

**YAMPA RIVER LEAFY SPURGE PROJECT
SCHEDULED MEETING
Wednesday 10:00am, February 9th, 2022
By Zoom**

Draft Proposed Agenda

1. Welcome: Ben (5 minutes)
2. Introductions: (5 minutes)
3. Review Agenda: (5 minutes)
4. Update on Close Out of the CWCB Grant: Tamara (15 minutes)
 - a. Status of Chloe's "Final Report" and PHD Dissertation
 1. Upload to website
 - b. Report to Yampa White Green Basin Roundtable
 - c. Future Plans
5. Website Update: (Pete) (10 minutes)
 - a. Chloe's data
 - b. Ability of the public to download data
 - c. A description of the data fields for the public
6. Review and Approve Draft 2021 YRLSP Accomplishments Group (10 minutes)
7. Review and Approve Draft 2022 YRLSP Goals (15 minutes)
8. 2022 Landowner Outreach:Group (15 minutes)
 - a.CO First Con Dist Annual Meeting February 15th (Jesse, Ben, Laurel)
 1. Nick Charchalis to check to see if a survey can be sent out in 2022
 - b. 2022 Biocontrol Field Trip
 1. Possible sites: Earle's Oxbows and YRSWA, The Frog Pond
 - c. Other
9. Update and Tentative Dates for 2022 Events: Group (5 minutes)
 - a. Youth and Education: Biocontrol Event (Tamara)
 1. Yampatika (Baili)
 - b. Biocontrol collection and releases in LYC and J Q Circle Ranch: June 20th to June 24th (Tamara)
 - c. Biocontrol Field Trip: July (Tamara, Jesse, Tiffany)
 - e. West Cross to Deerlodge Mapping: Early June (Pete, Ben)
 - f. 2022 Show Me Float: Dorsey to Loudy Simpson: Friday June 10th or Saturday June 11th (John, Ben)
 - g. Other

10. Partner Plans and Updates: Group (10 minutes)
 - a. Friends of the Yampa and Donations Account
 - b. Routt County Weed Program
 - c. Moffat County Weed and Pest Management
 - d. Colorado Parks and Wildlife
 - e. Yampa River State Park
 - f. BLM
 - g. CO State Land Board
 - h. NRCS: Steamboat
 - i. NRCS: Craig
 - j. Dinosaur Nat Monument
 - k. MC CSU Extension
 - l. RC CSU Extension

11. Discussion of Changes to Meeting Notes Process (Ben, Group) (10 minutes)
 - a. Meeting Notes as YRLSP Record
 - b. Questions raised: Length? Format? Are they read?
 - c. Other

12. Succession Planning 4th Edition John, Ben (10 minutes)
 1. Is there a timeframe for the YRLSP?
 2. What organization(s) could carry-on with leafy spurge education/management?
 3. Create a different iteration of the YRLSP i.e. Board appointed by Moffat and Routt BCCs?

13. Other (Group) 5 minutes

Next Scheduled YRLSP Regular Meeting: Wednesday, April 13, 2022 at the Hayden Town Hall/Carpenter Ranch or By Zoom

Proposed Adjournment (12:00pm)

Meeting Packet:

Proposed Agenda
Draft YRLSP 2021 Accomplishments
Draft YRLSP 2022 Goals

YAMPA RIVER LEAFY SPURGE PROJECT
Wednesday, February 9, 2022
By Zoom
Final Meeting Notes

Working Group Members Present

Tony Boher, Moffat County Commissioner
Ben Beall, Routt County Citizen
Tamara Naumann, Moffat County Citizen
Pete Williams, Moffat County Citizen
Jesse Schroeder, MC Weed and Pest
Tiffany Carlson, RC Weed Program
Laurel Deitch, NRCS Craig
Reece Wells, Yampatika
John Kaltenbach, CO Dept of Agriculture

Ben Beall opened the meeting at 10:05. He thanked everyone for coming and informed the Group that he had an email from RC Commissioner Tim Corrigan explaining that he has a conflict on every Wednesday at 10:00. Ben also said that Tyler Jacox and Baili Foster had previous commitments. Ben will ask the Group at the end of the meeting if the second Wednesdays of the month at 10:00 is a good time for the YRLSP meetings.

Ben shared the agenda and there were no suggested changes or additions.

First Discussion: Update of Close-Out of the CWCB Grant

Tamara Naumann reported:

1. She submitted the Final Report on December 22nd to CWCB and the Yampa White Green Basin Roundtable.
2. It was accepted and approved in January.
3. CWCB sent a final reimbursement check to Friends of the Yampa and \$22 was left with CWCB.
4. Of the Moffat and Routt counties contribution of \$30,000, \$150 was kept for the Youth and Education Event in 2022.

Tamara shared with the Group that Pete Williams had uploaded to the YRLSP website:

1. The CWCB Grant Executive Summary
2. The 3rd chapter of Chloe's Doctoral Dissertation, which includes her satellite mapping and risk modeling
3. Hannah's Master's Thesis on her Targeted Grazing Research
4. A Biocontrol Summary

Tamara also reported that she has been in conversations with Patrick Stanko for suggestions about how best to update the YWGRT.

Ben commented that he would like everyone to visit the website. Pete has done a great job and there is so much information regarding leafy spurge.

Ben informed the Group that Frances Kawano had contacted him about the possibility of using goats. Ben asked Tamara if she thought that goats would be any different than Hannah's findings regarding sheep.

Tamara responded that she thought that there would be no difference and it might even more labor intensive. She had worked with Utah State University using goats in Dinosaur National Monument, but she thought that herbicides did all the work.

Jesse Schroeder confirmed from his personal experiences in Ouray County with the Forest Service treating knapweed that goats have negligible effects and are not worth the funds and hassle.

Ben asked Jesse and Tiffany Carlson if he could give their names to Frances for references regarding goats. They both said yes.

Task 1: Tamara and Patrick will have conversations with members of the YWGRT regarding the best way to update the YWGRT on the completion of the CWCB Grant.

Second Discussion: YRLSP Website Updates

Pete explained to the Group that the YRLSP website resides on the WIX platform, for which the YRLSP pays an annual fee of \$168, and a domain name fee every two years of \$48 (which will be due in 2023). The annual fee is coming due on March 3.

Pete informed the Group that due to the close out of the CWCB Grant he has made a number of revisions to the YRLSP website pages:

1. On the **Research page** (under the **Projects** dropdown menu), the links to Chloe's and Hannah's final reports have been prominently placed in the introduction at the top of the page. The individual descriptions of Chloe's and Hannah's research projects have also been revised to reflect that each has now been completed. In Chloe's section there are also two new maps—a sample map that shows what Chloe's remote sensing results look like at the west end of the Yampa River State Wildlife Area, and another map showing Chloe's Invasion Risk (predictive) mapping results, covering the full extent of Routt and Moffat counties. Links to both of these maps have also been added to the **Index to Maps** page in the **Maps** dropdown menu.
2. On the **Grants** page (also under the **Projects** dropdown menu), the description of the CWCB grant has been updated to include the details of its completion, along with a link to the grant Executive Summary document. A brief list of the individual deliverables has

been added, with links to where each deliverable is discussed in greater detail elsewhere in the **Projects** web pages (all projects web pages are also available directly through the **Projects** dropdown menu).

3. On the **Resources** page, links have also been added for directly downloading Chloe and Hannah's final reports.

4. Two new web pages have been added to the **Maps** dropdown menu:

Interactive Map. In response to requests to develop a user-interactive map displaying the YRLSP mapping and biological control data (including Chloe's remote sensing and invasion risk data), there is now a new page displaying an interactive map application that currently displays all but one of these data sets. Pete explained that web map application is actually hosted by his personal ESRI account pages, but is linked to the YRLSP Interactive Map page. Hosting the interactive map for the YRLSP website is costing him nothing more in addition to his usual annual ESRI license fee, so there are no additional website costs to the YRLSP.

The one YRLSP dataset not available on the new Interactive Map, unfortunately, is Chloe's remote sensing data—which is far too large to host without paying a substantial additional monthly storage fee. Even if the YRLSP could afford to pay that fee, the delay for loading such a large file would slow the interactive map response time considerably. Pete explained that as a substitute for this omission, he planned to create a series of PDF maps showing Chloe's remote sensing results, to be posted in the remote sensing section of the **Research** page.

The Interactive Map allows users to define which data and which basemap layer they wish to view, and to zoom in and out on specific locations they wish to explore. Clicking on an individual feature in a data layer also brings up a popup window, with the contents of the data fields for that feature displayed. Pete has also included links on the Interactive Map page to downloadable "Data Field Guides," which should answer any questions about what each data field represents.

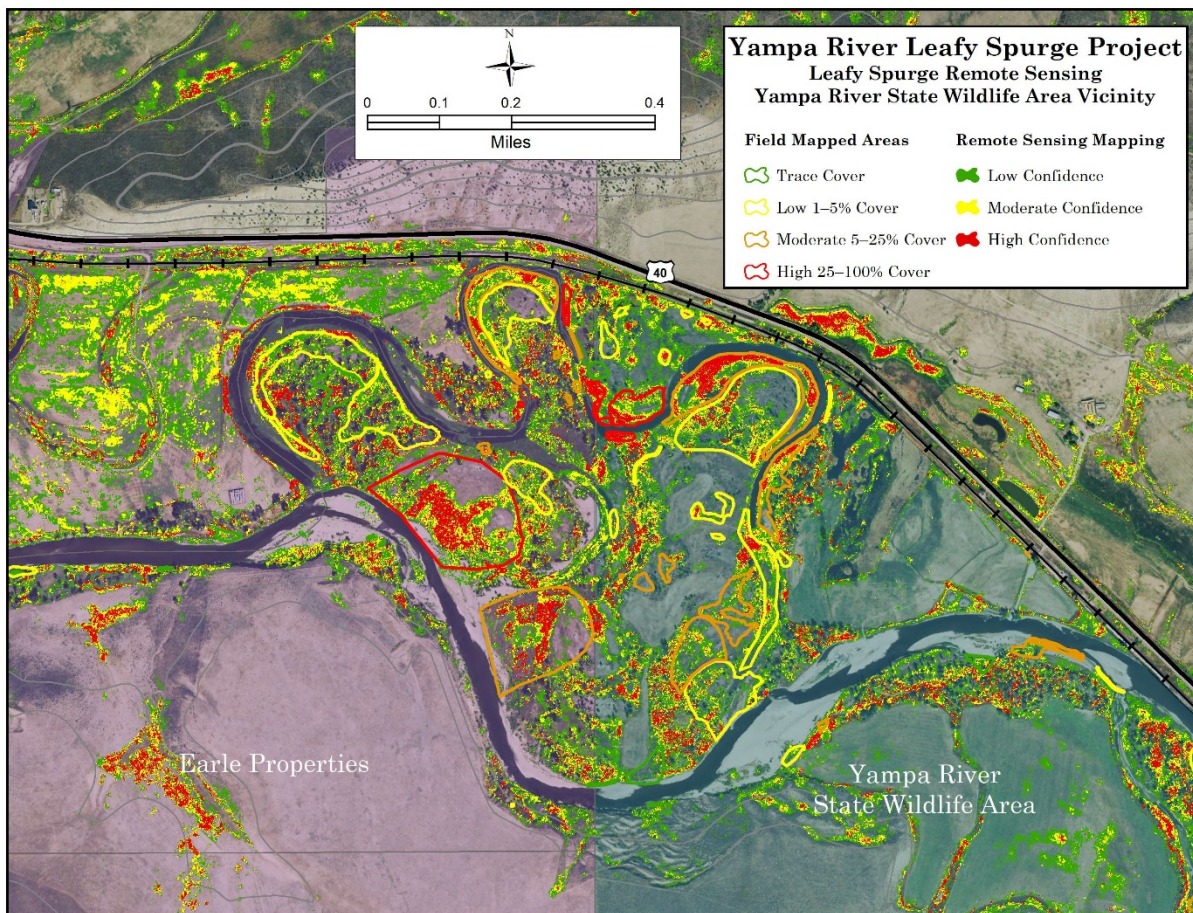
Pete wanted to ensure everyone that the leafy spurge mapping data displayed in the new Interactive Map is identical to that displayed in the PDF maps already available for download from the website. No infestations have been included that the YRLSP mappers might have recorded on properties for which no permission was granted for public display of the data.

GIS Data. The second new page under the **Maps** dropdown menu is the **GIS Data** page. This has also been added to the website in fulfillment of the request by the Working Group that the YRLSP data be made more accessible to the public. Every dataset viewable on the Interactive Map is available for direct download from the GIS Data page. Datasets are available in both the standard SHP (shapefile) and KMZ (compatible with Google Earth) formats. Chloe's remote sensing dataset is also available here for download in shapefile format (the KMZ version is not posted for

download because it is too large to open in Google Earth!). Again, the only YRLSP data not available for download from the GIS Data page are those leafy spurge infestations that were field mapped on properties for which the YRLSP does not have permission for publication.

Pete asked that everyone present to go to the website and take a look at the changes—he is always looking for feedback regarding how he might make the website more user-friendly.

Ben asked Pete if he could put up on the Zoom screen the sample interactive map displaying the Chloe’s remote sensing mapping, and to provide some explanation. (This sample map is currently posted in the remote sensing section of the **Research** page, available through the **Projects** dropdown menu.)



Pete explained that the raw data in Chloe’s remote sensing dataset is in the form of pixels arrayed in an image file (aka a “raster” file). This is comparable to how a satellite photograph of the same terrain would be composed of individually colored pixels. The difference is that while the pixels in a photographic image display colors, the pixels in Chloe’s raw data display a continuous spectrum of thousands of unique values ranging

from 0 to 1, with each value representing the relative confidence that leafy spurge exists in the area covered by that pixel. (0 represents no confidence that there is leafy spurge, and 1 represents high confidence that there might be leafy spurge.)

To display this data effectively on the printed page, Pete has then divided the spectrum of unique values into four discrete categories, each represented on the map by polygons of uniform color. The polygons representing the least confidence are not displayed on the map, but the other three groups (representing low, moderate, and high confidence) have been given unique colors, as shown on the right side of the map legend. Pete stressed that a red color does not indicate that leafy spurge unequivocally exists in that location, only that we have relatively high confidence that it could exist there.

Finally, for comparison purposes, Pete has added polygon outlines representing YRLSP's field mapped leafy spurge canopy cover data, as indicated in the left hand legend. Pete stressed that the field mapping and remote sensing polygons actually display two different values—the percent of the ground covered by leafy spurge in the field mapped polygons, versus Chloe's relative "confidence" of a detectable leafy spurge presence. While we might expect that there would be a correspondence between areas mapped as high-density leafy spurge cover, and those mapped with a high confidence of leafy spurge presence, Pete pointed out that this is not always the case. For example, Chloe's data show a lot of small high confidence red dots where on-the-ground observers did not report even traces of canopy cover. Nevertheless, Chloe's data is a useful tool that can show us where leafy spurge is more likely to be, and thus those areas where our time and energy would best be invested in going to look for it.

Pete suggested that this sample map gives a good idea of what a series of maps displaying Chloe's data could look like, following the model of the existing series of YRLSP field mapping leafy spurge maps. The division of Chloe's results into four categories could be modified, but he felt that the four options (none, low, moderate, and high) for confidence seem to be the best compromise for displaying the range of values without making the map impossibly cluttered with colors.

Ben asked Pete, how did the YRLSP groundtruth Chloe's data and ascertain that Chloe's data was 91.3% accurate?

Pete explained that Chloe used the YRLSP field mapping data to "train" her algorithms, and that figure of 91.3% accuracy was then a measure of how closely her results matched what we had mapped on the ground for leafy spurge presence or absence. Then Chloe did some actual feet-on-the-ground groundtruthing in the summer of 2021, when she visited additional areas where the YRLSP may or may not have field mapped the leafy spurge. She verified whether these randomly chosen locations had been accurately mapped by her software, and then used that data for further refinement to her algorithms.

Tamara added that Pete's description of a "continuum of confidence" is the best way to interpret Chloe's results, rather than thinking that what we have is a definitive map to where the leafy spurge actually is on the ground. If a location is represented with a red polygon, then it is worth going to check that location for leafy spurge, because the probability is fairly high that there might be leafy spurge there.

Pete said that he may need to work on changing the legends, to make it clearer that the field mapping and the remote sensing mapping are recording two different values. However, for comparative purposes he'll likely retain the field mapping polygon overlay, because it does seem that where we mapped the greatest density is generally where there is also high confidence in leafy spurge presence.

Ben asked if the remote sensing maps could be produced with the same map frames as the existing field mapping maps, so we can compare the field maps side-by-side with the remote sensing maps.

Pete explained that the field maps are 1:24,000 in scale, similar to a typical USGS map, while the current remote sensing sample map is 1:10,000 scale. Pete said that he needs to see experiment further with what scale would work best, but that he chose to reduce the scale of the sample map simply to make the finer scale of Chloe's data more visible. A trade-off is that using a smaller scale on the remote sensing maps would result in a lot more individual maps to cover the same extent of terrain, so perhaps there would be good reason to stick with the 1:24,000 scale—and if so, then he can frame the maps identically to the existing field maps. On the other hand, by including the polygon outlines for the field mapping data, we would already have a map series that combines the two datasets on the same page.

Ben asked if there were any questions for Pete.

Laurel Deitch said Pete, well done. This will be a great resource.

Tiffany Carlson thanked Pete and Tamara for all their work.

Ben welcomed John Kaltenbach. He asked John, how do we get this information out to a broader audience? The Group has talked about having Jesse Schroeder and Tiffany try and get us on the agenda at the CO Weed Managers Annual Meeting. John thought that the Annual Meeting was a good idea and he would help. He also suggested the Weed Managers Quarterly News Letter. Tiffany informed the Group that the 2023 Weed Managers Annual Meeting was December 7th and 8th.

Ben asked Pete about the YRLSP rule of only showing field mapped leafy spurge infestations where landowners have given their permission. Does this apply to Chloe's remote sensing maps? Pete explained that he has no reservations about using all of Chloe's data in this case. These maps are basically displaying an interpretation of existing satellite imagery, not unlike the satellite imagery available to the public on Google Earth. They are not depicting actual on-the-ground observations of leafy spurge.

Tamara added that these maps are only saying that there **might** be leafy spurge infestations in these areas, not that any infestations have actually been observed there.

Task 2: Pete to create static maps of Chloe's remote sensing data, with appropriate legends. If possible, these could be similar in size/scale to the YRLSP Field Maps so that the two sets can be compared side by side,

Task 3: Tiffany, Jesse, and John will see if the YRLSP can get on the CO Weed Managers Annual Meeting on Dec 7th and 8th to make a presentation.

Third Discussion: Review and Approve Final Draft 2021 YRLSP Accomplishments

Ben shared the Draft 2021 Accomplishments (appended at the end of this document, below). He reminded the Group that at the last meeting changes were made.

After review the 2021 Accomplishments should be approved and posted to the YRLSP website.

The Group reviewed the Draft. Ben asked if there were any changes to this draft. He suggested that this change made since the last meeting be approved: In Item 13 the landowner's name was removed. The Group had no further changes and the 2021 Accomplishments were approved unanimously.

Task 4: Pete to Post the Final 2021 YRLSP Accomplishments to the YRLSP website.

Fourth Discussion: Review and Approve Final Draft 2022 YRLSP Goals

Ben shared the Final Draft 2022 Goals (appended at the end of this document, below). He reminded the Group that at the last meeting changes were made and since the last meeting old Items #6 and #8 (Monitoring) have been combined. After review the 2022 Goals should be approved and posted to the YRLSP website.

The Group reviewed the Draft. Ben asked if there were any further changes to this draft. The Group had no changes and the 2022 YRLSP Goals were approved unanimously.

Task 5: Pete to post Final 2022 YRLSP Goals to YRLSP website

Fifth Discussion: 2022 Landowner and Organization Outreach

Colorado First Conservation District Annual Meeting

Ben reported that he and Laurel will be giving a 5-minute presentation on February 15th. We have made an outline for the presentation: 1. Short update; 2. Biocontrol; and 3. Landowner Outreach.

Ben asked Laurel, since she is giving the Outreach part and is last, if she thinks asking Nick Charchalis to give a shout-out for the YRLSP is a good thing. Laurel said that she had talked to Nick and he is willing to help.

Laurel asked Ben if he had any visuals or a PowerPoint for the presentation. Ben said that he could put together some photos of leafy spurge, maybe some of a Show Me Float.

Ben asked Jesse if there would be the capability of doing a PowerPoint. Jesse said that there would be and he would be happy to introduce the YRLSP presentation.

Pete said that he had many leafy spurge photos and to send him an email with what is needed.

2022 Biocontrol Field Trip

Tamara reported that she is getting together with all the various parties in the next few weeks to plan for the trip, which will be sometime in the first three weeks in July.

Update to the Moffat County Board of County Commissioners

Tamara thanked Tony Boher for another donation of \$1,500. She is in the process of writing an invoice for Moffat County to send the funds to the FOTY. She will be giving an update and outlining future plans to the MCBCC on February 22nd.

Update to the Yampa White Green Basin Roundtable

Tamara said that she has had further conversations with Patrick Stanko to find out the best way to communicate with the Roundtable. Patrick has sent her a template which she needs to work on and review with Patrick.

Presentation to the White River Leafy Spurge Group

Tamara reported that she had been contacted by Deirdre Macnab with a request to give a presentation which would include a short summary of the YRLSP, followed by questions/answers. This meeting will be on February 17th by Zoom.

Ben informed the Group that if anyone hears of an organization that would like an update on leafy spurge or the YRLSP, to let us know.

Task 6: The Group will continue to give reports and updates on Outreach opportunities and planning at future YRLSP meetings

Sixth Discussion: Update and Tentative Dates for 2022 Events

Youth and Education Biocontrol Event (No set date)

Tamara said that no date had been picked. She is hoping to get all parties who have volunteered on a Zoom within the next couple of weeks. Reece Wells said that he could send the dates when he is available. Tamara said that she would like to understand more about Yampatika.

Biocontrol Collection and Releases (June 20th through June 24th)

Tamara confirmed the dates of June 20th through June 24th. She asked John if he thought that would be a good time period for collection on the Front Range. John thought it would be and that he could find some beetles.

Biocontrol Field Trip (First three weeks in July)

See discussion above in Outreach

West Cross to Deerlodge Mapping (Early June)

Pete thought that even if we have a low water spring, we can be flexible and plan the trip at the last minute when conditions are right.

Show Me Float (Friday June 10th or Saturday June 11th)

Ben asked the Group to get him names of people who would like to go on the one-day float from Dorsey Beach to Loudy Simpson.

Seventh Discussion: Partner Plans and Updates

Friends of the Yampa and FOTY/YRLSP Donations Account

Ben did not get an updated donations account spreadsheet from Lindsey Marlow. He will ask Lindsey to get him one and he will share with the Group.

However, with the balance reported at the December meeting of \$2310 plus a \$1,000 donation, and \$1,000 from the RC Weed Program (\$500 for biocontrol, \$500 for

education), and the additional \$1,500 from Moffat County, the YRLSP Donations Account has about \$5,810 balance.

Tamara added that there was \$150 left over from the Counties' donation for the CWCB Grant and another \$250 returned from the CWCB Grant for payment to CDA for beetles. Therefore the balance is in the order of \$6,210.

Ben asked Tamara, since we have a \$6,210 balance, do we want to purchase beetles from Montana? Tamara said that we would first need an updated list of release sites for additional beetles.

Ben asked if we knew the date to order beetles from Montana. This would be the D-day to have the new list of released sites.

Tiffany reminded the Group that March 7th is the application deadline for funds from the RC Weed Board. Ben thanked Tiffany for the reminder and said that the RC Weed Board has been very supportive of the YRLSP in the past. The Group needs to think about its funding needs.

Routt County Weed Program

Tiffany listed these upcoming events: 1. A Master Gardeners Class the last Thursday in February; 2. The Winter Weed Class every Thursday in March; and 3. A half-day weed class with the RC Extension, where one of the topics will be the effects of leafy spurge on property values.

Moffat County Weed and Pest

Jesse said that MC W&P is continuing business as usual, trying to find out what works best and the best treatment options. He had learned about a new herbicide that he wanted to try out this summer. Jesse, in a response to Tiffany, said that it was called Venue, which was a mix including 2-4-D.

Colorado Parks and Wildlife

Tamara talked to Tyler Jacox. He will help with the Youth Event and will take as many beetles as he can get.

National Resources Conservation Service

Laurel reported that the application deadlines are past for NRCS 2022 program funding. She also wanted to inform the Group that NRCS has a practice program for herbaceous weed control. This is not a standalone program but can be utilized with other programs.

Bureau of Land Management

Tamara said that she had had an email exchange with Chris Rhyne. Chris is interested in getting beetles for Tepee Draw. Due to her schedule, she may not be able to do the release. Tamara asked Jesse if he would be available. He said that he thought he could make it happen.

Also, Tamara is scheduling with Chris a repeat monitoring of the 2020 release site on Fortification Creek.

Task 8. Ben to get an updated FOTY/YRLSP Donations Account spreadsheet and share it with the Group.

Eighth Discussion: Changes to Meeting Notes Process

Ben reminded the Group that he had asked the question in an email if there were suggestions about possibly changing the process/writing the Notes. He said that some of his questions are: Are they too long? And how many people read them?

Pete thought that they are valuable as a record of the organization.

Ben pointed out that there is a list of 65 or so Supporters that receive the Notes. This is a way of keeping these people up to date with what the YRLSP is doing.

Ben reiterated that he is willing to continue to writing the Notes. He asked John Kaltenbach if he had had any conversations at the state level regarding the Notes. John said that he hadn't.

John let the Group know that Steve Ryder, director of the State Weed Fund, had retired. Ben asked John if he would send him the email address of the new director when hired.

Ninth Discussion: Succession Planning 4th Edition

Ben reminded the Group that the YRLSP is basically a volunteer organization, even the partners who represent their organizations are volunteering their time. The YRLSP is not like an organization where the members are appointed by elected officials. John Husband, who along with Ben had started to think about this succession issue, had thought that maybe the YRLSP could become a subcommittee of the Yampa River System Legacy Partnership. After a recent meeting he reported that that would not be an option.

Pete suggested the example of all the mapping of the YRLSP had accomplished as a reason for finding continuity for the organization.

We should continue to talk about this.

Tenth Discussion: YRLSP Website Page for Management with Herbicides

Tamara thought that the YRLSP needs to page on the website for the discussion of herbicides. There is a big gap in the website coverage regarding herbicides. She said that she is willing to work on it.

This page would be where the YRLSP would show what we have found out about herbicides, i.e., Hannah Kunhs research, the County Weed Programs findings, results from new herbicide use, etc.

Tamara asked Jesse and Tiffany if they would be willing to work with her to create something that would be helpful for the public, to contribute to our understanding of what works in the Yampa Valley.

Tiffany said that she would be happy to help.

Jesse said that he has had no property research projects but thought that he could create a summary of what has worked, what the success stories have been. Tamara also suggested that the problems with herbicide treatments also need to be addressed.

Ben thought it was a good idea. The YRLSP has always talked about an integrated management approach. This would fill a hole.

Task 9: Tamara to work with Jesse and Tiffany to create web page on the YRLSP website for the management of leafy spurge with herbicides.

Eleventh Discussion: Next Meeting

Ben said that the next regular scheduled meeting was the April 13th, the second Wednesday of the month. He asked the Group if they thought the 2nd Wednesdays still worked. There was no objection to the 2nd Wednesday of the month.

Ben reminded the Group that RC Commissioner Tim Corrigan has not been able to make this schedule due to a regular conflict.

Ben asked if the next meeting should be in person or by Zoom. Tamara and Pete responded that both works for them. Pete thought that maybe the next meeting should be in person.

Ben thought that at least one meeting a year should be in person.

Ben said that he would talk with Commissioner Corrigan to see if there was a better schedule for him. Pete would like to put the meeting date on the website but will hold off until he hears back from Ben.

Task 8: Ben will meet with Commissioner Corrigan to see if he has a different day of the month when he could attend the YRLSP meetings.

Task 9: Ben will send out a reminder with the meeting schedule for April.

Meeting adjourned: 12:01

Next Meeting: April 13th at the CSU Extension Meeting Room in the Moffat County Courthouse at 10:00am



YAMPA RIVER LEAFY SPURGE PROJECT

“... working together to establish an effective program of integrated management for leafy spurge...”

YAMPA RIVER LEAFY SPURGE PROJECT 2021 ACCOMPLISHMENTS

1. Final deliverables and invoice on the CWCB WSRF grant were submitted to the CWCB and Yampa-White-Green Roundtable on December 22, 2021. After these documents are reviewed and approved, a final reimbursement to Friends of the Yampa will be made, which will close out the grant project. All deliverables on the grant will be posted to the YRLSP website by January 31, 2022. (Tamara)
2. Chloe Mattilio (UW PhD candidate) developed a remote-sensing application that included correlation with the field mapping data collected by YRLSP, followed by ground truthing in the Axial Basin and Maybell areas of the initial model and further corrections. The final model classification identified leafy spurge on the ground correctly with an overall accuracy rate of 91.3%—a remote sensing classification performance that is significantly better than random. (Tamara, Chloe)
3. Chloe Mattilio also developed two invasion risk predictive models for the basin that will aid leafy spurge control efforts now and into the future. The best-fitting model classifies 359,680 acres in Routt and Moffat counties as having “high suitability” for leafy spurge invasion, and another 2 million acres with “moderate suitability.” The model helps us understand the need to continue efforts to thwart the progress of this pernicious weed. (Tamara, Chloe)
4. Hannah Kuhns (Univ WY Master’s student) further supported our understanding of water as a vector for spreading leafy spurge downstream, by showing convincingly that root fragments eroding out of banks and sandbars during runoff season are capable of floating downstream and re-establishing new plants that contribute to a burgeoning infestation. Her management treatment studies tell us that targeted sheep grazing is not practical in most riparian settings, and probably not something to pursue in other than very limited circumstances. Lastly, Hannah’s herbicide studies indicated that Quinclorac and Duracor may cause a reduction in seed production, but more work on timing of application, rate of application, and duration of effect is warranted. (Tamara, Hannah)

5. Completed mapping of leafy spurge infestations on the Yampa River from Hayden to Cross Mt for a total of 108 miles with 5 miles mapped in Axial Basin above Juniper Campsite. (Pete)
6. YRLSP volunteers and partners conducted monitoring on nine sites where insects were released in 2019 and 2020. Biocontrol insects were still present on all nine sites. Detectable changes in leafy spurge cover were only recorded on two of the nine sites, but visible signs of insect activity were present on all nine sites. (Tamara, Group)
7. Purchased 9,950 leafy spurge beetles (3,250 by YRLSP, 6,200 by CPW, and 500 by RC Weed Program) and released beetles to new sites including YRSWA, Loudy Simpson Island, CPW South Beach, McIntyre, K-Diamond Ranch, and 78A north of Hayden (Group)
8. Continued outreach to landowners in Routt and Moffat Counties. Moffat County Weed and Pest and Routt County Weed Program continue to have conversations with landowners . CO First Conservation Dist. surveyed landowners at their Annual Meeting . Baili Foster (NRCS) surveyed attendees at the Routt County Conservation Dist. meeting.
9. Members of the YRLSP and NRCS met with the owner of J Quarter Circle Ranch to discuss an integrated management of leafy spurge. Chose a biocontrol release site for 2022.
10. Follow-up with 2019-2020 stakeholder and mapping partners. Obtained 7 new permissions (Colleen Behrman, Bruce Barnes, Janice Edwards, Nathan Mock, Darryl Steele, Dave Stoffle, and Elam). (John, Jesse)
11. Continued the updating of the YRLSP website (Pete)
12. Organized the 2021 Show Me Float with 16 participants in Little Yampa Canyon on June 11th and 12th (John, Ben)
13. Moffat County Weed and Pest monitored the treatments of leafy spurge infestations on various properties with inconclusive results on chemical treatment using Milestone and Quinclorac. (Jesse)
14. Routt County Weed Program continued to monitor the management of the leafy spurge infestation on Iron Springs Ranch near Stagecoach Reservoir and 2021 backpack herbicide treatment by Don Stinton. (Tiffany, Todd)
15. Dinosaur National Monument had one Yampa River leafy spurge hand pulling removal raft trip. (Emily)
16. Reports to supporting organizations: FOTY Board (Tamara), Moffat County Board of County Commissioners (John) and Routt County Board of County Commissioners (Ben, Tiffany, Jonathon)

17. Created Six-Year YRLSP Report with update of Five-Year YRLSP Report with 2021 Accomplishments (Ben)

18. Organized a Biocontrol Field Trip to a release site on the YRSWA to review the results of biocontrol with these participants: (Tamara, Ben, Jesse, Jonathan Murray, Kristen Gornell).



YAMPA RIVER LEAFY SPURGE PROJECT

“... working together to establish an effective program of integrated management for leafy spurge...”

YAMPA RIVER LEAFY SPURGE PROJECT 2022 GOALS

1. Work collaboratively with CSU Extension, BLM, CPW and NRCS to organize a Youth Education field event that focuses on leafy spurge and biocontrol and includes an expansion of youth groups. (Tamara, Chris, Jessica, Tyler, Baili, Laurel)
2. Obtain permission from Cross Mt Ranch and other landowners in order to map from West Cross Mt to DNM Deerlodge Park for leafy spurge infestations. (Pete, Ben, John)
3. Continue the outreach to landowners in Routt and Moffat Counties to emphasize the knowledge and information regarding the management of leafy spurge gained through the research and efforts of the YRLSP. (Tiffany, Jesse, Baili, Group)
4. Obtain at least 10,000 biocontrol insects in collaboration with CDA Palisade Insectary staff or purchase from other sources and prioritize releases in Little Yampa Canyon and the commitments to J Quarter Circle Ranch and other private landowners who request releases. (Tamara, Biocontrol volunteers, John Kaltenbach)
5. Biocontrol outreach event. Collaborate with NRCS and county weed staffs to organize a field tour of biocontrol sites for private landowners in July. (Tamara, Bali, Tiffany, Jesse, Laurel, Group)
6. Continue monitoring recent biocontrol release sites with YRLSP protocol (approximately 10 sites/year). These efforts are necessary to determine effects of biological control over time and will help us determine whether insect populations are growing large enough in particular areas to allow for hosting local

catch-and-take biocontrol insect events. We appreciate the support of NRCS in processing soil samples from release sites. (Tamara, and all other willing volunteers)

7. Dinosaur National Monument to conduct leafy spurge mechanical (hand pulling) and biocontrol releases in DNM. (Emily)
8. Continue the updating and revisions of the YRLSP website (Pete)
9. Routt County Weed Program to continue to monitor the management of the leafy spurge infestation on Iron Springs Ranch and adjacent lands near Stagecoach Reservoir. (Tiffany, Todd)
10. Continue to work with supporting partners in their implementation of integrated leafy spurge management strategies. (Jesse, Chris, Tiffany, Baili)
11. Organize the 2022 Show Me Float in June from Dorsey Beach to Loudy Simpson. (John, Ben)
12. Report to the Yampa White Green Basin Roundtable on the CO Water Conservation Board Grant with significant findings. (Tamara, Patrick)
13. Reports to supporting organizations: FOTY Board (Tamara), FOTY Yampa River Fest (Ben), MC and RC BCC (John, Ben), CDA (Ben), CO First Conservation Dist (Ben, John, Laurel), RC Conservation Dist. (Baili), IWMP (Lindsey) and the YRSLP (John)
14. Create a Seven-Year YRLSP Report with update of the YRLSP Six-Year Report (Ben, Group)
15. The YRLSP to hold discussions internally and with Partners regarding a Succession Plan to set a course for the future management of leafy spurge in the Yampa Valley. (Group)