REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Native Vegetation	Aspen_Conceptual_Model.pdf		Conceptual model	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	Aspen_Toolbox.doc		Toolbox structure and explanation.	Native Vegetation Toolbox/Folder
Conservation Elements	Terrestrial Species	Bald_Eagle.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Bald_Eagle_Conceptual model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Bighorn_Sheep.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Bighorn_Sheep_Conceptual_Model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Aquatic Species	Bull_trout.doc		Toolbox structure and explanation.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	Bull_Trout_conceptual Model.pdf		Conceptual model	Aquatic Species Toolbox/Folder
Change Agents	Climate	Climate_Change_Modeling_Notes.doc		Toolbox structure and explanation.	Climate Toolbox/Folder
Conservation Elements	Aquatic Group	Coldwater_Fish.doc		Toolbox structure and explanation.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Species	Columbia_Spotted_Frog.doc		Toolbox structure and explanation.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	Columbia_Spotted_Frog_conceptual_model.pdf		Conceptual model	Aquatic Species Toolbox/Folder
Conservation Elements	Native Vegetation	Combined_Juniper_Toolbox.doc		Toolbox structure and explanation.	Native Vegetation Toolbox/Folder
Conservation Elements	Aquatic Group	CWF_conceptual_Model.pdf		Conceptual model	Aquatic Group Toolbox/Folder
Change Agents	Development	Development_Toolbox.doc		Toolbox structure and explanation.	Development Toolbox/Folder
Change Agents	Invasives	Disease_Toolbox.doc		Toolbox structure and explanation.	Invasives Toolbox/Folder
Conservation Elements	Terrestrial Species	Golden_Eagle.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Golden_Eagle_Conceptual model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Change Agents	Development	Grazing_Toolbox.doc		Toolbox structure and explanation.	Development Toolbox/Folder
Conservation Elements	Terrestrial Species	GreaterSage_Grouse.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Groundwater.doc		Toolbox structure and explanation.	Aquatic Ecosystems Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Aquatic Ecosystems	Groundwater.pdf		Conceptual model	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Species	GSG_conceptual_Model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	HCAtoolkit		The HCA toolkit is an ArcGIS (ESRI) script (written with Python 2.5) designed to identify habitat concentrations areas (HCAs) from a habitat value raster, a landscape resistance raster, and several user-specified parameters.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Mule_Deer.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Mule_Deer_Conceptual_model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_Perennial_streams.tbx	NGB_AE_Perennial_cum	Cumulative perennial streams indicator score based on water quality (303d), aquatic invasives, groundwater recharge, and flow regulated watersheds.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_Perennial_streams.tbx	NGB_AE_Surface Water Use	Surface water use based on estimates from USGS 2005 datasets calibrated to land use within the HUC 12.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_TBL_Groundwater.tbx	NGB_AE_Groundwater Use	Groundwater use based on 2005 USGS estimates by county calibrated for land use within each HUC.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_TBL_Open_Water.tbx	NGB_AE_Open_water_anthro	Mean euclidean distance to anthropogenic features based on a HUC 12 zonal statistics.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_TBL_Open_Water.tbx	NGB_AE_Open_water_cum	Cumulative indicator score for open water based on water quality (303d), aquatic invasives, distance to anthropogenic, and percent native land cover.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_tbl_Riparian.tbx	NGB_AE_Extract and Mosaic Riparian	Riparian vegetation types extracted and mosaiced from Landfire EVT and ReGAP veg mapping.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_tbl_Riparian.tbx	NGB_AE_Riparian_Corridor	Riparian corridor modeled by using NHD plus attributes to determine bank full width and buffering based on that width. The corridor raster was mosaiced with the riparian vegetation layer to include both corridors and vegetation.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_tbl_Riparian.tbx	NGB_AE_Riparian_Corridor_vs_DevAgNatural	Amount of developed, agriculture and native land cover within a HUC.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_tbl_Wetlands.tbx	NGB_AE_Proportion_native	Native land cover within the HUC12 watershed based on Landfire VCC data.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	NGB_AE_tbl_Wetlands.tbx	NGB_AE_Wetlands_cum	Cumulative Wetland Indicator score using water quality (303d), aquatic invasives, groundwater condition and proportion native land cover.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Burn_Probability_5km_MW_Majority	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Combined_WinterFloodRisk_and_No_risk_areas	Winter flood risk was mosaicked with areas previously calculated to have to low of precipitation for winter flood risk.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Cumulative_indicator	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of coldwater fish in the ecoregion.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_CWF Barriers	Coldwater fish barriers were calculated using zonal statistics to determine the amount of barriers within the analysis unit.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Extract_CWF_To_Raster	Some of the modeling process required a raster of the coldwater fish range. This process creates that raster based on streams and lakes of the four species in the assemblage.	Aquatic Group Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Extract_HUC12_and_4km_Grids_with_CWF	Coldwater fish range was used to extract analysis units that were used as a mask in other modeling processes to maintain a consistent spatial extent for calculating the cumulative indicator.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Extract_Temperature_in_CWF_Range	July maximum temperature for the four species within the assemblage were extracted from the PRISM 1980-2010 dataset. The current temperature was used in spatial statistics to determine the current temperature tolerances. A future climate scenario was calculated that increased the current temperature 3 degrees C (based on Haak et al. 2010). The future modeled stream temperature was also extracted for the four species.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Extract_Winter_Precip_for_CWF	Winter precipitation was used to determine areas with low winter precipitation that would not be at risk for winter flooding.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Flood_Risk_Winter_Temperature	To determine the winter flood risk, PRISM January to March max temperature was increased by 3 degrees C to simulate a future climate change scenario (based on Haak et al. 2010 methodology). Areas that transition to rain from snow have the highest risk of winter flooding.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	NGB_AG_Invasives_near_CWF	USFS invasive detections were extracted to determine the number within the analysis unit of coldwater fish range.	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Group	NGB_AG_tbl_CWF.tbx	Percent_of_Streams_with_303d	303(d) streams were extracted and compared to non 303(d) streams to determine the percentage of the coldwater fish analysis units with 303(d).	Aquatic Group Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Analysis_Units_in_White_Sturgeon_Distribution	White sturgeon range was used to extract analysis units that were used as a mask in other modeling processes to maintain a consistent spatial extent for calculating the cumulative indicator.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Burn_Probability	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Cumulative_Indicators	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of white sturgeon in the ecoregion.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Invasives_near_White_Sturgeon	USFS invasive detections were extracted to determine the number within the analysis unit of white sturgeon range.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Percent_of_Streams_with_303d	303(d) streams were extracted and compared to non 303(d) streams to determine the percentage of the white sturgeon analysis units with 303(d).	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_161068_tbl_ White_Sturgeon.tbx	NGB_AS_Rasterize_White_Sturgeon	Some of the modeling process required a raster of the white sturgeon range. This process creates that raster based on Streamnet distribution of white sturgeon.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_B ullTrout.tbx	NGB_AS_Bull Trout Barriers	Bull trout barriers were calculated using zonal statistics to determine the amount of barriers within the analysis unit.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_B ullTrout.tbx	NGB_AS_Burn_Probability_5km_MW_Majority	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_B ullTrout.tbx	NGB_AS_Combined_WinterFloodRisk_and_No_risk_areas	Winter flood risk was mosaicked with areas previously calculated to have to low of precipitation for winter flood risk.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_B ullTrout.tbx	NGB_AS_Cumulative_indicator	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of bull trout in the ecoregion.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_B ullTrout.tbx	NGB_AS_Extract_Bull_Trout_To_Raster	Some of the modeling process required a raster of the bull trout range. This process creates that raster based on streams and critical habitat of bull trout.	Aquatic Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Extract_HUC12_and_4km_Grids_with_BT	Bull trout range was used to extract analysis units that were used as a mask in other modeling processes to maintain a consistent spatial extent for calculating the cumulative indicator.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Extract_Temperature_in_BullTrout_Range	July maximum temperature for bull trout were extracted from the PRISM 1980-2010 dataset. The current temperature was used in spatial statistics to determine the current temperature tolerances. A future climate scenario was calculated that increased the current temperature 3 degrees C (based on Haak et al. 2010). The future modeled stream temperature was also extracted for bull trout.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Extract_Winter_Precip_for_Bull_trout	Winter precipitation was used to determine areas with low winter precipitation that would not be at risk for winter flooding.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Flood_Risk_Winter_Temperature	To determine the winter flood risk, PRISM January to March max temperature was increased by 3 degrees C to simulate a future climate change scenario (based on Haak et al. 2010 methodology). Areas that transition to rain from snow have the highest risk of winter flooding.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Invasives_near_Bull_trout	USFS invasive detections were extracted to determine the number within the analysis unit of bull trout range.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_162004_tbl_BullTrout.tbx	NGB_AS_Percent_of_Streams_with_303d	303(d) streams were extracted and compared to non 303(d) streams to determine the percentage of the bull trout analysis units with 303(d).	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Ag within 2km Moving Window	A moving window analysis was completed on agricultural areas to determine its proximity to Columbia spotted frog modeled habitat.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Burn_Probability_5km_MW_Majority	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Cumulative_Indicators	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of coldwater fish in the ecoregion.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Extract_HUC12_and_4km_Grids_with_Spotted_Frog	Columbia spotted frog modeled suitable habitat was used to extract analysis units that were used as a mask in other modeling processes to maintain a consistent spatial extent for calculating the cumulative indicator.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Human_Footprint	A moving window analysis was completed on the Human Footprint layer to determine the mean value for modeled Columbia spotted frog habitat based on the analysis unit.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Number of Mines per HUC 12	MRDS mines were extracted to determine the number within the analysis unit of modeled Columbia spotted frog habitat.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Percent_AG_in_HUC	The amount of agriculture in the analysis unit was computed through zonal statistics.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Percent_Impervious_in_HUC	The amount of impervious areas using NLCD Impervious Areas in the analysis unit was computed through zonal statistics.	Aquatic Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Percent_Impervious_in_Rip_Corridor	The amount of impervious areas within the riparian corridor using NLCD Impervious Areas in the analysis unit was computed through zonal statistics.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Percent_Natural_in_Rip_Corridor	The amount of natural areas within the riparian corridor using NLCD in the analysis unit was computed through zonal statistics.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Percent_of_Streams_with_303d	303(d) streams were extracted and compared to non 303(d) streams to determine the percentage of the Columbia spotted frog analysis units with 303(d).	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_SpottedFrog_in_Protected_Areas	The amount of GAP status 1 and 2 protected areas from the Protected Areas Database in the analysis unit was computed through zonal statistics.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_Streams_Ponds_40m_from_Roads	TIGER roads were used to determine where roads are located within 40m of streams or ponds within the modeled suitable Columbia spotted frog habitat.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	NGB_AS_550546_tbl_Columbia_Spotted_Frog.tbx	NGB_AS_TRI_Sites_in_HUC	Toxic Release Inventory sites from the EPA were extracted to determine the number within the analysis unit of modeled Columbia spotted frog habitat.	Aquatic Species Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_A_PPT_Ann_RT	This tool was created for the BLM REA for the NGB ecoregion. The annual precipitation (RT) process is used to create the delta (or change) data layer for annual precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_B_PPT_Sept-Oct_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The September - October precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_C_PPT_Nov-Feb_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The November - February precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_D_PPT_Mar-May_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The March - May precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_E_PPT_Mar_Delta_SWE	This tool was created for the BLM REA for the NGB ecoregion. The Snow Water Equivalent (SWE) process is used to create the delta (or change) data layer for total snowfall in the month of March for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_F_PPT_June_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The June precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_G_PPT_July-Aug_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The July and August precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_H_PPT_Jul-Aug_Delta_RC	This tool was created for the BLM REA for the NGB ecoregion. The July and August convective precipitation (RC) process is used to create the delta (or change) data layer for convective precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_PPT.tbx (Climate_Change_Precipitation)	NGB_CL_I_PPT_Apr_Delta_SWE	This tool was created for the BLM REA for the NGB ecoregion. The Snow Water Equivalent (SWE) tool is used to create the delta (or change) data layer for total snowfall in the month of April for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_Annual_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The annual precipitation (RT) process is used to create the delta (or change) data layer for annual precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_April_Delta_SWE	This tool was created for the BLM REA for the NGB ecoregion. The Snow Water Equivalent (SWE) tool is used to create the delta (or change) data layer for total snowfall in the month of April for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_July_August_Delta_RC	This tool was created for the BLM REA for the NGB ecoregion. The July and August convective precipitation (RC) process is used to create the delta (or change) data layer for convective precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_July_August_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The July and August precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_June_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The June precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_March_Delta_SWE	This tool was created for the BLM REA for the NGB ecoregion. The Snow Water Equivalent (SWE) process is used to create the delta (or change) data layer for total snowfall in the month of March for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_March_May_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The March - May precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_November_February_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The November - February precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Precipitation.tbx (Climate_Change_Precipitation)	NGB_CL_September_October_Delta_RT	This tool was created for the BLM REA for the NGB ecoregion. The September - October precipitation (RT) process is used to create the delta (or change) data layer for precipitation for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_Annual_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The annual temperature (TA) process is used to create the delta (or change) data layer for annual temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_July_August_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The annual temperature (TA) process is used to create the delta (or change) data layer for temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_June_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The June temperature (TA) process is used to create the delta (or change) data layer for temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_March_May_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The March- May temperature (TA) process is used to create the delta (or change) data layer for temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_November_February_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The November - February temperature (TA) process is used to create the delta (or change) data layer for temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder
Change Agents	Climate	NGB_CL_tbl_Climate_Change_Temperature.tbx (Climate_Change_Temperature)	NGB_CL_September_October_Delta_TA	This tool was created for the BLM REA for the NGB ecoregion. The September - October temperature (TA) process is used to create the delta (or change) data layer for temperature for the periods between 1980-1999 (NCEP) and 2050-2069 (RegCM3).	Climate Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Area_within_2hours	Perform a cost distance raster from urban areas over 20,000 people. The max distance is 2 hours (estimated max travel time (each way) for someone to perform a day trip. Areas 100 miles outside the ecoregion were included in the road network to include urban areas near the ecoregion coming into the ecoregion.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Extract_development_from_imagery	Extract Urban, Agricultural, Mining areas from Landfire and ReGAP vegetation mapping and create mosaic locations of each land use type.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Extract_Protected_areas	Extract GAP Level 1 and 2 Protected Areas from the USGS Protected Areas Database.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Housing_density_Change_2060_2010	Determine the change in housing density from 2010 to 2060 based on the ICLUS housing density. 2060 is reclassified so that the raster calculator outputs values that can be coded showing change from 2010 housing density.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Rasterize Transmission Lines	Buffer transmission lines 60m for use in development CA raster calculations.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Rasterize_MRDS_mines	Buffer MRDS locations 150m for use in development CA raster calculations.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Rasterize_Roads	Buffer the TIGER roads (based on value in buff field) based on the type of road (Interstate vs 4WD). The result is converted to a raster for use in development CA raster calculations.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Rasterize_Ruby_pipeline(NV)	Buffer the Ruby Pipeline 90m and convert to a raster for use in development CA raster calculations. Only the Nevada section of the Ruby Pipeline was available.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Rasterize_Ski_Areas	Ski areas boundaries were estimated based on the size of the resort. These polygons were converted to a raster for use in Development CA raster analysis.	Development Toolbox/Folder
Change Agents	Development	NGB_DV.tbx (Development)	NGB_DV_Wind_Turbine_Locations	Combine wind turbines from the FAA dataset that are built or have a build date, buffer them 150m and convert to a raster for analysis in Development CAs.	Development Toolbox/Folder
Change Agents	Development	NGB_DV_Grazing.tbx (Grazing)	NGB_DV_Burn_Probability_in_Grazing_Allotment	Calculate the majority (most common) FSIM burn probability within each gazing allotment.	Development Toolbox/Folder
Change Agents	Development	NGB_DV_Grazing.tbx (Grazing)	NGB_DV_Distance_to_Roads_by_Allotment	Calculate the average distance to TIGER roads from each grazing allotment.	Development Toolbox/Folder
Change Agents	Development	NGB_DV_Grazing.tbx (Grazing)	NGB_DV_Grazing_Allotment_Rangeland_Standards	Extract the results of the USGS Rangeland Health analysis of BLM rangeland status based on grazing allotments.	Development Toolbox/Folder
Change Agents	Development	NGB_DV_Grazing.tbx (Grazing)	NGB_DV_Grazing_Allotment_resilience	Calculate the abundance of Level 1 and Level 2 WGA Large Intact Blocks within grazing allotments base on the WGA Landscape Integrity analysis.	Development Toolbox/Folder
Change Agents	Development	NGB_DV_Grazing.tbx (Grazing)	NGB_DV_Places_that_could_benefit_from_grazing	Constraints analysis examining overlapping areas of high burn probability, high fire frequency, and proximity to ignition sources.	Development Toolbox/Folder
Change Agents	Fire	NGB_FI.tbx (ngb_FI_tbl_C_Wildfire)	NGB_FI_A_ExtractHistPerim	This model extracts the 2011 and 2012 fire perimeters from the nation-wide GeoMAC dataset.	Fire Toolbox/Folder
Change Agents	Fire	NGB_FI.tbx (ngb_FI_tbl_C_Wildfire)	NGB_FI_B_frequency	Fire frequency was established by extracting fire perimeters and determining the about of overlap amongst the polygons. The results were converted to a raster with number of times burned represented as the raster value.	Fire Toolbox/Folder
Change Agents	Fire	NGB_FI.tbx (ngb_FI_tbl_C_Wildfire)	NGB_FI_C_Split_Burn_probability_3Classes	Take the raw data and split into 3 equal categories of low, moderate and high burn probabilities. 0 equals unburnable and is mosaiced back with the 3 categories of burn probability.	Fire Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Change Agents	Fire	NGB_FI_tbl_Wildfire.tbx	NGB_FI_Extract_2011_2012_Perim	This model extracts the 2011 and 2012 fire perimeters from the nation-wide GeoMAC dataset.	Fire Toolbox/Folder
Change Agents	Fire	NGB_FI_tbl_Wildfire.tbx	NGB_FI_Frequency	Fire frequency was established by extracting fire perimeters and determining the about of overlap amongst the polygons. The results were converted to a raster with number of times burned represented as the raster value.	Fire Toolbox/Folder
Change Agents	Fire	NGB_FI_tbl_Wildfire.tbx	NGB_FI_Split_Burn_probability_3Classes	Take the raw data and split into 3 equal categories of low, moderate and high burn probabilities. 0 equals unburnable and is mosaiced back with the 3 categories of burn probability	Fire Toolbox/Folder
Change Agents	Invasives	NGB_IV_tbl_Disease_Aerial_Disease_Survey.tbx (Aerial_Disease_Survey)	NGB_IV_Extract_Aspen_Other_Conifer_Disease	Extract Sudden Aspen Decline and Other conifer disease and pests from the USFS aerial detection surveys and convert them to raster.	Invasives Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Aspen Patch 10km Moving Window	Calculate the percent of aspen within a 10km moving window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Aspen_vs_Development	Calculate the distance from development CAs to aspen and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Aspen_vs_Disease Stands	Calculate the distance from sudden aspen decline stands to aspen and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Burn_Probability_5km_MW_Majority	Determine the majority (most common) FSIM burn probability value in aspen areas by 4km grid or HUC 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Extract_intact_Aspen	Use raster calculator to determine a cumulative score for aspen based on FSim burn probability, Distance to Development and Distance to Sudden Aspen Decline. The results are then averaged based in the 4km grid and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Extract_USFS_Climate_Change	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Aspen.tbx	Mosaic Landfire and REGAP	Extract from Landfire and ReGAP vegetation mapping for each state aspen vegetation types. Landfire was used for California only.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Burn_Probability_5km_MW_Majority	The FSim burn probability was used in conjuction with a moving window analysis to determine the majority value with in the window. Zonal Stats was then used to determine the majority value within the two analysis units	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Extract_intact_Salt_Desert_Shrub	Burn Probability and Distance to development where the two previously calculated values that were used to define intactness of salt desert shrub. The raster calculator is used to sum the ranked (1,2,3) values and then calculate the average value within the analysis unit.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Mosaic Landfire and REGAP	Extract Salt Desert Shrub (SDS) from Landfire (CA only), NW ReGAP and SW ReGAP using veg codes in the reclassify. The final steps take a moving window and filter out any areas with less than 10% of the window containing SDS. This was done to remove small isolated clusters of pixels that might be mis- classifications our outside of the traditional range of SDS.	Native Vegetation Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS Patch 10km Moving Window	The relative density of salt desert shrub was calculated using a moving window analysis to determine the percent of SDS within the window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS_Vs_Cheatgrass_2010	The salt desert shrub was used as a mask to extract cheatgrass from the USGS EROS 2010 cheatgrass layer.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_C_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS_vs_Development	Various types of development are buffered and rasterized (Dev Toolbox) and then mosaiced together to create a development layer. The distance to development is then determined through euc distance and the average distance to development is calculated using zonal stats.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Burn_Probability_5km_MW_Majority	Determine the majority (most common) FSIM burn probability value in combined juniper areas by 4km grid or HUC 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Extract Western Juniper CC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Extract_intact_juniper	Use raster calculator to determine a cumulative score for combined juniper based on FSim burn probability and Distance to Development. The results are then averaged based in the 4km grid and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Extract_Utah Juniper CC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Juniper Patch 10km Moving Window	Calculate the percent of combined juniper within a 10km moving window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Juniper_vs_Development	Calculate the distance from development CAs to combined juniper and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Combined_Juniper.tbx	Mosaic Landfire and REGAP	Extract from Landfire and ReGAP vegetation mapping for each state for combined juniper vegetation types. Landfire was used for California only.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Burn_Probability_5km_MW_Majority	Determine the majority (most common) FSIM burn probability value in other conifer areas by 4km grid or HUC 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Extract_Douglas_Fir CC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Extract_Engleman_SpruceCC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Extract_intact_Other_Conifer	Use raster calculator to determine a cumulative score for aspen based on FSim burn probability, Distance to Development and Distance to Other Conifer diseased stands. The results are then averaged based in the 4km grid and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Extract_Lodgepole_pineCC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Extract_Ponderosa_Pine CC	Calculate the climate ensemble from the seven different climate scenarios and three time frames to determine the average 2030 and 2060 viability based on USFS climate modeling.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Mosaic Landfire and REGAP	Extract from Landfire and ReGAP vegetation mapping for each state the other conifer vegetation types. Landfire was used for California only.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	OC_vs_Development	Calculate the distance from development CAs to other conifer and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Other Conifer Patch 10km Moving Window	Calculate the percent of other conifer within a 10km moving window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Other_Conifer.tbx	Other_Conifer_vs_Disease Stands	Calculate the distance from other conifer diseased stands to aspen and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Burn_Probability_5km_MW_Majority	Determine the majority (most common) FSIM burn probability value in sagebrush areas by 4km grid or HUC 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Distance_to_Development	Calculate the distance from development CAs to sagebrush and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Extract_intact_sagebrush	Use raster calculator to determine a cumulative score for sagebrush based on FSim burn probability and Distance to Development. The results are then averaged based in the 4km grid and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Mosaic Landfire and REGAP	Extract from Landfire and ReGAP vegetation mapping for each state the sagebrush vegetation types. Landfire was used for California only.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Sagebrush Patch 10km Moving Window	Calculate the percent of sagebrush within a 10km moving window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Sagebrush.tbx	Sagebrush_near_Juniper	Calculate the distance from combined juniper to sagebrush and determine the average distance by 4km and huc 12 analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Burn_Probability_5km_MW_Majority	The FSim burn probability was used in conjuction with a moving window analysis to determine the majority value with in the window. Zonal Stats was then used to determine the majority value within the two analysis units.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Extract_intact_Salt_Desert_Shrub	Burn Probability and Distance to development where the two previously calculated values that were used to define intactness of salt desert shrub. The raster calculator is used to sum the ranked (1,2,3) values and then calculate the average value within the analysis unit.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	Mosaic Landfire and REGAP	Extract Salt Desert Shrub (SDS) from Landfire (CA only), NW ReGAP and SW ReGAP using veg codes in the reclassify. The final steps take a moving window and filter out any areas with less than 10% of the window containing SDS. This was done to remove small isolated clusters of pixels that might be mis- classifications our outside of the traditional range of SDS.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS Patch 10km Moving Window	The relative density of salt desert shrub was calculated using a moving window analysis to determine the percent of SDS within the window.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS_Vs_Cheatgrass_2010	The salt desert shrub was used as a mask to extract cheatgrass from the USGS EROS 2010 cheatgrass layer.	Native Vegetation Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Native Vegetation	NGB_NV_tbl_Salt_Desert_Shrub.tbx (Salt_Desert_Shrubr)	SDS_vs_Development	Various types of development are buffered and rasterized (Dev Toolbox) and then mosaiced together to create a development layer. The distance to development is then determined through euc distance and the average distance to development is calculated using zonal stats.	Native Vegetation Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_PL_tbl_Wild_Horse_Burros.tbx	Burn_Probability_in_HMA	Calculate the majority (most common) FSIM burn probability based on a 4km grid or huc 12 for herd areas and herd management areas.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_PL_tbl_Wild_Horse_Burros.tbx	Distance_to_Anthropogenic	Calculate the mean distance to development from wild horse and burro herd areas and herd management areas based on 4km grid and huc 12 analysis units.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_PL_tbl_Wild_Horse_Burros.tbx	Grazing_Allotment_Rangeland_Standards	Extract the results of the USGS Rangeland Health analysis of BLM rangeland status based on wild horse and burro herd areas and herd management areas.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Ecosystems	NGB_TES_tbl_Soils.tbx	Steepness	Steepness was calculated based on equations related to the Revised Universal Soil Loss Equation (RUSLE).	Terrestrial Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Ecosystems	NGB_TES_tbl_Soils.tbx	Water_Erosion_Potential_RUSLE	Water erosion potential was calculated based on equations related to the Revised Universal Soil Loss Equation (RUSLE).	Terrestrial Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Ecosystems	NGB_TES_tbl_Soils.tbx	Wind_Erosion_Potential_WEQ	Wind Erosion Potential based on Climate Factor.	Terrestrial Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	GE_175407_Masks	The analysis units intersecting with the range of the species was extracted to use in other process models so that the entire range was analyzed.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Agriculture	Agricultural areas data were extracted from the REA Cropland data layer and analyzed to determine the distance from golden eagle potential suitable habitat. The quality of a HUC in relation to distance to agricultural areas was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from agricultural areas by >5km = good, 1-5km = fair, and <1km = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Distance_Wind	Wind turbines from the USFWS were analyzed to determine the distance from golden eagle potential suitable habitat. The quality of a HUC in relation to distance to wind turbines was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from wind turbines by >16km = good, 10-16km = fair, and <10km = poor.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Foraging_Habitat	Foraging habitat extent was derived from Existing Vegetation Type (EVT) landcover data to determine the extent of golden eagle potential suitable habitat. The quality of a HUC in relation to habitat extent was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to foraging habitat extent within a HUC (10) watershed or BLM 4km Grid by HUC = 70-100% or Grid = 72-100% = good, HUC = 37-70% or Grid = 32-72% = fair, and HUC = 0-37% or Grid = 0-32% = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Overall_Score	This toolbox was created for the BLM REA for the NGB ecoregion. This simple model calculates the overall score for the ecoregion, based upon individual threat attribute scores.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Road_Density	Road densities derived from the TIGER data were analyzed to determine the relationship between road density and golden eagle potential suitable habitat. The quality of a HUC in relation to road density was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to road density by >10 km/km2 = good, 5-10 km/km2 = fair, and <5 km/km2 = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_Urban_Development	Urban/exurban area data were extracted from GAP landcover data and analyzed to determine the distance from golden eagle potential suitable habitat. The quality of a HUC in relation to distance to urban/exurban areas was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from urban/exurban areas by >15km = good, 6-15km = fair, and <6km = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175407_tbl_Golden_Eagle.tbx	NGB_GE_VCC	Vegetation condition class is based on departure of current vegetation conditions from reference vegetation conditions only. Wildfire is one of the main components that would alter the VCC from historical reference state.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_175420_Masks	The analysis units intersecting with the range of the species was extracted to use in other process models so that the entire range was analyzed.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Agriculture	Agricultural areas data were extracted from the REA Cropland data layer and analyzed to determine the distance from Bald eagle potential suitable habitat. The quality of a HUC in relation to distance to agricultural areas was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from agricultural areas by >5km = good, 1-5km = fair, and <1km = poor.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Foraging_Habitat	Foraging habitat extent was derived from National Hydrological Dataset data to determine the extent of Bald eagle potential suitable habitat. The quality of a HUC in relation to habitat was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to foraging habitat by open water edge (lake, reservoir); low-gradient perennial stream = good, other aquatic feature (high gradient stream, wetland, spring; non-perennial stream) = fair, and other NHD Type = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Overall_Score_Summer	The overall score was used to contrast the NGB ecoregion to highlight analysis units within bald eagle habitat based on the cumulative indicator score.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Overall_Score_Winter	The overall score was used to contrast the NGB ecoregion to highlight analysis units within bald eagle habitat based on the cumulative indicator score.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Prey_Base_Condition	Prey base condition data were extracted from the EPA 303d listing and analyzed to determine the prey base quality within Bald eagle potential suitable habitat. The quality of a HUC in relation to distance to agricultural areas was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to impaired waterways. The scale ranged from 1(303d listed) to 3 (non-303d listed) and were averaged by HUC or REA 4km Grid, resulting in a score value range from 1 to 3.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Road_Density	Road densities derived from the TIGER data were analyzed to determine the relationship between road density and Bald eagle potential suitable habitat. The quality of a HUC in relation to road density was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to road density by >10 km/km2 = good, 5-10 km/km2 = fair, and <5 km/km2 = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Summer_Forest_to_Forage_Distance	Nest site and perch locations were derived from the NLCD (all forested cover types) were analyzed to determine the distance from Bald eagle potential suitable habitat. The quality of a HUC in relation to distance to nest site and perch locations was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from nest site and perch locations by <0.2km = good, 0.2-2km = fair, and >2km = poor.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Urban_Development	Urban/exurban area data were extracted from GAP landcover data and analyzed to determine the distance from Bald eagle potential suitable habitat. The quality of a HUC in relation to distance to urban/exurban areas was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from urban/exurban areas by >15km = good, 6-15km = fair, and <6km = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Winter_Forest_to_Forage_Distance	Night roost availability was derived from the NLCD (coniferous forested cover types) were analyzed to determine the distance from Bald eagle potential suitable habitat. The quality of a HUC in relation to distance to roost availability was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to distance from roosting availability by <2km = good, 2-15km = fair, and >15km = poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175420_tbl_Bald_Eagle.tbx (NGB_Bald_Eagle_Analysis_175420)	NGB_BE_Winter_Wildlife_Refuge	Waterfowl (prey species) habitat availability was derived from the NWR dataset to characterize the potential quality Bald eagle potential suitable habitat. The quality of a HUC in relation to waterfowl availability was defined as good (3), fair (2), or poor (1). The score indicates the threat level for each attribute. A low score indicates a low threat, a medium score indicates a medium threat, and a high score indicates a high threat to the species. The values for each score were characterized in relation to availability of NWRs adjacent to Bald Eagle habitat through a binary analysis. NWRs present within 2km of a Bald Eagle HUC were rated as good (3), and those outside the 2km range were categorized as poor (1).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Burn_Probablility	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Cumulative_Threats	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of greater sage-grouse in the ecoregion.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Distance to Roads	Euclidean distance was used to calculate the distance from primary TIGER roads (highways). Zonal statistics was used to extract the mean distance per analysis unit in the greater sage-grouse PPH.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Distance to Transmission_Lines	Euclidean distance was used to calculate the distance from transmission lines. Zonal statistics was used to extract the mean distance per analysis unit in the greater sage-grouse PPH.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Extract_Ag_in_BBD	Agricultural areas extracted from state vegetation mapping was used to determine the amount of agricultural areas within the breeding bird density areas.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Extract_HUC12_and_4km_Grids_with_PPH	Greater sage-grouse PPH was used to extract analysis units that were used as a mask in other modeling processes to maintain a consistent spatial extent for calculating the cumulative indicator.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Extract_Sagebrush_in_BBD	Sagebrush cover was extracted from Landfire existing vegetation cover and used to determine the amount of agricultural areas within the breeding bird density areas.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	GSG_PPH_in_Protected_Areas	The amount of GAP status 1 and 2 protected areas from the Protected Areas Database in the analysis unit was computed through zonal statistics.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Human_Density_in_PPH	2010 census block group data was used to calculate population density by block group. Zonal statistics was used to calculate the mean density within the analysis u	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	Percent Agriculture	A moving window analysis was completed on agricultural areas to determine its proximity to greater sage-grouse PPH.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_175855_tbl_GreaterSageGrouse.tbx	SageGrouse_PPH	State PPH data was merged together to create one raster to represent PPH within the ecoregion.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Overall_summer	Each of the Key Ecological Attributes for Mule Deer were added together using their rankings of 1-3 (3 highest quality) to determine an overall quality that can be shown to compare and contrast mule deer summer within the ecoregion. To derive a total value, the total score was divided by 12 (4 kea layers) to have values between 0.33 -1.0 (1.0 highest quality for all keas).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Overall_winter	Each of the Key Ecological Attributes mule deer were added together using their rankings of 1-3 (3 highest quality) to determine an overall quality that can be shown to compare and contrast mule deer summer within the ecoregion. To derive a total value, the total score was divided by 15 (5 kea layers) to have values between 0.33 -1.0 (1.0 highest quality for all keas).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Patch_Size	The metrics used to assess the size of core habitat fragments was developed by considering the average home range for mule deer in the intermountain west. Habitat fragment size does not pertain to the minimum habitat area, but rather reflects landscape fragments that are easily traversed by mule deer as they move between patches of suitable habitat. Using the Habitat Core Area (HCA) toolset developed by WHCWG (2010), large, contiguous core habitat fragments were identified that presented no permeability restrictions and retained high levels of naturalness (i.e., core areas characterized by a relatively light human footprint). Habitat fragments larger than 500 ha were considered good, fragments between 300-500ha were scored as fair, and fragments less than 300ha were scored as poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	PatchDensity	Habitat fragmentation was assessed by using the core habitat developed for the core habitat patch size analysis for both summer and winter ranges. Each dataset was evaluated by applying the following patch density equation to assess the level of habitat heterogeneity: PD = N/ A, where PD = Patch Density, N = number of unique patches, and A = unit area (100 ha). Based on the output of this equation values calculated between 0.4 -0.55 were scored as good, values between 0 and 0.4 were scored as fair, and values greater than 0.55 were scored as poor.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Road_Density	Road features were identified using TIGER line data and those features mapped as freeways, secondary roads and local roads were selected. A moving window analysis was applied, which used a window area of 640 acres to determine the miles of road per 640 acres. Output from the analysis was scored where road density values less than 3 miles/640acres were scored as a 3 ("preferred") and road density values greater than 3 miles/640acres received a score of 1 ("lower quality")	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Roads	Road features were identified using TIGER line data and those features mapped as freeways, secondary roads and local roads were selected. A proximity analysis was performed and then assigned scores based on the metric values that included ratings where distance from roads greater than 1000 meters was scored as preferred, 300 - 1,000 meters was scored as moderate and less than300 meters was considered lower quality.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180697_tbl_MuleDeer.tbx	Snow_depth	NOAA total mean monthly snow depth data represents the mean monthly total accumulation derived from 4km raster data. It does not incorporate melting, compression or sublimation. The data scoring categories were based on snow depth data categories, with snow depth greater than 20.4 inches considered low quality, 10.4 to 20.4 inches scored as moderate quality and less than 10.4 inches considered preferred.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	BHSummation	N/A	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	Connectivity	Habitat size refers to the size of the habitat patch extracted from the WAFWA dataset and is used to characterize the quality of the analysis unit by determining the size of patches and grading them based on size thresholds (>75 km2 is considered good, less than 75 km2 is considered poor).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	Disease	The risk of disease transmission from domestic sheep to bighorns was evaluated using a proximity analysis of BLM sheep allotments in relation to bighorn sheep occupied habitat. BLM allotment data were used to identify active domestic sheep grazing locations and their distance to bighorn ranges. Habitat falling within 9 miles of domestic sheep allotments were scored as high risk of disease, habitat located between 9 to 15 miles of domestic sheep allotments were scored as fair and habitat located beyond 15 miles was considered to have low disease risk.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	Dist2Barriers	: Barriers were characterized as the minimum distance from forested regions, highways and perennial rivers. Forested regions were extracted from GAP/EVT landcover data by isolating pixels that were classed as 'forest'. Only forested regions having canopy cover of >80% were selected by using the Landfire canopy cover dataset. TIGER road data was used to identify highways. The USGS National Hydrography Dataset was used to extract perennial stream features. Proximity analyses were applied to all development datasets and scored. Habitat located greater than 1,500 meters away from barriers were considered good, habitat within 400-1,500 meters of barriers were considered fair, and habitat within 400 meters were considered to have poor connectivity.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	HorizontalViz	Habitat patches were assessed and scored on the basis of horizontal visibility. Three datasets were required to support the analysis, including Landfire canopy cover, GAP/EVT landcover data and Landfire existing vegetation height (EVH).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	HumanDisturb	Human disturbance and presence was assumed to be adequately represented by the existence and proximity of trails, roads, highways and urbanized regions. TIGER road data was used to identify trail, road and highway features. Trails captured within the TIGER dataset represent trail features that support vehicular traffic (i.e., dirt roads). Urban areas were extracted from the GAP/EVT landcover dataset by isolating pixels that represented urban uses. Proximity analyses were applied to all development datasets, outputs were combined, constrained to the bighorn sheep range boundaries and then scored. Habitat located beyond 1,500 meters from human disturbance were considered good, habitat within 400-1,500 meters of human disturbance were considered fair, and habitat within 400 meters were considered to have poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180711_tbl_BighornSheep.tbx	SizeEscape	Escape terrain for bighorn sheep was defined as habitat patches that occurred on slopes between 30-85%. Elevation data was retrieved from USGS NED website and slopes were extract that fell within the defined elevation range. The bighorn sheep range habitat dataset was then intersected with the extracted slope data to isolate patches that had the required 30-85% slope criteria, where patches falling within this slope range having an area greater than 1.6 ha were considered good. Those having an area less than 1.6ha were considered poor.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	DistanceRoads	Road features were identified using TIGER line data and those features mapped as freeways, secondary roads and local roads were selected. A proximity analysis was performed and then assigned scores based on the metric values that included ratings where distance from roads greater than 1000 meters was scored as preferred, 300 - 1,000 meters was scored as moderate and less than300 meters was considered lower quality.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	Habitat Model	The model used was a Weighted Geometric (Multiplicative) Mean GIS habitat suitability model that uses vegetation, slope, and road density as primary variables (Penrod et al 2010). Because the NGB has a greater range of elevation it was added as a fourth input factor in the model. Habitat suitability ratings for input factors were modified from Penrod et al (2010) where determined necessary. Values range from zero to one, with one being most suitable and zero being unsuitable	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	PatchSize	Using the patch habitat GIS layer outputs for the pronghorn, the habitat patch layer was classified based on the patch acreage ranges established for this indicator and assigned associated values between 1 and 3. Where a value of '1' represented 'Lower Quality" (< 300 ha), a '2' for patches 300 to 500 ha in size and a value of '3' represented "Preferred" (>500ha).	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	Road_Density	: Road features were identified using TIGER line data and those features mapped as freeways, secondary roads and local roads were selected. A moving window analysis was applied, which used a window area of a square kilometer to determine kilometers of road per square kilometer. Output from the analysis was scored based on the following criteria where road density values less than 0.18km/km2 were scored as a 3 (“preferred”), densities between .18 and 1.0518 km/km2 scored as a 2, and road density values greater than 1.0518km/km2 received a score of 1 (“lower quality”)	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	Slope	Percent slope was analyzed by modeling the USGS NED raster for slope values. The slope grid was then reclassified into three categories reflecting the pronghorn’s preference for flat landscapes. Slope values of 5% or less were categorized as preferred and those above 20% were low quality.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	SnowDepth	NOAA total mean monthly snow depth data was obtained and represents the mean monthly total accumulation derived from 4km raster data. It does not incorporate melting, compression or sublimation. Scoring of the snow depth was as follows: depths less than 15 inches were preferred and over 15 inches were considered low quality. Snow depth data for the month of March was selected for analysis based on the importance of snowmelt and spring greenup to provide nutrition to late gestational does, and in restricting the amount of habitat and migration corridors that are available to migratory pronghorn.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	Summary	Each of the Key Ecological Attributes pronghorn were added together using their rankings of 1-3 (3 highest quality) to determine an overall quality that can be shown to compare and contrast mule deer summer within the ecoregion. To derive a total value, the total score was divided by 18 (6 kea layers) to have values between 0.33 -1.0 (1.0 highest quality for all keas).	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_180717_tbl_Pronghorn.tbx	VegCover	Sagebrush and grassland cover was extracted from the LANDFIRE Existing Vegetation Cover (EVC) to identify areas with the cover. The EVC data was run through a focal statistics algorithm to determine the mean vegetation cover over an 11x11 cell moving window within a 30m grid. Areas having less than 25% proportion of sagebrush/grasslands were considered low quality, areas having 25-50% sagebrush/grassland cover were score as fair and areas having greater than 50% sagebrush/grassland cover were scored as preferred.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Burn_Probablility	Using the Fsim burn probability layer, a moving window analysis was used to determine the majority value within the window and within the analysis unit.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Cumulative_Threats	Each of the key ecological attributes were ranked 1 – 3 (3 highest quality) to determine the overall condition of pygmy rabbit in the ecoregion.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Distance_To_Agriculture	A moving window analysis was completed on agricultural areas to determine its proximity to pygmy rabbit modeled habitat.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Existing_Veg_Cover	Existing vegetation cover (sagebrush cover) was extracted from LANDFIRE’s EVC layer and the majority within the analysis unit was calculated.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Existing_Veg_height	Existing vegetation height (sagebrush cover) was extracted from LANDFIRE’s EVH layer and the majority within the analysis unit was calculated.	Terrestrial Species Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Extract_Analysis_Units_In_PRabbit_Habitat	Analysis units with modeled pygmy rabbit habitat were extracted and used as a mask in spatial operations to maintain a consistent extent to allow raster calculator to calculative cumulative indicator.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	Human_Footprint	A moving window analysis was completed on the Human Footprint layer to determine the mean value for modeled pygmy rabbit habitat based on the analysis unit.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	NGB_TS_552521_tbl_PygmyRabbit.tbx	PygmyRabbit Priority Habitat (Rachlow and Svancara 2003)	Pygmy rabbit habitat was modeled based on the work of Rachlow and Svancara. Key variables such as sagebrush cover and depth to bedrock were used to limit the analysis along with recent fires, percent clay and slope.	Terrestrial Species Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Open_Water.doc		Toolbox structure and explanation.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Open_Water.pdf		Conceptual model	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Native Vegetation	Other_conifer_Conceptual_Model.pdf		Conceptual model	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	Other_Conifer_Toolbox.doc		Toolbox structure and explanation.	Native Vegetation Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Perennial_Streams.doc		Toolbox structure and explanation.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Perennial_Streams.pdf		Conceptual model	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Species	Pronghorn.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Pronghorn_Conceptual_model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Pygmy_Rabbit.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	Pygmy_Rabbit_conceptual_model.pdf		Conceptual model	Terrestrial Species Toolbox/Folder
Conservation Elements	Terrestrial Species	README-Big Game Modeling Notes.doc		Big Game Modeling Notes	Terrestrial Species Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Riparian.doc		Toolbox structure and explanation.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Riparian.pdf		Conceptual model	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Native Vegetation	Sagebrush_Toolbox.doc		Toolbox structure and explanation.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	Salt Desert Shrub.doc		Toolbox structure and explanation.	Native Vegetation Toolbox/Folder
Conservation Elements	Native Vegetation	Salt_Desert_Shrub_Conceptual_Model.pdf		Conceptual model	Native Vegetation Toolbox/Folder

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REA Data Type	REA Category	Toolbox & Files (.doc & .pdf)	Model Name	Description	Download Toolbox/Folder[1]
Conservation Elements	Terrestrial Ecosystems	Vulnerable_Soils.doc		Toolbox structure and explanation.	Terrestrial Ecosystems Toolbox/Folder
Conservation Elements	Terrestrial Ecosystems	Vulnerable_Soils.pdf		Conceptual model	Terrestrial Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Wetlands.doc		Toolbox structure and explanation.	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Ecosystems	Wetlands.pdf		Conceptual model	Aquatic Ecosystems Toolbox/Folder
Conservation Elements	Aquatic Species	White_Sturgeon.doc		Toolbox structure and explanation.	Aquatic Species Toolbox/Folder
Conservation Elements	Aquatic Species	White_Sturgeon_Conceptual_Model.pdf		Conceptual model	Aquatic Species Toolbox/Folder
Change Agents	Fire	Wildfire_Modeling_Notes.doc		Toolbox structure and explanation.	Fire Toolbox/Folder
Conservation Elements	Terrestrial Species	Wildhorse_Burro_Toolbox.doc		Toolbox structure and explanation.	Terrestrial Species Toolbox/Folder

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