

SAG Livestock Compensation Plan Alternatives January 26, 2022								
Program Components ↓	Alternative 1: Current Game Damage Process (i.e., preponderance of evidence standard);	Alternative 2: 2004 Wolf Working Group's Recommendations (100% FMV for confirmed, 50% FMV for probable);	Alternative 3: Simple Compensation Ratio for Missing Livestock (stand alone)	Alternative 4: Itemization for Compensation of Production Loss and Missing Livestock (stand alone)	Alternative 5: Producer chooses between simple compensation ratio (Alternative 3) OR itemization (Alternative 4)	Alternative 6: Outcome-based compensation in addition to ex post (pay for performance)	Alternative 7: Outcome-based compensation parallel to ex post alternative 1 or 2 (pay for performance/practices)	Alternative 7b: Outcome-based compensation parallel to ex post alternative 3, 4, or 5 (pay for performance/practices)
Confirmation of depredation events	Depredations compensated at 100% FMV for confirmation under preponderance of evidence standard if no sales receipts/contracts. Livestock injured/killed by wolves will be compensated up to fair market value of animal or 55k limit. CPW/WS-APHIS has investigative authority.	* Confirmed kills paid at 100% FMV (up to 5k/head) * Probable kills paid at 50% of market value. * Livestock injured/killed by wolves will be compensated up to fair market value of animal or 55k limit. * CPW/WS-APHIS has investigative authority.	*100% FMV for depredation event (death or injury) that the investigating officer reasonably determines the result of a wolf depredation resolving any unknowns in the producer's favor. *Document level of confidence (based on criteria TBD, e.g., highly confident, confident, reasonably confident) it was clear evidence to help inform other management options. * Livestock (including guard and herding animals) injured/killed by wolves will be compensated up to fair market value of animal or 55k limit (per statute 33.3 - 101a) - this limit needs to be updated if necessary. *CPW/WS-APHIS has investigative authority.	*100% FMV for depredation event (death or injury) that the investigating officer reasonably determines the result of a wolf depredation resolving any unknowns in the producer's favor. *Document level of confidence (based on criteria TBD, e.g., highly confident, confident, reasonably confident) it was clear evidence to help inform other management options. * Livestock (including guard and herding animals) injured/killed by wolves will be compensated up to fair market value of animal or 55k limit (per statute 33.3 - 101a) - this limit needs to be updated if necessary. *CPW/WS-APHIS has investigative authority.	*100% FMV for depredation event (death or injury) that the investigating officer reasonably determines the result of a wolf depredation resolving any unknowns in the producer's favor. *Document level of confidence (based on criteria TBD, e.g., highly confident, confident, reasonably confident) it was clear evidence to help inform other management options. * Livestock (including guard and herding animals) injured/killed by wolves will be compensated up to fair market value of animal or 55k limit (per statute 33.3 - 101a) - this limit needs to be updated if necessary. *CPW/WS-APHIS has investigative authority.	See alternative 1 for ex post compensation	Depredations investigated but have no bearing on compensation. Producers bid competitively to opt out of parallel ex-post program (Atr. 1 or 2). * Bids include proactive practices as well as the amount the producer would accept to opt out of ex-post; reviewed by a board and ranked based on wolf presence, risk, practices, and bid. * Conceptually similar to USDA's Conservation Stewardship Program *Allow pooled bids from multiple producers in a geographic area *Can be complementary to other financial and technical assistance programs for conflict minimization	Depredations investigated but have no bearing on compensation. Producers bid competitively to opt out of parallel ex-post program (Atr. 3, 4, 5). * Bids include proactive practices as well as the amount the producer would accept to opt out of ex-post; reviewed by a board and ranked based on wolf presence, risk, practices, and bid. * Conceptually similar to USDA's Conservation Stewardship Program *Allow pooled bids from multiple producers in a geographic area *Can be complementary to other financial and technical assistance programs for conflict minimization
Compensation rate for missing livestock?	No compensation for missing livestock, closest is running age ewes (1.5 times lamb price).	No compensation for missing livestock, closest is running age ewes (1.5 times lamb price).	* A or B Compensation ratio for missing sheep & calves * 1.5JA or 1.5JB Compensation ratio for missing yearlings Proposed 2-tier compensation ratio: 1) Compensation ratio of A for missing sheep and calves (1.5JA for yearlings) 2) Increased to compensation ratio of B for missing sheep and calves (1.5JB for yearlings) if the producer employs conflict mitigation measures. Note: report will document different ratios discussed by SAG to further inform CPW and Commission's decisions on final ratios.	This alternative is a way to itemize for missing animals and production losses.	Producer has option to choose between either straight/simple compensation ratio (alternative 3) or itemization (alternative 4); producer may not do both.	N/A	N/A	N/A
Eligibility requirements for claiming/compensating missing livestock?	No compensation for missing livestock.	No compensation for missing livestock.	1. Must have a depredation event (death or injury) by gray wolves. 2. Livestock must be sheep, calves or yearlings. 3. Losses are reported by the producer; lead with trust and further investigate missing livestock claims as appropriate. 4. Missing livestock claimed cannot exceed actual documented livestock loss. 5. Investigator may consider role of topography/vegetation. 6. Conflict minimization is not a requirement for damage compensation at a ratio of 5 7. Bump the ratio to 7 if conflict minimization is employed (for further consideration: specifics on what qualifies for this/what the validation is)	1. Must have a depredation incident (death or injury) to itemize. **Consider whether it is always a requirement? 2. Livestock must be sheep, calves or yearlings. 3. Losses are reported by the producer; lead with trust and further investigate missing livestock claims as appropriate. 4. Missing livestock claimed cannot exceed actual documented livestock loss (following the procedure set forth in Wyoming's program). 5. No topography requirement 6. Practice minimization is not a requirement for itemized damage compensation HOWEVER include an incentive for more compensation available if conflict minimization is applied.	Eligibility requirements same as alternative 3 or 4, depending on which option the producer chooses	N/A	N/A	N/A
Compensation amount for other (indirect) losses (i.e., pregnancy and weaning)?	N/A	N/A	1) Compensation ratio for missing livestock attempts to account for some production losses. Additional consideration: should there be subtraction of a state average baseline (pre-wolf reintroduction) loss rate from actual missing number to be claimed? However, this would mean that the ratio likely does not attempt to cover some additional production losses.	Proven by application and documentation for additional losses as follows (can apply for one or more of the following options)... The following are general considerations, with details to be developed: 1. Missing animals: Baseline death loss is submitted with percentages over a minimum of 3 years using production records. Loss above that must be demonstrated to qualify for additional death loss. 3 year is a pre-wolf introduction 3 year baseline. 2. Decreased weaning weights: Baseline weights over a minimum of 3 years must be submitted along with current year weights. (Further consideration: role of drought years?) Data can be submitted via weight tickets, production records, or sales records. 3. Decreased conception rates: Baseline conception rates over a minimum of 3 years must be submitted along with current year rates. Data can be submitted via production and/or vet records. 4. Additional losses can be considered on a case-by-case basis by the division. Consider: How to factor in operation/size changes year to year	See alternative 3 or 4, depending which option the producer chooses	N/A	N/A	N/A
Eligibility for 'indirect' loss compensation?	N/A	N/A	N/A	Eligibility for production loss compensation: 1. Depredation event (death or injury) automatically qualifies a producer to apply for production loss compensation. **Consider whether it is always a requirement for itemization of production losses?	See alternative 3 or 4, depending which option the producer chooses	N/A	N/A	N/A
Ex ante program components?	N/A	N/A	Covered in ratio differences	An ex ante program is not part of this alternative, but can be a separate program available to the producers	See alternative 3 or 4, depending which option the producer chooses	Payments based on wolf pack home ranges and overlap with ranches, and wolf survival to end of year. Payments based on an algorithm, similar to that used by the Mexican Wolf Livestock Council, where points are used to assign percentage of available funding The following would be an example of that framework: • Step 1: Core Area/2 points per core area + Territory/1 point per territory + Wolf Pups/1 point per pup = Subtotal A • Step 2: Subtotal A is multiplied by 2 if applicant is implementing preventative practices = Subtotal B • Step 3: The Number of Livestock (All) (cow/calf is 1; yearling is 0.5) that are exposed to wolves is divided by 100 = Subtotal C • Step 4: Subtotal B is multiplied by Subtotal C = Grand Total. *Algorithm may be adjusted to reduce bias toward larger producers, e.g., by beginning with a minimum payment regardless of herd size.	Producer bids to opt out of all ex post compensation. *May include proactive, preventative strategies (e.g., husbandry practices, guard animals, carcass removal) and/or tools (e.g., fences, light and noise devices) * Practices may be invented by livestock owners (rewards creativity) * Bids are reviewed by a board and ranked based on wolf presence, livestock risk, and bid amount.	Producer bids to opt out of all ex post compensation. *May include proactive, preventative strategies (e.g., husbandry practices, guard animals, carcass removal) and/or tools (e.g., fences, light and noise devices) * Practices may be invented by livestock owners (rewards creativity) * Bids are reviewed by a board and ranked based on wolf presence, livestock risk, and bid amount.
Eligibility for ex ante?	N/A	N/A	Covered in ratio differences	An ex ante program is not part of this alternative, but can be a separate program available to the producers	See alternative 3 or 4, depending which option the producer chooses	Livestock producer (in occupied wolf habitat). May need to enroll to determine ranch geography, number of livestock exposed, period of time, etc.	Livestock producer (in occupied wolf habitat), by competitive bid	Livestock producer (in occupied wolf habitat), by competitive bid
Additional considerations? (phasing, program evaluation, etc.)		Requires definitions for 'confirmed' and 'probable'	Collect pre-implementation baseline data as well as data on losses, claims and payments for first 3-5 years of implementation; evaluate program after that timeframe and adjust missing livestock compensation rate and types of animals covered as appropriate. Implement in conjunction with robust conflict minimization programs which would be evaluated to determine techniques that have merit and whether the program is robust enough. Consider operation of a compensation program in partnership with CO Department of Ag and/or Wildlife Services to leverage existing relationships with producers. Once wolf status is changed to delisted, harmonize the program into an overall big game compensation program to avoid unintended consequences.	Compile data from producers who file claims to report out the level of production losses experienced. Evaluate program after 3-5 years to identify whether there is a cleaner/easier way to cover the losses. Consider tweaking the process based on producer/CPW feedback on ease of application and administration and with considerations on the wolf population. OR consider going to a straight ratio that would be comparable to the actual losses that are demonstrated through this program (ease of use long term). Once wolf status is changed to delisted, harmonize the program into an overall big game compensation program to avoid unintended consequences.	Considerations in 3&4 should be evaluated along with also looking at which program is most widely used in an attempt to simplify the process after the evaluation time. Conservation performance payments are for wolf survival, independent of depredations or missing livestock. Incentive is for producer to prevent livestock from being killed and to find any missing livestock. Conservation performance payments are for wolf survival, independent of direct or indirect effects. Incentive is for producer to prevent conflict. * Like all alternatives, cost will increase with wolf population * But individual wolf value can decrease with population increase * Should include a sunset clause: expire, renew, or revise based on time (e.g., 5-10 yr) and/or wolf state endangered status change * Would require increased agency capacity and monitoring Implement in conjunction with robust conflict minimization programs which would be evaluated to determine techniques that have merit and whether the program is robust enough.	Conservation performance payments are for wolf survival, independent of depredations or missing livestock. Incentive is for producer to prevent livestock from being killed and to find any missing livestock. Conservation performance payments are for proactive practices and wolf survival, independent of direct or indirect effects. Incentive is for producer to prevent conflict. * Like all alternatives, cost will increase with wolf population * Ranking should evolve as wolf population spreads and needs change * Should include a sunset clause: expire, renew, or revise based on time (e.g., 5-10 yr) and/or wolf state endangered status change * Available funding would need to be adequate enough to incentivize opting out of ex post Implement in conjunction with robust conflict minimization programs which would be evaluated to determine techniques that have merit and whether the program is robust enough.	Conservation performance payments are for wolf survival, independent of depredations or missing livestock. Incentive is for producer to prevent livestock from being killed and to find any missing livestock. Conservation performance payments are for proactive practices and wolf survival, independent of direct or indirect effects. Incentive is for producer to prevent conflict. * Like all alternatives, cost will increase with wolf population * Ranking should evolve as wolf population spreads and needs change * Should include a sunset clause: expire, renew, or revise based on time (e.g., 5-10 yr) and/or wolf state endangered status change * Available funding would need to be adequate enough to incentivize opting out of ex post Implement in conjunction with robust conflict minimization programs which would be evaluated to determine techniques that have merit and whether the program is robust enough.	
Documented Peer Reviewed Case Studies			Literature on numerical ratios: Oakleaf, 2003; Bangs & Shival, 2001; Somers, 2010; Switaski, 2002; Lehmkühler, 2007; DSES, 2021 (USFWS); Ramler, 2014; Widman, 2019; Cooke, 2013	Steele, 2013; Somers, 2010; Lehmkühler, 2007; DSES, 2021 (USFWS); Ramler, 2014; Widman, 2019; Cooke, 2013	See alternative 3 or 4	Conservation performance payments preferred by numerous authors and most economists (Nelson 2009; Breck et al. 2011; Dickman et al. 2011; Harris 2020; Malcom 2020). Dickman et al (2011) recommended a combo with majority of funds to outcome-based and minority to ex post. Harris (2020) speculated that most benefits of performance-based could be captured by practice-based. Examples: Mexican Wolf Livestock Coexistence Council (Strategic Plan 2014) Viviendo con los Gatos (rare cats in Sonora) (Nistler 2007) Sweden lynx & wolverine, with semi-domesticated reindeer (Persson et al. 2015).	Harris/MFWP (2020): Payment for practices may be simpler than payment for conservation performance per se. For bid process, none, but recommended by economist (Dana Hoag presentation) Conceptually similar to CSP	Harris/MFWP (2020): Payment for practices may be simpler than payment for conservation performance per se. For bid process, none, but recommended by economist (Dana Hoag presentation) Conceptually similar to CSP
Program Administration, Funding Source, Etc.	Program Administered by CPW Game Damage Program Funding: Appropriations enumerated in 33-2-105.8 C.R.S. CDA has exclusive jurisdiction over depredating animals per 33-40-101 C.R.S.					Ex post administered as with other programs: Program Administered by CPW Game Damage Program Funding: Appropriations enumerated in 33-2-105.8 C.R.S. CDA has exclusive jurisdiction over depredating animals per 33-40-101 C.R.S. Ex ante administration TBD	Ex ante administration TBD	Ex ante administration TBD
Conflict Minimization/Risk Reduction Assumptions Across All Alternatives	Risk Reduction Program Elements: • Provide financial, technical and operational assistance to promote and implement conflict minimization and risk reduction practices. • Apply and update, as relevant, regulations to support non-lethal conflict minimization practices. • Support both preventative and post-depredation non-lethal practice implementation. • Emphasize context specificity. • Recognize that not all efforts will prevent loss, while encouraging and supporting implementation and innovation. • Emphasize producer education and outreach, leveraging experiences and lessons of other producers. • Provide sufficient agency capacity and funding for implementation. • As necessary based on resources, prioritize support for those that have experienced losses. • Use public-private partnerships to support funding, education, and implementation.							
Outcomes/Principles Across All Alternatives	Desired outcomes • Livestock owners are fairly compensated for losses and are not financially harmed. • Conflicts are minimized. • Wolves are restored. • Trust and support are built across communities. Principles • Build trust, transparency, relationships and good will with agricultural communities. • Be consistent, equitable, fair and robust. • Value both fair compensation and personal responsibility. • Be simple and straightforward. • Provide opportunity for choice and options. • Recognize different kinds of grazing contexts. • Promote conflict minimization. • Support with sustainable funding and capacity. • Use State-Federal partnerships and public-private partnerships where appropriate for implementation and funding. • Emphasize education and outreach. • Fiscal responsibility.							
Education and Outreach	Incorporate education and outreach for producers to ensure awareness and understanding of the program and administrative processes. Incorporate education and information for the public.							