

MEMORANDUM

To: ESHMC
Fr: Bryce Contor
Date: 13 February 2009

Re: Request for Input, Summary Tool & Irrigated Lands

Figure 1 illustrates the Rexburg Irrigation Company place of use polygon from IDWR data, highlighted in yellow.

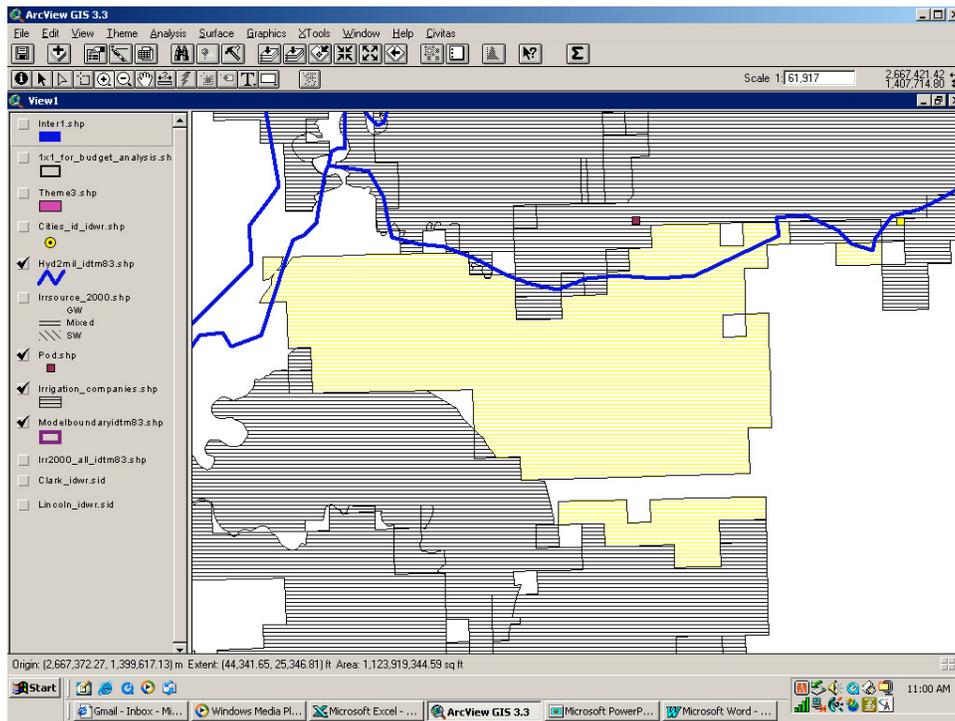


Figure 1. Rexburg Irrigation Company place of use.

Figure 2 illustrates in red the resulting irrigated lands of entity IESW038, along with the model grid in black.

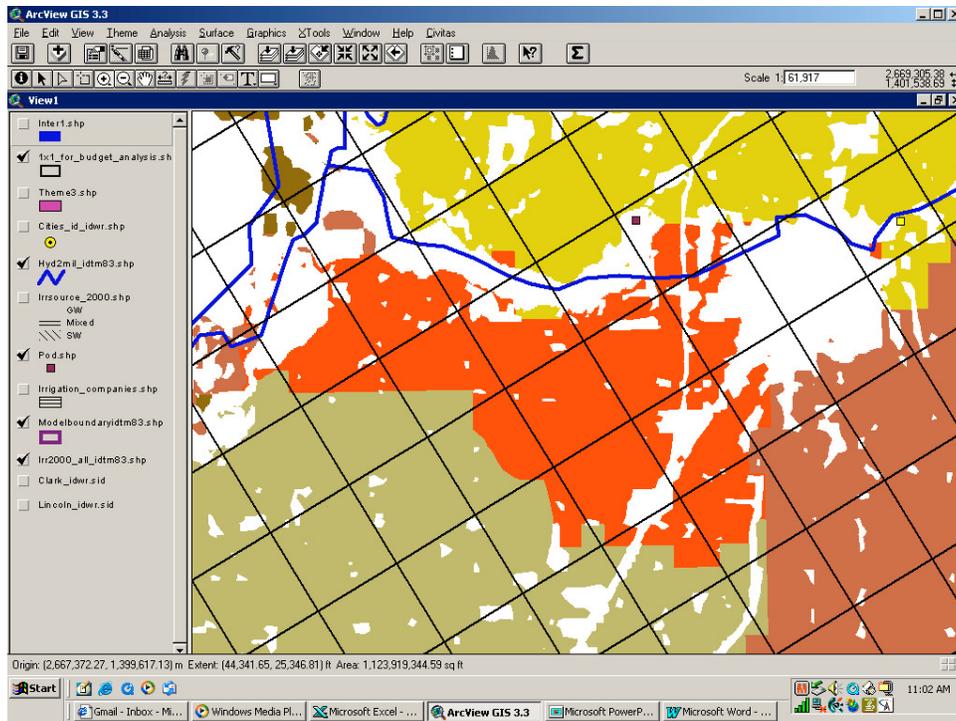


Figure 2. IESW038 irrigated lands (red) and model grid (black)

Note that due to the orientation of the grid, many model cells contain more than one entity. In this particular case, 26 model cells contain at least some irrigated lands of IESW038. Only six are exclusively within IESW038.

At the last ESHMC meeting, several members expressed a desire to have the summary tool be able to calculate and report implied irrigation efficiency by entity. With the current recharge tool configuration, this could easily be accomplished by redrawing entity boundaries to correspond to model cells, so that each model cell represents only one irrigation entity. Figure 3 illustrates a preliminary representation of IESW038 using this convention. Figure 4 overlays this representation on the current representation.

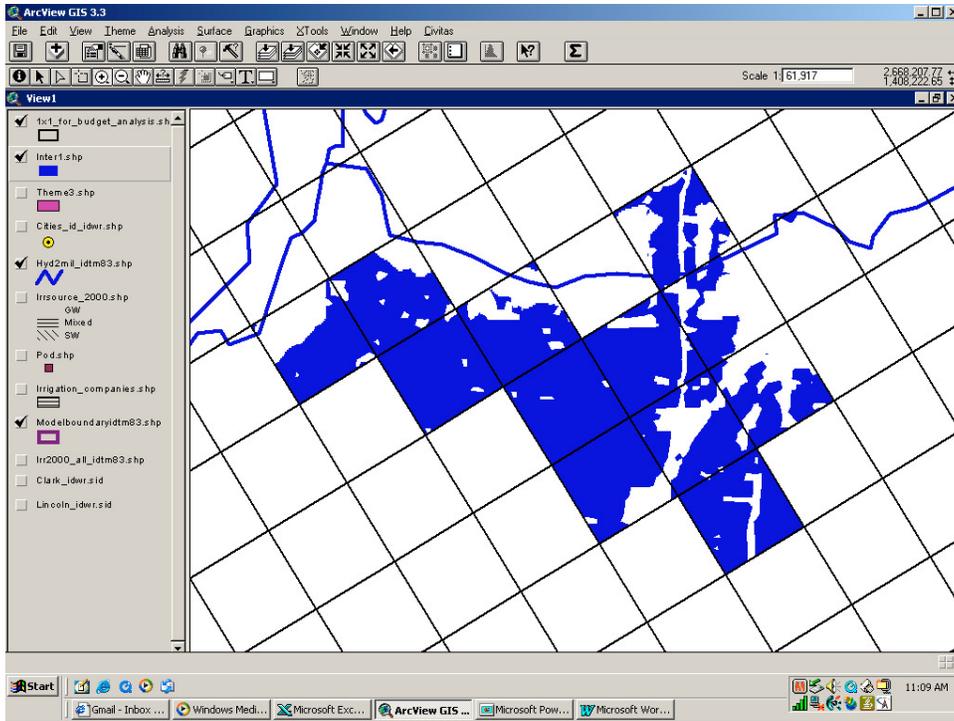


Figure 3. Representation of IESW038 using whole-model-cell convention.

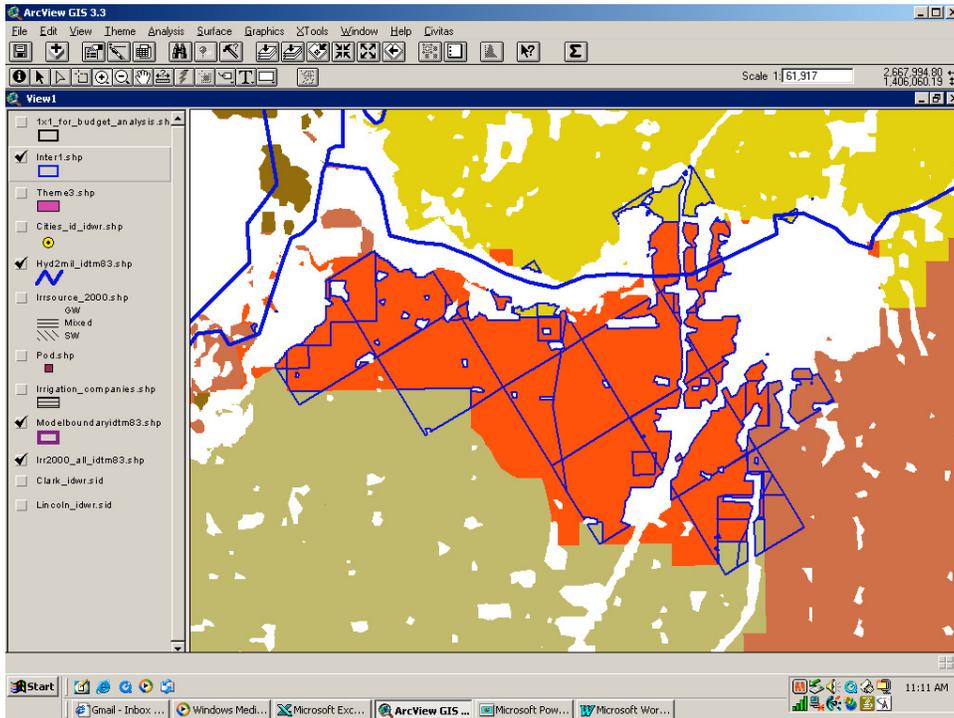


Figure 4. Whole-model-cell convention (blue outline) overlaid on existing polygons (solid red) for IESW038.

This would result in some distortion of irrigated acreage. For larger entities, there would be very little difference on a percentage basis. For smaller entities such as this one, differences could be larger; the existing entity has 5,794 irrigated acres and the new entity has 5,579. This is about 5% difference. The "missing" acres would of course still be represented in the model, but simply assigned to another entity.

Input is sought from the ESHMC. Is the convenience and utility of being able to summarize irrigation efficiency by entity worth the distortion of acreage (and therefore of application depth) that results from configuring entity boundaries to correspond with model grid cells?

Please respond by 27 February 2009, to bcontor@if.uidaho.edu.