Carlson Webinars – BIM, GIS and CAD Standards

July 18, 2009
Carlson Software recently asked Felicia and me to present webinars on topics we have particular interest in or specialize in.

Felicia's webinar on BIM, GIS and Carlson Software can be viewed here: BIM, GIS and Carlson Software Webinar

My webinar on CAD Standards can be viewed here: CAD Standards for Carlson Software with AutoCAD or IntelliCAD

Originally posted on **Carlson Connection** by Jennifer Dibona

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Carlson 2010 Sneak Peek

July 18, 2009
The highly anticipated Carlson 2010 release offers clients

hundreds of new or improved features from that found in Carlson 2009 and continues Carlson Software's track-record of delivering responsive solutions to client-requested technology needs.

Carlson-IntelliCAD GIS Starter Kit from ESRI

July 18, 2009
Those currently using Carlson with IntelliCAD are eligible for a new "GIS Starter Kit" from ESRI. The Kit includes:

- ArcGIS ArcView desktop software
- A copy of the book *A to Z GIS: An Illustrated Dictionary of Geographic Information Systems*
- A copy of *GIS Tutorial: Workbook for ArcView 9*, Third Edition
- A 10% discount for the ESRI Survey & Engineering GIS Summit ($325 – standard registration price)

To take advantage of the offer, call 1-800-GIS-XPRT (1-800-447-9778) and request the **Carlson-IntelliCAD GIS Starter Kit** and **please have your Carlson Serial Number available**.

You can read more about ESRI's commitment to survey and engineering services by visiting http://www.ESRI.com/engineering.

Originally posted on **Carlson Connection** by Jennifer DiBona

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Ribbon vs. Menu… Your preference is??

July 18, 2009
I was reading a recent AP article that was similar to the article entitled Meet Microsoft's antidote to Vista and saw the following:

You probably don't know her name, but if you're using

> *Office 2007, the sleeper hit of the Vista era, you're already familiar with Larson-Green's work.*
>
> *She was the one who banished the familiar system of menus on Word, Excel and other programs in favour of a new "ribbon" that shows different options at different times, depending on what a user is working on.*

Hmmm… I'm wondering if she'd be willing to re-think that decision?

I'm not sure what it is about the ribbon interface but I cannot seem to get used to it. I've tried… I mean *I've really tried* to be productive with the Office 2007 ribbon but continually find myself wasting lots of time searching for a particular command whose location I could find instantly in the traditional pull-down menu system used in Windows and Office applications for the past +15 years. The article also said:

> *"We want to reduce the amount of thinking about the software that they have to do, so that they can concentrate all their thinking on the task they're trying to get done,"*

> *Larson-Green said in an interview.*

The task I'm trying to get done?? I'm trying to figure out where all my favorite old commands went for getting my work done. I'm finding that I'm spending **more** time thinking and searching for commands and having less time for the task(s) I'm trying to get done. Don't even get me started on the new default file formats for Office files (*.docx, *.xlsx, *.accdb, *etc*) and having to Save As for those who haven't adopted Office 2007 and later.

Side note observation… I wonder how soon it will be until Autodesk decides to release a **.dwgx* file format? Perhaps the Open Design Alliance should beat them to the punch.

According to the frequently changing Wikipedia write-up on ribbons:

> *Microsoft has started the process of acquiring a patent on the ribbon user interface concept[2] and licenses the ribbon design to third-party developers royalty-free, as long as the user interface conforms to the Microsoft's design guidelines and they can get an approval from Microsoft. The*

> *ribbon design guidelines are confidential and an evaluation copy is only available when a non-disclosure agreement has been signed.*
>
> *The Ribbon has been licensed by Autodesk for AutoCAD 2009…*

My fear is that when I eventually have to migrate out of AutoCAD 2008 (I'm running the ribbon-less AutoCAD 2008 and IntelliCAD and haven't even looked at AutoCAD 2009/2010), I'll be too far behind the 8-ball. Maybe I'm too grounded and comfortable with pull-down menus. I still prefer Windows XP over Vista and suspect I'd prefer pull-down menus in my CAD product like many of comments left at AutoCAD 2009 – How do you use the Ribbon? blog. Perhaps it is time to accept the fact that ribbons are likely here to stay. However, if my CAD productivity takes a hit due to the migration to ribbons like my Office productivity took a hit, I suspect I'm "going to have some 'splainin' to do." Personally, I'd love to have a one-to-one chat with Julie Larson-Green (*a.k.a. "Microsoft's antidote to Vista*") to learn why throwing away +15 years of interface familiarity is/was a good idea.

What do you think?

[polldaddy poll=1552888]

Originally posted on **Carlson Connection** by Ladd Nelson

Carlson + ESRI = Wow!

July 18, 2009

So, how cool is this?

At the Carlson User Conference this week in Lexington, KY, Brent Jones of ESRI announced a new grant program in coordination with Carlson Software. The program will bring ESRI products to every IntelliCAD-based Carlson program.

Speaking with Brent on Tuesday, he said that a few of the details have yet to be worked out, but Carlson IntelliCAD users should be hearing details in about a month.

Originally posted on **Carlson Connection** by Jennifer Dibona

Brent Jones of ESRI discusses ‘Why GIS Needs Surveyors’

July 18, 2009

Combining all the GIS and land development technologies that exist today is what Brent Jones suggested surveyors do in his keynote address to the attendees at the 2nd annual Carlson User Conference. Jones, PE, PLS, is the Survey, Cadastre, and Engineering Industry Manager for ESRI, which designs and develops the world’s leading geographic information system (GIS) technology.

To help surveyors accomplish this, Jones announced an upcoming grant program to be offered by ESRI for every Carlson IntelliCAD user. “ESRI is very supportive of Carlson’s development on IntelliCAD and we want to support your users,” said Jones of this specialized grant program

being developed exclusively for Carlson IntelliCAD users. “We want to help surveyors leverage their existing resources to help in the GIS market.” With this offer Carlson IntelliCAD users will be able to access GIS technology and jump-start a GIS practice. Read More

Originally posted on **Carlson Connection** by Karen Cummings

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How Does Carlson Support Their Users? Ask David Farina

July 18, 2009

I’m going to post a LONG email stream between one of my clients, David Farina, Bruce Carlson and Dave Carlson. You can see the new feature that David requested and Bruce and Dave’s responses. David received a “development” version of the new features approximately a week after submitting this request.

I asked him for a statement describing his experience with Carlson:

> *Recently I found that the Time of Concentration input boxes were inadequate under the hydrology portion of Carlson Civil Suite so I emailed a description of the problem to them. I was very impressed to get a phone call the same day. They discussed the problem with me and had a revised program update to me in under a week. I've been emailing Autodesk for over a year on problems with Civil 3D and never heard a peep. Needless to say I'm very happy with the customer service I have received from Carlson thus far.*

Here is the original question from David Farina on March 4, 2009:

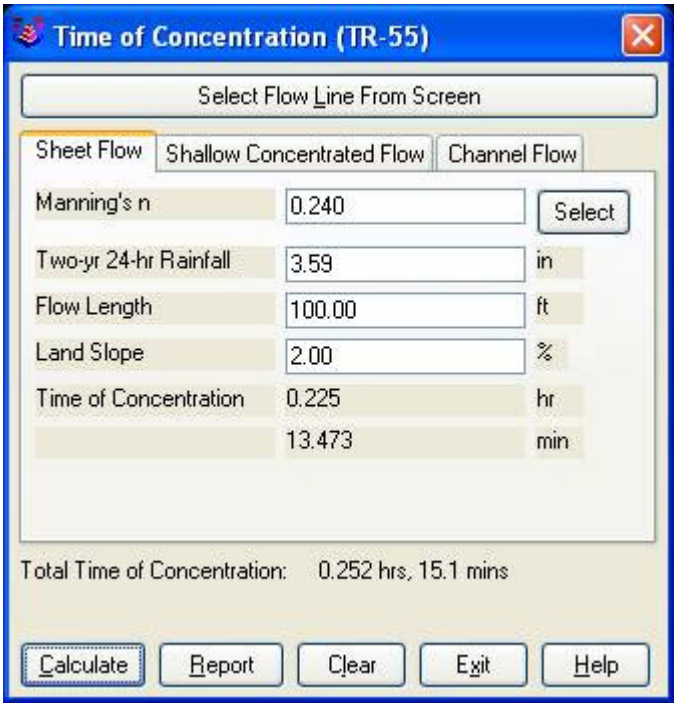
> *Jennifer,*
>
> *I was going through a mock project to learn the hydrology part of Carlson and noticed a critical deficiency in Time of Concentration input. The review agencies around here want to see the TR-55 method. First, the TR 55 minimum sheet flow needs to be 100' instead of 300'. They recently*

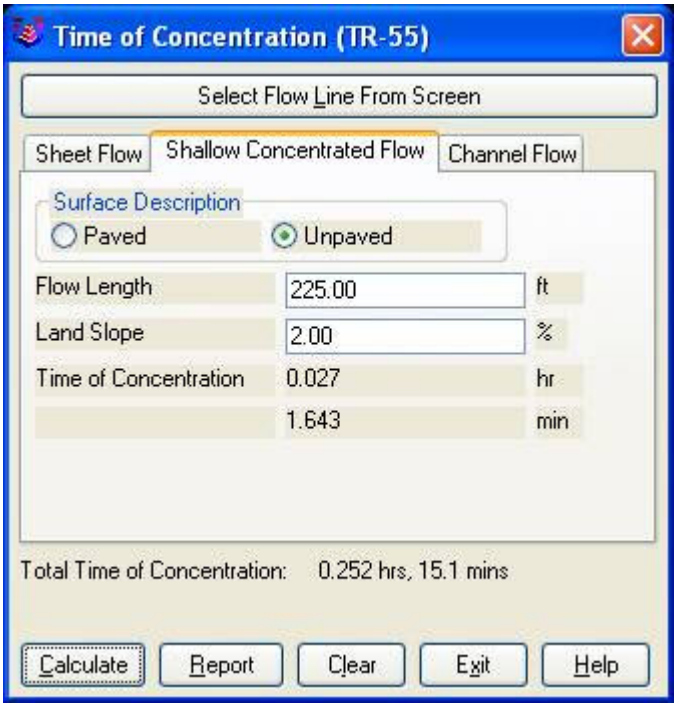
changed it per the TR-55 Web site. Second, I don't think I've ever had a project where you didn't have to split one of these flow types into 2 or more mannings roughness areas.

For example: a flow path that starts on dense grass for 50' then passes over asphalt for 75' and back to grass for 200' would need to be calculated as follows:

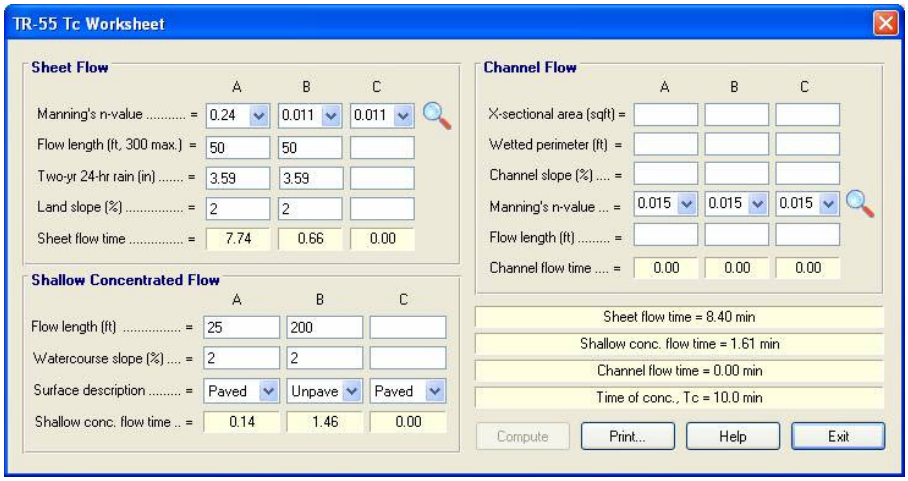
Sheet flow 50' Grass -> Sheet flow 50' Asphalt -> Shallow Concentrated flow 25' Paved -> Shallow Concentrated flow 200' UnPaved.

But as you can see the Carlson input only allows for one entry per flow type.

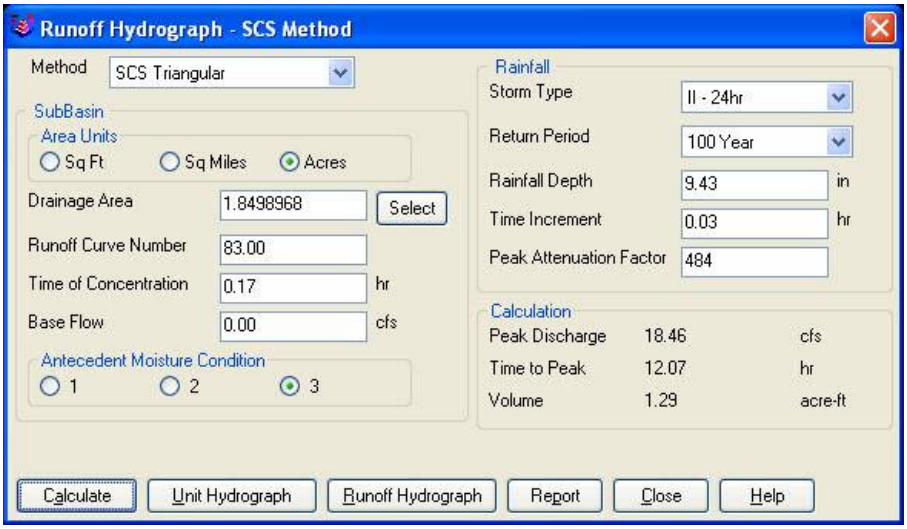

Time of Concentration (TR-55)
Select Flow Line From Screen
Sheet Flow
Shallow Concentrated Flow
Channel Flow
Manning's n
0.240
Select
Two-yr 24-hr Rainfall
3.59
in
Flow Length
100.00
ft
Land Slope
2.00
%
Time of Concentration
0.225
hr
13.473
min
Total Time of Concentration: 0.252 hrs, 15.1 mins
Calculate
Report
Clear
Exit
Help

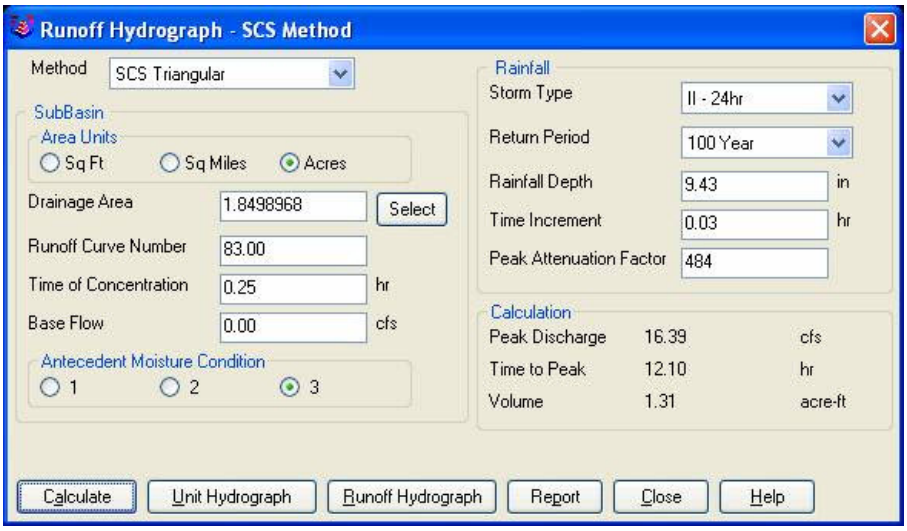


Below is the Intellisolve version: Notice the A, B C

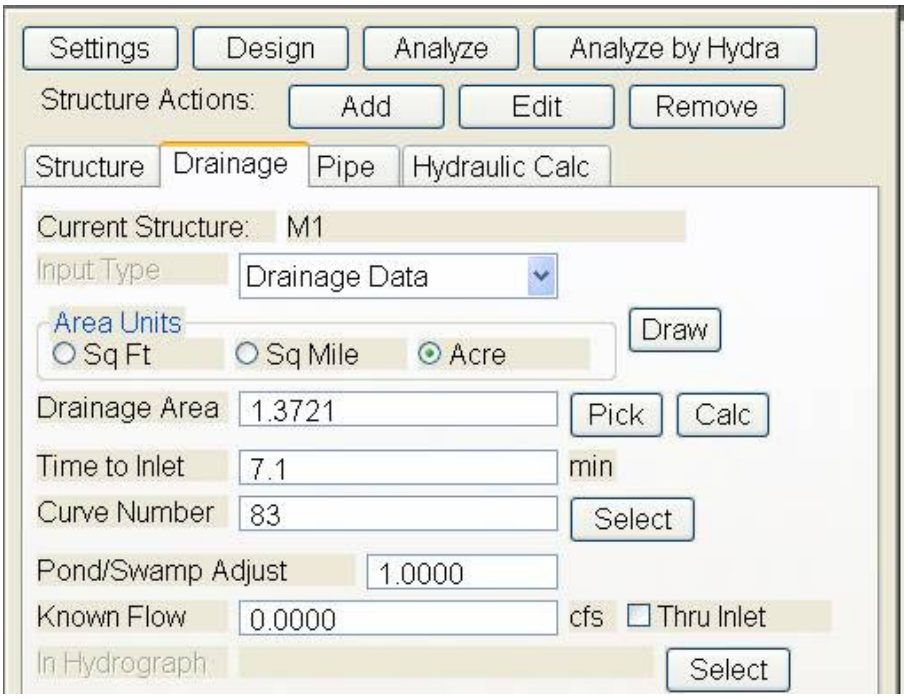


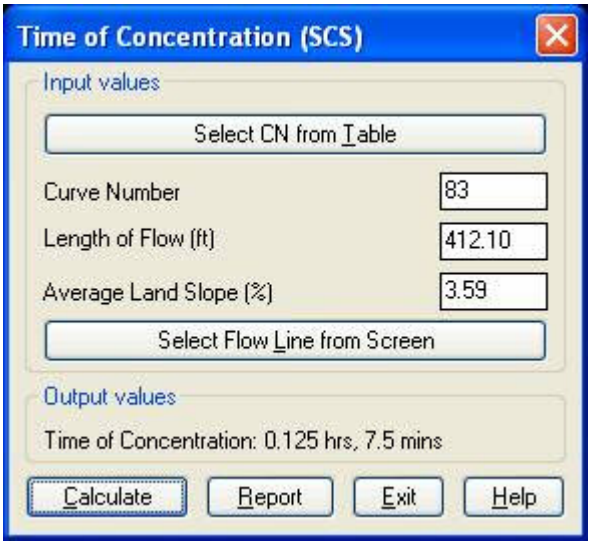
There is a 5.1 minute difference in TC results which results in a 2 CFS difference in the 100yr example below:


Runoff Hydrograph - SCS Method
Method
SCS Triangular
SubBasin
Area Units
Sq Ft
Sq Miles
Acres
Drainage Area
1.8498968
Select
Runoff Curve Number
83.00
Time of Concentration
0.17
hr
Base Flow
0.00
cfs
Antecedent Moisture Condition
1
2
3
Rainfall
Storm Type
II - 24hr
Return Period
100 Year
Rainfall Depth
9.43
in
Time Increment
0.03
hr
Peak Attenuation Factor
484
Calculation
Peak Discharge
18.46
cfs
Time to Peak
12.07
hr
Volume
1.29
acre-ft
Calculate
Unit Hydrograph
Runoff Hydrograph
Report
Close
Help


Runoff Hydrograph - SCS Method
Method
SCS Triangular
SubBasin
Area Units
Sq Ft
Sq Miles
Acres
Drainage Area
1.8498968
Select
Runoff Curve Number
83.00
Time of Concentration
0.25
hr
Base Flow
0.00
cfs
Antecedent Moisture Condition
1
2
3
Rainfall
Storm Type
II - 24hr
Return Period
100 Year
Rainfall Depth
9.43
in
Time Increment
0.03
hr
Peak Attenuation Factor
484
Calculation
Peak Discharge
16.39
cfs
Time to Peak
12.10
hr
Volume
1.31
acre-ft
Calculate
Unit Hydrograph
Runoff Hydrograph
Report
Close
Help

If the above example is that different then I am also concerned about how the Time to inlet is calculated in the example below:





Was the SCS method used to get the 7.1 min value?

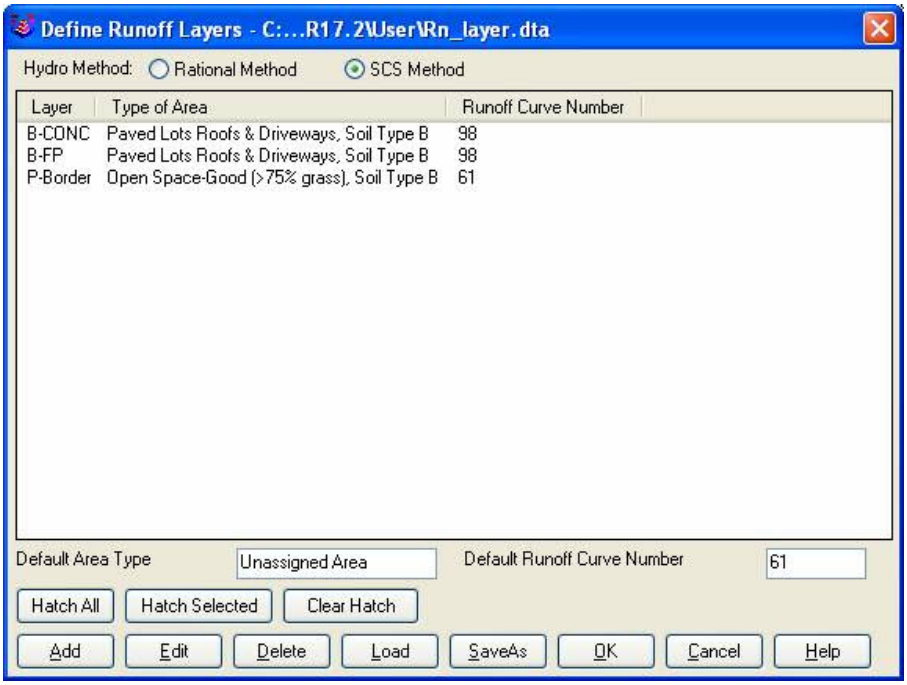
Notice the 7.5 value in the TC dialog to the right.

This was the value if I SELECT FLOW LINE FROM SCREEN and pick the path that the dialog on the left generates.

Can I generate a report of how the time to inlet was calculated?

Maybe there can be a button next to the Time to inlet to select TR-55

Maybe Mannings coefficients can also be put into the WATERSHED->DEFINE RUNOFF LAYERS to be used for this calc as the flow path passes through each polyline area the same way Carlson already calculates the composite CN.



Will any of this matter if we get HydroCAD and link it to Carlson?

Just food for thought.

Thank You,

David Farina

Senior Designer

I forwarded David's question onto Bruce Carlson, President of Carlson Software, and Dave Carlson, Director of Programming, and received this response from Bruce:

Folks: Excellent input—this will find its way into the next release for sure. We've spent a lot of time studying Haested and matching numbers there on pipe flows in culverts, for example, covering all conditions—but do need to put to bed Time of Concentration for approved defaults and sub-catchment conditions as they vary within a watershed area. This Intellisolve example is really helpful. Also, I took in input at Jennifer's Statesville, NC presentation Dec. 2007 that mentioned the new 100' default and also mentioned:

Using Q=CIA, there are new "rules" being published that

*using larger pipes or it may be larger drainage areas, there is an added multiplier in the form Q=CIA*Q1 where Q1 is a table of values. I didn't get the full details, but we need to research this.*

And in storm sewer design, if we are compositing the calc of time to inlet using a "short-form" SCS-style method, based on percentage area of various land uses and associated runoff coefficients, we need to have a Report button that documents the results for full vetting and reporting out by users, and we need to incorporate an additional auto-calculated, long-form TR55 time of concentration there as well that uses sheet flow, channel flow and shallow concentrated flow. One key in all this is to be able to auto-distinguish these flow types from the DTM and land uses and have the forms filled out with default values, which the user can change.

Question I'm curious about. Say you built a gentle 6'wide, 1% slope swale with 6:1 side slopes, hardly noticeable, mowable, between lots in a subdivision. Would the flow in that be treated as shallow concentrated flow or channel flow? When would one condition end and another

begin, by definition, so we can get real precise on auto-calculating these using layers/land use types and DTM values?

Good stuff, and it will get done.

Bruce Carlson, PE

Pres., Carlson Software

David added the following:

I think when to use channel flow should be determined by the width of the bottom of the channel and hence how deep the channel gets on an 2yr storm 24 storm.

You could have a channel with 1:1 side slopes but if the bottom was 50’ wide and the flow path started in the channel then

the first 100’ would still be sheet flow in my book. Unless of course a huge amount of water was entering the channel from another basin.

I think the concentrated and channel flow times (being in

the fraction of a minute range) are so small and have such a small impact on overall time

compared to sheet flow (fraction of an hour) that you could pick an arbitrary number like 5’ wide bottom and smaller is channel flow and not upset the model.

Sheet flow probably makes up 80 to 90 % of overall TC if it is over grass.

Anyone disagree?

Thank You

Dave Carlson sent this on March 11, 2009

Hi David,

Here’s an update to the Tc by TR-55 routine that allows unlimited number of breakouts. This update is for Carlson 2009 on Acad 2007-09. To install, unzip and copy the arx to

the Carlson2009LSP folder. Let me know if you need a different version or have more suggestions.

For the Storm Sewer Network routine, I put it on the to-do list to add a Select button next to the Tc to show the components that make up the Tc like the Select button does for CN. Also we will looks at adding Manning's n to the Define Runoff Layers for use with Tc calcs.

Thanks for the input.

Dave

Originally posted on **Carlson Connection** by Jennifer Dibona

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Coming in Carlson 2010

July 18, 2009
I'm not privy to the "official" list of coming updates, but I can share a few things that I know will be in the next

release. Most of these come from “wishlist” items I have submitted on behalf of my clients.

The folks at Carlson are welcome to add their 2-cents in the Comments of this post or on Direct From Carlson.

Option for placing building footprint a distance off the building setback line.

Currently, the LotNet command places the building footprint exactly on the midpoint of the building setback line. We heard the request several times to have the option of placing the footprint some distance behind the setback line. It will be in the 2010 release.

C & G Survey

Instead of having two separate survey programs, Carlson will be incorporating C & G as a separate set of menus in Carlson Survey in 2010.

Basic IntelliCAD Menu

If you’re running Carlson on top of an AutoCAD-based program, you have an icon or menu option to switch over to an AutoCAD

menu that has basic Draw commands such as line, pline and text and basic Modify commands such as copy, explode and pedit. Although it's not easy to get to right now, IntelliCAD has a similar set of menus and toolbars. Carlson 2010 stand-alone with IntelliCAD will have a menu item and toolbar icon allowing you to easily switch over to the IntelliCAD menus and then back again to the Carlson menus.

Lookup table of curb slopes for super-elevation transitioning

This new feature will handle curb transitions like those shown in this NC DOT detail drawing.

Originally posted on **Carlson Connection** by Jennifer Dibona

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IntelliCAD Update for Carlson Products – 2/2/2009

July 18, 2009

The most recent IntelliCAD Update for Carlson can be found

here:

http://update.carlsonsw.com/entov/c2009_icad_post65_install.exe

From Carlson:

> *It contains the fixes based on user input and crash submissions since we released 6.5.*
>
> *In particular, the following features and crashes has been addressed or at least a fix has been attempted:*
>
> *1) Crash on mouse move*
> *2) Crash on save (during exit?)*
> *3) Another update to image engine to correct problems in the last update*
> *4) Crash during printing or redraw after real time zoom*
> *5) Numerous “small” crashes*
> *6) Crashes during drawing opening or saving*
> *7) Right click menu is added for entity modifications (this requires menu reload and will reset the menus and toolbars). To reload the menu, type MENU and select*

icadbase.mnu file.
8) Slow autosave/save has been addressed or at least improved.
9) Font mapping problems have been addressed

In case if this patch makes matters worse for you, the older patch is available here: http://update.carlsonsw.com/entov/c2009_icad_6_6_17_41_install.exe . Simply run it to restore to the last version.

Originally posted on **Carlson Connection** by Jennifer Dibona