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Water Leasing to Accomodate ESA: Impacts on the Regional Economics in the Platte River Basin

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The States of Wyoming, Colorado and Nebraska have entered an agreement with the Department of the Interior to plan and implement a basin-wide cooperative recovery Program for four endangered species whose habitat on the Platte River in Nebraska has been diminished by water development upstream.

A key aspect of the Program is to lease water from irrigators for an Environmental Water Account in Lake McConaughy, NE, which can be used to improve river flows for the four threatened and endangered species–the whooping crane, interior least tern, piping plover, and pallid sturgeon–and their habitat in and along the Platte River in Nebraska.

Four alternatives for the Program are analyzed in the Environmental Impact Statement. For one scenario being analyzed, approximately 180 KAF annually will be leased (60 KAF from each state from voluntary lessors) to produce approximately 68 KAF at the habitat. The amount of water needed to deliver 68,000 AF accounts for return flows and transit losses.

The affected economic area includes the counties in which these irrigated lands are located, and in which the regional impacts of changes in agricultural and related economic operations may result. This includes much of the North Platte basin in Wyoming, the South Platte basin in Colorado, and the Central Platte basin in Nebraska.

Agriculture

Water supplies for the Program come primarily from the agricultural sector under the assumption of annual water leases. Most, if not all, of the water acquired for the Program will be leased from irrigators. After voluntarily leasing their water, an irrigator can either discontinue production on that land, deficit irrigate, or can revert to dryland farming. The agricultural analysis focuses on estimating the change in irrigated agricultural production as irrigation deliveries are reduced. Changes in production are derived by assuming that as irrigation deliveries decrease, land is removed from irrigated agriculture.

Agriculture is the sector most impacted by water leasing. There are both positive and negative impacts to agriculture and related sectors. Reduced agricultural production resulting from land retirement leads to reduced demand for inputs, such as fertilizer and machinery needed to grow crops, and reduced farm revenues. Demand for agricultural inputs generates income and employment within the other sectors. Income generated within these input sectors is then spent further on other goods and services, multiplying the impacts of the original change in farm production input expenditures. Payments to irrigators compensate for lost revenue resulting from changes in water supplies. Impacts from this compensation generate economic activity in

other sectors of the economy, somewhat offsetting the negative impacts of lost agricultural production.

The agricultural impact model estimates the effects of a reduced water supply to the agricultural sector in the identified economic regions. Impacts are expressed as changes in net revenues, defined as gross on-farm revenues minus production costs. The agricultural model also estimates changes in gross revenues that are used as an input in the regional model. The regional analysis uses the changes in gross revenues to estimate the range of regional impacts that may occur from voluntary water leasing.

Regional Economic Impacts

The analysis uses an input-output model to determine the average annual regional impacts from water leasing. The payment provided to willing water lessors is forecast to be $60 per AF on average based upon analysis of water leasing and banking in the basin and other states. Payments for leasing water represent a positive regional economic impact because of the "new" income flowing into the region from outside but can also represent a shift in spending patterns in the local economy. If those individuals receiving payments stay within the impact region and spend a portion of those payments on local goods and services, then these land payments would generate positive regional impacts. However, if those receiving payments move outside the impact area or invest their payments outside the region, then those payments will generate little or no regional impacts.

Conclusion

Analysis results will be determined and discussed. The following points will be the topic of discussion:

1. There will be some shift in sales, income and employment from agricultural sectors to non-agricultural sectors of the local economy.
2. The payments received from water leasing will somewhat offset the negative impacts from reduced agricultural production.
3. A voluntary water leasing program can be beneficial to both species and irrigator if constructed properly.