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

Place roads to avoid obstructions to migratory routes for wildlife, and to avoid displacement of wildlife from public to private lands.

Maximize the use of directional drilling to minimize habitat loss/fragmentation

Maximize use of long-term centralized tank batteries to minimize traffic

Maximize use of remote completion/frac operations to minimize traffic

Maximize use of remote telemetry for well monitoring to minimize traffic

Maintain undeveloped areas within development boundaries sufficient to allow wildlife to persist within development boundaries during all phases of construction, drilling, and production.

Restrict oil and gas activities as practical during critical seasonal periods

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.

Construct retention basins and ponds that benefit wildlife

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).

Conduct well completions with drilling operations to limit the number of rig moves and traffic.

PRODUCTION/RECLAMATION BMP's

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.