

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.