GeoWEPP ArcView Interface – Steps for BEAR Teams: post-fire & return period analysis

1. Introduction and Overview

Let's start GeoWEPP.

1. Double click on the **startgeowepp icon** or navigate to the geowepp folder and double click on **startgeowepp**. You will immediately get the **Important instructions** window. Read through them and click **OK**.



2. This will bring up the GEOWEPP wizard. Click onto the Use example data button.

GeoWEPP ArcX 2004.3	Open existing GeoWEPP project saved in a GeoWEPP
Use example data	Download and/or use NRCS Data Gateway zip files
Use own GIS Data	Use own GIS Data in ASCII Format

3. You now see the **Example Data Sets** window. Click on the **Hayman Fire – BAER Analysis** button.

	👰 Example Data Sets	X
	Click which data set you would like to use	
	Hayman Fire - BAER Analysis	
ľ		
	Hayman - CWE Analysis	
	Rangeland Analysis	
	Agriculture Analysis	

4. Click **OK** in the **Remember to Delete** window. This is just reminding you to delete the directory, so you can run the example analysis from the beginning the next time.



You now see DOS screens and layers being created for about a minute. Let the program run until its completion when you see the following screen. You have a view of the area suffering the most from the forest fire and the **Channel Delineation – Topographic Analysis (TOPAZ)** window, which we will now work from.

We are interested in the network channels and the watershed that is next to The Island in

Cheesman Lake. Using the **Zoom** button from the **TOPAZ** window, zoom into the area next to the red arrow.



We are interested in the slope that is south east of The Island.



A little explanation is now in order. What we are doing here is delineating channel networks to set watershed outlets. As you can see in the **Channel Delineation** window, you have the normal ArcView icons, such as **zoom in** and **pan**. Also, you can see two options by the left arrow. **Critical Source Area (CSA)** is the area required to initiate a channel [1 hectare = 100 m * 100m = 2.471 acres] (For more information, read 3.1 Fundamental Concepts in OVERVIEW.txt). **Minimum Source Channel Length (MSCL)** is the minimum length of a channel in a drainage pattern (For more information, read 4.4 TOPAZ Input Requirements in the OVERVIEW.txt). We will now remove the channels we have on the screen, set up new ones and map out a watershed.

Channel Delineation - Topographic Analysis (TOPAZ)	<u>×</u>
If delineation of channel network is acceptable proceed with Step 4 If network delineation is not acceptable adjust Critical Source Area (hectare): 5 Minimum Source Channel Length (m): 100	 Click here to remove network Click here to delete network Click here to delineate new
and proceed with Step 1. Use these tools to locate your area of interest in view: zoom in zoom out pan max. view	4. Activate tool button and set watershed outlet (NEVER set outlet on a confluence cell!)
O Image: Save Project	Accept watershed and proceed with WEPP

1. In the CSA, change the 5 to 2 (So, the area needed to create the channel will be reduced and we will see more channels on our view).

Channel Delineation - Topographic Analysis (TOPAZ) If delineation of channel network is acceptable proceed with Step 4	<u>×</u>
If network delineation is not acceptable adjust Critical Source Area (hectare): 4 Minimum Source Channel Length (m): 100	 Click here to remove network Click here to delete network Click here to delineate new
and proceed with Step 1. Use these tools to locate your area of interest in view: zoom in zoom out pan max. view	4. Activate tool button and set watershed outlet (NEVER set outlet on a confluence cell!)
🔍 🔍 🖑 🛃 Save Project	Accept watershed and proceed with WEPP

2. In the Click here window in the upper right, click once and you remove the channels.



- 3. The second click **deletes the network**.
- 4. After the second click, you see the Directory ownership window. Simply click OK.



- 5. If you receive an Error window, click OK.
- 6. The third click runs **TOPAZ** and **delineates the new network**. You see a number of DOS screens and then the view has the new channel network. As you can see below, our new network has more channels now.



Now you can make the watershed permanent.

7. Click the **4. Activate tool and set watershed outlet**

When you move the cursor over the view, you see that it's changed to a **cross in a circle**. We are ready mark off the watershed outlet that we are going to make the watershed for.

8. Put the cross in a circle cursor at the **end of the channel** (It must be at the end in order to delineate the channel). And click.



This process takes a couple of minutes and creates a new watershed.



9. Now the final part. If this is the watershed you want, click on Accept watershed and proceed with WEPP.



10. In the Info window, you are setting the watershed parameters. Click on OK.



11. In the **WEPP Climate Selection**, click the **Use Selected Station** to accept the weather station from Cheesman Co.

📕 WEPP Climate Sele	ection		×
Latitude: 39.18	26 Longitude:	-105.284	
State Colorado	✓ Station CHE	ESMAN CO	•
Based on the watershed CLIGEN data which is us	outlet point chosen the selection abo ed in WEPP simulations.	ve is the closest climate stati	on for
Distance to Closest Stati	on (miles): 2.6 (CHEESMAN CO)		
Use Existing C	Use Selected Station	Use Closest Station	Cancel

12. In the Cheesman CO window, click OK. This is setting up the data for 100 years.



Now, we get the **WEPP Management and Soil Lookup** window. Here we can decide on the type of landuse and soils for our catchment areas. We'll leave the landuse as is, but we want to change the soils.

1. Click on the **Soils** tab.



2. In the Soils window, click onto the GeoWEPP\High severity fire-sandy loam.sol in the WEPP Soil column.

Area	GIS Soil	WEPP Soil
25.5%	LowBurnSeverity	GeoWEPP\High severity fire-sandy loan
29.1%	ModerateBurnSeverity	GeoWEPP\20-yr forest sandy loam.sol
anduse	Soils Channels	
run a W uts. Dou t may be	/EPP simulation the landuse and soils defined uble-click on any entry in the WEPP managem e used. Where no WEPP management or soil i	in the GIS must be assoicated with equivalent WEPP ent or soils columns to display a list of WEPP inputs is specified the default soil or management will be used

3. In the Select a Soil file, navigate to Low severity fire-sandy loam and click on it to import this file.



4. For the remaining areas in the GIS Soil column, change the ModerateBurnSeverity to Low severity fire-sandy loam and the HighBurnSeverity to High severity fire-sandy loam.

	WEPP	Management and Soil Lookup	×
	Area	GIS Soil	WEPP Soil
	25.5% 29.1%	LowBurnSeverity ModerateBurnSeverity HighBurgSeverity	GeoWEPP\Low severity fire-sandy loam.sol GeoWEPP\Low severity fire-sandy loam.sol GeoWEPP\Lick severity fire-sandy loam.sol
	43.3%	nighbansevelig	deowern wign seveny nersandy loan. sor
	Landuse	<u>Soils</u> Channels	- CIC such has a series to double and other to V/CDD
in th (*)	o run a W puts. Dou at may be)	tePP simulation the landuse and soils defined in it ible-click on any entry in the WEPP management e used. Where no WEPP management or soil is sp	e GIS must be associated with equivalent WEPP or soils columns to display a list of WEPP inputs becified the default soil or management will be used
		OK	Cancel

6. In the WEPP Management and Soil Lookup window, click OK.

Now you see the **WEPP/TOPAZ Translator**. We want to run a 10-year simulation for both Watershed and Flowpaths.

- 1. In Number of Years, type in 10.
- 2. In Simulation Method, choose Watershed and Flowpaths.
- 3. Click Run WEPP.

WEPP Watershed Se	ttings	Name	Management	Soil	1%0
Change Soil	Associations Change Channel Associations	Hill 51	GeoWEPP\45% cove	GeoWEPP\Low seve	6
	Change Channel Associations	Hill_52	GeoWEPP\25% cove	GeoWEPP\High sev	2.
		Hill_32	GeoWEPP\90% cove	GeoWEPP\Low seve	18
Change Manager	nent Associations	Hill_62	GeoWEPP\45% cove	GeoWEPP\Low seve	8.
		Hill_53	GeoWEPP\45% cove	GeoWEPP\Low seve	0.
Watershed has 17 H	lillslopes and 7 Channels.	Hill_42	GeoWEPP\45% cove	GeoWEPP\Low seve	0.
		Hill_61	GeoWEPP\25% cove	GeoWEPP\High sev	6.
Clauste	Colorado\CHEESMAN CO.cli	Hill_43	GeoWEPP\45% cove	GeoWEPP\Low seve	1.
Climate		Hill_63	GeoWEPP\25% cove	GeoWEPP\High sev	10
Number of Years	10 Change Climate	Hill_22	GeoWEPP\90% cove	GeoWEPP\Low seve	2.
		- Hill_72	GeoWEPP\45% cove	GeoWEPP\Low seve	3.
Simulation Method	Watershed and Flowpaths	Hill_33	GeoWEPP\45% cove	GeoWEPP\Low seve	11
		Hill_73	GeoWEPP\45% cove	GeoWEPP\Low seve	1.
	BunWEPP	Hill_71	GeoWEPP\25% cove	GeoWEPP\High sev	- 7.
		Hill_23	GeoWEPP\90% cove	GeoWEPP\Low seve	5.
		Hill S1	GeoWEPP\25% cove	GeoWEPP\High cov	- E

4. In the **WEPP Results in relative measures of T**, you can name the layers that were produced. Leave Watershed as **Offsite1thy** and Flowpath as **Onsite1thy**. Click **OK**.

🔍 WEPP Results in relative measures of T	X
Use max.13 letters and numbers only; no blanks!	OK
Sediment yield into Channel (Watershed Method): Dffsite1thy	
Soil Loss from each raster (Flowpath Method): Onsite1thy	Cancel

From the simulation, you get two results. First, you get the two new layers. The **Offsite1thy**, as seen below, shows the erosion for each subcatchment. The shades of red show a higher erosion level.



You can display the **Onsite1thy** by turning off the checkmark for **Offsite1thy** in the table of contents on the left side of the view. You now see that the simulation is given by pixel. This non-aggregated simulation shows greater detail of the erosion.



Second, you get a Notepad file with the actual results. Here you can find the numbers for the Runoff Volume, Soil Loss, Sediment Yield, etc. Please minimize the Notepad window. Do not close it. We'll need it for later.

File Edit Format View Help 10 YEAR AVERAGE ANNUAL VALUES FOR WATERSHED ****WEEPP Watershed Simulation for Representative Hillslopes and Channels (watershed method)*** ****WEEPP Watershed Simulation for Representative Hillslopes and Channels (watershed method)*** ****WEEPP Watershed Simulation for Representative Hillslopes and Channels (watershed method)*** ***** ***** ************************************	_ 8 ×
10 YEAR AVERAGE ANNUAL VALUES FOR WATERSHED ***WEAPP Watershed Simulation for Representative Hillslopes and Channels (watershed method)*** WATERSHED SUMMARY (watershed method, off-site assessment) Hillslopes Volume Loss Yield Area Soil Sediment WEAPP TOPAZ (m3/yr) (tonne/yr) (tonne/yr) (tan. (tonne/ha/yr)) 1 22 0.0 0.0 0.0 0.8 0.0 0.0 3 32 0.0 0.0 0.0 0.8 0.0 0.0 3 32 0.0 0.0 0.0 1.8 0.0 0.0 4 32 0.0 0.0 0.0 1.8 0.0 0.0 5 443 0.0 0.0 0.0 0.5 0.0 0.0 5 443 0.0 0.0 0.0 0.5 0.0 0.0 7 5 1 0.0 0.0 0.0 0.3 4 0.0 0.0 8 52 59.3 3.0 3.0 0.9 3.4 3.4 9 53 0.0 0.0 0.0 0.0 3.0 0.0 0.0 10 62 0.0 0.0 0.0 0.3 0.0 0.0 0.0 11 61 52.0 2.9 2.9 2.2 1.3 1.3 12 63 194.4 6.3 6.3 3.5 1.8 1.8 13 72 0.0 0.0 0.0 0.1 1.2 0.0 0.0 14 73 0.0 0.0 0.0 0.1 1.2 0.0 0.0 14 73 0.0 0.0 0.0 0.2 3.0 0.0 15 1.1 0.0 0.0 0.0 0.2 3.0 0.0 16 8 51 194.4 6.3 6.3 3.5 1.8 1.8 17 83 108.8 5.1 5.1 1.9 2.7 2.7 CHANNEL SUMMARY (watershed method, off-site assesment) Channels (m3/yr) (tonne/yr) (tonne/yr) (tonne/yr) (tenne/yr) (tenne/yr	
WEPP watershed Simulation for Representative Hillslopes and Channels (watershed method) WATERSHED SUMMARY (watershed method, off-site assessment) Hillslopes volume Loss vield (tonne/yr) Sediment vield (tonne/yr) 1 22 0.0 0.0 0.8 0.0 0.0 3 32 0.0 0.0 0.8 0.0 0.0 4 33 0.0 0.0 0.8 0.0 0.0 4 42 0.0 0.0 0.4 3.8 0.0 0.0 5 42 0.0 0.0 0.0 0.1 0.0 0.0 7 42 0.0 0.0 0.1 0.0 0.0 0.0 7 42 0.0 0.0 0.0 0.1 0.0 0.0 7 53 0.0 0.0 0.3 0.0 0.0 0.0 10 62 0.0 0.0 0.0 1.3 1.3 1.3 12 63 194.4 6.3 6.3 3.5 1.8 1.8 13 72 0.0 </td <td>-</td>	-
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Next, we would like to remap the simulation output for the target value 'T' to 10 t/ha soil loss and sediment yield.

1. In the Erosion – Water Erosion Prediction Project (WEPP) window, go to the Tolerable Soil Loss. In the t/hectares/year box, type in 10 and press enter. Observe how the other numbers in the T value classes window change.

Erosion - Water Erosion Prediction Project (WEPP)	🔍 T value classes as absolute numbers
Change main WEPP model input (repeat 13. for scenarios)	Tolerable Soil Loss/Target (T) (t/ha/yr): 10.00
1. Change a single hillslope/channel WEPP database	Deposition
	>1 T is greater 10.00
2. Hun WEPP for watershed/flowpaths Tolerable Soil Loss or Target (T)	<= 1 T is smaller 10.00
3. Get and remap simulation results based on Ta	Tolerable Soil Loss or Sediment Yield
4. Run WEPP for a single hillslope/channel (optional) tons/acre/year	0 T - 1/4 T is smaller 2.50
	1/4 T - 1/2 T is between 2.50 and
Current Active Scenario View1 Run New Scenario Delete a theme in view Save Project	1/2 T - 3/4 T is between 5.00 and
	3/4 T - 1 T is between 7.50 and
Orisite1thy Onstetthy	Not Tolerable Soil Loss or Sediment Yield
	1 T - 2 T is between 10.00 and
	2T - 3T is between 20.00 and
Substrehments	3 T · 4 T is between 30.00 and
	> 4 T is greater 40.00
✓ Landoov r5 Burn Seve	Get this table in english units (tons/Acre/year)

2. In the Erosion – Water Erosion Prediction Project (WEPP) window again, click on Step 3. Get and remap simulation results based on Target (T).

🍭 Erosior	a - Water Erosion Prediction Project (WEPP)	X
	Change main WEPP model input (repeat 13. for scenarios)	
	1. Change a single hillslope/channel	WEPP database
Q	2. Due V/CDD (complete bad //lowership	
		Tolerable Soil Loss or Target (T)
	3. Get and remap simulation results based on Target (T)	t/hectare/year 10.00
	4. Run WEPP for a single hillslope/channel (optional)	tons/acre/year 4.46
Cum	ent Active Scenario View1 Run New Scenario D	elete a theme in view Save Project

3. In the WEPP Results window, leave the name as Offsite10thy and click OK.



As you can see below, two new layers with the new soil loss were created. Since a greater amount of soil loss was considered tolerable, the colors for the subcatchments are given in green.



Also, a Notepad file was created. If you compare this new file to the first one that we created, you see the numbers are the same. The amount of erosion is the same, but the amount of what was tolerable was considered different and this was depicted in the view.

📕 onsite	e10thy - I	Notepad												_ 8 >
File Edi	t Format	View Help												
1 -	0 YEAR	AVERAGE A	NNUAL V	ALUES FOR	WATERSH	HED								-
WEP	P Wate	rshed Simu	lation	for Repre	sentativ	/e нillsl	opes and Char	nels (waters	hed met	hod)				
	WATERS	HED SUMMAR	Y (wate	rshed met	nod, off	-site as	sesment)							
Hillsl WEPP T	opes OPAZ	Runoff Volume (m^3/yr)	soil Loss (tonne∕yr)	Sec Yie) (to	diment eld onne/yr)	Area (ha)	soil Loss (tonne/ha/y	*№ Se Yi	Mapped ediment ield conne/ha/yr)				
1 2 3 4 5 6 7 7 8 9 10 112 12 13 14 15 16 17	22 23 32 42 43 52 52 61 62 61 62 73 71 83 71 83 CHANNE	0 0 0 0 0 0 0 52 194 0 0 115 77 108 L SUMMARY	.0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.9 6.3 0.0 0.0 7.6 6.8 5.1 hed methor	d, off−s	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.9 6.3 0.0 0.0 0.0 0.0 0.0 0.0 5.1 5.1	0.8 1.8 6.4 3.8 0.1 0.5 2.3 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.3 1.8 0.0 0.0 0.0 0.0 2.9 2.7		0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0				
Channe NUM WE	ls PP TOP	Disc Volu AZ (m^3	harge me /yr)	Soil Loss (toni	ne/yr)	Sedi Yiel (ton	ment d ne/yr)	Length (m)	Le (c	ength cells)				
1 2 3 4 5 6 7	4 3 2 1 5 7	 54 64 74 84 44 34 24	47.9 214.9 97.4 172.7 243.3 306.7 468.5		n.a. n.a. n.a. n.a. n.a. n.a. n.a.		2.0 8.0 33.1 11.5 30.0 345.1 137.7	102.4 427.3 247.3 187.3 127.3 264.9 72.4		3 13 7 5 3 8 2				
the second	1 661 Geor	W/EPP ArcVie	and the	ew 615 3 3	a http://	radio sonice	W untitled - Paint	ansietik	u - Noten	onsite10the			A net	1-45 PM
Jotan		SWELLI ALCVIE	MICVI	ow and 5.5	- undrave	adio.sofilert	- unkided - Fairk	Unsiter un	y notep	onside rouny	6	130 A 181 4	300 🔛	1.45 PM

It's always a good idea to save your files often in case of crashes.

1. In the Erosion – Water Erosion Prediction Project (WEPP) window, click on the Save **Project** button.

🍭 Erosio	n - Water Erosion Prediction Project (WEPP)	×
	Change main WEPP model input (repeat 13. for scenarios)	
	1. Change a single hillslope/channel	WEPP database
Q	2. Run WEPP for watershed/flowpaths	Tolerable Soil Loss or Target (T)
(1)	3. Get and remap simulation results based on Target (T)	t/hectare/year 10.00
	■↓ 4. Run WEPP for a single hillslope/channel (optional)	tons/acre/year 4,46
Cur	rrent Active Scenario View1 Run New Scenario De	elete a theme in view Save Project

2. In the **GeoWEPP Watershed Directory**, note that you are saving this project in **C:\geowepp\ExampleSet\Haymanbaer**. Click **OK**.



3. In the Save Project As window, give the project the name Hayman. Click OK.



4. In the **Thank you for using GeoWEPP!** window, it prompts you to exit GeoWEPP. Click **No**.



Now, we are interested in doing mitigation of the subcatchments. We want to change the soils of the subcatchment to reduce the amount of erosion. Note that often the tops and bottoms of many hills do not need mitiation, only the midslopes; also some low/medium burn severity areas can function as a buffer strip.

1. Turn off the **Offsite10thy** and **Onsite10thy** layers to show the **Offsite1thy** layer that depicts high erosion in red. This will give us a better sense of the erosion. We are interested in subcatchment 71, which is a subcatchment in the south-east of the catchment area.



2. In the **Erosion – Water Erosion Prediction Project (WEPP)** window, click on **Step. 1. Change a single hillslope/channel** icon

🍭 Erosio	n - Water Erosion Prediction Project (WEPP)	×
	Change main WEPP model input (repeat 13. for scenarios)	
	1. Change a single hillslope/channel	WEPP database
Q	2. Run WEPP for watershed/flowpaths	Tolerable Soil Loss or Target (T)
()	3. Get and remap simulation results based on Target (T)	t/hectare/year 10.00
	4. Run WEPP for a single hillslope/channel (optional)	tons/acre/year 4.46
Cur	rent Active Scenario View1 Run New Scenario De	elete a theme in view Save Project

2. You now notice that the cursor has changed into a cross with a label symbol. Click this onto the subcatchment, and you get the **Change Management** window. Click **Yes**.



4. In the **Select a management** window, click on the **GeoWEPP** folder. There, double-click **grass** to use this management file.

Select a management file ID 71	2
	Browse
🗄 🛄 Agriculture	
E − Errest	OK
18% cover short grass prarie	Cancel
25% cover-high severity burn	Cancer
90% cover-low severity burn	
corn,soybean-fall mulch till	
fallow	
fallow tilled	
grass	
Mountain Big Sagebrush	
Tree-20 yr old forest	
winter wheat, Conventional till	
default	
fallow	
arass	

5. In the Change Soil window, click No.

Change S	ioil
?	Hillslope No : 71 Climate : "Colorado\CHEESMAN CO.cli" Management : "GeoWEPP\grass.rot" Soil : "GeoWEPP\High severity fire-sandy loam.sol"
	Do you want to change Soil for this representative hillslope?
	Yes No

6. In the Erosion – Water Erosion Prediction Project (WEPP) window, click on Step. 4. Run WEPP for a single hillslope/channel icon

Erosion - Water Erosion Prediction Project (WEPP)
Change main WEPP model input (repeat 13. for scenarios)
VEPP database WEPP database
2. Run WEPP for watershed/flowpaths Tolerable Soil Loss or Target (T)
3. Get and remap simulation results based on Target (T) t/hectare/year
4. Run WEPP for a single hillslope/channel (optional) tons/acre/year 4.46
Current Active Scenario View1 Run New Scenario Delete a theme in view Save Project

7. Click onto hillslop 71. You now get the Run WEPP interface window. Click Yes.



8. Next, **WEPP Model for Windows** appears. Here you can run you simulation for the individual hillslope. In **Welcome to WEPP for Windows**, click **Cancel** because hill #71 is already loaded.

WEPP Model for Windows File Edit View Option Tools Window Help	
St. geowepp	
CHEESMAN CO Manager Climate Slope Soil	2 Year Simulation Value Units Average Annual Precipitation in Average Annual Soil Loss ton/A Average Annual Soil Loss ton/A
Welcome to WEPP for Windows	
After selecting a task click the 'Start Task' button to begin	
Feet	Jrn P
Soi Loss Graph Brephical Output Return Periods Text Output Run Options Run	
For Help, press F1	SCALE Y:123456 NUM
🐮 Start 🖉 GeoWEPP Ar 🗿 Windows Me 🦷 🍳 ArcView GIS 🖉 The New Yor 📄 onsite1thy - N 📄 onsite	a10thy 🛛 💑 WEPP Mod 🥜 🐺 🥑 🖉 🏠 🍓 🖄 1.55 PM

9. We want to now set the options for the run. On the bottom of the window, click **Run Options**.



10. In the **Watershed Options** menu, make sure the **Return Period Summary** is checked. This will give you the summary report. Also, increase the **Simulation years** to 50. Click **OK**.

WEPP Run Options	×
🗖 Create pass file	Event by event summary
🗖 Warmup output	OFE line summary
Water output	🗖 Brief summary
Crop output	Winter output
🔲 Soil output	Yield output
🔽 Graphics output	Return Period Summary
🗹 All events	Main output option:
Rangeland Specific Plant output Animal (grazing) output	Annual, abbreviated
OK	Cancel

11. Back in the WEPP Model for Windows, click Run to run the simulation.



12. After the simulation runs, you get a new screen. You can see depicted in red that erosion is heaviest towards the bottom of the slope. Click onto **Return Periods** to get a summary of the results.



13. In the **Return Periods** window, you have the results of the simulation, such as runoff and sediment.

Return Period (years)	Daily Runoff Volume (mm)	Daily Sediment Leaving (t/ha)	Daily Peak Rate (mm/hr)	Daily Precipitation (mn
2	0.0	0.0	0.6	31.4
5	0.9	0.0	4.6	42.4
10	1.3	0.1	8.2	46.6
20	2.0	0.2	9.8	47.6
25	2.3	0.2	11.4	50.4

Finally, let's see the effect on hillslope 71 if we change it to grass. We need to go back into WEPP and run another simulation.

- 2. In Return Periods, click OK to close the window.
- 2. Close the WEPP Model for Windows to show the GeoWEPP screen.
- 2. You are prompted to save the WEPP project. Click Yes.

Project: (C:\Program Files\USDA	-ARS\WEPP\I	Data\Projects\geowepp.prj	X
?	Save changes to WEPP p	project?		
	Yes	No	Cancel	

4. Back in Erosion – Water Erosion Prediction Project (WEPP), click 2. Run WEPP for watershed/flowpaths.

💐 Erosion - Water Erosion Prediction Project (WEPP)
Change main WEPP model input (repeat 13. for scenarios)
Image: Constraint of the state of
2. Run WEPP for watershed/flowpaths Tolerable Soil Loss or Target (T)
3. Get and remap simulation results based on Target (T) t/hectare/year 10.00
4. Run WEPP for a single hillslope/channel (optional) tons/acre/year 4.46
Current Active Scenario View1 Run New Scenario Delete a theme in view Save Project

5. In the **WEPP Management and Soil Lookup**, notice that a 4th area has been created when we changed the management to grass. If you look in the **WEPP Management** field, you can now see a grass management. Click **OK**.

	Area	GIS Landuse	WEPP Management
	25.5%	Low Burn Severity	GeoWEPP\90% cover-low severity burn.rot
	29.1%	Moderate Burn Severity High Burn Severity	GeoWEPP\45% cover-moderate severity bur GeoWEPP\25% cover-high severity burn rot
	6.7%	No Data	GeoWEPP/grass.rot
	Landuse	Soils Channels	
	Landuse o run a W	Soils Channels	defined in the GIS must be assoicated with equivalent WEPF
T	Landuse o run a W puts. Dou	Soils Channels (EPP simulation the landuse and soils ible-click on any entry in the WEPP m	defined in the GIS must be assoicated with equivalent WEPF anagement or soils columns to display a list of WEPP inputs
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6. In the WEPP/TOPAZ Translator, make sure it's set for 2 years and Watershed and Flowpaths. Click Run WEPP.

VEPP Watershed Set	tings		Name	Management	Soil	% of Are
Change Soil A	ssociations Change Channel Asso	ciations	Hill_51	GeoWEPP\45% cove	GeoWEPP\Low seve	6.9%
		oldaono	Hill_52	GeoWEPP\25% cove	GeoWEPP\High sev	2.6%
			Hill_32	GeoWEPP\90% cove	GeoWEPP\Low seve	18.8%
Change Managem	ent Associations		Hill_62	GeoWEPP\45% cove	GeoWEPP\Low seve	8.7%
Watershed has 17 Hillslopes and 7 Channels.			Hill_53	GeoWEPP\45% cove	GeoWEPP\Low seve	0.8%
			Hill_42	GeoWEPP\45% cove	GeoWEPP\Low seve	0.3%
			Hill_61	GeoWEPP\25% cove	GeoWEPP\High sev	6.3%
or .	Colorado\CHEESMAN CO.cli		Hill_43	GeoWEPP\45% cove	GeoWEPP\Low seve	1.6%
Llimate	,		Hill_63	GeoWEPP\25% cove	GeoWEPP\High sev	10.3%
Number of Years	2	Change Climate	Hill_22	GeoWEPP\90% cove	GeoWEPP\Low seve	2.4%
			Hill_72	GeoWEPP\45% cove	GeoWEPP\Low seve	3.4%
Simulation Method	Watershed and Flowpaths		Hill_33	GeoWEPP\45% cove	GeoWEPP\Low seve	11.1%
			Hill_73	GeoWEPP\45% cove	GeoWEPP\Low seve	1.6%
	(Den W/CDD)		Hill_71	GeoWEPP\grass.rot	GeoWEPP\High sev	7.4%
	[nurl WEFF]		Hill_23	GeoWEPP\90% cove	GeoWEPP\Low seve	5.3%
			Hill_81	GeoWEPP\25% cove	GeoWEPP\High sev	6.9%
			Hill 83	GeoWEPP\25% cove	GeoWEPP\High sev	5.6%

7. In the WEPP Results in relative measure of T, change the names to Offsite1thy2 and Onsitethy2. Click OK.



You can now see that most of the erosion has stopped due to this change in landuse.

