Abstract: $u_t + uu_x = \eta u_{xxx} + u_{xx} \quad \lim_{x \to \pm \infty} u = \pm 1$ Originally proposed by Whitham as a model for the propagation of tidal bores. It was shown by Bona and Schonbek that front type traveling wave solutions exist for all $\eta$, unique modulo translation, and are monotone for $|\eta| \leq \frac{1}{4}$, and by Pego that such solutions are stable to small perturbations for the monotone case. We present a new stability criteria that does not require a smallness assumption on the difference between the initial data and the traveling wave, and which can be shown to hold in an open set of $\eta$ values that includes the monotone case. This condition involves the number of bound states of a certain Schrödinger operator constructed from the front solution. We will also discuss some rigorous numerical calculations that give intervals in $\eta$ where this spectral condition is guaranteed to hold. Joint work with Blake Barker, Vera Hur and Zhao Yang.