Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #1:

Develop new projects and secure funding for climate-smart agriculture practices.

Description:

The Inflation Reduction Act (IRA) provided an additional $19.5 billion over five years for climate smart agriculture through several of the conservation programs that USDA's Natural Resources Conservation Service (NRCS) implements. $850 million is being allocated in 2023 with significantly larger amounts in future years. The Land Use Working Group reviewed a list of approved Climate-Smart practices under the Farm Bill programs. Some which appear applicable in Routt County include nitrogen management on crop lands including cover crops, improved pasture and hay plantings, prescribed grazing practices, riparian forest buffers, new tree establishment in pasture including windbreaks, and upland wildlife habitat improvements. In addition, increased use of the Conservation Reserve Program to pay landowners to keep land in permanent vegetative cover is a climate smart strategy. One barrier to increasing the pace of

implementation is capacity to work with landowners to educate about the opportunities for funding and to help with preparing technically sound proposals to NRCS. This recommendation seeks to increase capacity for this type of outreach and technical support to build a pipeline of potential projects with climate benefits in line with the CAP Actions.

Lead Implementer(s):

Natural Resources Conservation Service (NRCS).

Partners:

Routt County Conservation District (RCCD), CSU Extension, YVSC, Trout Unlimited, CAA.

Implementation Needs & Next Steps:

1) With NRCS, identify eligible practices that are likely to be adopted in Routt County.
2) Identify funding for contracting with an organization/individual(s) to conduct outreach and assist with planning projects.
3) NRCS to approve projects and execute contracts with landowners.
4) Provide local match to help with cost share for landowners when projects align with broader goals (e.g. riparian forest buffers). Explore other incentives for landowners.
5) Technical support to implement projects, including connecting landowners with contractors qualified in these types of practices. Build a larger workforce to be available for project implementation.
6) Support NRCS monitoring efforts to document climate benefits.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

$100,000-200,000 for outreach and technical support. Project funding from NRCS funds.

Potential Funding Sources:

County support, State of Colorado Dept of Ag, USDA, private grants.

Assessment:

Greenhouse Gas Potential: M Notes/Assumptions: Unclear that there are widespread opportunities for climate smart projects as currently defined by NRCS in our dominant agricultural systems. And there are overlaps with benefits from riparian tree planting contained in a separate recommendation.
Co-benefits: M Notes/Assumptions: Generally, these projects will have benefits for water quality and wildlife habitat.
Implementation Cost: L Notes/Assumptions: If successful at recruiting participants, will have a steady funding stream from NRCS. Likely will need new local funding for developing projects.
Political Barriers: L Notes/Assumptions: Only applies to willing landowners and projects are beneficial to others.
Ease of Implementation: L Notes/Assumptions: Will require new capacity or approach to identify willing landowners. There might be limits on implementation capacity.

CAP Strategy and Action:

LUS1. Promote land management practices that increase carbon sequestration.

LUS1 A2. Work to implement specific natural climate solutions for croplands and rangelands within the County.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #2:

Restore wetlands and riparian areas in Yampa basin headwaters using low-tech restoration techniques.

Description:

Use of Low-Tech Process Based Restoration (LTPBR) (e.g. beaver-dam analogues, Zeedyk structures, wood structures) is a proven method for re-establishing normal stream processes by reconnecting incised streams to their floodplains. LTPBR is one of most effective methods to restore stream health and improve ecosystem services (including carbon sequestration). Recent increases in funding for natural infrastructure through the Inflation Reduction Act make this an opportune time to identify opportunities and implement action for LTPBR on degraded streams, particularly on smaller, sometimes ephemeral, streams located higher in our watersheds. Wetlands in general, including wet meadows, hold the most carbon per area of any ecosystem

in the US. Even small increases in restored wetlands can have measurable impacts on regional carbon sequestration. A model for the type of program recommended here is the Gunnison Basin Wet Meadow and Riparian Restoration and Resilience-Building Project.

Lead Implementer(s):

Routt County, USFS, BLM, CPW, NRCS.

Partners:

YVSC, Trout Unlimited, Private Entities, City of Steamboat Springs and Mt. Werner Water and Sanitation, UYWCD.

Implementation Needs & Next Steps:

1) Inventory and prioritize restoration opportunities on public and private land. Use upcoming model from National Forest Foundation of restoration opportunities in CO River headwaters.
2) Develop group of skilled practitioners who can plan and oversee projects.
3) Encourage public land managers to include these types of projects in land management plans and associated NEPA analyses.
4) Build available labor pools (e.g. Rocky Mountain Youth Corps) to implement projects.
5) Develop monitoring and evaluation protocols for condition, project impact and next steps.
6) Pursue available funding, particularly from Inflation Reduction Act and sage grouse mitigation funding.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

$100,000-$500,000 per year depending on available capacity and projects ready for implementation.

Potential Funding Sources:

Secure Rural Schools Title II, NFWF Sage Grouse Mitigation Funds, CPW Wetland Grants, America the Beautiful grants, Watersmart (if in applications with benefits for water supply).

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Assume reaching Gunnison basin pace of approximately 30 acres of restored wetland habitat per year. Very high carbon sequestration rate per acre, but small acres involved.
Co-benefits: H Notes/Assumptions: Water quality and wildlife habitat benefits, particularly for sage grouse. Wildfire risk reduction and improved resilience to drought and flooding. Potential water supply benefits (late season base flows and reduced sediment).
Implementation Cost: M Notes/Assumptions: Relatively high labor cost due to working in stream corridors with heavy materials. Good opportunity to use volunteers and youth corps to lower costs.
Political Barriers: L Notes/Assumptions: Currently some complications from CO Water law in process of being resolved.
Ease of Implementation: L Notes/Assumptions: Would require significant collaboration and outreach to landowners and collaboration with public land agencies.

CAP Strategy and Action:

LUS1. Promote land management practices that increase carbon sequestration.

LUS1 A1. Implement specific natural climate solutions for wetlands and riparian corridors within the County.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #3:

Increase capacity to accelerate tree planting on wildfire burn areas and other forested areas with need and potential for reforestation.

Description:

The national Reforestation Hub maintained by The Nature Conservancy and American Forests identifies more than 80,000 acres of land in Routt County with potential suitability for trees, but which do not currently support forests. This includes forest patches that have not regenerated naturally from past management actions, insects and disease, or wildfires. Replanting unstocked forest lands that are not regenerating naturally presents the biggest opportunity for increasing carbon sequestration in Routt County. A preliminary assessment by YVSC showed that replanting on burned lands from wildfires in the past six years that are not showing significant regeneration, could sequester as much as 3.5 million mT of CO2e in 35 years of

regrowth. This is equivalent to about 15% of the current Routt County GHG emissions over that time period. While this is a high end estimate given that not all of the burned lands likely will be available for replanting, it gives an indication of the potential impact of this recommendation. Congress recently passed the REPLANT act which will increase the amount of federal funding available for reforestation and directs the USFS to plant more than a billion trees over the next decade. Additionally, the Colorado State Forest Service is making upgrades to its nursery to increase the amount of suitable seedlings for planting in the State. Both the USFS and CSFS can increase the pace of reforestation if they have support from local governments and NGOs. It will require identifying ways to help address bottlenecks in the process through the development of a trained workforce, collaborative use of facilities, and community support and involvement. Some of the barriers to increased reforestation include: need for more seed collection from local sources; limited infrastructure to store and process seedlings; competition for seedlings from other areas with significant wildfire activity; time and staff to complete environmental review and planning; availability of trained and certified contractors; labor availability in relatively short planting windows; and community support emphasizing the importance of reforestation. As described in the USFS Reforestation Strategy: "successfully increasing reforestation is dependent on strong partnerships with other organizations. The agency will need to effectively collaborate with Federal, Tribal, State, local, nonprofit, and other partners to achieve landscape-scale results."

Lead Implementer(s):

USFS, CSFS.

Partners:

Routt County, YVSC, UYWCD, Upper Yampa Watershed Coalition, Routt County Wildfire Mitigation Council, CMC (for training).

Implementation Needs & Next Steps:

1) Identify local reforestation priorities, particularly for watershed health resilience across the landscape.
2) Assess current reforestation needs across existing wildfire burn areas and other understocked forests on public and private land in the County.
3) Collaboratively identify with CSFS and USFS need and opportunities locally to help address bottlenecks (e.g. identify training opportunities with CMC, assess local infrastructure that could be repurposed to support reforestation; grow volunteer workforce for seed collection, reseeding and planting seedlings and for monitoring).

4) Develop a monitoring and evaluation protocol for condition, project impact and next steps.
5) Develop relationships with USFS/CSFS nurseries to supply local projects.
6) Collaborative research on adaptive reforestation to plan for projected climate impacts.
7) Local funding dedicated to reforestation efforts perhaps through local carbon offsets.
8) Seek grants from national and state sources for priority efforts within the County.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

$100,000-$1,000,000 per year depending on how much land is available in a given year for reforestation (Need USFS estimates on costs per acre).

Potential Funding Sources:

USFS budgets (Reforestation Trust Fund), National Forest Foundation, Arbor Day Foundation, Carbon Offsets, RESTORE Colorado, Colorado Water Conservation Board Watershed Restoration Grants, CSFS Forest Restoration and Wildfire Mitigation Grant Program).

Assessment:

Greenhouse Gas Potential: H Notes/Assumptions: Assumes planting all eligible burn areas with planting potential within 10 years of burn date (no replanting in wilderness or areas showing natural regeneration).
Co-benefits: H Notes/Assumptions: Benefits to watershed health (through reduced erosion and increased water retention), wildlife habitat and recreation.
Implementation Cost: M-H (depending on amount) Notes/Assumptions: Cost refers to increase in needed USFS budgets or new non-federal funding for other projects. As noted below there is new funding available from REPLANT.

Political Barriers: L Notes/Assumptions: Seems like there would be no opposition. Only logistical issues in terms of how USFS prioritizes reforestation funding.
Ease of Implementation: M Notes/Assumptions: Unclear what can be done locally to significantly increase pace of reforestation as funds and access to capacity and trees are determined at regional and national scales. Significant new funding at the federal level will trickle down.

CAP Strategy and Action:

LUS1. Promote land management practices that increase carbon sequestration.

LUS1 A4. Work to implement specific natural climate solutions for forests within the County.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #4:

Increase tree planting in urban and other residential housing areas through government urban forestry programs.

Description:

Urban trees not only help sequester carbon, but can also provide significant benefits to urban communities, including relief from heat, lower energy bills, improved resilience to flooding and increased opportunities for outdoor recreation. They are a key feature of green infrastructure as identified as a priority action in the CAP. The State of Colorado Natural and Working Lands Strategic Plan identifies urban tree planting as a no-regrets strategy that will sequester additional carbon over the long term. Currently, the City of Steamboat Springs and the Town of Hayden are recognized as a Tree City by the Arbor Day Foundation. This program, with minimum standards, is open to any incorporated municipality. Increasing urban tree cover is

not only a specific way to implement CAP goals, it can also create savings in other areas of city budgets if trees are used to help manage stormwater, reduce costs of turf maintenance, or reduce energy use for air conditioning. Urban tree planting programs should carefully plan locations for and types of trees to be planted, factoring in projected climate changes in the coming decades (such as tree varieties that are more drought tolerant). An additional component of an urban tree planting program is protection of existing trees as part of new development efforts (see recommendation 10), and to create incentives or requirements for private landowners to help maintain and protect trees in public right of ways.

Lead Implementer(s):

CAP governments.

Partners:

CSFS, YVEA, HOAs, Landscaping Companies, CSU Extension.

Implementation Needs & Next Steps:

1) If applicable, follow Arbor Day Foundation guidelines to meet Tree City standards.
2) Seek technical support from CSFS and others to design programs.
3) Inventory of current green spaces and street trees in the municipalities/County and identification of highest priorities for additional trees.
4) Set goals for urban canopy cover for residential areas in municipalities and unincorporated areas. Consider “tree equity” and opportunities for water and energy savings.
5) Develop government budgets for increased tree planting, incorporating projected savings from other costs including stormwater management, energy savings, and landscaping maintenance.
6) Adjust landscape codes to incentivize or require tree planting in new developments along with protection of existing trees; consider landowner responsibility for maintenance of trees in new codes.
7) Develop partnerships to guide climate-smart tree planting, including selection of tree spp..
8) Develop partnership with YVEA to support appropriate urban tree planting as part of their ongoing vegetation management program.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

Cost varies. Minimum standard for Tree City status is $2/capita spent on municipal tree program.

Potential Funding Sources:

CDOT Revitalizing Main Street grants, municipal budgets, DOLA grants, Arbor Day Foundation, USFS Urban and Community Forestry Program, Colorado Water Conservation Board Turf Replacement Program.

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Urban trees are harder to plant in large numbers than in forests.
Co-benefits: H Notes/Assumptions: Significant co-benefits through lowered energy costs, potential water savings, wildlife habitat, and public enjoyment.
Implementation Cost: H Notes/Assumptions: High cost per unit for trees plus maintenance needs. Would need to be in municipal budgets.
Political Barriers: L Notes/Assumptions: Generally, very popular. If converting park grassy areas, might engender some opposition. Needs to be done in a way that does not increase wildfire risk or stress water supplies.
Ease of Implementation: M

Notes/Assumptions: Potential/likely need for new staffing and/or increased budgets at municipal level to support. There are some grant sources to offset new costs. Might be challenged by water shortages.

CAP Strategy and Action:

LUS1. Promote land management practices that increase carbon sequestration.

LUS1 A5. Integrate green infrastructure concepts and improvements that promote carbon mitigation.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #5:

Continue planting canopy trees along the Yampa to increase shading to help meet water temperature standards.

Description:

Riparian tree planting is a subset of reforestation described in Recommendation #2. It is called out separately because a program already exists with support of CAP partner governments and because it has some potential unique funding sources. It also is a key strategy under LUS3, for reducing energy expended in wastewater treatment using nature-based solutions. The State of Colorado's Strategic Plan for Climate-Smart Natural and Working Lands states that "restoration of riparian areas is a no-regrets strategy for increasing carbon sequestration while restoring ecological function." A key function of riparian canopy trees (e.g. narrowleaf cottonwoods) is shading rivers, helping to maintain lower temperatures in coldwater streams. In the Yampa

River, high water temperatures have led to closures to recreational use with significant economic impact, and exceedances to water quality standards for temperature could result in the City of Steamboat Springs being required to build new energy-intensive gray infrastructure at the wastewater treatment plant. Tree planting has been recognized as a compliance alternative to traditional infrastructure under the Clean Water Act, and the City of Steamboat Springs is exploring the possibility of using that alternative on the Yampa. In the meantime, the City, with YVSC, has three years of funding to plant trees for water temperature benefits. As discussed in Recommendation #1, NRCS also recognizes establishing riparian buffers to address water temperature as a climate-smart practice under Farm Bill funding programs. A key need to expand riparian planting under any of these funding sources is outreach to private landowners to encourage their participation in the program, as nearly all of the remaining suitable acres are on private lands.

Lead Implementer(s):

City of Steamboat Springs Public Works Department, YVSC.

Partners:

CSFS, Routt County, private landowners, Community Ag Alliance, NRCS.

Implementation Needs & Next Steps:

1) Identify highest priority lands for riparian reforestation to achieve water temperature benefits.
2) Conduct outreach to riparian landowners with potential for reforestation to encourage participation in City or NRCS programs.
3) Develop an alternative compliance program to use natural infrastructure to address water temperature (and potential other water quality issues like nutrients). Consider policy issues as well as alternative financing mechanisms (e.g. carbon credits).
4) Maintain pipeline of suitable riparian tree seedlings commensurate with scale of identified planting projects; develop long-term agreements with the CSFS nursery and appropriate private nurseries to raise Yampa river sourced seedlings.
5) Obtain sustainable funding for planting, maintenance, and data collection to document water quality benefits.

Timeframe to Begin Implementation:

Immediately (0).

Cost Estimate:

$200,000 -$500,000 per year.

Potential Funding Sources:

Water quality Credit Trading Program, Carbon Credit Program, NRCS climate-smart agriculture funding, CPW Wetland grants, Watersmart, CWCB Water Plan funds.

Assessment:

Greenhouse Gas Potential: M Notes/Assumptions: Less acres available than in forested areas, but faster sequestration rate. Avoided emissions from new wastewater treatment can be significant.
Co-benefits: H Notes/Assumptions: Water temperature biggest benefit. Also helps avoid nutrient loading in rivers, aids in erosion control and improves wildlife habitat, particularly for cold water fish and migratory birds.
Implementation Cost: H Notes/Assumptions: Cost per tree higher than upland forest reforestation, plus irrigation and maintenance needs. But new funding sources are more likely.
Political Barriers: L Notes/Assumptions: Popular with the public and meets other policy objectives. Some concerns with water usage.
Ease of Implementation: M Notes/Assumptions: On-going program but expanding to meet full potential would need more

capacity and outreach. Possibility of sustainable funding through credit trading program.

CAP Strategy and Action:

LUS1. Promote land management practices that increase carbon sequestration.

LUS1 A3. Protect and enhance wetlands and riparian corridors.

LUS3 A3. Improve water and wastewater infrastructure to reduce water and energy use using nature-based solutions.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #6:

Increase the area of wildfire risk mitigation projects (including prescribed burns) that help reduce the risk of large, intense fires that limit potential for forest regeneration.

Description:

Current and projected changes in climate have an indisputable impact of increasing the risk and intensity of wildfire in our forests. Unlike in other parts of the State, Routt County's forests ecologically have a longer fire return interval, making fires historically less frequent here. But recent decades of drought, increased insect activity, and large-scale blowdowns, have opened our forests to more regular, larger, and more intense fires. Additionally, drier conditions combined with hotter fires, have made natural regeneration following fire less robust. These changed forest conditions have made Colorado's forests a net source of GHG emissions (though

it is unclear if that is the case in Routt County). Future climate warming will exacerbate these problems, making the next decade a closing window to prepare our forests for these changes and minimize the impact of catastrophic fires that might shift some of our lands from forested to other vegetative types (e.g. shrublands). This will require landscape scale forest treatments, across property boundaries, carefully designed to alter fire behavior to avoid larger, more intense forests. It will also require increased use of managed and prescribed fire to maintain forests in a condition that resists intense fires causing long-term forest loss. This type of forest management does increase short-term carbon emissions, but if done properly can result in long-term increased sequestration and maintain the multiple benefits that healthy forests provide. Planned forest treatments should follow recommendations included in the Colorado Strategic Plan for Climate Smart Natural and Working Lands. Reducing the carbon footprint of forest management through strategies to make more use of biomass and wood products is also important, including fostering sustainable, local wood industries in Routt County. Preparing the built environment, particularly homes and neighborhoods, to better withstand impacts of wildfire is also an important step to allow forest management to focus on priorities for managing the overall landscape. Increasing the prevalence of fire-adapted communities will be an important climate adaptation strategy for Routt County.

Lead Implementer(s):

USFS, CSFS, BLM, Division of Fire Prevention and Control.

Partners:

Routt County Wildfire Mitigation Council, CAP governments, Fire Districts, water providers, private landowners, private fire mitigation contractors.

Implementation Needs & Next Steps:

1) Use the upcoming Routt County Community Wildfire Protection Plan to identify priorities for cross boundary projects in collaboration with USFS.
2) Continue to collaboratively prioritize mitigation projects (including methods in addition to timber management such as wetland restoration per recommendation #2).
3) Explore and develop sustainable, local funding sources for mitigation projects on private lands (e.g. mill levy).
4) Support Routt County Wildfire Mitigation Council in promoting fire-adapted communities (Firewise) and in other outreach efforts.
5) Support USFS to increase the number and scale of forest management projects covered by NEPA.

6) Continue to develop Good Neighbor Agreement projects between CSFS and USFS to help achieve landscape mitigation goals across property boundaries.
7) Foster innovative and interdisciplinary uses for forest biomass and timber to make forest management more economical and scalable (including incentives for local mills), provide wood products, and reduce the carbon footprint of forest management.
8) Increase public education effort to help residents and visitors understand the role of prescribed fire and where it is appropriate.
9) Include wildfire ready elements in new building codes.

Timeframe to Begin Implementation:

Immediately (0).

Cost Estimate:

Need cost estimates of current levels of treatment and possible increases.

Potential Funding Sources:

CSFS Forest Restoration and Wildfire Mitigation grants, BLM and USFS budgeted funds, Colorado Strategic Wildfire Action Program (COSWAP), Wildfire Mitigation Incentives Local Government Grant Program.

Assessment:

Greenhouse Gas Potential: M Notes/Assumptions: Calculating benefits requires assessment of future risk of large stand replacing fires that limit regeneration potential.
Co-benefits: H Notes/Assumptions: Large benefit from avoiding fires that pose greatest risk to watershed impacts and avoids potential for catastrophic loss of property.
Implementation Cost: H Notes/Assumptions: Fire mitigation projects at large scale requires significant investment in

planning and implementation.
Political Barriers: M Notes/Assumptions: There is support for fire mitigation, but some may prefer mitigation closer to homes and have concerns about forest management in the backcountry. Use of prescribed burns as a tool engenders opposition and will require increased education efforts.
Ease of Implementation: L Notes/Assumptions: Challenge to find ways to accelerate current pace of treatment given costs, access to forests, and capacity locally (also competition for resources with more populated areas).

CAP Strategy and Action:

LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.

LUS2 A2. Encourage and facilitate private landowner and public agency participation in landscape scale treatments that promote a resilient and healthy forest condition in Routt County.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #7:

Adopt land use regulations that establish or update appropriate wetland, stream and shoreline buffer widths and adjacent land uses and that avoid conversion of wetlands in new construction.

Description:

The City of Steamboat Springs has prioritized updating the waterbody setback standards in the Community Development Code in 2024. City staff are reviewing landscape standards within the code, with an eye to strengthening water conservation and wildfire mitigation requirements, and have engaged consultants to assist with updating the code. The Routt County Planning Department is also in the process of revising the County's Zoning and Subdivision Regulations to support the policies and goals of this Master Plan. The Master Plan calls for strengthening stream and wetlands protections through updates to regulations and zoning and to apply best

practices and data to inform decisions impacting sensitive ecological areas throughout the County. Protecting some of the most carbon rich habitats in the County in wetlands and riparian areas from new developments, would be an important step in implementing Strategy 2 of the Land Use section of the CAP.

Lead Implementer(s):

City of Steamboat Springs and Routt County planning departments.

Partners:

Yampa/White/Green Roundtable IWMP committee.

Implementation Needs & Next Steps:

1) Engage consultants to identify best practices for protecting sensitive wetland and riparian habitat in updated land use codes at City and County level.
2) Identify practices that would have the biggest benefit for protecting wetlands and riparian areas, including mandates, incentives, and mitigation areas.
3) Seek to include “like for like” mitigation requirements if included to insure retention of co-benefits from wetlands in a particular area (e.g. water temperature benefits where exceedances occur).
4) Seek input from local and state experts on key areas for enhanced protections and for best mitigation practices through a Technical Working Group.
5) Seek public input on proposed regulations.
6) Include strong protections in revised codes and regulations.

Timeframe to Begin Implementation:

Immediately (0).

Cost Estimate:

No additional cost beyond current process.

Potential Funding Sources:

N/A

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Unclear what current rate of conversion/loss is associated with new developments. Presumably relatively low, but includes high value habitats.
Co-benefits: H Notes/Assumptions: Water quality, wildlife habitat and other benefits associated with wetlands/riparian. Also avoided losses from future floods.
Implementation Cost: L Notes/Assumptions: Some cost associated with developing and passing new ordinance but that process is underway and funded.
Political Barriers: M Notes/Assumptions: Builder and developer opposition, but likely strong support from the public.
Ease of Implementation: H Notes/Assumptions: Part of already planned process to update codes.

CAP Strategy and Action:

LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resilience across the landscape within the County.

LUS2 A1. Protect natural resources that promote carbon mitigation.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #8:

Evaluate and develop smart siting/mitigation rules/guidelines for utility-scale solar development to minimize clearing of native habitat or productive agricultural lands.

Description:

It is expected that Routt County will see a significant uptick in applications for utility scale solar installations (greater than 1MW) as the closing date for Hayden Station approaches. The Master Plan anticipated this and included recommendations to “explore standards and codes to mitigate impacts from large-scale renewable energy generating facilities'' and to “leverage existing fossil fuel energy generation facilities/infrastructure for reuse for renewable energy production and/or storage.” These utility scale solar plants can cover hundreds of acres of land and require clearing of existing vegetation for installation. Converting native habitat, such as

sagebrush, can release significant amounts of carbon stored in the soil and adversely impact wildlife and impact hydrologic processes such as increasing runoff and erosion. While increasing solar production is an important climate action, careful planning can allow solar to proceed while protecting wildlife habitat and carbon stores. Standards should encourage siting on previously disturbed lands, avoiding new ground disturbance, utilizing practices that sustain ground cover and soil health, and allowing where appropriate continued agricultural uses on the same acres.

Lead Implementer(s):

Routt County Planning Department.

Partners:

CPW, Solar developers, Xcel Energy and other utilities proposing to purchase generated energy.

Implementation Needs & Next Steps:

1) Evaluate model code from other jurisdictions that have addressed this issue.
2) Create a pre-permit consultative process to identify optimal siting in conjunction with project developers.
3) Create a mapping application, or specific criteria, to identify optimal appropriate areas for large-scale renewable resources as mentioned in the Master Plan. Consider working with The Nature Conservancy to take advantage of their existing renewable energy mapping criteria.
4) Seek to include “like for like” mitigation requirements if part of the process to insure retention of co-benefits for wildlife habitat and to be “carbon neutral” in terms of impact of land disturbance.
5) Seek input from local and state experts, particularly CPW, on areas to protect and options for optimal siting.
6) Seek public input on proposed regulations.
7) Include strong protections in revised codes and regulations.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

No additional cost beyond current process.

Potential Funding Sources:

N/A

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Assuming avoided conversion or mitigation of 2000 acres of natural habitat.
Co-benefits: M Notes/Assumptions: Would likely be protecting wildlife habitat.
Implementation Cost: L Notes/Assumptions: Cost of developing regulations and assessing applications.
Political Barriers: M Notes/Assumptions: Might be pushback from developers and concerns about impeding renewable energy development.
Ease of Implementation: M Notes/Assumptions: Might not be many existing examples of local regulations for this type of project, so research would be needed.

CAP Strategy and Action:

LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.

LUS2 A1. Protect natural resources that promote carbon mitigation.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #9:

Develop land clearing regulations and incentives for protecting natural habitat within new residential developments in the County and include protections for urban trees in CAP government landscaping codes.

Description:

As part of the County's revised land use and subdivision regulations and upcoming municipal development codes, planners should consider new regulations related to land clearing for developments. The County Master Plan included a recommendation to "review land clearing activities in forested private lands to maintain a healthy watershed and incentivize appropriate forest management activities." Protecting existing forests to the greatest degree possible in areas slated for development would be an important step to avoiding increased carbon emissions. In addition, other natural habitat types, such as grassland and shrublands can hold

significant carbon and clearing should be minimized of all natural habitat types in new development. Requirements for land clearing permits exist in other counties and municipalities and can serve as models for Routt County. Development codes in more urbanized parts of the County can include protections for trees of significance for meeting urban forest goals as discussed in Recommendation 4. Forest protections in land clearing permits would need to balance with requirements for wildfire mitigation. The goal would be a balance that minimizes carbon emissions associated with land clearing but does not increase wildfire risk. Guidelines for addressing the "Home Ignition Zone" do specify that trees in the right spacing and location can be compatible with wildfire protection.

Lead Implementer(s):

Routt County planning department, municipal planners.

Partners:

CSFS, local forest management contractors, developers.

Implementation Needs & Next Steps:

1) Engage consultants to identify best practices for including land clearing permits as part of County land use regulations, with the intent of protecting important forest areas and other natural habitats.
2) Seek to include tree replacement requirements as part of the permit process where loss of forest is caused by development activities.
3) As part of urban forest programs, develop criteria for tree protection that could be included in new development codes.
4) Seek input from local and state experts on how to balance tree and forest protection requirements with wildfire ready developments.
5) Seek public input on proposed regulations.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

Likely no additional expense beyond existing consultants and public process.

Potential Funding Sources:

N/A

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Impact of regulations would depend on the scale of new developments and comparison to baseline of current land clearing practices.
Co-benefits: M Notes/Assumptions: Benefits associated with protecting vegetation important for wildlife habitat, water quality, etc. Potentially some conflict with wildfire mitigation guidance.
Implementation Cost: L Notes/Assumptions: May need consulting help to identify regulations with best practices examples. Subdivision regs are already being planned and are in the budget.
Political Barriers: M Notes/Assumptions: Potential opposition from developers.
Ease of Implementation: M Notes/Assumptions: Not possible to identify regulations that can be applied uniformly, will require site assessment and site plans, and decisions within permit process.

CAP Strategy and Action:

LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.

LUS2 A1. Protect natural resources that promote carbon mitigation.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #10:

Include strong water conservation requirements, including limits on new turf installation, in updated landscaping standards and consider including in County land use regulations. Expand existing urban water conservation programs with a focus on turf replacement.

Description:

Water conservation is included in the CAP as a strategy to reduce energy use in treating and distributing water to households. Water conservation is an extremely important climate adaptation strategy as well, though actions to reduce consumptive use of all water (including untreated sources and non-urban uses) are not covered in the CAP. The City of Steamboat Springs and the Mt. Werner Water and Sanitation District have a comprehensive water conservation program for existing households including outreach and education about reducing

the amount of water applied to outdoor landscaping, and they are developing incentives for existing turf replacement. Existing and proposed building codes have strong indoor water conservation measures. Many western municipalities have recently adopted very stringent outdoor landscaping requirements to reduce water use and model codes are available. One strategy would be to include limits on the amount of irrigated turfgrass associated with new developments and/or more stringent requirements for smart and efficient outdoor watering systems. The City of Steamboat Springs is considering water conservation measures for its revised landscaping code. The County could also consider outdoor water conservation measures in revised land use regulations for new subdivisions, and potentially in new building codes as proposed in the Master Plan. The State of Colorado has recently developed incentives for water suppliers with incentive programs for landowners to remove and replace turf with less water intensive landscaping. CAP governments should consider developing and expanding such programs.

Lead Implementer(s):

City of Steamboat Springs, Mount Werner Water District, other smaller water providers, Routt County and municipal planners.

Partners:

CWCB, YVSC, Yampatika, water suppliers.

Implementation Needs & Next Steps:

1) Engage consultants to identify best practices for outdoor water conservation in new developments based on other arid areas in the western US.
2) Consider limiting the amount of new irrigated turfgrass in new developments and support turf replacement programs as the most effective way to reduce water use.
3) Include more stringent requirements for irrigation efficiency, including smart systems that apply water based on soil moisture and precipitation.
4) Where applicable, water providers should consider moving to metered water connections and evaluate use of block pricing to limit high use of treated water.
5) Seek stakeholder and public input on proposed regulations.
6) Promote adoption of new regulations by city/town councils and the Board of County Commissioners.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

Likely no additional expense beyond existing consultants and public process.

Potential Funding Sources:

N/A

Assessment:

Greenhouse Gas Potential: M Notes/Assumptions: Depends on degree of restrictions and projected GHG emissions associated with water treatment (in this case only on the initial treatment as irrigation not disposed of in wastewater system).
Co-benefits: M Notes/Assumptions: Water conservation and water quality benefits.
Implementation Cost: L Notes/Assumptions: Some cost associated with installing non-turf landscaping, but life cycle savings associated with less need for watering and maintenance.
Political Barriers: H Notes/Assumptions: Developer and public opposition based on presumption that turf lawns are the more desirable.
Ease of Implementation: M Notes/Assumptions: Might be difficult to design an equitable and enforceable standard.

CAP Strategy and Action:

LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and wastewater treatment. A1 - Enhance regional water and energy conservation.

Sector	CAP Strategies
Land Use	LUS1. Promote land management practices that increase carbon sequestration and storage across forests, wetlands, riparian corridors, and agricultural lands/rangelands and preserve carbon sinks, especially forests and wetlands, and designate future land uses to maximize carbon sequestration.
	LUS2. Increase and support cross-boundary efforts to conserve and maintain natural lands and to promote resiliency across the landscape within the County.
	LUS3. Promote water conservation measures and reduce energy consumed in water production, distribution, and waste water treatment.
	LU4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

Highlighted boxes show which CAP Strategies are implemented by CAP recommended Action.

Land Use Working Group Recommended Action #11:

Encourage the use of Land Preservation Subdivision (LPS) Exemptions and other types of clustered development to protect natural habitat when 35-acre subdivisions are proposed in unincorporated areas.

Description:

The Routt County Master Plan has a clear focus on increasing development in defined growth areas and promoting compact development wherever possible. It emphasizes promoting infill development and redevelopment in existing urban areas. And specifically recommends continuing to promote the Land Preservation Subdivision (LPS) Exemption processes to preserve large remainder parcels for wildlife habitat. Implementing all these goals from the Master Plan will be important steps in avoiding future emissions of carbon from natural lands, as well as limiting transportation emissions as discussed in the Transportation recommendations of the

CAP. However, the County lacks the ability to prohibit new subdivisions of 35 acres or larger, which can increase development in rural areas and can impact existing natural habitat. Where 35-acre subdivisions are proposed, it will be important to update standards and incentives for Land Preservation Subdivisions (or other mechanisms for clustered development) to increase their attractiveness to developers as a strategy to protect natural lands.

Lead Implementer(s):

Routt County planning department, municipal planners.

Partners:

Developers, existing HOAs.

Implementation Needs & Next Steps:

1) Engage consultants to identify best practices for limiting impact of new developments in rural areas with important natural habitat.
2) Develop subdivision review criteria and standards that provide landowners with clear guidance for preserving open space while maintaining flexibility.
3) Encourage Tier 1 Municipalities to re-evaluate their zoning and subdivision standards to incorporate “gentle density” measures such as lot splits, small multi-family developments, and accessory dwelling units to accommodate growth within the existing urban fabric.
4) Encourage cluster development and use of Land Preservation Subdivision (LPS) Exemptions to discourage and reduce the desirability of 35-acre subdivisions. Consider new incentives for developers to limit the amount of land disturbed in 35-acre subdivisions.
5) Seek public input on proposed regulations.

Timeframe to Begin Implementation:

Immediately (0) to one year (1).

Cost Estimate:

Likely no additional expense beyond existing consultants and public process.

Potential Funding Sources:

N/A.

Assessment:

Greenhouse Gas Potential: L Notes/Assumptions: Reductions if avoids land clearing above presumed baseline, and potential transportation emission reductions.
Co-benefits: M Notes/Assumptions: Wildlife habitat protection. Transportation benefits.
Implementation Cost: L Notes/Assumptions: Cost associated with design and implementation of system, savings associated with lower cost of infrastructure improvements.
Political Barriers: M Notes/Assumptions: Likely developer opposition if too restrictive, though is proposed as a voluntary incentive.
Ease of Implementation: M Notes/Assumptions: Requires effort for designing and applying exemptions.

CAP Strategy and Action:

LUS4. Promote compact development patterns to achieve more sustainable development and preserve natural land use types.

LUS4 A1. Enhance policies, guidelines, and incentives for Smart Growth and compact development.

LUS4 A2. Update development and zoning codes to implement compact development goals and policies.