

portions of the Niagara Escarpment region (Hamilton to Niagara Falls corridor; *see* Yager 1997, 2000). A combination of the lack of deeper core in the Guelph through the Owen Sound region of the Niagara Escarpment, and confusion over the identification of crinoidal grainstones and packstones of the Gasport Formation and basal member of the overlying Goat Island Formation (e.g., Niagara Falls Member), without the characteristic calcareous shaly lithofacies known to the south, led to the creation of the Amabel Formation and Albemarle Group in the central to northern portions of the Niagara Escarpment

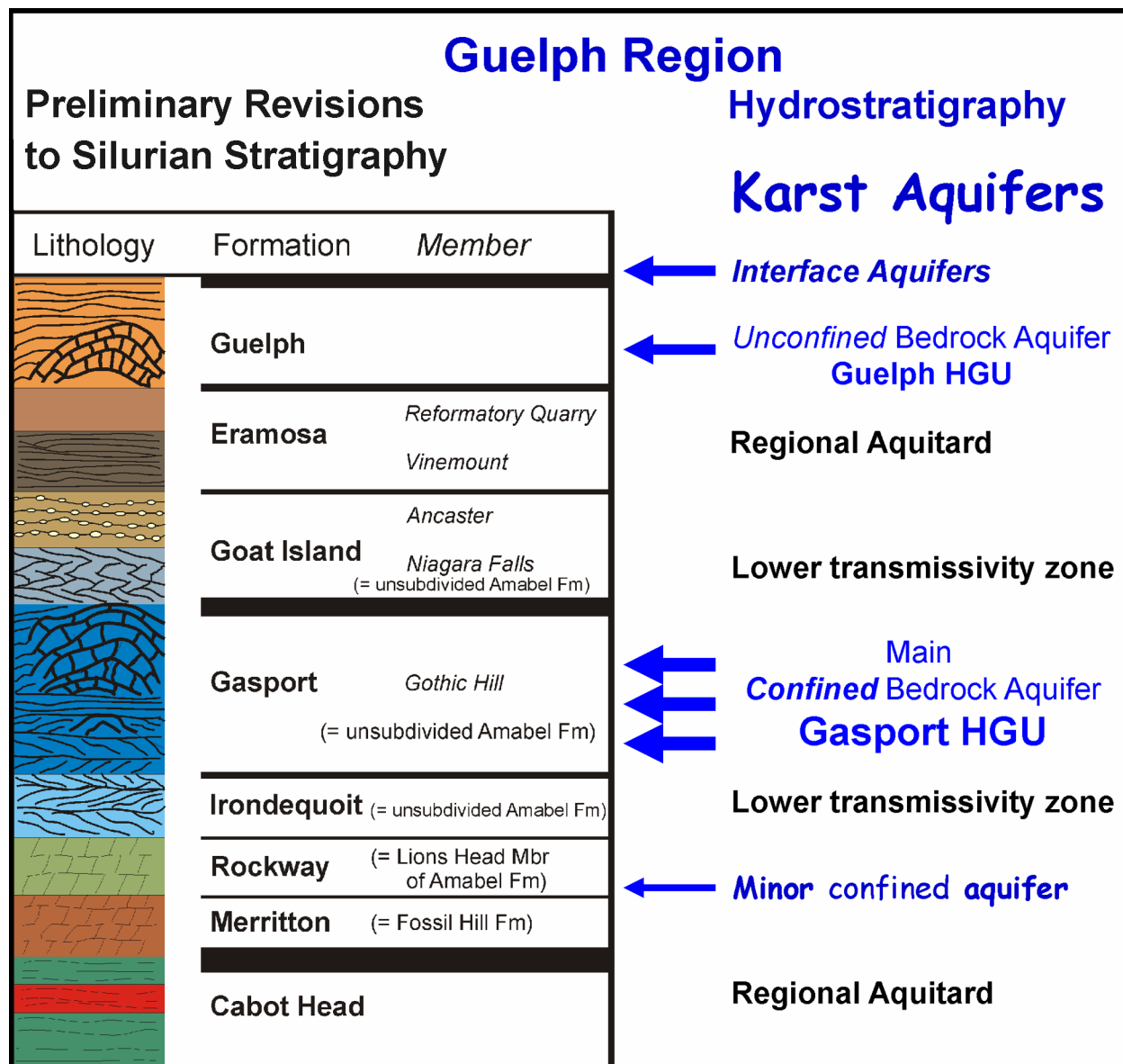


Figure 31.3. Preliminary revised Early Silurian stratigraphy and hydrostratigraphic framework for Guelph region of Niagara Escarpment. The relative thickness of lines separating each formation in right column reflects the significance of the diastem (thicker line reflects greater time break). Key aquitards include the regional Cabot Head Formation shales, the overlying dolostones of the Merritton and Rockway formations, and dolostones and calcareous shales of the Vinemount Member (Eramosa Formation). The Niagara Falls Member of Goat Island Formation is a relatively low transmissivity (reduced hydraulic conductivity) crinoidal grainstone unit. Previous hydrogeology studies have allocated the Irondequoit and Gasport formations and Niagara Falls Member of the Goat Island Formation to the unsubsdivided Amabel Formation. Key regional hydrogeologic units (HGU) include the Gasport Formation reef mound and inter-reefal bleached shell coquinas (Gasport HGU) and the overlying Guelph Formation (Guelph HGU); interface aquifers (groundwaters flowing along bedrock surface and within basal unconsolidated sediments) are also regional sources of groundwater (*see* Brunton et al. 2007).