



Harney Groundwater Economic Impact Analysis

29th October 2024



"Plan A" Economic Impact Analysis

- Using the hydro-economic model (HEM) for Harney.
 - ◆ Rely on the parcel-level inputs and financial outputs from HEM.
 - ◇ Ground truth inputs/outputs with interviews of local stakeholders.
 - ◆ Calculate gross agricultural revenues at the county-level to feed into IMPLAN model.
 - ◇ Create a baseline of economic impact to measure potential impacts based on management scenarios. [*Highest Level of Economic Impacts*]
 - ◇ Apply the same process to management scenarios.
 - ◇ Multiple options for analysis and will be informed by further internal meetings.

“Plan B” Economic Impact Analysis

- Unable to use HEM outputs for curtailment scenarios
 - ◆ Same baseline based on HEM inputs/outputs.
 - ◆ Make assumptions about the effects of management scenarios on agricultural acreage in Harney Basin.
 - ◇ Informed through stakeholder interviews and literature review.
 - ◆ Build the management scenario(s) into IMPLAN and analyze the effects.
 - ◇ Approach will be informed by internal meetings and review of available data.

- IMPLAN is a regional input-output model used to assess economic impacts of various projects. IMPLAN models linkages between 546 different economic sectors. Models how money moves through the economy.
- Impact Types:
 - ◆ **Direct** – Impacts of expenditures by water users.
 - ◆ **Indirect** – Impacts of expenditures of suppliers to water users.
 - ◆ **Induced** – Impacts of household spending directly/indirectly associated with water users.
- Impact Measures:
 - ◆ **Output** – value of goods and services produced.
 - ◆ **Jobs** – average number of employees employed FT or PT.
 - ◆ **Personal Income** – sum of employee compensation and proprietary income.

What ECOnorthwest's Analysis Can Do

- ECO's Analysis Can:
 - ◆ Look at direct and secondary economic impacts to Harney County's agricultural economy based on OWRD's management scenarios.
 - ◆ Qualitatively discuss potential impacts to other non-agricultural small businesses as shown in IMPLAN results.
- ECO's Analysis Cannot:
 - ◆ Measure farm-level economic impacts using IMPLAN.
 - ◆ Estimate a specific number of small businesses impacted by management.
 - ◇ Could qualitatively address with local stakeholder interviews.

- What are the effects of the rulemaking on local government tax revenue?
 - ◆ How do changes in agricultural production affect agricultural property values and thus local government revenues?
 - ◆ Will meet with local assessor and tax collector to understand how agricultural property values are assessed.
 - ◇ May learn of other potential fiscal impacts.
 - ◆ Based on this information, we will look at a range of potential impacts to property tax revenue for Harney County.