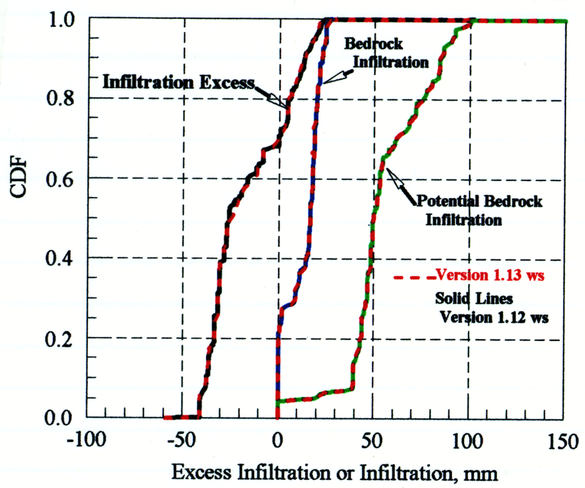
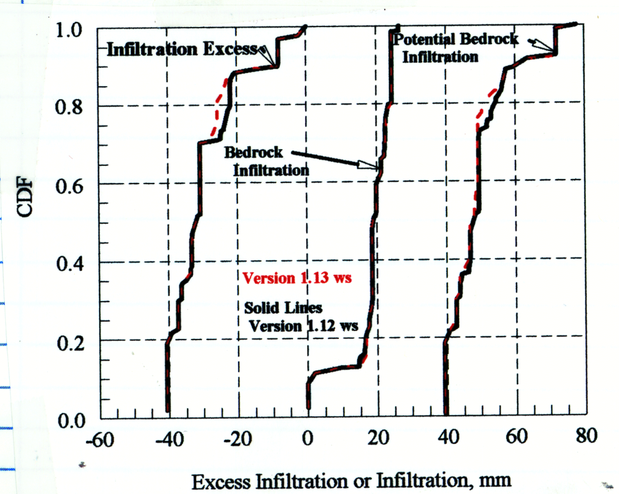
Daw 5-11-05 Runoff Comparisons (Con't)



CDFs for Event S8_3995B, 80.3 mm, API = 41 mm (Runs APISW_17B&C)

Data: C: | USW_03 | OUTREAL3 | APISW_17B.OUT (Program version 1.12ws)
| APISW_17C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_17WSHEDCompare.pgw
daw 5-11-05

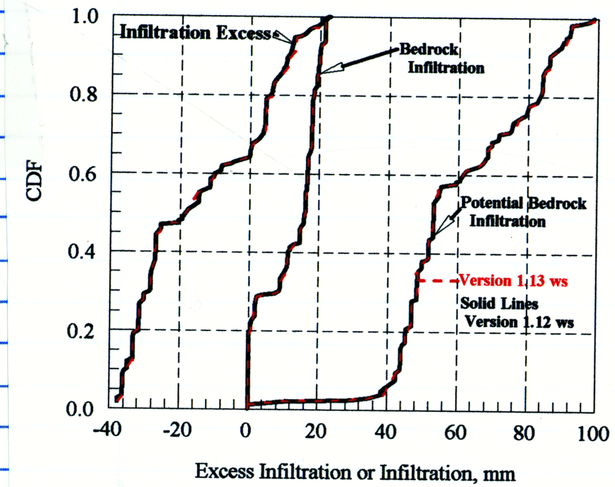
For the entire watershed, CDFs for this event (and also APISW_12) are virtually indistinguishable. For ridge elements (shown below) there are small differences in the CDFs of infiltration excess and potential bedrock infiltration, consistent with the figure on p 205.



CDFs for Upper Split Wash Ridge Elements, Event S8_3995B, 80.3 mm, API = 41 mm (Runs APISW_17B&C)

Data: C: | USW_03 | OUTREAL3 | APISW_17B.OUT (Program version 1.12ws)
| APISW_17C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_17RIDGE_COMPARE.pgw
daw 5-12-05

Daw 5-12-05 Runoff Comparisons versions 1.12ws vs 1.13ws

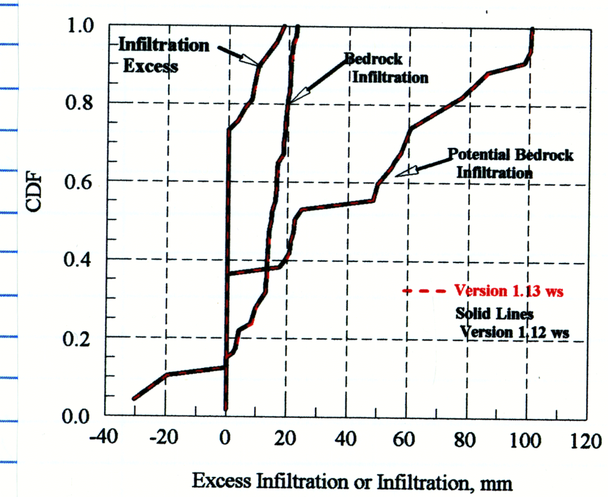


CDFs for Upper Split Wash Slope Elements, Event S8_3995B, 80.3 mm, API = 41 mm (Runs APISW_17B&C)

Data: C: | USW_03 | OUTREAL3 | APISW_17B.OUT (Program version 1.12ws)
| APISW_17C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_17SLOPECOMPARE.pgw
daw 5-12-05

An inspection of the CDFs for slope elements and toe-of-slope elements (this page) shows that the results are indistinguishable.

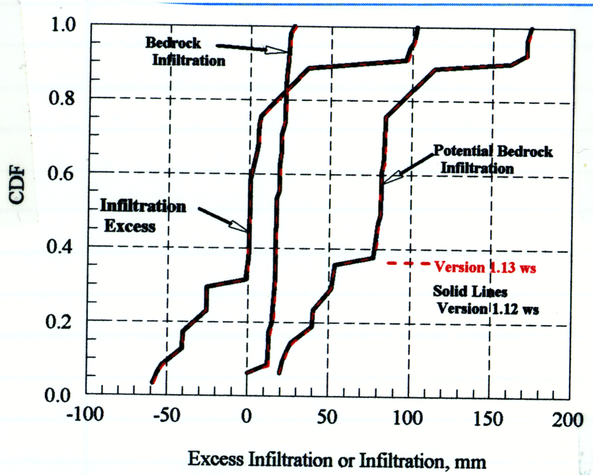
The CDFs for channel elements are shown on p 208.



CDFs for Upper Split Wash Toe of Slope Elements, Event S8_3995B, 80.3 mm, API = 41 mm (Runs APISW_17B&C)

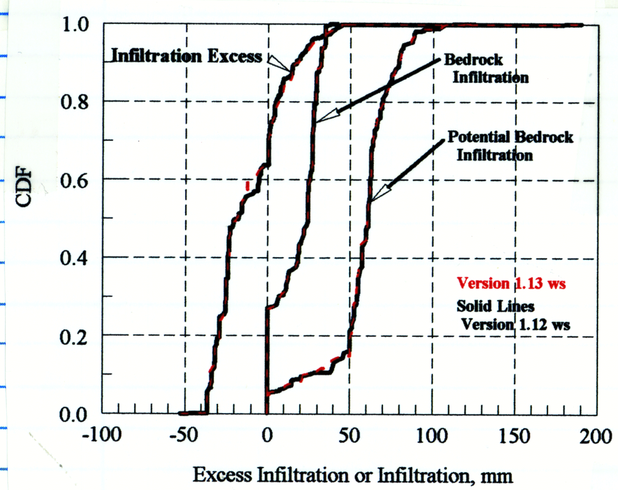
Data: C: | USW_03 | OUTREAL3 | APISW_17B.OUT (Program version 1.12ws)
| APISW_17C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_17TOE_COMPARE.pgw
daw 5-12-05

Daw 5-12-05 Comparison of KINEROS2 versions 1.12ws + 1.13ws.



CDFs for Upper Split Wash Channel Elements, Event S8_3995B, 80.3 mm, API = 41 mm (Runs APISW_17B&C)

Data: C: | USW_03 | OUTREAL3 | APISW_17B.OUT (Program version 1.12ws)
| APISW_17C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_17CHAN_COMPARE.pgw
daw 5-12-05



CDFs for UpperSplit Wash Watershed Event S18_95_2, 86.7 mm, API = 10 mm (Runs APISW_12B&C)

Data: C: | USW_03 | OUTREAL3 | APISW_12B.OUT (Program version 1.12ws)
| APISW_12C.OUT (Program version 1.13ws)
Fig. : C: | VALIDATION_SWRI | VALIDATION_05 | APISW_12WSHEDCompare.pgw
daw 5-12-05

Finally a plot of CDFs of runs API_12B and C is shown. This event had a lower API (10 mm vs 41 mm) There is a minor difference between the infiltration excess cdfs but the bedrock and potential bedrock infiltration CDFs are again nearly the same. Because the major objective of this study has been to estimate deep infiltration, I conclude that the differences between the two versions are scientifically insignificant.

Daw 8-3-05 Run APISW_1C with Kineros 1.13ws.

Control file: C:\validation_SWRI\VALIDATION_05\APISW.1C
output file C:\USW_03\OUTREAL3\APISW_1C.OUT
0.03 mm Runoff

Program: C:\VALIDATION_SWRI\VALIDATION_05\K2WSnew\KIN2WS
dated 5/5/2005.

Copy summary from x.OUT file to *.SUM file.

Get CDFs for this run.

Control file: C:\USW_03\APISW_1C.CON

COMPUTER PROGRAM: C:\USW_02\STORMCDF.F95

OUTPUT in C:\USW_03\CDFREAL3\ASW_1C.CDF

Also create CDF files for APISW_15C

Copy SUMMARY from x.OUT file to *.SUM file

CONTROL FILE: C:\USW_03\APISW_15C.CON

Output in C:\USW_03\CDFREAL3\ASW_15C.CDF

Output for this storm and those on p 203 were entered in a Quattro Pro worksheet C:\USW_05\RUNON_TABLE.qpw

This table was sent to Stuart Stothoff on 8-4-05. For an update of the TPA adjustments. See p 163.

DAW 1-29-07 Continuous Version of KINEROS2

For reference see: my documents\SWRI_06\Proposed Pilot Study a.wpd

R.E. Smith completed a run for the period June 1987 – Dec 1994 for the 3 plane Upper Split Wash cascade (planes 116, 117 and 118). His summary monthly output file is: C:\KINEROS_06\SW_118mon.out. For each plane, the following data are shown for each month:

rain soilwater seepage runoff runon ET

All units are in m^3 to facilitate volume balance checking. For presentations and comparisons with event based KINEROS or OPUS results, units of mm would be preferable.

The areas of each plane are:

Plane	Area (m^2)	L	W	THICK	S	Multiplier to get mm
116	341.6	48.8	7.0	250.	0.468	2.927
117	494.84	35.6	13.9	250.	0.505	2.0209
118	360.32	21.7	16.6	3000.	0.357	2.776

Above information from: C:\USW-07\SWCHJ_OL.PAR

The file C:\KINEROS_06\SW_118mon.out was edited to remove unneeded information headings and given unique column names and was saved as SW_118mon.dat

All information from this file was imported into a PsiPlot spreadsheet, the data were converted to units of millimeters in separate columns and saved in SW_118mon.pdw

DAW 1-31-07 Plotted data with PSIPLOT

Some discrepancies were identified in the output. This information was provided to R.E. Smith who worked with ARS-Tucson to correct them.

2-27-07 DAW Check Continuous Version KINEROS2+

A new output file was obtained from R.E. Smith. The ASCII file was edited and incorporated into file:
C:\KINEROS_06\SW_118monB.Pdw

To get runoff per unit contributing area

Plane	Cont. Area (m^2)	Multiple to get mm
116	341.6	2.927
117	836.44	1.196
118	1,196.66	0.8357

3-1-07 DAW. Diagnostics

To check water balance columns for precipitation, seepage, Runoff, Runon and ET were summed for each element. Units are m^3. Duration was 111 months.

DAW 3-1-07

Plane	Precipitation	runon	seepage	Runoff	ET	~~Error~~ Δstorage
116	523.19	0	153.5	26.26	367.22	−19.0
117	757.91	26.26	228.95	58.54	530.41	−27.07
118	561.8	58.54	205.32	4.92	442.04	−35.21

Water balance: Infow = outflow + Δstorage + error

	Error(m^3)	% of inflow
116	−4.19	−0.80
117	−6.06	−0.77
118	3.27	0.52

Global error = −0.38%

Given the model complexity and approximation errors due to finite difference increments in space and time, this is acceptable.

Daw 3-8-06 Continuos Kineros - Compare selected monthly totals with event based version.

During the months of Jan., Feb. and Mar. 1995 there were 4 significant precipitation events. They occurred on Jan 4-7, Jan 21-26, Feb. 28 and Mar. 9-11.

~~SWTBC-11~~
~~SWTBC-12~~ Daw 3-8-06
~~SWTBC-17~~
~~SWTBC-~~

From p 173, The KINEROS2 runs during that period were: (in C:\VSW_03\OUTREAL2

File Name	Precip date
APISW_11B	Jan 4-7, '95
APISW_12B	Jan 21-26 "
APISW_18B	Feb 28
APISW_17C	Mar 9-11

Seepage in mm for planes 116, 117 and 118 for these runs was obtained from *.OUT files in C:\VSW_03\OUTREAL2

Seepage in mm

	File	116	117	118	APT
Jan	-11	30.11	30.11	0.0	26.0
	-12	64.76	66.33	0.0	10.0
	-18	25.93	25.93	0.0	5.2
	-17	59.38	60.50	0.0	41.0

From KINEROS2+

Seepage in mm

Month	116	117	118	Rain
Jan	~~7.27~~ 21.28 (Daw 3-8)	27.24	85.31	126.06
Feb	~~6.64~~ 19.44	18.71	24.12	31.02
Mar	63.52	66.02	176.94	106.02

Daw 3-8-07

The January seepage for KINEROS2 is greater than for KINEROS2+, possibly reflecting a difference in initial water content of the soil. For Feb and Mar the seepage quantities for both 116 and 117 are reasonably close for both models. The striking difference is the absence of seepage for plane 118 and KINEROS2. Two possibilities should be examined

1) The difference in the soil water profiles at the beginning of precipitation events

2) Greater runon infiltration for KINEROS2+ because microtopography is not included

Compare runon runoff and infiltration for Jan, Feb + Mar 1995 118 (units are m^3)

	KINEROS2 (Daw 3-8-06) Runon	Runoff	Infil	KINEROS2+ Runon	Runoff	Infil	Seepage
Jan	0+13.99	0+10.70	(10.95 35.03) ~~(18.13 + 18.90)~~	21.33	0.94		~~(Daw 3/8) 95~~ 85.31
Feb	0	0	12.65	0	0		24.12
Mar	16.60	12.88	32.62	28.81	0.78		176.94

Thus plane 118 shows greater runon and less runoff for KINEROS2+.

3-20-07 Diagnostics KINEROS2+

R.E. Smith sent new output file for planes 116, 117 and 118

File Name: C:\KINEROS_06\SW_118monD.OUT

Import to PSIplot + get Column Statistics Units are m^3

Plane	Precip	~~runon~~ Seep (Daw 3-20-07)	runoff	runon	ET	vol error (%)	Δ Storage
116	519.29	153.56	25.81	0	354.09	0.44	-6.56
117	752.27	229.33	57.05	25.81	512.61	0.64	-21.54
118	547.57	206.58	4.88	57.05	423.88	0.59	-31.26

Daw 3-20-07

Check water balance

Precip + runon = runoff + seep + ET + Δstor + ε

	Error, ε m³	
116	-7.61	-1.46
117	0.63	+0.08
118	0.54	+0.01

Daw 3-21-07
R.E. Smith sent an output file for the hillslope sequence 181, 182, 183, 184, 185
File: C:\KINEROS.06\SW_185mon.out
The areas of each plane and other relevant information is shown below.

Plane	L(m)	W(m)	Area(m²)	S	Thick(mm)	RE(mm)	Convert to mm
181	34.0	21.7	737.8	0.215	120	50.	1.355
182	66.5	54.3	3,556.65	0.386	180	50.	0.281
183	26.8	50.2	1,345.36	0.455	280	100.	0.743
184	40.6	44.2	1,794.52	0.480	800	100.	0.557
185	12.3	22.6	277.98	0.223	1500	150.	3.597

Above information from C:\USW_02\SWCHJ_OL.PAR

Error Statistics

ε % of inf	Plane	Sum(m³)	Maximum/mo-yr	Minimum/mo-yr		Δstor
-0.61	181	Daw 3-21-07 ~~-4.02~~ -6.82	Daw 3-21-07 ~~0.54~~ 0.46	Daw 3-22-07 ~~-3.65~~ -3.17	Dec '92	-33.2
-0.19	182	-10.72	1.45	-6.96	Mar '95	-161.96
-0.005	183	-8.51	0.63	-4.49	Mar '95	-80.54
-0.5	184	-16.83	2.43	-12.75	Mar '95	-177.58
-0.6	185	-4.02	0.54	-3.65	Mar '95	-27.41

Daw 3-21-07

Convert Input + output to mm for qualitative check

Plane	Precip	Seepage	runoff	runon	ET	Δstor
181	1121.7	355.48	111.03	0	694.25 ← m³	-33.2
	1,519.9	481.68	150.45	0	970.71 ← mm	
182	5,407.17	1676.22	498.72	111.03	3583.13	-161.91
	1,519.4	471.02	140.14	31.20	990.0	
183	2,045.37	687.41	533.29	498.72	1,417.38	-80.54
	1,519.7	507.03	396.23	370.54	1,053.11	
184	2,728.18	1043.87	264.46	533.29	2,147.68	-177.58
	1,519.6	581.43	147.30	297.04	1,196.25	
185	422.67	176.99	209.86	264.46	331.65	-27.41
	1,570.3	636.63	754.87	951.26	1,192.94	

3-22-07 Daw.
There are a total of 99 months, so an approximate value for mm/y would be to divide sums by 99/12 = 8.25

Approximate Annual Values (mm/y)

Plane	Precip	Seepage	Runoff	Runon	ET	Accumulative Area m²	Area Factor
181	184	56	18	0	118	737.8	1.355
182	↓	57	17/14	4	120	4,294	0.232
183		61	48/11	45	128	5,640	0.177
184		70	18/4	36	145	7,434	0.134
185		77	91.49/3.3	115	145	7,712	0.130

Daw 3-22-07

181	182	183	184	185	
-6.86	-17.96	-8.45	-16.96	-3.96	← m³
-0.61%	-0.37%	-0.33	-0.52	-0.58	← % of inflow

DAW 8-30-07 Comparison of KINEROS2+ and KINEROS2 (Con't)

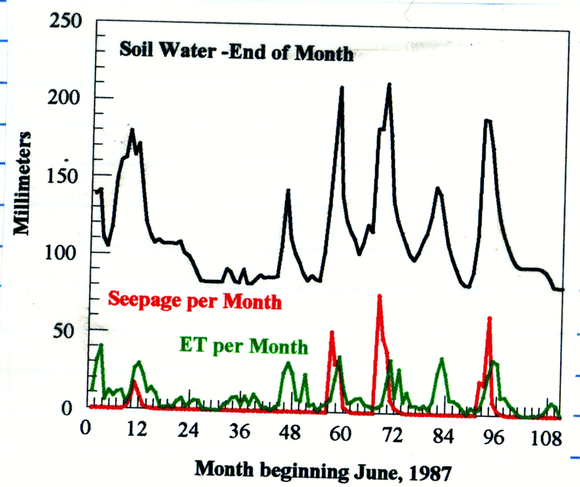
Prepare graphics to demonstrate K2+ capabilities

Data file: C:\KINEROS_06\SW-185MON.PDW

1. Create columns converting monthly quantities from m^3 to mm/unit area.

DAW 9-~~19~~-07 ~~DW 9/19~~

Figures prepared with PSI-Plot were copied to Word Perfect file C:\KINEROS_06\Pilot Study Graphs.wpd and are shown below

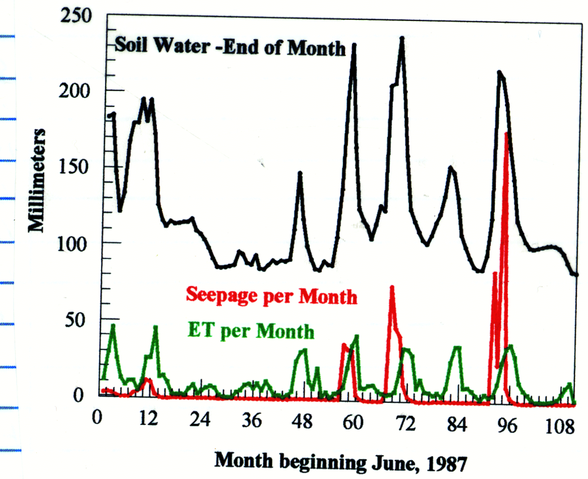


Soil Water, ET and Seepage - Element 116
Continuous KINEROS2 Model

File: C: | KINEROS_06 | ET_SEEP_SW116B.PGW
DATA : C: | KINEROS_06 | SW_118MONB.PDW
daw 2-28-07

This figure shows monthly ET and Seepage for plane 116 as well as the end of month soil water storage in the profile. Plane 116 is the ridge element of the hillslope, so there is no runon. There were 4 episodes of seepage during the 9-year period.

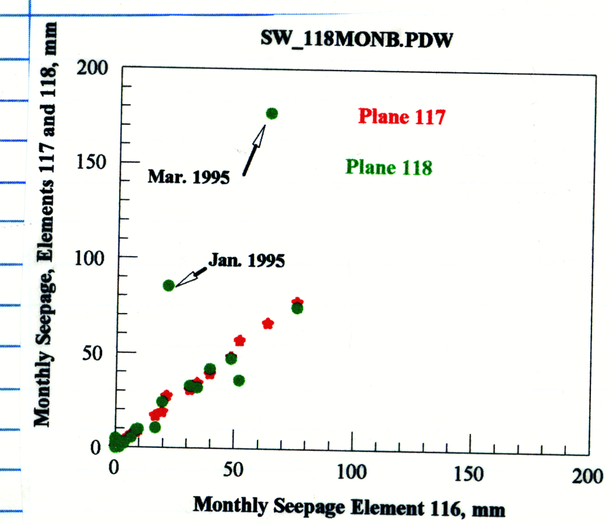
DAW 9-20-07



Soil Water, ET and Seepage - Element 118
Continuous KINEROS2 Model. RunB

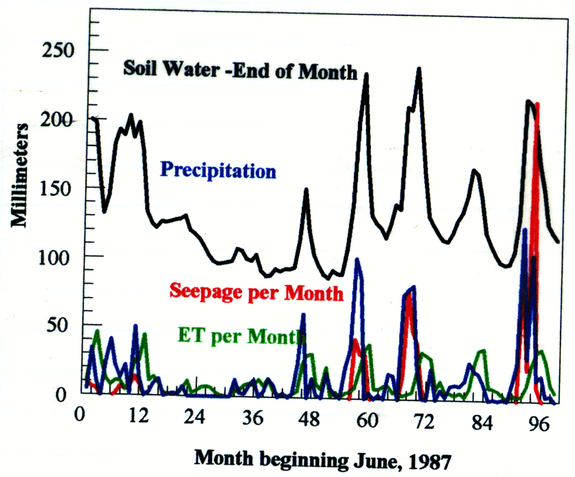
File: C: | KINEROS_06 | ET_SEEP_SW118B.PGW
DATA : C: | KINEROS_06 | SW_118MONB.PDW
daw 2-28-07

This figure shows the same variables, but for the lower element which does receive runon. The major runon occurs during months 92–96 which corresponds to the Jan and Mar. 1995 events. Area ratio: 2.32



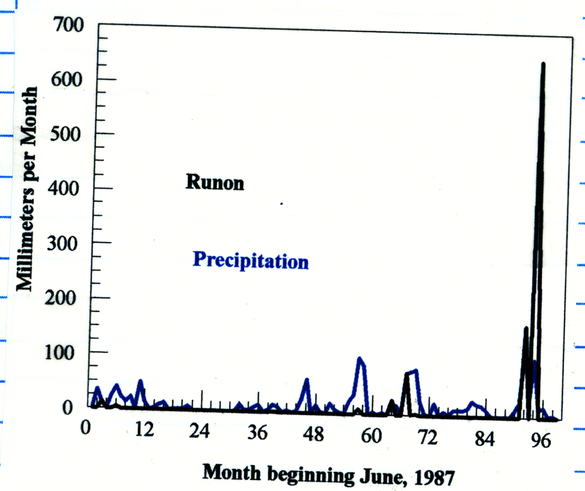
A plot of monthly seepage for lower hillslope element 117 and 118 versus the ridge element 116 shows the much greater seepage for Jan and Mar. 1995 due to runon.

DAW 9 1-20-07



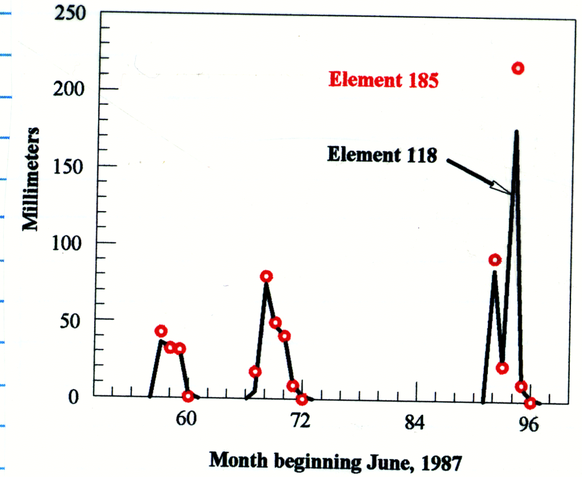
Precipitation, Soil Water, ET and Seepage - Element 185
Continuous KINEROS2 Model

This shows values for element 185, the lowest element of hillslope 181-185 with convergence ratio 26.7. Note that seepage is greater than precipitation for one month. This is due to the large amount of runon as shown in the figure below



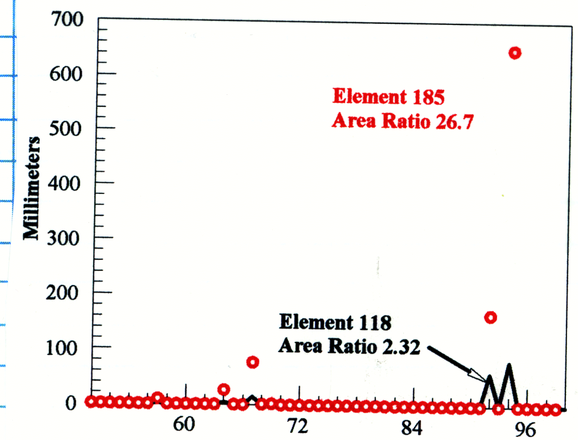
Precipitation and Runon - Element 185
Continuous KINEROS2 Model

DAW 9 1-20-07



Monthly Seepage - Elements 118 and 185
Continuous KINEROS2 Model

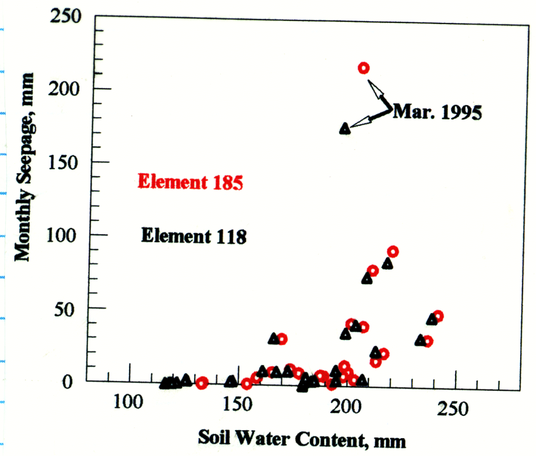
Element 185 has monthly seepage equal to or greater than element 118, reflecting the differences in area ratio.



Runon - Elements 118 and 185
Continuous KINEROS2 Model

Element 185 has runon during 5 months while 118 shows significant runon for only 3 months. The runon amounts are also much greater for 185.

DAW 9-20-07



Seepage vs Soil Water Content for Elements 118 and 185
Continuous KINEROS2 Model

Although element 185 has greater seepage than 118, it is not as large as the runon difference. This can be attributed to greater runoff from 185.

A summary of this work with comparisons with the event-based KINEROS2 results along with suggestions for future work was sent to S. Stothoff at the end of August.

DAW 1-2-08
Activity: Review selected files from Sandia Report

Purpose: Identify sections of the report that should be examined in more detail with runs with the continuous KINEROS model.

Files Included in the CD sent by S. Stothoff

File Name Title

1. ANL-MGR-MD-15R00_WeatherStation0612.pdf Dec. 2006
"Data Analysis for Infiltration Modeling: Extracted Weather Station Data Used to Represent Present-Day and Potential Future Climate Conditions in the Vicinity of Yucca Mountain" Prepared by Sandia National Laboratories.

2. ANL-NBS-HS-54R00_BedKsat0607.pdf July 2006
"Data Analysis for Infiltration Modeling: Bedrock Saturated Hydraulic Conductivity Calculation" Bechtel SAIC

3. ANL-NBS-HS-55R00_SoilUnit0609.pdf Sept. 2006
"Data Analysis for Infiltration Modeling: Development of Soil Units and Associated Hydraulic Parameter Values" Bechtel SAIC

DAW 1-2-08 Review (Con't)

4. ANL-NBS-HS-77R00_SoilDepth0607.pdf July 2006
"Data Analysis for Infiltration Modeling: Technical Evaluation of Previous Soil Depth Estimation Methods and Development of Alternate Parameter Values"
Bechtel SAIC

5 MDL-NBS-HS-23R01_SimInfil.pdf May 2007

"Simulation of Net Infiltration for Present-Day and Potential Future Climates"
Sandia Laboratories

This is an extensive revision of the USGS 2003 report
A new model, MASSIF, was developed

Procedure:
1. Carefully review ASSUMPTIONS

RL 4/14/2008

DAW 3-6-08

This terminates entries in this Notebook

David A. Woolhiser

RL 4/14/2008

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 597 #444

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	9/16/2003 through 3/19/2004
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1 CD
File Types: (.exe, .bat, .zip, etc.)	.wpd; .pdf; .zip; .ASCII text
Remarks: (computer runs, etc.)	Various files with various extensions and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444

Document Date:	5/15/04
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	3/16/2003 through 3/30/2005
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	4 CD
File Types: (.exe, .bat, .zip, etc.)	.wpd; .bas; .ext; .ASCII text; .pgw
Remarks: (computer runs, etc.)	Various files with various extensions and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 597 & 363

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	09/16/2003
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect 8.0
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1CD
File Types: (.exe, .bat, .zip, etc.)	.exe; .bas; .pgw; .wpd
Remarks: (computer runs, etc.)	Various files and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 363

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	3/2003 & 9/11/2003
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect 8.0
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	2 CD
File Types: (.exe, .bat, .zip, etc.)	.zip; .wpg; .fgs; .wpd; .psw; .exe
Remarks: (computer runs, etc.)	Various files and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 363 & 362

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	3/26/2001 through 9/24/2001
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect 8.0
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	~~2~~ CD 1
File Types: (.exe, .bat, .zip, etc.)	.wpd; .bas; .exe; .pgw; .fil; .pre
Remarks: (computer runs, etc.)	Various files and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 597

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	9/16/2006 through 3/14/2007
Operating System: (including version number)	Windows
Application Used: (including version number)	WordPerfect
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1 CD
File Types: (.exe, .bat, .zip, etc.)	.wpd; .bas; .exe; .pgw; .fil; .out; .doc
Remarks: (computer runs, etc.)	Various files and attachments to notebook. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 597

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	3/13/2006
Operating System: (including version number)	Windows
Application Used: (including version number)	KINEROS2
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1CD
File Types: (.exe, .bat, .zip, etc.)	.out; .ini; .bas; .wpd; .txt
Remarks: (computer runs, etc.)	Various files. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444 & 597

Document Date:	5/15/~~07~~ 01 5/19/08 MW
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	4/13/2001
Operating System: (including version number)	Windows
Application Used: (including version number)	KINEROS2
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1CDs
File Types: (.exe, .bat, .zip, etc.)	.mod; .exe; .map; .wpd; .zip
Remarks: (computer runs, etc.)	Various figures, maps, computer runs, papers, and reports. CD located with Notebook 444.

ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK NO. 444

Document Date:	5/15/01
Availability:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78228
Contact:	Southwest Research Institute® Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, TX 78228-5166 Attn.: Director of Administration 210.522.5054
Data Sensitivity:	■"Non-Sensitive" ☐ Sensitive ☐"Non-Sensitive - Copyright" ☐ Sensitive - Copyright
Date Generated:	March 29, 2002
Operating System: (including version number)	Windows 95 and XP
Application Used: (including version number)	Fortran
Media Type: (CDs, 3 ½, 5 1/4 disks, etc.)	1 ZIP (100MB)
File Types: (.exe, .bat, .zip, etc.)	.ASCII input and output files
Remarks: (computer runs, etc.)	Computer source code.