HARVEY ECONOMICS

On the Other Hand…

That old joke about the economist and his three hands provides Harvey Economics with the name of its newsletter, which you will now see in the fall and the spring each year. There are so many topical issues which deserve economic scrutiny; we hope you will appreciate our perspective on them. Senior Associate Susan Walker took the first one…

Unintended Water Contamination Leads to Myriad Economic Effects

We've all seen the pictures. The Animas River flowing with florescent yellow and orange water after more than 3 million gallons of water contaminated with heavy metals spilled from the abandoned Gold King Mine near Silverton, Colorado. The news cycle quickly moved on as the River returned to its pre-spill greenish blue, but the economic impacts of these environmental calamities can linger long after fading from the public eye. To an economist, proper restitution can only come from a full reckoning of what was lost. Other abandoned mines continue to leak toxins into Western watersheds and risks of other contamination goes unheeded. So Harvey Economics wondered who experiences economic damages when one of these inadvertent events or continuous leaks occurs:

Quality of outdoor recreation – boating, fishing and other recreation can be lost due to area contamination and its visual effects. Media coverage alarms potential visitors and may even drive people away.
Result: Reduced visitor spending, business loss and diminished local economic activity

Changes in agricultural operations – clean water is required to crop and livestock production and support agricultural economies. A reduction in water quality or loss of a quality water source can hit farmers and ranchers.
Result: Reduced agricultural yields & animal weights, lower income, employment and related spending

The water we drink – domestic wells in close proximity to contaminated waters may need to be tested; well water users may need to temporarily obtain water from alternative sources; Water users may be asked to sharply reduce water consumption which will impact utility revenues. Water treatment plants may need to utilize additional treatment processes to ensure quality drinking water.
Result: Higher cost for potable water

Costs of clean-up – activities related to cleaning up mining spills and leakage invariably require management and effort.
Result: Higher public and private sector costs without incremental benefit

Environmental loss – impacts to aquatic habitat and species, as well as wetlands, other vegetation and wildlife have an economic impact in and of themselves.
Result: Reduced populations, densities, propagation

Damaged Perception – the memory of a major spill or knowledge of the existence of a leaking mine can have longer lasting effects on all types of water uses. Reputation can also carry a cost as prospective residents and businesses look elsewhere.
Result: Continued losses to tourism and agriculture; reduced attraction of businesses and residents; constrained economic growth

The essential point is that water is used multiple times by different types of users in a single stream system. The cumulative economic effects across users and over time are daunting. It is easy to focus on the infrequency or low probability of a spill, until it happens. Thoughtful evaluations of site specific impacts could provide information about the groups affected, the extent and duration of economic losses and the value of prevention or remediation activities.

For more information see:

EPA Response to Release from Gold King Mine http://www2.epa.gov/goldkingmine
Denver Post Coverage of the Gold King Mine Spill http://www.denverpost.com/news/ci_28820352/draining-old-mines-foul-denvers-watershed-every-day?source=pkg
CBS Denver Coverage of the Gold King Mine Damage Estimates http://denver.cbslocal.com/2015/08/13/damages-in-mine-spill-will-take-years-to-tabulate/