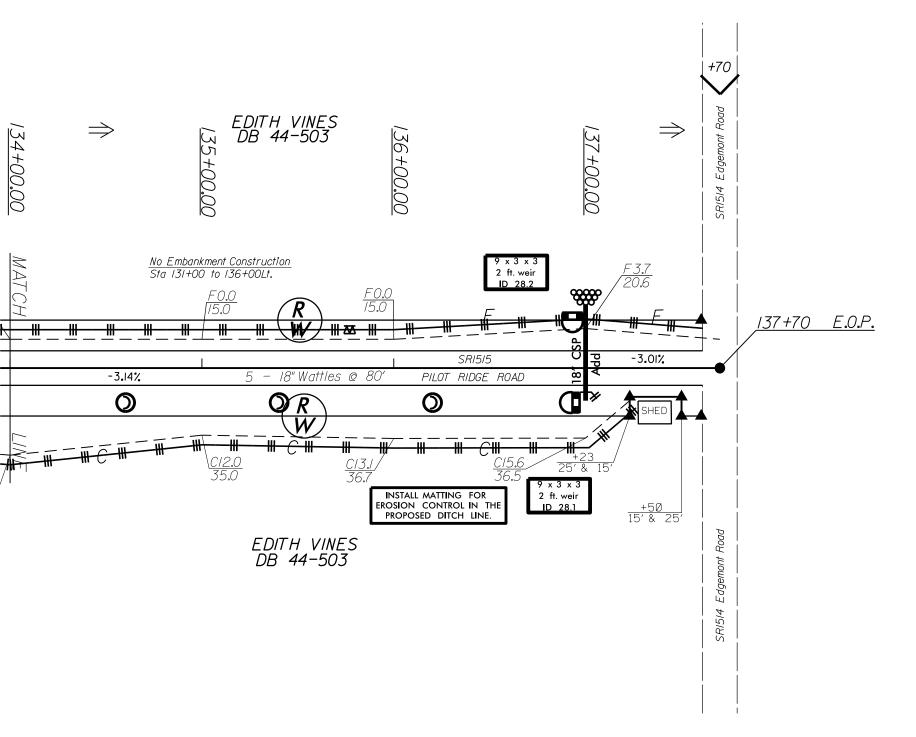


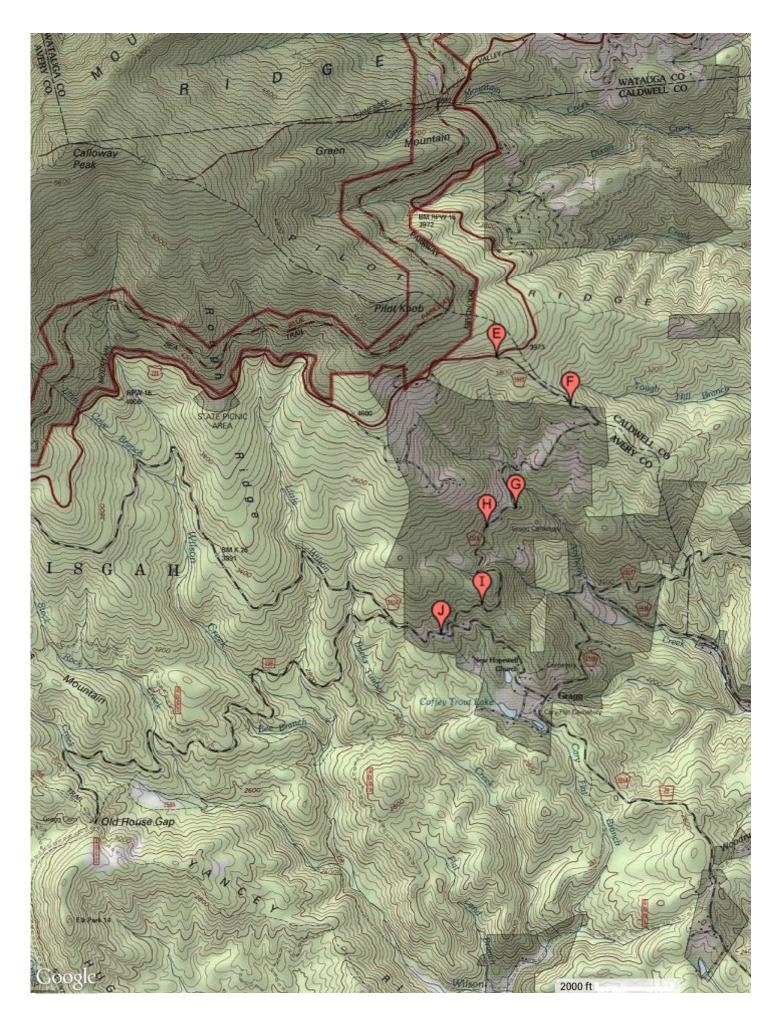












STEP 1: Input Project Information *ite	ms in red are REQUIRED		SECTIO	ON 1 of 32	
Construction time		County:	Avery	•	
≤ 6 months (Y/N)? Y	1	-			- ERODES
	levation	Location:	Pilot Ridge Rd		
	Tool (ft)	Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 0 + 0	0	Date Prepared:	11/18/2014		
to Sta.: 4 + 12	0	Level III A #:	3474		
	Elev Data %	Level III A Expiration	on 12/	31/2016	Version
-	Liev Data 70		Cross Kirby	51/2010	2.10.2012
		Reviewed By:	Greg Kirby		2.10.2012
Contributing		Date Reviewed:	11/19/2014		
R/W Width: 17 feet		Level III A #:	391		
Length of Run X 412 feet		Level III A Expiration	on: 1/0/	1900	
Disturbed Area = 0.16 acres					
Drainage Area: 0.16 acres					
*Drainage Area must equal or exceed t	he Disturbed Area found	above			
Surface Dewatering Device	N				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	Ν				
Regression Constant, C	<u>659</u>	Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	106.4	Figure 2-1	rtor manaaly		
			Coll Curryon /http:/	Vooildotomort n	raa uada gaud
Erodibility Factor, K	<u>0.24</u>	Table 2-2 or Web S		solidalamari.m	ics.usua.gov/)
Soil Type <u>SoD</u>	<u>Soco</u>	* informational purp	ioses only.		
STEP 2: Ditch Liner requirements: Util	ize the Required Liner tak	and note recommend	dations on plans.		
STEP 3: Velocity Control Requirements	e				
STEP 5. Velocity Control Requirements	·	_			Wattles are required in
TYPE B ROCK SILT CHEC OR WATTLES	KS 18	spaced at	22 fee		conjunction with PAMs
*See the HELP Tab for add	ditional clarification and a	n example on how to	place on plans.		
			piace on piane.		
Sta	rt with Option 4A				
OPTION 4A: For DRAINAG Regression Constant, C Rainfall Factor, R	GE AREA < 3 Acre: Use V= 65 106.	9]	storage		
Erodibility Factor, K	0.2		From Step 1 ab	ove	
Soil Type	SoD Soco				
Ditchline Slope, s	0.1368	0 ft/ft			
Ditchille Slope, s					
	V= 1887.72	ft³/ac/yr			
Required Storag	ge Volume= <u>303.53</u>	ft ³		Rainfall Facto Move on to Op	r-see note in cell otion 4C
OPTION 4B: For DRAINAG	E AREA > 3 Acre: Use R	USLE2 Modeling to d	letermine storag	e	
Sediment Delivery fro		-			
		0 tons/acre/yr			
Converting to f		ft ³ /ac/yr			
Required Storag	ge Volume= <u>N/A</u>	ft ³		See Option 4	A
OPTION 4C: Using the Red * These device	quired Storage Volume fro			f Wrapped TRS	SC-A/Wattles Required
	pe A Rock Silt Checks or		lents in Step 5.		
				WAT	TLES REQUIRED
Enter Ditch Front Slope Gra			:1		
Enter Ditch Back Slope Gra	dient (H:V):	<u>1.5</u>	:1		
Enter Device Height:		<u>1.5</u>	ft		
Area Behind Device:		5.06	ft ²		
Length of Ditch Behind Dev	ice:	10.96		cessive number	er of devices required. Go to
Storage Behind Device (as		12.03			Option 5
Wrapped TRSC-A/Wattles	required:	X 26.0			option o
COMMENTO	Total	312.71	ft ³		
COMMENTS:	T 040 1 0 0	1 44		signer still has tl	he option of using Option 5 or 6
Use Temporary Sediment D	am, Type-B 12x4x3. Dam a	nd wattles cover requir	red storage.		
					l

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		032 025	
Runoff Coefficient, C	•	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr				
NOAA website, http://hdsc.n	ws.noaa.gov/ho	lsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.16	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3		0 ft ³	
Required VOLOME using the des	agn depin.	0.0	10 0 11	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.1	6	
Required Sediment Storage (ft ³)=		289.4	2 ft ³	
			2	
Final Required Storage:		289.4		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	:1 or flatter
		y (http://soildatama		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr) Dewatering Time (Days)		0.00 N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	<mark>-</mark> 4	
Suggested Top Width (ft):	Minimum	0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		4	satisfy requirements of Step 3.	
Final Design Top Length (ft):		12	Install Baffles*.	
Final Design Depth (ft):		3	Case Option Citing to Up of this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	measurers not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
Verify Storage (ft ³)		44.00		
venny Storage (it)		bo Low		
Verify Surface Area (ft ²)		48.00		
,		OK		

STEP 1: Input Project Information	*items in red are REQUI	RED	SECTION 2 of	32
Construction time		County:	Avery	ED OD EG
≤6 months (Y/N)? Y				ERODES
HQW (Y/N)? Y	Elevation	Location:	Pilot Ridge Rd	Litte D Lis
Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs	EROsion DESign
From Sta.: 0 + 0	0	Date Prepared:	11/18/2014	
to Sta.: 3 + 0	0	Level III A #:	3474	
Right/Left: Rt.	No Elev Data %	Level III A Expiration	n: 12/31/201	Nersion
			One of Kinkey	
	%	Reviewed By:	Greg Kirby	2.10.2012
Contributing		Date Reviewed:	11/19/2014	
	feet	Level III A #:	391	
	feet	Level III A Expiration	n: 1/0/1900	
Disturbed Area = 0.32	acres			
Drainage Area: 0.32	acres			
*Drainage Area must equal or exce	eed the Disturbed Area fo	ound above		
Surface Dewatering Device	n			
Is this a Typical Section (Y/N)?	Y			
Will RUSLE2 be used to model				
the Non-Typical sections?	N			
the role rypical sections.				
Regression Constant, C	<u>549</u>	Table 2-7 (Level III)	Ref Manual)	
Rainfall Factor, R	106.4	Figure 2-1	(or manual)	
Erodibility Factor, K	0.24		oil Survey (http://soilda	lamart prog. upda gou/
				amarchics.usua.gov/)
Soil Type	SoD Soco	* informational purp	oses only.	
STEP 2: Ditch Liner requirements:	Utilize the Required Line	er tab and note recommend	lations on plans.	
STEP 3: Velocity Control Requiren	nents			
				Wettles and remained in
TYPE B ROCK SILT C	HECKS 13	spaced at	21 feet	Wattles are required in
OR WATTLES				conjunction with PAMs
*See the HELP Tab fo	r additional clarification a	and an example on how to	place on plans.	
:	Start with Option 4	4A		
OPTION 4: Using RUSLE2 Ar	alysis to determine r	equired storage		
-			torage	
-		equired storage ise V=CRKs to determine s	storage	
OPTION 4A: For DRA	INAGE AREA < 3 Acre: U	se V=CRKs to determine s	storage	
OPTION 4A: For DRA	INAGE AREA < 3 Acre: U	lse V=CRKs to determine s	storage	
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R	INAGE AREA < 3 Acre: U	lse V=CRKs to determine s	-	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K	INAGE AREA < 3 Acre: U	Se V=CRKs to determine s	torage From Step 1 above	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type	- INAGE AREA < 3 Acre: U C SoD So	Ise V=CRKs to determine s 549 106.4 0.24 co	-	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K	INAGE AREA < 3 Acre: U C SoD So 0.	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft	-	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 Acre: U C SoD So 0. V=	/se V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 2.62 ft ² /ac/yr	From Step 1 above	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 Acre: U C SoD So 0.	549 106.4 0.24 co 13680 ft/ft 1.3680 ft/ft	From Step 1 above	II Factor-see note in cell
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 Acre: U C SoD So 0. V=	/se V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 2.62 ft ² /ac/yr	From Step 1 above Using 82% of Rainfa	Il Factor-see note in cell on to Option 4C
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 Acre: U C SoD So 0. V=	/se V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 2.62 ft ² /ac/yr	From Step 1 above Using 82% of Rainfa	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u>	/se V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 2.62 ft ² /ac/yr	From Step 1 above Using 82% of Rainfa C4 - Move (
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u>	ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 2.62 tt ³ /ac/yr 21	From Step 1 above Using 82% of Rainfa C4 - Move (
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u>	See V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft :62 ft ³ /ac/yr 21 ft ³ /see RUSLE2 Modeling to determine s	From Step 1 above Using 82% of Rainfa C4 - Move (
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2:	549 106.4 0.24 co 13680 ft/ft	From Step 1 above Using 82% of Rainfa C4 - Move (
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive <i>Converting</i>	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: <u>N/A</u>	549 106.4 0.24 co 13680 ft/ft .62 tt ³ /ac/yr 21 tt ³ /se RUSLE2 Modeling to d 0.00 tons/acre/yr tt ³ /ac/yr	From Step 1 above Using 82% of Rainfa C4 - Move (
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive <i>Converting</i>	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2:	549 106.4 0.24 co 13680 ft/ft 2.62 tt ³ /ac/yr 21 tt ³ // se RUSLE2 Modeling to d 0.00 tons/acre/yr tt ³ /ac/yr	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage	
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive <i>Converting</i>	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: <u>N/A</u>	549 106.4 0.24 co 13680 ft/ft .62 tt ³ /ac/yr 21 tt ³ /se RUSLE2 Modeling to d 0.00 tons/acre/yr tt ³ /ac/yr	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage	on to Option 4C
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/</u>	549 106.4 0.26 11/24 <td< td=""><td>From Step 1 above Using 82% of Rainfa C4 - Move etermine storage See (</td><td>Don to Option 4C</td></td<>	From Step 1 above Using 82% of Rainfa C4 - Move etermine storage See (Don to Option 4C
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive Converting Required St OPTION 4C: Using the	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U ory from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N//</u> e Required Storage Volum	See V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 tf ³ tse RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ tf ³ me from Option 4A or 4B t	From Step 1 above Using 82% of Rainfa C4 - Move (etermine storage See 0 o determine # of Wrap,	on to Option 4C
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Convertin Required St OPTION 4C: Using the "These d	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volum evices can be used to sa	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 tild 13680 ft/ft .62 tild .62 .63 .64 .65 .66 .62 .63 .64 .65 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .62 .63 .64 .64 .64 .64 .64 .65 .66 .67 .67 .67 .68 .68	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage See (o determine # of Wrap, eents in Step 3.	Don to Option 4C
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Convertin Required St OPTION 4C: Using the "These d	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volum evices can be used to sa	See V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 tf ³ Use RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ tf ³ me from Option 4A or 4B t	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage See (o determine # of Wrap, eents in Step 3.	Dption 4A Dption 4A Ded TRSC-A/Wattles Required
OPTION 4A: For DRA. Regression Constant, Q Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage from Wrapper	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u>	se V=CRKs to determine s 106.4 0.24 co 13680 ft/ft 13680 ft/ft 1	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage See (o determine # of Wrap, eents in Step 3.	Don to Option 4C
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive Converting Required St OPTION 4C: Using the "These d Storage from Wrappen Enter Ditch Front Slope	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u> e Required Storage Volur evices can be used to said d Type A Rock Silt Check e Gradient (H:V):	se V=CRKs to determine s 106.4 0.24 co 13680 ft/ft 13680 ft/ft 1	From Step 1 above Using 82% of Rainfa C4 - Move e etermine storage See (o determine # of Wrap, ents in Step 3. :1	Dption 4A Dption 4A Ded TRSC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage from Wrappe Enter Ditch Ford Slope	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u> e Required Storage Volur evices can be used to said d Type A Rock Silt Check e Gradient (H:V):	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ² /ac/yr 21 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ² /ac/yr A ft ³ me from Option 4A or 4B t tisfy the velocity requirem ks or Wattles 3 1.5	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage See 0 o determine # of Wrap, eents in Step 3. :1 :1	Dption 4A Dption 4A Ded TRSC-A/Wattles Required
OPTION 4A: For DRA. Regression Constant, Q Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the "These d Storage from Wrappen Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u> e Required Storage Volur evices can be used to said d Type A Rock Silt Check e Gradient (H:V):	(se V=CRKs to determine s 106.4 0.24 co 13680 ft/ft 1.62 ft ³ /ac/yr 21 ft ³ (se RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ /ac/yr A ft ³ me from Option 4A or 4B t isfy the velocity requirent ks or Wattles 3 1.5 1.5	From Step 1 above Using 82% of Rainfa C4 - Move etermine storage See 0 o determine # of Wrap, t1 ft	Dption 4A Dption 4A Ded TRSC-A/Wattles Required
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Enot Slope	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u> e Required Storage Volum e Required Storage Volum a dType A Rock Silt Check a Gradient (H:V): e Gradient (H:V):	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft 13680 ft	From Step 1 above Using 82% of Rainfa C4 - Move of etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 :1 tf tf tf t	Deption 4A Deption 4A WATTLES REQUIRED
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the "These of Storage from Wrappen Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /aciyr: N/A torage Volume= <u>N//</u> e Required Storage Volum evices can be used to sa d Type A Rock Silt Checl e Gradient (H:V): a Gradient (H:V):	See V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ² /ac/yr 21 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ /ac/yr A ft ³ me from Option 4A or 4B t 1.5 5.06 5.06	From Step 1 above Using 82% of Rainfa C4 - Move d etermine storage See 0 o determine # of Wrap, eents in Step 3:1 .:1 ft ft ft ft Excessiv	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED
OPTION 4A: For DRA. Regression Constant, Q Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the "These d Storage from Wrappes Enter Ditch Front Slope Enter Ditch Behind Storage Behind Device:	INAGE AREA < 3 Acre: U SoD So 0. V = 1572 torage Volume <u>498.</u> INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume <u>N/A</u> torage Volume <u>N/A</u> e Required Storage Volum evices can be used to sa <u>d Type A Rock Silt Checl</u> e Gradient (H:V): 1 Device: te (assumes 65% effecien	(se V=CRKs to determine s 106.4 0.24 co 13680 ft/ft 1.62 ft ³ /ac/yr 21 ft ³ (se RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ /ac/yr A ft ³ me from Option 4A or 4B t tisfy the velocity requirent ks or Wattles 1.5 5.06 10.96 (0.96) (0.90) (12.03)	From Step 1 above Using 82% of Rainfa C4 - Move d etermine storage See 0 o determine # of Wrap, eents in Step 3:1 .:1 ft ft ft ft Excessiv	Deption 4A Deption 4A WATTLES REQUIRED
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the "These of Storage from Wrappen Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 Acre: U SoD So 0. V = 1572 torage Volume <u>498.</u> INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume <u>N/A</u> torage Volume <u>N/A</u> e Required Storage Volum evices can be used to sa <u>d Type A Rock Silt Checl</u> e Gradient (H:V): 1 Device: te (assumes 65% effecien	See V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ² /ac/yr 21 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ /ac/yr A ft ³ me from Option 4A or 4B t 1.5 5.06 5.06	From Step 1 above	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED
Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA Sediment Delive Converting Required St OPTION 4C: Using the *These d Storage from Wrapper Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Device	INAGE AREA < 3 Acre: U SoD So 0. V = 1572 torage Volume <u>498.</u> INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume <u>N/A</u> torage Volume <u>N/A</u> e Required Storage Volum evices can be used to sa <u>d Type A Rock Silt Checl</u> e Gradient (H:V): 1 Device: te (assumes 65% effecien	(se V=CRKs to determine s 106.4 0.24 co 13680 ft/ft 1.62 ft ³ /ac/yr 21 ft ³ (se RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ /ac/yr A ft ³ me from Option 4A or 4B t tisfy the velocity requirent ks or Wattles 1.5 5.06 10.96 (0.96) (0.90) (12.03)	From Step 1 above Using 82% of Rainfa C4 - Move d etermine storage See 0 o determine # of Wrap, eents in Step 3:1 .:1 ft ft ft ft Excessiv	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED
OPTION 4A: For DRA. Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRA. Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage From Wrappe Enter Ditch Back Slope Enter Bac	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498.</u> INAGE AREA > 3 Acre: U ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> torage Volume= <u>N/A</u> e Required Storage Volum levices can be used to said d Type A Rock Silt Check e Gradient (H:V): Coradient (H:V): Coradient (H:V): Device: re (assumes 65% effecter ttles required:	$ \begin{array}{c} \text{(se V=CRKs to determine s)} \\ 106.4 \\ 0.24 \\ \text{co} \\ 13680 \text{ fulfit} \\ 2.62 & \text{ft}^3/\text{ac/yr} \\ 21 & \text{ft}^3 \\ \text{(se RUSLE2 Modeling to d)} \\ 0.00 & \text{tons/acre/yr} \\ \text{ft}^3/\text{ac/yr} \\ \text{A} & \text{ft}^3 \\ \text{me from Option 4A or 4B t} \\ \text{tisfy the velocity requirem} \\ \text{ks or Wattles} \\ 1.5 \\ 5.06 \\ 10.96 \\ 12.03 \\ \text{x} & 42.0 \\ \end{array} $	From Step 1 above	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5
OPTION 4A: For DRAM Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRAM Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage from Wrapper Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Behind Device: Length of Ditch Behind Storage Behind Device Wrapped TRSC-AWar	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N//</u> e Required Storage Volum evices can be used to sa d Type A Rock Silt Checl o Gradient (H:V): a Gradient (H:V): a Gradient (H:V): b Gradient (H:V): c (assumes 65% effecient ttles required: Total	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ the rom Option 4A or 4B to 1.5 5.06 10.96 <tr< td=""><td>From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it it</td><td>on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED</td></tr<>	From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED
OPTION 4A: For DRAM Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRAM Sediment Delive Converting Required St OPTION 4C: Using the "These of Storage from Wrapper Enter Ditch Front Slope Enter Ditch Behind Device: Length of Ditch Behind Storage Behind Device Wrapped TRSC-AWar	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N//</u> e Required Storage Volum evices can be used to sa d Type A Rock Silt Checl o Gradient (H:V): a Gradient (H:V): a Gradient (H:V): b Gradient (H:V): c (assumes 65% effecient ttles required: Total	$ \begin{array}{c} \text{(se V=CRKs to determine s)} \\ 106.4 \\ 0.24 \\ \text{co} \\ 13680 \text{ fulfit} \\ 2.62 & \text{ft}^3/\text{ac/yr} \\ 21 & \text{ft}^3 \\ \text{(se RUSLE2 Modeling to d)} \\ 0.00 & \text{tons/acre/yr} \\ \text{ft}^3/\text{ac/yr} \\ \text{A} & \text{ft}^3 \\ \text{me from Option 4A or 4B t} \\ \text{tisfy the velocity requirem} \\ \text{ks or Wattles} \\ 1.5 \\ 5.06 \\ 10.96 \\ 12.03 \\ \text{x} & 42.0 \\ \end{array} $	From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5
OPTION 4A: For DRAM Regression Constant, Q Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRAM Sediment Delive Converting Required St OPTION 4C: Using the "These of Storage from Wrapper Enter Ditch Front Slope Enter Ditch Behind Device: Length of Ditch Behind Storage Behind Device Wrapped TRSC-AWar	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N//</u> e Required Storage Volum evices can be used to sa d Type A Rock Silt Checl o Gradient (H:V): a Gradient (H:V): a Gradient (H:V): b Gradient (H:V): c (assumes 65% effecient ttles required: Total	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ the rom Option 4A or 4B to 1.5 5.06 10.96 <tr< td=""><td>From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it it</td><td>on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5</td></tr<>	From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5
OPTION 4A: For DRAM Regression Constant, C Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required St OPTION 4B: For DRAM Sediment Delive Converting Required St OPTION 4C: Using the *These of Storage from Wrapper Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Rehind Device: Length of Ditch Behind Storage Behind Device Wrapped TRSC-AWar	INAGE AREA < 3 Acre: U SoD So 0. V= 1572 torage Volume= <u>498</u> . INAGE AREA > 3 Acre: U bry from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N//</u> e Required Storage Volum evices can be used to sa d Type A Rock Silt Checl o Gradient (H:V): a Gradient (H:V): a Gradient (H:V): b Gradient (H:V): c (assumes 65% effecient ttles required: Total	Ise V=CRKs to determine s 549 106.4 0.24 co 13680 ft/ft .62 ft ³ Ise RUSLE2 Modeling to d 0.00 tons/acre/yr ft ³ the rom Option 4A or 4B to 1.5 5.06 10.96 <tr< td=""><td>From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it it</td><td>on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5</td></tr<>	From Step 1 above Using 82% of Rainfa C4 - Move r etermine storage See 0 o determine # of Wrap, ents in Step 3. :1 :1 ft ft ft ft tt it	on to Option 4C Option 4A Deed TRSC-A/Wattles Required WATTLES REQUIRED e number of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	0
	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Q _p =CiA	•	T-6- 4 4 4 5 4 0		
Runoff Coefficient, C Time of Concentration, t , (minutes)		Table 1-4,1-5,1-6		
	,			
		0/		
Watershed Slope, S		%	Coo Kinglah	
t _c =	N/A	minutes	See Kirpich	
2 Kirpich Method	•	faat	tana Madula 1 Er. 2	
Flow Path, L Watershed Slope, S	_	feet ft/ft	*see Module 1 Eq. 3 *see Module 1 Eq. 3	
Kirpich, t _c =		minutes	see module 1 Eq. 3	
Using a Return Period (T) of 10 y	-		#DIV/0! minutes,	
the rainfall intensity, i (in/hr, NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as	_	acres		
Peak Rate of Runoff, Q =CIA	0.00	cfs		
-				
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3			
Required VOLUME using the des	sign depth:	0.0	0 ft ³	
	2			
d. Sediment Storage Required using 1800 ft	r/ac			
Disturbed Area (acres)=		0.3		
Required Sediment Storage (ft ³)=		570.2	5 ft ³	
Final Required Storage:		570.2	5 ft ³	
Proposed Basin Side Slopes:			5 :1 side slopes *must be at least 1.5:	1 or flatter
	Web Soil Surve	y (http://soildatama	•	
Sat. Hydraulic Con. (Ksat, micro		0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		13	satisfy requirements of Step 3. Install Baffles*.	
Final Design Top Length (ft):		26	install barnes .	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		5	measure is not practical.	
Skimmer Size (in)		1.5	_	
Orifice Diameter (in) Dewatering Time (Days)		0.25	<u> </u>	
Dewatering Time (Days)		568.50	-	
Verify Storage (ft ³)		oo Low		
		338.00		
Verify Surface Area (ft ²)		OK		

STEP 1: Input Project Information	*items in red are RE	QUIRED		SECT	FION 3 of 32	
Construction time ≤ 6 months (Y/N)? Y		County	:	Avery	•	EDODES
HQW (Y/N)? Y	Elevation	Locatio	n:	Pilot Ridge R	?d	<i>ERODES</i>
Trout (Y/N)? Y	Tool (ft)	Prepare		Jacob Comb		EROsion DESign
From Sta.: 4 + 12	0	Date Pro		11/18/2014	5	
	0			3474		
• • • • •	0	Level III			0/04/0040	Version
Right/Left: Lt	No Elev Data %		A Expiratio	n:	2/31/2016	
	%	Review		Greg Kirby		2.10.2012
Contributing			eviewed:	11/19/2014		
	feet	Level III		391	1014.000	
	feet	Level III	A Expiratio	n: 1	/0/1900	
	acres					
	acres					
*Drainage Area must equal or exce		ea found above				
Surface Dewatering Device	n Y					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Regression Constant, C	<u>659</u>		7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>	Figure 2				
Erodibility Factor, K	<u>0.24</u>				p://soildatama	rt.nrcs.usda.gov/)
Soil Type	SoD Soco	* informa	ational purp	oses only.		
STEP 2: Ditch Liner requirements.	Utilize the Required	Liner tab and note	recomment	ations on plan	IS.	
					_	
STEP 3: Velocity Control Requirer	nents					
		-				Wattles are required in
TYPE B ROCK SILT C	HECKS	9 spa	aced at	<mark>18</mark> fe	eet	conjunction with PAMs
OR WATTLES						
*See the HELP Tab fo	r additional clarificati	on and an example	on how to	place on plan	s.	
	Start with Optic	on 4A				
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K		e: Use V=CRKs to 6 659 106.4 0.24	determine s	torage From Step 1 a	above	
Soil Type	Sol) Soco	1			
Ditchline Slope, s		0.16420 ft/ft	J			
Biterinite Olope, 3	V= 2	2265.82 ft ³ /ac/yr				
Dogwinod S				Licing 92%	of Doinfall Ea	ctor-see note in cell
Required S	torage Volume=	139.66 ft ³				
					- Move on to	o Option 4C
OPTION 4B: For DBA		a. Lian DUSI ED Ma	dolina to d	tormine stor		
OPTION 4B: For DRA	INAGE AREA > 5 ACI	e. Use KUSLEZ MO	uenny to u	stermine stor	aye	
Sodimont Dolive	ery from RUSLE2:	0.00 tons/acr	ohr			
		ft ³ /ac/yr	e/yi			
	g to ft ³ /ac/yr: N/A					
Required S	torage Volume=	N/A ft ³			See Optio	on 4A
	e Required Storage V levices can be used to					TRSC-A/Wattles Required
		hecks or Wattles		í T		
Enter Ditch Front Slope			3	:1	W	ATTLES REQUIRED
Enter Ditch Back Slope			<u>1.5</u>			
Enter Device Height:			1.5			
0			5.06			
Area Behind Device:	Dovico:					mhor of dovices a minut C
Length of Ditch Behind		ata a sub .	9.14		Excessive nu	mber of devices required. Go to
Storage Behind Devic			10.02	π		Option 5
Wrapped TRSC-A/Wa		x	14.0	. 2		
	Tot	al 14	40.28	ft ³		
COMMENTS:					Designer still h	as the option of using Option 5 or 6
Use Temporary Sedime	ent Dam, Type-B 9x3x3	B. Dam and wattles co	over require	d storage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250	-
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	•	Table 1 4 1 5 1 6		
Time of Concentration, t _e (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,), can be read fi	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.06	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3		0 ft ³	
Required VOLOME using the des	agn depin.	0.0	U II	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.0	6	
Required Sediment Storage (ft ³)=		110.9	5 ft ³	
			_	
Final Required Storage:		110.9		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	:1 or flatter
		ey (http://soildatamai		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	instanto to not praotiour	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
		oo Low	-	
Verify Surface Area (ft ²)		27.00		
		OK		

	*items in red are REQUIR	RED	SECTION 4	of 32	
Construction time		County:	Avery	•	EDODES
≤6 months (Y/N)? Y HQW (Y/N)? Y	Elevation	Leastion	Dilot Didgo Dd		ERODES
		Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 5 + 91	0	Date Prepared:	11/18/2014		
to Sta.: 8 + 15	0	Level III A #:	3474		Manajara
Right/Left: Lt	No Elev Data %	Level III A Expirati	on: 12/31/2	016	Version
% Ditch Grade: 18.800	%	Reviewed By:	Grea Kirby		2.10.2012
Contributing		Date Reviewed:	11/19/2014		2.10.2012
	feet	Level III A #:	391		
	feet	Level III A Expirati	n: 1/0/190	0	
	acres	Level III A Expirati	110/130	0	
	acres				
*Drainage Area must equal or exc		ind above			
Surface Dewatering Device	n Y				
s this a Typical Section (Y/N)?	T				
Will RUSLE2 be used to model					
the Non-Typical sections?	N				
Regression Constant, C	<u>659</u>	Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>059</u> 106.4	Figure 2-1	(Grimanudi)		
			De il Ourseeur //s//sec//sec		-10
Erodibility Factor, K	0.24		Soil Survey (http://soi	datamart.nrcs.us	da.gov/)
Soil Type	SoD Soco	* informational purp	oses only.		
STEP 2: Ditch Liner requirements	I Hilizo the Beguired Lines	tob and note recommon	dationa an nIana		
STEP 2: Ditch Liner requirements	Utilize the Required Liner	tab and note recommen	dations on plans.		
STEP 3: Velocity Control Requirer	nents				
TYPE B ROCK SILT C	HECKS 14	spaced at	15 feet		s are required in
OR WATTLES				conjui	nction with PAMs
*See the HELP Tab fo	r additional clarification an	nd an example on how to	place on plans.		
	Start with Option 4	Α			
OPTION 4A: For DRA	INAGE AREA < 3 Acre: Us	e V=CRKs to determine	storage		
Regression Constant,	~	~~~ >			
		659			
Rainfall Factor, R	1	106.4			
Rainfall Factor, R Erodibility Factor, K	1	106.4 0.24	From Step 1 above		
Rainfall Factor, R Erodibility Factor, K Soil Type	1 SoD Soc	106.4 0.24 o	From Step 1 above		
Rainfall Factor, R Erodibility Factor, K	1 SoD Soco 0.1	106.4 0.24 o 8800 ft/ft	From Step 1 above		
Rainfall Factor, R Erodibility Factor, K Soil Type	1 SoD Soc	106.4 0.24 o 8800 ft/ft	From Step 1 above		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	1 SoD Soco 0.1	106.4 0.24 o 8800 ft/ft 24 ft ³ /ac/yr	From Step 1 above	nfall Factor-see	note in cell
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	1 SoD Soc 0.1 V=	106.4 0.24 o 8800 ft/ft 24 ft ³ /ac/yr	Using 82% of Rai	nfall Factor-see /e on to Option 4	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u>	106.4 0.24 0 88000 ft/ft 24 ft ³ /ac/yr 7 ft ³	Using 82% of Rai C4 - Mor		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S	1 SoD Soc 0.1 V=	106.4 0.24 0 88000 ft/ft 24 ft ³ /ac/yr 7 ft ³	Using 82% of Rai C4 - Mor		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u>	106.4 0.24 0 88000 ft/ft 24 ft ³ /ac/yr 7 ft ³	Using 82% of Rai C4 - Mor		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive	1 SoD Soc. 0.1: V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ery from RUSLE2:	106.4 0.24 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ e RUSLE2 Modeling to c	Using 82% of Rai C4 - Mor		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: <u>N/A</u>	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr ft ³ /ac/yr	Using 82% of Rai C4 - Mor		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin	1 SoD Soc. 0.1: V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ery from RUSLE2:	106.4 0.24 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ e RUSLE2 Modeling to c	Using 82% of Rai C4 - Mo		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ery from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume	106.4 0.24 0 24 ft ² /ac/yr 2 ft ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr tt ³ <i>e ftrom Option 4A or 4B</i>	Using 82% of Rai C4 - Mor letermine storage	re on to Option 4	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o	1 SoD Soc. 0.1: V= 2594.3 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume levices can be used to sati	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr ft ³ /ac/yr ft ³ <i>e from Option 4A or 4B i</i> <i>sty the velocity requirer</i>	Using 82% of Rai C4 - Mor letermine storage	re on to Option 4	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These of	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ery from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ³ /ac/yr ft ³ e from Option 4A or 4B is sfy the velocity requirers s or Wattles	Using 82% of Rai C4 - Mo letermine storage St to determine # of Wi nents in Step 3.	e Option 4A apped TRSC-AA	IC Vattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These o	1 SoD Soc. 0.1: V= 2594.3 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ery from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volumes fevices can be used to sati	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ³ /ac/yr ft ³ e from Option 4A or 4B is sfy the velocity requirers s or Wattles	Using 82% of Rai C4 - Mor letermine storage	re on to Option 4	IC Vattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume fevices can be used to saff. d Type A Rock Silt Checks e Gradient (H:V):	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr T ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ² /ac/yr tt ² /ac/yr tt ³ /ac/yr 2 sty the velocity requirer s or Wattles	Using 82% of Rai C4 - Mo letermine storage St to determine # of Wi nents in Step 3.	e Option 4A apped TRSC-AA	IC Vattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These of Storage from Wrappe Enter Ditch Front Slop Enter Ditch Back Slop	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume fevices can be used to saff. d Type A Rock Silt Checks e Gradient (H:V):	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 2 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ³ /ac/yr 1t ³ e from Option 4A or 4B isfy the velocity requirer s or Wattles	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA	IC Vattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These of Storage from Wrappe Enter Ditch Front Slop Enter Ditch Fack Slop Enter Device Height:	1 SoD Soc. 0.1 V= 2594.2 torage Volume= <u>320.1</u> INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume fevices can be used to saff. d Type A Rock Silt Checks e Gradient (H:V):	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 7 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ² /ac/yr ft ³ e from Option 4A or 4B is sty the velocity requires a or Wattles	Using 82% of Rai C4 - Mo letermine storage	e Option 4A apped TRSC-AA	IC Vattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Back Slope	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us eny from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A e Required Storage Volume levices can be used to sati d Type A Rock Silt Checks e Gradient (H:V): e Gradient (H:V):	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr T ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr ft ³ e from Option 4A or 4B i isfy the velocity requirer s or Wattles 1.6 5.06	Using 82% of Rai C4 - Mo letermine storage	e Option 4A apped TRSC-AA WATTLES	IC Vattles Required REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe Enter Ditch Front Slop Enter Ditch Front Slop	1 SoD Soc. 0.1 $V = 2594.2$ torage Volume= 320.1 INAGE AREA > 3 Acre: Us ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A torage Volume= N/A e Required Storage Volume fevices can be used to safi d Type A Rock Silt Checks e Gradient (H:V): 1 Device:	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr T ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ² /ac/yr ft ³ /ac/yr tt ³ /ac/yr 2 1 5 5 5 5 0 7,96 5 5 0 7,96 5 1 1 1 1 1 1 1 1 1 1 1 1 1	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c	IC Vattles Required REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Rack Slop Enter Device Height: Area Behind Device: Length of Ditch Behind	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A e Required Storage Volume levices can be used to sati d Type A Rock Silt Checks e Gradient (H:V): g Gradient (H:V): 1 Device: c (assumes 65% effecience)	106.4 0.24 0 0.8800 ft/ft 24 ft ² /ac/yr 2 ft ³ e RUSLE2 Modeling to a 0.00 tons/acre/yr 0.00 tons/acre/yr ft ³ /ac/yr tt ³ tt ³ e from Option 4A or 4B is sty the velocity requirers a or Wattles 1.6 1.6 5.00 7.98 5.00 7.99 8.72	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c	IC Vattles Required REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe Enter Ditch Front Slop Enter Ditch Front Slop	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us eny from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A e Required Storage Volume levices can be used to sati d Type A Rock Silt Checks e Gradient (H:V): a Gradient (H:V): I Device: the (assumes 65% effecience tttles required:	106.4 0.24 0 8800 ft/ft 24 ft ³ /ac/yr 7 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr ft ³ /ac/yr 14 15 16 5.00 7.95 24/3 25/3	Using 82% of Rai C4 - Mo letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c	IC Vattles Required REQUIRED levices required. Go to
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These of Storage from Wrappe Enter Ditch Back Slope Enter Ditch Back Slope	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= <u>N/A</u> e Required Storage Volume levices can be used to sati d Type A Rock Silt Checks e Gradient (H:V): g Gradient (H:V): 1 Device: the (assumes 65% effecience) (1 Device)	106.4 0.24 0 0.8800 ft/ft 24 ft ² /ac/yr 2 ft ³ e RUSLE2 Modeling to c 0.00 tons/acre/yr 0.00 tons/acre/yr ft ³ /ac/yr tt ³ tt ³ e from Option 4A or 4B is sty the velocity requirers a or Wattles 1.6 1.6 5.00 7.98 5.02 cy): 8.75	Using 82% of Rai C4 - Mo letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	Vattles Required REQUIRED levices required. Go to on 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These o Storage from Wrappe Enter Ditch Back Slop Enter Ditch Bachto Storage Behind Device Wrapped TRSC-A/Wa	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A torage Volume= N/A d Type A Rock Sill Checks: a Gradient (H:V): b Gradient (H:V): clowice: ce (assumes 65% effecience: titls required: Total	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 16 ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr 16 ² /ac/yr 16 ³ <i>e rom Option 4A or 4B</i> 15 <i>fy the velocity requirer</i> <i>s or Wattles</i> 1.6 5.06 7.98 2.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	IC Vattles Required REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These o Storage from Wrappe Enter Ditch Back Slop Enter Ditch Bachto Storage Behind Device Wrapped TRSC-A/Wa	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us env from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A e Required Storage Volume levices can be used to sati d Type A Rock Silt Checks e Gradient (H:V): a Gradient (H:V): I Device: the (assumes 65% effecience tttles required:	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 16 ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr 16 ² /ac/yr 16 ³ <i>e rom Option 4A or 4B</i> 15 <i>fy the velocity requirer</i> <i>s or Wattles</i> 1.6 5.06 7.98 2.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	Vattles Required REQUIRED levices required. Go to on 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe Enter Ditch Back Slop Enter Ditch Bach Device Length of Ditch Behind Storage Behind Device Wrapped TRSC-A/Wa COMMENTS:	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A torage Volume= N/A d Type A Rock Sill Checks: a Gradient (H:V): b Gradient (H:V): clowice: ce (assumes 65% effecience: titls required: Total	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 16 ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr 16 ² /ac/yr 16 ³ <i>e rom Option 4A or 4B</i> 15 <i>fy the velocity requirer</i> <i>s or Wattles</i> 1.6 5.06 7.98 2.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	Vattles Required REQUIRED levices required. Go to on 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th * These o Storage from Wrappe Enter Ditch Back Slop Enter Ditch Bach Device Length of Ditch Behind Storage Behind Device Wrapped TRSC-A/Wa COMMENTS:	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A torage Volume= N/A d Type A Rock Sill Checks: a Gradient (H:V): b Gradient (H:V): clowice: ce (assumes 65% effecience: titls required: Total	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 16 ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr 16 ² /ac/yr 16 ³ <i>e rom Option 4A or 4B</i> 15 <i>fy the velocity requirer</i> <i>s or Wattles</i> 1.6 5.06 7.98 2.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	Vattles Required REQUIRED levices required. Go to on 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These o Storage from Wrappe Enter Ditch Back Slop Enter Ditch Bachto Storage Behind Device Wrapped TRSC-A/Wa	1 SoD Soc. 0.1: V= 2594.3 torage Volume= 320.1 INAGE AREA > 3 Acre: Us: ary from RUSLE2: g to ft ³ /ac/yr: N/A torage Volume= N/A torage Volume= N/A d Type A Rock Sill Checks: a Gradient (H:V): b Gradient (H:V): clowice: ce (assumes 65% effecience: titls required: Total	106.4 0.24 0 8800 ft/ft 24 ft ² /ac/yr 16 ³ <i>e RUSLE2 Modeling to c</i> 0.00 tons/acre/yr 16 ² /ac/yr 16 ³ <i>e rom Option 4A or 4B</i> 15 <i>fy the velocity requirer</i> <i>s or Wattles</i> 1.6 5.06 7.98 2.1 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	Using 82% of Rai C4 - Mor letermine storage	e Option 4A apped TRSC-AA WATTLES sive number of c Opti	Vattles Required REQUIRED levices required. Go to on 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	·ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q25	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or		
NOAA website, http://hdsc.n	iws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.12	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
			_	
c. Use Surface Area (A) to determine requir		Temporary Type-B	Sediment Dam	
Design Depth:	3		- 2	
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=	,40	0.1	2	
Required Sediment Storage (ft ³)=		222.1		
Final Required Storage:		222.1	<mark>5</mark> ft ³	
Proposed Basin Side Slopes:		0.	0 :1 side slopes *must be at least 1.5	5:1 or flatter
Infiltration Analysis	Web Soil Surve	ey (http://soildatamai	rt.nrcs.usda.gov/)	
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A	_	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		4	Ensure devices are used to satisfy requirements of Step 3.	
Final Design Top Width (ft): Final Design Top Length (ft):		4	Install Baffles*.	
Final Design Top Length (it):		3	-	
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
		144.00		
Verify Storage (ft ³)	Т	oo Low		
Verify Surface Area (ft ²)		48.00		
verny Sunace Area (it)		ок		

STEP 1: Input Project Information	*items in red are F	REQUIRED		SECTIO	N 5 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	-	ERODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		ERODES
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 4 + 12	0		Date Prepared:	11/18/2014		EROSION DESIGN
to Sta.: 5 + 91	0			3474		
Right/Left: Rt	No Elev Data %		Level III A Expiratio		31/2016	Version
	%	,		Crog Kirby	51/2010	2.10.2012
% Ditch Grade: 16.420 9 Contributing	70		Reviewed By: Date Reviewed:	41/10/2014		2.10.2012
-	eet		Level III A #:	201		
	eet		Level III A Expiratio	551 n· 1/0/	1000	-
	acres			1/0/	1300	1
	acres					
*Drainage Area must equal or exce		Area found al	hove			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Ÿ					
Will RUSLE2 be used to model	· · ·					
the Non-Typical sections?	Ν					
Regression Constant, C	<u>549</u>		Table 2-7 (Level III F	Ref Manual)		
Rainfall Factor, R	106.4		Figure 2-1			
Erodibility Factor, K	0.24		Table 2-2 or Web S	oil Survey (http://	/soildatamart.nrcs	.usda.gov/)
Soil Type	SoD Soco		* informational purpo			
	-			-		
STEP 2: Ditch Liner requirements:	Utilize the Require	ed Liner tab a	and note recommend	ations on plans.		
STEP 3: Velocity Control Requirem	nents					
TYPE B ROCK SILT CI OR WATTLES	HECKS	9	spaced at	18 feet		ttles are required in njunction with PAMs
*See the HELP Tab for	r additional clarifica	ation and an	example on how to j	place on plans.		
(Start with Opt	tion 4A				
OPTION 4A: For DRAI Regression Constant, C Rainfall Factor, R		cre: Use V=0 549 106.4	CRKs to determine s	torage		
Erodibility Factor, K		0.24	>	From Step 1 abo	ove	
Soil Type	S	oD Soco				
Ditchline Slope, s		0.16420	ft/ft			
	V=	1887.61	ft3/ac/yr			
Required St	orage Volume=	<u>155.13</u>	ft ³		Rainfall Factor-s Move on to Optic	
OPTION 4B: For DRAI	NAGE AREA > 3 A	cre: Use RU	SLE2 Modeling to de	etermine storage	e	
	ry from RUSLE2:	0.00	tons/acre/yr			
Converting	g to ft ³ /ac/yr: N	/A	ft ³ /ac/yr			
Required St	orage Volume=	<u>N/A</u>	ft ³		See Option 4A	
OPTION 4C: Using the * These de			n Option 4A or 4B to be velocity requirem		Wrapped TRSC	A/Wattles Required
Storage from Wrapped	d Type A Rock Silt	Checks or V	lattles		WATTL	ES REQUIRED
Enter Ditch Front Slope				:1		
Enter Ditch Back Slope	Gradient (H:V):		<u>1.5</u>			
Enter Device Height:			<u>1.5</u>			
Area Behind Device:	. .		5.06			
Length of Ditch Behind			9.14			of devices required. Go to
Storage Behind Devic Wrapped TRSC-A/Wat	ttles required:	x	10.02 16.0		C	Option 5
	Te	otal	160.32	ft ³		
COMMENTS: Use Temporary Sedime	ent Dam, Type-B 16x	(8x3. Dams co	overs required storage		signer still has the	option of using Option 5 or 6

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface A	Area Calculatio	ns to determine storage. A=3250 -	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	
	- atio (ation in		032 423	
Q _p =CiA Runoff Coefficient, C	0	Table 1-4,1-5,1-6		
Time of Concentration, t _c (minutes)		Table 1-4, 1-3, 1-0		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =	#DIV/0		000 1100000 / 24.0	
Using a Return Period (\mathbf{T}) of 10 y	rs (25 for HOW	() and a t of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr				
NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	- 	
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 💌			
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
	_		_	
d. Sediment Storage Required using 1800 ft	3/ac		_	
Disturbed Area (acres)=		0.0		
Required Sediment Storage (ft ³)=		147.9	3 ft ³	
Final Required Storage:		147.9	3 ft ³	
Proposed Basin Side Slopes:			5 :1 side slopes *must be at least 1.5:1 or flat	ter
	Web Soil Surve	y (http://soildatama	•	
Sat. Hydraulic Con. (Ksat, micro			Skimmer Basin	
Soil Permeability (in/hr)	5 11/300)	0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum.	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		8	satisfy requirements of Step 3.	
Final Design Top Length (ft):		16	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in) Dewatering Time (Days)		0.25		
Dewatering Time (Days)		3 156.00	-	
Verify Storage (ft ³)		OK		
	1			
Verify Surface Area (ft ²)		28.00		

STEP 1: Input Project Information	*items in red are REQUIRE	ED	SECTIO	N 6 of 32	
Construction time		County:	Avery	•	EDODEC
≤6 months (Y/N)? Y HQW (Y/N)? Y	Elevation	Leastion	Dilot Didgo Dd		– ERODES
. ,		Location:	Pilot Ridge Rd	_	
Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 8 + 15	0	Date Prepared:	11/18/2014		
to Sta.: 11 + 10	0	Level III A #:	3474		Manatan
Right/Left: Lt	No Elev Data %	Level III A Expirati	on: 12/3	31/2016	Version
% Ditch Grade: 16.930	%	Reviewed By:	Greg Kirby		2.10.2012
Contributing		Date Reviewed:	11/19/2014		2.10.2012
R/W Width: 22	feet	Level III A #:	301		
Length of Run X 295	feet	Level III A Expirati	on: 1/0/	1000	
		Level III A Expirati		1300	
	acres				
Drainage Area: 0.15	acres				
*Drainage Area must equal or exc		la above			
Surface Dewatering Device	n				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	N				
Regression Constant, C	<u>659</u>	Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>	Figure 2-1			
Erodibility Factor, K	0.24	Table 2-2 or Web	Soil Survey (http://	/soildatamart.n	rcs.usda.gov/)
Soil Type	SoD Soco	* informational purp			5 /
STEP 2: Ditch Liner requirements	: Utilize the Required Liner	tab and note recommen	dations on plans.		
STEP 3: Velocity Control Require	ments				
					Wattles are required in
TYPE B ROCK SILT (OR WATTLES		spaced at	17 feet		conjunction with PAMs
*See the HELP Tab f	or additional clarification and	l an example on how to	place on plans.		
	Start with Option 4A	A			
OPTION 4A: For DRA	NNAGE AREA < 3 Acre: Use	V=CRKs to determine	storage		
Regression Constant	c	650			
Regression Constant,		659			
Rainfall Factor, R		06.4			
Erodibility Factor, K).24 >	From Step 1 abo	ove	
Soil Type	SoD Soco				
Ditchline Slope, s	0.16	930 ft/ft			
	V= 2336.20) ft ³ /ac/yr			
Required S	Storage Volume= <u>348.07</u>	ft ³		Rainfall Facto Move on to Op	r-see note in cell otion 4C
OPTION 4B: For DRA	NINAGE AREA > 3 Acre: Use	RUSLE2 Modeling to a	letermine storage	e	
Sediment Deliv	ery from RUSLE2:	0.00 tons/acre/yr			
	ng to ft ³ /ac/yr: N/A	ft ³ /ac/yr			
Required	Storage Volume= <u>N/A</u>	ft ³		See Option 4	A
	ne Required Storage Volume			Wrapped TRS	SC-A/Wattles Required
	devices can be used to satis		nents in Step 3.		
	ed Type A Rock Silt Checks			WAT	TLES REQUIRED
Enter Ditch Front Slop			3 :1	TRAT	
Enter Ditch Back Slop	e Gradient (H:V):	<u>1.</u>	:1		
Enter Device Height:	-		ft		
Area Behind Device:		5.06			
Length of Ditch Behin	d Device:	8.86		essive numb	er of devices required. Go to
-				cosive numb	
Storage Benind Devi Wrapped TRSC-A/W	•	´X <mark>36.0</mark>			Option 5
00000000	Total	349.86			
COMMENTS:	T D (0 (5 5			signer still has t	he option of using Option 5 or 6
Use 2 Tiered Silt Basi	ns, Type-B 12x4x3. Dams and	wattles cover required st	orage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	•	Table 1 1 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read fi	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.15	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
			_	
c. Use Surface Area (A) to determine requir		Temporary Type-B	Sediment Dam	
Design Depth:	3		. 2	
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=	780	0.1	5	
Required Sediment Storage (ft ³)=		268.1		
		20011		
Final Required Storage:		268.1	8 ft ³	
Proposed Basin Side Slopes:		0.	0 :1 side slopes *must be at least 1.	5:1 or flatter
		ey (http://soildatama		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)	14i i			
Basin Design	Minimum	2:1 (L:W) Ratio	Disco Designat sutlate sigt	
Suggested Top Width (ft): Suggested Top Length (ft):		0	Place Basin at outlet point. Ensure devices are used to	
Final Design Top Width (ft):		4	satisfy requirements of Step 3.	
Final Design Top Width (ft):		12	Install Baffles*.	
Final Design Top Length (ft):		3	-	
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
Marife Starson (43)	1	144.00		
Verify Storage (ft ³)	T	oo Low		
Verify Surface Area (ft ²)		48.00		
		OK		

STEP 1: Input Project Information	*items in red are REQUIRED		SECTIO	ON 7 of 32	
Construction time		County:	Avery	•	EDODES
≤6 months (Y/N)? Y HQW (Y/N)? Y	Elevation	Location:	Pilot Ridge Rd		<i>— ERODES</i>
HQW (Y/N)? Y Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs		EDOsian DECian
From Sta.: $11 + 10$		Date Prepared:	11/18/2014		EROsion DESign
	U C				
to Sta.: 14 + 29	0	Level III A #:	3474		Version
Right/Left: Lt	No Elev Data %	Level III A Expirati	on: 12/3	31/2016	
% Ditch Grade: 16.560	%	Reviewed By:	Greg Kirby		2.10.2012
Contributing		Date Reviewed:	11/19/2014		
R/W Width: 20	feet	Level III A #:	391		
Length of Run X 319	feet	Level III A Expirati	on: 1/0/	1900	
Disturbed Area = 0.15	acres				
Drainage Area: 0.15	acres				
*Drainage Area must equal or exc	ceed the Disturbed Area found	above			
Surface Dewatering Device	n				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	Ν				
Regression Constant, C	<u>659</u>	Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>	Figure 2-1			
Erodibility Factor, K	<u>0.24</u>	Table 2-2 or Web	Soil Survey (http://	/soildatamart.n	rcs.usda.gov/)
Soil Type	SoD Soco	* informational purp	oses only.		
STEP 2: Ditch Liner requirement	s: Utilize the Required Liner tal	b and note recommen	dations on plans.		
STEP 3: Velocity Control Require	ements				
		_			Wattles are required in
TYPE B ROCK SILT OR WATTLES		spaced at	18 fee		conjunction with PAMs
*See the HELP Tab f	or additional clarification and a	n example on how to	place on plans.		
	Start with Option 4A				
OPTION 4A: For DR.	AINAGE AREA < 3 Acre: Use V	=CRKs to determine	storage		
Regression Constant	C	· ·			
Regression Constant,					
Rainfall Factor, R	106.				
Erodibility Factor, K	0.2	24 >	From Step 1 ab	ove	
Soil Type	SoD Soco				
Ditchline Slope, s	0.1656				
	V= 2285.14	ft³/ac/yr			
Required	Storage Volume= <u>334.69</u>	ft ³		Rainfall Facto Move on to O	pr-see note in cell ption 4C
OPTION 4B: For DR.	AINAGE AREA > 3 Acre: Use R	USLE2 Modeling to a	letermine storag	e	
Sediment Deliv	very from RUSLE2: 0.0	0 tons/acre/yr			
Converti	ng to ft ³ /ac/yr: N/A	ft ³ /ac/yr			
Required	Storage Volume= <u>N/A</u>	ft ³		See Option 4	4A
	he Required Storage Volume fr			f Wrapped TR	SC-A/Wattles Required
	devices can be used to satisfy ed Type A Rock Silt Checks or		nents in Step 3.		
Enter Ditch Front Slop			:1	WAT	TLES REQUIRED
Enter Ditch Back Slop			:1		
Enter Device Height:			ft		
Area Behind Device:		5.06			
	d Dovico:				er of devices remained O
Length of Ditch Behind		9.06		cessive numb	er of devices required. Go to
Storage Behind Dev Wrapped TRSC-A/W	-	X 34.0			Option 5
	Total	337.81	ft ³		
COMMENTS:				signer still has t	he option of using Option 5 or 6
Use 2 Tiered Silt Basi	ns, Type-B 12x4x3. Dams and wa	attles cover required st	orage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		032 423	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _e (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,), can be read f	rom Appendix A or		
NOAA website, http://hdsc.n	iws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.15	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3		0 ft ³	
Required VOLOME using the des	agn deptri.	0.0	0 It	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.1	5	
Required Sediment Storage (ft ³)=		263.6	4 ft ³	
			_	
Final Required Storage:		263.6		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5:1	or flatter
		ey (http://soildatamai		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		4	satisfy requirements of Step 3.	
Final Design Top Length (ft):		12	Install Baffles*.	
Final Design Depth (ft):		3	Soo Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
Verify Storage (ft ³)		144.00		
		oo Low		
Verify Surface Area (ft ²)		48.00		
		OK		

STEP 1: Input Project Information	*items in red are REQUIRE	D	SECTION 8 of 32	
Construction time ≤ 6 months (Y/N)? Y		County: Avery	•	EDODEC
	Elevation	Location: Pilot Ri	idea Dal	- ERODES
Trout (Y/N)? Y From Sta.: 14 + 29	Tool (ft)	Prepared By: Jacob Date Prepared: 11/18/2		EROsion DESign
			014	
to Sta.: 17 + 30	0	Level III A #: 3474		Version
Right/Left: Lt	No Elev Data %	Level III A Expiration:	12/31/2016	
% Ditch Grade: 16.190	%	Reviewed By: Greg K	irby	2.10.2012
Contributing		Date Reviewed: 11/19/2	014	
R/W Width: 20	feet	Level III A #: 391		
Length of Run X 301	feet	Level III A Expiration:	1/0/1900	
Disturbed Area = 0.14	acres			
Drainage Area: 0.15	acres			
*Drainage Area must equal or exc	eed the Disturbed Area foun	d above		
Surface Dewatering Device	n			
Is this a Typical Section (Y/N)?	Y			
Will RUSLE2 be used to model				
the Non-Typical sections?	N			
Regression Constant, C	<u>659</u>	Table 2-7 (Level III Ref Man	ual)	
Rainfall Factor, R	<u>106.4</u>	Figure 2-1		
Erodibility Factor, K	<u>0.24</u>	Table 2-2 or Web Soil Surve	əy (http://soildatamart.ni	rcs.usda.gov/)
Soil Type	SoD Soco	* informational purposes onl	y.	
STEP 2: Ditch Liner requirements	: Utilize the Required Liner	ab and note recommendations o	n plans.	
STEP 3: Velocity Control Require	ments			
STEP 3. Velocity control Require	nents			
TYPE B ROCK SILT (CHECKS 16	spaced at 18		Nattles are required in
OR WATTLES			c	onjunction with PAMs
*See the HELP Tab f	or additional clarification and	an example on how to place or	n plans.	
	Start with Option 4A	N		
OPTION 4: Using RUSLE2 A OPTION 4A: For DRA		V=CRKs to determine storage		
		Ũ		
Regression Constant,	C	659		
Rainfall Factor, R	10	6.4		
Erodibility Factor, K	0	0.24 ≻ From S	tep 1 above	
Soil Type	SoD Soco			
Ditchline Slope, s	0.16	190 ft/ft		
	V= 2234.08	ft ³ /ac/yr		
Required S	Storage Volume= 308.75	ft ³ Using	82% of Rainfall Facto	r-see note in cell
			C4 - Move on to Op	
OPTION 4B: For DRA	NNAGE AREA > 3 Acre: Use	RUSLE2 Modeling to determine	e storage	
Sediment Deliv	ery from RUSLE2:	0.00 tons/acre/yr		
	ery from RUSLE2: Ung to ft ³ /ac/yr: N/A	ft ³ /ac/yr		
Converti			See Ontion 4	
Converti	ng to ft ³ /ac/yr: N/A	ft ³ /ac/yr	See Option 4	A
Convertin Required S OPTION 4C: Using th	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> ne Required Storage Volume	ft ³ /ac/yr ft ³ from Option 4A or 4B to detern	nine # of Wrapped TRS	
Convertii Required S OPTION 4C: Using th * These	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> ne Required Storage Volume devices can be used to satisi	ft ³ /ac/yr ft ³ from Option 4A or 4B to determ fy the velocity requirements in	nine # of Wrapped TRS	
Convertii Required S OPTION 4C: Using th * These Storage from Wrapp	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> ne Required Storage Volume devices can be used to satisi ad Type A Rock Silt Checks	ft ² /ac/yr ft ³ from Option 4A or 4B to determ fy the velocity requirements in or Wattles	nine # of Wrapped TRS Step 3.	C-A/Wattles Required
Convertii Required S OPTION 4C: Using th * These Storage from Wrapp Enter Ditch Front Slop	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> the Required Storage Volume devices can be used to satis ad Type A Rock Silt Checks the Gradient (H:V):	ft ² /ac/yr ft ³ from Option 4A or 4B to determ fy the velocity requirements in or Wattles <u>3</u> :1	nine # of Wrapped TRS Step 3.	
Convertii Required S OPTION 4C: Using th * These Storage from Wrappy	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> the Required Storage Volume devices can be used to satis ad Type A Rock Silt Checks the Gradient (H:V):	ft ² /ac/yr ft ³ from Option 4A or 4B to determ fy the velocity requirements in or Wattles	nine # of Wrapped TRS Step 3.	C-A/Wattles Required
Convertii Required S OPTION 4C: Using th * These Storage from Wrapp Enter Ditch Front Slop	ng to ft ³ /ac/yr: N/A Storage Volume= <u>N/A</u> the Required Storage Volume devices can be used to satis ad Type A Rock Silt Checks the Gradient (H:V):	ft ² /ac/yr ft ³ from Option 4A or 4B to determ fy the velocity requirements in or Wattles <u>3</u> :1	nine # of Wrapped TRS Step 3.	C-A/Wattles Required
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OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface i	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p} :			USE Q25	¢ρ
	- Q ₁₀ (Q ₂₅ 101 11		032 023	
Q _p =CiA Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _e (minutes		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10	rs (25 for HQV	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr	-			
NOAA website, http://hdsc.r	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.15	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine require Design Depth:		Temporary Type-B	Sediment Dam	
	3		0 ft ³	
Required VOLUME using the des	agn deptri.	0.0	U 11	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.1	4	
Required Sediment Storage (ft ³)=		248.7	6 ft ³	
			_	
Final Required Storage:		248.7		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.	5:1 or flatter
Infiltration Analysis		ey (http://soildatamai		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
		oo Low		
Verify Surface Area (ft ²)		27.00 OK		
				

A & formults (Y/N)? Y Elevation HOW (Y/N)? Y Tool (ft) From Sta: 17 + 30 0 Tool (ft) 0 0 Right/Left: Lt No Elev Data % Dich Grade: 18 + 0 0 Right/Left: Lt No Elev Data % Dich Grade: 18,970 % Contributing Reviewed By: Greak (trivy Disturbed Area 0.02 acres Disturbed Area 0.02 acres Optimize Area: 0.02 acres Surface Dewatering Device n N Surface Dewatering Device n State 2-7 (Level III Ref Manual) Figure 2.1 Table 2-7 (Level III Ref Manual) Figure 2.1 Reiobility Factor, R 106.4 Figure 2.1 Table 2-2 Or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Soil Type SoD Soco * informational purposes	a monitor N/N/ i image: i	≤6 months (Y/N)? Y						
a B monital (NV)* Free Developments Evention Control (Control (Contro) (Contro) (Contro) (Control (Control (Control (Contro) (Control	a B Monitori MV // A Control Monitori MV				County:	Avery	•	
The strength of	The NU (107) 1 Teach (1) Form 3 (1) Teach (1) Form 3 (1) Teach (1) Form 3 (1) <	HQW (Y/N)? Y	El avus d'		-			<i>ERODES</i>
From Stat: 11 + 0 <	From Sta: 17 9 0 0 Us Sta: 1 1 0 0 0 RightLeft: 1 1 0 0 0 0 RightLeft: 1 1 0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
From Star: 11 + 0 - Vertician Night-Left: - 1 No Elevans Vertician Night-Left: - 1 No Elevans Vertician Night-Left: - 1 No Elevans Vertician RNW Widh: 1 1 No Elevans Vertician Vertician RNW Widh: 1 1 No Elevans Vertician Vertician Disturbed Area 0.02 acres Introduction Vertician 2.10.2012 Optimized Area 0.02 acres Introduction 2.10.2012 Vertician State Width St	From Sta:: 11 + 0 0 14 14 20 Version Right-Lett:: + 1 10 No Elev Data No Version 210.2012 Workshow 10.9 10.9 10.9 10.9 210.2012 Version Since: 10.9 20.2 acres 10.4 20.0.2012 210.2012 Toralings Area 10.0 20.2 acres 10.4 20.0.2012 210.2012 Toralings Area 10.02 Table 2.7 (Level III Ref Manual) France Statt Area 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0		Tool (ft)					EROsion DESign
Night Let: L No Elev Data % Level III & Egrination: 12/31/2016 Version RW Width: 10 feet 10.2012 2.10.2012 2.10.2012 Sector Data Reviewed By: Contributing 10.10 10.10 2.10.2012 RW Width: 10 feet Data Reviewed By: Contributing 2.10.2012 Sector Data Reviewed By: Contributing: 10.01 2.10.2012 2.10.2012 Data Reviewed By: Contributing: 10.01 2.10.2012 2.10.2012 <td>Right Lett: I. No Elev Data % Level # A Expiration: 23/2016 Version X0 bith of rade: 1.0.370 % % Level # A Expiration: 23/2016 2.10.2012 RW Width: 10 feet Level # A Expiration: 10.4015 2.10.2012 Data Reviewed By: Contributions 10.40205 2.10.2012 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.</td> <td>From Sta.: 17 + 30</td> <td>0</td> <td></td> <td>Date Prepared:</td> <td>11/18/2014</td> <td></td> <td></td>	Right Lett: I. No Elev Data % Level # A Expiration: 23/2016 Version X0 bith of rade: 1.0.370 % % Level # A Expiration: 23/2016 2.10.2012 RW Width: 10 feet Level # A Expiration: 10.4015 2.10.2012 Data Reviewed By: Contributions 10.40205 2.10.2012 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.10.2012 Data Reviewed By: Level # A Expiration: 10.40205 2.	From Sta.: 17 + 30	0		Date Prepared:	11/18/2014		
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Spitch forage: 19.970 % Reviewed By: Deck Huber 2.10.2012 RWWidth: 10 feet Deck Huber 2.10.2012 English of Run 70 feet Deck Huber 2.10.2012 Disturbed Area 0.02 acres Deck Huber 2.10.2012 Disturbed Area 0.02 acres Deck Huber Deck Huber 2.10.2012 Disturbed Area 0.02 acres Deck Huber Deck Huber 2.10.2012 Disturbed Area 0.02 acres Deck Huber Deck Huber Deck Huber 2.10.2012 Disturbed Area 0.02 acres Deck Huber <	Spitch forage: 19.370 % Reviewed By: res kine: 2.10.2012 RWWidth: 10 feet Image: Area Reviewed By: res 2.10.2012 RWWidth: 70 feet Image: Area Reviewed By: Image: Area 2.10.2012 Disturbed Area 0.02 acres Image: Area Image:		No Elev Data	%		n 12	/31/2016	Version
Contributing RW Width: tength of Run Type a factor is a construct of the Disturbed Area found above Strings Development to the Disturbed Area found above String Development to the Disturbed Area found to the Disturbed Area foun	Contributing RW With: 10 feet between the residue that is the paration: 100/2014 Level II A Equival III A: 100/2014 Level IIII A: 100/2014 Level IIII A: 100/2014 Level IIII	-		/0		One of Kinker	1011/2010	2 40 2042
RWWith: 10 feet Level III A E joint Level III A E joint M9999 Disturbed Area 0.02 acres Optinage Area 0.02 acres Stafes Developing Device 0 prove NIR NUELE 0.24 Table 2: or Web Sol Survey (http://soldatamart.ncs.usda.gov) Staft With Option 4A spaced at 14 feet Staft with Option 4A spaced at 14 feet OPTION 4: Using RUSLE2 Analysis to determine required storage Form Step 1 above Sol Soco OPTION 4: Using RUSLE2 Analysis to determine required storage Form Step 1 above Sol Soco OPTION 4: Using RUSLE2 Analysis to determine required storage Form Step 1 above Sol Soco Di	RW Widh: 10 feet Level III A #: 11 Level III A #: 11 10 feet Disturbed Area - 0.02 acres Disturbed Area 0.02 res Regression Constant, C 0.02 res Start 0.02 res res Start with Option 4A spaced at 14 feet Convention Start, C 0.02 0.02 res Start with Option 4A spaced at 14 feet Convention Constant, C 0.02 feed convention on the pactor at		70			Greg Kirby		2.10.2012
Length of Run X 70 feet sources University Even III & Expiration: MetHop Delatured Area 2002 acres Drainage Area model it Room-Typical Sections (7) V Will RUSLE2 be used to model it Room-Typical Sections (7) V Will RUSLE2 be used to model it Room-Typical Sections (7) V Regression Constant, C <u>550</u> Regression Constant, C <u>1064</u> Regression Constant,	Length of Run X 70 feet with the Length of Run X 70 feet with A Expiration: Motion Run X 70 feet with Run Run X 70 feet with Run Run X 70 feet with Run					11/19/2014		
Disturde Area <u>0.02</u> acres Drainage Area With a provide a serves Drainage Area With Starte Devices and or exceed the Disturbed Area found above Stringe Devices the is a stringe Device the issues of model the Non-Typical sections? N Regression Constant, C Start With Option 4A DFTDN 4: Using RUSLE2 analysis to determine required atorege DFTDN 4: Using RUSLE2 analysis to determine required storage DFTDN 4: Using RUSLE2 Analysis to determine storage Sediment Delvent from RUSLE2: 0.00 provide to determine storage Dettine Storage Volume: NA 1 ¹ See Option 4A DFTDN 4: Using the Rust 4: 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delvent from RUSLE2: 0.00 provide to determine storage Distring See Sed Storage Volume: NA 1 ¹ See Option 4A DFTDN 4: Distring RUSLE2: 0.00 provide to starby the velocity requirements in Storage. Storage form Advector required to as duft the velocity requirements in Storage. Storage form Advector requirements in Storage. Storage Rust August Storage Volume: A 1 See Sed Storage Vo	Disturbed Area = 0.02 acres Drainage Area Must equal or exceed the Disturbed Area found above Strates Devated in powers the his a Typical Section (YM)? Will RUBLE be used to model the Non-Typical sections? N Regression Constant, C Start With Option 4A Spaced at 14 test TYPE B ROCK SLT CHECKS A spaced at 14 test Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: For DRANAGE AREA < 3 Acre: Use V=CRKs to determine storage Regression Constant, C Regression Constant, C					391	4000	
Drainage Area (b) 202 acros Surface Dewatering Device (b) Surface Devatering Device (b) Surface De	Drainage Area : 0.02 acros "Variange Area in the second of the Disturbed Area found above Surface Dewatering Device in the intervention of the Second of t				Level III A Expiratio	n: 1/	/1900	
"Challing a Area must equal or exceed the Disturbed Area found above "Strates Dewatering Device Image: Strate Dewatering Device Is this a Typical Section (YM)? Image: Strate Dewatering Device Regression Constant, C 553 Rainfall Factor, R 106.4 Sold Sector 'snormational purposes only.' STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 4: Outrol Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 4: Outrol Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 4: Velocity Control Requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 4: Outrol Requirements: Utilize the Required Liner tab and note recommendations on plans. Start with Option 4A Option 4A OPTION 4: Using RUSLE2 Analysis to determine storage	"Challing Area must equal for exceed the Disturbed Area found above "Strates Dewatering Device is this a Typical Section ('N)n' Regression Constant, C 553 Table 2-7 (Level III Ref Manual) Rinital Factor, R 054 Strates Dewaters only. Strates Deviation ('N)n' 1054 Strate Deviation ('N)n' 1054 Order Daviation (N) no additional clarification and an example on how to place on plans. Strate With Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Stor DRANAGE AREA < 3 Acre: Use V=CRKs to determine storage							
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Storage Behind Device (assumes 65% effeciency): 8.67 tt³ Option 5 Wrapped TRSC-A/Wattles required: X 5.0 1	Storage Behind Device (assumes 65% effeciency): Wrapped TRSC-A/Wattles required: Total COMMENTS: Storage Behind Device (assumes 65% effeciency): Storage Behind Device (assumes 65%	OPTION 4A: For DR. Regression Constant, Rinfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to "These Storage from Wrapp Enter Ditch Front Sloy Enter Ditch Back Sloy	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be use ed Type A Rock Sil o Gradient (H:V):	Acre: Use V=(659 106.4 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A E Volume froi d to satisfy th	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ n Option 4A or 4B t te velocity requirem Vattles 3 1.5	From Step 1 al Using 82% of C4 etermine store o determine # d eternts in Step 3. :1 t	Rainfall Fac Move on to (ge See Option of Wrapped Ti	AA ARSC-A/Wattles Required
Storage Behind Device (assumes 65% effeciency): 8.67 ti ³ Option 5 Wrapped TRSC-A/Wattles required: X 5.0 1	Storage Behind Device (assumes 65% effeciency): Wrapped TRSC-A/Wattles required: Total COMMENTS: Storage Behind Device (assumes 65% effeciency): Storage Behind Device (assumes 65%	OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to * These Storage from Wrapp Enter Ditch Front Slog Enter Ditch Back Slog Enter Device Height:	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be use ed Type A Rock Sil o Gradient (H:V):	Acre: Use V=(659 106.4 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A E Volume froi d to satisfy th	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ n Option 4A or 4B t te velocity requirem Vattles 3 1.5	From Step 1 al Using 82% of C4 etermine store o determine # d eternts in Step 3. :1 t	Rainfall Fac Move on to (ge See Option of Wrapped Ti	AA ARSC-A/Wattles Required
Wrapped TRSC-A/Wattles required: X 5.0	Wrapped TRSC-A/Wattles required: X 5.0 Total 43.37 tt ³ COMMENTS: *Designer still has the option of using Option 5 or 6	OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using t "These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use devices can be use devices can be use devices can be use of Gradient (H:V): be Gradient (H:V):	Acre: Use V=(659 106.4 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A E Volume froi d to satisfy th	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Vattles 1.5 5.06	From Step 1 al Using 82% of C4 etermine store o determine # c rents in Step 3. :1 :1 :1 tf tf tf	Rainfall Fac Move on to O ge See Option of Wrapped TI WA	4A RSC-A/Wattles Required TTLES REQUIRED
Total 43.37 ft ³	COMMENTS: *Designer still has the option of using Option 5 or 6	OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required *These Storage from Wrapp Enter Ditch Fack Slop Enter Ditch Fack Slop	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: Ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use ed Type A Rock Sil be Gradient (H:V): be Gradient (H:V): hd Device:	Acre: Use V=0 659 106.4 0.24 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A N/A N/A N/A N/A N/A	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t ne velocity requiren Yattles 1.5 5.06 7.91	From Step 1 al Using 82% of C4- etermine stora o determine # of eterms in Step 3. :1 :1 :1 ft ft ft ft	Rainfall Fac Move on to O ge See Option of Wrapped TI WA	Deption 4C 4A RSC-A/Wattles Required TTLES REQUIRED ber of devices required. Go to
		OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to * These Storage from Wrapp Enter Ditch Front Slog Enter Ditch Back Slog Enter Ditch Back Slog Enter Ditch Backs	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use ed Type A Rock Sil oe Gradient (H:V): the Gradient (H:V): to device: ice (assumes 65% of	Acre: Use V=(659 106.4 0.24 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A N/A te Volume froi do satisfy ti t Checks or V	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ m Option 4A or 4B t te velocity requiren Vattles 1.5 5.06 7.91 8.67	From Step 1 al Using 82% of C4 - etermine store etermine store o determine # c o determine # c ents in Step 3. :1 :1 :1 :1 ft ft ft ft ft ft	Rainfall Fac Move on to O ge See Option of Wrapped TI WA	Deption 4C 4A RSC-A/Wattles Required TTLES REQUIRED ber of devices required. Go to
	Use Temperen Ordinant Dam Time D 0:0:0 Demanduration	OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Behint Device: Length of Ditch Behint Storage Behind Devi	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use devices can be	Acre: Use V=(659 106.4 0.24 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A N/A to Satisfy the Checks or V to Checks or V	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t tons/acre/yr ft ³ 1.5 5.06 7.91 8.67 5.0	From Step 1 al Using 82% of C4 - etermine store o determine # c rements in Step 3. :1 :1 :1 tf tf tf tf tf tf tf tf tf	Rainfall Fac Move on to O ge See Option of Wrapped TI WA	20ption 4C 4A RSC-A/Wattles Required TTLES REQUIRED ber of devices required. Go to Option 5
	Use Temporary Sediment Dam, Type-B 9x3x3. Dam and wattles cover required storage.	OPTION 4A: For DR. Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Behint Storage Behind Device: Length of Ditch Behint Storage Behind Device Wrapped TRSC-AW	AINAGE AREA < 3 / C V= Storage Volume= AINAGE AREA > 3 / very from RUSLE2: Ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use devices can be	Acre: Use V=0 659 106.4 0.24 SoD Soco 0.18970 2617.70 42.07 Acre: Use RU 0.00 N/A N/A N/A N/A t Checks or V effeciency): X Total	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Vattles 3 1.5 5.06 7.91 8.67 5.0 43.37	From Step 1 al Using 82% of C4 etermine store o determine # c eterts in Step 3. :1 :1 ft ft ft ft ft ft ft ft ft ft ft ft ft	Rainfall Fac Move on to O ge See Option of Wrapped TI WA	20ption 4C 4A RSC-A/Wattles Required TTLES REQUIRED ber of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface A	Area Calculation	s to determine storage. A=325Q -	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	
$Q_p = CiA$	- atio (ation in	an or nouly)	032 425	
Runoff Coefficient, C	0	Table 1 4 1 E 1 G		
Time of Concentration, t _e (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Ripich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, $t_c=$	#DIV/0!		000 1100000 1 24.0	
Using a Return Period (\mathbf{T}) of 10 y	rs (25 for HOW	() and a t of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,				
NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	· ++	
Peak Rate of Runoff, Q =CiA	0.00	cfs		
F				
b. Determine the Required Surface Area=		0.0	<mark>D</mark> ft ²	
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🔻			
Required VOLUME using the des		0.0	0 ft ³	
			_	
 d. Sediment Storage Required using 1800 ft 	³/ac			
Disturbed Area (acres)=		0.0		
Required Sediment Storage (ft ³)=		28.9	3 ft ³	
First Damins d Otana and		00.0	43	
Final Required Storage:		28.9		-
Proposed Basin Side Slopes: Infiltration Analysis		y (http://soildatamar	0 :1 side slopes *must be at least 1.5:1 o	ritatter
Sat. Hydraulic Con. (Ksat, micro		y (http://solidatamai	Skimmer Basin	
Soil Permeability (in/hr)	J IIVSec)	0.00	Required	
Dewatering Time (Days)		N/A	Reduited	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2	_	
Verify Storage (ft ³)		81.00		
		OK 27.00	-	
Verify Surface Area (ft ²)		OK		

Indiv (1N)? Y Location Prepared By: Jacob Combs ERO: From Sta.: 18 + 0 0 0 Date Prepared By: Jacob Combs ERO: Prepared By: Jacob Combs Date Prepared By: Jacob Combs ERO: Right/Left: Lt No Elev Data % Level III A #: 3474 2374 Length of Run X 300 feet Date Prepared By: Greg Kirby 22. 2. Length of Run X 300 feet Date Reviewed By: Greg Kirby 2. Disturbed Area = 0.09 acres Date Reviewed: 11/19/2014 2. Disturbed Area = 0.09 acres Date Reviewed: 11/19/2014 2. Disturbed Area = 0.09 acres Date Reviewed: 11/19/2014 2. Will RUSLE2 be used to model the Disturbed Area found above Surface Dewatering Device n 106.4 Figure 2-1 Figure 2-1 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. * STEP 2: Ditch	ODES ion DESign (ersion 10.2012
Inductivity Image Addition From Sta: 18 + 0 0 Trout (Y/N)? Y Tool (ft) From Sta: 18 + 0 0 Ito Sta: 21 + 0 0 Right/Left: Lt No Elev Data % Date Prepared By: Jacob Combs Prepared By: Greg Kirby 2 Date Prepared By: Greg Kirby 2 Contributing 13 feet Level III A #: 3474 Length of Run X 300 feet Date Prepared: 11/18/2014 2 Disturbed Area = 0.09 acres Date Reviewed By: Greg Kirby 2 Disturbed Area = 0.09 acres Date Reviewed: 11/19/2014 2 Disturbed Area = 0.09 acres Disturbed Area found above Surface Dewatering Device n 2 Surface Dewatering Device n Figure 2-1 Table 2-7 (Level III Ref Manual) 3 3 Rainfall Factor, R 106.4 Figure 2-1 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov 3 Soil Type SoD Soco	ion DESign /ersion 10.2012
Trout (Y/N)? Y Tool (ft) From Sta:: 18 + 0 0 to Sta:: 21 + 0 0 Right/Left: Lt No Elev Data % Ditch Grade: 15.540 % Contributing R/W Width: 13 feet Level III A Expiration: 12/31/2016 Reviewed By: Greg Kirby 2. Disturbed Area 0.09 acres "Drainage Area must equal or exceed the Disturbed Area found above Surface Dewatering Device n Is this a Typical Section (YN)? Y Will RUSLE2 be used to model the Non-Typical sections? the Non-Typical sections? N Regression Constant, C 659 SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements 15 spaced at 19 feet Conjunction 15 spaced at 19 feet Conjunction rese the HELP Tab for additional clarification and an example on how to place on plans.	/ersion 10.2012
From Sta.: 18 0 0 Ito Sta.: 21 + 0 0 Right/Left: Lt No Elev Data % Level III A #: 3474 2////////////////////////////////////	/ersion 10.2012
to Sta: 21 + 0 0 Right/Left: Lt No Elev Data % %Ditch Grade: 15.540 % Reviewed By: Great Kirby/ 2. Contributing Rw Width: 13 feet 12/31/2016 2. Length of Run X 300 feet Date Reviewed: 11/9/2014 2. Disturbed Area 0.09 acres Date Reviewed: 11/0/1900 2. Disturbed Area 0.09 acres 391 Level III A #:: 391 2. Usinge Area 0.09 acres 10/1900 10/1900 2. 2. Surface Dewatering Device n Ist is a Typical Section (YfN)? Y Ist is a Sol Socio Soil Survey (http://soildatamart.nrcs.usda.gov * informational purposes only. Soil Survey (http://soildatamart.nrcs.usda.gov * informational purposes only. StEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity	10.2012
Right/Left: Lt No Elev Data % Woltch Grade: 15.540 % Reviewed By: Grag Kirby 2. Contributing RW Width: 13 feet Reviewed By: Grag Kirby 2. Length of Run X 300 feet 10.09 acres 11/19/2014 2. Disturbed Area 0.09 acres 11/0/1900 11/0/1900 2. Trainage Area: 0.09 acres 11/0/1900 11/0/1900 2. Surface Dewatering Device n sits a Typical Section (YM)? Y Y Will RUSLE2 be used to model n 106.4 Figure 2-1 Figure 2-1 Trable 1 Factor, R 106.4 Figure 2-1 Table 2-2 (Level III Ref Manual) Rainfall Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov. Soil Type SoD Soco * informational purposes only. * STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet "See the HELP Tab for additional clarification and an example on how to place on pl	10.2012
My Mitcht 15.540 % Reviewed By: Greg Kirby 2. Contributing 13 feet Level III A #: 391 2. Length of Run 2.000 feet 2. 2. Disturbed Area = 0.09 acres 2. 2. Drainage Area 0.000 acres 100/1900 2. Drainage Area 0.000 acres 100/1900 2. Surface Dewatering Device n 100/1900 100/1900 Rainfall Factor, R 100/200 100/200 100/200 Soil Type SoD Soco * informational	10.2012
Contributing R/W Width: 13 feet Length of Run X 300 feet Disturbed Area = 0.09 acres Drainage Area: 0.09 acres Drainage Area: 0.09 acres Drainage Area: 0.09 acres Drainage Area: 0.09 acres Surface Dewatering Device n Is this a Typical Section (Y/N)? Y Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet "See the HELP Tab for additional clarification and an example on how to place on plans.	
R/W With: 13 feet level III A #: 391 Length of Run × 300 feet Disturbed Area 0.09 acres Drainage Area 0.09 acres Surface Dewatering Device n n Is this a Typical Section (Y/N)? Y)
Length of Run X 300 feet Level III A Expiration: 1/0/1300 Disturbed Area 0.09 acres 1/0/1300 I/0/1300 Drainage Area: 0.09 acres 1/0/1300 "Drainage Area: 0.09 acres 1/0/1300 "Surface Dewatering Device n n 1/0/1300 Statistical Section (YIN)? Y Y 1/0/1300 Will RUSLE2 be used to model the Non-Typical Section (YIN)? Y Will RUSLE2 he used to model the Non-Typical Sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 1/06.4 Figure 2-1 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. * <)
Disturbed Area = 0.09 acres Drainage Area: 0.09 acres Drainage Area must equal or exceed the Disturbed Area found above Surface Dewatering Device n Is this a Typical Section (Y/N)? Y Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet Conjunction *See the HELP Tab for additional clarification and an example on how to place on plans.)
Drainage Area: 0.09 acres 'Drainage Area must equal or exceed the Disturbed Area found above Surface Dewatering Device n Is this a Typical Section (Y/N)? Y Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet Wattles are I or on yunction *See the HELP Tab for additional clarification and an example on how to place on plans.)
"Drainage Area must equal or exceed the Disturbed Area found above Surface Dewatering Device n Stris at Typical Section (YM)? Y Will RUSLE2 be used to model readout the Non-Typical Sections? Will RUSLE2 be used to model n the Non-Typical Sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Frodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov. Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 OR WATTLES "See the HELP Tab for additional clarification and an example on how to place on plans.)
Surface Dewatering Device n s this a Typical Section (Y/N)? Y Will RUSLE2 be used to model the Non-Typical sections? Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Erodibility Factor, K 0.24 Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 OR WATTLES "See the HELP Tab for additional clarification and an example on how to place on plans.)
Is this a Typical Section (Y/N)? Y Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Foodbility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet Wattles are I conjunction *See the HELP Tab for additional clarification and an example on how to place on plans.)
Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov. Soil Type SoD Soco STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements STEP 3: Velocity Control Requirements 15 spaced at 19 TYPE B ROCK SILT CHECKS 15 spaced at 19 "See the HELP Tab for additional clarification and an example on how to place on plans. Tester on plans.)
the Non-Typical sections? N Regression Constant, C 659 Table 2-7 (Level III Ref Manual) Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements STEP 3: Velocity Control Requirements 15 spaced at 19 feet Conjunction "See the HELP Tab for additional clarification and an example on how to place on plans. Testing and an example on how to place on plans.)
Rainfall Factor, R 106.4 Figure 2-1 Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov Soil Type Sol Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet Conjunction or WATTLES *See the HELP Tab for additional clarification and an example on how to place on plans.)
Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov.* informational purposes only. Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements STEP 3: Velocity Control Requirements T5 spaced at 19 GR WATTLES *See the HELP Tab for additional clarification and an example on how to place on plans. Wattles are in conjunction)
Erodibility Factor, K 0.24 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov.* informational purposes only. Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements STEP 3: Velocity Control Requirements T5 spaced at 19 GR WATTLES *See the HELP Tab for additional clarification and an example on how to place on plans. Wattles are to conjunction)
STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS 15 spaced at 19 feet conjunction *See the HELP Tab for additional clarification and an example on how to place on plans.	
STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS OR WATTLES *See the HELP Tab for additional clarification and an example on how to place on plans.	
STEP 3: Velocity Control Requirements TYPE B ROCK SILT CHECKS OR WATTLES *See the HELP Tab for additional clarification and an example on how to place on plans.	
TYPE B ROCK SILT CHECKS 15 spaced at 19 feet Wattles are in conjunction *See the HELP Tab for additional clarification and an example on how to place on plans. Image: Conjunction Image: Conjunction Image: Conjunction	
"See the HELP Tab for additional clarification and an example on how to place on plans.	
Start with Option 4A	
OPTION 4A: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage	
Regression Constant, C 659	
o	
Rainfall Factor, R 106.4 Erodibility Factor, K 0.24 > From Step 1 above	
Soil Type SoD Soco	
Ditchline Slope, s 0.15540 ft/ft	
V= 2144.39 ft ³ /ac/yr	
Required Storage Volume= <u>191.99</u> ft ³ Using 82% of Rainfall Factor-see note in C4 - Move on to Option 4C	cell
OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage	
Sediment Delivery from RUSLE2: 0.00 tons/acre/yr	
Converting to ft ³ /ac/yr: N/A ft ³ /ac/yr	
Required Storage Volume= <u>N/A</u> ft ³ See Option 4A	
OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles * These devices can be used to satisfy the velocity requirements in Step 3.	Required
Storage from Wrapped Type A Rock Silt Checks or Wattles	
Enter Ditch Front Slope Gradient (H:V): <u>3</u> :1	RED
Enter Ditch Back Slope Gradient (H:V):	
Enter Device Height: 1.5 ft	
Area Behind Device: 5.06 ft ²	
Length of Ditch Behind Device: 9.65 ft Excessive number of devices	
Storage Behind Device (assumes 65% effeciency): 9.05 ft ³ Option 5	required Go to
Wrapped TRSC-A/Wattles required: X 19.0	required. Go to
Total 201.16 ft ³	required. Go to
Total 201.16 ft ³	
Total 201.16 ft ³ COMMENTS: "Designer still has the option of u Use Temporary Sediment Dam, Type-B 9x3x3. Dam and wattles cover required storage.	

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	·ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q25	
Runoff Coefficient, C	0	Table 1 1 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	10/0	minutes	See Kilpicii	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =	#DIV/0!	minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.09	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir			Sodimont Dom	
Design Depth:	3	Temporary Type-b	Sediment Dam	
Required VOLUME using the des		0.0	0 ft ³	
····	.3			
 d. Sediment Storage Required using 1800 ft 	³ /ac			
Disturbed Area (acres)=		0.0		
Required Sediment Storage (ft ³)=		161.1	6 ft ³	
Final Required Storage:		161.1	6 ft ³	
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	5:1 or flatter
	Web Soil Surve	y (http://soildatama	•	
Sat. Hydraulic Con. (Ksat, micro		0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3. Install Baffles*.	
Final Design Top Length (ft):		<u>9</u> 3	-	
Final Design Depth (ft): Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25	-	
Dewatering Time (Days)		2		
		81.00		
Verify Storage (ft ³)	Т	oo Low		
Verify Surface Area (ft ²)		27.00		
		OK		

STEP 1: Input Project Information	*items in red are	REQUIRED		SECTION	N 11 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	EDODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd	* *	<i>– ERODES</i>
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EDOsian DECian
From Sta.: 20 + 0			Date Prepared:	11/18/2014		EROsion DESign
	0			3474		
	Ű.	0/	Level III A #:	-	4/0040	Version
Right/Left: Rt.		%	Level III A Expiration	on: 12/3	1/2016	
	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
	leet		Level III A #:	391		
	feet		Level III A Expiration	on: 1/0/	1900	
	acres					
Drainage Area: <u>0.09</u> a *Drainage Area must equal or exce	acres	Area found a	have			
Surface Dewatering Device	n n	Area Iouno a	bove			_
Is this a Typical Section (Y/N)?	Ÿ					_
Will RUSLE2 be used to model	· ·					
the Non-Typical sections?	N					
the Non-Typical sections :						
Regression Constant, C	<u>549</u>		Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	106.4		Figure 2-1	(or manual)		
Erodibility Factor, K	0.24		Table 2-2 or Web S	Soil Survey (http://	soildatamart.n	rcs.usda.gov/)
	SoD Soco		* informational purp			3 ,
STEP 2: Ditch Liner requirements:	Utilize the Requi	ired Liner tab	and note recommen	dations on plans.		
STEP 3: Velocity Control Requiren	nents					
	_		_			Wattles are required in
TYPE B ROCK SILT C	HECKS	10	spaced at	27 feet		conjunction with PAMs
OR WATTLES						
*See the HELP Tab for	r additional clarifi	ication and an	example on how to	place on plans.		
;	Start with Op	otion 4A				
OPTION 4A: For DRAI	INAGE AREA < 3	Acre: Use V=	CRKs to determine	storage		
	_					
Regression Constant, C	;	549				
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	י א	From Step 1 abo	ove	
Soil Type		SoD Soco				
Ditchline Slope, s		0.10350				
	V=	1189.81	ft ³ /ac/yr			
Required St	torage Volume=	<u>106.53</u>	ft ³			r-see note in cell
				L4 - I	Nove on to O	Stion 4C
OPTION 4B: For DRAI	INAGE AREA > 3	Acre: Use RL	ISLE2 Modeling to a	letermine storage	,	
Sediment Delive	ry from RUSLE2:	0.00	tons/acre/yr			
Converting	g to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
Required St	orage Volume=	N/A	ft ³			
					See Option 4	IA
OPTION 4C: Using the	e Required Storag	ge Volume fro	m Option 4A or 4B t	o determine # of	Wrapped TR	SC-A/Wattles Required
* These de	evices can be use		he velocity requiren	nents in Ste <u>p 3.</u>		-
		It Checks or V	Nattles 1			TLES REQUIRED
Storage from Wrapped	d Type A Rock Si					
Storage from Wrapped Enter Ditch Front Slope	d Type A Rock Si		<u>3</u>	:1		TEED REQUIRED
	d Type A Rock Si Gradient (H:V):		<u>3</u> <u>1.5</u>			
Enter Ditch Front Slope	d Type A Rock Si Gradient (H:V):			:1		
Enter Ditch Front Slope Enter Ditch Back Slope	d Type A Rock Si Gradient (H:V):		<u>1.5</u>	:1 ft		
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device:	d Type A Rock Sil Gradient (H:V): Gradient (H:V):		<u>1.5</u> 1.5 5.06	:1 ft ft ²		
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind	d Type A Rock Si Gradient (H:V): Gradient (H:V): Device:		1.5 1.5 5.06 14.49	:1 ft ft ² ft Exc		er of devices required. Go to
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic	d Type A Rock Sil 9 Gradient (H:V): 9 Gradient (H:V): 9 Device: 10 Device: 10 device: 10 device: 10 device: 10		1.5 1.5 5.06 14.49 15.90	ft ft ² ft Exc		
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind	d Type A Rock Sil e Gradient (H:V): e Gradient (H:V): Device: pe (assumes 65% ttles required:	effeciency): >	1.5 1.5 5.06 14.49 15.90 (7.0	ft ft ² ft Exc		er of devices required. Go to
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wai	d Type A Rock Sil e Gradient (H:V): e Gradient (H:V): Device: pe (assumes 65% ttles required:	effeciency):	1.5 1.5 5.06 14.49 15.90	:1 ft ft Exc ft ³ ft ³	essive numb	er of devices required. Go to Option 5
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat	d Type A Rock Si 9 Gradient (H:V): 9 Gradient (H:V): Device: 10 Device: 10 desumes 65% 10 desumes 65%	effeciency): X Total	1.5 1.5 5.06 14.49 15.90 (7.0 7.0 111.28	:1 ft ft ² ft Exc ft ³ ft ³	essive numb	er of devices required. Go to
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wai	d Type A Rock Si 9 Gradient (H:V): 9 Gradient (H:V): Device: 10 Device: 10 desumes 65% 10 desumes 65%	effeciency): X Total	1.5 1.5 5.06 14.49 15.90 (7.0 7.0 111.28	:1 ft ft ² ft Exc ft ³ ft ³	essive numb	er of devices required. Go to Option 5
Enter Ditch Front Stope Enter Ditch Back Stope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat	d Type A Rock Si 9 Gradient (H:V): 9 Gradient (H:V): Device: 10 Device: 10 desumes 65% 10 desumes 65%	effeciency): X Total	1.5 1.5 5.06 14.49 15.90 (7.0 7.0 111.28	:1 ft ft ² ft Exc ft ³ ft ³	essive numb	er of devices required. Go to Option 5
Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat	d Type A Rock Si 9 Gradient (H:V): 9 Gradient (H:V): Device: 10 Device: 10 desumes 65% 10 desumes 65%	effeciency): X Total	1.5 1.5 5.06 14.49 15.90 (7.0 7.0 111.28	:1 ft ft ² ft Exc ft ³ ft ³	essive numb	er of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculatio	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	·ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11	avv or mouty)	03E Q23	
Runoff Coefficient, C	•	Table 1 1 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read fi	rom Appendix A or		
NOAA website, http://hdsc.r	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.09	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
			_	
c. Use Surface Area (A) to determine requir		Temporary Type-E	Sediment Dam	
Design Depth:	3		- 2	
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=	780	0.0	19	
Required Sediment Storage (ft ³)=		161.1		
			<u>•</u>	
Final Required Storage:		161.1	6 ft ³	
Proposed Basin Side Slopes:		1.	5 :1 side slopes *must be at least 1.5	5:1 or flatter
		ey (http://soildatama		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)	14i i			
Basin Design	Minimum	2:1 (L:W) Ratio	Disco Desire et sutista sint	
Suggested Top Width (ft): Suggested Top Length (ft):		<u>0</u> 0	Place Basin at outlet point. Ensure devices are used to	
Final Design Top Width (ft):		7	satisfy requirements of Step 3.	
Final Design Top Width (ft):		14	Install Baffles*.	
Final Design Top Length (ft):		3		
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Marife Starson (43)	1	115.50		
Verify Storage (ft ³)	T	oo Low		
Verify Surface Area (ft ²)		98.00		
		OK		

STEP 1: Input Project Information	*items in red are REG	UIRED	SE	CTION 12 of 32	
Construction time ≤ 6 months (Y/N)? Y		County:	Avery		EDODEC
	Elevation	Location:	Pilot Rido	e Del	<i>— ERODES</i>
HQW (Y/N)? Y Trout (Y/N)? Y	Tool (ft)	Prepared B			EDOsian DECian
From Sta.: 21 + 0		Date Prepa			EROsion DESign
	0				
to Sta.: 25 + 0	0	Level III A #			Version
Right/Left: Lt	No Elev Data %		Expiration:	12/31/2016	
	%	Reviewed		y	2.10.2012
Contributing		Date Revie		4	
	feet	Level III A #			
	feet	Level III A E	Expiration:	1/0/1900	
Disturbed Area = 0.08	acres				
	acres				
*Drainage Area must equal or exce	eed the Disturbed Area	a found above			
Surface Dewatering Device	n				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	N				
Regression Constant, C	<u>659</u>	Table 2-7 (I	Level III Ref Manua	D	
Rainfall Factor, R	<u>106.4</u>	Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		or Web Soil Survey	(http://soildatamart	.nrcs.usda.gov/)
Soil Type	SoD Soco	* informatio	nal purposes only.		
STEP 2: Ditch Liner requirements	Utilize the Required L	iner tab and note rec	ommendations on p	olans.	
STEP 3: Velocity Control Requirer	nents				
TYPE B ROCK SILT C	HECKS	15 space	dat 25	feet	Wattles are required in conjunction with PAMs
OR WATTLES					
*See the HELP Tab fo	r additional clarificatio	n and an example on	how to place on p	lans.	
	Start with Option	n 4A			
Regression Constant, 0	INAGE AREA < 3 Acre. C	659	ermine storage		
Rainfall Factor, R		106.4 0.24	E		
Erodibility Factor, K	0-D		From Step	Tabove	
Soil Type	SoD				
Ditchline Slope, s		0.11360 ft/ft)		
		67.58 ft ³ /ac/yr			
Required S	torage Volume= <u>1</u>	29.55 ft ³	Using 82	2% of Rainfall Fact C4 - Move on to 0	tor-see note in cell Option 4C
OPTION 4B: For DRA	INAGE AREA > 3 Acre	: Use RUSLE2 Model	ling to determine s	torage	
	ery from RUSLE2:	0.00 tons/acre/yr			
Convertin	g to ft ³ /ac/yr: N/A	ft ³ /ac/yr			
Required S	torage Volume=	N/A ft ³		See Option	4A
					RSC-A/Wattles Required
	levices can be used to d Type A Rock Silt Che		equirements in St	ер 3.	
Enter Ditch Front Slope		Sona of Matties	<u>3</u> :1	WA	TTLES REQUIRED
			<u>1.5</u> :1		
Enter Ditch Back Slope Enter Device Height:	, Gradieni (11. V).				
0			<u>1.5</u> ft		
Area Behind Device:	Daviasi		5.06 ft ²	-	
Length of Ditch Behind			13.20 ft	Excessive num	ber of devices required. Go to
Storage Behind Devic Wrapped TRSC-A/Wa	-	x x	14.48 ft ³ 9.0		Option 5
00000000	Total	<mark>130.3</mark>	<mark>85 ft³</mark>		
COMMENTS:		B		*Designer still has	the option of using Option 5 or 6
Use Temporary Sedime	ent Dam, Type-B 9x3x3.	Dam and wattles cove	r required storage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	10/0	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =	#DIV/0!	minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.08	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir		Temporary Type-B	Sediment Dam	
Design Depth:	3		0 ft ³	
Required VOLUME using the des	lign deptn:	0.0	U ft	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.0	8	
Required Sediment Storage (ft ³)=		148.7	6 ft ³	
			_	
			3	
Final Required Storage:		148.7		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	:1 or flatter
Infiltration Analysis Sat. Hydraulic Con. (Ksat, micro		ey (http://soildatamai	Skimmer Basin	
Soil Permeability (in/hr)	J IIVSec)	0.00	Required	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-1	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in) Dewatering Time (Days)		0.25	<mark>-</mark>	
Dewatering Time (Days)		2 81.00	-	
Verify Storage (ft ³)		oo Low		
		27.00		
Verify Surface Area (ft ²)		OK		

STEP 1: Input Project Information	*items in red are F	REQUIRED		SECTION	N 13 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	EDODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		- ERODES
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EDOsian DECian
From Sta.: 25 + 0			Date Prepared:	11/18/2014		EROsion DESign
	0			3474		
	<u> </u>		Level III A #:	-		Version
Right/Left: Lt	No Elev Data %		Level III A Expiration	on: 12/3	1/2016	
	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
	eet		Level III A #:	391		
	eet		Level III A Expiration	on: 1/0/	1900	
	acres					
	acres					
*Drainage Area must equal or exce	ed the Disturbed A	Area found a	bove			
Surface Dewatering Device	n					
s this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	Ν					
Regression Constant, C	<u>659</u>		Table 2-7 (Level III)	Ref Manual)		
Rainfall Factor, R	106.4		Figure 2-1			
Erodibility Factor, K	0.24		Table 2-2 or Web S	oil Survey (http://	soildatamart n	rcs usda gov/)
	0.24 SoD Soco		* informational purp		sonualannai l.M	
son rype	<u>50D 50C0</u>		iniornational purp	uses only.		
STEP 2: Ditch Liner requirements:	Utilize the Require	d Liner tab	and note recommend	lations on plans.		
STEP 3: Velocity Control Requirem	onts					
STEP 5. Velocity control Requirem	lents					Mettles are required in
TYPE B ROCK SILT CI OR WATTLES	HECKS	13	spaced at	25 feet		Wattles are required in conjunction with PAMs
*See the HELP Tab for	r additional clarifica	ation and an	example on how to	place on plans.		
	Start with Opt	ion 4A				
OPTION 4: Using RUSLE2 An OPTION 4A: For DRAI		-	-	storage		
Regression Constant, C	;	659	٦			
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	7	From Step 1 abo	ove	
Soil Type	Se	oD Soco				
Ditchline Slope, s	-	0.11580	ft/ft			
Bitoriano Ciopo, C	V=	1597.94	ft ³ /ac/yr			
De muine d Ot			ft ³	Lioing 929/ of I	Doinfoll Footo	r ann nata in call
Required St	orage Volume=	<u>151.43</u>	π		Move on to Op	r-see note in cell otion 4C
OPTION 4B: For DRAI		oro: Uso BU	SI E2 Modeling to d	otormino storage		
OF HON 46. FOI DRAM	NAGE AREA > 5 A	cie. Use KU	SLEZ Wodening to a	elernine storage	3	
Sediment Deliver	ry from RUSLE2:	0.00	tons/acre/yr			
Converting	to ft ³ /ac/yr: N/	/Α	ft ³ /ac/yr			
Required St	orage Volume=	N/A	ft ³			
					See Option 4	A
					Wrapped TRS	SC-A/Wattles Required
			he velocity requiren	ients in Step 3.		
	Type A Rock Silt	Unecks or V			WAT	TLES REQUIRED
Enter Ditch Front Slope				:1		
Enter Ditch Back Slope	Gradient (H:V):		<u>1.5</u>			
Enter Device Height:			<u>1.5</u>	ft		
Area Behind Device:			5.06	ft ²		
Length of Ditch Behind	Device:		12.95	ft Exc	essive numb	er of devices required. Go to
Storage Behind Devic		feciency):	14.21			Option 5
Wrapped TRSC-A/Wat	tles required:	X	11.0			
COMMENTS:	Те	otal	156.29		inner still has t	he option of using Option 5 or 6
Use Temporary Sedime	nt Dom Time P 0:0	v2 Domord	wattles on or reading		ngrier still nas ti	he option of using Option 5 or 6
Use remporary Sedime	псьян, туре-в 9х3		wattes cover require	u siorage.		
						I

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage A=3250	-
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	þ
	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Q _p =CiA	•			
Runoff Coefficient, C Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
	,			
		0/		
Watershed Slope, S t _c =		% minutes	See Kirpich	
د= 2 Kirpich Method	N/A	minutes	See Kirpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr				
NOAA website, http://hdsc.n	iws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.09	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir			Sodimont Dom	
Design Depth:	3	remporary rype-b	Sediment Dam	
Required VOLUME using the des		0.0	0 ft ³	
····· ································				
 d. Sediment Storage Required using 1800 ft 	3/ac			
Disturbed Area (acres)=		0.0	9	
Required Sediment Storage (ft ³)=		170.5	8 ft ³	
Final Dequired Storego		170.5	9 43	
Final Required Storage: Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	1 or flatter
	Web Soil Surve	ey (http://soildatama		I OI Hatter
Sat. Hydraulic Con. (Ksat, micro			Skimmer Basin	
Soil Permeability (in/hr)	5 11/3007	0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):	3 9		satisfy requirements of Step 3.	
Final Design Top Length (ft):			Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5	<mark>-</mark>	
Orifice Diameter (in) Dewatering Time (Days)		0.25	-	
Dewatering Time (Days)		81.00	-	
Verify Storage (ft ³)		oo Low		
		27.00		
Verify Surface Area (ft ²)		OK		

Trout (YN)? Y Tool (ft) From Sta: 26 + 0 0 28 + 44 0 0 Right/Left: Rt. No Elev Data % Ditch Grade: 10.140 % Vertice Contributing RW Width: 12 feet Level III A #: 3474 Vertice Length of Run X 244 feet Date Reviewed: 11/9/2014 2.10 Disturbed Area 0.07 acres Date Reviewed: 11/9/2014 2.10 Disturbed Area 0.07 acres 10/19/00 2.10 2.10 Disturbed Area 0.07 acres 10/19/00 2.10 Drainage Area 0.07 acres 11/9/2014 2.10 Drainage Area 0.07 acres 10/19/00 2.10 Will RUSLE2 be used to model the Non-Typical section (YN)? Y 10/19/00 2.10 Rainfall Factor, R 106.4 Figure 2-1 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) *informational purposes only. STEP 2: Ditch Liner requirements: Ullize the Required Liner tab and note recommendations on plans. STEP 3: Velocity C		TON 14 of 32		EQUIRED	*items in red ar	roject Information	STEP 1: Input
In Wr (Win)? 1 <t< td=""><td>ODEC</td><td></td><td>Avery</td><td>County:</td><td></td><td></td><td></td></t<>	ODEC		Avery	County:			
Trout (TWI)? Trout	ODES		Bilo	Location	Flevation		
From Sta: 26 + 0 0 No Sta: 28 + 44 0 RighULdt: Rt. No Elev Data % Wolth Grade: 10,140 % Verter III A Expiration: 12/21/2016 Verter IIII A Expiration: 12/21/2016 Verter III A Expiration: 12/21/2016 Verter III A Expiration: 12/21/2016 Verter III A Expiration: 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21 12/21	on DECian						
to Stat: 28 + 44 0 RightLaft: Rt No Elev Data % %Other Grades: 10,40 % Reviewed Bx Streak Kirby 2,231/2016 Yet RAW Width: 12 feet EnglishLaft: Wet MA #: 3474 Vet State Reviewed: 10,40 % State Reviewed Bx Greak Kirby Data Reviewed By: Greak Kirby Data Reviewed By: Greak Kirby Data Reviewed: 11/12/2014 Level III A #: 3491 Level III A #: 3471 Level III A #: 3491 Level III A #: 3471	UT DESIGIT	ERUSIUIT L			0		
Right/Left: Rt No Elev Data % Woltch Grade: 10.140 % Ithe Expiration: 12/21/2016 Vert Woltch Grade: 10.140 % Ithe Expiration: 12/21/2016 Vert Contributing RW Width: 12 feet Ithe Expiration: 12/21/2016 2.10 Ength of Run X 244 feet Ithe Expiration: 10/1900 2.10 Disturbed Area = 0.07 acres Disturbed Area found above Surface Dewaterring Device n 10/1900 2.10 Strika I Strika Strika I Strika I Strika I Strika I Strika I Strika					0		
Application	ersion	Versi			Ű		
Contributing RNW With: <u>12</u> feet Length of Run <u>× 244</u> feet Length of Run <i>× 244</i> feet Length of Run <i>× 244</i> feet Length of Run <i>× 244</i> feet Sufface Devaded the Disturbed Area found above Sufface Devaded Area found above Sufface Area found above Sufface Devaded Area found Area found Area found Area found Area found Area found Area for DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage Regression Constant, C 549 Disturbed Area for DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage Disturbed Storage Volume Teas for Sufface Pace for DRAINAGE AREA < 3 Acre: Use RUSLE2 Modeling to determine storage C - Move on to Option 4C CPTION 4E: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr		2/31/2010					-
RW Widh: 12 feet isstituted and and and and anexan	0.2012	2.10.2			%	10.140	
Length of Run X 244 feet Level III A Expiration: 1/0/1900 Disturbed Area 0.07 acres Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Drainage Area must equal or exceed the Disturbed Area found above Distribut RUSLE2 to used to model the Non-Typical sections? N Regression Constant, C 549 Table 2-7 (Level III Ref Manual) Figure 2-1 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Soil Type SoD Soco * informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SiLT CHECKS 8 spaced at 27 feet OR WATTLES 'See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage Regression Constant, C 549 Disching Slope, s 0.10140 fth V= 1165.67 ft ³ ac/yr Required Storage Volume= 78.35 ft ³ Using 82% of Rainfail Factor-see note in co C4 - Move on to Option 4C OPTION 4E; For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr							
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				0.00 topc/pore/u	on from PUSIE2	Sodimont Doliv	
Converting to it /ac/yr: N/A It /ac/yr							
					· ·		
Required Storage Volume= <u>N/A</u> ft ³ See Option 4A		See Option 4A		N/A ft ³	Storage Volume=	Required \$	
OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Re * These devices can be used to satisfy the velocity requirements in Step 3.	Required						о
Storage from Wrapped Type A Rock Silt Checks or Wattles							6
Enter Ditch Front Slope Gradient (H:V): <u>3</u> :1 WATTLES REQUIRED	ED	WATTLES REQUIRED	3.1	HEERS OF Mattics			<u>-</u>
					e Gradieni (E:V):		
Enter Device Height: 1.5 ft						0	
Area Behind Device: 5.06 ft ²	and the second se				- Davia		
		Excessive number of devices requi				-	
Storage Behind Device (assumes 65% effeciency): 16.23 ft ³ Option 5	required. Go to	Option 5					
Wrapped TRSC-A/Wattles required: X 5.0	required. Go to		1		attles required:	apped TRSC-A/W	и
Total 81.13 ft ³	required. Go to						
COMMENTS: *Designer still has the option of using			3 IL	ai 81.			
		Designer still has the option of using Op					
Use Temporary Sediment Dam, Type-B 12x6x3. Dam covers required storage.		Designer still has the option of using Op			nent Dam, Type-B 1		
		Designer still has the option of using Op			nent Dam, Type-B 1		
		Designer still has the option of using Op			nent Dam, Type-B 1		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface i	Area Calculation	s to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{o} :			USE Q25	¢ρ
	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Q _p =CiA	•	T-6- 4 4 4 5 4 0		
Runoff Coefficient, C Time of Concentration, t _c (minutes		Table 1-4,1-5,1-6		
	,			
		0/		
Watershed Slope, S		%	Cas Kinsish	
t _c =	N/A	minutes	See Kirpich	
2 Kirpich Method	•	4	to a Markela d En O	
Flow Path, L Watershed Slope, S		feet ft/ft	*see Module 1 Eq. 3 *see Module 1 Eq. 3	
Kirpich, t _c =		minutes	see module 1 Eq. 3	
	#21110.	minuco		
Using a Return Period (T) of 10 y	-			
the rainfall intensity, i (in/hr NOAA website, http://hdsc.r				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	- 1-1	
Peak Rate of Runoff, Q _n =CiA	0.00	cfs		
· •				
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine require	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3	romporary rypo b	oodinon Dani	
Required VOLUME using the des		0.0	0 ft ³	
	5			
 d. Sediment Storage Required using 1800 ft 	³ /ac			
Disturbed Area (acres)=		0.0	7	
Required Sediment Storage (ft ³)=		120.9	9 ft ³	
Final Required Storage:		120.9	0 tt ³	
Proposed Basin Side Slopes:			5 :1 side slopes *must be at least 1.	5-1 or flatter
Infiltration Analysis	Web Soil Surve	ey (http://soildatamar	•	
Sat. Hydraulic Con. (Ksat, micro		0	Skimmer Basin	
Soil Permeability (in/hr)	0 11/3007	0.00	Required	
Dewatering Time (Days)		N/A	Roganou	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		6	satisfy requirements of Step 3.	
Final Design Top Length (ft):		12	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25	-	
Dewatering Time (Days)		2	-	
Verify Storage (ft ³)		81.00		
		oo Low	-	
Verify Surface Area (ft ²)		72.00 OK		

STEP 1: Input Project Information	n *items in red are	REQUIRED		SECTIC	N 15 of 32	
Construction time ≤6 months (Y/N)? Y			County:	Avery	•	EDODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		<i>— ERODES</i>
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 76 + 50	0		Date Prepared:	11/18/2014		
to Sta.: 77 + 0	0		Level III A #:	3474		
		2/			31/2016	Version
Right/Left: Rt.		%	Level III A Expirati	on: [12/	31/2016	
% Ditch Grade: 12.000	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing	4		Date Reviewed:	11/19/2014		
R/W Width: 14 Length of Run X 50	feet feet		Level III A #: Level III A Expirati	00: 1/0	/1000	
Disturbed Area = 0.02	acres			UII. 170	/1900	
Drainage Area: 0.02	acres					
*Drainage Area must equal or ex		Area found a	hove			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Ÿ					
Will RUSLE2 be used to model	-					
the Non-Typical sections?	N					
Regression Constant, C	<u>733.5</u>		Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	106.4		Figure 2-1			
Erodibility Factor, K	0.24		Table 2-2 or Web		//soildatamart	.nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	ooses only.		
STEP 2: Ditch Liner requirement	s: Utilize the Requir	r ed Liner tab	and note recommen	dations on plans.		
STEP 3: Velocity Control Require	ements					
TYPE B ROCK SILT OR WATTLES		1	spaced at	25 fee	et	Wattles are required in conjunction with PAMs
*See the HELP Tab	for additional clarific	cation and an	example on how to	place on plans.		
	Start with Op	otion 4A				
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	, C	A <i>cre: Use V≕</i> 733.5 106.4 0.24 SoD Soco 0.12000	}	storage From Step 1 ab	ove	
	V=	1843.10	ft3/ac/yr			
Required	Storage Volume=	<u>29.62</u>	ft ³		Rainfall Fac Move on to	tor-see note in cell Option 4C
OPTION 4B: For DR	AINAGE AREA > 3	Acre: Use RU	ISLE2 Modeling to a	determine storag	je	
Codimont D-	very from RUSLE2:	0.00	tops/parc/m			
			tons/acre/yr ft ³ /ac/yr			
	· · ·	N/A				
Required	Storage Volume=	<u>N/A</u>	ft ³		See Option	1 4A
	he Required Storag devices can be use				f Wrapped T	RSC-A/Wattles Required
Storage from Wrapp	ed Type A Rock Sil					
Enter Ditch Front Slo				3 :1	WA	TTLES REQUIRED
Enter Ditch Back Slo				5 :1		
Enter Device Height:				ft		
Area Behind Device:				6 ft ²		
Length of Ditch Behir	nd Device:		12.50		cessive num	ber of devices required. Go to
Storage Behind Dev		effeciencv) [.]	13.7			Option 5
Wrapped TRSC-A/M	attles required:	x	3.0			
COMMENTS.		Total	41.13		alaman -till t	the ention of using Option 5 - 0
COMMENTS: Use Temporary Sedir	nont Dom Turne D Ou	212 Domo	ore required store		esigner still has	s the option of using Option 5 or 6
Use Temporary Sedir	пент Dam, Туре-В 9х	Jana. Damicov	ers required storage			

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage. A=3250	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11	avv or mouty)	03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kirpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes	000 1100010 7 24.0	
Using a Return Period (\mathbf{T}) of 10 y	rs (25 for HOM	/) and a t of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr				
NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres		
Peak Rate of Runoff, Qp =CIA	0.00	cfs		
			- 22	
 b. Determine the Required Surface Area= 		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir	ed VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🗸 🗸			
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
	a.			
d. Sediment Storage Required using 1800 ft	ac		•	
Disturbed Area (acres)=		0.0		
Required Sediment Storage (ft ³)=		28.9	3 ft ²	
Final Required Storage:		28.9	3 ft ³	
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	i-1 or flatter
	Web Soil Surve	ey (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro		0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio	1	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00 OK		
		27.00		
Verify Surface Area (ft ²)		OK		

strements (WN)? Y Eventson EVENDSON EVENDSON <td< th=""><th>STEP 1: Input Project Information</th><th>*items in red are RE</th><th>EQUIRED</th><th></th><th>SECTIO</th><th>N 16 of 32</th><th></th></td<>	STEP 1: Input Project Information	*items in red are RE	EQUIRED		SECTIO	N 16 of 32	
The Trip of the second seco	Construction time			County:	Avery	•	EDODES
Trous (Way) Trous		Elevation		Leastion	Dilot Didge Dd	· · · ·	<i>— ERODES</i>
From Sta: Tr + 0 0 0 Sta: Tr + 50 0 0 RightLett: + N: No Elev Data VerSion Sta: 11.00 % 0 VerSion Contributing RW Width : 2 164 2 VerSion Sta: 11.00 % 0 2 0.0.2012 Determined Area 0.10 acres 1 0 2 0.0.2012 Trainage Area 10.0 scress 1 1 0 2 0						_	
is Stat: 27 + 50 0							ERUSION DESIGN
Right Lett: R. No Elev Data Version Witch Grade 11.00 % Version 2.10.2012 Contributing 2 feet Version 2.10.2012 RW Witch : 2 feet Version 2.10.2012 Date Reviewed: 1.40.001 Version 2.10.2012 String: 0.1 area Version 2.10.2012 Date Reviewed: 1.40.001 Version 2.10.2012 String: 0.1 area Version 2.10.2012 Date Reviewed: 1.40.001 Version 2.10.2012 String: 0.1 area Version 2.10.2012 String: 0.1 10.0 Figure 2.1 Version 2.10.2012 String: 0.1 10.0 Figure 2.1 Version							
Notion to rate: 11.00 100 <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td>Version</td>		0					Version
Contributing RW Width: 2 i feet Length of Run <u>1 19</u> feet Run Length Section (YN)? The Length of Run <u>1 19</u> feet Run Length Section (YN)? Regression Constant, C Run JEE Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>25</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS <u>5</u> spaced at <u>5</u> feet Strip B ROCK SLT CHECKS to determine storage OPTION 4: Using RUSLE2 Analysis to determine required storage Dichline Stopp, s <u>5 SoD Soco Dichline Stopp, s <u>5 SoD Soco</u> Dichline Stopp, s <u>1810</u> f¹ f¹ f¹ f¹ f¹ f¹ f¹ f¹</u>	-				on: 12/3	31/2016	
RW Widh: 23 feet Level III A #: 11 Level III A #: 11 Level III A #: 11 Disturbed Area - 0.10 acres Trainage Area: 0.10 acres 11 Traines Pressing Dovice 0 11 11 Repression Constant, C 0.00 Figure 2-1 11 Foldbally Factor, K 0.00 12.24 Traine 2-2 Veb Soil Survey (http://soildatamart.nrcs.usda.gov) Start with Option 42 Traine 2-2 Web Soil Survey (http://soildatamart.nrcs.usda.gov) 11 Start with Option 4A 20 Veb Soil Survey (http://soildatamart.nrcs.usda.gov) 11 Start with Option 4A Start with Option 4A 25 feet Watties are required in conjunction with PAdis OPTION 4: Using RUSLE2 Analysis to determine required storage 0.00 600 600 600 OPTION 4: For DR		%			Greg Kirby		2.10.2012
Length of Run X 150 feet set and the set of Run X 150 feet set of					11/19/2014		
Disturbed Area = 0.10 scres "Drainage Area must equal or exceed the Disturbed Area found above Stratee Development provide a provide and above Strate Development provide and above Strate With Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage Regression Constant, C Sol Storage Volumes Strate Storage Volumes Storage Boild Device (assume Volume A read Vol					391		
Drainage Area is 0.1 scros "Variange Area is 0.1 scros Step 2: Dich Liner requirements: Utilize the Required Liner tab and noto recommendations on plans. Step 2: Dich Liner requirements: Utilize the Required Liner tab and noto recommendations on plans. Step 3: Velocity Control Requirements TYPE B ROCK SLT CHECKS 5 spaced at 25 tert Wattles are required in conjunction with PAMs "See the HELP 1 ab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage Dichiner Storage Volume Variange Area is 0.0 social is 0.0 soci				Level III A Expiration	on: 1/0/	1900	
"Danking Area must equal of vector the Disturbed Area found above Strates Devareating Device is this a Typical Section (YN)? Regression Constant, C 100.4 Regression Constant, C 100.4 Strates Devareating Device is this a Typical Section? N Regression Constant, C 100.4 Strate Devareating Device is the Area Device Member of the Distance of the Dist							
Surface Dewatering Device n n this is a typical Section (YN) Y WIR RUSLE2 be used to model the Non-Typical Section (YN) Y Sufface Device (Section Characterized Section							
is this a Typical Section (YM)? Regression Constant, C SOD Sece Table 2-7 (Level III Ref Manual) Figure 2-1 Endelibility Factor, R SOD Sece Informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SLIT CHECKS S spaced at 25 Tor OR WATTLES Area the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: For DRAINGE AREA < 3 Acre: Use V-CRKs to determine storage Regression Constant, C SoD Soco Ditchine Stope, s 0.11100 fth V V 1 Stop Soc Soc Soc Soc Soc Soc Soc Soc		ed the Disturbed Ar	rea found al	bove			
Will RUSLE2 be used to model the Non-Typical sections? N Regression Constant, C faultifiance in the Non-Typical sections? 0.00 10.42							
the Non-Typical sections? N Regression Constant, C Sol Sece Store the LP Table 2.3 (Level III Ref Manual) Figure 2.4 Table 2.4 or Web Sol Survey (http://solidatamart.nrcs.usda.gov/) informational purposes STEP 2. Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements TYPE B ROCK SLI T CHECKS S spaced at 25 Teat Vettles are required in conjunction with PAMs Vettles are required in conjunction Vettles are required area Vettles are required Vettles are		Y					
Regression Constant, C 005 Table 2-7 (Level III Ref Manual) Figure 2-1 Figure 2-1 Following Factor, K 0.02 Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Stol Type SoiD Soce Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Stol Type SoiD Soce Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Stol Type SoiD Soce Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Stol Type SoiD Soce Table 2-2 or Web Soil Survey (http://soildatamart.nrcs.usda.gov/) Stol Type SoiD Soce SoiD Soce Wattles are required in conjunction with PAMs Store the HELP Tab for additional clarification and an example on how to place on plans. Store the HELP Tab for additional clarification and an example on how to place on plans. Store the HELP Tab for additional clarification and an example on how to place on plans. Store the HELP Tab for additional clarification and an example on how to place on plans. OPTION 4: Using RUSLE2 Analysis to determine required storage From Step 1 above From Step 1 above Ditchine Stope, s 0.01 for datification Store RUSLE2 Using 82% of Rainfall Pactor-see note in cell Cd-1 wove on to Option 4C COPTION 4: Using the Required Storage Volumes NA ff ¹ /2 wov							
Rainfall Factor, R 105.4 Fgure 2-i Soll Type Sol Soco Table 2-2 or Web Soll Survey (http://solidatamart.ncs.usda.gow) Soll Type Sol Soco Table 2-2 or Web Soll Survey (http://solidatamart.ncs.usda.gow) STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: TYPE B ROCK SLIT CHECKS 5 spaced at 25 feet Wattles are required in conjunction with PAMs "See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage From Step 1 above From Step 1 above Sol Type Sol Soco 0.24 From Step 1 above Sol Type Sol Soco From Step 1 above Using 82% of Rainfall Factor-see note in cell C4- Move on to Option 4C OPTION 4E: Using the Required Storage Volume MA tt'actor See Option 4A OPTION 4E: Using the Required Storage Volume MA tt'actor See Option 4A COPTION 4E: Using the Required Storage Volume from Option 4A or 4B to determine storage See Option 4A See Option 4A OPTION 4E: Using the Required Storage	the Non-Typical sections?	N					
Raintall Factor, R Soll Type Soll Soco Soll Soco Soll Soco Soll Soco StEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: TYPE B ROCK SLI CHECKS So WATTLES So the HELP Tab for additional clarification and an example on how to place on plans. Stert with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: For DRANAGE AREA < 3 Acre: Use V=CRKs to determine storage Regression Constant, C Regression Constant, C Soll Store Soll Storage Volume= Store Biope, s Using B22% of Rainfall Factor-see note in cell C4. Move on to Option 4C OPTION 4E: For DRANAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Soll Storage Volume= MA Store Using the Required Storage Volume fill Storage Soll Type Conversing to f ¹ Acry; Required Storage Volume= MA These devices can be used to satisfy the velocity requirements in Storag. Storage Option 4A: For DRANAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Second Storage Volume= MA t ¹ Second Storage Volume fill Storage Storage Option 4D ford Storage Volume fill Storage to user and the storage Storage Option 4D ford Storage Volume fill Storage to use statisfy the velocity requirements in Storag. Storage Option 4D ford Storage Volume fill Storage fill Storage Volume fill Storage fill Storage fill Storage Volume fill Storage fill Storage fill Storage fill Storage Volume fill Storage Volume fill Storage fill Storage Volume fill Storage Volume fill Storage fill Storage Volume fill Storage fill Storage Volume fill Storage fill Storage Volume	Regression Constant C	808		Table 2-7 (I evel III	Ref Manual)		
Ended billity Factor, K 0.24 Table 2.2 or Web Soil Survey (http://soildatemart.nrcs.usda.gov/) Stol Type 3 of Soco 'informational purposes only. STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: Type Soll Soco Wattles are required in conjunction with PAMs TYPE B ROCK SLT CHECKS 5 spaced at 25 feet OPTION 4: Using RUSLE2 Analysis to determine required storage Start with Option 4A Soll Soco Soll Soco OPTION 4: Using RUSLE2 Analysis to determine required storage From Step 1 above Soll Type Sol Soco OPTION 4: Using RUSLE2 Analysis to determine required storage From Step 1 above Soll Soco From Step 1 above Soll Type Sol Soco 0.01 trnstarenty Using B2% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4: Using the Required Storage Volume NA tract See Option 4A OPTION 4: Using the Required Storage Volume NA tract See Option 4A Converting to the locy of the locy or the loce on plans. See Option 4A See Option 4A OPTION 4: Using the Required Storage Volume 0.00 tonslarenty Using B2% of Rainfall Fact					manualy		
Soil Type Soil Soco *informational purposes only.** STEP 2: Ditch Liner requirements: Utilize the Required Liner tab and note recommendations on plans. STEP 3: Velocity Control Requirements: TYPE B ROCK SLIT CHECKS 5 spaced at 25 freet UPFE B ROCK SLIT CHECKS 5 spaced at 25 freet Conjunction with PAMs "See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A Soil Type Soil Type Soil Type Soil Type Soil Soco Soil Type Soil Soco Soil Type Soil Soco Soil Type Soil Soco Soil Soco Soil Soco Soil Type Soil Soco Soil Soco Using 82% of Rainfall Factor-see note in cell C4 Moread at Call Socie Soil Type Soil Soco Soil Type Soil Soco Using 82% of Rainfall Factor-see note in cell C4 Moread at Call Socie Socie <td></td> <td></td> <td></td> <td></td> <td>Soil Survey (http://</td> <td>/soildatamart</td> <td>nrcs usda gov/)</td>					Soil Survey (http://	/soildatamart	nrcs usda gov/)
STEP 2: Ditch Liner requirements: Wattles are required in conjunction with PAMs STEP 3: Velocity Control Requirements: YPE B ROCK SLI CHECKS 5 spaced at 25 text Conjunction with PAMs "See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage From Step 1 above Segression Constant, C 808 Regression Constant, C 808 From Step 1 above Sol Soco Sol Ditchine Slope, s 0.11100 fthi From Step 1 above Sol Soco 0.11100 fthi From Step 1 above Steriment Delivery from RUSLE2: 0.00 tons/acre/yr Using 82% of Rainfall Factor-see note in cell C4-Move on to Option 4C OPTION 4: Using the Required Storage Volume MA th ¹ / ₁ or See Option 4A OPTION 4: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage See Option 4C See Option 4C OPTION 4: Sing the Required Storage Volume from Option 4A or 4B to determines to Wrapped TRSC-AWattles Required Storage Volume from Option 4A or 4B to determine the d Wrapped TRSC-AWattles Required to satisfy the velocity requirements in Step 3. MATTLES REQUIRED There Ditch Back Sige Gradient (H-V): 15 fth Storage Behind Device						sonuarandi l.	
STEP 3: Velocity Control Requirements YPEE BROCK SLIT CHECKS 5 spaced at 25 feet Incomparing the provide the prov	зоптуре	100 3000		"normational purp	oses uniy.		
STEP 3: Velocity Control Requirements YPE B ROCK SLT CHECKS 5 spaced at 25 feet Conjunction with PAMs TYPE B ROCK SLT CHECKS 5 spaced at 25 feet Definition with PAMs The North CHECKS 5 spaced at 25 feet Definition with PAMs Start with Option 4A OPTION 4: Using RUSLEZ Analysis to determine required storage OPTION 4: For DRANAGE AREA < 3 Acre: Use V=CRKs to determine storage							
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TYPE B ROCK SLIT CHECKS 5 spaced at 25 feet Wattless are required in conjunction with PAMs The part of additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage	STEP 3: Valocity Control Posting	ants					
IMPE B NOCK SLIFCIPCUS 3 spaced at 23 refer conjunction with PAMs Conjunction with PAMs Conjunction with PAMs See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 42: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage	STEP 3: Velocity Control Requirem	ients					
Of WATTES "See the HELP Tab for additional clarification and an example on how to place on plans. Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Using RUSLE2 Analysis to determine required storage Regression Constant, C Regression Constant, C 808 Rainfall Factor, R 106.4 Erdobility Factor, K 0.24 OJI Type SoD Soco Ditchline Slope, s 0.11100 ft/t W= 181.08 It* 181.08 It* 181.08 It* 0.24 V= 181.08 It* 181.08 It* 181.08 It* 181.08 It* 181.08 It* 181.08 It* See Option 4A OPTION 42: Using the Required Storage Volume From Option 4A or 4B to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Control 44: Using the Required Storage Volume From Option 4A or 4B to determine storage 3* OPTION 42: Using the Required Storage Volume From Option 4A or 4B to detetermines	TYPE B ROCK SILT CI	HECKS	5	spaced at	25 feet	t l	
Start with Option 4A OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 4: Ising RUSLE2 Analysis to determine required storage OPTION 4: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage	OR WATTLES						conjunction with PAMs
OPTION 4: Using RUSLE2 Analysis to determine required storage OPTION 44: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage	*See the HELP Tab for	^r additional clarificati	tion and an	example on how to	place on plans.		
OPTION 4A: For DRAINAGE AREA < 3 Acre: Use V=CRKs to determine storage		Start with Optic	on 4A				
Rainfall Factor, R 106.4 Erodibility Factor, K 0.24 Soil Type SoD Soco Ditchine Slope, s 0.11100 fuft V= 1878.02 ft ³ /ac/yr Required Storage Volume= 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4E: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr N/A Required Storage Volume= N/A MA ft ³ /ac/yr Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Sill Checks or Wattles Enter Ditch Font Slope Gradient (H:V): 1.5 ft Enter Ditch Book Slope Gradient (H:V): 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: x Total 192.69 ft ³ "	OPTION 4A: For DRAI	NAGE AREA < 3 Acı	re: Use V=0	CRKs to determine :	storage		
Rainfall Factor, R 106.4 Erodbility Factor, K 0.24 Soil Type SoD Soco Ditchline Slope, s 0.11100 fu'lt V= 1878.02 ft ³ /ac/yr Required Storage Volume= 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr: N/A ft ³ /ac/yr Required Storage Volume 1 tt ³ OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Sill Checks or Wattles Enter Ditch Front Slope Gradient (H:V): 1.5 ft Enter Ditch Book Slope Gradient (H:V): 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 144.82 ft ³ Total 192.69 ft ³ COMMENTS: **Designer still has the option of using Option 5 or 6					U U		
Erodibility Factor, K 0.24 Soil Type SoD Soco Ditchine Slope, s 0.11100 (t/t V= 1878.02 ft ² /ac/yr Required Storage Volume= 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr: N/A ft ² /ac/yr Required Storage Volume= N/A ft ³ OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Sill Checks or Wattles Enter Ditch Front Slope Gradient (H:V): 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device: 15.51 ft Storage Behind				j			
Soil Type SoD Soco Ditchine Slope, s 0.11100 ft/ft V= 1878.02 ft ³ /ac/yr Required Storage Volume= 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 48: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr NA ft ³ /ac/yr Required Storage Volume= NA ft ³ NA ft ³ /ac/yr Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Back Slope Gradient (H·V): 15 Enter Ditch Back Slope Gradient (H·V): 15 Length of Ditch Behind Device: 13.51 Storage Behind Device: 5.06 Storage Behind Device (assumes 65% effeciency): 14.82 Wrapped TRSC-A/Wattles required: 13.51 Total 192.69 "Designer still has the option of using Option 5 or 6							
Ditchine Slope, s 0.11100 ft/ft V= 1878.02 ft ² /ac/yr Required Storage Volume 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4E: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr N/A Required Storage Volume N/A MA ft ³ /ac/yr Required Storage Volume N/A MA ft ³ /ac/yr See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required Storage from Wrapped Type A Rock Sill Checks or Wattles Enter Ditch Font Slope Gradient (H:V): 1.5 Enter Ditch Font Slope Gradient (H:V): 1.5 Enter Ditch Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 ft ³ "Designer still has the option of using Option 5 or 6 <td></td> <td></td> <td></td> <td>></td> <td>From Step 1 abo</td> <td>ove</td> <td></td>				>	From Step 1 abo	ove	
V= 1878.02 ft ³ /ac/yr Required Storage Volume= 181.08 ft ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr: N/A Required Storage Volume= N/A MA ft ³ /ac/yr Required Storage Volume= N/A MA ft ³ See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-AWattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Tapped Tappe A Rock Silt Checks or Wattles Enter Ditch Front Slope Gradient (H:V): 1:1 Enter Ditch Back Slope Gradient (H:V): 1:5 Length of Ditch Behind Device: 5:06 ft ² Length of Ditch Behind Device: 13:51 ft Storage Behind Device (assumes 65% effeciency): 14:82 ft ³ Yrapped TRSC-A/Wattles required: X Total 192.69 ft ³ "Designer still has the option of using Option 5 or 6	Soil Type	Sol	D Soco				
Required Storage Volume 181.08 It ³ Using 82% of Rainfall Factor-see note in cell C4 - Move on to Option 4C OPTION 4E: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr: N/A ft ⁹ /ac/yr Required Storage Volume N/A ft ⁹ /ac/yr See Option 4A See Option 4A OPTION 4E: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles 15 Enter Ditch Back Slope Gradient (H:V): 15 Enter Ditch Back Slope Gradient (H:V): 15 Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 "Designer still has the option of using Option 5 or 6	Ditchline Slope, s		0.11100				
C4 - Move on to Option 4C OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr Required Storage Volume NA NIA ft ³ /ac/yr Required Storage Volume NA NA ft ³ /ac/yr Required Storage Volume See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles WATTLES REQUIRED * NA Enter Ditch Front Slope Gradient (H:V): 1.5 :1 Enter Ditch Book Slope Gradient (H:V): </td <td></td> <td>V=</td> <td>1878.02</td> <td>ft³/ac/yr</td> <td></td> <td></td> <td></td>		V=	1878.02	ft ³ /ac/yr			
OPTION 4B: For DRAINAGE AREA > 3 Acre: Use RUSLE2 Modeling to determine storage Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to ft ³ /ac/yr N/A tt ³ /ac/yr Converting to ft ³ /ac/yr N/A tt ³ /ac/yr Required Storage Volume N/A tt ³ /ac/yr Required Storage Volume N/A N/A tt ³ /ac/yr Required Storage Volume See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required Storage from Wrapped Type A Rock Silt Checks or Wattles WATTLES REQUIRED Enter Ditch Font Slope Gradient (H:V): 1.5 ft Enter Ditch Font Slope Gradient (H:V): 1.5 ft Area Behind Device: 5.0 6ft ² Cord colspan= S5% effeciency): 14.82 ft ³ Total 13.51 ft Commerce of devices required. Go to Option 5 Total 13.60 ft ³ Total 13.50 ft ³	Required St	orage Volume=	<u>181.08</u>	ft ³			
Sediment Delivery from RUSLE2: 0.00 tons/acre/yr Converting to tt ³ /ac/yr: NA Required Storage Volume NA tt ³ See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Fornt Stope Gradient (H·V): 3 :1 Enter Ditch Back Stope Gradient (H·V): 1.5 :1 Enter Device Height: 1.5 it Area Behind Device: 5.06 it ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 it ³ Wrapped TRSC-A/Wattles required: X Total 192.69 ft ³ "Designer still has the option of using Option 5 or 6	OPTION 4P: For DPA		ro: Uso BU	SI E2 Modeling to d			<u> </u>
Converting to ft³/ac/yr: N/A ft³/ac/yr Required Storage Volume N/A ft³/ac/yr NA ft³ See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Wattles Required Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped TRSC-A/Wattles Required 3 :1 Wattles Required Enter Ditch Front Slope Gradient (H:V): 1 :1.5 :1 Enter Ditch Back Slope Gradient (H:V): 1.5 :1 Enter Device Height: 1.5 it Area Behind Device: 5.06 it² 13.51 it Excessive number of devices required. Go to Option 5 Storage Behind Device (assumes 65% effeciency): 14.82 it³ Option 5 Option 5 Wrapped TRSC-A/Wattles required: X 13.0 it 'Designer still has the option of using Option 5 or 6 COMMENTS: 'Designer still has the option of using Option 5 or 6 'Designer still has the option of using Option 5 or 6			re. 03e NO	SELZ Wouldening to u	etermine storage	6	
N/A that is a see Option 4A Required Storage Volume = M/A See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Front Slope Gradient (H:V): 3 :1 Enter Ditch Back Slope Gradient (H:V): 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Option 5 Wrapped TRSC-A/Wattles required: X 13.0 ft ³ Total "Designer still has the option of using Option 5 or 6	Sediment Delive	ry from RUSLE2:	0.00	tons/acre/yr			
See Option 4A See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Font Slope Gradient (H:V): 3 :1 Enter Ditch Font Slope Gradient (H:V): 1.5 :1 Enter Ditch Book Slope Gradient (H:V): 1.5 :1 Enter Device Height: 1.5 :1 Area Behind Device: 5.06 :1 ² Storage Behind Device (assumes 65% effeciency): 14.82 :1 ³ Wrapped TRSC-A/Wattles required: X Total 192.69 :1 ³ *Designer still has the option of using Option 5 or 6	Converting	to ft ³ /ac/yr: N/A	4	ft3/ac/yr			
See Option 4A See Option 4A OPTION 4C: Using the Required Storage Volume from Option 4A or 4B to determine # of Wrapped TRSC-A/Wattles Required * These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Font Slope Gradient (H:V): 3 :1 Enter Ditch Font Slope Gradient (H:V): 1.5 :1 Enter Ditch Book Slope Gradient (H:V): 1.5 :1 Enter Device Height: 1.5 :1 Area Behind Device: 5.06 :1 ² Storage Behind Device (assumes 65% effeciency): 14.82 :1 ³ Wrapped TRSC-A/Wattles required: X Total 192.69 :1 ³ *Designer still has the option of using Option 5 or 6	-			ft ³			
* These devices can be used to satisfy the velocity requirements in Step 3. Storage from Wrapped Type A Rock Silt Checks or Wattles WATTLES REQUIRED Enter Ditch Back Slope Gradient (H-V): 3 :1 Enter Ditch Back Slope Gradient (H-V): 1.5 :1 Enter Ditch Back Slope Gradient (H-V): 1.5 :1 Enter Device Height: 1.5 ft Area Behind Device: 5.06 ft² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft³ Wrapped TRSC-A/Wattles required: X Total 192.69 ft³ *Designer still has the option of using Option 5 or 6	quirea et					See Option	4A
Storage from Wrapped Type A Rock Silt Checks or Wattles Enter Ditch Front Slope Gradient (H:V): 3:1 Enter Ditch Back Slope Gradient (H:V): 1.5 Enter Device Height: 1.5 Area Behind Device: 5.06 Storage Behind Device: 13.51 Storage Behind Device: 13.51 Wrapped TRSC-A/Wattles required: X Total 192.69 "Designer still has the option of using Option 5 or 6						Wrapped TF	RSC-A/Wattles Required
Enter Ditch Front Slope Gradient (H:V): 3:1 WATTLES REQUIRED Enter Ditch Back Slope Gradient (H:V): 1.5:1 Enter Device Height: 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ² Wrapped TRSC-A/Wattles required: 13.0 Total 192.69 'Designer still has the option of using Option 5 or 6					nents in Step <u>3.</u>		
Enter Dirch Point Slope Gradient (H:V): 1 Enter Dirch Back Slope Gradient (H:V): 1.5 Enter Device Height: 1.5 Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 'Designer still has the option of using Option 5 or 6			Checks or V			WA	TTLES REQUIRED
Enter Device Height: 1.5 ft Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 COMMENTS: 'Designer still has the option of using Option 5 or 6	Enter Ditch Front Slope	Gradient (H:V):				WA.	
Enter Device Height: 1.5 ft Area Behind Device: 5.06 ft ² Length of Dichs Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 *Designer still has the option of using Option 5 or 6	Enter Ditch Back Slope	Gradient (H:V):		<u>1.5</u>	:1		
Area Behind Device: 5.06 ft ² Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 ft ³				<u>1.5</u>	ft		
Length of Ditch Behind Device: 13.51 ft Storage Behind Device (assumes 65% effeciency): 14.82 ft ³ Wrapped TRSC-A/Wattles required: X Total 192.69 ft ³ *Designer still has the option of using Option 5 or 6	-						
Storage Behind Device (assumes 65% effeciency): Wrapped TRSC-A/Wattles required: 14.82 X th³ Option 5 Total 192.69 th³ *Designer still has the option of using Option 5 or 6		Device:				essive num	ber of devices required. Go to
Wrapped TRSC-A/Wattles required: X 13.0 Total 192.69 COMMENTS: *Designer still has the option of using Option 5 or 6	-		eciencv):				
COMMENTS: *Designer still has the option of using Option 5 or 6		ttles required:	x	13.0			- phone -
	0.000	Tot	tal	192.69			
						signer still has	the option of using Option 5 or 6
Use Temporary Sediment Dam, Type-B 12x4x3. Dam and wattles cover required storage.	Use Temporary Sedime	nt Dam, Type-B 12x4>	x3. Dam and	d wattles cover requir	red storage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	se Surface /	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	
	- 0010 (002510111		03E 425	
Q _p =CiA	•	T-1-1-4 44 54 6		
Runoff Coefficient, C Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
		0/		
Watershed Slope, S		%	Cas Kinnish	
t _c =	N/A	minutes	See Kirpich	
2 Kirpich Method	•	4	to a Martula d En O	
Flow Path, L Watershed Slope, S		feet ft/ft	*see Module 1 Eq. 3 *see Module 1 Eq. 3	
Kirpich, t _c =		minutes	see module TEq. 3	
Using a Return Period (T) of 10 y	-		#DIV/0! minutes,	
the rainfall intensity, i (in/hr, NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	, ppondik , t	
Peak Rate of Runoff, Q _n =CiA	0.00			
- P				
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir	ed VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🗸			
Required VOLUME using the des		0.0	0 ft ³	
			_	
d. Sediment Storage Required using 1800 ft	³/ac			
Disturbed Area (acres)=		0.1		
Required Sediment Storage (ft ³)=		173.5	5 ft ³	
Final Required Storage:		173.5	F 43	
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5:	1 or flattor
		ey (http://soildatamai	•	i oi nattei
Sat. Hydraulic Con. (Ksat, micro		ey (http://solidatamai	Skimmer Basin	
Soil Permeability (in/hr)	o iivsec)	0.00	Required	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-1	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		4	satisfy requirements of Step 3.	
Final Design Top Length (ft):		12	Install Baffles*.	
Final Design Depth (ft):		3	Rea Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	and to the procession.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
Verify Storage (ft ³)		144.00		
verity otorage (it)		oo Low		
Verify Surface Area (ft ²)		48.00		
,		OK		

STEP 1: Input Project Information	*items in red are REQ	UIRED	SECTIO	ON 17 of 32	
Construction time		County:	Avery	•	EDODEC
≤6 months (Y/N)? Y HQW (Y/N)? Y	Elevation	Location:	Pilot Ridge Ro	× •	- ERODES
Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs	_	EDOsian DECian
From Sta.: $78 + 50$		Date Prepared:	11/18/2014		EROsion DESign
to Sta.: 79 + 65	0	Level III A #:	3474		Version
Right/Left: Rt.	No Elev Data %	Level III A Expirat	ion: 12	/31/2016	
% Ditch Grade: 6.870	%	Reviewed By:	Greg Kirby		2.10.2012
Contributing		Date Reviewed:	11/19/2014		
R/W Width: 16	feet	Level III A #:	391		
Length of Run X 115	feet	Level III A Expirat	ion: 1/0	/1900	
Disturbed Area = 0.04	acres				
Drainage Area: 0.04	acres				
*Drainage Area must equal or ex	ceed the Disturbed Area	found above			
Surface Dewatering Device	n				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	N				
Regression Constant, C	<u>808</u>	Table 2-7 (Level II	l Ref Manual)		
Rainfall Factor, R	<u>106.4</u>	Figure 2-1			
Erodibility Factor, K	0.24	Table 2-2 or Web	Soil Survey (http:	//soildatamart.n	rcs.usda.gov/)
Soil Type	SoD Soco	* informational pur			
			,,		
STEP 2: Ditch Liner requirement	s: Utilize the Required Li	ner tab and note recomme	ndations on plans		
STEP 3: Velocity Control Require	ements				
TYPE B ROCK SILT	CHECKS	2 spaced at	38 fee		Wattles are required in
OR WATTLES				c	onjunction with PAMs
*See the HELP Tab t	or additional clarification	and an example on how t	o place on plans.		
	Start with Option	4A			
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	C SoD S	Use V=CRKs to determine 808 106.4 0.24 0c0 0.06870 ft/ft	• storage • From Step 1 at	oove	
	V= 116	52.34 ft ³ /ac/yr			
Required	Storage Volume= 49	9.10 ft ³		Rainfall Facto Move on to Op	r-see note in cell otion 4C
OPTION 4B: For DR	AINAGE AREA > 3 Acre:	Use RUSLE2 Modeling to	determine stora	ye	
Sediment Deli	very from RUSLE2:	0.00 tons/acre/yr			
	ing to ft ³ /ac/yr: N/A	ft ³ /ac/yr			
		I/A ft ³		See Option 4	A
OPTION 4C: Using t	ha Baguirad Staraga Val	ume from Option 4A or 4B	to dotormino # a		
* These	devices can be used to s	atisfy the velocity require		i mapped inc	o-A/Walles Nequired
	ed Type A Rock Silt Che			WAT	TLES REQUIRED
Enter Ditch Front Slo			<u>3</u> :1		
Enter Ditch Back Slop	oe Gradient (H:V):	<u>1.</u>	<u>5</u> :1		
Enter Device Height:		1.	<u>5</u> ft		
Area Behind Device:		5.0	6 ft ²		
Length of Ditch Behir	d Device:	21.8	3 ft Ex	cessive numb	er of devices required. Go to
0	ice (assumes 65% effeci		5 ft ³		Option 5
Wrapped TRSC-A/W		X 3.			
COMMENTS:	i otai	/ 1.00		signer still has t	he ontion of using Ontion 5 or 6
	nent Dam Turca P 0v2v2	Dam and wattles cover require		əlgiler still nas ti	he option of using Option 5 or 6
Use remporary Sedir	пенк Баш, туре-в эхэхэ. Г	zam anu wattes cover requi	eu siorage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	se Surface /	Area Calculation	s to determine storage 4=3250)
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	p
	- 0010 (002510111	avv or mouty)	03E Q23	
Q _p =CiA		Table 1 4 1 5 1 6		
Runoff Coefficient, C Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
		0/		
Watershed Slope, S		%	Cas Kimish	
t _c =	N/A	minutes	See Kirpich	
2 Kirpich Method	•	4	to a Markula d En O	
Flow Path, L Watershed Slope, S		feet ft/ft	*see Module 1 Eq. 3 *see Module 1 Eq. 3	
Kirpich, t _c =		minutes	see module T Eq. 3	
	#21170.	minutes		
Using a Return Period (T) of 10 y	-		#DIV/0! minutes,	
the rainfall intensity, i (in/hr, NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	· +	
Peak Rate of Runoff, Q _n =CiA	0.00			
- P				
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir	ed VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🗸			
Required VOLUME using the des		0.0	0 ft ³	
			—	
 d. Sediment Storage Required using 1800 ft 	³/ac			
Disturbed Area (acres)=		0.04		
Required Sediment Storage (ft ³)=		76.03	3 ft ³	
Final Deguized Storage		76.03	a 43	
Final Required Storage: Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	ut or flattor
		ey (http://soildatamar		o. i oi nattei
Sat. Hydraulic Con. (Ksat, micro		ey (nup.//solidatamar	Skimmer Basin	
Soil Permeability (in/hr)	o ilvsec)	0.00	Required	
Dewatering Time (Days)		N/A	Kequiled	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	Rea Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	and to the protocol	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
verity otorage (it)		OK		
Verify Surface Area (ft ²)		27.00		
		ок		

STEP 1: Input Project Information	n *items in red a	re REQUIRED		SECTI	ON 18 of 32	
Construction time			County:	Avery	•	EDODEC
≤ 6 months (Y/N)? Y	Elevation	1	-	Dilet Didee D		– ERODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge R		
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 79 + 65	0	-	Date Prepared:	11/18/2014		
to Sta.: 80 + 50	0		Level III A #:	3474		Manatan
Right/Left: Rt.	No Elev Data	%	Level III A Expiration	on: 12	2/31/2016	Version
% Ditch Grade: 9.760	%	_	Reviewed By:	Grea Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		2.10.2012
R/W Width: 16	feet		Level III A #:	391		
Length of Run X 85	feet		Level III A Expiration	on: 1/	0/1900	
Disturbed Area = 0.03	acres					
Drainage Area: 0.03	acres					
*Drainage Area must equal or ex		d Area found a	ahove			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Ÿ					_
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
			T	D (11)		
Regression Constant, C	<u>808</u>		Table 2-7 (Level III	Ret Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		://soildatamart.n	rcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirement	s: Utilize the Requ	iired Liner tab	and note recommen	dations on plans	s.	
STEP 3: Velocity Control Require	ements					
TYPE B ROCK SILT	CHECKS	2	spaced at	28 fe		Wattles are required in
OR WATTLES	5		-			conjunction with PAMs
*See the HELP Tab t	or additional clari	fication and an	example on how to	place on plans		
				,,, <i>.</i>	-	
	Start with O	ption 4A				
OPTION 4A: For DR		3 Acre: Use V= 808		storage		
Regression Constant	C .					
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	ץ ו	From Step 1 a	bove	
Soil Type		SoD Soco				
Ditchline Slope, s		0.09760) ft/ft			
	V=	1651.31	ft ³ /ac/yr			
Required	Storage Volume=	51.56	ft ³	Using 82% o	f Rainfall Facto	r-see note in cell
	J				- Move on to O	
				-		
OPTION 4B: For DR	AINAGE AREA > 3	3 Acre: Use RL	ISLE2 Modeling to a	letermine stora	ae	
					3-	
Sediment Deliv	very from RUSLE2	0.00	tons/acre/yr			
	ing to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
Required	Storage Volume=	<u>N/A</u>	ft ³		See Option 4	A
			m Option 4A or 4B t			SC-A/Wattles Required
	ed Type A Rock S					
Enter Ditch Front Slo				:1	WAT	TLES REQUIRED
Enter Ditch Back Slo				:1		
Enter Device Height:						
				ft		
0			5.06			
Area Behind Device:				tt 🖡	vcessive numb	er of devices required. Go to
Area Behind Device: Length of Ditch Behir			15.37		Accounter manna	
Area Behind Device: Length of Ditch Behir Storage Behind Dev	ice (assumes 65%	6 effeciency):	15.37 16.86			Option 5
Area Behind Device: Length of Ditch Behir	ice (assumes 65%	% effeciency): >	16.86	ft ³		
Area Behind Device: Length of Ditch Behir Storage Behind Dev	ice (assumes 65%)	16.86 (4.0	ft ³		
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W	ice (assumes 65%		16.86	ft ³		Option 5
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W COMMENTS:	ice (assumes 65% /attles required:) Total	16.86 (<u>4.0</u> 67.43	ft ³ ft ³		
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W	ice (assumes 65% /attles required:) Total	16.86 (<u>4.0</u> 67.43	ft ³ ft ³		Option 5
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W <u>COMMENTS:</u>	ice (assumes 65% /attles required:) Total	16.86 (<u>4.0</u> 67.43	ft ³ ft ³		Option 5
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W COMMENTS:	ice (assumes 65% /attles required:) Total	16.86 (<u>4.0</u> 67.43	ft ³ ft ³		Option 5
Area Behind Device: Length of Ditch Behir Storage Behind Dev Wrapped TRSC-A/W <u>COMMENTS:</u>	ice (assumes 65% /attles required:) Total	16.86 (<u>4.0</u> 67.43	ft ³ ft ³		Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	s to determine storage. A=3250)_
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	• p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11	avv or mouty)	03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (\mathbf{T}) of 10 y	rs (25 for HOM	/) and a t of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr	-			
NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres		
Peak Rate of Runoff, Qp =CIA	0.00	cfs		
			- 2	
 b. Determine the Required Surface Area= 		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🗸 🗸		_	
Required VOLUME using the des	sign depth:	0.0	0 ft ³	
d. Sediment Storage Required using 1800 ft	l³/ac			
Disturbed Area (acres)=		0.03		
Required Sediment Storage (ft ³)=		56.2	o ft ³	
Final Required Storage:		56.2	n ft ³	
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.	5-1 or flatter
	Web Soil Surve	ey (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro		0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio	1	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5	-	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2	_	
Verify Storage (ft ³)		81.00 OK		
		27.00		
Verify Surface Area (ft ²)		OK		

	i items in reu are	e REQUIRED		SECTIO	N 19 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	EDODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		<i>— ERODES</i>
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs	_	EDOsion DECian
From Sta.: 80 + 50	1001(11)		Date Prepared:	11/18/2014		EROsion DESign
to Sta.: 83 + 50	0		Level III A #:	3474		Version
Right/Left: Rt.		%	Level III A Expiration	n: 12/3	31/2016	
% Ditch Grade: 5.820	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
R/W Width: 39	feet		Level III A #:	391		
Length of Run X 300	feet		Level III A Expiration	n: 1/0/	1900	
Disturbed Area = 0.27	acres					
Drainage Area: 0.27	acres					
*Drainage Area must equal or ex	,	Area found a	bove			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
			T // 0 T // ////			
Regression Constant, C	<u>659</u>		Table 2-7 (Level III I	ket Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		solidatama	nt.mcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirement	a. I liliza tha Dagui	ired liner tob	and note recommend	lationa an nIana		
STEP 2: Ditch Liner requirements	s: Utilize the Requi	irea Liner tab	and note recommend	ations on plans.		
STED 2: Valacity Control Deguing	monto					
STEP 3: Velocity Control Require	ements					
TYPE B ROCK SILT	CHECKS	F	anasad at	50 (act		Wattles are required in
	· · · ·	5	spaced at	50 feet		conjunction with PAMs
OR WATTLES	•					
*See the HELP Tab f	or additional clarifi	ication and an	example on now to	place on plans.		
	Start with Op	ption 4A				
OPTION 4: Using RUSLE2 A			J. J			
OPTION 4A: For DR.	AINAGE AREA < 3	Acre: Use V=	CRKs to determine s	torage		
				torage		
Regression Constant,		659	٦	torage		
Regression Constant, Rainfall Factor, R		659 106.4	Ì	-		
Regression Constant, Rainfall Factor, R Erodibility Factor, K	C	659 106.4 0.24	Ì	torage From Step 1 abo	ove	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type	C	659 106.4 0.24 SoD Soco	}	-	ove	
Regression Constant, Rainfall Factor, R Erodibility Factor, K	с	659 106.4 0.24 SoD Soco 0.05820	ft/ft	-	ove	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	C V=	659 106.4 0.24 SoD Soco 0.05820 803.11	ft/ft ft³/ac/yr	From Step 1 abo		
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	с	659 106.4 0.24 SoD Soco 0.05820	ft/ft	From Step 1 abo	Rainfall Fa	ictor-see note in cell
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	C V=	659 106.4 0.24 SoD Soco 0.05820 803.11	ft/ft ft³/ac/yr	From Step 1 abo	Rainfall Fa	ictor-see note in cell o Option 4C
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required	C V= Storage Volume=	659 106.4 0.24 SoD Soco 0.05820 803.11 <u>215.71</u>	ft/ft ft ³ /ac/yr ft ³	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	C V= Storage Volume=	659 106.4 0.24 SoD Soco 0.05820 803.11 <u>215.71</u>	ft/ft ft ³ /ac/yr ft ³	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required	C V= Storage Volume= AINAGE AREA > 3	659 106.4 0.24 SoD Soco 0.05820 803.11 <u>215.71</u> Acre: Use RU	ft/ft ft ² /ac/yr ft ³ SLE2 Modeling to d	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2:	659 106.4 0.24 SoD Soco 0.05820 803.11 <u>215.71</u> Acre: Use RU 0.00	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv <i>Converti</i>	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr:	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv <i>Converti</i>	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2:	659 106.4 0.24 SoD Soco 0.05820 803.11 <u>215.71</u> Acre: Use RU 0.00	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	o Option 4C
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv <i>Converti</i>	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr:	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 abo Using 82% of I C4 - I	Rainfall Fa Move on t	o Option 4C
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storage	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage	Rainfall Fa Move on t e See Opti	o Option 4C
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage	Rainfall Fi Move on t e See Opti Wrapped	o Option 4C on 4A TRSC-A/Wattles Required
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using t * These Storage from Wrapp	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be usi devices can be usi ed Type A Rock Si	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3.	Rainfall Fi Move on t e See Opti Wrapped	o Option 4C
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slop	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be uss ed Type A Rock Si os Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to he velocity requirem Yattles	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1	Rainfall Fi Move on t e See Opti Wrapped	o Option 4C on 4A TRSC-A/Wattles Required
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Sloy Enter Ditch Back Sloy	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be uss ed Type A Rock Si os Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5	From Step 1 abo Using 82% of I C4 - 1 etermine storage o determine # of ents in Step 3. :1	Rainfall Fi Move on t e See Opti Wrapped	o Option 4C on 4A TRSC-A/Wattles Required
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using tt * These Storage from Wrapp Enter Ditch Back Slop Enter Delich Back Slop Enter Delich Back Slop Enter Delich Back Slop	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be uss ed Type A Rock Si os Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 1.5	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1	Rainfall Fi Move on t e See Opti Wrapped	o Option 4C on 4A TRSC-A/Wattles Required
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using t "These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Back Slop Enter Ditch Back Slop	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us devices to the the the the the the performance of the the the the the performance of the	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 1.5 5.06	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage	Rainfall F. Move on t e See Opti Wrapped V	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Back Slop	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= he Required Storag devices can be us ed Type A Rock to be Gradient (H:V): be Gradient (H:V): be Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti it Checks or V	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to he velocity requiren Yattles 1.5 5.06 5.06 25.77	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 tf tf tf tf	Rainfall F. Move on t e See Opti Wrapped V	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using t * These Storage from Wrapp Enter Ditch Front Slog Enter Ditch Back Slog Enter Ditch Backs Slog	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storage devices can be use devices can be use device	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A N/A ge Volume froi ed to satisfy ti it Checks or V	fr/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Yattles 1.5 5.06 25.77 28.27	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 tf tf tf tf	Rainfall F. Move on t e See Opti Wrapped V	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Back Slop	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be using devices can be using devices can be using the required Storag devices can be using devices can be using the required Storag devices can be using devices can be using	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A N/A ge Volume froi ed to satisfy til It Checks or V effeciency): X	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0	From Step 1 abo Using 82% of 1 C4 -	Rainfall F. Move on t e See Opti Wrapped V	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Deliv Converti Required OPTION 4C: Using to * These Storage from Wrapp Enter Ditch Front Slog Enter Ditch Back Slog Enter Ditch Backs Top Enter Ditch Backs Top Enter Ditch Backs Top	C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be using devices can be using devices can be using the required Storag devices can be using devices can be using the required Storag devices can be using devices can be using	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 Acre: Use RU 0.00 N/A N/A ge Volume froi ed to satisfy ti it Checks or V	fr/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Yattles 1.5 5.06 25.77 28.27	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 tf tf tf tf	Rainfall F. Move on t e See Opti Wrapped V	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Back Slop Enter Ditch Back Slop	C V= Storage Volume= AlNAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us ed Type A Rock Si be Gradient (H:V): be Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 <i>Acre: Use RU</i> 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti ilt Checks or V effeciency): X Total	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0 226.16	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1	Rainfall Fa Move on t e See Opti f Wrapped V cessive nu	o Option 4C on 4A TRSC-A/Wattles Required /ATTLES REQUIRED
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Fack Slop Enter Ditch Fack Slop Enter Ditch Backs Slop Enter Ditch Behim Storage Behind Devi	C V= Storage Volume= AlNAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us ed Type A Rock Si be Gradient (H:V): be Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 <i>Acre: Use RU</i> 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti ilt Checks or V effeciency): X Total	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0 226.16	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1	Rainfall Fa Move on t e See Opti f Wrapped V cessive nu	o Option 4C on 4A TRSC-A/Wattles Required ATTLES REQUIRED Imber of devices required. Go to Option 5
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Back Slop Enter Ditch Back Slop	C V= Storage Volume= AlNAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us ed Type A Rock Si be Gradient (H:V): be Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 <i>Acre: Use RU</i> 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti ilt Checks or V effeciency): X Total	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0 226.16	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1	Rainfall Fa Move on t e See Opti f Wrapped V cessive nu	o Option 4C on 4A TRSC-A/Wattles Required ATTLES REQUIRED Imber of devices required. Go to Option 5
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Back Slop Enter Ditch Back Slop	C V= Storage Volume= AlNAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us ed Type A Rock Si be Gradient (H:V): be Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 <i>Acre: Use RU</i> 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti ilt Checks or V effeciency): X Total	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0 226.16	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1	Rainfall Fa Move on t e See Opti f Wrapped V cessive nu	o Option 4C on 4A TRSC-A/Wattles Required ATTLES REQUIRED Imber of devices required. Go to Option 5
Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR. Sediment Delin Converti Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Back Slop Enter Ditch Back Slop	C V= Storage Volume= AlNAGE AREA > 3 very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storag devices can be us ed Type A Rock Si be Gradient (H:V): be Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V): to Gradient (H:V):	659 106.4 0.24 SoD Soco 0.05820 803.11 215.71 <i>Acre: Use RU</i> 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti ilt Checks or V effeciency): X Total	ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 25.77 28.27 8.0 226.16	From Step 1 abo Using 82% of 1 C4 - 1 etermine storage o determine # of ents in Step 3. :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1 :1	Rainfall Fa Move on t e See Opti f Wrapped V cessive nu	o Option 4C on 4A TRSC-A/Wattles Required ATTLES REQUIRED Imber of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	s to determine storage A=3250	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	0
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11	avv or mouty)	032 423	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _e (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t_ of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,				
NOAA website, http://hdsc.n	iws.noaa.gov/h	dsc/pfds/orb/nc_pfd	s.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.27	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	D ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
u	3		0 ft ³	
Required VOLUME using the des	lign deptn:	0.0	U IT	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.2	7	
Required Sediment Storage (ft ³)=		483.4		
			- .	
Final Required Storage:		483.4		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5:	1 or flatter
		ey (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr) Dewatering Time (Days)		0.00 N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	_	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	industric to not providur	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
		oo Low		
Verify Surface Area (ft ²)		27.00		
		OK		

STEP 1: Input Project Information	*items in red a	e REQUIRED		SECTI	ON 20 of 32	
Construction time			County:	Avery	-	
≤6 months (Y/N)? Y		_	county.	Andy		<i>— ERODES</i>
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge R		LICOLLS
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs	5	EROsion DESign
From Sta.: 79 + 0	0		Date Prepared:	11/18/2014		
to Sta.: 81 + 0	0		Level III A #:	3474		Manda
Right/Left: Lt	No Elev Data	%	Level III A Expiration	on: 12	2/31/2016	Version
% Ditch Grade: 8.100	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
R/W Width: 18	feet		Level III A #:	391		
	feet		Level III A Expiration	on: 1/	0/1900	
	acres					
	acres					
*Drainage Area must equal or exce		d Area found a	above			
Surface Dewatering Device Is this a Typical Section (Y/N)?	n Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
the Non-Typical sections?	IN					
Regression Constant, C	<u>549</u>		Table 2-7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1	(or manual)		
Erodibility Factor, K	0.24		Table 2-2 or Web S	oil Survey (http:	://soildatamart.r	nrcs.usda.gov/)
	SoD Soco		* informational purp		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, colacad.gov)
	000 0000		international parp	ooco onij.		
STEP 2: Ditch Liner requirements:	Utilize the Requ	iired Liner tab	and note recommend	lations on plan	s.	
STEP 3: Velocity Control Requiren	nents					
						Wattles are required in
TYPE B ROCK SILT C	HECKS	5	spaced at	33 fe	et	conjunction with PAMs
OR WATTLES						· · · · · · · · · · · · · · · · · · ·
*See the HELP Tab fo	r additional clari	fication and an	example on now to	place on plans	i.	
:	Start with O	ption 4A				
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K		3 Acre: Use V= 549 106.4 0.24		torage From Step 1 a	bove	
Soil Type		SoD Soco	•	rion otop i d		
Ditchline Slope, s		0.08100) ft/ft			
	V=		ft ³ /ac/yr			
Required S	torage Volume=	76.96	ft ³	Using 82% o	f Rainfall Fact	or-see note in cell
Required 0	torage volume=	10.00			- Move on to O	
OPTION 4B: For DRA	INAGE AREA > 3	Acre: Use RL	ISLE2 Modeling to d	etermine stora	ige	
	ry from RUSLE2	0.00	tons/acre/yr			
Converting	g to ft ³ /ac/yr:	N/A	ft³/ac/yr			
Required S	torage Volume=	N/A	ft ³		One Onting	4.0
	•		-		See Option	4A
			m Option 4A or 4B to the velocity requirem			SC-A/Wattles Required
Storage from Wrappe			Wattles			
Enter Ditch Front Slope			3	:1	TAW	TLES REQUIRED
Enter Ditch Back Slope			<u>1.5</u>			
Enter Device Height:			1.5	ft		
Area Behind Device:			5.06	ft ²		neasure(s) on EC Plan. Start
Length of Ditch Behind	Device:		18.52			levice as close to the outlet
Storage Behind Device		effeciency).	20.31			sible and then space them
Wrapped TRSC-A/Wa		x circolonoy).				grade. PAM should not be
		Total	81.25	ft ³	placed on	the last BMP at outlet.
COMMENTS:			01.23		lesigner still her	the option of using Option 5 or 6
Use Temporary Sedime	ent Dam, Type-R	12x6x3. Dam co	overs required storage		rearginer sum nas	and option of using Option 5 0F 0
coo remporary dealine						

a. Determine the Peak Runoff Rate, Q ₁ (Q ₂ ,=Q ₁₀ (Q ₂₀ ,for HOW of roud)) Q _g =ClA Runoff Coefficient, C 1 Sec 025 1 Scherrent Method, 1, (kqAc485) Watershed Slope, S L= NA minutes 2 Kirpich Method Fow Path, L 2 Kirpich, L= #DIVN01 minutes Using a Return Period (T) of 10 yrs (25 for HOW) and a 1, of Berginell intensity, 1 (m/h), can be read from Appendix A or the NOAA website, http://hdsc.mss.noaa.gov/hdsc/plds/orbine_plds.html Rainfall Intensity, 1 (m/h), can be read from Appendix A or the NOAA website, http://hdsc.mss.noaa.gov/hdsc/plds/orbine_plds.html Rainfall Intensity, 1 (m/h), can be read from Appendix A or the NOAA website, http://hdsc.mss.noaa.gov/hdsc/plds/orbine_plds.html Rainfall Intensity, 1 (m/h) D eign Depth: 1 Required Surface Area 0.000 ft ² c. Use Surface Area (A) to determine required VULUME of Temporary Type-B Sedment Dan Design Depth: 1 Required Storage 1 S :1 side slopes "must be at least 1.5:1 or flatter Hill attorage (areas) 0.08 Required Storage (t ²)= 1 S :1 side slopes "must be at least 1.5:1 or flatter Hill Tation Analysis Web Soll Survey (http://soldatamations.usd.ag.ov) Kinmer Basin Suggested Top Length (ft): 1 A Stimmer Size (nn) 1 S : side slopes "must be at least 1.5:1 or flatter Hill Design Depth: 1 S : side slopes "must be at least 1.5:1 or flatter Hill Tation Analysis Web Soll Survey (http://soldatamations.usd.ag.ov) Kinmer Basin Suggested Top Length (ft): 1 A Stimmer Size (nn) 1 S : Side slopes "must be at least 1.5:1 or flatter Hill Design Depth (ft): 1 A Stimmer Size (nn) 1 S : 1 S :	OPTION 5: IF DRAINAGE AREA > 1 Acre	· Use Surface	Area Calculation	ns to determine storage A=325	0
Q _y =CiA Rundle Coefficient, C Time of Concentration, t _z (minutes) 1 Table 1-4,1-5,1-6 1 Shortcut Method, t _z (A _{24.68}) 0 % 1 Shortcut Method, t _z (A _{24.68}) 0.% See Kirpich 2 Kirpich Method 1 0 feet "see Module 1 Eq. 3 2 Kirpich Method 1 0 feet "see Module 1 Eq. 3 3 0.10 10 yrs (25 for HOW) and a t _z of BDDZO2 minutes, minutes, the rainall itensity, i (n/m) 0 n/m Appendix A or the NOAA website, http://hdsc.nws.noaa.gov/hdsc/plds/orbinc_plds.html Rainfail Itensity, i (n/m) 0.00 of s b. Determine the Required Surface Area 0.000 ft ² 0.000 ft ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dan Design Depti: 1 Required VOLUME using the design deptit: 0.000 ft ² 1.5.1 si de Stopes 'must be at least 1.5.1 or flatter Proposed Basin Storage (tr)= 148.76 ft ³ Storage 'must be at least 1.5.1 or flatter Minimum 2:1 (L/W) Ratio 0.00 Stimmer Basin Storage 'must be at least 1.5.1 or flatter Minimum 2:1 (L/W) Ratio 0.00 Stimmer Ba					- <i>ρ</i>
Rundf Coefficient, C 9. Table 1-4,1-5,1-6 Time of Concentration, L ₁ (minutes) Watershed Skope, S 9.% Watershed Skope, S 9.% Watershed Skope, S 9.% Watershed Skope, S 9.1% Drainage Area given as 0.00 Drainage Area given as 0.00 Lead Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Dopth: 1		ap = ato (a2510111	avi or mouty	032 023	
Time of Concentration, t _c (minutes) 1 Shortcut Method, t _c (A ₂ A ₅ S) Watershed Stope, S t ₌ V/A minutes 2 Klipich Method Flow Path, L Watershed Stope, S Using a Return Period (T) of 10 yrs (25 for HOW) and a t _c of the rainfall intensity, i (inhr), can be read from Appendix A or the NOAA website, http://dsc.mws.noae.gov/hdsc/pit/stor/binc_prids.hml Rainfall intensity, i (inhr), can be read from Appendix A or the NOAA website, http://dsc.mws.noae.gov/hdsc/pit/stor/binc_prids.hml Rainfall intensity, i (inhr), can be read from Appendix A or the NOAA website, http://dsc.mws.noae.gov/hdsc/pit/stor/binc_prids.hml Rainfall intensity, i (inhr), can be read from Appendix A or the NOAA website, http://dsc.mws.noae.gov/hdsc/pit/stor/binc_prids.hml Rainfall intensity, i (inhr), can be required form Appendix A Drainage Area given as 0.08 acres b. Determine the Required Surface Area= 0.000 ft ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: Required VOLUME using the design depth: 0.000 ft ² d. Sediment Storage Required using 1800 ft ² /ac Disturbed Area (acres)= Required Storage: 1.5 : fisde slopes 'must be at least 1.5:1 or flatter ntificration Analysis Web Soil Survey (http://solidatamatr.nrcs.usda.gov) Stimmer Brasin Suggested Top Length (ft): 0.00 Final Design Top Width (ft): 6.00 Dewatering Time (Days) 2.00 Suggested Top Length (ft): 6.00 Dewatering Time (Days) 2.00 Sub Virtue Sampter A Sust Mydrage ft of Length (ft): 6.00 Dewatering Time (Days) 2.00 Sub Virtue Sampter (ft) 3.00 Sub Virt		•	T-6- 4 4 4 5 4 0		
1 Shorcut Method, t, (A ≤ A, 6S) Watershed Stope, S t, Kirpich 9 % t, Kirpich 2 Kirpich Method Watershed Stope, S Kirpich, t, e = #DW001 minutes 1 feet 'see Module 1 Eq. 3 Watershed Stope, S 0 (ht) 2 Watershed Stope, S Kirpich, t, e = #DW001 minutes 1 feet 'see Module 1 Eq. 3 Watershed Stope, S 0 (ht) 2 Watershed Stope, S (ht) 0 (ht) 1 feet 'see Module 1 Eq. 3 Watershed Stope, S 0 (ht) 2 Watershed Stope, S (ht) 0 (ht) 1 feet 'see Module 1 Eq. 3 Watershed Stope, S 0 (ht) 2 Watershed Stope, S (ht) 0 (ht) 1 feet 'see Module 1 Eq. 3 Watershed Stope, S (ht) 1 feet 'see Module 1 Eq. 3 Watershed Stope, S (ht) 2 Watershed Stope, S (ht) 0 (ht) Appendix A 2 Watershed Stope, S (ht) 0.00 ft ² 2 Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: 1 (ht) 3 Determine the Required Storage 0.00 ft ² 4 Storage Required Using 1800 ft ² /ac 0.00 ft ² 5 Disturbed Area (acres)= 0.00 ft ² 6 Final Required Storage: 1.5 ft 3 ide slopes * must be at least 1.5 ft or flatter Minimum 2: (LW) Ratio Skimmer Basin Stat Hydrau			Table 1-4,1-5,1-6		
Watershed Stope, S 0 % t_e N/A minutes See Kirpich Prov Pati, L 0 feet 'see Module 1 Eq. 3 Watershed Stope, S 0 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Stope, S 10 tht 'see Module 1 Eq. 3 Watershed Storage 10 tht 'see Module 1 Eq. 3 Watershed Storage 10 tht 'see Module 1 Eq. 3 Watershed Storage Toral Intensity, I (in/hr) 0 in/hr Appendix A Drainage Area given as 0.00 dts 's Ib determine the Required Storage area 0.00 ft ² C. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam 0.00 ft ² Disturbed Area (acres) 0.00 ft ² 1.5 ft side stopes "must be at least 1.5 ft or flatter Inforce Basin Stob Stopes		,			
t_e NA minutes See Kirpich 2 Kirpich Method Plow Path, Le 1 fet 'see Module 1 Eq. 3 (htt's 'see Module 1 Eq. 3) Watershed Stope, S Kirpich, Le 0 fet 'stop Mothod 'see Module 1 Eq. 3 Using a Return Period (T) of 10 yrs (25 for HOW) and a t_e of the rainfall intensity, 1 (in/hr), can be read from Appendix A or the NOAA website, http://hdsc.mvs.noaa.gov/hdsc/ptds/orb/nc_ptds/html #DM/02 Rainfall Intensity, 1 (in/hr) 0 in/hr Appendix A Drainage Area given as 0.08 acres Peak Rate of Runoft, Qp = CIA 0.00 cfs b. Determine the Required Surface Area= 0.00 ft ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: 1 Trainage Area given as ing 1800 ft ² /ac 0.08 Required VolLUME using the design depth: 0.00 ft ² d. Sediment Storage Required using 1800 ft ² /ac 1.5 :1 side slopes "must be at least 1.5:1 or flatter Minimum 2:1 (L: W) Ratio 1.5 :1 side slopes "must be at least 1.5:1 or flatter Minimum 2:1 (L: W) Ratio Skimmer Basin Suggested Top Length (ft): 0 Suggested Top Length (ft): 1 Suggested Top Length (ft): 1 Suggested Top Length (ft): 2 Web Soli S			0/		
2 Kirpich Method 9 feet "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 10tt "see Module 1 Eq. 3 Watershed Sope, S 0 0 "see Module 1 Eq. 3 Watershed Sope, S 0 0 "see Module 1 Eq. 3 Watershed Sope, S 0 0 "see Module 1 Eq. 3 Watershed Sope, See Module 1 Eq. 3 "see Module 1 Eq. 3 "see Module 1 Eq. 3 Watershed Sope, See Module 1 Eq. 3 "see Module 1 Eq. 3 "see Module 1 Eq. 3				See Kimish	
Flow Path, L 0 feet "see Module 1 Eq. 3 Watershed Slope, S 0 fth "see Module 1 Eq. 3 Watershed Slope, S 0 fth "see Module 1 Eq. 3 Using a Return Period (T) of 10 yrs (25 for HQW) and a t, of #DIVID minutes, the rainfall intensity, 1 (in/n), can be read from Appendix A or the MOAA website, http://hdsc.nws.noaa.gov/hdsc/ptd/s/oth/nc.ptd/s.html Rainfall intensity, 1 (in/n) 0 in/n Appendix A Drainage Area given as 0.08 acres Peak Rate of Runoff, Q_=CIA 0.00 cfs b. Determine the Required Surface Area= 0.00 ft ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: Required VOLUME using the design depth: 0.00 ft ³ c. Sediment Storage Required using 1800 ft ³ /ac 0.08 ft ³ Proposed Basin Side Slopes: 1.5 : 1 side slopes *must be at least 1.5:1 or flatter Infilitron Analysis Web Soil Survey (http://soildatanros.usda.gov) Sail, Hydraulic Con. (Ksat, micro msec) 0 Sail, Hydraulic Con. (Ksat, micro msec) 0 Sail, Hydraulic Con. (Ksat, micro msec) 0 Saign Design Top Width (ft): 0 Basin Design Top Length (ft		t _c = N/A	minutes	See Kirpich	
Watershed Stope, S. 0 If the set of th		0	feet	*see Module 1 Ea 3	
Kirpich, 't_e #DIV/01 minutes Using a Return Period (T) of 10 yrs (25 for HQW) and a t_c of the rainfall intensity, i (in/hr), can be read from Appendix A or the NOAA website, htp://hdsc.nws.noaa.gov/hdsc/jd6x10hc_pld5.html IDIV/D1 minutes, the rainfall intensity, i (in/hr) Rainfall Intensity, i (in/hr) 0 in/r Appendix A Drainage Area given as 0.08 acres Peak Rate of Runoff, Q _p =CIA 0.00 dt ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: 1 Disturbed Area (acres)= 0.00 (t ²) Required VOLUME using the design depth: 0.00 (t ²) disturbed Area (acres)= 0.08 Required Storage: 148.76 (t ³) Proposed Basin Side Storage: 15 :1 side slopes *must be at least 1.5:1 or flatter Infiltration Analysis Web Soil Survey (http://solidatamatr.nrcs.usda.gov) Statubed Top Length (t): 0 Suggested Top Length (t): 0 Statubed Top Length (t): 3 Verifits Cone (trig) 3 Verifits Cone (trig) 3 Verifits Cone (trig) 15 Statube Storage: Statube Storage List Design Depth (trig) 0 Sto					
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NOAA website, http://hdsc.riws.noaa.gov/hdsc/pfds/orb/nc_pfds.html Rainfall Intensity, i (in/hr) 0 in/hr Appendix A Drainage Area given as 0.03 acres Peak Rate of Runoff, Q _p =CiA 0.00 cfs D. Determine the Required Surface Area 0.00 ft ² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: Design Depth: 1 0.00 ft ³ d. Sediment Storage Required using 1800 ft ³ /ac 0.00 ft ³ Disturbed Area (acres)= 0.08 ft ³ Required Storage: 148.76 ft ³ Proposed Basin Side Slopes: 1.5 :1 side slopes 'must be at least 1.5:1 or flatter Infiltration Analysis Web Soil Survey (http://soildatamart.nrcs.usda.gov) Soil Permeability (in/hr) 0 Dewatering Time (Days) N/A Basin Design Top Length (ft): 0 Sign Depth (ft): 3 Final Design Top Length (ft): 3 Basin Design Top Length (ft): 3 Basin Design Top Length (ft): 3 Minimum 2:1 (L/W) Ratio See Option 6 if installing this measure is not practical. Stimmer Size (in) 1.5 Oritice Diameter					
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Peak Rate of Runoff, Q _p = CiA 0.00 cfs b. Determine the Required Surface Area = 0.00 ft² c. Use Surface Area (A) to determine required VOLUME of Temporary Type-B Sediment Dam Design Depth: Beguired VOLUME using the design depth: 0.00 ft³ d. Sediment Storage Required using 1800 ft²/ac 0.08 Disturbed Area (acres) = 0.08 Required Storage: 148.76 ft³ Proposed Basin Side Sopes: 1.5 :1 side slopes *must be at least 1.5:1 or flatter Infiltration Analysis Web Soil Survey (http://soildatamart.nrcs.usda.gov) Sat. Hydraulic Con. (Kast, micro m/sec) 0 Soil Permeability (inhr) 0.00 Dewatering Time (Days) N/A Basin Design Depth (ft): 0 Final Design Top Length (ft): 0 Final Design Top Length (ft): 1.5 Dewatering Time (Days) 2. Verify Storage (tr) 72.00 Verify Storage (tr) 72.00	Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
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Weir Width (ft): 4 See Option 6 if installing this measure is not practical. Orifice Diameter (in) 0.25 Dewatering Time (Days) 2 Verify Storage (ft ²) 81.00 Verify Storage (ft ²) 72.00	Final Design Top Length (ft)):	12	Install Baffles*.	
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Skimmer Size (in) 1.5 Orifice Diameter (in) 0.25 Dewatering Time (Days) 2 Verify Storage (tt ³) 81.00 Verify Storage (tt ³) Too Low Varify Surface Area (tt ²) 72.00					1
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81.00 Too Low Verify Storage (ft ³) 72.00					1
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Varity Surface Area (#2) 72.00	Verify Storage (ft ³)				
				-	1
	Verify Surface Area (ft ²)				

STEP 1: Input Project Information	*items in red are	e REQUIRED		SECTION	N 21 of 32	1
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	EDODES
	Elevation	1	Location:	Pilot Ridge Rd	· · ·	ERODES
				Jacob Combs	_	
	Tool (ft)		Prepared By: Date Prepared:	11/18/2014		EROsion DESign
From Sta.: 82 + 30	U					
to Sta.: 83 + 50	0		Level III A #:	3474		Margion
Right/Left: Lt	No Elev Data	%	Level III A Expiration	on: 12/3	1/2016	Version
% Ditch Grade: 4.980	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
R/W Width: 48 f	eet		Level III A #:	391		
	eet		Level III A Expiration	on: 1/0/*	1900	
	acres					-
	acres					
*Drainage Area must equal or exce		d Area found a	above			
Surface Dewatering Device	n					1
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						-
the Non-Typical sections?	N					
Regression Constant, C	<u>549</u>		Table 2-7 (Level III)	Ref Manual)		
Rainfall Factor, R	106.4		Figure 2-1			
Erodibility Factor, K	0.24		Table 2-2 or Web S	Soil Survev (http://	soildatamart.nrcs	.usda.gov/)
	SoD Soco		* informational purp			
jpo			anonnaionai purp	cool only.		
STED 2. Ditch Lizzania		ined Liver to t	and note =	dationa ar -l		
STEP 2: Ditch Liner requirements:	Utilize the Requ	irea Liner tad	and note recommend	dations on plans.		
STEP 3: Velocity Control Requirem	nents					
TYPE B ROCK SILT CI	HECKS	1	spaced at	60 feet		ttles are required in junction with PAMs
OR WATTLES						,
*See the HELP Tab for	r additional clarif	ication and an	example on how to	place on plans.		
9	Start with O	ption 4A				
OPTION 4A: For DRAI				storage		
Regression Constant, C	•	549				
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	א ו	From Step 1 abo	ove	
Soil Type		SoD Soco				
Ditchline Slope, s		0.04980				
	V=	572.49	ft³/ac/yr			
Required St	orage Volume=	<u>75.70</u>	ft ³		Rainfall Factor-s Move on to Optic	
OPTION 4B: For DRAI	NAGF ARFA > 3	Acre: Use RU	ISI F2 Modeling to d	letermine storage	, ,	
				o co ugo		
	ry from RUSLE2: g to ft ³ /ac/yr:	0.00 N/A	tons/acre/yr ft ³ /ac/yr			
Required St	orage Volume=	<u>N/A</u>	ft ³		See Option 4A	
OPTION 4C: Using the * These de			m Option 4A or 4B t he velocity requiren		Wrapped TRSC-	A/Wattles Required
Storage from Wrapped	Type A Rock S	ilt Checks or V	Nattles		MATTI	
Enter Ditch Front Slope	Gradient (H:V):		<u>3</u>	:1	WATTL	ES REQUIRED
Enter Ditch Back Slope	• • •		1.5			
			1.5			
Enter Device Height:			5.06			
0						
Area Behind Device:	Device:		30.12	ft Evo	essive number	of devices required. Go to
Area Behind Device: Length of Ditch Behind		effeciency):	30.12			of devices required. Go to
Area Behind Device:	e (assumes 65%	x	33.04 3.0	ft ³		of devices required. Go to Option 5
Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat	e (assumes 65%		33.04	ft ³ ft ³	C	Option 5
Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat COMMENTS:	e (assumes 65% ttles required:	X Total	33.04 3.0 99.12	ft ³ ft ³ *Des	C	
Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat	e (assumes 65% ttles required:	X Total	33.04 3.0 99.12	ft ³ ft ³ *Des	C	Option 5
Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat <u>COMMENTS:</u>	e (assumes 65% ttles required:	X Total	33.04 3.0 99.12	ft ³ ft ³ *Des	C	Option 5
Area Behind Device: Length of Ditch Behind Storage Behind Devic Wrapped TRSC-A/Wat COMMENTS:	e (assumes 65% ttles required:	X Total	33.04 3.0 99.12	ft ³ ft ³ *Des	C	Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	p
	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Q _p =CiA	•	T-6- 4 4 4 5 4 6		
Runoff Coefficient, C Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
	,			
		0/		
Watershed Slope, S t _c =		% minutes	See Kirpich	
د= 2 Kirpich Method	N/A	minutes	See Kirpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes	300 module / Eq. 0	
	054 101			
Using a Return Period (T) of 10 y			#DIV/0! minutes,	
the rainfall intensity, i (in/hr, NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	Appendix A	
Peak Rate of Runoff, Q _n =CiA	0.00			
· · · · · · · · · · · · · · · · · · ·				
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 💌			
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
			—	
 d. Sediment Storage Required using 1800 ft 	³ /ac			
Disturbed Area (acres)=		0.1		
Required Sediment Storage (ft ³)=		238.0	2 ft ³	
F 10 10			2 (13	
Final Required Storage:		238.0		
Proposed Basin Side Slopes:			5 :1 side slopes *must be at least 1.5	:1 or flatter
		ey (http://soildatamai		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		6	satisfy requirements of Step 3.	
Final Design Top Length (ft):		12	Install Baffles*.	
Final Design Depth (ft):		3		
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
verny storage (it)		oo Low		
Verify Surface Area (ft ²)		72.00		
verity Surface Area (it.)		ок		

STEP 1: Input Project Information	*items in red ar	e REQUIRED		SECT	ION 22 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	EDODES
≤ 6 months (Y/N)? Y HQW (Y/N)? Y	Elevation	1	Location:	Pilot Ridge R	d	<i>ERODES</i>
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 83 + 50	0	1	Date Prepared:	11/18/2014		EROSION DESIGN
to Sta.: 85 + 65	0		Level III A #:	3474		
Right/Left: Rt	No Elev Data	%	Level III A Expirati		2/31/2016	Version
% Ditch Grade: 4.710	%	10	Reviewed By:	Grea Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		2.10.2012
R/W Width: 43	feet		Level III A #:	391		
Length of Run X 215	feet		Level III A Expirati	on: 1	/0/1900	
Disturbed Area = 0.21	acres					
Drainage Area: 0.21 *Drainage Area must equal or exc	acres	d Area faund a	have			
Surface Dewatering Device	n	a Area Iouna a	above			
Is this a Typical Section (Y/N)?	Ÿ					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Regression Constant, C	<u>659</u>		Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1		<i></i>	
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web		o://soildatamai	rt.nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	boses only.		
STEP 2: Ditch Liner requirements	: Utilize the Requ	iired Liner tab	and note recommen	dations on plan	s.	
STEP 3: Velocity Control Require	ments					
			_			Wattles are required in
TYPE B ROCK SILT OR WATTLES		3	spaced at	<mark>54</mark> fe	et	conjunction with PAMs
*See the HELP Tab f	or additional clarii	fication and an	example on how to	place on plans	5.	
	Start with O	ption 4A				
OPTION 4: Using RUSLE2 A OPTION 4A: For DRJ	-		-	storage		
				-		
Regression Constant,	С	659				
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	ץ ו	From Step 1 a	above	
Soil Type Ditchline Slope, s		SoD Soco 0.04710	f+/f+			
Ditchinie Sibpe, s	V=	649.94	ft ³ /ac/yr			
Required	Storage Volume=	<u>137.94</u>	ft ³		of Rainfall Fac	ctor-see note in cell Option 4C
OPTION 4B: For DR		Aara: Usa Bl	ISI E2 Modeling to			
CI NON 45. FOI DRI	AND ANEA >3	Alle. Use AL	SELZ MODELING IO	actornine store	a.	
Sediment Deliv	ery from RUSLE2:	0.00	tons/acre/yr			
Converti	ng to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
Required	Storage Volume=	N/A	ft ³		See Optio	n 4A
* These	devices can be us	ed to satisfy t	he velocity require			RSC-A/Wattles Required
	ed Type A Rock S	ilt Checks or V			W	ATTLES REQUIRED
Enter Ditch Front Slop				3:1		
Enter Ditch Back Slop	e Gradient (H:V):			5:1		
Enter Device Height:				5 ft	GOOD. Place	e measure(s) on EC Plan. Start
Area Behind Device:	d Device:			6 ft ² 5 ft		t device as close to the outlet
Length of Ditch Behin Storage Behind Dev		effeciency)	31.8 34.9			ssible and then space them
Wrapped TRSC-A/W		· · · ·	(<mark>4.</mark>			he grade. PAM should not be on the last BMP at outlet.
COMMENTS:		Total	139.73		Designer still be	as the option of using Option 5 or 6
Use Temporary Sedin	nent Dam, Type-B S	9x3x3. Dam and	d wattles cover requir		zəsiyinər Sulli Në	is the option of using option 5 or 6

OPTION 5: IF DRAINAGE AREA > 1 Acre: L	lse Surface .	Area Calculation	ns to determine storage A=3250) _
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{\mathbf{p}}(\mathbf{Q}_{\mathbf{p}})$			USE Q25	·ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (ninities	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpici	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S	_	ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10	yrs (25 for HQV	/) and a t _ of	#DIV/0! minutes,	
the rainfall intensity, i (in/hi				
NOAA website, http://hdsc.r	nws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.21	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
c. Use Surface Area (A) to determine requi Design Depth:		Гетрогату Туре-В	Sediment Dam	
Required VOLUME using the des	3		0 ft ³	
Required VOLOME using the des	sign deptri.	0.0	it.	
d. Sediment Storage Required using 1800 f	t ³ /ac			
Disturbed Area (acres)=		0.2	1	
Required Sediment Storage (ft ³)=		382.0	2 ft ³	
· · · ·				
			2	
Final Required Storage:		382.0		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.	5:1 or flatter
Infiltration Analysis		ey (http://soildatama		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		0.00 N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	<mark>-</mark>	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
		oo Low	-	
Verify Surface Area (ft ²)		27.00 OK		

STEP 1: Input Project Information	n *items in red ar	e REQUIRED		SECTION	23 of 32	
Construction time			County:	Avery	-	
≤ 6 months (Y/N)? Y			County.	Analy		ERODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 85 + 65	0		Date Prepared:	11/18/2014		
to Sta.: <u>86 + 0</u>	0		Level III A #:	3474		Version
Right/Left: Rt	No Elev Data	%	Level III A Expiration	n: 12/3	1/2016	
% Ditch Grade: 0.200	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing R/W Width: 30	feet		Date Reviewed: Level III A #:	11/19/2014		
Length of Run X 35	feet		Level III A Expiration	n: 1/0/1	900	
Disturbed Area = 0.02	acres					
Drainage Area: 0.02	acres					
*Drainage Area must equal or ex		d Area found a	bove			
Surface Dewatering Device	n Y					
Is this a Typical Section (Y/N)? Will RUSLE2 be used to model	I					
the Non-Typical sections?	N					
Regression Constant, C	<u>659</u>		Table 2-7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		soildatamart.nrcs.	usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirement	e: I Itilizo tho Bogu	urad Linar tab	and noto recommon	lations on plans		
STEP 2. Ditti Liner requirement	s. Ounze une Requ		and note recomment	auons on plans.		
STEP 3: Velocity Control Require	ements					
TYPE B ROCK SILT	CHECKS	0	spaced at	N/A feet		control is not required. t device from Option 4,5,
OR WATTLE		0	spaced at	IN/A leet		6 will be sufficient.
*See the HELP Tab	for additional clarif	fication and an	example on how to	place on plans.		
	Start with O	ntion 4A				
ODTION A USING DUOL TO	A					
OPTION 4: Using RUSLE2 A	Analysis to dete	rmine requir	ed storage			
OPTION 4: USING RUSLEZ	Analysis to dete	rmine requir	ed storage			
-	-		ed storage CRKs to determine s	torage		
OPTION 4A: For DR	AINAGE AREA < 3	Acre: Use V=	CRKs to determine s	torage		
-	AINAGE AREA < 3		CRKs to determine s	torage		
OPTION 4A: For DR Regression Constant	AINAGE AREA < 3	Acre: Use V≕ 659 106.4 0.24	CRKs to determine s	torage From Step 1 abo	ve	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type	AINAGE AREA < 3	Acre: Use V= 659 106.4 0.24 SoD Soco	CRKs to determine s	-	ve	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K	AINAGE AREA < 3 , C	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200	CRKs to determine s	-	ve	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	, C V=	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60	CRKs to determine s	From Step 1 abo		
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	AINAGE AREA < 3 , C	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200	CRKs to determine s	From Step 1 abo	ainfall Factor-se	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	, C V=	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60	CRKs to determine s	From Step 1 abo		
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required	AINAGE AREA < 3 , C V= Storage Volume=	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 <u>0.67</u>	CRKs to determine s	From Step 1 abo Using 82% of R C4 - N	Rainfall Factor-se Nove on to Optio	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.67	CRKs to determine s ft/ft ft ² ac/yr ft ³ SLE2 Modeling to d	From Step 1 abo Using 82% of R C4 - N	Rainfall Factor-se Nove on to Optio	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.67 Acre: Use RU 0.00	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr	From Step 1 abo Using 82% of R C4 - N	Rainfall Factor-se Nove on to Optio	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.67 Acre: Use RU 0.00 N/A	CRKs to determine s ft/ft ft ² ac/yr ft ³ SLE2 Modeling to d	From Step 1 abo Using 82% of R C4 - N	Rainfall Factor-se Nove on to Optio	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.67 Acre: Use RU 0.00	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 abo Using 82% of R C4 - N	Rainfall Factor-se Nove on to Optio	
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume=	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 <u>0.67</u> Acre: Use RU 0.00 N/A <u>N/A</u>	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³	From Step 1 abo Using 82% of R C4 - N etermine storage	Rainfall Factor-sc love on to Optio	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 2.7.60 0.67 0.67 0.00 N/A N/A N/A ge Volume fro	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 abo Using 82% of R C4 - N etermine storage	Rainfall Factor-sc love on to Optio	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using t * These Storage from Wrapp	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us the devices can be us	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles	From Step 1 abo Using 82% of R C4 - N etermine storage o determine # of eents in Step 3.	Rainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC-,	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using to "These Storage from Wrapp Enter Ditch Front Slo	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us pe Gradient (H:V):	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to he velocity requirem Yattles	From Step 1 abo Using 82% of R C4 - N etermine storage o determine # of ents in Step 3. :1	Rainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC-,	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using t * These Storage from Wrapp Enter Ditch Front Sto Enter Ditch Front Sto	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock S ped Gradient (H:V): pe Gradient (H:V):	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0	CRKs to determine s ft/ft ft ³ SLE2 Modeling to d tons/acre/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles	From Step 1 abo Using 82% of R C4 - N etermine storage o determine # of ents in Step 3. :1	Rainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC-,	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using t "These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Fack Slo Enter Device Height:	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock S pe Gradient (H:V): pe Gradient (H:V):	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t the velocity requirem Vattles 3 1.5	From Step 1 abo	Rainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC-,	n 4C
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using t * These Storage from Wrapp Enter Ditch Fack Slo Enter Device Height: Area Behind Device:	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us sed Type A Rock S pe Gradient (H:V): pe Gradient (H:V):	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to he velocity requirem Vattles 1.5 5.6	From Step 1 abo	Rainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC-/ WATTLE	n 4C A/Wattles Required IS REQUIRED
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= the Required Stora devices can be us ped Type A Rock S pe Gradient (H:V): pe Gradient (H:V): and Device:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 2.7.60 0.67 0.67 0.00 N/A N/A 9 Volume fro. sed to satisfy ti ilt Checks or V	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to he velocity requirem Yattles 3 1.5 5.06 750.00	From Step 1 abo Using 82% of R C4 - N etermine storage	tainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC- WATTLE essive number o	n 4C AWattles Required IS REQUIRED
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OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using to These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slo Enter Ditch Back Slo Enter Ditch Back Slo	AINAGE AREA < 3 , C Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock S pe Gradient (H:V): pe Gradient (H:V): nd Device: vice (assumes 65%	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.67 Acre: Use RU 0.00 N/A N/A ge Volume fro. set to satisfy ti ilt Checks or N	CRKs to determine s fr/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B to the velocity requirem Vattles 1.5 5.06 750.00 38.39	From Step 1 abo Using 82% of R C4 - N etermine storage	tainfall Factor-se Nove on to Optio See Option 4A Wrapped TRSC- WATTLE essive number o	n 4C AWattles Required IS REQUIRED
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using a "These Storage from Virapp Enter Ditch Front Slo Enter Ditch Back Slo	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock 3 pe Gradient (H:V): pe Gradient (H:V): nd Device: rice (assumes 65% fattles required:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.0020 0.0020 0.002	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 750.00 38.39 1.0	From Step 1 abo Using 82% of R C4 - N etermine storage	See Option 4A Wrapped TRSC-J WATTLE essive number o	n 4C AWattles Required IS REQUIRED
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using to *These Storage from Wrapp Enter Ditch Fack Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Front Slo Enter Ditch Back Slo Enter Ditch Behind Device: Length of Ditch Behind Storage Behind Devi	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock 3 pe Gradient (H:V): pe Gradient (H:V): nd Device: rice (assumes 65% fattles required:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.0020 0.0020 0.002	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 750.00 38.39 1.0	From Step 1 abo Using 82% of R C4 - N etermine storage	See Option 4A Wrapped TRSC-J WATTLE essive number o	A/Wattles Required SREQUIRED f devices required. Go to ption 5
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using a "These Storage from Virapp Enter Ditch Front Slo Enter Ditch Back Slo	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock 3 pe Gradient (H:V): pe Gradient (H:V): nd Device: rice (assumes 65% fattles required:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.0020 0.0020 0.002	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 750.00 38.39 1.0	From Step 1 abo Using 82% of R C4 - N etermine storage	See Option 4A Wrapped TRSC-J WATTLE essive number o	A/Wattles Required SREQUIRED f devices required. Go to ption 5
OPTION 4A: For DR Regression Constant Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required OPTION 4B: For DR Sediment Deli Convert Required OPTION 4C: Using a "These Storage from Virapp Enter Ditch Front Slo Enter Ditch Back Slo	AINAGE AREA < 3 , C V= Storage Volume= AINAGE AREA > 3 very from RUSLE2: ing to ft ³ ac/yr: Storage Volume= the Required Stora devices can be us bed Type A Rock 3 pe Gradient (H:V): pe Gradient (H:V): nd Device: rice (assumes 65% fattles required:	Acre: Use V= 659 106.4 0.24 SoD Soco 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.00200 0.00200 27.60 0.0020 0.0020 0.002	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 5.06 750.00 38.39 1.0	From Step 1 abo Using 82% of R C4 - N etermine storage	See Option 4A Wrapped TRSC-J WATTLE essive number o	A/Wattles Required SREQUIRED f devices required. Go to ption 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface /	Area Calculation	ns to determine storage. A=3250)_
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	×ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	•	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t_ of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,				
NOAA website, http://hdsc.n	ws.noaa.gov/ho	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.02	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
- Use Outlese Area (A) to determine a mil		T T D	Co diaso at Do as	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3	0.0	0 ft ³	
Required VOLOME using the des	agir depur.	0.0	U It	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.0	2	
Required Sediment Storage (ft ³)=		43.3	9 ft ³	
			_	
Final Required Storage:		43.3		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.	5:1 or flatter
		ey (http://soildatamai		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2	-	
Verify Storage (ft ³)		81.00 OK		
•		27.00		
Verify Surface Area (ft ²)		OK		

	items in reu are	REQUIRED		SECTIO	N 24 of 32	
Construction time			County:	Avery	•	EDODES
≤ 6 months (Y/N)? Y	Elevation		Leastion	Dilot Didgo Dd		<i>– ERODES</i>
HQW (Y/N)? Y			Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 83 + 50	0		Date Prepared:	11/18/2014		
to Sta.: 85 + 65	0		Level III A #:	3474		Manatan
Right/Left: Lt	No Elev Data 9	%	Level III A Expiration	on: 12/3	31/2016	Version
% Ditch Grade: 5.960	%		Reviewed By:	Grea Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		2.10.2012
R/W Width: 49	feet		Level III A #:	391		
Length of Run X 215	feet		Level III A Expiration	n: 1/0/	1900	
Disturbed Area = 0.24	acres		Level III A Expiration	110/	1300	
Drainage Area: 0.24	acres					
*Drainage Area must equal or exc		Area found a	hovo			
Surface Dewatering Device		Area Iounu a	bove			
Is this a Typical Section (Y/N)?	n Y					
	T L					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Democratical Constant C	540		T-1-1-0 7 /1 1 ///	Defilence		
Regression Constant, C	<u>549</u>		Table 2-7 (Level III	Rei Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		/soildatamart.r	rcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirements	S: Utilize the Requir	red Liner tab	and note recommend	dations on plans.		
STEP 3: Velocity Control Require	ments					
			1			Wattles are required in
TYPE B ROCK SILT		4	spaced at	43 fee		conjunction with PAMs
OR WATTLES	;					
*See the HELP Tab f	or additional clarific	cation and an	example on now to	place on plans.		
	Start with Op	otion 4A				
OPTION 4A: For DR	AINAGE AREA < 3 /	Acre: Use V=	CRKs to determine :	storage		
Demociae Constant	•	E 40	, , , , , , , , , , , , , , , , , , ,			
Regression Constant,	с	549				
Rainfall Factor, R	с	106.4				
Rainfall Factor, R Erodibility Factor, K		106.4 0.24		From Step 1 ab	ove	
Rainfall Factor, R Erodibility Factor, K Soil Type		106.4 0.24 SoD Soco	: }	From Step 1 ab	ove	
Rainfall Factor, R Erodibility Factor, K		106.4 0.24	ft/ft	From Step 1 ab	ove	
Rainfall Factor, R Erodibility Factor, K Soil Type		106.4 0.24 SoD Soco	: }	From Step 1 ab	ove	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	s	106.4 0.24 SoD Soco 0.05960	ft/ft			or-see note in cell
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	s V=_	106.4 0.24 SoD Soco 0.05960 685.15	ft/ft ft ³ /ac/yr	Using 82% of		
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	s V=_	106.4 0.24 SoD Soco 0.05960 685.15	ft/ft ft ³ /ac/yr	Using 82% of	Rainfall Facto	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	S V= Storage Volume=	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u>	ft/ft ft³/ac/yr ft³	Using 82% of C4 -	Rainfall Facto Move on to O	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DR.	S V= Storage Volume= AINAGE AREA > 3 A	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU	ft/ft ft ³ /ac/yr ft ³	Using 82% of C4 -	Rainfall Facto Move on to O	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DR. Sediment Deliv	Storage Volume= AlNAGE AREA > 3 A very from RUSLE2:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d	Using 82% of C4 -	Rainfall Facto Move on to O	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DR. Sediment Deliv	Storage Volume= AINAGE AREA > 3 A very from RUSLE2:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU	ft/ft ft ³ /ac/yr ft ³	Using 82% of C4 -	Rainfall Facto Move on to O	
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRJ Sediment Deliv Converti	Storage Volume= AlNAGE AREA > 3 A very from RUSLE2:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU 0.00	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d	Using 82% of C4 -	Rainfall Facto Move on to O e	ption 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRJ Sediment Deliv Converti	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU 0.00 N/A	ft/ft ft ² /ac/yr ft ² ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	Using 82% of C4 -	Rainfall Facto Move on to O	ption 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRJ Sediment Deliv Converti	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU 0.00 N/A	ft/ft ft ² /ac/yr ft ² ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	Using 82% of C4 -	Rainfall Facto Move on to O e	ption 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using th	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: Ing to ft ³ /ac/yr: Storage Volume= the Required Storage	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU 0.00 N/A <u>N/A</u>	ft/ft ft ³ /ac/yr ft ³ ft ³ ft ³ ft ³ ft ³ ft ³ ft ³ /ac/yr ft ³ /ac/yr ft ³ ft ³	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option o	ption 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option o	ation 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: Ing to ft ³ /ac/yr: Storage Volume= the Required Storage	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option A f Wrapped TR	AA SC-A/Wattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRA Sediment Deliv Converti Required : OPTION 4C: Using ti * These	Storage Volume= Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy the Required Storagy the Required Storagy	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option A f Wrapped TR	ation 4C
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DR. Sediment Deliv Converti Required S OPTION 4C: Using ti * These Storage from Wrapp Enter Ditch From VSrapp	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= he Required Storage devices can be use the Required Storage devices can be use the Gradient (H:V):	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr ft ³ dt ³ m Option 4A or 4B t he velocity requiren Nattles	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option A f Wrapped TR	AA SC-A/Wattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= he Required Storage devices can be use the Required Storage devices can be use the Gradient (H:V):	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	tt ² /ac/yr tt ² /ac/yr tt ³ (SLE2 Modeling to d tons/acre/yr tt ³ /ac/yr tt ³ ac/yr tt ³ tt ³ m Option 4A or 4B t he velocity requirem Nattles 1.5	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option A f Wrapped TR	AA SC-A/Wattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DR. Sediment Deliv Converti Required : OPTION 4C: Using th *These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Fack Slop Enter Ditch Back Slop Enter Device Height:	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ing to ft ³ /ac/yr: Storage Volume= he Required Storage devices can be use the Required Storage devices can be use the Gradient (H:V):	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5	Using 82% of C4 - etermine storag	Rainfall Facto Move on to O e See Option A f Wrapped TR	AA SC-A/Wattles Required
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4E: For DR. Sediment Deliv Converti Required : OPTION 4C: Using th * These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Back Slop Enter Ditch Back Slop Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: Ing to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ded Type A Rock Sili pe Gradient (H:V): pe Gradient (H:V):	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro.	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d I tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Nattles 1.5 5.06	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option / f Wrapped TR WAT	Pation 4C NA SC-A/Wattles Required TLES REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DR. Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Deivce Height: Area Behind Device: Length of Ditch Behind	Storage Volume= AINAGE AREA > 3 / AINAGE AREA > 3 / very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ad Type A Rock Sili be Gradient (H:V): be Gradient (H:V): d Device:	106.4 0.24 SoD Soco 0.05960 685.15 <u>165.70</u> Acre: Use RU 0.00 N/A <u>N/A</u> e Volume fro. rd to satisfy t t Checks or N	ft/ft ft ² /ac/yr ft ³ ft ⁵ ft ⁵	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option / f Wrapped TR WAT	etion 4C IA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using th *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slop Enter Device Height: Area Behind Device: Length of Ditch Behind	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill pe Gradient (H:V): the Gradient (H:V): d Device: ice (assumes 65% 6	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro. d to satisfy t t Checks or V	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Nattles 1.5 5.00 25.17 27.61	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option / f Wrapped TR WAT	Pation 4C NA SC-A/Wattles Required TLES REQUIRED
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DR. Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Deivce Height: Area Behind Device: Length of Ditch Behind	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed iattles required:	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro. N/A t Checks or V	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Nattles 1.5 5.06 25.17 27.61 7.0	Using 82% of C4 - letermine storag	Rainfall Facto Move on to O e See Option / f Wrapped TR WAT	etion 4C IA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using th *These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slop Enter Device Height: Area Behind Device: Length of Ditch Behind	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed iattles required:	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A e Volume fro. d to satisfy t t Checks or V	ft/ft ft ² /ac/yr ft ³ ISLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Nattles 1.5 5.00 25.17 27.61	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option / f Wrapped TR WAT	etion 4C IA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed attles required: 1	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A to satisfy t t Checks or M effeciency): X Total	ft/ft ft ² /ac/yr ft ³ (SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5 5.06 25.17 27.61 7.0 193.24	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option & f Wrapped TR WAT cessive numb	etion 4C IA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4E: For DR. Sediment Deliv Converti Required : OPTION 4C: Using th * These Storage from Wrapp Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Front Slop Enter Ditch Back Slop Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev Wrapped TRSC-A/W	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed attles required: 1	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A to satisfy t t Checks or M effeciency): X Total	ft/ft ft ² /ac/yr ft ³ (SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5 5.06 25.17 27.61 7.0 193.24	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option & f Wrapped TR WAT cessive numb	AA AA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to Option 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed attles required: 1	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A to satisfy t t Checks or M effeciency): X Total	ft/ft ft ² /ac/yr ft ³ (SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5 5.06 25.17 27.61 7.0 193.24	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option & f Wrapped TR WAT cessive numb	AA AA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to Option 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed attles required: 1	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A to satisfy t t Checks or M effeciency): X Total	ft/ft ft ² /ac/yr ft ³ (SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5 5.06 25.17 27.61 7.0 193.24	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option & f Wrapped TR WAT cessive numb	AA AA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to Option 5
Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required : OPTION 4B: For DRJ Sediment Deliv Converti Required : OPTION 4C: Using ti *These Storage from Wrapp Enter Ditch Back Slop Enter Ditch Back Slop	Storage Volume= AINAGE AREA > 3 A very from RUSLE2: ng to ft ³ /ac/yr: Storage Volume= the Required Storagy devices can be use ed Type A Rock Sill be Gradient (H:V): be Gradient (H:V): d Device: ice (assumes 65% ed attles required: 1	106.4 0.24 SoD Soco 0.05960 685.15 165.70 Acre: Use RU 0.00 N/A N/A to satisfy t t Checks or M effeciency): X Total	ft/ft ft ² /ac/yr ft ³ (SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requiren Nattles 1.5 5.06 25.17 27.61 7.0 193.24	Using 82% of C4 - Letermine storag	Rainfall Facto Move on to O e See Option & f Wrapped TR WAT cessive numb	AA AA SC-A/Wattles Required TLES REQUIRED er of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q25	
Runoff Coefficient, C	•	Table 1 1 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	194	mindico		
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S	_	ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =	#DIV/0!	minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or	the	
NOAA website, http://hdsc.n	nws.noaa.gov/ho	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as	0.24	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
		0.0		
c. Use Surface Area (A) to determine requir	red VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 🗸 🗸		_	
Required VOLUME using the des	sign depth:	0.0	0 ft ³	
	3,			
 d. Sediment Storage Required using 1800 ft Disturbed Area (acres)= 	r/ac	0.2	,	
Required Sediment Storage (ft ³)=		435.3		
Required Sediment Storage (it)=		433.3	3 It	
Final Required Storage:		435.3	3 ft ³	
Proposed Basin Side Slopes:		1.	5 :1 side slopes *must be at least 1.5	5:1 or flatter
Infiltration Analysis	Web Soil Surve	ey (http://soildatama	rt.nrcs.usda.gov/)	
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A	_	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point. Ensure devices are used to	
Suggested Top Length (ft): Final Design Top Width (ft):		7	satisfy requirements of Step 3.	
Final Design Top Width (it): Final Design Top Length (ft):		21	Install Baffles*.	
Final Design Depth (ft):		3		
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		4		
Verify Storage (ft ³)		189.00		
venny Storage (it)		oo Low		
Verify Surface Area (ft ²)	1	147.00		
,		OK		

STEP 1: Input Project Information	n *items in red are REQUI	RED	SECTION 25	of 32	
Construction time		County:	Avery		Ta
≤ 6 months (Y/N)? Y	Flowetien	Lastian	Dilet Didee Dd	EROD	PES
HQW (Y/N)? Y	Elevation	Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)	Prepared By:	Jacob Combs	EROsion D	PESign
From Sta.: 85 + 65	0	Date Prepared:	11/18/2014		
to Sta.: 86 + 0	0	Level III A #:	3474		
Right/Left: Lt	No Elev Data %	Level III A Expiratio	n: 12/31/20	Versio	on
% Ditch Grade: 0.200	%	Reviewed By:	Greg Kirby	2.10.20)12
Contributing		Date Reviewed:	11/19/2014	2.10.20	
R/W Width: 40	feet	Level III A #:	391		
Length of Run X 35	feet	Level III A Expiratio	n: 1/0/1900		
Disturbed Area = 0.03	acres				
Drainage Area: 0.03	acres				
*Drainage Area must equal or ex		und above			
Surface Dewatering Device	n				
Is this a Typical Section (Y/N)?	Y				
Will RUSLE2 be used to model					
the Non-Typical sections?	N				
the field of plots sections.					
Regression Constant, C	<u>549</u>	Table 2-7 (Level III F	Pof Manual)		
Rainfall Factor, R	106.4	Figure 2-1	(er manual)		
Erodibility Factor, K	0.24		oil Survoy (http://poile	latamart.nrcs.usda.gov/)	
Soil Type	SoD Soco	* informational purpo		atamart.mcs.usua.gov/)	
Son Type	300 3000	inionnaionai purpo	ises only.		
STEP 2: Ditch Liner requirement	s: I Itilize the Required I in	r tab and note recommend	ations on plans		
STEP 2. Ditch Einer requirement	s. Ounze the Required Line	a lab and note recommend	alions on plans.		
STEP 3: Velocity Control Require	oments				i
orer of velocity control require	lineinto			Velocity control is not re	equired
TYPE B ROCK SILT	CHECKS 0	spaced at	N/A feet	The outlet device from O	
OR WATTLES		spaced at	IN/A Teet	or 6 will be sufficie	
OK WATTLES	5			or o will be sufficie	ant.
*Soo the HELD Tab	or additional clarification a	nd an axample on how to	alaco on plans		
See the HELF Tab	or additional claimcation a	ind an example on now to p	hace on plans.		
	Start with Option 4	4A			
OPTION 4A: For DR Regression Constant	AINAGE AREA < 3 Acre: U	se V=CRKs to determine s	torage		
	, C				
Rainfall Factor, R		106.4	Energy Ofen Alabama		
Erodibility Factor, K		-	From Step 1 above		
Soil Type	SoD So				
Ditchline Slope, s		00200 ft/ft			
	V= 22.9				
Required	Storage Volume= 0.7	4 ft ³		fall Factor-see note in cell	
			C4 - Mov	e on to Option 4C	
OPTION 4B: For DR	AINAGE AREA > 3 Acre: U	se RUSLE2 Modeling to de	etermine storage		
	(
	very from RUSLE2:	0.00 tons/acre/yr			
Convert	ing to ft ³ /ac/yr: N/A	ft ³ /ac/yr			
Required	Storage Volume= N//	A ft ³			
-			500	e Option 4A	
			determine # of Wra	pped TRSC-A/Wattles Requi	red
	devices can be used to sa	tisfy the velocity requirem			
* These		tisfy the velocity requirem			
* These	devices can be used to sa ed Type A Rock Silt Check	tisfy the velocity requirem (s or Wattles		WATTLES REQUIRED	
* These Storage from Wrapp	devices can be used to sa ed Type A Rock Silt Check be Gradient (H:V):	tisfy the velocity requirem (s or Wattles	ents in Step 3. :1	WATTLES REQUIRED	
* These Storage from Wrapp Enter Ditch Front Slo	devices can be used to sa ed Type A Rock Silt Check be Gradient (H:V): be Gradient (H:V):	tisfy the velocity requirem <u>(s or Wattles</u> <u>3</u>	ents in Step 3. :1 :1	WATTLES REQUIRED	
* These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slo Enter Device Height:	devices can be used to sa ed Type A Rock Silt Check be Gradient (H:V): be Gradient (H:V):	tisfy the velocity requirem (s or Wattles <u>3</u> <u>1.5</u>	ents in Step 3. :1 :1 ft	WATTLES REQUIRED	
* These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slo Enter Device Height: Area Behind Device:	devices can be used to sa ed Type A Rock Silt Check be Gradient (H:V): be Gradient (H:V):	tisfy the velocity requirem ss or Wattles 1.5 1.5 5.06	ents in Step 3. :1 :1 ft ft ²		red Go to
* These Storag from Wrapp Enter Ditch Front Sio Enter Ditch Back Sio, Enter Device Height: Area Behind Device: Length of Ditch Behi	devices can be used to sa ted Type A Rock Silt Check be Gradient (H:V): be Gradient (H:V): and Device:	tisfy the velocity requirem <u>(s or Wattles</u> <u>3</u> <u>1.5</u> <u>1.5</u> 5.06 750.00	ents in Step 3. :1 :1 ft ft ² ft Excess	ive number of devices requir	red. Go to
* These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slo Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev	devices can be used to sa led Type A Rock Silt Checi be Gradient (H:V): be Gradient (H:V): ad Device: ice (assumes 65% effecier	tisfy the velocity requirem (s or Wattles 3 1.5 1.5 5.06 750.00 pcy): 38.39	ents in Step 3. :1 :1 ft ft ² ft Excess		red. Go to
* These Storag from Wrapp Enter Ditch Front Sio Enter Ditch Back Sio, Enter Device Height: Area Behind Device: Length of Ditch Behi	devices can be used to sa led Type A Rock Silt Checi be Gradient (H:V): be Gradient (H:V): ad Device: ice (assumes 65% effecier fattles required:	tisfy the velocity requirem (s or Wattles 3 1.5 1.5 5.06 750.00 750.00 x 1.0 X 1.0	ents in Step 3. :1 :1 ft ft ² ft Excess ft ³	ive number of devices requir	red. Go to
* These Storage from Wrapp Enter Ditch Front Slo Enter Ditch Back Slo Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev Wrapped TRSC-AM	devices can be used to sa led Type A Rock Silt Checi be Gradient (H:V): be Gradient (H:V): ad Device: ice (assumes 65% effecier	tisfy the velocity requirem (s or Wattles 1.5 1.5 5.06 750.00 (rcy): 38.39 X 1.0	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir Option 5	
* These Storage from Wrapp Enter Ditch Back Slo Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev Wrapped TRSC-AM	devices can be used to sa led Type A Rock Silt Check oe Gradient (H:V): be Gradient (H:V): ad Device: lice (assumes 65% effecient fattles required: Total	tisfy the velocity requirem (s or Wattles 3 1.5 5.06 (750.00) (750.00 (750.00 (750.00) (750.00 (750.00)	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir	
* These Storage from Wrapp Enter Ditch Back Slo Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev Wrapped TRSC-AM	devices can be used to sa led Type A Rock Silt Checi be Gradient (H:V): be Gradient (H:V): ad Device: ice (assumes 65% effecier fattles required:	tisfy the velocity requirem (s or Wattles 3 1.5 5.06 (750.00) (750.00 (750.00 (750.00) (750.00 (750.00)	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir Option 5	
* These Storage from Wrapp Enter Ditch Front Slo Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Dev Wrapped TRSC-AM <u>COMMENTS:</u>	devices can be used to sa led Type A Rock Silt Check oe Gradient (H:V): be Gradient (H:V): ad Device: lice (assumes 65% effecient fattles required: Total	tisfy the velocity requirem (s or Wattles 3 1.5 5.06 (750.00) (750.00 (750.00 (750.00) (750.00 (750.00)	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir Option 5	
* These Storage from Wrapp Enter Ditch Front Slo Enter Device Height: Area Behind Device: Length of Ditch Behind Storage Behind Dev Wrapped TRSC-AM <u>COMMENTS:</u>	devices can be used to sa led Type A Rock Silt Check oe Gradient (H:V): be Gradient (H:V): ad Device: lice (assumes 65% effecient fattles required: Total	tisfy the velocity requirem (s or Wattles 3 1.5 5.06 (750.00) (750.00 (750.00 (750.00) (750.00 (750.00)	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir Option 5	
* These Storage from Wrapp Enter Ditch Back Slo Enter Device Height: Area Behind Device: Length of Ditch Behin Storage Behind Dev Wrapped TRSC-AM	devices can be used to sa led Type A Rock Silt Check oe Gradient (H:V): be Gradient (H:V): ad Device: lice (assumes 65% effecient fattles required: Total	tisfy the velocity requirem (s or Wattles 3 1.5 5.06 (750.00) (750.00 (750.00 (750.00) (750.00 (750.00)	ents in Step 3. :1 :1 ft ft ² ft ³ ft ³	ive number of devices requir Option 5	

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface A	Area Calculation	ns to determine storage. A=3250)_
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	ρ
	- Q ₁₀ (Q ₂₅ 101 11	avv or mouty)	03E Q25	
Q _p =CiA Runoff Coefficient, C	•	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S	_	ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read fi	rom Appendix A or i		
NOAA website, http://hdsc.n	ws.noaa.gov/ho	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.03	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
			_	
c. Use Surface Area (A) to determine requir		Temporary Type-B	Sediment Dam	
Design Depth:	3		- 3	
Required VOLUME using the des	sign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=	780	0.0	3	
Required Sediment Storage (ft ³)=		57.8		
		0110		
Final Required Storage:		57.8	5 ft ³	
Proposed Basin Side Slopes:		1.	5 :1 side slopes *must be at least 1.	5:1 or flatter
Infiltration Analysis	Web Soil Surve	ey (http://soildatamar	rt.nrcs.usda.gov/)	
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A		
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to satisfy requirements of Step 3.	
Final Design Top Width (ft):		<u>3</u> 9	Install Baffles*.	
Final Design Top Length (ft): Final Design Depth (ft):		3	-	
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		1		
		27.00		
Verify Storage (ft ³)	Т	oo Low		
Verify Surface Area (ft ²)		27.00		
verny Sunace Area (it)		ок		

STEP 1: Input Project Information	*items in red are	REQUIRED		SECTIO	N 26 of 32	
Construction time			County:	Avery	-	
≤ 6 months (Y/N)? Y			-			<i>— ERODES</i>
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 122 + 50	0		Date Prepared:	11/18/2014		
to Sta.: 122 + 90	0		Level III A #:	3474		Manajara
Right/Left: Rt.	No Elev Data	%	Level III A Expiration	n: 12/	31/2016	Version
% Ditch Grade: 2.900	%		Reviewed By:	Grea Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
	feet		Level III A #:	391		
Length of Run X 40	feet		Level III A Expiration	n: 1/0/	/1900	
Disturbed Area = 0.01	acres					
	acres					
*Drainage Area must equal or exce	eed the Disturbed	Area found a	bove			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model	-					
the Non-Typical sections?	N					
Regression Constant, C	<u>808</u>		Table 2-7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S	oil Survey (http://	/soildatamart.	nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirements:	: Utilize the Requi	ired Liner tab	and note recommend	lations on plans.		
STEP 3: Velocity Control Requirer	nents					
			1			ocity control is not required.
TYPE B ROCK SILT C	HECKS	0	spaced at	N/A fee	t The	outlet device from Option 4,5,
OR WATTLES						or 6 will be sufficient.
*See the HELP Tab fo	or additional clarifi	ication and an	example on now to	place on plans.		
	Start with Op	ption 4A				
OPTION A: Using PUSI E2 A	nalveis to dotor	mino roquir	ad storage			
OPTION 4: Using RUSLE2 Ar OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 C	Acre: Use V= 808 106.4 0.24 SoD Soco	CRKs to determine s	torage From Step 1 ab	ove	
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K	INAGE AREA < 3 C	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900	CRKs to determine s	-	ove	
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 C V=	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65	CRKs to determine s	From Step 1 ab		or-see note in cell
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 C	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900	CRKs to determine s	From Step 1 ab	Rainfall Fact	or-see note in cell
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 C V=	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65	CRKs to determine s	From Step 1 ab		
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s	INAGE AREA < 3 C V= torage Volume=	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41	CRKs to determine s	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C	
OPTION 4A: For DRA Regression Constant, G Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S	INAGE AREA < 3 C V= torage Volume=	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41	CRKs to determine s	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C	
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA	INAGE AREA < 3 C V= torage Volume=	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU	CRKs to determine s	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C	
OPTION 4A: For DRA Regression Constant, G Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive	INAGE AREA < 3 C torage Volume= INAGE AREA > 3 ery from RUSLE2:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU	CRKs to determine s ft/ft ft ² (ac/yr ft ³ SLE2 Modeling to d	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C	
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin	INAGE AREA < 3 C Itorage Volume= INAGE AREA > 3 ary from RUSLE2: g to ft ³ /ac/yr:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU 0.00 N/A	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C e	ption 4C
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin	INAGE AREA < 3 C torage Volume= INAGE AREA > 3 ery from RUSLE2:	Acre: Use V=0 808 106.4 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU 0.00	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C	ption 4C
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin	INAGE AREA < 3 C Itorage Volume= INAGE AREA > 3 ary from RUSLE2: g to ft ³ /ac/yr:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU 0.00 N/A	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr	From Step 1 ab Using 82% of C4 -	Rainfall Fact Move on to C e	ption 4C
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th	INAGE AREA < 3 C V= torage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option	ption 4C
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertion Required S OPTION 4C: Using the *These d	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ery from RUSLE2: ig to ft ³ /ac/yr: itorage Volume= e Required Storage levices can be us	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option	4A
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These d Storage from Wrappe	INAGE AREA < 3 C V= torage Volume= INAGE AREA > 3 ery from RUSLE2: ig to ft ³ /ac/yr: torage Volume= e Required Storag levices can be usi to Type A Rock Si	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF	4A
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These d Storage from Wrappe Enter Ditch Front Slopy	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ory from RUSLE2: g to ft ³ /ac/yr: itorage Volume= e Required Storag fevices can be uss e Gradient (H:V):	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B to the velocity requirem Yattles <u>3</u>	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF	4A 2SC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These d Storage from Wrappe Enter Ditch Ford Slope Enter Ditch Back Slope	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ory from RUSLE2: g to ft ³ /ac/yr: itorage Volume= e Required Storag fevices can be uss e Gradient (H:V):	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s ft/ft ft ³ SLE2 Modeling to d tons/acre/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF	4A 2SC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These d Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ory from RUSLE2: g to ft ³ /ac/yr: itorage Volume= e Required Storag fevices can be uss e Gradient (H:V):	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF	4A 2SC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These of Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Front Slope Enter Ditch Back Slope Enter Device Height:	INAGE AREA < 3 C V= torage Volume= INAGE AREA > 3 ary from RUSLE2: g to ft ³ /ac/yr: torage Volume= devices can be us fevices can be us devices can be us devices can be us fevices to the state of type A Rock Si e Gradient (H:V):	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume from	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1.5 4.50	From Step 1 ab Using 82% of C4 - etermine storag	Rainfail Fact Move on to C e See Option f Wrapped TF WA [*]	4A 2SC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These of Storage from Wrappe Enter Ditch Front Slopp Enter Ditch Front Slopp	INAGE AREA < 3 C V= torage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag fevices can be usi d Type A Rock Si e Gradient (H:V): e Gradient (H:V):	Acre: Use V=4 808 106.4 0.24 SoD Soco 0.02900 490.65 <u>5.41</u> 0.00 N/A <u>N/A</u> 92 Volume froi ed to satisfy ti 1t Checks or V	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 1 1.5 4.50 51.72	From Step 1 ab Using 82% of C4 - etermine storag	Rainfail Fact Move on to C e See Option f Wrapped TF WA [*]	4A 2SC-A/Wattles Required TTLES REQUIRED
OPTION 4A: For DRA Regression Constant, G Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These d Storage from Wrappe Enter Ditch Front Slop Enter Ditch Fack Slop Enter Device Height: Area Behind Device: Length of Ditch Behind	INAGE AREA < 3 C V= torage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag fevices can be us to Type A Rock Si e Gradient (H:V): e Gradient (H:V): f Device: ce (assumes 65%	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti It Checks or V effeciency):	CRKs to determine s fr/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B to the velocity requirem Vattles 1 1.5 4.50 51.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfail Fact Move on to C e See Option f Wrapped TF WA [*]	4A 2SC-A/Wattles Required
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using th *These of Storage from Wrappe Enter Ditch Front Slopp Enter Ditch Front Slopp	INAGE AREA < 3 C V= ttorage Volume= INAGE AREA > 3 ery from RUSLE2: ig to ft ³ /ac/yr: ttorage Volume= e Required Storag levices can be us id Type A Rock Si e Gradient (H:V): e Gradient (H:V): t Device: c (assumes 65% tttles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A Va ge Volume froi ed to satisfy til It Checks or V effeciency): X	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 1 5. 4.50 51.72 39.00 1.0	From Step 1 ab Using 82% of C4 - etermine storag	Rainfail Fact Move on to C e See Option f Wrapped TF WA [*]	4A 2SC-A/Wattles Required TTLES REQUIRED
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using the "These of Storage from Wrappe Enter Ditch Front Slopp Enter Ditch Front Slopp Enter Device Height: Area Behind Device Urape d TRSC-AWa	INAGE AREA < 3 C V= ttorage Volume= INAGE AREA > 3 ery from RUSLE2: ig to ft ³ /ac/yr: ttorage Volume= e Required Storag levices can be us id Type A Rock Si e Gradient (H:V): e Gradient (H:V): t Device: c (assumes 65% tttles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A <u>N/A</u> ge Volume froi ed to satisfy ti It Checks or V effeciency):	CRKs to determine s fr/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ² /ac/yr ft ³ m Option 4A or 4B to the velocity requirem Vattles 1 1.5 4.50 51.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF WA [*] cessive num	4A 2SC-A/Wattles Required TTLES REQUIRED Deer of devices required. Go to Option 5
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using thu * These of Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag levices can be us to Type A Rock Si e Gradient (H:V): e Gradient (H:V): to Device: ce (assumes 65% ittles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume froi ed to satisfy til It Checks or V effeciency): X Total	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1 1.5 5.1.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF WA [*] cessive num	4A 2SC-A/Wattles Required TTLES REQUIRED
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using the "These of Storage from Wrappe Enter Ditch Front Slopp Enter Ditch Front Slopp Enter Device Height: Area Behind Device Urape d TRSC-AWa	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag levices can be usi d Type A Rock Si e Gradient (H:V): e Gradient (H:V): to Device: ce (assumes 65% ittles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume froi ed to satisfy til It Checks or V effeciency): X Total	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1 1.5 5.1.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF WA [*] cessive num	4A 2SC-A/Wattles Required TTLES REQUIRED Deer of devices required. Go to Option 5
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using thu * These of Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag levices can be usi d Type A Rock Si e Gradient (H:V): e Gradient (H:V): to Device: ce (assumes 65% ittles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume froi ed to satisfy til It Checks or V effeciency): X Total	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1 1.5 5.1.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF WA [*] cessive num	4A 2SC-A/Wattles Required TTLES REQUIRED Deer of devices required. Go to Option 5
OPTION 4A: For DRA Regression Constant, (Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s Required S OPTION 4B: For DRA Sediment Delive Convertin Required S OPTION 4C: Using thu * These of Storage from Wrappe Enter Ditch Front Slope Enter Ditch Front Slope	INAGE AREA < 3 C V= itorage Volume= INAGE AREA > 3 ery from RUSLE2: g to ft ³ /ac/yr: torage Volume= e Required Storag levices can be usi d Type A Rock Si e Gradient (H:V): e Gradient (H:V): to Device: ce (assumes 65% ittles required:	Acre: Use V= 808 106.4 0.24 SoD Soco 0.02900 490.65 5.41 Acre: Use RU 0.00 N/A N/A V/A ge Volume froi ed to satisfy til It Checks or V effeciency): X Total	CRKs to determine s ft/ft ft ³ /ac/yr ft ³ SLE2 Modeling to d tons/acre/yr ft ³ /ac/yr ft ³ m Option 4A or 4B t he velocity requirem Vattles 3 1 1.5 5.1.72 39.00	From Step 1 ab Using 82% of C4 - etermine storag	Rainfall Fact Move on to C e See Option f Wrapped TF WA [*] cessive num	4A 2SC-A/Wattles Required TTLES REQUIRED Deer of devices required. Go to Option 5

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	se Surface /	Area Calculation	s to determine storage. A=3250 -	
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	
	- 0010 (002510111		032 425	
Q _p =CiA Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)				
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Ripich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQN	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or i		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	s.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.01	acres		
Peak Rate of Runoff, Q _p =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	D ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3	0.0	0 ft ³	
Required VOLOME using the des	igir deptir.	0.0		
d. Sediment Storage Required using 1800 ft	³/ac			
Disturbed Area (acres)=		0.0	1	
Required Sediment Storage (ft ³)=		19.8	3 ft ³	
			_	
			3	
Final Required Storage:		19.8		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5:1	or flatter
		ey (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin Required	
Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2	-	
Verify Storage (ft ³)		81.00 OK		
		27.00	-	
Verify Surface Area (ft ²)		OK		

STEP 1: Input Project Information	*items in red a	re REQUIRED		SECTI	ON 27 of 32	
Construction time			County:	Avery	-	
<u>≤</u> 6 months (Y/N)? Y		-	-	- County		<i>— ERODES</i>
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge R		LICOLLS
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs	i	EROsion DESign
From Sta.: 122 + 50	0		Date Prepared:	11/18/2014		
to Sta.: 125 + 0	0		Level III A #:	3474		
Right/Left: Lt	No Elev Data	%	Level III A Expiration	n: 12	2/31/2016	Version
% Ditch Grade: 2.900	%	_	Reviewed By:	Greg Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		
R/W Width: 52	feet		Level III A #:	391		
Length of Run X 250	feet		Level III A Expiration	n: 1/	D/1900	
Disturbed Area = 0.30	acres					
Drainage Area: 0.3	acres					
*Drainage Area must equal or exc	eed the Disturbe	d Area found a	above			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Democratical Complement of	5.40		T-h/- 0 7 // / ///	D=644=		
Regression Constant, C	<u>549</u>		Table 2-7 (Level III I	ter manual)		
Rainfall Factor, R	<u>106.4</u> 0.24		Figure 2-1 Table 2-2 or Web S	oil Survey 1640	·//soildatamart -	arcs usda dow/
Erodibility Factor, K Soil Type	SoD Soco		* informational purp		งบแนลเลเทลกไ.ท	ilos.usua.gov/j
Sou i Nha	000 0000		""Orriauoriai purp	Jaes Uniy.		
STEP 2: Ditch Liner requirements	: Utilize the Real	iired Liner tab	and note recommend	lations on plans	s.	
STEP 3: Velocity Control Require	ments					
			_			Wattles are required in
TYPE B ROCK SILT (CHECKS	2	spaced at	83 fe		Wattles are required in conjunction with PAMs
OR WATTLES			_			conjunction with PAMs
*See the HELP Tab for	or additional clari	fication and an	example on how to	place on plans		
	Start with O	ption 4A				
OPTION 4A: For DRA				torage		
Regression Constant,	С	549				
Rainfall Factor, R		106.4	l			
Erodibility Factor, K		0.24	ץ ו	From Step 1 a	bove	
Soil Type		SoD Soco	. <i></i>			
Ditchline Slope, s		0.02900				
	V=		ft ³ /ac/yr	11 : 000/		6 T B
Required S	Storage Volume=	<u>99.49</u>	ft ³			or-see note in cell
				C4	- Move on to O	ption 4C
OPTION 4B: For DRA		A ara: Usa BI	ISI E2 Modeling to d	tormino ctora	~	
OF NON 4B. FOI DRF	AINAGE AREA >	SALIE. USE KL	SLEZ WOUGHING TO U	elerinine stora	ge	
Sediment Deliv	ery from RUSLE2	0.00	tons/acre/yr			
	ng to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
	Storage Volume=		ft ³			
Required a	storage volume=	<u>N/A</u>	lir		See Option	4A
			m Option 4A or 4B to he velocity requirem			SC-A/Wattles Required
Storage from Wrappe		Silt Checks or	Wattles		WAT	TLES REQUIRED
Enter Ditch Front Slop				:1		
Enter Ditch Back Slop	e Gradient (H:V):			:1		
Enter Device Height:			<u>1.5</u>		GOOD Place m	neasure(s) on EC Plan. Start
Area Behind Device:			4.50			evice as close to the outlet
Length of Ditch Behind			51.72	π		sible and then space them
Storage Behind Devi			50.43	ft ³		grade. PAM should not be
Wrapped TRSC-A/Wa	attles required:	X	2.0			the last BMP at outlet.
		Total	100.86	ft ³	placed off	the fast pint at outlet.
COMMENTS:					esigner still has t	the option of using Option 5 or 6
Use Temporary Sedim	ent Dam, Type-B	14x7x3. Dam co	overs required storage			

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	se Surface Area Calculation	ns to determine storage, A=325Q _p
a. Determine the Peak Runoff Rate, Qp (Qp=	= Q ₁₀ (Q ₂₅ for HQW or Trout))	USE Q25
Q _n =CiA		
Runoff Coefficient, C	0 Table 1-4,1-5,1-6	
Time of Concentration, t. (minutes)		
1 Shortcut Method, t _c (A<4.6	6S)	
Watershed Slope, S	0 %	
t _c =	N/A minutes	See Kirpich
2 Kirpich Method		
Flow Path, L	0 feet	*see Module 1 Eq. 3
Watershed Slope, S	0 ft/ft	*see Module 1 Eq. 3
Kirpich, t _c =	#DIV/0! minutes	
Using a Return Period (T) of 10 y	rrs (25 for HQW) and a t_c of	#DIV/0! minutes,
), can be read from Appendix A or	
NOAA website, http://hdsc.n	ws.noaa.gov/hdsc/pfds/orb/nc_pfc	Is.html
Rainfall Intensity, i (in/hr)	0_ in/hr	Appendix A
Drainage Area given as	0.3 acres	
Peak Rate of Runoff, Qp =CiA	0.00 cfs	
-		
 b. Determine the Required Surface Area= 	0.0	0 ft ²
c. Use Surface Area (A) to determine requir	ed VOLUME of Temporary Type-B	Sediment Dam
Design Depth:	3 💌	
Required VOLUME using the des	ign depth: 0.0	0 ft ³
d. Sediment Storage Required using 1800 ft	3/00	
 Disturbed Area (acres)= 	/ac 0.3	0
Required Sediment Storage (ft ³)=	537.1	
Required Sediment Storage (it)=	537.1	9 11
		- .
Final Required Storage:	537.1	
Proposed Basin Side Slopes:	1.	5 :1 side slopes *must be at least 1.5:1 or flatter
	Web Soil Survey (http://soildatama	
Sat. Hydraulic Con. (Ksat, micro		Skimmer Basin
Soil Permeability (in/hr)	0.00	Required
Dewatering Time (Days)	N/A	
Basin Design	Minimum 2:1 (L:W) Ratio	
Suggested Top Width (ft): Suggested Top Length (ft):	0	Place Basin at outlet point. Ensure devices are used to
Final Design Top Width (ft):	7	satisfy requirements of Step 3.
Final Design Top Width (it): Final Design Top Length (ft):	14	Install Baffles*.
Final Design Top Length (It): Final Design Depth (ft):	3	
Weir Width (ft):	4	See Option 6 if installing this
Skimmer Size (in)	1.5	measure is not practical.
Orifice Diameter (in)	0.25	
Dewatering Time (Days)	2	
	115.50	
Verify Storage (ft ³)	Too Low	
Verify Surface Area (ft ²)	98.00	
verity Surface Area (it)	ок	

STEP 1: Input Project Information	*items in red are	REQUIRED		SECTIO	ON 28 of 32	
Construction time			County:	Avery	-	
≤6 months (Y/N)? Y			-	Andy		- ERODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge Rd		
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 122 + 90	0		Date Prepared:	11/18/2014		
to Sta.: 128 + 25	0		Level III A #:	3474		Version
Right/Left: Rt		%	Level III A Expiration	n: 12/	31/2016	
% Ditch Grade: 3.230	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing R/W Width: 22	feet		Date Reviewed: Level III A #:	11/19/2014		
Length of Run X 535	feet		Level III A Expiratio	n· 1/0	/1900	
Disturbed Area = 0.27	acres		Lovor myr Expiratio		/1000	
Drainage Area: 0.27	acres					
*Drainage Area must equal or exc	eed the Disturbed	Area found a	bove			
Surface Dewatering Device	n					_
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model the Non-Typical sections?	N					
the Non-Typical sections :						
Regression Constant, C	<u>808</u>		Table 2-7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		//soildatamart.n	rcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirements	: Utilize the Requi	red Liner tab	and note recommend	lations on plans.		
STEP 3: Velocity Control Require	ments					
TYPE B ROCK SILT (5	spaced at	89 fee		Wattles are required in
OR WATTLES		•	Spuccu ut			conjunction with PAMs
*See the HELP Tab for	or additional clarifi	cation and an	example on how to	place on plans.		
	Start with Op	otion 4A				
OPTION 4: Using RUSLE2 A OPTION 4A: For DRA	AINAGE AREA < 3	Acre: Use V=	CRKs to determine s	torage		
Regression Constant,	С	808				
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24 SoD Soco	ع	From Step 1 ab	ove	
Soil Type Ditchline Slope, s		0.03230	ft/ft			
	V=	546.49	ft ³ /ac/yr			
Required S	Storage Volume=	147.66	ft ³	Using 82% of	Rainfall Facto	r-see note in cell
••••••			•		Move on to Op	
OPTION 4B: For DRA	AINAGE AREA > 3	Acre: Use RU	SLE2 Modeling to d	etermine storag	je	
Sediment Deliv	ery from RUSLE2:	0.00	tons/acre/yr			
		N/A	ft ³ /ac/yr			
	Storage Volume=	N/A	ft ³			
			1		See Option 4	A
* These of	devices can be use	ed to satisfy th	m Option 4A or 4B to he velocity requirem		f Wrapped TRS	SC-A/Wattles Required
Storage from Wrappe		t Checks or V	Vattles		WAT	TLES REQUIRED
Enter Ditch Front Slop				:1		
Enter Ditch Back Slop	e Gradient (H:V):			:1		
Enter Device Height:			<u>1.5</u>		GOOD. Place m	easure(s) on EC Plan. Start
Area Behind Device: Length of Ditch Behin	d Device:		4.50 46.44	π	with the first d	evice as close to the outlet
Storage Behind Devi		offeciencyly	45.28	ft ³		ible and then space them
Wrapped TRSC-A/Wa		eneciency): X				grade. PAM should not be
	-	Total		ft ³	placed on	the last BMP at outlet.
COMMENTS:					esigner still has t	he option of using Option 5 or 6
Use Temporary Sedim	nent Dam, Type-B 9	<3x3. Dam and	wattles cover require		- u	

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	se Surface /	Area Calculation	s to determine storage A=3250)
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	·ρ
	- 0010 (002510111		03E Q23	
Q _p =CiA	•	T-6- 4 4 4 5 4 0		
Runoff Coefficient, C Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
		0/		
Watershed Slope, S		%	One Kinnish	
t _c =	N/A	minutes	See Kirpich	
2 Kirpich Method	•	4	to a Markula d En O	
Flow Path, L Watershed Slope, S		feet ft/ft	*see Module 1 Eq. 3 *see Module 1 Eq. 3	
Kirpich, t _c =		minutes	see module T Eq. 3	
	#21170.	minuco		
Using a Return Period (T) of 10 y	-		#DIV/0! minutes,	
the rainfall intensity, i (in/hr, NOAA website, http://hdsc.n				
Rainfall Intensity, i (in/hr)	0	in/hr	Appendix A	
Drainage Area given as		acres	, pponant r	
Peak Rate of Runoff, Q _n =CiA	0.00			
- P				
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
c. Use Surface Area (A) to determine requir	ed VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3	romporary rypo b	oodinon Dani	
Required VOLUME using the des		0.0	0 ft ³	
···· ·	.3			
d. Sediment Storage Required using 1800 ft	³/ac			
Disturbed Area (acres)=		0.2	7	
Required Sediment Storage (ft ³)=		486.3	6 ft ³	
Final Required Storage:		486.3	e 43	
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	tor flattor
		ey (http://soildatamar		or matter
Sat. Hydraulic Con. (Ksat, micro		ey (http://solidatamai	Skimmer Basin	
Soil Permeability (in/hr)	o iivsec)	0.00	Required	
Dewatering Time (Days)		N/A	Kequired	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	Rea Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5	and to the product of the	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
Verify Storage (ft ³)		81.00		
verity otorage (it)		oo Low	-	
Verify Surface Area (ft ²)		27.00		
		OK		

STEP 1: Input Project Information	*items in red are	REQUIRED		SECT	ION 29 of 32	
Construction time ≤ 6 months (Y/N)? Y			County:	Avery	•	ERODES
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge R	Rd	- ERODES
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Comb		EROsion DESign
From Sta.: 127 + 0	0		Date Prepared:	11/18/2014	<u> </u>	LICOSION DESIGN
to Sta.: 131 + 0	0		Level III A #:	3474		
Right/Left: Lt	0	%	Level III A Expiration		2/31/2016	Version
-		70			2/31/2010	
% Ditch Grade: 3.730 Contributing	%		Reviewed By: Date Reviewed:	Greg Kirby		2.10.2012
	feet		Level III A #:	201		
	feet		Level III A Expiration	on: 1	/0/1900	
	acres		Level III A Expiration	011.	10/1300	
	acres					
*Drainage Area must equal or exc		Area found a	above			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Regression Constant, C	<u>549</u>		Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web 3		o://soildatama	rt.nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	ooses only.		
STEP 2: Ditch Liner requirements	: Utilize the Requ	ired Liner tab	and note recommen	dations on plan	s.	
STEP 3: Velocity Control Require	nents					
TYPE B ROCK SILT C OR WATTLES	CHECKS	4	spaced at	<mark>80</mark> fe	eet	Wattles are required in conjunction with PAMs
*See the HELP Tab fo	or additional clarif	ication and an	example on how to	place on plans	s.	
	Start with O	otion 4A				
OPTION 4A: For DRA Regression Constant, I Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s		Acre: Use V= 549 106.4 0.24 SoD Soco 0.03730 428.79	}	storage From Step 1 व	above	
Required S	torage Volume=	<u>149.62</u>	ft ³		of Rainfall Fa - Move on to	ctor-see note in cell Option 4C
OPTION 4B: For DRA	INAGE AREA > 3	Acre: Use RU	JSLE2 Modeling to a	letermine stor	age	
Sediment Delive	ery from RUSLE2:	0.00	tons/acre/yr			
	g to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
	torage Volume=	N/A	ft ³			
Requireu o	torage volume=	<u>11/A</u>			See Optio	n 4A
			m Option 4A or 4B the velocity requirer			TRSC-A/Wattles Required
		It Checks or \				
Enter Ditch Front Slop				:1	W	ATTLES REQUIRED
Enter Ditch Back Slop				:1		
Enter Device Height:				ft		
Area Behind Device:			4.50			e measure(s) on EC Plan. Start
Length of Ditch Behind	l Device:		40.21			t device as close to the outlet
Storage Behind Devi		effeciencv) [.]	39.21			ossible and then space them
Wrapped TRSC-A/Wa		Total				he grade. PAM should not be on the last BMP at outlet.
COMMENTS:		, Jtai	130.04		Designer still h	as the option of using Option 5 or 6
Use Temporary Sedim	ent Dam, Type-B 1	6x8x3. Dam co	overs required storage		zərginət əttif İk	<u>as the option of asing option of 0</u>

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface I	Area Calculation	ns to determine storage A=3250	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	ρ
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	•	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	IN/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW	/) and a t c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,), can be read fi	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.35	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
			_	
 c. Use Surface Area (A) to determine requir 		Temporary Type-B	Sediment Dam	
Design Depth:	3		- c3	
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=	140	0.3	5	
Required Sediment Storage (ft ³)=		628.1		
		02011		
Final Required Storage:		628.1	<mark>0</mark> ft ³	
Proposed Basin Side Slopes:		1.	5 :1 side slopes *must be at least 1.5	:1 or flatter
		ey (http://soildatama		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)		N/A	<mark>_</mark>	
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft): Suggested Top Length (ft):		0	Place Basin at outlet point. Ensure devices are used to	
Final Design Top Width (ft):		8	satisfy requirements of Step 3.	
Final Design Top Width (it): Final Design Top Length (ft):		<u> </u>	Install Baffles*.	
Final Design Depth (ft):		3	-	
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		3		
	1	156.00		
Verify Storage (ft ³)	T	oo Low		
Verify Surface Area (ft ²)	1	128.00		
verity Surface Area (it)		ок		

STEP 1: Input Project Information	*items in red are	e REQUIRED		SECTI	ON 30 of 32	
Construction time			County	Avery	-	
≤6 months (Y/N)? Y		-	County:	Awary	. •	<i>— ERODES</i>
HQW (Y/N)? Y	Elevation		Location:	Pilot Ridge R	d	LICOLLS
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Combs		EROsion DESign
From Sta.: 128 + 25	0		Date Prepared:	11/18/2014		
to Sta.: 132 + 20	0		Level III A #:	3474		
Right/Left: Rt	No Elev Data	%	Level III A Expiration	n: 12	2/31/2016	Version
% Ditch Grade: 2.970	%		Reviewed By:	Grea Kirby		2.10.2012
Contributing			Date Reviewed:	11/19/2014		2.10.2012
R/W Width: 25	feet		Level III A #:	391		
Length of Run X 395	feet		Level III A Expiration	n: 1/	0/1900	
Disturbed Area = 0.23	acres					
Drainage Area: 0.23	acres					
*Drainage Area must equal or exc	ceed the Disturbed	d Area found a	above			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Regression Constant, C	<u>808</u>		Table 2-7 (Level III)	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		://soildatamart.i	nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirements	s: Utilize the Requ	ired Liner tab	and note recommend	lations on plans	5.	
STEP 3: Velocity Control Require	ements					
	0.050/0	•	-			Wattles are required in
TYPE B ROCK SILT		3	spaced at	99 fe	et	conjunction with PAMs
OR WATTLES	j -					
10 (h 1151 D T 6						
"See the HELP Tab f	or additional clarif	ication and an	example on how to	place on plans	-	
	Start with O	ption 4A				
OPTION 4A: For DR/ Regression Constant, Rainfall Factor, R Erodibility Factor, K Soil Type Ditchline Slope, s		Acre: Use V= 808 106.4 0.24 SoD Soco 0.02970		storage From Step 1 a	bove	
	V=	502.50	ft ³ /ac/yr			
Required S	Storage Volume=	<u>113.92</u>	ft ³	Using 82% of	f Rainfall Fact	or-see note in cell
	•		-	C4	- Move on to O	ption 4C
OPTION 4B: For DR	AINAGE AREA > 3	Acre: Use RL	JSLE2 Modeling to d	etermine stora	ge	
	very from RUSLE2:	0.00	tons/acre/yr			
Converti	ng to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
Required S	Storage Volume=	<u>N/A</u>	ft ³		See Option	4.0
					See Option	4A
			om Option 4A or 4B t the velocity requiren			SC-A/Wattles Required
Storage from Wrapp			Wattles			
Enter Ditch Front Slop			3	:1	WAT	TLES REQUIRED
Enter Ditch Back Slop				:1		
Enter Device Height:			<u>.</u> 1.5	ft		
Area Behind Device:			4.50		GOOD. Place n	neasure(s) on EC Plan. Start
	d Device:				with the first o	levice as close to the outlet
Length of Ditch Behin			50.51	π		sible and then space them
Storage Behind Dev			49.24	π		grade. PAM should not be
Wrapped TRSC-A/W	aules required:)		43		the last BMP at outlet.
		Total	147.73	ft ³		
COMMENTS:	_				esigner still has	the option of using Option 5 or 6
Use Temporary Sedin	nent Dam, Type-B 9	x3x3. Dam and	d wattles cover require	d storage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface i	Area Calculation	ns to determine storage A=3250	-
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	p
$Q_p = CiA$	- Q ₁₀ (Q ₂₅ 101 11		03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	100	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =	#DIV/0!	minutes		
Using a Return Period (T) of 10 y	rs (25 for HQV	/) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read f	rom Appendix A or i		
NOAA website, http://hdsc.n	ws.noaa.gov/h	dsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.23	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	0 ft ²	
			_	
c. Use Surface Area (A) to determine requir		Temporary Type-B	Sediment Dam	
Design Depth:	3 🔻		- 3	
Required VOLUME using the des	sign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.2	3	
Required Sediment Storage (ft ³)=		408.0	6 ft ³	
			. 2	
Final Required Storage:		408.0		
Proposed Basin Side Slopes:			0 :1 side slopes *must be at least 1.5	1 or flatter
		ey (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro Soil Permeability (in/hr)	o m/sec)	0.00	Skimmer Basin Required	
Dewatering Time (Days)		N/A	Kequiled	
Basin Design	Minimum	2:1 (L:W) Ratio	-	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25	-	
Dewatering Time (Days)		2 81.00	-	
Verify Storage (ft ³)		on Low		
		27.00		
Verify Surface Area (ft ²)		ок		

STEP 1: Input Project Information	n *items in red ar	e REQUIRED		SECT	ION 31 of 32	
Construction time ≤6 months (Y/N)? Y			County:	Avery	•	ERODES
HQW (Y/N)? Y	Elevation	1	Location:	Pilot Ridge F	Rd	
Trout (Y/N)? Y	Tool (ft)		Prepared By:	Jacob Comb		EROsion DESign
From Sta.: 132 + 20	0		Date Prepared:	11/18/2014		LIKOSION DESIGN
to Sta.: 137 + 0	0		Level III A #:	3474		
Right/Left: Rt		%			2/31/2016	Version
-		70	Level III A Expirati		2/31/2016	
% Ditch Grade: 3.140	%		Reviewed By:	Greg Kirby		2.10.2012
Contributing	4		Date Reviewed:	11/19/2014		
R/W Width: 29	feet		Level III A #:	391	10/4000	
Length of Run X 480	feet		Level III A Expirati	on:	10/1900	
Disturbed Area = 0.32	acres					
Drainage Area: 0.32	acres					
*Drainage Area must equal or ex		Area tound a	above			
Surface Dewatering Device	n					
Is this a Typical Section (Y/N)?	Y					
Will RUSLE2 be used to model						
the Non-Typical sections?	N					
Regression Constant, C	<u>808</u>		Table 2-7 (Level III	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web		p://soildatama	art.nrcs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirement	s: Utilize the Requ	ired Liner tab	and note recommen	dations on plan	<i>า</i> s.	
STEP 3: Velocity Control Require	ements					
			_			Wattles are required in
TYPE B ROCK SILT	CHECKS	5	spaced at	80 f	eet	conjunction with PAMs
OR WATTLES	3					conjunction with PAMs
*See the HELP Tab f	or additional clarif	ication and an	example on how to	place on plan	s.	
	Chart with O	ntion 44				
	Start with O	ption 4A				
OPTION 4A: For DR. Regression Constant, Rainfall Factor, R		808	3)	storage		
Erodibility Factor, K		106.4 0.24		From Stop 1	ahaya	
		SoD Soco	•	From Step 1	above	
Soil Type			4.164			
Ditchline Slope, s		0.03140				
	V=	531.26	ft³/ac/yr			
Required	Storage Volume=	<u>169.77</u>	ft ³			actor-see note in cell
				C4	4 - Move on to	o Option 4C
OPTION 4B: For DR.	AINAGE AREA > 3	Acre: Use RL	JSLE2 Modeling to a	letermine stor	age	
	very from RUSLE2:		tons/acre/yr			
Converti	ng to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
Required	Storage Volume=	N/A	ft ³		See Optio	
	-		-		See Optio	on 4A
	devices can be us	ed to satisfy t	he velocity requirer			TRSC-A/Wattles Required
Storage from Wrapp	ed Type A Rock S	ilt Checks or	Wattles		10	
Enter Ditch Front Slop	pe Gradient (H:V):		3	:1	V	IATTLES REQUIRED
Enter Ditch Back Slop			1	:1		
Enter Device Height:	. ,			ft		
Area Behind Device:			4.50			e measure(s) on EC Plan. Start
Length of Ditch Behin	d Device:		47.77			st device as close to the outlet
Storage Behind Dev		effeciency),	46.58			ossible and then space them
Wrapped TRSC-A/W		eneciency):			evenly up t	the grade. PAM should not be
mapped 1K30-A/W	anes required:			ft ³	placed	on the last BMP at outlet.
0.01		Total	186.31	_	-	
COMMENTS:					Designer still h	as the option of using Option 5 or 6
Use Temporary Sedin	nent Dam, Type-B 9	x3x3. Dam and	a wattles cover require	ea storage.		

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface A	Area Calculation	ns to determine storage A=3250)
a. Determine the Peak Runoff Rate, \mathbf{Q}_{p} (\mathbf{Q}_{p}			USE Q25	¢ρ
$Q_p = CiA$	- atio (ation in		03E Q23	
Runoff Coefficient, C	0	Table 1 4 1 5 1 6		
Time of Concentration, t _c (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (hindles)	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S		ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW) and a t _c of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr), can be read fi	rom Appendix A or		
NOAA website, http://hdsc.n	ws.noaa.gov/ho	lsc/pfds/orb/nc_pfd	ls.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.32	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	<mark>0</mark> ft ²	
			_	
 c. Use Surface Area (A) to determine requir 	ed VOLUME of	Temporary Type-B	Sediment Dam	
Design Depth:	3 💌		2	
Required VOLUME using the des	ign depth:	0.0	0 ft ³	
d. Sediment Storage Reguired using 1800 ft	³ /ac			
Disturbed Area (acres)=	/ac	0.3	2	
Required Sediment Storage (ft ³)=		575.2		
		010.2		
Final Required Storage:		575.2	1 ft ³	
Proposed Basin Side Slopes:		0.	0 :1 side slopes *must be at least 1.	5:1 or flatter
Infiltration Analysis	Web Soil Surve	y (http://soildatama	rt.nrcs.usda.gov/)	
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0	Skimmer Basin	
Soil Permeability (in/hr)		0.00	Required	
Dewatering Time (Days)	-	N/A		
Basin Design	Minimum	2:1 (L:W) Ratio		
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to satisfy requirements of Step 3.	
Final Design Top Width (ft):		<u>3</u> 9	Install Baffles*.	
Final Design Top Length (ft): Final Design Depth (ft):		3	_	
Weir Width (ft):		4	See Option 6 if installing this	
Skimmer Size (in)		1.5	measure is not practical.	
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		2		
		81.00		
Verify Storage (ft ³)	Т	oo Low		
Verify Surface Area (ft ²)		27.00		
verny Sunace Area (it)		ок		

STEP 1: Input Project Information	*items in red ar	e REQUIRED		SECTIO	ON 32 of 32	
Construction time			County:	Avery	•	EDODES
≤ 6 months (Y/N)? Y	Elevation	1	-			- ERODES
HQW (Y/N)? Y Trout (Y/N)? Y			Location:	Pilot Ridge Ro		
Trout (Y/N)? Y From Sta.: 136 + 0	Tool (ft)		Prepared By: Date Prepared:	Jacob Combs 11/18/2014		EROsion DESign
	0			3474		
to Sta.: <u>137 + 70</u> Right/Left: Lt	No Elev Data	%	Level III A #:		/31/2016	Version
J	%	70	Level III A Expiration Reviewed By:	n: 12	131/2016	
% Ditch Grade: 3.010 Contributing	70		Date Reviewed:	11/19/2014		2.10.2012
	feet		Level III A #:	391		
	feet		Level III A Expiratio	n: 1/0	/1900	
	acres					
Drainage Area: 0.03	acres					
*Drainage Area must equal or exc Surface Dewatering Device		d Area found a	bove			
Is this a Typical Section (Y/N)?	n Y					-
Will RUSLE2 be used to model		1				
the Non-Typical sections?	N					
Regression Constant, C	<u>549</u>		Table 2-7 (Level III I	Ref Manual)		
Rainfall Factor, R	<u>106.4</u>		Figure 2-1			
Erodibility Factor, K	<u>0.24</u>		Table 2-2 or Web S		//soildatamart.nr	cs.usda.gov/)
Soil Type	SoD Soco		* informational purp	oses only.		
STEP 2: Ditch Liner requirements	: Utilize the Requ	i ired Liner tab	and note recommend	lations on plans		
STEP 3: Velocity Control Decuiro	monts					
STEP 3: Velocity Control Require	nents					
TYPE B ROCK SILT O	HECKS	1	spaced at	85 fee		Nattles are required in
OR WATTLES			_		C	onjunction with PAMs
*See the HELP Tab for	or additional clarif	fication and an	example on how to	place on plans.		
	Start with O	ntion 4A				
OPTION 4: Using RUSLE2 A	-		-	torage		
OFTION 4A: FOI DRA	IINAGE AREA < 3	Acre: Use v=	CRAS to determine s	lorage		
Regression Constant,	С	549	ر ۱			
Rainfall Factor, R		106.4				
Erodibility Factor, K		0.24	. >	From Step 1 at	ove	
Soil Type		SoD Soco				
Ditchline Slope, s	N.	0.03010	ft ³ /ac/yr			
Beguired S	V=	346.02 10.80	ft ³	Licing 929/ of	Painfall Eactor	r-see note in cell
Required S	storage Volume=	10.00	In		Move on to Op	
OPTION 4B: For DRA	INAGE AREA > 3	Acre: Use RU	SLE2 Modeling to d	etermine stora	ye	
Sediment Dolive	ery from RUSLE2:	0.00	tons/acre/yr			
	ig to ft ³ /ac/yr:	N/A	ft ³ /ac/yr			
	storage Volume=		ft ³			
Required o	torage volume=	<u>11/6</u>	_ir		See Option 4	A
			m Option 4A or 4B to he velocity requirem		of Wrapped TRS	C-A/Wattles Required
Storage from Wrappe			Vattles			
Enter Ditch Front Slop			3	:1	WATI	LES REQUIRED
Enter Ditch Back Slop			<u>1</u>	:1		
Enter Device Height:			<u>1.5</u>		SOOD Place me	easure(s) on EC Plan. Start
Area Behind Device:			4.50	π		evice as close to the outlet
Length of Ditch Behind			49.83	π		ble and then space them
Storage Behind Devi Wrapped TRSC-A/Wa		s effeciency): X	48.59 1.0	π ⁻	evenly up the g	grade. PAM should not be
mapped moo-A/Wa		Total		ft ³	placed on t	the last BMP at outlet.
COMMENTS:					esigner still has th	e option of using Option 5 or 6
Use Temporary Sedim	ent Dam, Type-B S	9x3x3. Dam cov	ers required storage.			

OPTION 5: IF DRAINAGE AREA > 1 Acre: U	lse Surface A	Area Calculation	is to determine storage. A=325Q -	
a. Determine the Peak Runoff Rate, $\mathbf{Q}_{p}(\mathbf{Q}_{p} = \mathbf{Q}_{p})$			USE Q25	
$Q_p = CiA$	- atio (ation in a	an or mouty)	032 423	
Runoff Coefficient, C	0	Table 1 4 1 E 1 G		
Time of Concentration, t _e (minutes)		Table 1-4,1-5,1-6		
1 Shortcut Method, t _c (A≤4.	,			
Watershed Slope, S		%		
t _c =		minutes	See Kirpich	
2 Kirpich Method	N/A	minutes	See Kilpich	
Flow Path, L	0	feet	*see Module 1 Eq. 3	
Watershed Slope, S	_	ft/ft	*see Module 1 Eq. 3	
Kirpich, t _c =		minutes		
Using a Return Period (T) of 10 y	rs (25 for HQW) and a t _ of	#DIV/0! minutes,	
the rainfall intensity, i (in/hr,	-			
NOAA website, http://hdsc.n	iws.noaa.gov/ho	lsc/pfds/orb/nc_pfd	s.html	
Rainfall Intensity, i (in/hr)	<u>0</u>	in/hr	Appendix A	
Drainage Area given as	0.03	acres		
Peak Rate of Runoff, Qp =CiA	0.00	cfs		
b. Determine the Required Surface Area=		0.0	D ft ²	
c. Use Surface Area (A) to determine requir Design Depth:		Temporary Type-B	Sediment Dam	
Required VOLUME using the des	3	0.0	0 ft ³	
Required VOLOME using the des	agri deptri.	0.0	D It	
d. Sediment Storage Required using 1800 ft	³ /ac			
Disturbed Area (acres)=		0.0	3	
Required Sediment Storage (ft ³)=		56.2	0 ft ³	
			-	
Final Required Storage:		56.2		
Proposed Basin Side Slopes:			5 :1 side slopes *must be at least 1.5:1 or fl	atter
		y (http://soildatamar		
Sat. Hydraulic Con. (Ksat, micro	o m/sec)	0.00	Skimmer Basin	
Soil Permeability (in/hr) Dewatering Time (Days)		N/A	Required	
Basin Design	Minimum	2:1 (L:W) Ratio	_	
Suggested Top Width (ft):		0	Place Basin at outlet point.	
Suggested Top Length (ft):		0	Ensure devices are used to	
Final Design Top Width (ft):		3	satisfy requirements of Step 3.	
Final Design Top Length (ft):		9	Install Baffles*.	
Final Design Depth (ft):		3	See Option 6 if installing this	
Weir Width (ft):		4	See Option 6 if installing this measure is not practical.	
Skimmer Size (in)		1.5		
Orifice Diameter (in)		0.25		
Dewatering Time (Days)		1		
Verify Storage (ft ³)		27.00		
		27.00	-	
Verify Surface Area (ft ²)		OK		

Temporary Liner (Matting) in Ditchline Calculations (English)	ing) in	Ditchli	ne Calc	sulatior	ıs (Enç	llish)									
Construction Sheet #	-	2	က်	4	5	9 [16 1	17	18	25 0-1	26 26	27	28		
Construction Line (-L-,-Y-,etc.)	1.1	2.1	3.1	4.1	5.1	6.1	16.1	17.1	18.1	25.1	26.1	27.2	28.1		
Left or Right (LT.,RT.,Median)	Ļ	Lt	Lt	Ę	Lt	Ţ	Lt	Rt	Rt	Rt	Ъţ	Кţ	Rt		
Upper Station No.	0	412	815	1110	1800	2100	7650	7850	8350	12250	12290	12825	13220		
Upper Station Elevation (ft.)															
Lower Station No.	412	591	1110	1429	2100	2500	7700	7965	8565	12290	12525	13220	13700		
Lower Station Elevation (ft.)															
Design Ditch Flow Depth (ft.)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Actual Ditch Depth (ft.)	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33		
Frontslope Grade (i.e. 2 for 2:1)	e	S	n	n	e	с	n	ę	S	n	ę	n	n		
Backslope Grade (i.e. 2 for 2:1)	1.5	1.5	1.5	1.5	1.5	1.5	1.25	-	1.5	-	1	1	1		
Base Width (ft., 0 for V-Ditches)	0	0	0	0	0	0	0	0	0	0	0	0	0		
Measured Ditchline Length (ft.)	412	179	295	319	300	400	50	115	215	40	535	395	180		
Ditch Grade (%)	13.68	16.42	16.93	16.56	15.54	11.36	12.00	6.87	4.70	2.90	3.23	2.97	3.14		
Velocity (ft/s)	6.75	7.40	7.51	7.43	7.19	6.15	6.26	4.67	3.96	3.03	3.20	3.07	3.16	0.00	0.00
Shear Stress in Ditch (lb/ft ²)	2.82	3.38	3.49	3.41	3.20	2.34	2.47	1.41	0.97	0.60		0.61	0.65	0.00	0.00
Ditch Liner Requirement	RIPRAP	RIPRAP	RIPRAP	RIPRAP	RIPRAP	RIPRAP	RIPRAP	PSRM	PSRM	ÿ	ğ		MATTING	None	None
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	30	360	265	125	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	80	160	0	0	0	0	0	0
							_								
Construction Line (-L-,-Y-,etc.)		2.2		4.2		6.2	16.2	17.2	18.2						
Left or Right (LT.,RT.,Median)		Ę		Ę		Ŧ	Ę	Rt	Rt						
Upper Station No.		591		1429		2500	7700	7965	8565						
Upper Station Elevation (ft.)															
Lower Station No.		815		1730		2844	7850	8050	8600						
Lower Station Elevation (ft.)															
	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Actual Ditch Depth (ft.)		1.33		1.33		1.33	1.33	1.33	1.33						
Frontslope Grade (i.e. 2 for 2:1)		3		3		3	S	3	S						
Backslope Grade (i.e. 2 for 2:1)		1.5		1.5		1.5	~	-	1.5						
Base Width (ft., 0 for V-Ditches)		0		0		0	0	0	0						
Measured Ditchline Length (ft.)		224		301		344	150	85	35						
Ditch Grade (%)	00.0	18.80	0.00	16.19	0.00	11.58	11.10	9.76	0.20	0.00	0.00	0.00		0.00	
Velocity (ft/s)	00.0	7.91	0.00	7.34	0.00	6.21	5.94	5.57	0.82	0.00	0.00	0.00	0.00	0.00	0.00
Shear Stress in Ditch (lb/ft ²)	0.00	3.87	0.00	3.33	0.00	2.38	2.29	2.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Ditch Liner Requirement	None	RIPRAP	None	RIPRAP	None	RIPRAP	RIPRAP	RIPRAP	None	None	None	None	None	None	None
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction Line (-L-,-Y-,etc.)				4.3				17.3							
Left or Right (LT.,RT.,Median)				Lt				Rt							
Upper Station No.				1730				8050							
Upper Station Elevation (ft.)															
Lower Station No.				1800				8350							

I ower Station Elevation (ft)															
Design Ditch Flow Depth (ft.)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
				1.33				1.33							
Frontslope Grade (i.e. 2 for 2:1)				e				S							
Backslope Grade (i.e. 2 for 2:1)				1.5				1.5							
Base Width (ft., 0 for V-Ditches)				0											
Measured Ditchline Length (ft.)				20				300							
Ditch Grade (%)	00.00	0.00	0.00	18.97	0.00	00.0	0.00	5.82	0.00	0.00	0.00	0.00	0.00	0.00	
Velocity (ft/s)	00.00	0.00	0.00	7.95	0.00	00.0	0.00	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shear Stress in Ditch (lb/ft ²)	0.00	0.00	0.00	3.91	0.00	00.0	00.0	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ditch Liner Requirement	None	None	None	RIPRAP	None	None	None	PSRM	None						
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	220	0	0	0	0	0	0	0
Construction Line (-L-,-Y-,etc.)															
Left or Right (LT.,RT.,Median)															
Upper Station No.															
Upper Station Elevation (ft.)															
Lower Station No.															
Lower Station Elevation (ft.)															
Design Ditch Flow Depth (ft.)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Actual Ditch Depth (ft.)															
Frontslope Grade (i.e. 2 for 2:1)															
Backslope Grade (i.e. 2 for 2:1)															
Base Width (ft., 0 for V-Ditches)															
Measured Ditchline Length (ft.)															
Ditch Grade (%)	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity (ft/s)	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shear Stress in Ditch (lb/ft ²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ditch Liner Requirement	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		-													
Left or Right (LT.,RT.,Median)															
Upper Station No.															
Upper Station Elevation (ft.)															
Lower Station No.															
Design Ditch Flow Depth (ft.)	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Actual Ditch Depth (ft.)															
Backslope Grade (i.e. 2 for 2:1)															
Base Width (ft., 0 for V-Ditches)															
Measured Ditchline Length (ft.)															

Actual Ditch Depth (ft.)															
Frontslope Grade (i.e. 2 for 2:1)															
Backslope Grade (i.e. 2 for 2:1)															
Base Width (ft., 0 for V-Ditches)															
Measured Ditchline Length (ft.)															
Ditch Grade (%)	00.0	00.0	0.00	00.00	0.00	00.0	0.00	0.00	0.00	00.00	00.0	00.0	00.0	00.00	00.0
Velocity (ft/s)	00.0	00.0	0.00	00.00	0.00	00.0	0.00	0.00	0.00	00.00	00.0	00.0	00.00	00.00	00.0
Shear Stress in Ditch (lb/ft ²)	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	00.0	00.0	0.00	0.00	0.00
Ditch Liner Requirement	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Matting Quantity (yd ²) =	0	0	0	0	0	0	0	0	0	30	360	265	125	0	0
		I													
Total Ditchline Matting Quantity =	= 780.00 yd²	yd ²													
Total PSRM Quantity (yd ²) =	0	0	0	0	0	0	0	300	160	0	0	0	0	0	0
Total Ditchline PSRM Quantity =	= 460.00 yd ²	yd²													



Saturated Hydraulic Conductivity (Ksat)—Avery County, North Carolina, and Caldwell County, North Carolina (sr 1515 ksat)	urated Hydraulic Conductivity (Ksat)—Avery County, North Carolina, and Caldwell County, North Caroli (sr 1515 ksat)
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\rea of Int	Area of Interest (AOI)	Background	The soil surveys that comprise your AOI were mapped at 1:12,000.
	Area of Interest (AOI)	Aerial Photography	Warning: Soil Map may not be valid at this scale.
soil Rati	suis Soil Rating Polygons		Enlargement of maps beyond the scale of mapping can cause
	<= 6.8809		misunderstanding of the detail of mapping and accuracy of soil line
	> 6.8809 and <= 13.8930		soils that could have been shown at a more detailed scale.
	> 13.8930 and <= 18.5152		Please rely on the har scale on each man sheet for man
	Not rated or not available		measurements.
Soil Rati	Soil Rating Lines		g
ł	<= 6.8809		
ł	> 6.8809 and <= 13.8930		Coordinate System: VVeb Mercator (EPSG:3857)
ł	> 13.8930 and <= 18.5152		Maps from the Web Soil Survey are based on the Web Mercator projection. which preserves direction and shape but distorts
2	Not rated or not available		distance and area. A projection that preserves area, such as the
soil Rati	Soil Rating Points		Albers equal-area conic projection, should be used if more accurate calculations of distance or area are requiried
	<= 6.8809		This product is constant from the USDA NDCS contrified data as of
	> 6.8809 and <= 13.8930		the version date(s) listed below.
	> 13.8930 and <= 18.5152		~
	Not rated or not available		Survey Area Data: Version 19, Sep 9, 2014
Water Features	ures.		Soil Survey Area: Caldwell County, North Carolina
)	Streams and Canals		Survey Area Data: Version 14, Sep 9, 2014
Transportation	tion		Your area of interest (AOI) includes more than one soil survey area.
Ŧ	Rails		I nese survey areas may nave been mapped at different scales, with a different land use in mind. at different times. or at different levels
>	Interstate Highways		of detail. This may result in map unit symbols, soil properties, and
>	US Routes		interpretations triat do not completely agree across soil survey area boundaries.
>	Major Roads		Soil map units are labeled (as space allows) for map scales 1:50,000
>	Local Roads		or larger.
			Date(s) aerial images were photographed: Oct 22, 2010—Mar 17, 2011
			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting

Saturated Hydraulic Conductivity (Ksat)

Saturated Hyd	raulic Conductivity (Ksat)-	- Summary by Map Unit	— Avery County, North C	arolina (NC011)
Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
CrE	Crossnore-Jeffrey complex, 30 to 50 percent slopes, very stony	18.5152	1.2	12.3%
PnD	Pineola gravelly loam, 15 to 30 percent slopes, stony	6.8809	3.3	33.5%
SoD	Soco-Ditney complex, 15 to 30 percent slopes, very stony	13.8930	1.9	19.1%
Subtotals for Soil Surv	vey Area		6.4	64.8%
Totals for Area of Inter	rest		9.9	100.0%

Saturated Hydra	ulic Conductivity (Ksat)—	Summary by Map Unit –	- Caldwell County, North	Carolina (NC027)
Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
CrE	Crossnore-Jeffrey complex, 30 to 50 percent slopes, very stony	18.5152	0.5	4.6%
PnD	Pineola gravelly loam, 15 to 30 percent slopes, stony	6.8809	1.3	13.0%
SoD	Soco-Ditney complex, 15 to 30 percent slopes, very stony	13.8930	1.7	17.3%
SoE	Soco-Ditney complex, 30 to 50 percent slopes, very stony	13.8930	0.0	0.2%
Subtotals for Soil Surv	ey Area		3.5	35.2%
Totals for Area of Inter	est		9.9	100.0%

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second Aggregation Method: Dominant Component Component Percent Cutoff: None Specified Tie-break Rule: Fastest Interpret Nulls as Zero: No Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Report—RUSLE2 Related Attributes

	RUSLE2	Related A	ttributes–Avery Cou	nty, North	Carolina			
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Repre	sentative	value
	map unit	length (ft)				% Sand	% Silt	% Clay
CrE—Crossnore-Jeffrey complex, 30 to 50 percent slopes, very stony								
Crossnore, very stony	45		В	.10	3	65.1	18.9	16.0
Jeffrey, very stony	40		В	.10	2	65.1	18.9	16.0
PnD—Pineola gravelly loam, 15 to 30 percent slopes, stony								
Pineola, stony	85	_	С	.28	3	45.7	41.8	12.5
SoD—Soco-Ditney complex, 15 to 30 percent slopes, very stony								
Soco, very stony	60		В	.24	3	45.3	43.2	11.5
Ditney, very stony	25	_	В	.15	2	65.7	22.8	11.5

	RUSLE2 F	Related Att	ributes–Caldwell Co	unty, Nor	th Carolina			
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Repre	esentative	value
	map unit	length (ft)				% Sand	% Silt	% Clay
CrE—Crossnore-Jeffrey complex, 30 to 50 percent slopes, very stony								
Crossnore, very stony	45		В	.10	3	65.1	18.9	16.0
Jeffrey, very stony	40		В	.10	2	65.1	18.9	16.0
PnD—Pineola gravelly loam, 15 to 30 percent slopes, stony								
Pineola, stony	85		С	.28	3	45.7	41.8	12.5
SoD—Soco-Ditney complex, 15 to 30 percent slopes, very stony								
Soco, very stony	60		В	.24	3	45.3	43.2	11.5
Ditney, very stony	25		В	.15	2	65.7	22.8	11.5

USDA

	RUSLE2 F	Related Att	ributes–Caldwell Co	unty, Nort	h Carolina			
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Repre	esentative	value
	map unit	length (ft)				% Sand	% Silt	% Clay
SoE—Soco-Ditney complex, 30 to 50 percent slopes, very stony								
Soco, very stony	50	_	В	.24	3	45.3	43.2	11.5
Ditney, very stony	35	—	В	.15	2	65.7	22.8	11.5

Data Source Information

,	Avery County, North Carolina Version 19, Sep 9, 2014
,	Caldwell County, North Carolina Version 14, Sep 9, 2014



MAP INFORMATION	The soil surveys that comprise your AOI were mapped at 1:12,000.	Warning: Soil Map may not be valid at this scale.	Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line	placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.	Please rely on the bar scale on each map sheet for map measurements.	0	Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: Web Mercator (EPSG:3857)	Maps from the Web Soil Survey are based on the Web Mercator	projection, writch preserves unection and shape but distorts distance and area. A projection that preserves area, such as the	Albers equal-area conic projection, should be used if more accurate	calculations of distance or area are required.	This product is generated from the USDA-NRCS certified data as of	_	Soil Survey Area: Avery County, North Carolina Survey Area Data: Version 19, Sep 9, 2014		or larger.	Date(s) aerial images were photographed: Oct 22, 2010—Mar 17, 2011	The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.			
MAP LEGEND	Area of Interest (AOI)	Area of Interest (AOI) Socie	Soil Rating Polygons	Not rated or not available	Soil Rating Lines = 18.5281	Not rated or not available	Soil Rating Points = 18.5281	Not rated or not available	Water Features	Streams and Canals	Transportation	+++ Rails	Interstate Highways	US Routes	Major Roads	Local Roads	Background Aerial Photography				

Natural Resources Conservation Service

USDA

Saturated Hydraulic Conductivity (Ksat)

Saturated Hyd	raulic Conductivity (Ksat)	— Summary by Map Unit	— Avery County, North C	Carolina (NC011)
Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
StD	Stecoah-Soco complex, 15 to 30 percent slopes, stony	18.5281	0.3	19.6%
StE	Stecoah-Soco complex, 30 to 50 percent slopes, stony	18.5281	1.3	80.4%
Totals for Area of Inter	rest	1	1.6	100.0%

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second Aggregation Method: Dominant Component Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

RUSLE2 Related Attributes

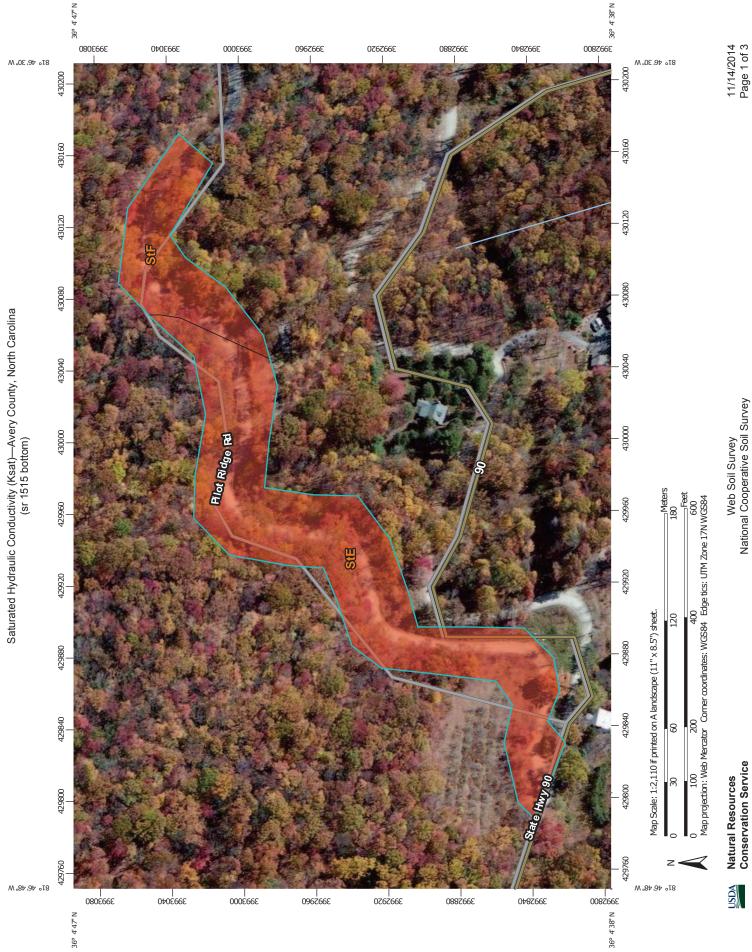
This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Report—RUSLE2 Related Attributes

RUSLE2 Related Attributes–Avery County, North Carolina								
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Representative value		value
	map unit	length (ft)				% Sand	% Silt	% Clay
StD—Stecoah-Soco complex, 15 to 30 percent slopes, stony								
Stecoah, stony	60		A	.28	4	45.3	43.2	11.5
Soco, stony	30		В	.24	3	45.3	43.2	11.5
StE—Stecoah-Soco complex, 30 to 50 percent slopes, stony								
Stecoah, stony	65		A	.28	4	45.3	43.2	11.5
Soco, stony	25		В	.24	3	45.3	43.2	11.5

Data Source Information

Soil Survey Area: Avery County, North Carolina Survey Area Data: Version 19, Sep 9, 2014



/, North Carolina	
Saturated Hydraulic Conductivity (Ksat)—Avery County,	(sr 1515 bottom)

MAP LEGEND	MAP INFORMATION
Area of Interest (AOI)	The soil surveys that comprise your AOI were mapped at 1:12,000.
Area of Interest (AOI)	Warning: Soil Map may not be valid at this scale.
Soil Rating Polygons	Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The mask do not show the small areas of contrasting
Not rated or not available	precentation into metry output shown are small areas of contrasting soils that could have been shown at a more detailed scale.
Soil Rating Lines = 18.5281	Please rely on the bar scale on each map sheet for map measurements.
Not rated or not available Soil Rating Points	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
	Wana from the Work Call Current and the Work Marader
Not rated or not available	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
Streams and Canals	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate
Transportation	calculations of distance or area are required.
+++ Rails	This product is generated from the USDA-NRCS certified data as of
Interstate Highways	the version date(s) listed below.
US Routes	Soil Survey Area: Avery County, North Carolina Survey Area Data: Version 19, Sep 9, 2014
Major Roads	de
Local Roads	or larger.
Background Aerial Photography	Date(s) aerial images were photographed: Oct 22, 2010—Mar 17, 2011
	The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Saturated Hydraulic Conductivity (Ksat)

Saturated Hydraulic Conductivity (Ksat)— Summary by Map Unit — Avery County, North Carolina (NC011)							
Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI			
StE	Stecoah-Soco complex, 30 to 50 percent slopes, stony	18.5281	3.3	76.8%			
StF	Stecoah-Soco complex, 50 to 80 percent slopes, stony	18.5281	1.0	23.2%			
Totals for Area of Interest			4.3	100.0%			

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second Aggregation Method: Dominant Component Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): All Layers (Weighted Average)

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Report—RUSLE2 Related Attributes

RUSLE2 Related Attributes-Avery County, North Carolina								
Map symbol and soil name	Pct. of	Slope	Hydrologic group	Kf	T factor	Representative value		value
	map unit	length (ft)				% Sand	% Silt	% Clay
StE—Stecoah-Soco complex, 30 to 50 percent slopes, stony								
Stecoah, stony	65	_	A	.28	4	45.3	43.2	11.5
Soco, stony	25	_	В	.24	3	45.3	43.2	11.5
StF—Stecoah-Soco complex, 50 to 80 percent slopes, stony								
Stecoah, stony	50	_	A	.28	4	45.3	43.2	11.5
Soco, stony	35	_	В	.24	3	45.3	43.2	11.5

Data Source Information

Soil Survey Area: Avery County, North Carolina Survey Area Data: Version 19, Sep 9, 2014