The Northern Integrated Supply Project has four (4) pipeline reaches that run through Larimer County. The reaches are known as the County Line, Poudre Intake, Glade Release Pipeline, and Northern Tier Pipelines.

**Floodplain Crossings**

Where the pipelines need to cross wetlands or open waters, or where work would impact wetlands or open waters, the construction limits will be reduced from the typical 120 feet width. At the majority of wetland and open water features, the reduced impact width will be 60 feet wide (30 feet on either side of center) ([Figure 1](#)). However, where wetlands or open water features are over 500 feet in length, the reduced impact width will be 80 feet wide (40 feet on either side of center) ([Figure 1](#)). Additional BMPs, such as using equipment mats and implementing erosion control measures, will be used to further minimize impacts ([Figure 2](#)).

Using data obtained from the Larimer County GIS website it was determined where the anticipated floodplain crossings are expected. Below, this section breaks down the four conveyance reaches and where the alignment crosses the floodplain and whether it is in unincorporated Larimer County. All floodplain crossings that occur in unincorporated Larimer County will be subject to the county’s floodplain regulations and permitting. Additionally, for pipeline crossings in unincorporated Larimer County the required floodplain permits for those crossings will be acquired prior to construction in those floodplains.

- **Northern Tier Pipeline**
  - Adjacent to West State Highway 14 near Glade Reservoir (unincorporated)
  - Northwest of Kluver Reservoir (unincorporated)
  - East of Interstate 25 between County Road 54 and County Road 52 (unincorporated)

- **Glade Release Pipeline**
  - South of West State Highway 14, approximately 1,300 feet west of the intersection of West State Highway 14 and North County Road 29C (unincorporated)

- **Poudre Intake Pipeline**
  - From the intake structure off of the Poudre River to Mulberry Street (Fort Collins)
  - South of Mulberry Street between South Lemay Ave and South Timberline Road (unincorporated)
  - East of South Timberline Drive until just west of South Summit View Drive (Fort Collins)
  - East of I-25 and north of the canal between Sherry Drive and I-25 (Fort Collins)
West of I-25 and south of the canal between I-25 and McLaughlin Lane (Fort Collins)

- County Line Pipeline
  - Along County Road 13 from just north of Larimer County Road 32E/ Weld County Road 68 1/2 to the Poudre River (Windsor)

While floodplains can pose risks to any conveyance system (pipelines, roadways, conduits and even supports for aerial systems) they are frequently unavoidable and must be a major consideration in design. Several approaches to crossing active channels are conceptually depicted in Figures 3, 4, and 5. Floodplains are not considered a significant risk to this pipeline due to the following practices:

- Use of double-lap-welded steel pipelines, which increases pipeline strength and provides a double seal at the joint
- Performance of a scour analysis for each major crossing to ensure that pipeline burial depth is adequate
- Siting of critical appurtenances outside of floodplains
- Restoring to existing grades after pipeline construction to avoid any changes to the floodplain to obtain a "no rise" finding

It is important to note that Northern Water's welded-steel Southern Water Supply Pipeline (SWSP) remained operational throughout and after the September 2013 floods even though it traversed four of the major affected floodplains (Big Thomson, St Vrain, Left Hand Creek, and Boulder Creek). Additionally, of the City of Longmont’s five raw water delivery systems (3 pipelines and 2 canals), the SWSP was their only operational supply following the September 2013 floods.