Recharging the Edwards Aquifer
The Edwards Aquifer, the primary source of drinking water for almost 2 million Texans, is recharged through rainfall and runoff that enter the aquifer through fractures, caves, sinkholes, and streams within the contributing and recharge zones of the aquifer. Most of the water that recharges the aquifer enters via streams that originate in the contributing zone and subsequently cross the recharge zone (i.e., the Nueces, Frio, Sabinal, Medina, Guadalupe and Blanco Rivers, and the Hondo, Cibolo, Barton, Onion, and San Geronimo Creeks, etc.).

A High Risk Practice To Be Avoided
In December 2008, TCEQ approved a permit for wastewater discharge in Hays County that allowed discharge of treated effluent from the Belterra subdivision into Bear Creek, a tributary of Onion Creek that recharges the Barton Spring segment of the Edwards Aquifer. Currently, Baruch Properties’ pending application for the Hills of Castle Rock subdivision proposes to release treated effluent into the San Geronimo Creek, a prolific Edwards Aquifer Recharge Creek.

Effluent discharged directly into creeks and waterways that recharge the Edwards enters the Aquifer unfiltered through fractures and sink-holes within the creek beds. Consensus among scientists is that this practice results in eutrophication – an excess of nutrients (such as phosphorus) that end up in creeks, and eventually in groundwater, producing an increase of microorganisms and algae and a
depression of oxygen. Such an outcome would be disastrous for the Edwards Aquifer – and the millions of Texans who depend on it for their water. Additionally, the U.S. Environmental Protection Agency and the U.S. Geological Survey have both acknowledged an increasing presence of pharmaceutical chemicals that have not historically been considered as contaminants in treated water. These emerging contaminants may be toxic or carcinogenic for people at very low concentrations. They are not removed during the water treatment process. Emerging contaminants will be present in the treated effluent that TCEQ has allowed to be directly recharged into the Aquifer.

Land Application: The Better Alternative
Developments located on the contributing or recharge zones of the Aquifer typically apply for a Texas Land Application Permit (TLAP), which allows them to dispose of treated effluent by land application (surface irrigation, evaporation, drain fields, or subsurface land application), rather than directly into recharge waterways. Treated effluent discharged onto land goes through a natural filtration process by being used in vegetation and percolating through large volumes of soil, under specific regulation by TCEQ. Appropriate application removes most of the dangerous chemicals before they reach our drinking water supply. Water that recharges the Aquifer this way is of much better (and safer) quality. Almost all subdivisions within the Hill Country have successfully employed this method of wastewater treatment.

Protect Aquifer Water Quality
Prohibiting discharge of effluent into contributing zone waterways will help to ensure that the quality of water that Central Texans drink and use every day stays as pristine as possible. This bill encourages growth and development that does not unnecessarily harm the most prolific natural resource of Central Texas: the Edwards Aquifer.