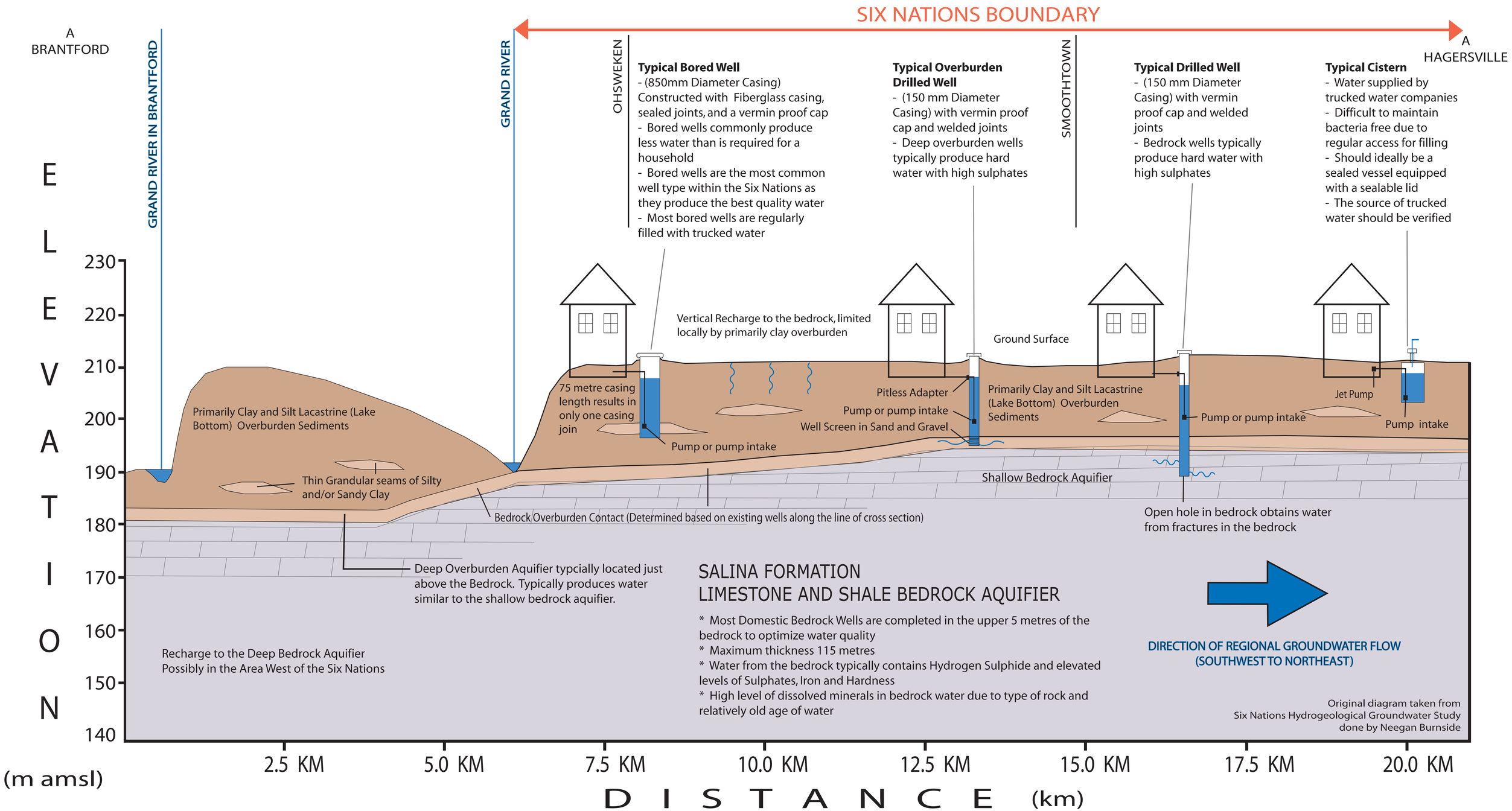
SIX NATIONS BOUNDARY
A BRANTFORD
A HAGERSVILLE
GRAND RIVER IN BRANTFORD
GRAND RIVER
OHSWEKEN
SMOOTHTOWN
Typical Bored Well
- (850mm Diameter Casing) Constructed with Fiberglass casing, sealed joints, and a vermin proof cap
- Bored wells commonly produce less water than is required for a household
- Bored wells are the most common well type within the Six Nations as they produce the best quality water
- Most bored wells are regularly filled with trucked water
Typical Overburden Drilled Well
- (150 mm Diameter Casing) with vermin proof cap and welded joints
- Deep overburden wells typically produce hard water with high sulphates
Typical Drilled Well
- (150 mm Diameter Casing) with vermin proof cap and welded joints
- Bedrock wells typically produce hard water with high sulphates
Typical Cistern
- Water supplied by trucked water companies
- Difficult to maintain bacteria free due to regular access for filling
- Should ideally be a sealed vessel equipped with a sealable lid
- The source of trucked water should be verified
ELEVATION
230
220
210
200
190
180
170
160
150
140
(m amsl)
Vertical Recharge to the bedrock, limited locally by primarily clay overburden
Ground Surface
75 metre casing length results in only one casing join
Pump or pump intake
Pitless Adapter
Pump or pump intake
Well Screen in Sand and Gravel
Primarily Clay and Silt Lacastrine (Lake Bottom) Overburden Sediments
Pump or pump intake
Jet Pump
Pump intake
Primarily Clay and Silt Lacastrine (Lake Bottom) Overburden Sediments
Thin Grandular seams of Silty and/or Sandy Clay
Shallow Bedrock Aquifer
Bedrock Overburden Contact (Determined based on existing wells along the line of cross section)
Open hole in bedrock obtains water from fractures in the bedrock
Deep Overburden Aquifier typcially located just above the Bedrock. Typically produces water similar to the shallow bedrock aquifier.
SALINA FORMATION
LIMESTONE AND SHALE BEDROCK AQUIFIER
* Most Domestic Bedrock Wells are completed in the upper 5 metres of the bedrock to optimize water quality
* Maximum thickness 115 metres
* Water from the bedrock typically contains Hydrogen Sulphide and elevated levels of Sulphates, Iron and Hardness
* High level of dissolved minerals in bedrock water due to type of rock and relatively old age of water
DIRECTION OF REGIONAL GROUNDWATER FLOW (SOUTHWEST TO NORTHEAST)
Recharge to the Deep Bedrock Aquifer Possibly in the Area West of the Six Nations
Original diagram taken from Six Nations Hydrogeological Groundwater Study done by Neegan Burnside
2.5 KM
5.0 KM
7.5 KM
10.0 KM
12.5 KM
15.0 KM
17.5 KM
20.0 KM
DISTANCE (km)