

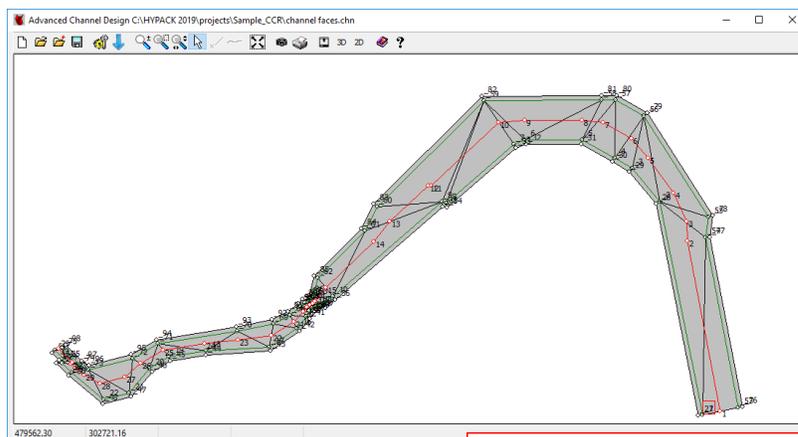


Zone Selection Poly Tool in ADVANCED CHANNEL DESIGN

By John Lindberg

One of the nicest features of ADVANCED CHANNEL DESIGN is the ability to select multiple faces in a *.CHN (channel) file that define zones. These zones allow additional volume reporting; a zone defined by multiple faces gives you a reported volume by the zone, rather than each individual face. The following example compares displays of the channel defined by faces and zones, along with their respective volume reports.

FIGURE 1. Channel and Volumes Itemized by Faces

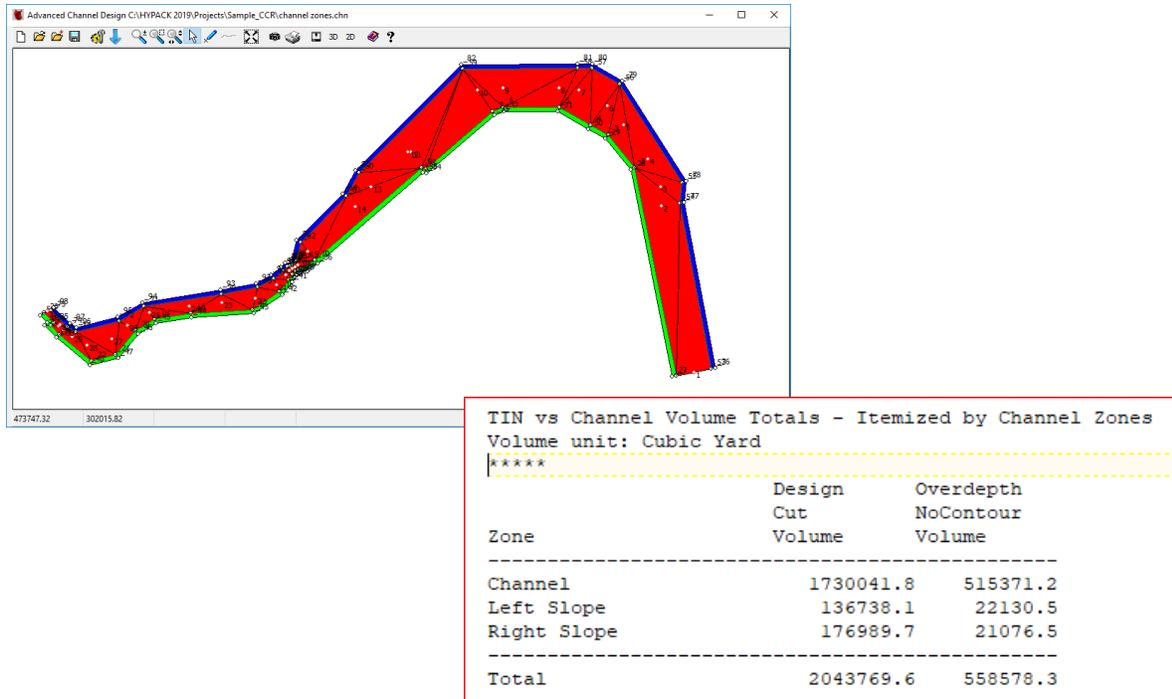


TIN vs Channel Volume Totals - Itemized by Channel Faces	
Volume unit: Cubic Yard	

Face	Design Cut Volume
4	3441.7
5	15676.6
6	5089.8
7	26939.7
8	1182.9
9	52031.2
10	17702.0
14	197.0
15	348.1
16	397.9
17	1246.1
18	690.6
19	1142.0
20	4273.3
.....	
92	2229.2
93	9502.8
94	5355.4

Total	2043769.6

FIGURE 2. Channel and Volumes Itemized by Zones

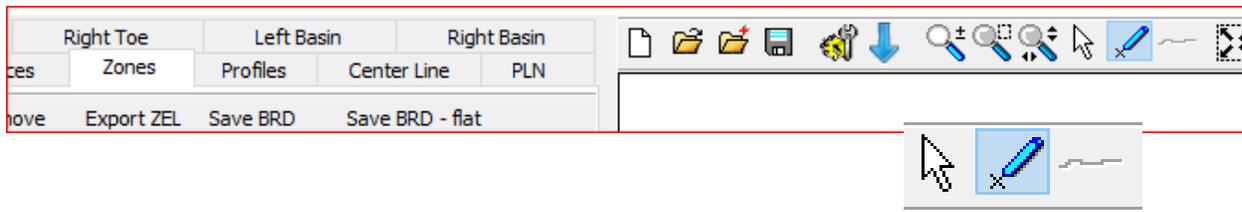


As you can see by the reports, the itemization by zones becomes more sensible as they report volumes of specific channel areas, rather than reporting each individual face.

The creation of zones in ADVANCED CHANNEL DESIGN is relatively easy; you just click on each face to add it to a zone. But what happens when you have hundreds or even thousands of faces? Selecting each individual face can become quite tedious and time-consuming.

We added new face selection methods in ADVANCED CHANNEL DESIGN under the Zones tab to allow either polyline or polygon area selection.

FIGURE 3. Select Tool in the Zones Tab



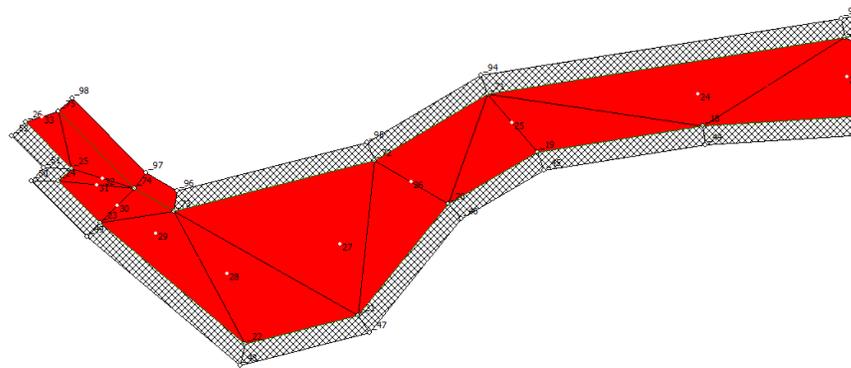
1. **Name your zones** as you normally would under the Zones tab:
 - a. **Click [Add]**. The Zone Attributes dialog will appear.
 - b. **Enter the zone name**.
 - c. **Choose the zone color**. Click in the color box and select from the colors dialog. (The color is only to clearly distinguish between zones in the map view.)
 - d. **Click [OK]**.
2. **Define the zone areas**.
 - a. **Select the target zone** by clicking in the list on the left.
 - b. **Select the faces for the selected zone**. This is where the new face selection methods speed things along. You can still use the Arrow icon to select one face at a time, but selecting a polyline and polygon is likely faster.

- **To create a polyline selection**, use the Select tool to mark polyline points through the zone as shown in [Figure 4](#). Right-click when you are done drawing. ADVANCED CHANNEL DESIGN assigns every face intersected by the polyline to the selected zone as shown in [Figure 5](#).

FIGURE 4. *Creating a Zone with Polyline Selection*



FIGURE 5. *Zone Defined by the Polyline in Figure 4*



- **To use the polygon function**, use the same tool to define the zone area, enclosing its faces. Right-click close to your beginning point. Every face intersected with, and located within the polygon is then assigned to the selected zone.

FIGURE 6. *Defining a Zone with a Polygon*

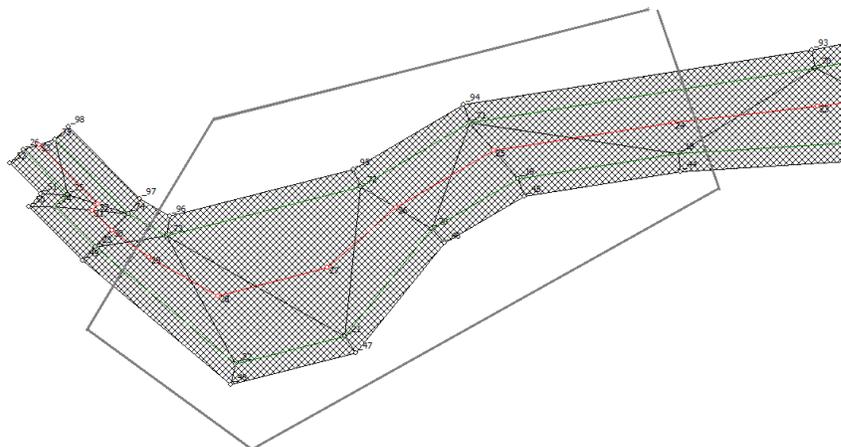
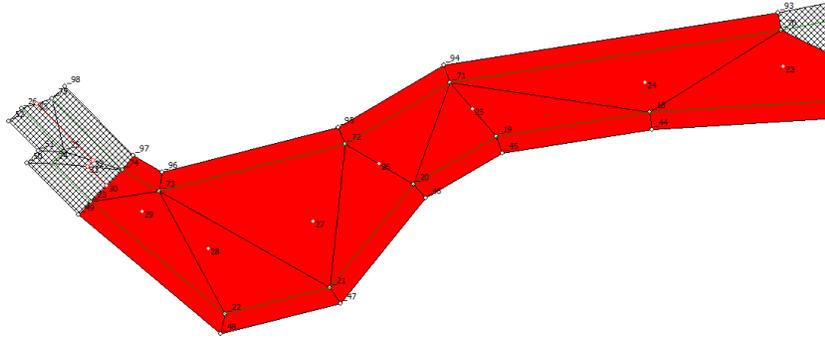


FIGURE 7. Zone Defined by the Polygon in Figure 6



This ADVANCED CHANNEL DESIGN update will be included in the first HYPACK® 2019 quarterly update expected July 1.