

## Appendix A.

# 5-10-Year Draft Plan Fire and Fuels Management in the Red Cliffs Desert Reserve

Prepared by Washington County HCP Technical Committee

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### Background & Introduction

At the November 2023 HCAC meeting, BLM, UDWR and County officials presented new information regarding fire prevention and restoration activities in the Reserve. Through its Watershed Restoration Initiative (WRI), and in collaboration with HCP funds, UDWR recently treated state lands with Rejuvra to reduce the threat of fire from Green Springs and east towards I-15. In recent months the BLM also approved a new weeds management plan for NCA. With these new tools available, HCAC members felt inclined to address the ongoing fire threat by shifting fire management funds higher than the typical annual average. The purpose of additional funding was in support of greater fuels management across a broader landscape and in support of a long-term strategy that will complement the new BLM weeds management plan. The TC was given the following assignment in support of this plan:

*Develop a long-term strategy (5-10-year plan) to treat various sub-sections of the Reserve on an annual basis. Identify the potential best methods to reduce fuels, improve restoration success and estimate costs for desired treatments in each area. Consider how these activities can be integrated to utilize funds from WRI, BLM and HCP. Add this strategy as an appendix or as a separate chapter in RCDR Habitat Fire Management Plan.*

This document is intended to complement existing documents that already guide habitat management efforts in the RCDR, including the RCDR Habitat/Fire Management Plan, and the BLM's Weed Management Plan for the Red Cliffs / Beaver Dam Wash National Conservation Areas (NCAs). The strategies and associated funding mechanisms identified here are intended to provide further guidance under the framework of those existing plans. While this plan estimates costs and potential funding sources, the amount available each year to implement projects is unknown to do variability in annual agency budgets and grant availability.

**Objective 1.** Establish, enhance and maintain fuel breaks within the RCDR to reduce spread of fire and to reduce dry fuels near ignition sources.

Target Treatment Areas *	Fuel Break Length (feet)  1100 acres for BLM treatments in 2024	Estimated Costs **	Buffer Width  100-300 ft for THs >300 ft for major roads on both sides 25 ft on both sides for minor roads	Managing Agencies & Potential Funding Sources
<p><b>Zone 2</b></p> <ul style="list-style-type: none"> <li>• Snow Canyon Drive</li> <li>• Tuacahn Drive</li> <li>• West Canyon</li> <li>• SR-18</li> <li>• Trailheads</li> <li>• Campground</li> </ul> <p><b>Zone 3</b></p> <ul style="list-style-type: none"> <li>• Winchester trail</li> <li>• Red Hills Parkway</li> <li>• Cottonwood Rd.</li> <li>• Mill Creek</li> <li>• Middleton Powerline</li> <li>• Grapevine</li> <li>• I-15</li> <li>• Red Cliffs CG road</li> <li>• Trailheads</li> <li>• Campground</li> </ul> <p><b>Zone 4</b></p> <ul style="list-style-type: none"> <li>• Babylon</li> <li>• Trailheads</li> </ul> <p><b>Zone 5</b></p> <ul style="list-style-type: none"> <li>• 600 North</li> <li>• Trailheads</li> </ul> <p><b>Zone 6</b></p> <ul style="list-style-type: none"> <li>• Navajo Drive</li> <li>• Trailheads</li> </ul>	<p><b>Zone 2</b></p> <p><b>Zone 3</b></p> <p><b>Zone 4</b></p> <p><b>Zone 5</b></p> <p><b>Zone 6</b></p>	<p><b>Zone 2</b></p> <p><b>Zone 3</b></p> <p><b>Zone 4</b></p> <p><b>Zone 5</b></p> <p><b>Zone 6</b></p>		<p><b>Zone 2</b> Snow Canyon BLM Ivins City UDOT</p> <p><b>Zone 3</b> BLM SITLA County HCP &amp; Weeds UDWR St. George City UDOT</p> <p><b>Zone 4</b> BLM UDWR</p> <p><b>Zone 5</b> BLM County HCP &amp; Weeds Hurricane City</p> <p><b>Zone 6</b> BLM SITLA County HCP &amp; Weeds</p>

Any additional areas we would like to list here?				
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\* Zone 1 fire management is primarily conducted by the City of Ivins and Kayenta.

\*\* Cost per linear foot estimated at: \$ **xxxx** / ft (March 2024).

### Frequency of Treatment

Establishing and maintaining effective fuel breaks is the top priority of this plan. As a result, each fuel break listed above should be assessed annually each **January-February** to determine if herbicide treatment is needed that year. Treatments should be preventative and prioritized before areas are overgrown and fuel breaks are compromised. We expect that Rejuvra treatments may be effective for approximately **3-5 years**, while areas treated with Plateau will last **1 year**.

Include some comments on treatment timing and allowing for some flexibility. For example, 'less active season' is preferred timing for tortoises, but Russian Thistle treatment timing may be better in October/November before the plants go to seed.

Figure 1. Insert map identifying priority fuel break treatment areas.

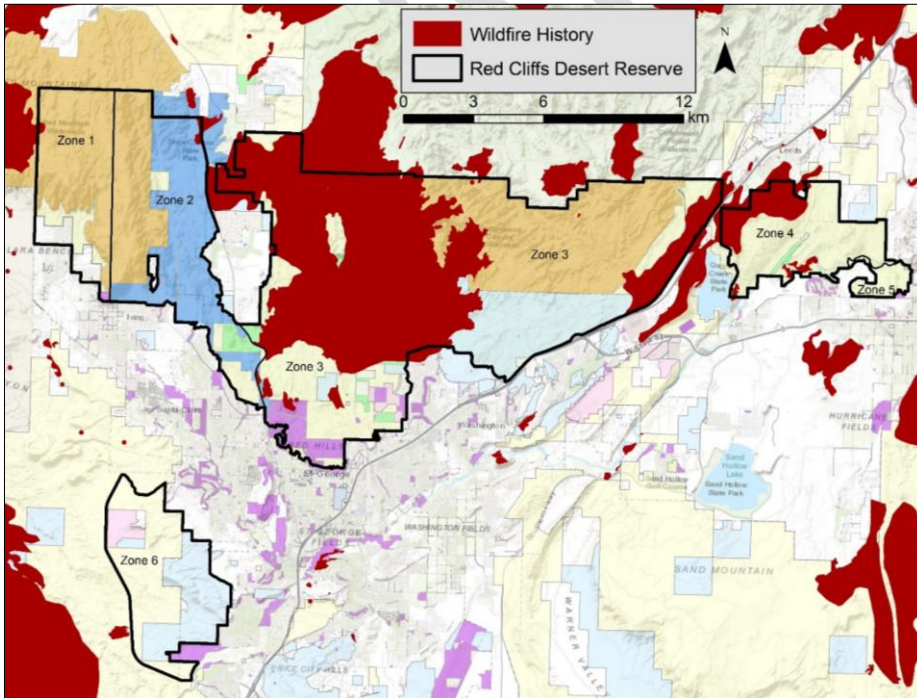
**Objective 2.** Protect unburned tortoise habitat in the RCDR through an annual herbicide treatment plan.

Unburned Area(s)	Priority Projects to Protect Habitat	Treatment Timing/Intervals	Managing Agencies	Estimated Average Annual Cost/ Funding Sources (HCP, BLM, WRI, etc.)
<p>Zone 2: almost entirely unburned</p> <p>Zone 3: south and east ends mostly unburned (except for far east end), some small unburned patches at west end</p> <p>Zone 4: mostly unburned except for northwest end, some burned patches at south end</p> <p>Zone 5: almost entirely unburned</p> <p>Zone 6: almost entirely unburned</p> <p>3 priorities</p>	<p>Identify unburned habitat in Zone 3 for larger-scale treatments. Consider treatments at remaining small unburned habitat areas at west end of Zone 3.</p> <p>Other possible treatment strategies for Zone 3 and elsewhere: Conduct aerial treatments at edges of existing burned areas and adjacent edges of unburned habitats to reduce dry fuel loads, with the objective of reducing/slowing spread of fire from burned to unburned habitats. Coordinate with Forest Service to reduce fire danger on Dixie NF north of the RCDR.</p> <p>Drone treatments Helicopter Airplane Truck boom</p>	<p>Establish based on treatment strategies identified. Suggest splitting into spatial increments that would allow all areas to be treated every 5-10 years.</p> <p>Prioritize 3 levels of treatment for each area.</p>	<p>BLM, HCP, UDWR, potential for additional agency collaboration such as US Forest Service (USFS)</p> <p>SITLA – noxious weed fund</p> <p>County – apply for ISM grant, HCP funds, State Forestry and Fire</p> <p>State – WRI</p> <p>BLM – infrastructure bill funding, 300-500k, base funding, national grants, USFWS, fuels treatment from CCFO</p>	

Another possible template for organizing objective 2:

Year	Location(s)	Managing Agencies	Treatment Description	Acres	Estimated Costs
2024					
2025					
2026					
2027					
2028					
2029					
2030					
2031					
2032					
2033					
2034					

Figure 2. Map out annual treatment areas (identified in table under strategy #2)



**Commented [CR1]:** I suggest creating polygon shapefiles for each treatment area by year. This would match the year in the table above. Up to 10 areas may be needed. This could be done by clipping the tortoise habitat shapefile over the unburned habitat. Next we would look at those and spatially split them up into smaller areas based on Zone, tortoise occupancy, invasive grass presence, or whatever else makes sense to consider treating that area in any given year. We may not need to worry about "prioritization" since that will be built into which areas we treat in the first years of the plan, ie 2024 is top priority followed by 2025... etc

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