

**AGENDA  
 CARBONDALE BOARD OF TRUSTEES  
 WORK SESSION  
 CARBONDALE TOWN HALL  
 JUNE 18, 2019  
 6:00 P.M.**

**DINNER WILL BE PROVIDED**

<b><u>TIME*</u></b>		<b><u>ITEM</u></b>	<b><u>DESIRED OUTCOME</u></b>
<b>6:00</b>	<b>1.</b>	<b>Joint Meeting with Garfield County Commissioners</b> 1. Next Steps on Housing 2. Update on Red Hill Engineering 3. General Discussion	<b>Discussion</b>
<b>7:30</b>	<b>2.</b>	<b>VCAPS Discussion</b>	<b>ATTACHMENT A Discussion</b>
<b>9:00</b>	<b>3.</b>	<b>Adjourn</b>	

**\* Please Note Times Are Approximate**



# TOWN OF CARBONDALE

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## BOARD OF TRUSTEES AGENDA MEMORANDUM

**TITLE:** VCAPS Update & Next Steps Discussion

**SUBMITTING DEPARTMENT:** Administration

**ATTACHMENTS:** (A) [Carbondale Centered Drought Planning & Adaptation Public Meeting Presentations](#)  
(B) [VCAPS Action Chart](#)

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### BACKGROUND

On September 26 & 27, 2018, Carbondale participated in a Vulnerability, Consequences, Adaptation, Planning Scenarios (VCAPS) pilot program workshop. Carbondale was chosen along with 4 other western communities to participate in the pilot program workshop. The workshop facilitated a discussion around the consequences and impacts of drought, which resulted in a list of potential public and private actions to mitigate those impacts.

During January 2019, Carbondale received the [final VCAPS Workshop Report](#); since, the Town conducted an internal gap analysis of 2019 VCAPS related actions and engaged local non-profits and stakeholders.

On April 2, 2019 a public meeting was held in the Third Street Center – Gym, 38 people from the community attended the meeting. During the meeting a representative from WWA presented information about *Local Weather & Climate Impacts: Recent Trends and Future Projections for the Roaring Fork Valley*. Then, Trustees and Town Staff shared information about Carbondale's *VCAPS Workshop Results*, and provided a *Summary of Town Projects* geared toward VCAPS actions during the 2019 fiscal year. [The public meeting agenda and presentations are available online by clicking this link.](#) The public can access [regularly updated VCAPS information](#) in the news section of the Town's homepage.

On April 16, 2019 the Trustees discussed next steps at a work session. The item was reserved for further discussion. In the interim the Board agreed they would each take some time to identify their top priorities on the VCAPS action list for further discussion at the June work session. Attached is [page 2 and 3 of the the minutes from April 16](#) for Trustee review.

## **DISCUSSION**

In attachment B, you'll find the VCAPS action chart for discussion.

Thank you for the opportunity to work on this project.

Prepared by: Angie Sprang

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Town Manager

Scenario	Issue Area	Town of Carbondale 2019 Actions	Possible Actions Identified at the Workshop <sup>*1</sup>
Drought Scenario 1 (2018-Type Drought)	Reduced runoff	<ul style="list-style-type: none"> <li>Communications plan</li> <li>55k storm water drainage improvements</li> <li>10k lighting retro fitting in town hall</li> <li>416k hydroelectric plant at Nettle Creek</li> <li>Various fleet upgrades</li> <li>15k utilities to support CORE initiatives</li> <li>25k support of GCE initiatives</li> <li>30k support Carbondale specific energy programs</li> <li>Reduce CO2 emissions – building and energy code upgrades 5k for consulting fees</li> </ul>	<ul style="list-style-type: none"> <li>Reaching out to other partners like RVR, schools, Hendrick and town</li> <li>Small discussion with community leaders about climate change</li> <li>Reviewing the drought plan at the right time</li> <li>Maintaining proactive steps with the NRCS, Watershed groups and agricultural community early in the year as the winter season recedes</li> <li>Reduce CO2 emissions</li> <li>Convene multiple partners: park, schools, RVR, HOA design community to share this info and the options and actions</li> </ul>
	Stress on Ecosystem	<ul style="list-style-type: none"> <li>Ongoing project with Roaring Fork leadership – friends of Carbondale Gardens</li> <li>20.5k environmental board and waste reduction efforts – bag fee fund</li> <li>RFP single hauler</li> <li>2019 ongoing energy upgrades to town facilities</li> </ul>	Landscape restoration for resiliency. Not just building it back but maybe do it in a different manner. Have a dialogue about how such a process should happen
	Fires	<ul style="list-style-type: none"> <li>Work with Carbondale Rural Fire Protection District on this</li> </ul>	<ul style="list-style-type: none"> <li>Table top (simulation) exercises with fires scenarios on mitigation strategies</li> <li>Do municipal services have all the equipment they need in case of emergency</li> <li>Work with property owners on ladder fuel mitigation and defensive spaces and with USFS on forest lands</li> <li>Work with landscape professionals on materials to educate the public on vegetation management during drought conditions (trimming, watering vegetation that is most susceptible to drought, e.g. trees and shrubs)</li> <li>Identify emergency structures and reevaluate what counts as essential infrastructure (schools ended up being used as an essential shelter)</li> <li>Figure out who is responsible for funding those needs and updates</li> <li>Find how can we better share resources during fires</li> <li>Conversation on how do we build resilience for more frequent and intense fires</li> <li>Educate the public about how resources are spread thin during fires</li> <li>Create a ballot tax for raising funds for fire fighting</li> </ul>
	Reduced Water Supply	<ul style="list-style-type: none"> <li>50k developing Roaring Fork well No. 4</li> <li>500k for increasing capacity at Roaring Fork Water Treatment Plant</li> <li>150k pipeline pump on Nettle Creek waterline</li> <li>75k Weaver Ditch &amp; Crystal River Improvements</li> <li>35k Crystal River Design Planning</li> </ul>	<ul style="list-style-type: none"> <li>Connect with NGOs like CLEER to help with marketing campaign and education<sup>*2</sup></li> <li>Share what was discussed during the VCAPS workshop<sup>*2</sup></li> <li>Marketing campaign with local media to help community revise their perceptions on baseline</li> <li>Assess the efficiency of the whole water system</li> <li>Evaluate creating a grey water system</li> <li>Evaluating the fee structure for use of ditches</li> <li>Potentially shift most municipal water to take from the RFR</li> <li>Look at how water restrictions work, specifically how they need to be different than raw water systems</li> <li>Analyze how efficient Carbondale is</li> <li>Tell stories about drought resiliency and how the town responded to the 2018 drought. Tell success stories of people cutting back on their water use</li> <li>Include an insert on conservation in the water bill to educate the public</li> <li>Increase communication and dialogue with citizen about water risk via nonprofits or CWCB</li> <li>Create a press release from the town about the workshop<sup>*2</sup></li> <li>Future press release about outcomes from this process<sup>*2</sup></li> <li>Give feedback on results from this summer's conservations efforts and then discuss next steps<sup>*2</sup></li> <li>Have small community discussions in different neighborhoods /communities within town</li> <li>Conversation directly with property owners about environmental change and new expectations</li> <li>Look to other dry places to see what strategies they are using</li> <li>Write an Op Ed in the Sopris Sun (like the science presentations)</li> <li>Have outreach in Spanish</li> <li>Need to step up water treatment</li> <li>Factor increase energy use into community plan to be a net zero emission community by 2050</li> </ul>
	More concentrated waste water solids	<ul style="list-style-type: none"> <li>1.2 mill for a new clarifier</li> </ul>	<ul style="list-style-type: none"> <li>Need to cut back on human use in some popular rec areas to avoid degradation.</li> <li>Share the data from presentation with the fishing industry on changes in the ecosystem and potential inevitable changes in the fishing industry</li> <li>Communicate drought issues and environmental ethos to tourists (to promote native grasses and authenticity)</li> <li>Promote diversity of tourism activities (art, food, ag)</li> <li>Chamber of commerce can promote diversity of activities</li> <li>Promote summer and winter tourism</li> <li>Switch municipal water to the RFR, that would leave more water for irrigation in the Crystal</li> <li>Offer training to staff about water use / shows why it's important</li> <li>Line the ditches with plastic where feasible</li> <li>Differentiate how water restrictions are applied to municipal and raw water</li> <li>Could evaluate changing ditch restrictions from time of day rather than a specific day</li> <li>Install a smart irrigation system that can water more efficiently<sup>*3</sup></li> <li>Prioritize different green spaces for irrigation<sup>*2</sup></li> <li>Write master plan for right-sizing landscaping</li> <li>Add secondary water irrigation system</li> <li>Marketing Campaign with local media to help community revise their perceptions on baseline</li> <li>Use artificial turf</li> <li>Review turf management policies with drought resilience<sup>*2</sup></li> <li>Revise town priorities and landscape ethic</li> <li>Open dialogue with landscape architects about marketing campaign that promotes xeriscaping</li> <li>Demonstration park with xeriscape plants</li> <li>Have local nurseries stock xeriscape plants and drought friendly plants</li> </ul>
	Decrease in tourism	<ul style="list-style-type: none"> <li>Lodging Tax \$120,750</li> <li>Chamber 20k</li> </ul>	<ul style="list-style-type: none"> <li>Need to cut back on human use in some popular rec areas to avoid degradation.</li> <li>Share the data from presentation with the fishing industry on changes in the ecosystem and potential inevitable changes in the fishing industry</li> <li>Communicate drought issues and environmental ethos to tourists (to promote native grasses and authenticity)</li> <li>Promote diversity of tourism activities (art, food, ag)</li> <li>Chamber of commerce can promote diversity of activities</li> <li>Promote summer and winter tourism</li> <li>Switch municipal water to the RFR, that would leave more water for irrigation in the Crystal</li> <li>Offer training to staff about water use / shows why it's important</li> <li>Line the ditches with plastic where feasible</li> <li>Differentiate how water restrictions are applied to municipal and raw water</li> <li>Could evaluate changing ditch restrictions from time of day rather than a specific day</li> <li>Install a smart irrigation system that can water more efficiently<sup>*3</sup></li> <li>Prioritize different green spaces for irrigation<sup>*2</sup></li> <li>Write master plan for right-sizing landscaping</li> <li>Add secondary water irrigation system</li> <li>Marketing Campaign with local media to help community revise their perceptions on baseline</li> <li>Use artificial turf</li> <li>Review turf management policies with drought resilience<sup>*2</sup></li> <li>Revise town priorities and landscape ethic</li> <li>Open dialogue with landscape architects about marketing campaign that promotes xeriscaping</li> <li>Demonstration park with xeriscape plants</li> <li>Have local nurseries stock xeriscape plants and drought friendly plants</li> </ul>
	Reduced Irrigation for Town Facilities	<ul style="list-style-type: none"> <li>Parks - 66k North 133 irrigation upgrades</li> <li>Ongoing dialogue to reduce irrigation water use</li> </ul>	<ul style="list-style-type: none"> <li>Switch municipal water to the RFR, that would leave more water for irrigation in the Crystal</li> <li>Look for ways to build trust with ranching community so they would feel comfortable to try other water mechanisms (e.g. leasing water)</li> <li>Explore new and creative ways for ranchers to use more efficient water systems. Use pilots to explore these different mechanisms</li> <li>Create a dashboard that shows what can happen (loss of water) and the impacts (economic)</li> <li>Look into storage on the tributaries of the Crystal</li> <li>Promote beaver dams</li> <li>Find ways to increase resiliency on the Crystal River</li> <li>Reference the Crystal River management plan as necessary</li> <li>Risk analysis of major factors impacting water use</li> <li>Help town residents understand the economic need for water use by the agricultural community</li> <li>Identify potential ecological cliffs that may occur on the Crystal River</li> <li>Consider private non-profit campaigns in Garfield County to raise awareness about benefit of agriculture</li> <li>Increase community support for new farmers</li> <li>Explore possibilities in which big ranches might allow people to farm on their land</li> <li>Broker deals with landowners to provide lease lands</li> <li>Increase conservation easements (AVLT)</li> <li>Promote tours of local farms and farm-to-table</li> <li>Storytelling to promote farmers and ranchers</li> <li>Chamber could invite farmers to first Friday</li> <li>Promote the local Rodeo</li> </ul>
	Reduced agriculture irrigation out of town		<ul style="list-style-type: none"> <li>Educate people about sprinkler systems and their efficiency</li> <li>Switch municipal water to the RFR, that would leave more water for irrigation in the Crystal</li> <li>Look for ways to build trust with ranching community so they would feel comfortable to try other water mechanisms (e.g. leasing water)</li> <li>Explore new and creative ways for ranchers to use more efficient water systems. Use pilots to explore these different mechanisms</li> <li>Create a dashboard that shows what can happen (loss of water) and the impacts (economic)</li> <li>Look into storage on the tributaries of the Crystal</li> <li>Promote beaver dams</li> <li>Find ways to increase resiliency on the Crystal River</li> <li>Reference the Crystal River management plan as necessary</li> <li>Risk analysis of major factors impacting water use</li> <li>Help town residents understand the economic need for water use by the agricultural community</li> <li>Identify potential ecological cliffs that may occur on the Crystal River</li> <li>Consider private non-profit campaigns in Garfield County to raise awareness about benefit of agriculture</li> <li>Increase community support for new farmers</li> <li>Explore possibilities in which big ranches might allow people to farm on their land</li> <li>Broker deals with landowners to provide lease lands</li> <li>Increase conservation easements (AVLT)</li> <li>Promote tours of local farms and farm-to-table</li> <li>Storytelling to promote farmers and ranchers</li> <li>Chamber could invite farmers to first Friday</li> <li>Promote the local Rodeo</li> </ul>
	Call on the Nettle Creek		<ul style="list-style-type: none"> <li>Increase Roaring Fork water treatment system capacity</li> <li>Provide upstream pumps to the 42 homes on the nettle creek</li> <li>Focus on better redundancy for water supply with the Roaring Fork plant capacity</li> <li>Change laws to be able to do rainwater harvesting (state issue)</li> <li>Increase individual water storage (cisterns)</li> <li>Increase water storage on the Crystal River and discuss possible decisions</li> <li>Increase use of the Ruedi Reservoir by adding containment ponds to recharge wells (need adjudication)</li> <li>Consider moving away from Nettle Creek as primary water source for municipal water to the Roaring Fork River instead</li> <li>Create raw water redundancy and think about how to expand past the Crystal River</li> <li>Add new wells to access the Roaring Fork River</li> </ul>

<sup>\*1</sup>Action is defined here as conceptual ideas that emerged at the workshop and are not necessarily possible or commitments.

<sup>\*2</sup>All the cells in dark blue color were identified as priority actions by the workshop group.