Abandoned water wells pose a threat to our groundwater quality. Water wells that are not physically or legally capable of making beneficial withdrawals are considered abandoned. The term “deteriorated” considers the condition of the well casing and the seal between the borehole and the well casing (annular seal).

WHAT ARE THE HEALTH RISKS ASSOCIATED WITH DETERIORATED ABANDONED WELLS?

- Surface Contaminants - a well is a direct conduit for contamination from the surface to the fresh water supply in the Edwards Aquifer.
- Co-mingling of groundwater – a well that is open to more than one aquifer (improperly constructed) can transmit contaminants or lower quality water from a shallow aquifer to the Edwards Aquifer even if the surface seal is in good condition.

WHO IS RESPONSIBLE FOR PLUGGING ABANDONED WELLS?

Texas law makes the landowner responsible for plugging abandoned wells. However, the threats that a deteriorated abandoned well poses can be significant health risks to the general population.

WHAT IS BEING DONE TO IDENTIFY AND PLUG ABANDONED EDWARDS AQUIFER WELLS?

- In Bexar County, the EAA works with the San Antonio Water Systems (SAWS) to identify and plug abandoned wells. The EAA researches historical databases from SAWS, and the state in addition to systematic canvassing of landowners to register and inspect all Edwards wells.
- The Edwards Aquifer Authority (EAA) has funded a needs-based abandoned well closure assistance program (AWCAP) to assist well owners with proper plugging of wells.

WHAT ARE POTENTIAL SOLUTIONS TO REDUCE THE HEALTH RISKS OF ABANDONED WELLS?

- Accelerate the plugging of abandoned wells based on risk to groundwater quality and public health.
- The EAA has developed an abandoned well risk assessment tool to rank potential impacts to groundwater quality.
- To increase the rate of plugging high risk wells, the EAA needs collaborative partners across the region to help with notification, information sharing, and potential funding sources.

*Turn page over for well contamination illustration*
POTENTIAL FOR EDWARDS AQUIFER GROUNDWATER CONTAMINATION
Abandoned and Deteriorated Wells

Contaminant Source

Well Casing

(Deteriorated)

(Water Level)

Borehole

Casing

Open

Casing

Open

Casing

Well Cap

Open borehole

Abandoned and deteriorated well casing

Contaminated Shallow Groundwater

Eagle Ford Shale

(Boring Layer)

Buda Limestone

(Confining Layer)

Del Rio Clay

(Confining Layer)

Potential for Edwards Aquifer Groundwater Contamination

Abandoned and deteriorated wells

Potential wet weather surface contaminant sources include:

Trash, Cars, Fertilizers, Herbicides/Pesticides

Impacted groundwater:

Deteriorated well casing & annular space allow contaminants to migrate downward into the Edwards Aquifer.