

**PLANNING BMP's**

- Share/consolidate corridors for pipeline ROWs to the maximum extent possible.
- Maximize the utility of surface facilities by developing multiple wells from a single pad (directional drilling), and by co-locating multipurpose facilities (for example, well pads and compressors) to avoid unnecessary habitat fragmentation and disturbance of additional geographic areas.
- Minimize newly planned activities and operations within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river.
- Locate roads outside of drainages where possible and outside of riparian habitat.
- Avoid constructing any road segment in the channel of an intermittent or perennial stream
- Avoid new surface disturbance and placing new facilities in key wildlife habitats in consultation with CDOW.
- Minimize the number, length, and footprint of oil and gas development roads
- Use existing roads where possible
- Combine utility infrastructure (gas, electric, and water) planning with roadway planning to avoid separate utility corridors
- Combine and share roads to minimize habitat fragmentation
- Where possible, consolidate pipeline and existing roadways, or roadways that are planned for development
- Design roads with visual and auditory buffers or screens (e.g., topographic barriers, vegetation, and distance).
- Maximize use of remote completion/frac operations to minimize traffic
- Maximize use of remote telemetry for well monitoring to minimize traffic

**CONSTRUCTION BMP's**

- Structures for perennial or intermittent stream channel crossings should be constructed using appropriately sized bridges or culverts
  - Design road crossings of streams at right angles to all riparian corridors and streams to minimize the area of disturbance to the extent possible.
- DRILLING/COMPLETIONS BMP's
- Use centralized hydraulic fracturing operations.
  - Install and maintain adequate measures to exclude all types of wildlife (e.g., big game, birds, and small rodents) from all fluid pits (e.g., fencing, netting, and other appropriate exclusion measures).

**PRODUCTION/RECLAMATION BMP's**

- Utilize staked soil retention blankets for erosion control and reclamation of large surface areas with 1.5:1 or steeper slopes. Avoid use of plastic blanket materials.
- Remove well pad and road surface materials that are incompatible with post-production land use and re-vegetation requirements
- Use only certified weed-free native seed in seed mixes, except for non-native plants that benefit wildlife
- Williams will use certified, weed free grass hay, straw, hay or other mulch materials used for the reseeding and reclamation of disturbed areas.
- Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents and openings.
- Reduce visits to well-sites through remote monitoring (i.e. SCADA) and the use of multi-function contractors.
- Avoid dust suppression activities within 300 feet of the ordinary high water mark of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river where possible.
- Install and use locked gates or other means to prevent unauthorized vehicular travel on roads and facility rights-of-way.