

# GEOGRAPHIC INFORMATION SYSTEMS (GIS)

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## Spatial Calculations

### **Asphalt Specialties Company, Inc. - Historically Irrigated Areas for Fulton Ditch Shares**

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Asphalt Specialties Company, Inc., acquired 45 shares in the Fulton Ditch, which it planned to use as an augmentation water supply for its substitute water supply plans for its gravel pit mining operations. As part of a submitted plan, Martin and Wood conducted an historical use analysis for these 45 shares.

For many years, a tenant farmer had been using the 45 Fulton Ditch shares to irrigate land near Brighton. Martin and Wood personnel interviewed the farmer and used aerial photographs of the farmed land to

outline the historically irrigated area. Aerial photographs from a number of different years were used to determine if irrigated area had changed over time.

The aerial photographs were imported into GIS ArcMap software and georeferenced to 7.5-minute topographic maps of the area. The irrigated areas were outlined and their areas calculated using GIS software.