

SLIDE 1

K-Beach Flood Impact Area

Situational Analysis

And

Outlook

April 7, 2015

Previous attempts at ditching and diverting water from the wetlands have resulted in unanticipated downstream consequences while providing no measurable benefit.

Both ADNR and Borough hydrologists agree that development / activity in the wetlands in this area has reduced the ability of the wetlands to function properly and created impacts to surrounding properties.

SLIDE 14

Are the ditches on maintained roads within the Borough designed to hold water temporarily to allow it to dissipate?

The short answer is yes – In many cases this is the only economically feasible way to construct roads in rural areas with flat topographical characteristics.

SLIDE 20

- Kenai Peninsula Roads have historically been designed to hold water in their ditches and allow that water to dissipate (absorb) into the underlying groundwater.
- This approach is still used today.
- This approach meets Borough code – KPB 14.06.170 reads: *Roads shall be constructed to prevent ponding of runoff waters in the roadside ditches. Drainage ditches shall be constructed such that runoff waters will be conveyed to natural drainage courses, ditches or waterways, or other man-made drainage courses.*
- Looking at each portion of code:
 - *Roads shall be constructed to prevent ponding of runoff waters in the roadside ditches* – Long term ponding in ditches is not desirable. However, ponding is inevitable to some degree. The intent of the code and the design of the roads that are Borough maintained is to limit this ponding as much as reasonably possible.
 - *Drainage ditches shall be constructed such that runoff waters will be conveyed to natural drainage courses, ditches or waterways, or other man-made drainage courses.* – Drainage ditches should convey water to natural drainage courses. Natural drainage courses include both above ground drainages and underground aquifers. Draining all drainage ditches to above ground natural drainage courses is virtually impossible. Installing underground storm water drainage systems where above ground drainage systems are not possible would be so cost prohibitive as to make many rural developments unfeasible.